Reference APP/A5840/A/12/2168042
Southwark Council

Applied Ecology Ltd

# 123 GROVE PARK

# ECOLOGY SUMMARY

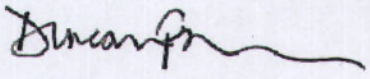
Report for

**Citrus Health Care**

November 2011

| | |
|---|---|
| **Client:** | **Citrus Health Care** |
| **Title:** | **123 Grove Park – Ecology Summary** |
| **Project No:** | **AEL 408** |
| **Date of Issue:** | **11 November 2011** |
| **Status:** | **Final report** |

**Signed on behalf of Applied Ecology Ltd:**



Dr Duncan Painter
Director

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## Contents

# 1 INTRODUCTION

## 1.1 BACKGROUND

*1.1.1* Applied Ecology Ltd (AEL) was appointed by Citrus Health Care to complete a number of ecology surveys (see full list below) at 123 Grove Park (central grid reference for site: TQ 33228 76124). This site is located on Grove Park, to the east of Camberwell Grove and close to Denmark Hill in southeast London and comprises a large Victorian/Edwardian detached mansion set in large grounds, with a formal garden and area of woodland at the rear.

*1.1.2* The purpose of this report is to summarise the potential impact of the habitat loss associated with re-development of the site, and in particular the construction of new residential dwellings in garden and wood land at the rear of the existing property as indicated on the latest development design for the site produced by KSR Architects (**Appendix 1**).

*1.1.3* Ecology surveys completed by AEL are as follows:

- Initial ecology appraisal – 7 July 2006
- Initial bat activity survey – 18 July 2007
- Follow up ecology survey – 25 March 2011
- Bat activity survey - 4-5 May 2011
- Pond survey – 24 June 2011
- Follow up Phase 1 Habitat survey - 5 September 2011
- Invertebrate survey – 20 September 2011
- Reptile survey – 20 September-24 October 2011

*1.1.4* **Chapter 2** provides details of a follow up Phase 1 Habitat survey completed on 5 September 2011 in order to verify the findings of a habitat assessment survey carried out in 2006.

*1.1.5* **Chapter 3** gives a summary of the ecology surveys completed to date and makes a broad assessment of the potential risk of negative impacts that may occur on each receptor.

*1.1.6* **Chapters 4 and 5** assess in more detail those receptors where negative impacts are

anticipated and provides suggestions for mitigation and compensation measures to offset these impacts on habitats and protected species (respectively) to an acceptable level.

1.1.7 **Chapter 6** provides an evaluation of the overall potential impacts and relevant mitigation/compensation measures.

# 2 PHASE 1 HABITAT SURVEY

## 2.1 BACKGROUND

2.1.1 On 5 September 2011 AEL completed a Phase 1 Habitat survey of the 123 Grove Park site, in accordance with the JNCC guidelines[1]. The purpose of this survey was to verify the findings of a previous habitat survey carried out on 7 July 2006, with the specific aim of producing a Phase 1 habitat map.

## 2.2 FINDINGS

2.2.1 The Phase 1 habitat map is provided in **Appendix 2** of this report and confirms that no significant change in the habitat types present on site had occurred since the original (2006) habitat survey, and that the detailed habitat descriptions provided in the 2006 report remain accurate and valid (see **Appendix 3**).

2.2.2 **Table 2.1** below provides details of the habitat types identified on the Phase 1 map and their respective areas (in hectares).

**Table 2.1 – Habitat types (and their areas) at 123 Grove Park**

| Receptor habitat | Existing area (ha) |
|---|---|
| Amenity grassland | 0.04 |
| Broadleaved semi-natural woodland | 0.30 |
| Buildings & hard standing | 0.08 |
| Dense scrub | 0.09 |
| Introduced shrub | 0.08 |
| **Total** | **0.59** |

[1] JNCC (2010) *Handbook for Phase 1 habitat survey - a technique for environmental audit*

# 3 ECOLOGY SURVEY FINDINGS

3.1.1 Applied Ecology Ltd has completed eight ecology surveys at 123 Grove Park between 2006 and 2011. **Table 3.1** below summarises the findings of the six surveys completed in 2011. Copies of the reports produced for each of these surveys, as well as those carried out in 2006 and 2007, are included in **Appendices 4 – 9**.

**Table 3.1 – Summary of 2011 Ecology Survey Findings**

| Survey Date | Ecological Receptor | Potential impacts identified/ evidence of protected species found |
|---|---|---|
| 25 March | All protected species | Survey identified the potential for the site to support roosting bats.<br><br>Habitat of potential value to stag beetle *Lucanus cervus* was recorded in the form of fallen trees and log piles on site.<br><br>A range of common bird species were noted in the garden and woodland including the Red-Listed song thrush *Turdus philomelos*. Other species seen (and likely to breed on site) included magpie *Pica pica*, robin *Erithacus rubecula*, great tit *Parus major*, blue tit *Cyanistes caeruleus*, blackbird *Turdus merula*, great spotted woodpecker *Dendrocopos major*, wren *Troglodytes troglodytes*, jay *Garrulus glandarius* and woodpigeon *Columba palumbus*. Ring-necked parakeets *Psittacula krameri* were also seen, but appeared to be on territory to the west of the site<br><br>A stand of invasive Japanese knotweed *Fallopia japonica* was also identified. |
| 4-5 May | Bats | Bat activity survey results and a lack of bat field evidence confirmed that the existing building within the site does not support a bat roost. Building to be retained and renovated. |
| 24 June | Amphibians | Two adult common frogs *Rana temporaria* were seen in a small shaded ornamental pond within the site. Subsequent discovery of common frogs during the reptile survey (Sept 2011) indicates that the pond supports a small breeding population of this species. The pond is obviously unsuitable for great crested newt *Triturus cristatus* on account of its small size and isolated location in suburban London. No further survey required for this or other amphibian species. |

| | | |
|---|---|---|
| 20 September | Terrestrial invertebrates | Specialist survey findings suggested that the site is unlikely to support significant terrestrial invertebrate interest beyond the presence of stag beetle – a widespread and relatively common species in the Borough. |
| 20 September - 24 October | Reptiles | Specialist survey confirmed the absence of reptiles from site. No further survey work required. |

# 4 DEVELOPENT IMPACTS - HABITATS

4.1.1 **Table 3.2** confirms the total area of each habitat type within site as identified by the Phase 1 habitat map, alongside the predicted loss of habitat resulting from the construction of the proposed development provided in **Appendix 1**. The total area of all mapped habitats within the site is 0.59 ha. The table also includes details of mitigation, compensation and enhancement considered necessary to compensate for habitat loss impacts. Detailed information on the area and type of new habitats to be created as part of green roofs and new soft landscaping around and within the development are not included below as these details are not known at this stage.

**Table 3.2 – Estimated habitat loss as a result of development construction and recommended mitigation/compensation measures**

| Receptor | Existing area (ha) | Loss/damage (ha) | Loss/damage (%) | Mitigation | Compensation/ enhancement |
|---|---|---|---|---|---|
| Amenity grassland | 0.04 | 0.04 | 100.00 | Not necessary as it is a low ecological value habitat | Not applicable |
| Broadleaved semi-natural woodland | 0.3 | 0.13 | 43.33 | Tree protection during construction of retained trees. Eradication of Japanese knotweed. | Green roof creation on new buildings / improved woodland management of retained woodland areas, new garden and shrub planting |
| Buildings | 0.04 | 0.00 | 0.00 | Existing building to be retained and renovated | Not applicable |
| Hard standing | 0.04 | 0.04 | 98.33 | Not necessary as it has no ecological value | Not applicable |
| Dense scrub | 0.09 | 0.07 | 84.40 | Avoid clearance during bird breeding period | New shrub planting of wildlife friendly species (native and non-native) and ongoing management as part of new development |
| Introduced shrub | 0.08 | 0.05 | 57.93 | Avoid clearance during bird breeding period | As above for dense scrub |

# 5 DEVELOPMENT IMPACTS - PROTECTED SPECIES

5.1.1 **Table 4.1** outlines the mitigation and compensation measures necessary to offset potential negative impacts of the proposed development on protected species to acceptable levels.

**Table 4.1 – Mitigation and compensation required for protected species**

| Protected Species | Mitigation | Compensation/ enhancement |
|---|---|---|
| Building-roosting bats | No building-roosting bats present | Bat bricks to be incorporated into existing and new buildings (see report recommendations in **Appendices 6 & 7**). |
| Tree-roosting bats | Trees to be checked prior to felling for bats, and appropriate mitigation agreed and implemented with a licensed bat worker as necessary | Bat boxes to be installed on retained trees (**Appendix 7**), and woodland areas to be kept un-illuminated after dark. |
| Breeding birds | Removal of vegetation outside of the bird nesting period. | Improved woodland management, and new habitat creation. Erection of bird boxes on select trees to be retained. |
| Invertebrates | Retention and protection of mature native broadleaved tree species, and supervised relocation to safe areas within site of all existing dead wood (log piles) to maintain the existing stag beetle conservation status within the site. | Creation of new dead wood habitat features i.e. additional log piles, loggeries and deep woodchip paths and similar within the site.<br><br>Planting and maintenance of nectar and pollen-rich under-storey plants and shrubs for the general benefit of winged invertebrate species.<br><br>See **Appendix 8.** |
| Reptiles | Reptiles absent from site | Not necessary. |
| Amphibians (common frog) | Existing artificial pond to be drained and checked for amphibians, and any amphibians found relocated to new pond. | New pond to be created within the site and maintained long term as a fish free habitat for the benefit of breeding amphibians (**Appendix 7**). |

# 6 EVALUATION

6.1.1 The proposed development is likely to result in a permanent loss or damage of approximately 0.29 hectares of semi-natural habitat within the site to enable construction. This represents a loss or damage of 49% of the existing mapped habitat resource within the site. None of the habitats that would be impacted are of high value in nature conservation and biodiversity terms – all are relatively common place habitats in this part of London of low relative botanical importance.

6.1.2 New habitat creation (green roofs and new shrub and garden planting) and improved management of retained habitats, notably the retained woodland area, should (subject to confirmation of new planting details) compensate for the predicted habitat loss impacts. For example, the existing woodland is shaded throughout, suffers from management neglect and lacks a botanically rich under storey. With selective tree removal and management to increase light levels reaching the woodland floor, and planting of UK native spring flowering bulbs (e.g. bluebell) and under-storey shrubs (e.g. hazel and holly) it would be feasible to create an attractive naturalistic recreational space within the woodland while enhancing the ecological and biodiversity value of the woodland habitat above current levels.

6.1.3 Specific mitigation and enhancement measures are proposed for protected species (stag beetle, bats and breeding birds). Together, these should ensure that the development will result in no net loss of protected species and nature conservation interest within the site, and could theoretically lead to small scale ecological enhancement.

# Appendix 1
# Proposed Development Plan


The communal woodland viewing area is retained.

Previously proposed House 1 is omitted

Existing trees which were removed for House 1 are now retained.

House 2 and the refuse vehicle path are resited to enable the retention of more existing trees and to enable new planting in the central area.

New trees are proposed to compensate for the loss of broad leaf canopy. Subject to detailed proposals by the Landscaping Designers.

Additional boundary planting

Houses 1, 2 & 4 are 2 1/2 floors.

0 5 10

**SITE PLAN - PROPOSED REVISIONS**
**4-11-2011**

# Appendix 2
# Phase 1 Habitat Map

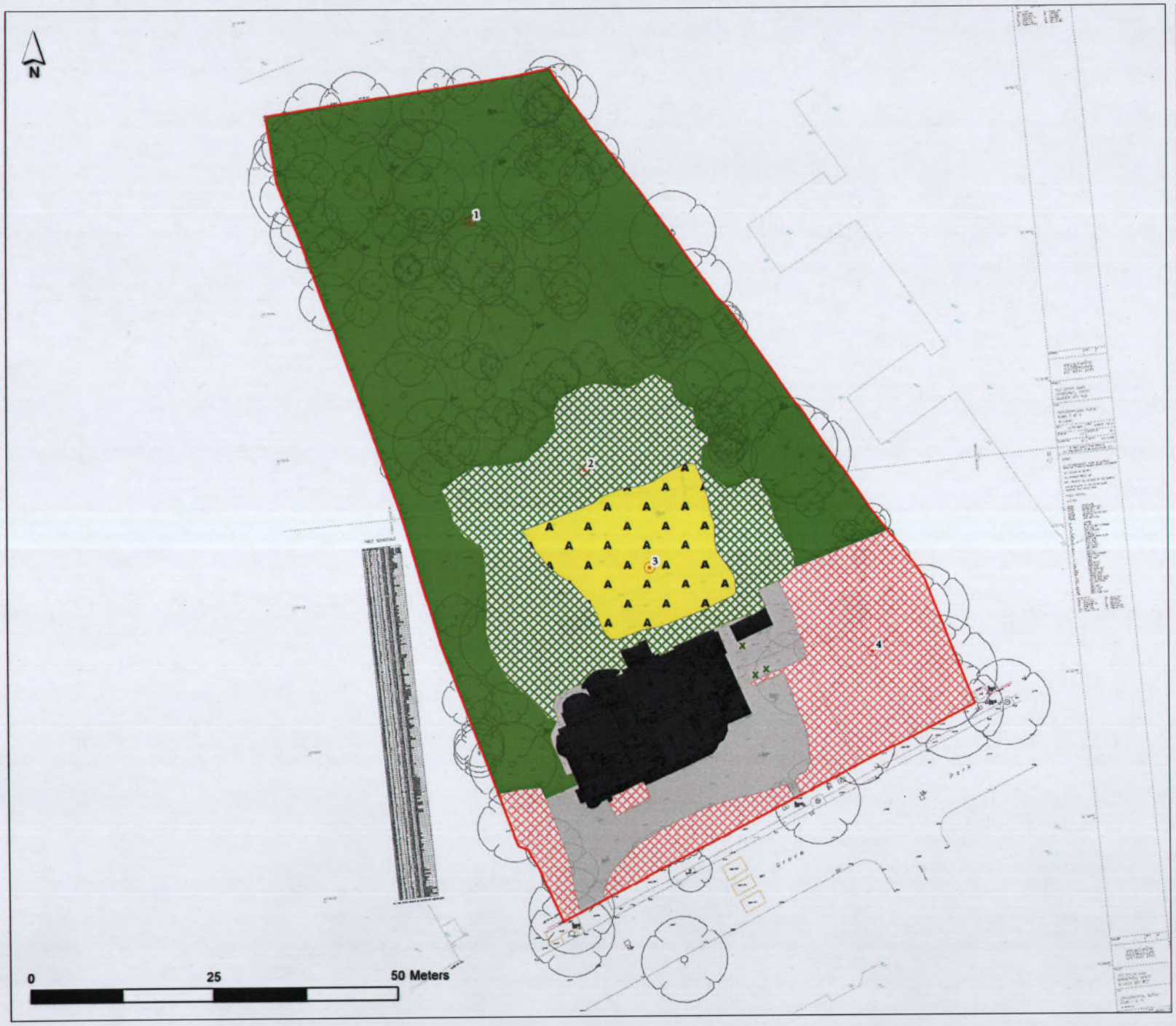


**Figure 1**

**Phase I Habitat Map**

**Key:**

- Broadleaved semi-natural woodland
- Dense scrub
- Introduced shrub
- Amenity grassland
- Hard standing, roads and tracks
- Building
- Scattered scrub
- Target note
- Site boundary

| | |
|---|---|
| **Date of survey:** | 5 September 2011 |
| **Job reference no:** | AEL 408 |
| **Status:** | Final |
| **Drawn by:** | LJB |
| **Checked by:** | RG |

Applied Ecology Ltd

# Appendix 3
# Ecological Appraisal Report (2006)

Applied Ecology Ltd

# ECOLOGICAL APPRAISAL OF 123 GROVE PARK, SOUTHWARK

Report for

Colliers CRE

July 2006

| | |
|---|---|
| **Client:** | **Nick Finney (Colliers CRE) on behalf of the Home Office** |
| **Title:** | **Ecological Appraisal of 123 Grove Park, Southwark** |
| **Project No:** | **Project No. AEL 0046** |
| **Date of Issue:** | **12th July 2006** |
| **Status:** | **Final Report** |

**Signed on behalf of Applied Ecology Ltd:**

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Dr Duncan Painter
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## Contents

# 1 INTRODUCTION

## 1.1 BACKGROUND

Applied Ecology Ltd. was commissioned by Colliers CRE (acting on behalf of the Home Office) to complete an ecological appraisal of 123 Grove Park, Southwark, London. The site comprises a large Victorian/Edwardian house together with its associated garden of around 0.58 hectares.

A walkover ecological survey of the site was completed by an experienced AEL ecologist on 7th July 2006. The site visit was undertaken during an optimum time of year for assessing habitat, botanical and ornithological interest. Habitat types were classified according to those published in the Greater London Authority (GLA) Open Space Strategy (OSS), and detailed botanical field notes on each habitat type present were taken.

On the basis of the habitat types present and reflecting on the sites position within the wider landscape, an assessment was made of the sites potential to support protected faunal species and species of high individual nature conservation value, which may have a bearing on future development proposals. In particular, all bird species observed during the walkover were listed, along with the number of individual birds observed and any signs of breeding behaviour. In addition, an assessment was made of the potential of individual trees to support roosting bats, by virtue of the presence of suitable features, including fissures, cracks and/or holes. It is of note however, that due to the presence of dense tree canopies during the assessment, many tree trunks and large branches were obscured and a full visual inspection was difficult.

## 1.2 PLANNING CONTEXT

The Wildlife and Countryside Act 1981 (as amended) provides the main legal framework for nature conservation and species protection in the UK. The Conservation (Natural Habitats, etc.) Regulations 1994, and the Countryside and Rights of Way Act 2000, provide supplementary protected species legislation. Specific protection for badgers is provided by the Protection of Badgers Act 1992.

### National Planning Guidance

Planning Policy Statement 9: Biodiversity and Geological Conservation August 2005 sets out Government's national planning policy on protection of biodiversity and

geological conservation through the planning system and replaces *Planning Policy Guidance Note 9 (PPG 9) on nature conservation* published in October 2004. In the context of PPS 9, biodiversity is taken to mean the variety of life in all its forms as discussed in the *UK Biodiversity Action Plan*[1].

The key principals of PPS 9 with respect to biodiversity which should be adhered to by regional planning bodies and local planning authorities in the context of development planning are as follows:

I. Development plan policies and planning decisions should be based upon up-to-date information about the environmental characteristics of their areas. These characteristics should include the relevant biodiversity resources of the area. In reviewing environmental characteristics, local authorities should assess the potential to sustain and enhance those resources.

II. Plan policies and planning decisions should aim to maintain, and enhance, restore or add to biodiversity conservation interests. In taking decisions, local planning authorities should ensure that appropriate weight is attached to designated sites of international, national and local importance; protected species; and to biodiversity interests within the wider environment.

III. Plan policies on the form and location of development should take a strategic approach to the conservation, enhancement and restoration of biodiversity, and recognise the contribution that sites, areas and features, both individually and in combination, make to conserving those resources.

IV. Plan policies should promote opportunities for the incorporation of beneficial biodiversity within the design of development.

V. Development proposals where the principal objective is to conserve or enhance biodiversity interests should be permitted.

VI. The aim of the planning decisions should be to prevent harm to biodiversity interests. Where granting planning permission would result in significant harm to those interests, local planning authorities will need to be satisfied that the development cannot reasonably be located on any alternative sites that would result in less or no harm. In the absence of any such alternatives, local planning authorities should ensure that, before planning permission is granted, adequate mitigation measures are put in place. Where a planning decision would result in significant harm to biodiversity interests which

[1] *Biodiversity: The UK Action Plan* published in 1994 – HMSO Cm 2428.

cannot be prevented or adequately mitigated against, appropriate compensation measures should be sought. If that significant harm cannot be prevented, adequately mitigated against or compensated for, then planning permission should be refused.

**The Mayor's Biodiversity Strategy**

The Mayor's Biodiversity Strategy[2] sets out 14 policies and 72 proposals to implement these policies, and lists the main partners who are asked to take each proposal forward. The document also provides an overview of London's wildlife and the places where it is to be found. A summary of the 14 policies is provided below:

- **Policy 1**: The Mayor will work with partners to protect, manage and enhance London's Biodiversity.
- **Policy 2**: The Mayor recognises the unique role of the River Thames in London's history and in the lives of Londoners, and its value for transport, recreation, biodiversity and archaeology. In recognition of their importance, the Mayor has set up the concept of a Blue Ribbon Network for the Thames and London's waterways and the land alongside them. This will establish principles concerning the use and management of the water and land beside it.
- **Policy 3**: The Mayor will encourage and promote the management, enhancement and creation of green space for biodiversity, and promote public access and appreciation of nature.
- **Policy 4**: The Mayor will promote the conservation and enhancement of London's farmland biodiversity.
- **Policy 5**: The Mayor will seek to ensure that opportunities are taken to green the built environment within development proposals and to use open spaces in ecologically sensitive ways. This is particularly important in areas deficient in open spaces and in areas of regeneration.
- **Policy 6**: The Mayor will promote local opportunities for regular direct contact with the natural world, through a variety of types of open space (such as allotments, community and cultural gardens, school grounds, environmental education centres and city farms, as well as informal wildlife areas).

[2] Greater London Authority (2002) *Connecting with London's nature: The Mayor's Biodiversity Strategy*. GLA. London

- **Policy 7**: The Mayor will promote environmental education, participation and training for all ages and across all sectors of London's society.
- **Policy 8**: London's many species, and the landscapes where they are found, should be celebrated and promoted.
- **Policy 9**: The Mayor supports the establishment and maintenance of partnerships at London wide and local levels to produce and implement Biodiversity Action Plans.
- **Policy 10**: The Mayor will promote the reputation of London as a world centre of excellence for biodiversity conservation, working with London's world class organisations for greater influence globally and to learn from exemplary experience at home and abroad.
- **Policy 11**: The Mayor will encourage the business community to play a major role in implementing the programme for conserving London's biodiversity.
- **Policy 12**: The Mayor will encourage practices, and support existing effective initiatives, that reduce London's impact on biodiversity elsewhere.
- **Policy 13**: The Mayor is committed to increasing the funding for biodiversity projects in London, and wishes to ensure that major new development projects include provision for biodiversity.
- **Policy 14**: Progress in conserving London's biodiversity should be measured with particular reference to the status of important species and habitats, and progress on proposed actions or targets.

**Southwark Local Biodiversity Action Plan (BAP)**[3]

A local Biodiversity Action Plan (BAP) has been prepared for the London Borough of Southwark. The priority habitats and species targeted by this plan are summarised in **Table 1.1**.

**Table 1.1.: Summary of priority habitats and species within Southwark**

| Habitats |
|---|
| Built up areas and gardens |
| Standing open water and canals |
| Ancient woodland |
| Grassland |
| Hedge and scrub |

| Species | |
|---|---|
| Stag beetle | *Lucanus cervus* |
| House martin | *Delichon urbica* |
| House sparrow | *Passer domesticus* |

[3] http://www.ukbap.org.uk/lbap.aspx?id=403

# 2 SURVEY FINDINGS

## 2.1 CONTEXT

The site is situated within a residential area of Southwark, London. It is bordered to the south by Grove Park Road, and to the east, north and west by residential properties and associated gardens. The boundaries of the garden itself comprise of a wooded panel fence along the western boundary and steel rail fence, which would allow potential animal movement on and off the site, to the north and east.

The closest non-statutory wildlife site is Grove Park Cuttings and Peckham Rye to East Dulwich Railsides (Borough Grade II), which is located around 50 metres to the north of the site and largely divided from it by residential houses and Grovelands Close. However, a very narrow wooded corridor appears to form a potential wildlife corridor, extending in a north-east direction from the site towards the rail cuttings.

## 2.2 HABITATS

### Grassland

A relatively small grassland lawn area (approx 950m$^2$, **photo 1**) was located to the rear (north) of the house and fringed by a mix of introduced shrubs and woodland. The lawn comprised amenity grassland (**OSS habitat code 07**), although recent neglect, particularly a lack of mowing, has resulted in the grassland sward developing a tall (around 30cm high) and somewhat rank appearance. In the continued absence of regular mowing the grassland is likely to develop semi-improved neutral grassland character (09).

The sward was dominated by red fescue *Fetuca rubra*, perennial rye-grass *Lolium perenne*, common bent-grass *Agrostis capillaris* and white clover *Trifolium repens*, with occasional sweet vernal-grass *Anthoxanthum odoratum*, Yorkshire fog *Holcus lanatus*, smaller cat's-tail *Phleum bertolonii*, hairy sedge *Carex hirta*, field wood-rush *Luzula campestris*, creeping buttercup *Ranunculus repens*, dandelion *Taraxacum officinale* agg., creeping cinquefoil *Potentilla reptans* and cat's-ear *Hypochaeris radicata*. The moss *Rhytidiadelphus squarrosus* was also locally abundant beneath the grasses.

### Woodland

The majority of the garden was wooded, including narrow fringes along the eastern (**photo 2**) and western (**photo 3**) flanks, and a more extensive area to the north

(**photo 4**).

The northern woodland area (approx 2,500m²) comprised of non-native broadleaved woodland (**02**) formed on variable topography, which although probably planted in the past, has been widely colonised by sycamore *Acer pseudoplatanus* and elm *Ulmus* species. Other tree species present included horse chestnut *Aesculus hippocastanum*, ash *Fraxinus excelsior*, cherry *Prunus avium*, lime *Tilia* species, London plane *Platanus x hispanica* and Norway maple *Acer platanoides*. Occasional semi-mature and mature individual trees occurred within this woodland area, and native woody scrub species, such as hawthorn *Crataegus mongyna* and elder *Sambucus nigra* formed a patchy scrub understorey.

The ground layer within the northern woodland was generally well developed, particularly beneath canopy gaps where patches of bramble and/or nettle dominated (**photo 5**). Other ground flora species included ivy *Hedera helix*, wood avens *Geum urbanum*, hedge bindweed *Calystegia sepium*, the introduced yellow archangel *Lamiastrum galeobdolon* subsp. *argentatum*, enchanter's-nightshade *Circaea lutetiana*, cleavers *Galium aparine*, cow-parsley *Anthriscus sylvestris*, greater celandine *Chelidonium majus*, garlic mustard *Allaria peetiolata* and hedge woundwort *Stachys sylvestris*.

In addition, Japanese knotweed *Fallopia japonica* (an invasive and notifiable plant species) occurred with the northern woodland largely along the western side (**photo 6**). The distribution of this plant species was not mapped in detail, however high concentrations of plant stems were recorded at TQ3322476172 (40+ stems over 4x3m), TQ3320976160 (20+ stems over 3x3m), and TQ3322076147 (40+ stems over 3x3m).

The narrow western and eastern flanks of woodland (approx 350m² and 560m² respectively) were similar in character to the northern area and are also classified as non-native broadleaved woodland (**02**). The eastern flank was situated on a rising bank that slopes up from the lawn area to the adjacent garden boundary, and grades into disturbed ornamental woodland to the south, where it is situated among outbuildings (sheds etc.) and former garden paths. This area had been subject to significant fly-tipping (**photo 7**). In general, these peripheral woodland areas were characterised by a greater diversity of planted and ornamental tree and shrub species, including cotoneaster species, yew *Taxus baccata* and holly *Ilex aquifolium*. The ground layer comprised patches of bramble, together with occasional wood avens, red campion *Silene dioica*, ivy, wood dock *Rumex sanguinea*, cow-parsley and cleavers. Around five tufts of grey sedge *Carex divulsa* subsp. *divulsa* occurred on

bare soil along the edge of the western woodland flank close to the house.

**Planted shrubbery**

Occasional areas of planted shrubbery (**38**) occurred throughout (**photo 8**) totalling approximately 220m², including formal beds at the front of the house and as fringes and pockets around the woodland. Species included garden privet *Ligustrum ovalifolium*, snowberry *Symphoricarpos albus*, cherry laurel *Prunus laurocerasus* and cotoneaster species.

**Ruderal or ephemeral vegetation**

A small area (approx 27m²) of ruderal or ephemeral vegetation (**12**) comprising of scattered plants (around 10% cover), was recorded from the old brick patio to the east of the house (**photo 9**). Species recorded include feverfew *Tanacetum parthenium*, rosebay willowherb *Chamerion angustifolium*, chickweed *Stellaria media*, American willowherb *Epilobium ciliatum*, Canadian fleabane *Conyza canadensis* and smooth sow-thistle *Sonchus oleraceus*.

## 2.3 PROTECTED SPECIES

**Reptiles**

Despite a visual search of grassland areas and any refuges habitat present for the presence of reptiles during the walkover survey (which was undertaken in suitable weather conditions for reptile observation), no reptiles were observed. Given the isolated nature of the site, its relatively small size and the more intensive management to which the garden was probably subject prior to its recent period of neglect, the site is considered to be of limited value to reptile species, including slow worms and common lizard.

**Bats**

Due to access restrictions no assessment was made of the house and its roof voids for the presence roosting bats.

The majority of the semi-mature and mature trees present did not appear to possess any features of value to roosting bats. However, two individual sycamore trees (tree no. 16 and probably tree no. 17, as shown on tree survey plan[4]) were found to

[4] Ian Keen Ltd (2006) Tree Survey for Land at 123 Grove Park, Dulwich, SE5. Report to the Home Office

possess holes (former woodpecker holes) of potential value to roosting bats. Tree no. 16 (TQ3325276187) possessed 5+ holes, one of which had distinct staining beneath that may be attributable to bat roosting (**photo 10**), although further specific survey would be required to confirm this.

**Birds**

All bird species observed during the walkover survey were recorded and are summarised in **Table 2.1**. In summary, no bird species of specific conservation concern (red or amber list species[5]) were recorded during the current survey.

**Table 2.1.: Summary of bird species recorded from 123 Grove Park**

| Species | Number of individual birds observed | Suspected breeding within the garden during the current survey |
|---|---|---|
| Blackbird | 2 | No |
| Carrion crow | 1 | No |
| Ferral pigeon | 3 | No |
| Great tit | 3 | Yes |
| Green finch | 1 | No |
| Wood pigeon | 1 | No |
| Wren | 1 | No |

A single owl pellet was found on the garden lawn, although no evidence of owl nesting was observed and no habitats likely to provide suitable owl nesting habitat were present on the site. In addition, although no woodpeckers were seen on during the survey, woodpecker holes within sycamore trees (2 individual trees) in the northern woodland area indicate that woodpeckers have nested within the site in previous years.

[5] http://www.rspb.org.uk/Images/BOCC%20in%20Wales%20Eng%20%20W%20text_tcm5-48681.pdf

# 3 RECOMMENDATIONS AND FURTHER SURVEY REQUIREMENTS

## 3.1 HABITATS

The habitats found within the study area are all of relatively low inherent ecological and botanical interest. However within the local context, these habitats are likely to be of value to a range of garden bird species, and also include priority habitats under the Southwark BAP, including `built up areas and gardens' and `grassland'.

The presence of Japanese knotweed within the northern woodland area will require the development of an eradication strategy prior to development proceeding, as it is an offence to plant or otherwise cause the species to grow in the wild. This plant is also classed as 'controlled waste' and as such must be disposed of safely at a licensed landfill site according to the Environmental Protection Act (Duty of Care) Regulations 1991.

## 3.2 PROTECTED SPECIES

Given the isolated nature of the site, its relatively small size and the more intensive management to which the garden was probably subject prior to its recent period of neglect, the site is considered on balance to be of limited value for reptile species, and a full reptile survey is not considered necessary.

In order to avoid illegal bird disturbance, the removal of any habitat of potential value to nesting and breeding birds (e.g. woodland, shrubberies etc.) must be undertaken outside of the bird breeding period (mid-March to August, inclusive), or immediately following a check and the confirmed absence of breeding birds by a qualified ecologist.

Subject to the exact development proposals, it is recommended that a survey of the building including its roof voids is undertaken during the main bat activity period (May-September) to establish if bats are using this building and to gain an understanding of the type and level of use. In addition, the two sycamore trees identified as possessing suitable holes for roosting bats which included a single hole with evidence of possible bat staining, must be checked by a suitably qualified ecologist during the main bat activity period in order to verify bat presence or otherwise, prior to felling or limb removal.

# 4 CONCLUSIONS

Subject to the completion of a further bat survey which should, ideally, include a survey of the house for the potential presence of roosting bats in the roof void and cellar (if present), and an additional check of individual trees with recognised bat potential (to be undertaken between May-September), there are no anticipated significant ecological issues associated with development of the site. If roosting bats are discovered and significant development effects on them are anticipated, then an appropriate mitigation strategy should be developed and implemented under the auspices of a Rural Development Service licence.

Future development will need to take account the confirmed presence of the invasive alien plant Japanese knotweed, and an eradication programme should be developed and agreed with the necessary authorities before site clearance operations take place. Site clearance work should also take account the potential presence of nesting birds in trees and shrub vegetation, and care should be taken to ensure that any vegetation clearance is timed to avoid the main bird breeding season (mid-March to July inclusive) wherever practicable. Where it is not possible to remove vegetation outside this time period, the presence of nesting birds immediately prior to vegetation removal will need to be verified by an appropriately qualified ecologist, and appropriate stand-offs around nest sites respected until young birds have fledged and are independent form the parent birds.

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

Photo 7

Photo 8

Photo 9

Photo 10

# Appendix 4
# Bat Report (2007)


# 123 GROVE PARK, SOUTHWARK
# BAT REPORT

Report for Citrus Group

August 2007

**Client:** Citrus Group

**Title:** 123 Grove Park, Southwark – Bat Report

**Project No:** Project No. AEL 0046

**Date of Issue:** 17 August 2007

**Status:** Final Report

**Signed on behalf of Applied Ecology Ltd:**

.....

Dr Duncan Painter
Director

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## Contents

# 1 INTRODUCTION

## 1.1 BACKGROUND

Applied Ecology Ltd. was commissioned by Citrus Group to complete a bat survey of 123 Grove Park, Southwark. The site comprises of a large Victorian/Edwardian house together with its associated garden of around 0.58 hectares. A previous ecological assessment was undertaken by AEL in July 2006[1]. Full access inside the grounds of the property was not possible at this time although two trees with the potential to support roosting bats were identified. Due to these access restrictions it was considered necessary to conduct an internal inspection of the house and a further inspection of trees with bat roost potential to verify bat presence or absence. This assessment was completed in July 2007 and was followed by a bat emergence and general activity survey in August 2007.

## 1.2 LEGISLATION

All bat species and their roosts in Britain are protected under the Wildlife and Countryside Act 1981 as amended, through their inclusion on Schedule 5. They are also included on Annex IV of Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (known as the Habitats Directive). As a result of the UK ratifying this directive, all British bats are protected under The Conservation Regulations 1994 (the Habitat Regulations) which make it an offence to kill, injure, capture or disturb bats or obstruct access to, damage or destroy bat roosts. The implementation of the Countryside and Rights of Way Act 2000 (CRoW 2000) has amended the WCA to include 'reckless' damage, destruction or disturbance of a roost.

From a legal perspective, a roost is any structure or place used by a bat for shelter or protection. This could be any structure, for example any building or mature tree. Bats use many roost sites and feeding areas throughout the year. These vary according to bat age, condition, gender and species, as well as season and weather. Since bats tend to re-use the same roosts for generations, the roost is protected whether the bats are present or not. The legislation provides defences so that necessary operations may be carried out in dwelling places used by bats, provided that English Nature are notified and allowed a reasonable time to advise on whether the proposed operation should be carried out, and if so, the approach to be used.

[1] Ecological Appraisal of 123 Grove Park, Southwark. Applied Ecology Ltd Report for Colliers CRE, July 2006.

With respect to development, the Department of Food & Rural Affairs (DEFRA) Rural Development Service (RDS) will issue development specific licences to legalise works effecting bats roosts provided the potential development effects on bats are properly assessed and appropriate mitigation developed to ensure that significant negative effects on bat population ecology do not occur.

The UK is a signatory to the Agreement on the Conservation of Bats in Europe, established under the Bonn Convention. The Fundamental Obligations of Article III of this Agreement require the protection of all bats and their habitats, including the identification and protection from damage or disturbance of important feeding areas for bats.

# 2 SURVEY APPROACH

## 2.1 DAYTIME INSPECTION

### Building Inspection

A building inspection of 123 Grove Park was undertaken on 18 July 2007. This comprised a detailed internal inspection using a high powered torch (1 million candle power) of all roof spaces within the property to look for evidence of bat presence e.g. droppings, staining, live or dead bats etc. An external inspection of the house was also completed using binoculars to verify the presence of potential bat entry and exit points (and associated signs of bat activity) associated with the built fabric of the building.

### Tree Inspection

A detailed inspection of all trees in the grounds of the house that are proposed for removal as part of the re-development was undertaken to determine the presence of features that could be used by tree roosting bat species (holes, splits, cracks etc.), and associated signs of bat activity.

## 2.2 EMERGENCE SURVEY

A bat emergence survey was undertaken by two experienced AEL ecologists on 16 August 2007 (Sunset 20.22). Full access to the grounds was not possible on this date, and the survey focussed on the section of the house where potential bat access had been identified in the eaves of the building. It was not possible to complete a survey of the trees on site.

Two Tranquility Transect time expansion bat detectors (set to record at 320ms, 32 division and each linked to a digital recording device set to record automatically all bat calls heard by the detector) were employed during the survey. All recordings were analysed using Batsound software to aid bat species identification. The survey commenced at 20.10 and finished at 21.52 and comprised two ecologists watching the building for emerging bats. These times encompass the average emergence times of all British bat species.

# 3 SURVEY FINDINGS

## 3.1 DAYTIME INSPECTION

The roof spaces within 123 Grove Park are very extensive and only 80% of the roof space could be accessed. The other 20% of the roof space was inaccessible either because the space was too small to allow access to the surveyor or because it was considered unsafe to do so. The internal inspection of the property (**Photo 1.**) revealed no evidence (droppings, live or dead bats, staining etc.) of bats within the roof spaces that could be surveyed (**Photos 2/3**).

The tree inspection revealed only two trees that possessed features attractive to roosting bats. These trees, both Sycamores (tree nos. 16 and 17, as shown on the tree survey plan)[2], had been identified in a previous inspection in July 2006[1].

Both trees possessed woodpecker holes; tree 16 (**Photo 4.**) possessed a total of eight woodpecker holes, none of which had fresh staining evident. However, old staining that had been identified in the previous inspection was still obvious.

Tree 17 (**Photo 5.**) possessed two woodpecker holes; again no fresh staining was evident.

The external inspection of the building identified definite potential bat access points to the roof spaces within 123 Grove Park, under the eaves on the road side of the house (**Photo 6.**). As not all of the roof space could be accessed the possibility that bats are using the roof spaces could not be ruled out. As it was considered that the house had the potential to support roosting bats an evening survey was undertaken in August 2007 to determine the exact status of this potential roosting site.

[2] Ian Keen Ltd (2006). Tree Survey for land at 123 Grove Park, Dulwich

Photo 1.

Photo 2.

Photo 3.

Photo 4.

Photo 5.

Photo 6.

### 3.2 EMERGENCE SURVEY

No bats were seen to emerge from the house during the emergence survey undertaken on 16 August 2007. A single bat was seen to fly from the direction of the road over the house in a north-westerly direction at 21.13. This was identified from the recordings as a Common Pipistrelle. This species generally emerges from its roost 20-30 minutes after sunset. The individual recorded during the survey was noted 51 minutes after sunset and would suggest that the roost from where it came is a considerable distance away from the development site. No other bats were recorded during the survey.

## 4 SUMMARY OF FINDINGS

### 4.1 RECOMMENDATIONS

The results of the emergence and activity survey undertaken on 16 August 2007 suggests that bats are not using the roof voids of the house during the breeding season and any development work that takes place during this period would not detrimentally affect the integrity of the local bat populations.

It is recommended that the two Sycamore trees with potential bat roost features to be lost as a result of the development should be assessed in detail using ladders, torches, mirrors as considered necessary by an experienced bat worker to check for bat presence the day before the trees are scheduled for removal during the bat active season (March to September). If considered necessary, an evening bat emergence survey at each tree should be completed to verify that bats are not using the tree. If bat absence is confirmed, the trees should be removed by a qualified tree surgeon the day after the bat survey is completed. If bats are found to be present, further monitoring should be completed to establish the nature of the roost, and an application made to Natural England European Wildlife Licencing Unit for a development specific licence to remove the trees.

# Appendix 5
# Ecology Survey Report (2011)

Barry Kitcherside
Chart Plan (2004) Ltd
Mansard Cottage
65 Stoneleigh Road
Limpsfield Chart
Oxted
Surrey RH8 0TP

31 March 2011

Dear Barry,

**ECOLOGY SURVEY REPORT – 123 GROVE PARK, SOUTHWARK**

I am writing to set out the findings of my ecology survey of the above site completed on 25 March 2011. The survey was completed to update two previous surveys of the site undertaken by my company in 2006 and 2007[1]. I am an ecologist with over 20 years professional experience, a Chartered Environmentalist and licenced bat worker, I am also a voluntary Bat Warden for Natural England (Three Counties Team).

I completed an external and internal inspection of the house to search for signs of roosting bats, and identify features that bats could use for roosting. I also completed a walkover survey of the grounds and garden to search for evidence of legally protected animal species, species with elevated levels of biodiversity interest in the context of the Southwark Biodiversity Action Plan (BAP) and invasive plants that might be of planning concern with respect to developing the site.

In general the site was in a very similar condition to that reported previously, with the house (see **Photos 1-2**) possessing a number of built features about its exterior that could support crevice roosting bat species including gaps behind soffits (**Photo 3**) and lifting roof tiles (**Photo 4**). No physical evidence of bats was seen on any external surface, and the presence of bats using these features remains, as reported previously, a theoretical possibility only. It is of note that the current survey was completed outside the start of the main bat active season, and therefore evidence of bats (e.g. their droppings) would not necessarily be expected to be visible on exposed areas about the buildings exterior.

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[1] Applied Ecology Ltd (July 2006) *Ecological Appraisal of 123 Grove Park, Southwark.* Report for Colliers CRE issued 12 July 2006
Applied Ecology Ltd (August 2007) 123 *Grove Park, Southwark – Bat Report.* Report for the Citrus Group

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Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

**123 Grove Park, Southwark**
Photo-sheet 1 of 1

Photos taken March 2011

Applied Ecology Ltd

Two old bat droppings of a size and shape consistent with those produced by a Pipistrelle bat were present on the lid of a water tank in the loft (see **Photo 2**), but no other evidence of bats was present. This along with the very light conditions within the roof space as a result of gable end windows (some with missing panes of glass), indicates that a large or important bat roost of species that require large roof voids to fly within (e.g. Brown Long-eared bat) is not present, and that any roosting activity is likely to be confined only to the use of crevice type features by Pipistrelle bats about the exterior of the property. The two droppings within the loft are considered most likely to have been produced by a single bat making a one off exploratory visit of roof space entering via the window frame with the missing window pane.

The two sycamore trees in the wooded area of the garden (**Photos 5-6**), reported previously to possess woodpecker holes that could be used by tree roosting bats, were still standing, and it appeared likely that one or both were in use by greater spotted woodpecker at the time of the survey. No obvious evidence of roosting bats was seen in association with either tree.

The previously reported invasive alien plant Japanese Knotweed was still present in the garden albeit the stand had increased in size since 2006. Similarly, as reported before, a number of fallen trees and log piles were also present in the wooded area of the garden, and are likely to provide dead wood habitat for Stag Beetle (a local BAP and legally protected species). Stag Beetle pupae and larvae require below ground dead wood habitat to persist and it is very difficult to prove their presence/absence from a site as it would involve destroying the habitat on which they depend to search for them. The presence of adult Stag Beetles in the garden does not necessarily prove breeding presence in the garden unless the beetle is seem to emerge from dead wood within the site. In light of this, and reflecting unverified reports of Stag Beetle presence in the local area, I would recommend a precautionary approach is adopted with respect to Stag Beetle, and the species is regarded as being present within the wooded part of the site.

**Recommendations**

***Bats***

A bat activity survey in line with current best practice survey guidance should be completed to verify the presence/absence of roosting bats within the house prior to its demolition. If bats are found to be present, it is likely they will be crevice roosting species (almost certainly Pipistrelle bats) roosting in external crevice features. It is of note that such features could be easily replicated in any new building, and it is recommended that bat roost features are incorporated into the exterior of the new building as compensation for the loss of crevice roosting opportunity.

1. Ten enclosed bat bricks (Ibstock Type B or similar) to be incorporated in suitable locations within the exterior of the new building (locations to be agreed by a suitably experienced bat worker).

2. If the presence of roosting bats (i.e. more than one bat) is verified, then the building to be demolished under the auspices of a Natural England European Protected Species (EPS) development licence as considered necessary.

3. Standing dead trees with bat roost features to be felled at a time when they are least likely to be in use by nesting birds and breeding tree roosting bats in the autumn months (September to early November) immediately after a detailed check has been carried out that birds and bats are absent from them. Trees to be soft-felled if bat absence cannot be verified e.g. if trees prove unsafe to climb. Trees to be felled under the auspices of an EPS licence, as necessary, if the presence of tree roosting bats is confirmed.

4. As compensation for the loss of bat roost potential trees, six woodcrete bat boxes to be mounted in suitable locations on retained trees or other suitable structures within the grounds of the site in locations to be agreed by a suitably experienced bat worker.

*Stag Beetle*

A boundary of the garden (minimum width 3m) should be set aside as a Stag Beetle protection zone in perpetuity. In advance of site clearance and construction the following measures should be completed:

5. All dead wood and brashings to be removed by hand and used to construct two Stag Beetle loggeries (2.5m circumference) within the protection zone. Loggeries to be supplemented with large hard wood logs (not pine) as necessary. Left over dead wood to be left as habitat piles on the ground surface within the protection zone.

6. All ground immediately below and within 1m of the edge of existing dead wood log/brash pile locations to be hand dug under ecological supervision to search for Stag Beetle larvae or pupal cells. All larvae found to be transferred to one of three Stag Beetle breeding boxes to be constructed in advance of site clearance within the Stag Beetle protection zone.

7. A Stag Beetle information board to be erected to describe Stag Beetle ecology, conservation and the function of the mitigation measures provided within the protection zone.

*Japanese Knotweed*

8. A Japanese Knotweed elimination strategy be developed and implemented in advance of site clearance to avoid the spread of knotweed as a result of site clearance and construction operations.

In summary, I believe that provided the recommendations numbered 1-8 listed above are made a condition of any planning permission that is issued, there should be no significant adverse impact on the ecological interests of the site and the biodiversity value of the site will be maintained in the long term.

Please do not hesitate to contact me should you have any questions or points of clarification.

Yours sincerely,

**Dr Duncan Painter MIEEM CEnv**
On behalf of Applied Ecology Ltd.

# Appendix 6
# Bat Activity Survey Report (2011)


10-AP-3751
2154-C

# 123 GROVE PARK, SOUTHWARK
# BAT ACTIVITY SURVEY

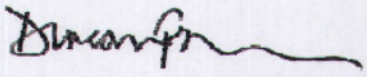
Report for

**Citrus Health Care**

May 2011

| | |
|---|---|
| **Client:** | **Citrus Health Care** |
| **Title:** | **123 Grove Park, Southwark**<br>**Bat Activity Survey** |
| **Project No:** | **AEL 408** |
| **Date of Issue:** | **12 May 2011** |
| **Status:** | **Final** |

**Signed on behalf of Applied Ecology Ltd:**



Dr Duncan Painter
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---

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# Contents

# 1 INTRODUCTION

## 1.1 BACKGROUND

1.1.1 Applied Ecology Ltd (AEL) was appointed by Citrus Health Care to complete a bat activity survey of a large residential house located at 123 Grove Park, Camberwell, Southwark.

1.1.2 The survey was undertaken to inform a development proposal to re-develop the site for residential accommodation following the discovery of two bat droppings consistent in size and shape with those produced by a pipistrelle bat on the cover of a water tank in the loft of the property in March 2011 – (see **Appendix 1** for survey report). The March survey was completed by AEL to update two previous surveys of the site undertaken in 2006 and 2007[1] which recorded no evidence of roosting bats in the building only features that had the potential to support roosting bats such as missing or lifted roof and hanging tiles about the exterior of the property.

1.1.3 The objective of the bat activity survey that is the subject of this report is to confirm the nature and status of bat roosting in the building reflecting that bats and their roosts are protected by law, and to inform the scope of appropriate mitigation and compensation measures to enable the re-development of the site to proceed lawfully as necessary

## 1.2 BAT LEGISLATION AND ECOLOGY

**Legislation**

1.2.1 All UK bat species are protected by two separate legislative frameworks: the Conservation (Natural Habitats, &c.) Regulations 1997 and the Wildlife and Countryside Act 1981, as amended,

1.2.2 Under Section 39 (part 1) of the amended Regulations a person commits an offence if he:

> *"(b) deliberately disturbs wild animals of any such species [i.e. a European Protected Species] in such a way as to be likely significantly to affect:*

[1] Applied Ecology Ltd (July 2006) *Ecological Appraisal of 123 Grove Park, Southwark.* Report for Colliers CRE issued 12 July 2006
Applied Ecology Ltd (August 2007) 123 *Grove Park, Southwark – Bat Report.* Report for the Citrus Group

I. *the ability of any significant group of animals of that species to survive, breed, or rear or nurture their young; or*

II. *the local distribution or abundance of that species."*

1.2.3 Although the term a 'significant group' cannot easily be defined, and may vary between species, the construction of this limb of the offence clearly excludes individual animals from its scope.

1.2.4 A person would also commit an offence under Section 39 if he:

*"(d) damages or destroys a breeding site or resting place of such an animal [European Protected Species]."*

1.2.5 Destruction or damage to a bat roost, whether a bat is present or not, would constitute an offence as bats return to the same places year after year, and there are no qualifications, exemptions or defences for this apart from a licence (see below). Any degree of damage could qualify as an offence and there is no threshold of 'significant' as for the deliberate disturbance offence. Section 39 (part 11) goes on to state that a person guilty of an offence *"is liable on summary conviction to imprisonment for a term not exceeding six months or a fine not exceeding level 5 on the standard scale, or to both."*

**Licences**

1.2.6 In England, such offences can be licensed by Natural England for a number of purposes set out in regulation 44. These include 'imperative reasons of over-riding public interest', which could cover the deliberate significant disturbance or destruction of a bat roost during development operations. Licences can only be issued where there is no satisfactory alternative and where the action authorised will not adversely affect the conservation status of the species involved. Section 9 of The Wildlife & Countryside Act, 1981 (as amended) make a person guilty of an offence if intentionally or recklessly:

(a) *he damages or destroys any structure or place which any wild animal on Schedule 5 [all bat species] uses for shelter or protection;*

(b) *he disturbs any such animal while it is occupying a structure or place which it uses for shelter or protection; or*

(c) *he obstructs access to any structure or place which any such animal uses for shelter or protection.*

1.2.7 The existence of two separate disturbance offences in two separate legislative frameworks presents a challenge of interpretation and application. Neither can be dismissed as they both operate in rather different ways. The offence in the Regulations does not apply to non-significant disturbance and seems unlikely to apply to individual bats, but is licensable for development purposes, particularly with respect to damage or destruction of a bats breeding site or resting place. The offence in the WCA applies to individual animals, but only in places of shelter or protection, is not licensable for development, but is subject to two important defences. These are:

- that the action took place within a dwelling-house; or
- that the act was the incidental result of a lawful operation and could not reasonably have been avoided.

1.2.8 For bats, these defences cannot be relied upon, except in the living-area of a dwelling-house, unless Natural England have been notified and allowed a reasonable time to advise on whether the proposed operation should be carried out and, if so, the method to be used.

**Ecology**

1.2.9 The distribution and conservation status of the 17 species known to occur in mainland UK are shown in **Table 1.**

**Table 1: Distribution and conservation status of the 17 bat species known to occur in mainland UK (Status from Hutson[2] and the Bat Conservation Trust[3])**

| COMMON NAME | SPECIES NAME | DISTRIBUTION/STATUS | IUCN STATUS |
|---|---|---|---|
| Natterer's Bat | *Myotis nattereri* | Widespread/Frequent | Vulnerable |
| Daubenton's Bat | *M. daubentonii* | Widespread/Common | Not threatened |
| Whiskered Bat | *M. mystacinus* | Widespread/Scarce | Vulnerable |
| Brandt's Bat | *M. brandti* | Widespread/Scarce | Vulnerable |
| Bechstein's Bat | *M. bechsteinii* | Restricted/Rare | Vulnerable |
| Greater Mouse-eared Bat | *M. myotis* | Classified as extinct within U.K. | Vulnerable |
| Soprano Pipistrelle Bat | *Pipistrellus pygmaeus* | Widespread/Common | Not threatened |
| Common Pipistrelle Bat | *P. pipistrellus* | Widespread/Common | Not threatened |

[2] Hutson, A.M. (1993) Action Plan for the Conservation of bats in the United Kingdom,
[3] The Bat Conservation Trust, accessed at www.bat.org.uk.

| | | | |
|---|---|---|---|
| Nathusius' Pipistrelle Bat | *P. nathusii* | Unknown | Not threatened |
| Brown Long-eared Bat | *Plecotus auritus* | Widespread/Common | Not threatened |
| Leisler's Bat | *Nyctalus leisleri* | Widespread/Scarce | Vulnerable |
| Noctule Bat | *N. noctula* | Widespread/Common | Not threatened |
| Serotine Bat | *Eptesicus serotinus* | Restricted/ Frequent | Vulnerable |
| Barbastelle Bat | *Barbastella barbastellus* | Restricted/Rare | Endangered |
| Greater Horseshoe Bat | *Rhinolophus ferrumequinum* | Restricted/Rare | Vulnerable |
| Lesser Horseshoe Bat | *R. hipposideros* | Restricted/Rare | Vulnerable |
| Grey Long-eared Bat | *Plecotus austriacus* | Restricted/Rare | Not threatened |

1.2.10 The Bat Conservation Trust (BCT) website lists six of the 17 species that have been identified by the UK Government as needing special conservation help due to their rarity or significant decline. All six species have Species Action Plans (SAPs). These plans have the objective of increasing their existing population levels through protecting and enhancing the quality of their roosting and foraging habitats. Plans exist for the following species:

- Greater Horseshoe Bat (*Rhinolophus ferrumequinum*);
- Lesser Horseshoe Bat (*R. hipposideros*);
- Bechstein's Bat (*Myotis bechsteinii*);
- Barbastelle Bat (*Barbastella barbastellus*);
- Soprano Pipistrelle Bat (*Pipistrellus pygmaeus*);
- Brown Long-eared Bat (*Plecotus auritus*); and
- Noctule (*Nyctalus noctula*).

1.2.11 The majority of the bats found in mainland UK all belong to the family Vespertilionidae. Although each species may have its own specific preferences for the structures it uses for roosting, and different dietary and foraging habitat needs, all of these bats show a common life history and annual cycle of behaviour. These include the following characteristics and/or events.

1.2.12 All bats use torpor to save energy whenever food supplies are scarce. Torpid bats use less than 1% of the energy used by active bats, even when resting. Winter torpor, or hibernation, involves extended torpor for many days. It generally

occurs between November and April. Winter roosts must provide cool, damp conditions. Such conditions occur in underground structures such as caves, disused mines and tunnels.

*1.2.13* When fully active, bats must have access to large amounts of insect food supplies. Individuals may need to eat over 50% of their body weight per day. This particularly applies to females nursing young. Summer roosts must provide bats with warm conditions to reduce the costs of regulating their body temperature. Normally bats congregate in colonies in summer to share the costs of keeping warm. Maternity colonies are the largest. They may use holes and crevices in trees or building attics as summer roosts, especially those warmed by the sun.

*1.2.14* Some bat summer roosts contain only a few, or even a single bat. Mature males often occupy such roosts as mating sites.

*1.2.15* Bats normally use the same summer and winter roosts, especially maternity roosts and hibernation sites, on an annual cycle over long time periods. Species that use trees for roosting are most likely to use a number of different summer roosts. Some bat populations have been shown to occupy 19 different roosts in a single summer.

*1.2.16* Bat reproduction is unique among mammals. Bats usually mate in the autumn and early winter, but sometimes also in spring. Males may advertise for females from their roosts using social calls (Pipistrelles, Noctules, Leisler's), or visit underground swarming sites and wait for females to arrive (*Myotis* bats, Brown long-eared, Serotines). Sperm is stored until the spring by both sexes.

*1.2.17* Fertilization occurs in spring, and pregnancy proceeds up to June, when single births occur. Poor weather (cold, or wet and windy) prevents bats from feeding at any time of the summer. The use of torpor to survive poor weather may prolong a female's pregnancy and/or reduce her milk supplies during lactation. Hence climatic conditions affect reproductive performance survival and ultimately population levels over time.

*1.2.18* Numbers at maternity colonies peak between June and mid August, when climate and insect availability are normally most favourable. The single young are large (about 20% or more of the mother's body weight) at birth and grow rapidly. They are fully grown and weaned by about 45 days after birth. By late August large maternity colonies have dispersed; the bats moving to alternative summer roosts. In September and October, bats mate and store fat for winter hibernation.

# 2 SURVEY APPROACH

## 2.1 BACKGROUND

2.1.1 Guidance on the level of survey effort necessary to verify use of a building by roosting bats in relation to development has been produced by the Bat Conservation Trust (BCT) in 2007[4], and is endorsed by Natural England as the methodological approach that should be followed in relation to assessing development impacts on bats. BCT 2007 suggests that up to four bat activity surveys of a building may need to be conducted in order to have confidence in a negative survey result, and at least two of these surveys should be conducted between mid-May and August to correspond with the bat maternity (breeding) period.

2.1.2 The current survey was based on the completion of a two surveys - an emergence survey on 4 May 2011 and a following return to roost survey on 5 May 2011. Both surveys were conducted within the recognised summer bat activity and maternity period.

## 2.2 BAT ACTIVITY SURVEY

**Emergence & Return Survey – 4-5 May 2011**

2.2.1 A bat activity survey comprising a dusk emergence survey to watch for bats emerging from the property at dusk, as well as recording general levels of bat activity around the site, was undertaken on 4 May 2011. The survey was completed by Miss Crystal Acquaviva – an experienced AEL bat worker who holds a Natural England licence that legally enables her to enter and disturb bat roosts and handle bats for scientific purposes in all counties of England (Licence no. 20110210) with assistance from a second AEL ecologist Dr Martin Brammah (AEL).

2.2.2 A visual inspection of the accessible external walls and footings around the building and on surfaces inside the building's roof space was completed to search for bat droppings or any other field evidence that might indicate the location of roosting bats in advance of the emergence survey commencing on 4 May. No additional bat dropping evidence to that recorded previously in the building was found.

[4] Bat Conservation Trust (2007) *Bat Surveys – Good Practice Guidelines.* Bat Conservation Trust, London

2.2.3 Sun set on the evening of the survey was at 20.28, and the emergence survey commenced 15 minutes before this time and ended at approximately 90 minutes after sun set. Weather conditions were suitable for bats to be active during the survey with an air temperature at the start of 13.4$^{0}$C, a gentle breeze and 100% cloud cover. Light drizzle fell at the start of the survey but stopped after a few minutes and did not restrict bat activity. All surveying equipment was removed from site after the completion of the emergence survey as the site was not secure.

2.2.4 Both surveyors returned to site in darkness the following morning and repositioned the survey equipment in the locations shown by **Figure 1**. The return to roost survey was completed from 04.00 until 05.30 - sun rise was at 05.25. During this time, both surveyors slowly patrolled their respective halves of the building to look for bats returning to roost in the building.

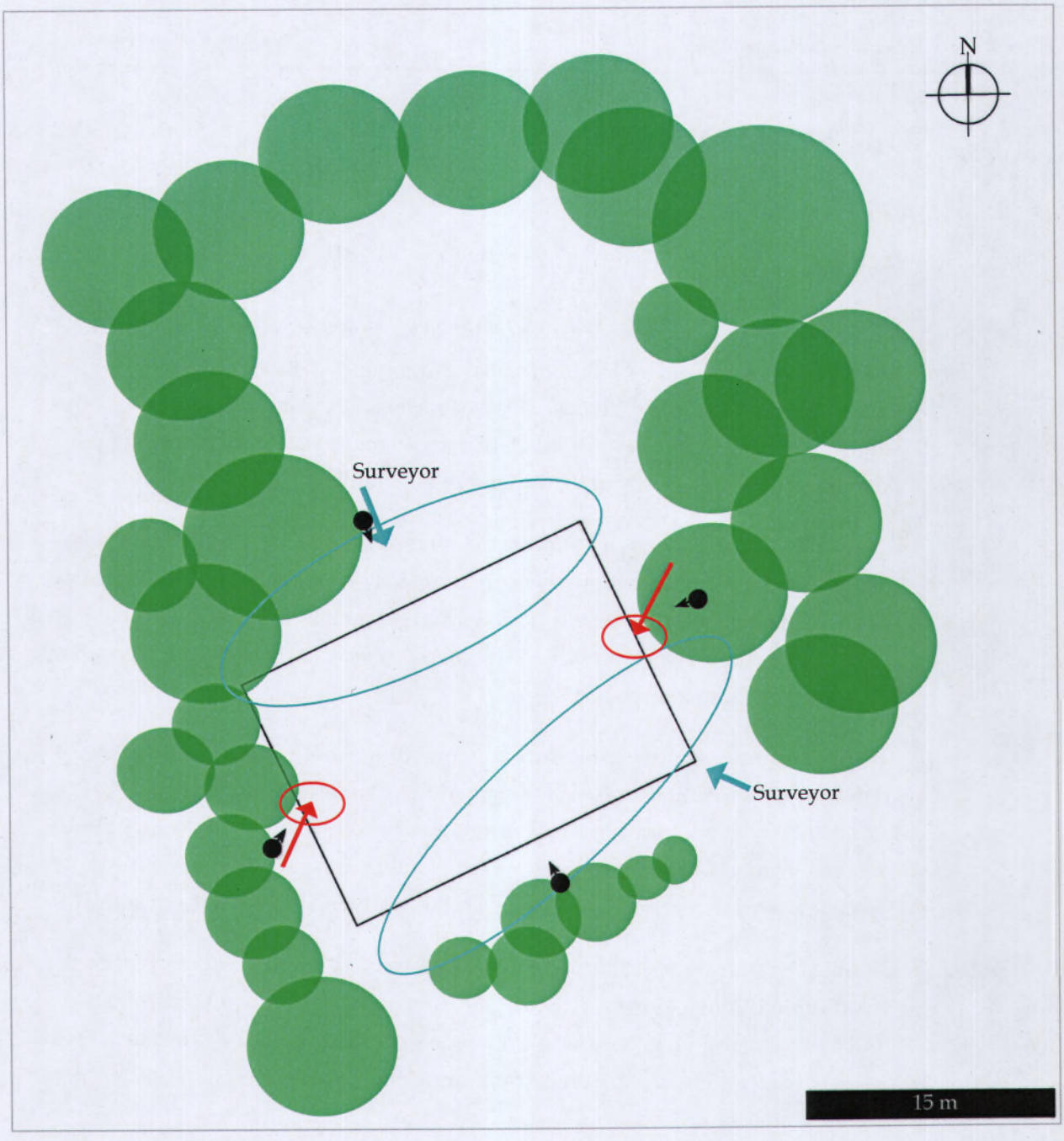
2.2.5 Four time-synchronised automated Anabat electronic bat detectors (SD2 models) were employed during the dusk and dawn survey. Each was raised 1.5m from the ground on a tripod with their microphones pointing skyward in the positions shown by **Figure 1**. Both surveyors were equipped with a Pettersson 230 bat detector.

2.2.6 Two tripod mounted digital video cameras with infra-red night shoot facility were also used during the survey (dusk and dawn) to film bats emerging from two potential bat access/egress points the western and eastern end of the building missing hanging and roof tiles respectively (see **Figure 1**). An infra-red lamp was used to illuminate both areas being filmed. The video recorders were set to run at five minutes before the start of each survey and were left to record for 84 minutes (the length of the tape) on each occasion

2.2.7 In summary, all potential bat egress points about the exterior of the building were observed during the survey.

## 2.3 SURVEY LIMITATIONS

2.3.1 No significant survey constraints were experienced at any point during the activity survey.




**Key**

**Infra-red lamp and video camera position and field of view (ellipse)**

**Anabat elecronic bat detector on tripod (2m above ground) and direction of microphone (arrow)**

**Surveyor field of view during the roost emergence survey. Surveyors patrolled around perimeter of the building during the dawn return to roost survey**

**123 Grove Park, Southwark**
Figure 1: Bat activity survey locations 4-5th May 2011

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# 3 SURVEY FINDINGS

## 3.1 BAT ACTIVITY SURVEY

**Summary of Findings**

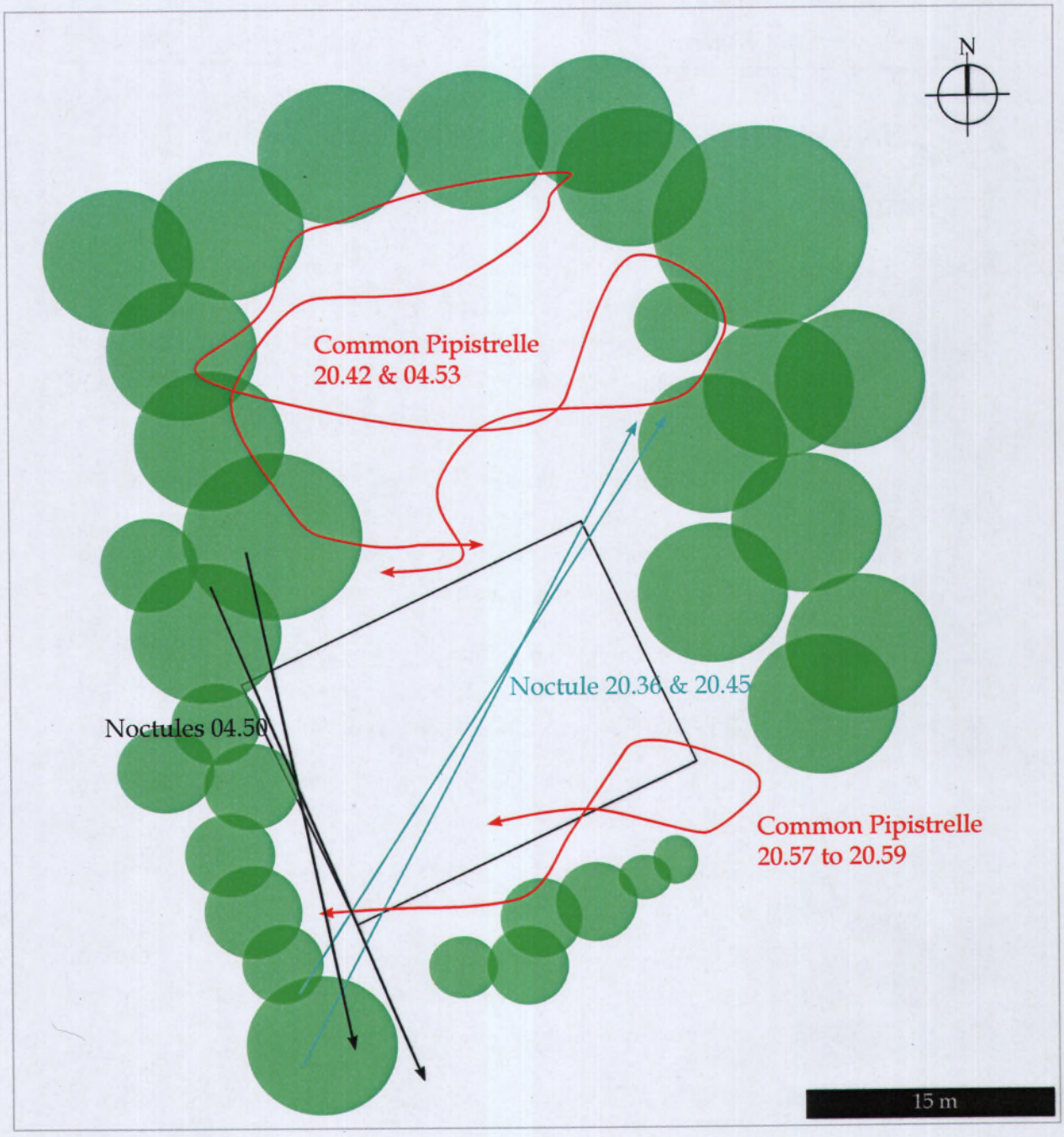
*3.1.1* No bats were seen or recorded flying out of or into any point of the building during the survey, and no additional bat dropping evidence was present on or within the property since the last survey in March. During the return to roost survey no bat activity was recorded that indicated a bat or bats investigating potential roost locations about the exterior of the building.

*3.1.2* The results of the bat activity survey are summarised on **Figure 2**. The first bat calls detected during were those of a commuting *Nyctalus* bat (probably a noctule) that flew high across the site in a north easterly direction from the south west at 20.36 (eight minutes after sun set). A second *Nyctalus* bat commuted across the site in the same direction at 20.45.

*3.1.3* The next bat seen and recorded was a common pipistrelle *Pipistrellus pipistrellus* from 20.42 until 20.59 which was foraging around both sides of the property. The bat was first seen and recorded at 14 minutes after sun set, and had therefore been roosting relatively close by. Thereafter a single foraging soprano pipistrelle *Pipistrellus pygmaeus* was recorded at 21.13 until 21.19 but the bat was not seen.

*3.1.4* During the return to roost survey the next morning, a single common pipistrelle was recorded foraging around the back garden area at various times from 04.07 until the last sighting at 04.53 when it flew off site in a northerly direction. Two *Nyctalus* bats were also observed commuting high above the site at 04.50 in a southerly direction.

*3.1.5* No other bat activity was recorded during the survey.




**123 Grove Park, Southwark**
Figure 2: Bat activity survey results 4-5th May 2011

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# 4 CONCLUSIONS AND RECOMMENDATIONS

## 4.1 SUMMARY OF RESULTS

*4.1.1* The results of the survey work completed from March to May 2011 suggests strongly that 123 Grove Park does not support a bat roost, and that the two bat droppings recorded in the roof space were probably the result of a single pipistrelle bat that had flown into the building and investigated the interior of the loft space - probably via a missing window pane in this location.

*4.1.2* On the basis of the survey findings and, reflecting the general lack of field evidence to suggest the presence of a significant bat roost in the property, further bat survey work is not considered necessary or reasonable to verify bat absence provided the following recommendations are implemented moving forward:

- three bat bricks[5] or tubes[6] to be built into or attached onto the external fabric of the new building at roof eave level in locations away from external security or other lighting to be agreed with an experienced bat worker;
- bat boxes to be monitored and maintained post construction by an experienced bat worker for two years;
- all mature trees in the garden to be inspected and checked for the presence of roosting bats prior to their removal; and
- any external lighting is designed to minimise adverse impacts on bats with any lighting of paths being low level and that minimises light spill and/or is operated only by external motion sensors on short timers.

[5] See - http://www.ibstock.com/sustainability-ecozone.asp
[6] See - http://www.alanaecology.com/acatalog/No_750_6_Bat_Box.html

# Appendix 7
# Pond Survey Report (2011)

Applied Ecology Ltd

Barry Kitcherside
Chart Plan (2004) Ltd
Mansard Cottage
65 Stoneleigh Road
Limpsfield Chart
Oxted
Surrey RH8 0TP

24 June 2011

Dear Barry,

**ECOLOGY MATTERS – 123 GROVE PARK, SOUTHWARK**

Further to my survey of the above site conducted earlier today to search for a pond reported to be present in the grounds of the property, I am writing to verify that I found a small ornamental pond within bramble scrub in the north west of the site at grid reference TQ 33240 76140.

The location of the pond was not obvious (see photo-sheet), and I had to cut back and remove bramble to gain entry into the scrub to find it. It consists of a kidney shaped pre-formed plastic mould dug into the ground approximately 2m long by 1.2m wide – maximum depth circa 80cm. It completely lacked any form of submerged or floating aquatic vegetation and possessed a thick accumulation of leaf and bramble litter. The water in the pond was relatively clear and, with the aid of a high powered torch, I was able to spot two adult common frogs *Rana temporia* in the water, but I saw no evidence of toad, newts or their respective young. The pond is too small and shaded to be of significant value to breeding amphibians, but could theoretically support small numbers of breeding frog and smooth newt *Lissotriton vulgaris*.

The pond is highly unlikely to support the legally protected great crested newt *Triturus cristatus* on account of its small and shaded nature, and because this species is not known to occur in the local area. I have calculated the pond's Habitat Suitability Index (HSI) score (as recommended by Natural England when assessing the potential value of ponds for GCN), and it scores somewhere between 0.38 and 0.40 depending upon how many other ponds are located within 1km of the site. Scores of less than 0.5 are normally taken to mean that the pond is unsuitable for GCN. Reports of crested newts being seen in the local area are almost certainly sightings of male smooth newts, which also have a small crest on their backs during the breeding season but which have no significant legal protection.

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Registered in England at the above address: 05447247

Pond location within bramble scrub

Pond location

**123 Grove Park**
Ornamental Pond location

June 2011

Applied Ecology Ltd

In summary, the pond is a small neglected ornamental feature that is probably of value to amphibians at a site level, but is unlikely to support large numbers of amphibians or amphibian species that have high levels of legal protection on account of its small size. The loss of the pond to the proposed development would be a minor adverse impact that could be adequately compensated by providing a replacement pond of similar dimensions elsewhere within the site – see below.

Further to our recent bat survey report I have set out below a summary of all the ecological mitigation and compensation recommendations that should be implemented as part of the development for the benefit of biodiversity and nature conservation.

**Recommendations**

1. A wildlife pond (minimum size 2x2m) is constructed within the site and maintained in the long term as a fish free habitat for the benefit of breeding amphibians – location and design details to be agreed;

2. three bat bricks[1] or tubes[2] to be built into or attached onto the external fabric of the new building at roof eave level in locations away from external security or other lighting to be agreed with an experienced bat worker;

3. external lighting to be designed to minimise adverse impacts on bats with any lighting of paths being low level and that minimises light spill and/or is operated only by external motion sensors on short timers;

4. standing trees with bat roost features to be felled at a time when they are least likely to be in use by nesting birds and breeding tree roosting bats in the autumn months (September to early November) immediately after a detailed check has been carried out that birds and bats are absent from them. Trees to be soft-felled if bat absence cannot be verified e.g. if trees prove unsafe to climb. Trees to be felled under the auspices of an EPS licence, as necessary, if the presence of tree roosting bats is confirmed;

5. As compensation for the loss of bat roost potential trees, six woodcrete bat boxes to be mounted in suitable locations on retained trees or other suitable structures within the grounds of the site in locations to be agreed by a suitably experienced bat worker;

6. all bat boxes to be monitored and maintained post construction by an experienced bat worker for two years;

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[1] See - http://www.ibstock.com/sustainability-ecozone.asp
[2] See - http://www.alanaecology.com/acatalog/No_750_6_Bat_Box.html

7. A boundary of the garden (minimum width 3m) should be set aside as a stag beetle protection zone in perpetuity.

8. All dead wood and brashings to be removed by hand and used to construct two stag beetle loggeries (2.5m circumference) within the protection zone. Loggeries to be supplemented with large hard wood logs (not pine) as necessary. Left over dead wood to be left as habitat piles on the ground surface within the protection zone.

9. All ground immediately below and within 1m of the edge of existing dead wood log/brash pile locations to be hand dug under ecological supervision to search for stag beetle larvae or pupal cells. All larvae found to be transferred to one of three stag beetle breeding boxes to be constructed in advance of site clearance within the stag beetle protection zone.

10. A stag beetle information board to be erected to describe stag beetle ecology, conservation and the function of the mitigation measures provided within the protection zone.

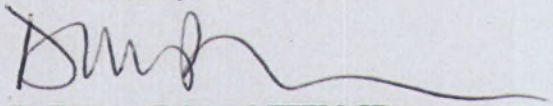
11. All scrub vegetation to be removed outside of the bird nesting period or only after it has been deemed to be free of nesting birds at other times by a qualified ecologist / ornithologist.

12. A Japanese knotweed elimination strategy be developed and implemented in advance of site clearance to avoid the spread of knotweed as a result of site clearance and construction operations.

In summary, I believe that provided the recommendations numbered 1-12 listed above are made a condition of any planning permission that is issued, there should be no significant adverse impact on the ecological interests of the site and the biodiversity value of the site will be maintained in the long term.

Please do not hesitate to contact me should you have any questions or points of clarification.

Yours sincerely,



**Dr Duncan Painter MIEEM CEnv**
On behalf of Applied Ecology Ltd.

# Appendix 8
# Terrestrial Invertebrate Report (2011)

**Peter Hammond**

**Environmental /**
**Entomological Services**

**39 Woodhurst Road**
**London**
**W3 6SS**

**Telephone: 0208 992 6322**
**Email: peter.m.hammond@virgin.net**

Attention: Duncan Painter

21 September 2011

**Applied Ecology Ltd**
**St John's Innovation Centre**
**Cowley Road,**
**Cambridge CB4 OWS**
**United Kingdom**

**123 Grove Park, Camberwell**

**This site, a substantial but long neglected garden much of which had progressed to woodland and scrub, was visited (in fine weather) on 20 September 2011 in company with Duncan Painter of Applied Ecology Ltd. The site was examined for its present and potential terrestrial invertebrate interest, with special attention paid to the value of retaining certain individual trees or other features. The Stag Beetle (*Lucanus cervus*) – a species protected by European legislation - was found to be present, and attention was also paid to assessing means of maintaining populations of this species on the site.**

**My assessment of the current value of the site for terrestrial invertebrates is attached, along with an annotated list of invertebrate species observed during my visit. It should be borne in mind that the assessment is based on a single visit outside the period of peak invertebrate activity.**

**Yours sincerely,**

**Peter Hammond**

**123 Grove Park, Camberwell**

From the perspective of terrestrial invertebrates this site has clearly degenerated with its progression to relatively dense secondary woodland, due to neglect. The understorey is dense and the ground flora of poor quality; the woodland floor is almost uniformly covered by ivy. Despite the late season of my visit my view is that the site is unlikely to support any substantial terrestrial invertebrate interest beyond the presence of dead wood associates such as Stag Beetles (see below). However, there is substantial potential for improving this situation by appropriate management. Whatever the future of the site, to encourage a much more varied and interesting invertebrate fauna, removal of some non-native trees (including sycamore), thinning of the understorey and removal of most of the ivy (but see below) and at least some of the Yellow Archangel (*Galeobdolon luteum)* is to be recommended. This would allow more light into the woodland, favour the development of a more varied ground flora, and create a basis for colonisation by richer and more interesting invertebrate assemblages.

These objectives are in line with development proposals for the site[1]. However, again from the invertebrate perspective, as well as with any landscape considerations in mind, mitigation is clearly advisable in relation to maintaining good quality woodland conditions on some parts of the site and retaining a number of selected trees. If most of the site is to acquire a garden/parkland aspect, maintenance of some areas (see below) with more of a woodland character is to be recommended. Some other special considerations, especially in relation to the population of Stag Beetles that was found to be present on the site, are noted below.

**Retention of trees and woodland management**

Few of the trees on site are of truly native species, and as such have low interest for invertebrates. Also, most of the trees exhibit the spindly form characteristic of growth in a dense and largely closed-canopy woodland. Nevertheless, a priority should be given to retaining a number of the larger ash trees, some of the larger sycamores and the relatively few examples of holly, Holme oak and deciduous oak that are present. Some cherries would also be beneficial and hawthorn saplings also encouraged as sources of nectar and pollen. For the same reason, although currently in substantial excess, some brambles should be retained where feasible. The ivy that currently covers most of the woodland floor as well as many trees, logs, stumps and other features in the woodland should be a priority for removal. However, as this plant has value as a nectar/pollen source for bees etc and, where it grows vertically against walls, has value as habitat for other invertebrates, retention of some ivy at the periphery of the site should be considered along with the planting of other nectar/pollen rich garden species.

A plan for retaining existing dead or dying woody material (that already present in the way of tree stumps and logs and also that resulting from felling and pruning of trees) should be a key feature of mitigation (see below under 'Stag Beetles'). With appropriate

[1] KSR Architects – Proposed Site Plan – Dec 2010 – Drawing no. GRP – ST 101

management of woody material (existing dead logs, new logs and woodchip) it should be feasible to maintain and enhance the site's principal terrestrial invertebrate interest, whether the general facies is that of woodland or garden/parkland.

**Stag Beetles**

Stag beetles (*Lucanus cervus*) were found (as larvae in well decayed stumps and logs – probably mostly of sycamore) to be present on the site in at least 3 locations: to the northwest of the H1 footprint, just north of the H2 footprint and just west of the H3 footprint. This species is protected at both UK (Wildlife and Countryside Act 1981) and European levels. However, the London area as a whole, and the southern and western suburbs of London in particular support substantial populations of the species, and *L. cervus* is known or is likely to be present in many gardens and parks in the Camberwell area. To maintain the present population at 123 Grove Park, suitable Stag Beetle habitat should be conserved, and new potential habitat created on site (see below under 'Decaying wood habitats'). Abundant information and advice on Stag Beetle conservation is available (e.g. 'Stags in Stumps' and 'Stag Beetle friendly gardening', both published by the People's Trust for Endangered Species).

**Decaying wood habitats**

The woody parts of trees, including both standing and fallen timber) comprise a major resource for invertebrates that may be nationally scarce. An important component of any mitigation should be to safeguard and augment the amount and variety of dead/decaying wood habitat on site. Areas at the periphery of the site (the northwest and northeast corners appear to be two good areas to target) should be earmarked to receive woody materials that will result from felling and tree management. In addition, large woody items (mostly currently hidden under ivy) already present should be relocated to these areas with care (many of them are likely to contain developing Stag Beetle larvae). Some major portions of large tree trunks should be retained whole, with some located in shade and others in more sun-exposed situations. Smaller sections of trunks may form the basis for 'Stag Beetle friendly log piles'. Small woody items from broad-leaved trees (including sycamore and ash) should be chipped, and as much of this material as possible retained on site. Some can be heaped around log-piles, while other chipped material can be used for pathways. Wood-chips, even when compacted (as when used in Children's Playgrounds) will support a good range of scarce invertebrate species and, if in layers of at least 3 or 4 inches in depth provide suitable larval habitat for Stag Beetles.

**Other considerations**

Except around the present lawn (Formal Gardens area) the site presently lacks very much in the way of 'early succession' habitat (sparsely vegetated and with some bare patches). Habitat of this type will encourage development of a diverse invertebrate fauna and, if advantage is taken of the currently varied relief of the site, can provide suitable conditions (south-facing banks open to the sun) for species (such as various ground-nesting bees) requiring well-drained soil for their burrows. Careful (guidelines for this are available) removal of aggressively invasive plant species, notably Japanese Knotweed is a priority.

**General comment on other invertebrates found**

With the exception of the Stag Beetle *Lucanus cervus* and the Brown Tree Ant *Lasius brunneus* no species found at the site is currently accorded any special UK conservation status. Both of these species are, in fact, insufficiently restricted in their distributions in Southern Britain to meet the requirements of their current formal Nationally Scarce status. The Brown Tree Ant, in particular, must now be regarded as a common species throughout the London area, as well as in many of the surrounding counties.
Published records for two of the other species found on site, both of them only recently established in Britain (*Rhyzobius chrysomeloides* and *Sericoderus brevicornis*) are few. However, both of these are now widely distributed and often common in at least south-eastern England (P.M. Hammond, unpublished). Their successful colonisation has paralleled that of another species of exotic origin (*Harmonia axyridis*, the 'Harlequin Ladybird') whose arrival in Britain and subsequent rapid spread has been well documented.

The most interesting find made during the brief visit to the site is that of *Ocys quinquestriatus*. This small ground-beetle is elusive and little recorded. However, this is likely to be in no little measure due to specialised habits, as these beetles are found mostly above ground level on old buildings and garden walls (often in urban areas). No post-1969 records for London are included in the most recent Atlas of British ground beetles (M.L.Luff, 1998), but at least some additional finds have been made in London over the past two decades (P.M. Hammond, unpublished).

**Summary**

My assessment of the site is that it is unlikely to support any substantial terrestrial invertebrate interest beyond the presence of dead wood associates such as Stag Beetle. The survey has verified that Stag Beetles are breeding on site, with beetle larvae utilising log piles of previously felled/managed trees. The five dwelling development proposal would result in the permanent loss of trees however, provided a number of the mature native broad-leaf species and existing dead wood habitats are retained and protected, the conservation status of Stag Beetle should be maintained.

The invertebrate value of the site should also be enhanced above current levels as a result of increases in light levels that will inevitably occur from site clearance operations, and by the creation of new dead wood habitat features such as log piles and woodchip. Finally, the retention and planting of nectar and pollen rich under-storey plants and shrubs would also be of general conservation benefit to a range of winged invertebrate species and is recommended.

**123 Grove Park, Camberwell, TQ3376**

**Insect species observed on 20 September 2011:**

* Widely distributed and common on the site

| | |
|---|---|
| **BEETLES** | |
| CARABIDAE (ground beetles) | |
| ***Nebria brevicollis** | In litter etc. |
| ***Ocys quinquestriatus** | Scarce species (see comment in Report) |
| ***Pterostichus madidus** | In litter etc. |
| PTILIIDAE (featherwing beetles) | |
| ***Acrotrichis henrici** | In litter |
| STAPHYLINIDAE (rove beetles) | |
| ***Habrocerus capillaricornis** | In litter |
| ***Mocyta clientula** | In litter |
| ***Mocyta negligens** | In litter |
| ***Platydracus stercorarius** | One under plastic sheet |
| ***Tasgius ater** | One under loose bark |
| LUCANIDAE (stag beetles) | |
| ***Lucanus cervus** | Notable species (see comment in Report) |
| CRYPTOPHAGIDAE | |
| ***Cryptophagus dentatus** | On dead standing sapling |
| ENDOMYCHIDAE | |
| ***Mycetaea subterranea** | In numbers on dead standing sapling |
| COCCINELLIDAE (ladybird beetles) | |
| ***Rhyzobius chrysomeloides** | On various shrubs and ivy |
| ***Harmonia axyridis** | Ubiquitous |
| ***Propylea 14-punctata** | One in litter |
| CORYLOPHIDAE | |
| ***Sericoderus brevicornis** | In litter and decaying wood |
| CHRYSOMELIDAE (leaf beetles) | |
| ***Aphthona euphorbiae** | Ubiquitous on shrubs and other vegetation |
| **ANTS** | |
| FORMICIDAE (ants) | |
| ***Lasius brunneus** | Ubiquitous (see comment in Report |
| ***Leptothorax nylanderi** | With *L. brunneus* in decayed wood |

Peter Hammond

21 September 2011

# Appendix 9
# Reptile Survey Report (2011)

Barry Kitcherside
Chart Plan (2004) Ltd
Mansard Cottage
65 Stoneleigh Road
Limpsfield Chart
Oxted
Surrey RH8 0TP

1 November 2011

Dear Barry,

**REPTILE SURVEY – 123 GROVE PARK, SOUTHWARK**

I am writing to report the results of a reptile survey completed at the above site in accordance with recent published survey guidance - *Natural England Technical Information Note TIN 102 – Reptile Mitigation Guidelines (September 2011).* The survey coincided with an optimal time of year to conduct reptile assessment, and was completed to definitely prove reptile presence or absence from the site.

The majority of the site is unsuitable habitat for reptiles on account that it consists of shaded woodland/introduced shrub habitat or hard standing. However, the amenity lawn area in the centre of the site (circa 16x25m) has developed a rank structure as a result of recent management neglect and has been identified as having theoretical potential to support reptiles.

The site was visited on 5 September 2011, and 40 sheets (each circa 1m x 0.5m) of roofing felt were laid out around the lawn in locations considered to have the greatest habitat value to reptiles – namely all well-lit (un-shaded) rank grassland in open areas and in close association with fringing ornamental shrub beds. In order to provide a comprehensive picture of reptile distribution, fifteen roofing felt refugia were also set in two less shaded locations within the woodland area to the north of the lawn, although both areas were still considered sub-optimal habitat for reptiles and neither were expected to support reptiles.

The refugia were revisited by an Applied Ecology Ltd ecologist on eleven separate occasions at different times of day in weather conditions that were suitable for reptiles to be active (air temperature range 16.5°C-22.2°C; wind speed 0-1m/s, no rain (ten occasions) and light drizzle (one occasion)). The survey dates were: 20, 23, 26, & 29 September and 3, 6, 10, 13, 17, 20 & 24 October 2011. No reptiles of any species were recorded on, under or on land between the refugia on any survey visit occasion, with

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only adult, sub adult and juvenile common frogs being found under the refugia on most survey visits.

Monitoring of a reptile receptor site (owned and managed for reptiles by Applied Ecology Ltd in Sussex since 2008) was also undertaken over the September-October 2011 survey period, and confirmed that reptiles were active and using refugia up until the 25 October, after which point reptile numbers declined significantly suggesting the onset of the 2011 hibernation period after this date in southern England

In summary, the reptile survey of 123 Grove Park categorically confirms that reptiles are absent from the site, and that no further survey work or ecological assessment with respect to reptiles is necessary in relation to future management and development. Given the site's isolated nature in suburban London, the risk of reptiles colonizing the site in the future is also considered to be very low.

Please do not hesitate to contact me should you have any questions or points of clarification.

Yours sincerely,

**Dr Duncan Painter MIEEM CEnv**
On behalf of Applied Ecology Ltd.