

Athlone House Ltd

Ecological survey & appraisal for
Athlone House,
Hampstead Lane, London N6

October 2013

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SK 9135-07 Rev J (October '13) Hard and soft landscape proposals

EXECUTIVE SUMMARY

Ecological surveys (habitat, bat and reptile) were undertaken in 2012 to update previous surveys undertaken in relation to proposals for the re-development of Athlone House, Hampstead Lane, Hampstead, to a private dwelling. The grounds cover c.2.7ha, part of which forms the north east corner of Hampstead Heath Site of Metropolitan Importance for Nature Conservation.

Since the late 18th century the grounds have been a designed landscape including ornamental gardens, shrubberies, wooded areas and a pond. These form a buffer to the adjacent Hampstead Heath and also contain areas of acid grassland. Certain shrubberies have become overgrown.

As in previous bat surveys, a single common pipistrelle was observed possibly emerging from a roosting site within the northwest corner of Athlone House during the dusk survey. Other occasionally recorded species foraging or commuting across the grounds included noctules, Leisler's bats, soprano pipistrelles, Nathusius' pipistrelle and myotis bat (including Daubenton's) but they were not considered to have been roosting within Athlone House.

A breeding population of grass snake was recorded by the pond and around the edges of the grassland to the west and north of the house, with anecdotal records of snakes using the vents around the edges of the house itself. Biodiversity action plan species including garden birds, common toad and hedgehog have also been recorded in the grounds.

The proposals would include: construction of a new house over approximately the same footprint as the existing building; construction of a courtyard, pond, driveway and lawns to the north and east of the house; modification and extension of the existing pond and creation of a new pond in the western part of site; and rejuvenation of the grounds back to a private garden with restored historical features. The proposals respect the main ecological interest of the site including the retention of areas of acid grassland, the woodland and the pond. In the absence of mitigation, some small areas of amenity grassland, poor semi-improved grassland and less diverse acid semi-improved grassland would be lost, and a small area of secondary woodland would be removed for pond creation.

Mitigation measures would result in a net increase in semi-improved acid grassland and wetland habitat and enhance the overall biodiversity value of the grounds, and accommodate the requirements of protected species such as bats, grass snake, and nesting birds. A wildlife construction plan and conservation management plan should be subject to a condition to ensure the grounds are maintained and enhanced for the benefit of wildlife, amenity and the historic landscape interests. The revised proposals for the house and mitigation measures would comply with relevant planning policies and help towards certain biodiversity action plans. Overall the proposals would conserve and positively enhance the wildlife interest of the grounds as part of the Site of Metropolitan Importance for Nature Conservation.

1 INTRODUCTION

Introduction

- 1.1 Catherine Bickmore Associates were instructed by Athlone House Ltd on 20th July 2012 to undertake and update ecological surveys in relation to proposals for re-development of Athlone House, Hampstead Lane N6, to a private residence. The proposals for the revised scheme (updated in September 2013) incorporate recommendations from the 2009 appeal, in particular the smaller size of the house. This report presents the findings of the surveys, assesses the ecological effects of the proposals and seeks to address the requirements of planning policies and relevant wildlife legislation.

Outline

- 1.2 Section 2 outlines the method of approach. Relevant planning policies and biodiversity action plans are summarised in Section 3. In section 4 the survey results are presented including biological records and field survey findings in relation to the findings of surveys in previous years, and an assessment of the nature conservation interest is given in Section 5. An assessment of the effects of the proposals, and recommendations are described in Section 6. These recommendations are also written to inform a Code for Sustainable Homes assessment.
- 1.3 Photographs of the site are included in appendix I, and appendix II provides the scientific names of plant species referred to in the text. Other appendices provide supporting information including extracts from the Ecology Handbook, notes from GLA site survey, legislative background, extracts from the Borough of Camden Local Development Framework, and data from the bat survey.

2 METHOD OF APPROACH

Desk study

- 2.1 The 2012 surveys update those initially undertaken in 2003 for the habitats across the wider area of the grounds which were larger in 2003, and subsequent specialist surveys for bat in 2003, 2004, 2007 and 2009, for reptile in 2004 and 2007, and for great crested newt in 2004 and 2005 (Catherine Bickmore Associates, 2003, 2004, 2007a, 2009a and 2009b). Reference is made to the findings of these previous surveys. In 2003 biological records were sought for the site and the surrounding 1km² from English Nature, the London Wildlife Trust, the Greater London Authority and the London Reptile and Amphibian Trust. Anecdotal records were received from the groundsmen in 2003 and from the security guard in 2012. Updated information on the Site of Nature Conservation Interest (SNCI) was requested from Greenspace Information for Greater London (GIGL) in 2010.
- 2.2 Note: the absence of a record does not necessarily equate with the absence of a particular species, rather that no records have been submitted.
- 2.3 Other documents were consulted including the national planning policy framework (DCLG, 2012), the London plan (Greater London Authority, 2011) and the Local Development Framework (Camden Borough Council 2006 & 2010a-b), along with the national (Defra, 2011 & JNCC, 2012) and local (London Biodiversity Partnership, 2012 and Camden Borough Council, 2012) biodiversity actions plans (BAPs).

Habitat survey

- 2.4 The site was visited on 31st July 2012, a breezy, dry, moderately overcast day, by a qualified ecologist and full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). The field survey method followed phase one habitat survey procedures in Nature Conservancy Council (1990) and comprised a walk over of the site recording main habitat types and species present using the DAFOR¹ scale. Particular attention was paid to the species composition of the grassland to check for changes since previous surveys. The description of the wooded area/ornamental planting areas is taken from previous surveys as these areas had not changed significantly.
- 2.5 Features of note were described and plotted approximately by eye on topographical plans, along with the main habitat types (drawing 514/03 Rev A). Common names are used throughout the text with scientific equivalents listed in Appendix II, applying BSBI (2007) or Stace (2010) nomenclature.
- 2.6 Information relating to fauna was collected by casual observations supplemented by specialist surveys for reptile and bat (see below).

Bat surveys

- 2.7 Previous surveys for bat were undertaken in September 2003, July 2004, September 2007 and August 2009. The purpose of these surveys was to identify whether bats were present and if so what species were using the grounds and associated buildings, and which areas were important for bats. The 2012 survey focussed on the presence of bats within Athlone House on account of previous findings and its proposed demolition.

Daytime building survey

- 2.8 Bats can use several parts of a building as roost sites or to gain access to the roof space. These include the following:
- Gaps in the soffits or barge boards;
 - Gaps at the gable apex or eaves;
 - Cracks in the masonry and pointing;

¹ D = dominant; A = abundant; LA = locally abundant; F = frequent; LF = locally frequent; O = occasional; R = rare

Under lead flashing;
 Under hanging, ridge or roof tiles.

- 2.9 A systematic inspection of the interior (including the roof space) and exterior of Athlone House, searching for evidence of bats, was undertaken by a Natural England licence holder (no. 20120841), licenced to disturb and handle bats, on 18th July 2012. The inspection was undertaken in daylight hours in dry weather conditions considered suitable for completing ecological survey work.
- 2.10 The inspection was facilitated by the use of 4m ladders, Swarovski EL 10x32 binoculars, a high-powered torch (1 million candle power) and small dental mirrors to inspect accessible crevices considered likely to support bats. All safely accessible roof voids, holes, gaps, and crevices, and walls, windows, window ledges and the ground around the buildings footings were inspected.
- 2.11 Evidence of bats using a building as a roost site typically comprises the following:
- Droppings;
 - Piles of insect remains e.g. moth wings;
 - Urine staining at roost entrances or within the roost;
 - Scratch marks or grease marks
 - Bats (live or dead).

Bat emergence surveys

- 2.12 Emergence surveys were undertaken on two separate occasions during a suitable time of year, covering dusk on the first occasion, and dusk and dawn on the second occasion. The surveys were undertaken by three to four surveyors, including licensed bat workers (licence no. 20120841 and 20122373) supported by assistant ecologists with experience of undertaking bat emergence surveys. Table 1 shows the dates, times, surveyors and weather conditions during the surveys. Survey methods were in line with the BCT (2012) best practice guidelines for bat surveys.
- 2.13 On the first night, one surveyor was positioned on the lawn to the west of the House to enable a view of the northern and southern parts of the west side of the building, the second surveyor was positioned at the north eastern side of the building, and the third was positioned at the south eastern corner. On the second visit, one surveyor was positioned on each corner of the house (drawing 514/11 Rev A). An anabat was also placed in the loft on each occasion.
- 2.14 The surveys were undertaken from c.15 minutes before sunset until c.1.5-2 hours after sunset and from 1.5 hours before sunrise until sunrise. Surveys were carried out with the aid of bat detectors including three SD1 Anabats, an EM3, a frequency division detector (Batbox Duet) attached to a minidisc recorder, and two heterodyne detectors (Batbox III and Peterson D200) (survey data including surveyor positions and equipment are included in Appendix VII).

Table 1: Dusk/dawn emergence survey conditions

Date	Sunset/Sunrise	Weather
18 th July 2012	Sunset – 21.06	16°C at start, overcast, SW wind force 3, dry
16 th August 2012	Sunset – 20.20	18°C at start, overcast, still
17 th August 2012	Sunrise – 05.50	15°C at start, overcast, slight breeze, mostly dry (brief, light rain shower for c. 2 minutes)

Reptile survey

- 2.15 A reptile survey was undertaken to determine the continued presence of reptiles in the grounds. Grass snake had previously been recorded during a habitat survey in 2003 and during specialist reptile surveys in 2004 and 2007 (note: some of the areas in which reptiles had been recorded previously no longer form part of the grounds of Athlone House).
- 2.16 The Froglife Advice Sheet 10 outlines the best practice method for conducting a reptile survey. This suggests that surveys should be conducted between March and October (with April, May and September being the best months for survey), between 8.30 and 11.00am or 4.00 and 6.30 pm when temperatures are between 9 and 18°C and there is no rain (Froglife 1999). Gent and Gibson (2003) suggest that grass snake will bask in temperatures between 12°C and 20°C.
- 2.17 The survey involved placing refugia, consisting of corrugated bitumen and bitumen roofing felt (c.0.5m x 0.5m – 0.5m x 1m), in suitable locations in the grounds focusing on areas of optimum terrestrial habitat including areas with previous records of grass snake (drawing 514/12). The refugia warm up quickly in sunshine and provide good places for reptiles to bask on and shelter under.
- 2.18 The site was initially visited on the 18th July 2012 to set out a total of 44 refugia in areas of un-mown grassland habitats around the edges of the lawn, in the overgrown grass/scrub area to the north of the house, and in the western part of the grounds near the pond (drawing 514/12). Two refugia were also placed in the shorter grass adjacent to the south west corner of the house, where the security guards reported seeing snakes.
- 2.19 The refugia were left in place for 10 days to allow time for any reptiles to find and begin using them. They were then checked for reptiles on seven separate occasions during warm weather without continuous rain. Date, time and weather conditions of each check are shown in Table 2. Refugia were checked at various times of day, sometimes later than the recommended time, to allow for varying weather conditions.
- 2.20 Population size was based on guidelines produced by Froglife (1999) and the HGBI (1998) advisory note. Froglife (1999) classifies population size according to the number of adult reptiles recorded by one person in one day with a tin density of up to 10/ha, therefore results were adjusted to give expected results for use of 10 refugia per hectare. HGBI (1998) gives population size by total adult density across a site, which was estimated from survey results. Table 3 shows the population size classifications of the two publications.

Table 2: Reptile survey conditions

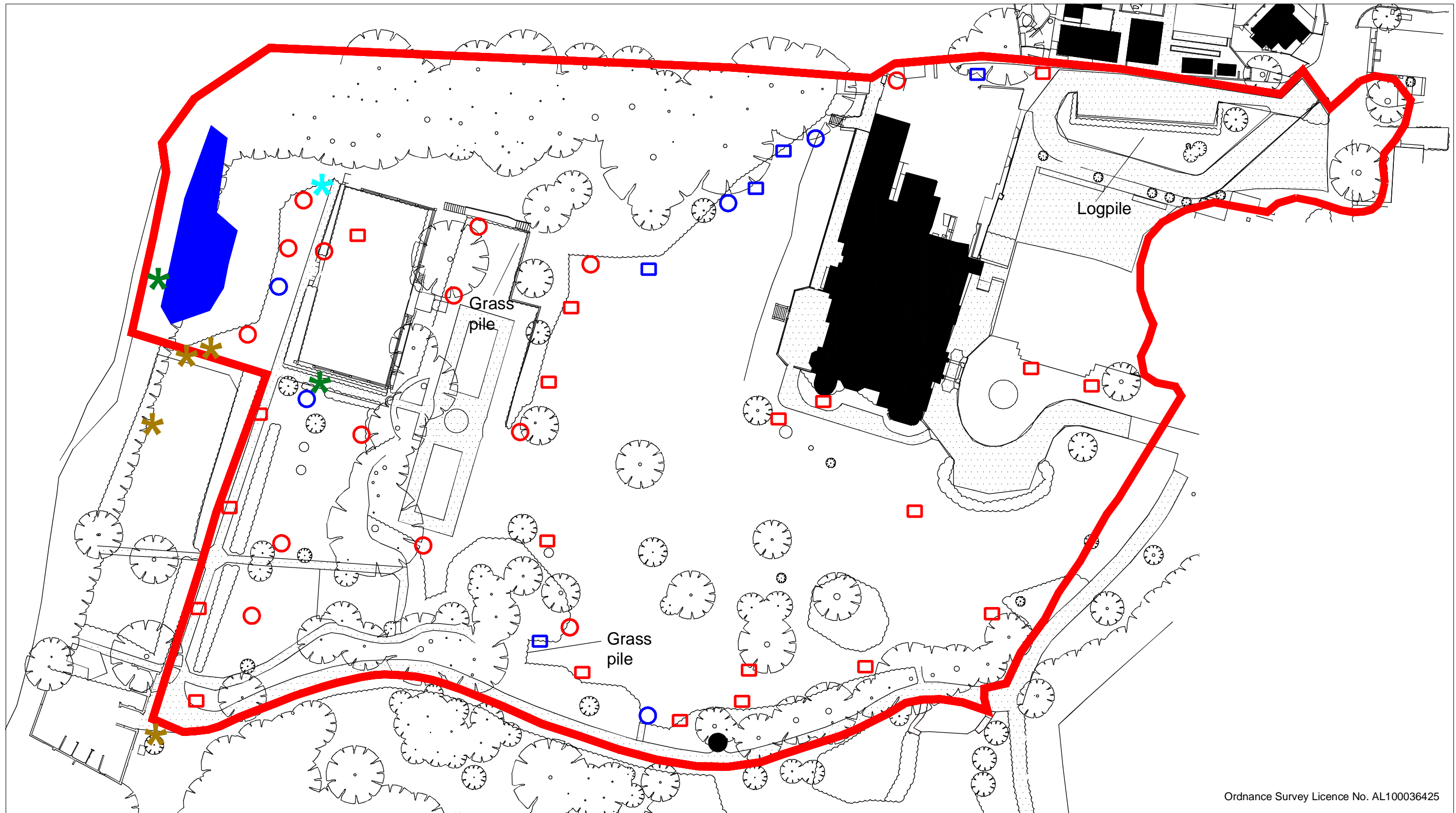
Date	Time	Weather conditions
30/07/12	17.40	Moderately overcast, occasional breeze, 19°C
1/08/12	18.45	Sunny intervals, slight breeze, 18°C
2/08/12	15.00	Moderately overcast, calm, 23°C
3/08/12	14.10	Moderately overcast, slight breeze, 22°C
08/08/12	10.00 - 13.15	Sunny intervals, calm, 17°C
10/08/12	10.15	Sunny, calm, 21°C
16/08/12	18.00	Overcast, calm, 19°C

Table 3: Classification of common lizard population size by Froglife (1999) and HGBI (1998)

Population size	HGBI (adult density)	Froglife (no. adults observed in one survey using up to 10 refugia/ha)
High	Over 80/ha	Over 20
Medium	20-80/ha	5-20
Low	Under 20/ha	Under 5

Constraints

- 2.21 The surveys provide a 'snapshot in time', and were subject to access and seasonal constraints reflecting the conditions at the time of the survey. July is an appropriate time for a phase one habitat survey.
- 2.22 Although some of the reptile surveys were carried out when temperatures were slightly above 20°C, they were carried out in the appropriate season and reptiles were recorded on all visits, suggesting that conditions were suitable.
- 2.23 The inspection of buildings and built structures for evidence of bats can be conducted at all times of year according to the Bat Conservation Trusts best practice survey guidance (Bat Conservation Trust, 2012). The current survey was completed during the main bat active period. Although there were some areas of the building with limited access, and where evidence of bats may have gone unrecorded, it is expected that any substantial bat evidence on the exterior and in the interior of the buildings would have been visible.
- 2.24 The dawn and dusk emergence/re-entry surveys were carried out at an appropriate time of year and in suitable weather conditions for bat activity.



Ordnance Survey Licence No. AL100036425

Key:

■ Buildings

□ Bare ground

— Red line application boundary

○ Location of corrugated bitumen refugia in 2012 survey (blue = grass snake recorded)

□ Location of bitumen felt refugia in 2012 survey (blue = grass snake recorded)

* Location of juvenile grass snake 2007

* Location of adult grass snake & slough in 2003

* Location of juvenile grass snake 2004

Athlone House, Hampstead Lane N6

Reptile survey 2012

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Drawn by MM	Check by CJB	Date Jul 2012	Scale NTS
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Drawing number
514/12

3 PLANNING POLICY AND BIODIVERSITY ACTION PLANS

Planning policy: National policy

- 3.1 The National Planning Policy Framework, published 27th March 2012 (DCLG, 2012), replaces the previous Planning Policy Statements, and is based around a presumption in favour of sustainable development. The framework includes a number of core principles, including that planning should contribute to conserving and enhancing the natural environment. Note: Government Circular 06/2005 (Biodiversity and Geological Conservation) remains in force.
- 3.2 Chapter 9 relates to protecting Green Belt land (under The London Plan, Metropolitan Open Land is given the same level of protection as Green Belt land) and requires local authorities to refuse inappropriate development which would include construction of new buildings. Exceptions to this include:
- 'the replacement of a building, provided the new building is in the same use and not materially larger than the one it replaces'.*
- 3.3 Chapter 11 states that the presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directive is being considered. It also states that the planning system should contribute to and enhance the local and natural environment by measures including:
- 'protecting and enhancing valued landscapes, geological conservation interests and soils;*
- recognising the wider benefits of ecosystem services;*
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;'*
- 3.4 Principles to be applied when determining planning applications include: encouraging opportunities to incorporate biodiversity into and around developments; requiring adequate mitigation or, as a last resort, compensation, for impacts that cannot be avoided; and refusing permission for development that would have an adverse effect on SSSIs or irreplaceable habitats (such as ancient woodland or veteran trees) except where the need and benefits clearly outweigh the negative effects.
- 3.5 The framework charges local planning authorities to set criteria based policies regarding protected wildlife sites which make distinctions based on the hierarchy of international, national and local designation so that protection is commensurate with their status and the contribution they make to the wider ecological network. They should also plan positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure, and promote the conservation of priority habitats and species linked to national and local targets.
- 3.6 Section 40 of The Natural Environment and Rural Communities Act 2006 Act requires all public authorities to have regard to biodiversity conservation. In addition to matters related to sites and species scheduled under European designations Habitats Regulations (2010), Section 39 requires planning authorities to include policies which encourage the 'management of features of the landscape of major importance for fauna and flora' in particular linear features 'essential for migration, dispersal and exchange of genetic populations'.

Planning policy: Local plan

London plan policies

- 3.7 The Mayor of London is required to take account of local biodiversity action plans produced by the boroughs (Greater London Authority Act 1999). The London Plan (Greater London Authority 2011) requires integration of green infrastructure, such as green roofs, into development proposals to enhance biodiversity and to contribute to reduction of and adaption to climate change (policy 5.11 and 5.10 Urban Greening). It also contains policy 7.19 which aims to protect, enhance, create, manage and promote biodiversity in support of the Mayor's Biodiversity Strategy. It states that wherever possible developments must take opportunities for positive gains for nature, and prioritise assisting in achieving targets for biodiversity action plans. In particular, the highest protection is given to sites of international and national importance, and strong protection afforded to Sites of Metropolitan Importance for Nature Conservation.
- 3.8 Policy 7.17 relates to Metropolitan Open Land, which covers the grounds of Athlone House and includes land with biodiversity features of metropolitan value. The policy aims to protect land from inappropriate development and gives it the same level of protection as the Green Belt.
- 3.9 Policy 7.21 relates to trees and woodlands and states that they should be protected, maintained and enhanced. Trees of value should be protected, and any trees to be lost should be replaced, with additional planting where appropriate.
- 3.10 The Mayor's biodiversity strategy (GLA, 2002) lists London's wildlife habitats and protected sites such as woodland, grassland, ponds and gardens. Proposal 1 is that the Mayor will identify Sites of Metropolitan Importance for Nature Conservation for strong protection. Proposal 3 states that the Mayor and boroughs should resist development which would have a significant adverse impact on the population or conservation status of protected or priority species. Proposal 7 states that *"the Mayor expects that biodiversity and wildlife habitat will be taken into account in proposals for the redevelopment of garden land"*.

London Borough of Camden

- 3.11 Camden Core Strategy (Camden Borough Council, 2010a) and Development Policies Document DPD (Camden Borough Council, 2010b) have recently been adopted and so far as relevant supersede the Unitary Development Plan. Under the proposals map, Athlone House is shown as Proposals Site 1, Open Space, and Metropolitan Open Land.
- 3.12 Core Strategy policy CS15 covers open spaces including Metropolitan Open Land and sites of nature conservation and biodiversity, and requires the Council to protect and improve them including in gardens where possible, in particular habitats and biodiversity identified in the local BAPs (Appendix VI). Section g) states that the Council will expect provision of new or enhanced habitat where possible, including through biodiverse green or brown roofs and green walls.
- 3.13 Sections k) to p) of Policy CS15 are specific to Hampstead Heath and the adjacent area requiring the preservation and enhancement of its nature conservation importance and including protection of Metropolitan Open Land and where possible the enhancement of biodiversity (Appendix VI).
- 3.14 Policy CS14 relates to the conservation of heritage including the preservation and enhancement of Conservation Areas, and historic parks and gardens. The grounds of Athlone House are subject to the Highgate Village Conservation Area.
- 3.15 A supplementary planning document (Camden Borough Council, 2006), lists and describes the Sites of Nature Conservation Importance in Camden, including Hampstead Heath Site of Metropolitan Importance (MO072) which includes the grounds of Athlone House.

Biodiversity Action Plans

- 3.16 JNCC and Defra (2012) have published the latest UK biodiversity framework on behalf of the Four Countries' Biodiversity Group. This framework supersedes the previous UKBAP (2007) and is based around the new global 'Aichi' targets arising from the 2010 biodiversity meeting in Nagoya, Japan. It includes five strategic goals to galvanise and complement the four individual country strategies which have been produced as a result of devolution.
- 3.17 The England Biodiversity Action Plan (Defra, 2011), sets out the countries overall strategy with regard to biodiversity, and has as its mission:
- 'to halt overall biodiversity loss, support healthy well-functioning ecosystems, and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people'.*
- 3.18 The list of priority habitats and species biodiversity action plans which was agreed under the previous UKBAP still form the basis of much biodiversity work in the four countries, however it has been separated into statutory lists of priorities for the individual countries. The list for England meets the requirements of Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 which requires the Secretary of State to publish a list of habitats and species of principle importance for the conservation of biodiversity in England.
- 3.19 The list of habitats and species of principle importance in England includes some of relevance to Athlone House for example hedgerows, ponds, dry acid grassland, and lowland mixed deciduous woodland, and species such as noctule, soprano pipistrelle and brown long-eared bats, Western European hedgehog, all reptile species, common toad, and garden birds such as song thrush, common starling, common linnet, house and tree sparrow.
- 3.20 There are two local BAPs: the London BAP (London Biodiversity Partnership, 2012) and the Camden BAP (Camden Borough Council, 2012). These include habitat action plans for acid grasslands, private gardens and open spaces, the built environment, wetlands and woodlands, hedgerows and trees. Targets for acid grassland and woodlands relate to their protection, management and restoration. Relevant local species plans include all bat and reptile species, house sparrow and stag beetle. Other important species listed in the London BAP include black redstart.

Invasive species

- 3.21 Japanese knotweed and *Rhododendron ponticum* are invasive non-native plants and are classed as notifiable weeds under Schedule 9 of the Wildlife and Countryside Act 1981 (Appendix V). Japanese knotweed is also classed as controlled waste (Appendix V).
- 3.22 As part of the London Biodiversity Partnership, the London Invasive Species Initiative (LISI) encourages better co-ordination to prevent, reduce and eliminate the impact caused by invasive non-native species across the city.
- 3.23 Buddleia and cherry laurel are listed under LISI as category 3 species which are of high impact or concern, widespread in London, that require concerted, co-ordinated and extensive action to control/eradicate. Cotoneaster, *Rhododendron ponticum* and snowberry are category 2 species of high impact or concern, present at specific sites that require attention (control, management, eradication etc). False acacia is a category 4 species which are widespread and for which eradication is not feasible but where avoiding spread to other sites may be required.

4 SURVEY FINDINGS

Desk study

Site context and history

- 4.1 Athlone House is located adjacent to Hampstead Heath in north London, on the south side of Hampstead Lane, bordering residential land and public open space. Highgate School and its associated playing fields are located on the north side of Hampstead Lane. Athlone House is a large detached house built in 1871. After World War II the eastern part of the grounds were developed with accommodation to service Athlone House as a hospital. The grounds have been reduced in size over the last few years as three apartment blocks (Caenwood Court) were constructed to the east of the house between 2007-2008, and part of the land to the south and west now forms part of the extension area of public open space in Hampstead Heath.
- 4.2 The current grounds forming the application site cover c.2.7ha and comprise Athlone House itself, an area of hard standing and lawns to the north and east of the house, and associated gardens to the west including the main south west facing lawn sloping down to garden terraces, a disused tennis court, a pond, and areas of ornamental shrub and woodland (drawing 514/03 Rev A). A network of paths runs through the grounds. The grounds slope from c.110m Above Ordnance Datum (AOD) in the east, to c. 100m AOD in the west.
- 4.3 Between 2007 and 2009 the current grounds to the east of Athlone House were used as a construction site for development of Caenwood Court. The extension buildings (part of the former hospital) to the north and east of the main house were demolished. The main house was boarded up, and remains vacant, with 24 hour security. The grounds are managed following the principles of the 2007 management plan (Catherine Bickmore Associates, 2007b).

Biological records

Site designations

- 4.4 The grounds of Athlone House form the north eastern corner of Hampstead Heath Site of Metropolitan Importance for Nature Conservation (site number M072, 330ha), a non-statutory designation for a *Site of Nature Conservation Importance (SNCI)*. It is included on the basis of relict acid grassland found within the lawns (noted as containing sheep's sorrel and heath bedstraw) which extends the habitats found within the adjacent Heath (Appendix III). Appendix IV provides extracts for the eastern part of the site of ecological surveys carried out by the London Ecology Unit in 1998 in relation to Athlone House and its identification as part of the site of importance for nature conservation.
- 4.5 The criteria for the selection of such sites are based on those outlined by the Greater London Council in Ecology Handbook 3 (GLC 1986), and the Mayor of London has adopted this approach (GLA, 2002). The Sites of Metropolitan Importance are those which display the '*...best examples of London's habitats, sites which contain rare species, rare assemblages of species or important populations of species, or which are of particular significance within large areas of otherwise heavily built-up London*' (Waite *et al* 1993).
- 4.6 Hampstead Heath Wood Site of Special Interest (SSSI) an ancient woodland, is located in Hampstead Heath at around a kilometre to the west of Athlone House. It is unlikely to be affected by the proposals for re- development.

Species

- 4.7 Data provided by the London Wildlife Trust from the London Bat Group identified a large number of bat records within a 1km² radius of the site since 1985, which included pipistrelle, Daubenton's and noctule bat.

- 4.8 Biological records were sought from English Nature and the London Reptile and Amphibian Trust. There was no data available relating to great crested newt in the area. The Highgate Conservation Area appraisal suggests that there might be slow worms present at Athlone House, but it provides no specific reference to a biological record, and none have been recorded in reptile surveys.
- 4.9 In 2003, the gardener for Athlone House reported seeing grass snake, fox, and frequent hedgehog in the grounds. Birds included a kingfisher seen in 2000 by the pond, a goldcrest nesting in one of the conifers, woodcock observed on two occasions several years ago and tawny owls nesting in the wood.
- 4.10 Anecdotal evidence from security guards at Athlone House in 2012 suggest that 'snake' may be using the brick vents around the edges of the house for shelter.
- Previous bat and herpetofauna surveys (2003-2007)
- 4.11 Previous surveys for bat undertaken in September 2003, 2004, 2007 and 2009 (Catherine Bickmore Associates 2003, 2004, 2007a and 2009b) recorded common pipistrelles (*Pipistrellus pipistrellus*), soprano pipistrelles (*Pipistrellus pygmaeus*), myotis (*Myotis sp.*), noctule (*Nyctalus noctula*) and long eared bats (*Plecotus sp.*) foraging within the grounds of Athlone House. In 2009, a single common pipistrelle bat was recorded roosting under a roof tile at the south western corner of Athlone House.
- 4.12 Herpetofauna surveys undertaken of the grounds in 2003-2005 included areas which no longer form part of the grounds such as a bathing pond that was filled in as part of development of Caenwood Court, and a small pond in land to the south which was included in land donated to Hampstead Heath (now called Athlone House Gardens), as well as the woodland pond still within the site boundary. A visual daytime inspection and sweep netting was carried out of the ponds looking under natural refugia and vegetation for amphibians in September 2003, and night time great crested newt surveys were carried out using high powered torches in May 2004 (Catherine Bickmore Associates, 2004) and repeated in May 2005 (Catherine Bickmore Associates, 2005). Reptile surveys using artificial refugia across the grounds were completed in June 2004. The surveys recorded a population of grass snake around the bathing pond and woodland pond, smooth newt in all three ponds, and no record of great crested newt.
- 4.13 In 2007 the reptile survey was repeated (including only the current extent of the grounds) and grass snake were again recorded adjacent to the western woodland pond, and frogs and common toad were also recorded to the south of the tennis courts and south of the house (Catherine Bickmore Associates, 2007a).
- 4.14 During a bat survey of the gatehouse building to the north east of Athlone House in 2012, a hedgehog was recorded foraging at the north east corner of the grounds adjacent to the entrance gate.

Habitat survey

- 4.15 The grounds have been subdivided into:
- eastern area (hard standing and grassland to east of house),
 - central area (lawns and ornamental planting to west and south of house),
 - western area (sunk garden, tennis courts, ornamental planting)
 - north western area (pond and woodland)
 - southern boundary (driveway and shrubs).
- 4.16 The main habitat types are shown on drawing 514/03 Rev A, photographs are included in Appendix I, and scientific names of species are listed in Appendix II. Information on fauna and potential for protected species follows the habitat description.

Eastern area

- 4.17 The area to the east of Athlone House was largely hard standing (concrete and tarmac), with encroaching scattered ephemeral/short perennial vegetation including species such as annual meadow grass (O), bird's-foot trefoil (O), cat's-ear (O), dandelion (O), greater plantain (O), nettle (O), ragwort (O) and red fescue (O).
- 4.18 Some areas which had previously been bare ground and used as a construction site/compound, for example the location of the former northern extension of the house (now demolished) and the foundations of the former single storey hospital annex to the east, had been colonised by grassland recently established over soil mounds (Photograph 1). Species included red fescue (A), creeping bent (A), broad-leaved dock (O), bristly ox-tongue (O), cat's-ear (O), creeping cinquefoil (O), common mouse-ear (O), dandelion (O), hedge mustard (O), hop trefoil (O), nipplewort (O), red clover (O), ribwort plantain (O), selfheal (O), tall fescue (O), wood avens (O), white clover (F), yarrow (O) and Yorkshire fog (O).
- 4.19 The recently developed grassland on a soil mound to the north of the house resembled outgrown amenity grassland with the species listed above, but also included some bird's-foot trefoil (F) and hare's-foot clover (R), likely to have colonised from construction materials. The area included scattered scrub which was denser at the northern and southern edges of the grassland to the north of the house, included bramble (LF) and buddleia (F), occasional sycamore and ash saplings, and some abandoned building materials and ivy (LF) adjacent to and on the wall in the north.
- 4.20 The recently established grassland to the east of the southern part of the house and the older former lawns (including around a central island in the drive) also included the species listed above, but had out grown, becoming poor semi improved grassland, and including additional species such as agrimony, bird's-foot trefoil, common cats-ear, creeping cinquefoil, colt's-foot, hop trefoil and lady's bedstraw, with grasses including red fescue (D) and Yorkshire fog (O). A large clipped ornamental/introduced yew hedge enclosed the drive from the adjacent lawns to the south, and there was a mature yew tree by the eastern boundary. A recently established beech hedge ran along the retaining wall forming the eastern boundary of the site with Caenwood Court, lying just off-site. A line of semi-mature cypress trees had also been recently planted within the site to provide some visual screening.
- 4.21 There were two mature oaks in the north eastern area, near the entrance off Hampstead Lane, growing within amenity grassland of similar composition to that above. This area included abundant red fescue and perennial ryegrass, and also included bindweed (O), hedgerow crane's-bill (O), herb Robert (O), male fern (O), pendulous sedge (O) and square-stalked willowherb (O). There was some dogwood, a short section of yew hedgerow and a row of cherry laurel adjacent to the entrance. A group of immature silver birch and Swedish white beam were growing in amenity grassland by a former car park. There was a Wilson's honeysuckle hedgerow and a log pile adjacent to this group of trees.

Central area

- 4.22 The main lawns sloping from Athlone House to the south and west supported some more diverse grassland patches which included a limited number of species associated with acid grassland, and as such has been classified as semi-improved acid grassland (Photograph 2). Grasses such as Yorkshire fog and perennial ryegrass were dominant with locally frequent patches of red fescue and creeping bent, and occasional sheep's fescue. Forbs such as heath bedstraw and lesser stitchwort were frequent. There were occasional occurrences of bird's-foot trefoil, black horehound, common cat's-ear, common sorrel, creeping cinquefoil, dandelion, germander speedwell, lady's smock, mouse-ear hawkweed, ox-eye daisy, sheep's sorrel, white dead nettle and wood rush.
- 4.23 There was a tendency for the more typical acid grassland species (such as sheep's fescue, sheep's sorrel and mouse-ear hawkweed) to be associated with the southern parts of the lawn and in particular adjacent/under the edges of the canopies of some of the specimen trees such as the hornbeam, oak, and cedar. However there was also a group of evergreen oak, false acacia and holly, and a golden yew under which dense shade prevented establishment of

grassland. In other areas, particularly on the bank to the west of the house where the grass was longer, the grassland was associated with fewer acidic indicators and included common mouse ear (O), creeping buttercup (LF), ribwort plantain (O), white clover (F) and yarrow (O) with patches of bramble and creeping thistle next to the steps to the west of the house. Locally frequent patches of lady's smock and bird's-foot trefoil had been recorded in 2007 on the bank to the west of the house.

- 4.24 The lawns were separated from the western and southern side of the house by a paved terrace and path, with small areas of poor semi-improved lawn immediately adjacent to the south side of the house. This grassland is mown and included species such as perennial ryegrass (A), creeping bent (F), Yorkshire fog (F), bird's-foot trefoil (O), cat's-ear (O), lady's bedstraw (O) and wood avens (O). Within the lawns adjacent to the south of the house were an immature purple-leaved birch and a moribund hawthorn tree.
- 4.25 To the west and south west of the house, clumps of trees including an evergreen oak (with significant die back), English oak, white beam, cherry, acacia, and specimens including mulberry and cedar were scattered within the lawns, along with a large dead oak tree. Around the boundaries of the lawn were evergreen shrubs such as rhododendron, and hollies intermingled with bramble and the occasional foxglove. There was a small patch of Japanese knotweed at the south west corner of the lawn (undergoing treatment) and also a large grass cutting pile. Ruderal species and scrub such as bramble, creeping thistle, ivy and rose bay willowherb were frequent in rough grassland along the northern edge of the lawn, adjacent to the northern wooded area.

Western area

- 4.26 This comprised a mix of habitats, mostly semi ornamental in character including areas of amenity grassland, out grown hedges, shrubs, an abandoned tennis court and a network of partially obscured paths.
- 4.27 A sunk garden was located at the western end of the central lawns and included low walls, overgrown paved areas with remnants of ornamental planting beds and amenity grassland with an adjacent grass pile. The flagstones had been colonised by species such as bryophytes (F), red fescue (F), bird's-foot trefoil (O), dog violet (O), dove's-foot crane's-bill (O), hop trefoil (O), nipplewort (O), scarlet pimpernel (R), self heal (F) and sow thistle (O). The amenity grassland around the sunk garden was dominated by red fescue with frequent perennial rye grass, and included additional species such as bracken (LF), common sorrel (O), creeping buttercup (O), enchanters nightshade (O), germander speedwell (O), herb Robert (O), meadow buttercup (R), ribwort plantain (O), wood avens (LF), Yorkshire fog (O), a patch of pampas grass and cotoneaster and some locally frequent bramble.
- 4.28 Ornamental hedges and overgrown shrub beds alongside the footpaths subdivided the gardens to the west. Species included hawthorn, forsythia, hazel, flowering current, cherry, garden privet and rhododendron. A number of regenerating woody species were observed including holly, oak, ash, beech and yew, along with understory species such as bramble and nettle. Occasional bluebell (possibly Spanish bluebell or hybrid) were noted in 2007. Immediately to the west of the sunk garden were two large horse chestnut trees and an ash tree, and a row of yews (possibly outgrown from a former hedge). The bank to the east side and above the tennis courts had become invaded with a ruderal growth including frequent bracken, with brambles, curled dock, garlic mustard, nettle and spear thistle.
- 4.29 Beyond the trees and shrubs to the west of the sunk garden, there was an open area of rough cut amenity grassland on sloping land, predominantly perennial ryegrass (A) and red fescue (A) with frequent creeping bent and Yorkshire fog and occasional creeping buttercup, hop trefoil and mouse-ear hawkweed, and a scatter of ornamental trees and shrubs including hawthorn, cotoneaster, crab apple and cherry. Adjacent areas of shrubs to its north had been invaded by bramble. Under the shade of the sycamore and yew trees to the east there were patches of dog violet, wood avens and herb Robert. To the south of the amenity grassland was an area of recently cut tall ruderal vegetation including pendulous sedge (F), bracken (F), bramble (F), wood avens (F), bindweed (O) and a small patch of Japanese knotweed.

- 4.30 A strip of amenity grassland to the west of the tennis courts contained abundant red fescue; locally frequent creeping buttercup; frequent bryophytes, perennial ryegrass and Yorkshire fog; and occasional germander speedwell, lady's smock, lesser stitchwort, ragwort, self heal and white clover. A path running through this area had been colonised by bryophytes and stonecrop with occasional ornamental bellflower, black medick and hoary willowherb.
- 4.31 The surface of the abandoned tennis court had been colonised by ruderal and pioneer species (Photograph 6). Bryophytes were dominant, covering much of the surface. Species such as silver birch, buddleia, bracken, bramble, American willow herb, Canadian fleabane, false oat grass, figwort, foxglove, hawkweed, ivy, least lettuce, red fescue, white stonecrop were frequent. There were occasional ash and sycamore saplings, cat's-ear, enchanter's nightshade, herb Robert, woody nightshade and wood dock. The surrounding fence/walls of the tennis court were beginning to disintegrate with toppled sections and a mix of exotic and other climbers including wisteria, ivy and bramble. A path network adjacent to the court had become partially overgrown by bramble and ornamental shrubs.

North western area

- 4.32 A pond was located within the north western part of the grounds, in a wooded area (Photograph 3). A partially dry concrete-lined channel led into the pond from the north, with an outlet to the west onto Hampstead Heath. At the northern end of the pond was ravine type rock formation (Pulhamite) established as a garden feature with the occasional hart's tongue and soft shield fern.
- 4.33 The pond itself was heavily shaded including by horse chestnut along the western boundary within the Heath, and by immature sycamore and ash trees. The pond was shallow (mostly a few centimetres deep) with much sediment and leaf litter, and covered with algae at the time of the survey, with little aquatic vegetation. Yellow-flag was occasional around the margins and ivy was frequent on the banks.
- 4.34 A narrow bank along the western side of the pond included some recent shrub planting, and occasional small patches of Japanese knotweed, alongside a reed panel fencing. The southern banks of the pond supported bamboo with parts with ruderal growth including bracken, brambles, creeping thistle, great willowherb, nettle, spear thistle and ragwort. Cherry and poplar saplings were becoming established. The eastern side was mainly semi mature sycamore and ash and included cherry laurel, dogwood, false acacia saplings, holly, rhododendron, rose, snowberry, spotted laurel and banks of bramble, with occasional Japanese knotweed plants. There was much ivy on the ground with the occasional bracken, enchanter's nightshade, hedge woundwort, nettle, pendulous sedge, wood avens and wood dock. In 2007 a small cleared area was recorded including foxglove and bluebell.
- 4.35 The northwest woodland was partly ornamental in character with a mix of exotic and native trees and shrubs. To its north it was bounded by adjacent woodland with public access forming part of the Heath. A flag stone path lead through the length of the wood, and other structures including a tufa type dry stone wall and an excavated bowl shaped area were likely to relate to ornamental features of the grounds (Photograph 5). Trees included ash, beech, cedar, false acacia, holly, lime, oak, sweet chestnut, sycamore, yew. There was a large fallen trunk to the north of the tennis courts, and some piles of logs elsewhere. There was a line of large girthed tree stumps standing at around 0.5-1m in height. Of note were some very large sweet chestnut and oak trees –the sweet chestnut included numerous bore holes in the upper limbs likely to be from woodpecker. Shrubs included camellia, rhododendron, forsythia, garden privet with much regenerating yew and holly with some recent planting of hazel along the northern boundary chain link fence. Ivy dominated the ground cover.
- 4.36 Southern margins around the woodland included banks of predominantly bramble with rosebay willow herb.

Southern boundary

- 4.37 The southern boundary of the grounds was marked by an old drive way adjacent to land (Athlone House Gardens) donated to the Heath (Photograph 4). The drive way was defined by

a metal railing fence, and a low stone retaining wall with a band of mixed trees and scrub including ornamental shrubs alongside and over hanging. These included sections of mainly hazel with other sections with a number of evergreen trees and shrubs including yew, holly, rhododendron, and much ivy. Mid way along the wall was a stone built tower (The Milner Folly) with much ivy over the upper part of the structure.

Fauna

- 4.38 Information from the phase one survey in conjunction with biological records and findings from previous specialist surveys, show that the grounds have potential for use by protected species such as foraging, commuting and roosting bats, and reptiles (see specialist survey findings below), and also BAP species such as hedgehog, common toad and garden birds. A hedgehog was recorded during a bat survey of the buildings to the north east of the Athlone House site, and during the habitat survey evidence of fox was recorded with an earth in the wooded area.

Bat survey

Building and context

- 4.39 Athlone House is a large, complex, detached, brick built house with multiple, pitched tiled roofs, and sections of flat roof, chimney stacks and dormer windows (Appendix I: photographs 1-2). The surrounding landscape, adjacent to Hampstead Heath, represents suitable bat habitat (for roosting and foraging), particularly for common species such as pipistrelle, noctule and brown-long-eared bat.

External inspection

- 4.40 To the exterior, Athlone House possessed features that could provide roost sites for crevice dwelling species such as:

- Missing clay roof tiles on the northern elevation

- Gaps between the roof tiles and the bargeboards on two bay windows on northern elevation (photograph 3),

- Lifting lead flashing on northern elevation,

- Gaps behind boarded up windows around entirety of building (photograph 4),

- Missing and lifting tiles on western elevation and south western corner,

- Missing tiles on southern elevation,

- Missing/lifting and broken tiles on eastern elevation, and

- Lifting ridge tiles on northern elevation.

Internal inspection

- 4.41 There were two roof voids within Athlone House (photographs 5-6), both of which were checked for evidence of roosting bats as well as to their suitability to support roosting bats. A basement area was also checked. No bats or evidence of previous use by bats was recorded.
- 4.42 Both roof voids were lined with wooden sarking that was in good condition at the time of the survey. Occasional gaps were noted at eaves level that could allow bats to enter the main roof void, however there was much evidence of feral pigeons within both voids. The basement was of negligible potential for crevice roosting bats.

Emergence surveys (survey data included in Appendix VII)

18th July 2012 – Dusk Survey

- 4.43 A single common pipistrelle was seen to possibly emerge from a roosting site within the northwest corner of the building at 21.32. It flew north toward the surrounding woodland (drawing 514/11 Rev A). A single common pipistrelle was seen to feed in the lee of the building between 21.50 and 21.55 but very few bats were recorded in total, and all were common pipistrelle.

16th August 2012 – dusk

- 4.44 No bats were seen to leave or enter any roost sites within the building during the survey. Up to seven species of bats were recorded within the grounds – common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, Leisler's bat, noctule, Daubenton's bat and a possible myotis species. Small numbers of individual common pipistrelles were observed foraging to the south and west of the house as well as over scrub to the northeast. Two common pipistrelles were seen flying together along the woodland edge to the west of the house at 21.18. A soprano pipistrelle was recorded between 20.52 and 20.59, but not thereafter. The possible myotis bat species was recorded only once, at 21.12, just southeast of the house, but it was not seen. Noctules were recorded, but not observed, at 20.26 and 20.52 whilst a single Leisler's bat was recorded on the southeast side of the house at 21.59. A single unseen Daubenton's bat pass was recorded at 21.18 whilst the only Nathusius' pipistrelle of the survey flew north over the house at 21.17.

17th August 2012 – dawn

- 4.45 No bats were seen entering or leaving roost sites within the house during the survey. Small numbers of common pipistrelle, noctule and a possible myotis bat species were recorded, the majority of registrations only being heard and not seen by the surveyors. Leisler's bats were recorded at 04.44 (not seen) and at 05.24 when one was seen to fly south past the east side of the house.

Summary

- 4.46 The house included two roof voids and many external crevices with potential for roosting bats, however during the daylight inspection no bats or evidence of previous use by bats was recorded. The basement was also inspected and was found to have negligible potential as a roost site for bats.
- 4.47 During a dusk survey, on 18th July 2012, a single common pipistrelle bat was observed possibly emerging from a roosting site within the northwest corner of Athlone House. No other bats were seen to enter or exit roosting sites within Athlone House during the subsequent surveys. Occasional noctules, Leisler's bats, soprano pipistrelles, Nathusius' pipistrelle and myotis bat passes (including Daubenton's bat) were recorded near to the house but none of these bats were considered to have been roosting within Athlone House.
- 4.48 Although roosting was not definitively confirmed in 2012, it is likely that Athlone House continues to provide a day-roosting site for a single common pipistrelle as was confirmed during the 2009 bat surveys. Common pipistrelle is a widespread and common species of bat in the U.K and low numbers of this species means that the roost status of Athlone House is of low conservation significance (Mitchell-Jones, 2004). It is also possible that the house could be used by small numbers of crevice-roosting bats such as pipistrelles in winter, although no signs of hibernation roosts were recorded.

Reptile survey

Areas of suitable habitat

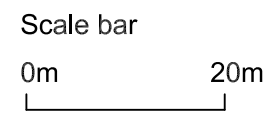
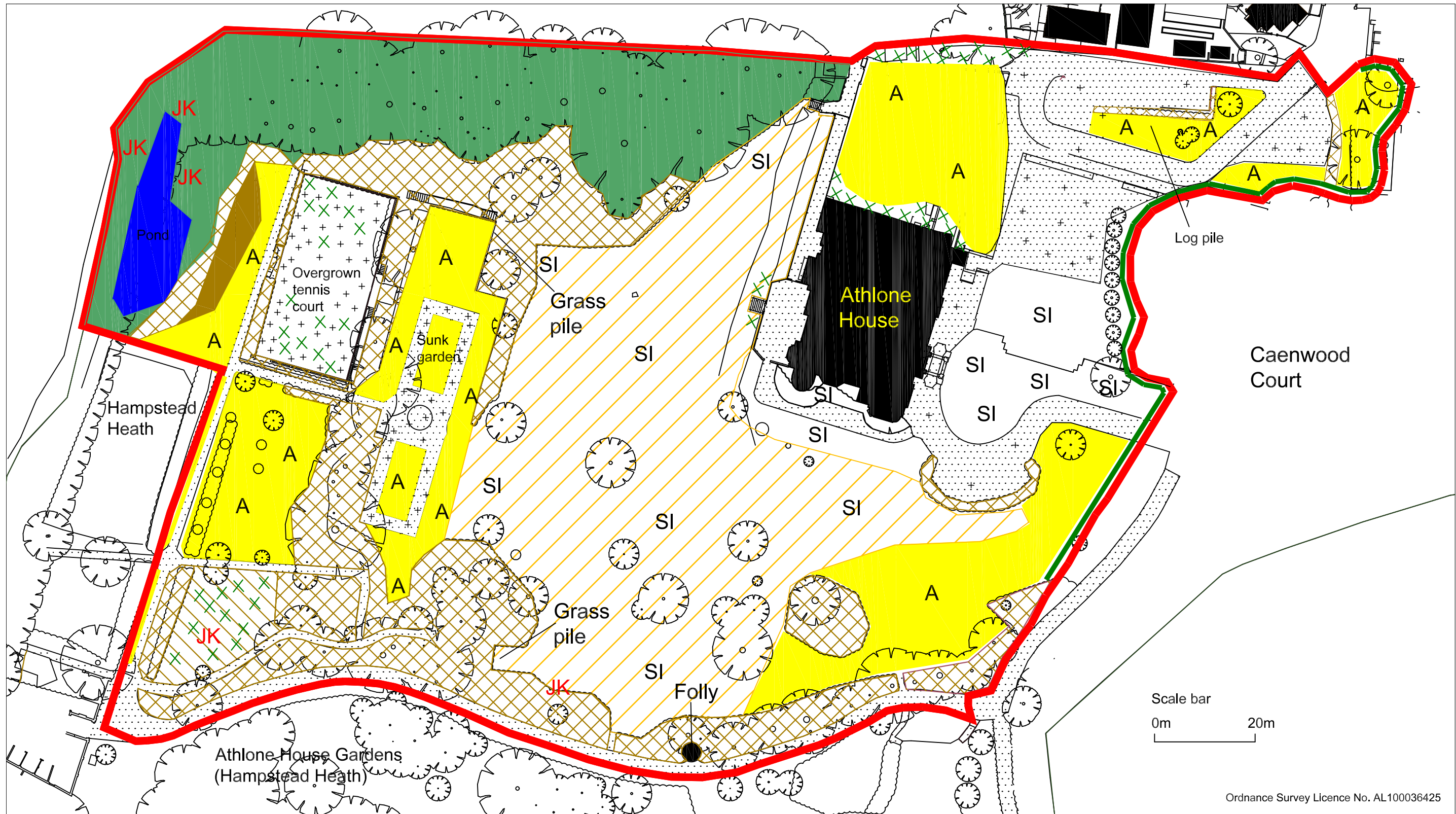
- 4.49 The grounds provided habitat conditions suitable to support reptiles with the habitat mosaic of grassland, tall herb communities, scrub and a pond; south and south west facing slopes; and dense boundary vegetation allowing for connectivity with Hampstead Heath. Rock features, walls, burrows and mature trees provide opportunities for hibernation/refugia sites, as well as potentially the brick vents around the house. Two large grass piles provided potential egg laying sites for grass snake in the south west corner of the main lawn, and also to the north of the sunk gardens.
- 4.50 The grounds have remained relatively undisturbed for some time with much of the ornamental shrubberies largely unmanaged. However, some of the areas of habitat in which grass snake were previously recorded have since been donated to Hampstead Heath and the western part of this area is now specifically managed for grass snake.

Refugia survey

- 4.51 Grass snake was recorded on all seven survey visits in 2012, with a maximum number of four juvenile and one sub-adult grass snake recorded on 8th August 2012. The maximum number of adult grass snakes recorded on one day was one, along with two sub-adults. This is classified as a low population size by Froglife (1999).
- 4.52 The juvenile and sub-adult grass snake were mostly recorded on the northern and southern edges of the lawn to the west of the house, and also at the edge of the grassland to the north of the house. One was found adjacent to the pond, and one near the steps to the south of the tennis court (drawing 514/12). A large adult grass snake was recorded adjacent to the grass pile in the south western corner of the lawn, a possible egg laying site.
- 4.53 In 2004, grass snake were recorded around the woodland pond and also around a bathing pond in the eastern part of the grounds (part of Caenwood Court, no longer present), while in 2007 (after the size of the grounds had been reduced) they were recorded only adjacent to the woodland pond and to the south of the tennis courts in the western part of the site (drawing 514/12). The results from the 2012 survey suggest that the population of grass snake has spread eastwards towards the house since 2007. As grass snake are wide ranging species, they may also be associated with other areas of the grounds and may change location regularly. They may use the wooded area of the grounds for hibernation.
- 4.54 A maximum of one adult and two juvenile common toads were also recorded under the artificial refugia around the pond and on the overgrown tennis court.

Table 4: Reptile survey findings

Date	Herpetofauna recorded	Location
30/07/12	3 juvenile grass snake	Northern and southern edges of lawn to west of house
1/08/12	3 juvenile + 1 sub-adult grass snake	Northern edge of lawn to west of house
2/08/12	1 adult + 2 sub-adult grass snake 1 juvenile common toad	North, south and west of lawn Western boundary of site, south of pond
3/08/12	1 sub-adult grass snake 2 juvenile common toad	Northern edge of lawn Tennis court and western boundary of site, south of pond
08/08/12	4 juvenile + 1 sub-adult grass snake 1 adult common toad	North of house, north of lawn & by pond Tennis court
10/08/12	3 juvenile grass snake 1 juvenile common toad	Northern edge of lawn Western edge of site
16/08/12	2 juvenile + 1 sub-adult grass snake	Northern edge of lawn and south of tennis court

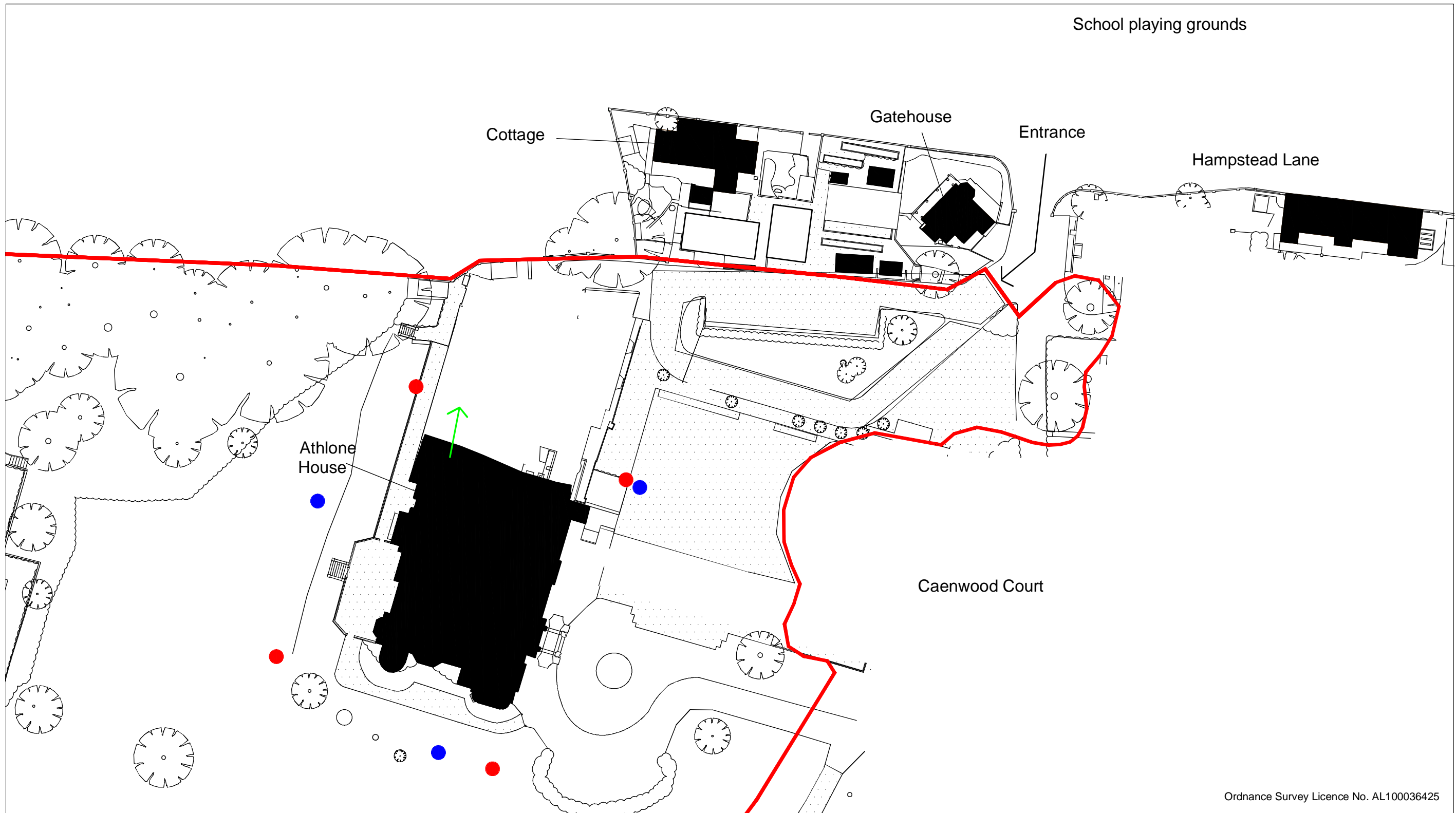


Ordnance Survey Licence No. AL100036425

Key:	
	Building
	Hard standing
	Semi-improved acid grassland
	Poor semi-improved grassland
	Amenity grassland
	Tall ruderal
	Bracken
	Ephemeral/short perennial vegetation
	Introduced shrubs
	Scattered scrub
	Broad-leaved woodland
	Standing water
	Japanese knotweed
	Species poor hedgerow
	Red line application boundary

Rev A: 24/10/12 updated with 2012 survey

Athlone House, Hampstead Lane N6				
Phase one habitat map 2012		Catherine Bickmore Associates Ltd ENVIRONMENTAL CONSULTANCY		
LFG 5 Lafone House, Leathermarket Street, London SE1 3HN Tel: 020 73576700 E-mail: info@bickmoreassociates.co.uk Website: www.bickmoreassociates.co.uk				
Drawn by MM	Check by CJB	Date Oct 2007	Scale See bar	Drawing number 514/03 Rev A



Ordnance Survey Licence No. AL100036425

Key:

- Buildings
- Bare ground
- Red line application boundary
- Surveyor position (1st survey)
- Surveyor position (2nd-3rd survey)
- Possible pipistrelle emergence

All locations approximate

Athlone House, Hampstead Lane N6

Bat survey 2012

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Drawn by MM	Check by CJB	Date Jul 2012	Scale NTS
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Drawing number
514/11 Rev A

5 NATURE CONSERVATION INTEREST

- 5.1 The grounds of Athlone House are essentially ornamental in nature with a history of use as pleasure gardens. However, within this framework are remnants of acid semi-improved grassland, a pond and woodland/scrub habitats of value to a number of species in an urban context. The acid grassland extends and complements wildlife habitats found on the adjacent Heath, and as a consequence the grounds form part of the Hampstead Heath Site of Metropolitan Importance for Nature Conservation (site number M072). As an area of open space including woodland, pond and grassland within an urban area, the land could also provide some potential ecosystem services such as flood regulation.
- 5.2 In 2012 a low population of grass snake was recorded around the lawns to the north and west of the house, and in the vicinity of the pond. The population of grass snake was recorded over a wider area of the grounds in 2012 compared to 2007. Grass snake have a wide range and therefore may use different areas of the grounds at different times. The presence of several juveniles suggests there continues to be an active breeding population, possibly using the grass piles for egg laying. The survey recorded common toad (a BAP species), but no evidence of any other herpetofauna species.
- 5.3 The bat survey in 2012 recorded a possible emergence of one common pipistrelle from the north western part of the house, and use of tiles at the south western corner of the house as a day-roost by individual pipistrelle was recorded in 2009. Other parts of the house were considered to have potential for roosting bats, although no other bats were recorded emerging from or entering the house. Six bat species were recorded in the vicinity of the house, and previous surveys recorded bats making use of tree lines/woodland edge in the grounds for foraging. This diversity of bat species is likely to relate to the proximity of Hampstead Heath with extensive suitable habitat. Previous surveys assessed that the Folly has some potential also, especially as a feeding roost for the brown long eared bat, although this species of bat was not recorded during the 2012 activity survey. The mature trees in the grounds are likely to be an important component of the landscape for bat; providing foraging areas, navigational aids and possible roosting sites for example in features such as woodpecker holes.
- 5.4 In addition to the above protected species, the shrubs and wooded areas of the grounds are likely to provide habitat for nesting birds, including some BAP species. Hedgehog, a UKBAP species, has also been recorded in the grounds, and the dead wood (standing and on the ground) in the wooded areas and elsewhere provides potential habitat for invertebrates, including possibly dead wood specialists such as the stag beetle BAP species.
- 5.5 The findings of the 2012 surveys are in general agreement with previous surveys in 2003-2005, 2007 and 2009 (note that as a result of land division the grounds have been reduced in size since 2004), and those collected by the London Ecology Unit in 1998. This would indicate that there has been little change in the overall condition of the site over this period. The main difference is that some of the plantings and paths have become more invaded by ruderals in particular bramble, and some of the grassland appears slightly less diverse and more dominated by species such as Yorkshire fog. In addition, patches of Japanese knotweed were recorded in parts of the ground and are undergoing treatment. Other species included in the London Invasive Species Initiative were also recorded such as buddleia, cherry laurel, cotoneaster, false acacia, rhododendron and snowberry.

6 ASSESSMENT OF EFFECTS AND RECOMMENDATIONS

Description of proposals

- 6.1 The development of Athlone House to a private residence would involve the demolition and replacement of the house using approximately the same footprint, with associated removal of a few relatively insignificant trees within the immediate proximity of the house. A courtyard would be constructed to the north of the house, and lawns with a semi-formal pond, shrubberies and trees created to the east. A line of clipped evergreen (holm) oak with Austrian pine would be established along the eastern boundary of the site, to replace the existing line of cypress trees. External lighting would be required to light the drive and entrance ways to the house. The grounds to the west of the house would largely retain their current layout, with creation of new ornamental water features, a pond, restoration of historic landscape features and planting/management to benefit the historical and nature conservation interest of the grounds within the context of gardens for the beneficial use of the owner, and carried out in accordance with the landscape scheme (drawing SK 9135-07 Rev J).
- 6.2 The existing landscape structures and areas of trees and shrubs have mostly been incorporated into the proposed landscape scheme, with certain areas to be enhanced and restored. The proposals would include the restoration of the rustic bridge, boat house and waterfall by the existing pond as recorded in the 1881 sale particulars (Catherine Bickmore Associates, 2013b). The pond would be extended in size to the south east, and made deeper as part of the dredging works. An additional informal pond would be constructed to the east of the existing woodland pond, with a small channel connecting the restored waterfall to the new pond and circulating water. Pulhamite restoration would include retention and planting of ferns. Other structural elements subject to restoration would include the Milner Folly tower, woodland and other walks, terracing/ walls, steps, the overgrown tennis court (to be converted to a grass court), and the sunk garden. An orchard would be planted in the area of amenity grassland to the south of the tennis court.
- 6.3 To open up the lawn, a number of areas of introduced shrubs and scattered ornamental trees, some with die back, would be removed including shrubs along the eastern side of the sunk garden and within the lawn. A hornbeam and cedar would be retained with the crowns lifted. The large dead oak would be retained as standing dead wood to benefit dead wood invertebrate species and associated birds such as woodpecker.
- 6.4 Other landscape proposals would involve the restoration and management of shrubberies, installation of three water features in the sunk garden and one to the south west of the sunk garden, installation of planters, and other minor ornamental embellishments of the grounds.

Assessment of effects in the absence of mitigation

- 6.5 Demolition of the existing house would result in the loss of an occasional summer bat roost used by individual pipistrelle bat.
- 6.6 The majority of the construction of the house would be undertaken within the existing footprint of the house and surrounding paths/terrace, and therefore would not affect much of the semi-natural habitat. Approximately 180m² of poor semi-improved grassland would be removed from the southern edge of the house for construction of the new house and southern terrace. Construction of the western terrace would affect a c.1-2m wide strip of rough grassland (a less diverse area of the semi-improved acid grassland) on the bank immediately adjacent to the path to the west of the house (c.100m²). Construction of a new wider set of steps would affect an additional c.30m² of semi-improved acid grassland.
- 6.7 Creation of ornamental lawns and a pond to the east of the house would replace the existing poor semi-improved grassland (c. 0.1ha) and hard standing in this area. The pond would be created for flood detention purposes and ornament, and the combination of exotic and native emergent planting/boundary would also add some habitat diversity. The existing line of cypress trees would be replaced with clipped holm oak and pine, forming a similar non-native boundary feature.

- 6.8 Construction of the courtyard and landscaping to the north would result in the loss of c. 0.1ha of recently established but outgrown amenity grassland and scattered scrub to the north of the house, used by grass snake. Drive construction/preparation for laying the lawn would result in loss of small areas (c.300m²) of amenity grassland near the entrance. However, the c.0.2ha of hard standing currently to the east of the house would also be replaced with lawns.
- 6.9 Construction of a basement is proposed, however a hydrological report concluded that it would be likely to have a minimal affect on the local groundwater conditions within the grounds of Athlone House, and will not have any impact on the hydrology of the nearby Hampstead Heath (GEA, 2013).
- 6.10 The landscape design proposals for the main part (west and south) of the grounds of Athlone House incorporate the features of the site of nature conservation interest. The existing woodland pond would be extended on the south eastern side, and a new pond would be constructed and connected to the east of it, resulting in loss of c.0.02ha of secondary woodland/scrub with some bracken. The affected wooded area consisted mostly of immature sycamore and ash trees, introduced shrubs such as cherry laurel and spotted laurel, snowberry, rhododendron and false acacia saplings, and a small area of bracken. The area could be used by grass snake for shelter and hibernation and they could therefore be harmed during the works. However, in the long-term, construction of an additional informal pond is expected to be beneficial for grass through provision of additional habitat for prey species such as frog. Proposals also include creation of additional features of benefit to nature conservation such as an orchard (drawing SK 9135-07 Rev J).
- 6.11 Therefore, in the absence of mitigation, the re-development of the house would result in the loss of a small summer pipistrelle bat roost (with associated risk of killing/injuring bats), and loss of relatively small areas of amenity grassland with scattered scrub, some of which are used by a small population of grass snake. The loss of amenity grassland would be temporary, and in the long-term there would be a slight increase (by c.0.07ha) of amenity grassland through lawn creation. In the absence of mitigation there would be a loss of c.0.12ha of poor semi-improved grassland and c.0.01ha of acid semi-improved grassland. A small area of woodland/introduced scrub/bracken within an amenity context (c.0.02ha) would be affected by construction of a new pond and extension of the existing pond, and overall the creation of two new ponds would result in an additional c.0.09ha of wetland. The value of the rest of the grounds (for which the site is designated) to wildlife would be retained and enhanced through the proposed landscape scheme.
- 6.12 Overall, the impact of the development on the nature conservation interest of the site would therefore be expected to be minor adverse on account of loss of habitat of minor local importance to bats and reptiles.

Recommendations

Management plans

- 6.13 A wildlife construction management plan should be drawn up and implemented to accommodate ecological requirements of protected and important species and habitats in relation to demolition and construction works, and to cover the intervening period between construction and occupation. This could be subject to a condition of production of the plan prior to the start of demolition works.
- 6.14 A landscape conservation management plan has been produced (Catherine Bickmore Associates 2007b) in association with the Caenwood Court development in the former grounds to the east of Athlone House as part of a 106 agreement. It would be reviewed to accommodate the development of the landscape and proposed landscape scheme since 2007 and to cover the 10 year period following occupation, and should be subject to a planning condition. The principles of management to maintain the wildlife interest and for conservation benefit would remain the same, including managing and enhancing the existing features of interest such as the pond, woodland and areas of semi-improved acid grassland. Management works should also include eradication of Japanese knotweed, and where possible removal of

spreading non-native species listed as invasive by the London Invasive Species Initiative, such as snowberry, buddleia, *Rhododendron ponticum* and false acacia saplings.

Habitat protection

- 6.15 Prior to demolition, barriers to protect trees should be erected around all trees to be retained in the vicinity of the area of works, and should be retained throughout the period of construction (as recommended in Catherine Bickmore Associates, 2013a). Also, fencing should be erected to protect the semi-improved grassland outside of the working area to the south and west of the house (Drawing 514/07).
- 6.16 Prior to the start of demolition works, the small areas of more diverse semi-improved grassland likely to be affected by demolition and construction works should be marked up on site and relocated to a receptor area (c.0.01ha) of less diverse amenity grassland outside the area of works to the south of the house, under direction of an ecologist.
- 6.17 The rubble substrate to the east of the house should also be salvaged/retained for re-use in creating an additional area of wildflower grassland (c.0.04ha) around the eastern and south eastern side of the proposed eastern pond.

Habitat creation/enhancement

- 6.18 To the west and south of the house, areas of rough grassland should be allowed to develop adjacent to the woodland and tree belts/shrub edges through an infrequent cutting regime every 1-3 years, and should be managed as semi-improved acid grassland. Acid grassland should be re established in areas adjacent to the lawn where trees and shrubs have been removed, including along the eastern side of the sunk garden (c.300m²), and within the lawn itself (c.450m²). Wildflower grassland should be established and flowering encouraged in the existing grassland adjacent to the existing pond/new pond in the western part of the grounds.
- 6.19 The proposed new ponds (c.0.02ha + c.0.07ha) for amenity/flood detention should be designed to be semi-natural in character to provide benefit to wildlife through profile and planting treatments, for example through creating shallow marshy areas planted with native, locally occurring aquatic species and emergent species such as purple loosestrife, meadowsweet, brooklime, water forget me not, mint and yellow flag iris. The water in the new western pond should be from a rainwater or ground water source such that there would be no indirect hydrological implications to the Heath. The flow of water through the existing pond to the Heath should be maintained.
- 6.20 In the north west woodland the restoration of the woodland paths should include the selective removal of extensive ivy cover and deep shade species such as volunteer yew and holly through the opening up of glades to increase the diversity and enhance the woodland structure. Extant tree stumps, larger sections of fallen timber and leaf litter piles should be retained where possible/safe, as shelter and dead wood resources and to benefit dead wood invertebrate species such as stag beetle. Care should be taken during maintenance works to avoid harming hedgehogs which may shelter in leaf piles.
- 6.21 Native trees and shrubs should be established, for example to the east of the new eastern pond and to the north of the house, to provide potential nesting habitat and shelter for BAP species such as garden birds and hedgehog. In addition, the large standing dead oak on the southern side of the lawn should be retained and managed to benefit saprophytic invertebrates and associated birds.

Protected species

Bats

- 6.22 Demolition of the house would require a European Protected Species (EPS) licence issued by Natural England as it would result in loss of a likely bat roost. A licence application requires survey information from the season prior to demolition works, and a detailed mitigation plan outlining how bats would be protected during the building works and subsequently (Appendix V). Full planning permission for the development needs to be granted and conditions relating to wildlife which can be discharged prior to start of works would need to be discharged before

an application can be made to Natural England for an EPS licence. It can take Natural England 30 working days to assess the licence application and issue the licence if it is accepted.

- 6.23 The mitigation strategy would require installation of suitable bat boxes onto nearby trees prior to start of demolition works of the exterior of the building, and long-term provision of compensatory roosting sites (bat boxes or bricks) on the new house. It should include a precautionary 'soft-strip' approach, i.e. roof coverings and soffits to be removed by gloved hand under the supervision of a licensed ecologist able to handle any bats encountered during the work. A check should also be made of any boarded up windows as bats can roost between the glass and boarding. In the event that bats are encountered during the soft strip, the bat(s) should be captured by hand and transferred by the licensed ecologist to the tree mounted bat boxes.
- 6.24 The soft strip should be timed to avoid parts of the year when bats are most sensitive to disturbance i.e. winter hibernation season (mid November to late February) and summer breeding season (May to August). It should take place in conditions suitable for bat activity i.e. air temperatures above 8°C for at least four consecutive days where practicable to minimise the risk of encountering torpid bats.
- 6.25 If demolition works are to be carried out more than one year from the date of the latest bat survey, the surveys should be updated in the active season prior to demolition as bats are highly mobile and may change roost sites on a regular basis.
- 6.26 Mitigation measures outlined above to create areas of wildflower grassland, wetlands and scrub/wooded areas managed for wildlife will benefit invertebrates and therefore enhance foraging resources for bats.
- 6.27 Where the landscape proposals involve significant tree works or the felling of mature trees they should be assessed for bat potential. Similarly, depending on the extent of the Folly restoration works and its condition, a check may be needed to assess the potential of the Folly as a bat roost and the potential impact of the work.
- 6.28 External lighting during the period of works should be kept to a minimum and directed away from potential bat commuting lines/foraging habitat, with use of hooded luminaires to prevent upward lighting. The final external lighting scheme has been designed to use low level, low energy LED luminaires with zero upward light distribution, and would minimise lighting of habitat potentially used by foraging or commuting bats. Any security lighting would be controlled using automatic sensors and timers to minimise duration of lighting and would be downward directional with zero upward light distribution. Details of the lighting would be included in the EPS licence application.

Reptiles

- 6.29 Grass snake, protected under Schedule 5 of the Wildlife and Countryside Act, 1981 (Appendix V), could be affected by house construction and pond construction and extension in the woodland, as well restoration/management of the wider grounds, therefore a mitigation strategy would need to be designed to prevent harm. A relocation scheme may be necessary to ensure grass snake are not killed or injured during house demolition/construction works and pond construction.
- 6.30 Ongoing management prior to construction should include continuation of maintenance of the area of grassland to the north of house, and also the patches around southern and eastern side of the house, to be affected by the works (as short grass to minimise likelihood of use by grass snake). During the active period for reptiles, i.e. between March and October, long grass (>10cm long) should only be cut on warm dry days where possible, to minimise the risk of injuring a grass snake. As preparation for carrying out a relocation programme in the area of woodland pond construction, trees and shrubs should be cut to ground level outside of the nesting bird season in the area subject to pond works, and the arisings not required to make log piles should be removed.

- 6.31 In the survey season (April to September) prior to the start of building demolition, house construction and pond works, artificial refugia should be placed in areas of potential habitat to determine whether grass snake still remain in the areas to be affected by the works. Seven survey visits in suitable conditions between April and September without recording reptiles would be required to indicate absence of reptiles.
- 6.32 If grass snake is recorded, they should be relocated to the western part of the grounds in locations unaffected by construction works, for example the proposed orchard. The relocation works should include exclusion fencing, habitat manipulation and destructive search (outside of the winter hibernation period) where appropriate, including for example searches of the vents/gaps in bricks and paving around the house, and log/rubble piles and scrub and tree roots.
- 6.33 Landscape works and restoration of the grounds will also need to take into account the presence of grass snake, and works such as dredging and extension operations in the existing pond should be undertaken in late autumn/winter, following surveys/relocation, to minimise affects on herpetofauna. Small scale works on potential terrestrial habitats such as rough grass and scrub, and piles of rocks, rubble, logs etc should be undertaken carefully, by hand, in the active reptile season (spring to early autumn) to minimise the risk of killing/injuring reptiles, and disturbing hibernation sites. Grass and compost piles should be maintained between June and September when they could be used as egg laying sites for grass snake.
- 6.34 As compensation for the minor loss of habitat around the house and potential temporary disturbance during landscaping works, a further grass pile should be created in a sunny area adjacent to scrub which will not be affected by works, to provide a long-term egg laying site. Similarly, at least two new log piles should be created in sunny locations around the new woodland pond, to provide potential refugia for reptiles and habitat for invertebrates (logs from the existing log pile to the east of the house, and from other fallen timber, could be used for this).

Birds

- 6.35 Any trees/shrubs to be removed should be felled outside of the breeding bird season (March to August) or following a check for breeding birds. A watching brief should be included for black redstart during construction works.
- 6.36 Bird boxes (min. 5 no.) should be installed on mature trees within the grounds as part of habitat enhancement including to attract woodpecker, nuthatch, house sparrow, with a tunnel nest box for kingfisher by the western ponds.

Residual effect

- 6.37 As the house would be constructed mostly over the existing building foot print, and the landscape scheme has been designed within an amenity context to retain, enhance and manage features of wildlife interest, the potential impact of the development on nature conservation and ecosystem services is limited. Implementation of the above mitigation measures should result in an overall positive effect of the development on the nature conservation interest of the site, and the effect of the proposals on the Site of Metropolitan Importance would be neutral to minor beneficial.
- 6.38 Loss of small areas of semi-improved grassland would be mitigated and compensated for through relocation of more diverse patches of grassland and extension of areas of semi-improved acid grassland. This would result in no net loss of semi-improved grassland, and a net gain of acid semi-improved grassland.
- 6.39 The loss of a small area of secondary woodland/introduced shrubs would be compensated for through beneficial management of woodland habitats, with additional benefit from the creation of two new ponds and extension of the existing pond. The effect of the proposals on herpetofauna and bat would be mitigated through relocation from the vicinity of the works, and habitat enhancement elsewhere. A wildlife construction management plan would address wildlife and landscape protection during works and in the intervening period prior to occupation, and should be subject to a condition.

- 6.40 The landscape scheme would contribute to BAP habitat plans (wetlands, woodlands and trees, acid grassland, private gardens), and would ensure maintenance of wildlife habitats that may support BAP species such as hedgehog, stag beetle, garden birds, common toad and bats. A landscape management plan, subject to a planning condition, would set out principles for maintaining the wildlife interest for the 10 year period following occupation (as accepted as part of the consented scheme and raised in the appeal for the 2009 application). The ongoing support and commitment of the beneficial owner through occupation of the dwelling and provision of adequate funding, as proposed in the 2009 scheme, is most important.
- 6.41 The proposed redevelopment would comply with Camden's planning policy CS15 (Appendix VI) which reflects those in the London plan (GLA, 2011) and the Mayor's biodiversity strategy (GLA, 2002). As a result of the development, there would be a positive contribution to the heritage asset comprising the grounds within the Conservation Area, and the proposals would conserve and positively enhance the wildlife interest of the grounds as part of the Site of Metropolitan Importance for Nature Conservation. If approved, there would be assurance that the restoration, conservation and enhancement works would be fully maintained as part of the proposed landscape management plan.

7 CONCLUSIONS

- 7.1 The information from the ecological assessment was integrated with the landscape proposals to accommodate the requirements of the beneficial owner. Therefore, the landscape plan shows the retention of the main features of wildlife interest, and enhancement to benefit wildlife and the status as a part of the Hampstead Heath Site of Metropolitan Importance for Nature Conservation. In association with works to Athlone House, mitigation measures would be carried out under a bat licence to avoid any detrimental impacts to bat populations using the house, and for reptile populations.
- 7.2 In addition other enhancements would also provide benefit (credits) in terms of sustainability under the Code for Sustainable Homes. Enhancement measures would include:
- relocation of areas of semi-improved grassland
 - the extension and enhancement of the area of acid semi-improved grassland,
 - the creation of areas of wildflower grassland,
 - the dredging and enhancement of the existing pond,
 - enhancement of the woodland structure and native tree and shrub planting,
 - installing bat and bird boxes,
 - establishment of two new ponds providing further diversity of habitat,
 - updating of the 2007 management plan to accommodate the proposals and on going management.

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APPENDIX I: PHOTOSHEETS

Photographs: phase one habitat survey of house and grounds (2012)



P1 Hard standing and recently established grassland to east and north of Athlone House (view south)



P2 Lawn containing acid grassland and scattered ornamental trees (view north east)



P3 Over-shaded pond in north west of grounds showing Pulhamite rock work



P4 Shrubbery along southern boundary drive, adjacent to land donated to Hampstead Heath (Athlone House Gardens)



P5 Path through north west woodland



P6 Overgrown tennis court

Photographs: daylight bat survey of Athlone House (2012)



P1 Athlone House – northern elevation



P2 Athlone House – eastern elevation



P3 Gap between bargeboards and tiles on northern elevation



P4 Boarded-up window on northern elevation



P5 Large roof void



P6 Main roof void showing wooden sarking and daylight at eaves (potential bat access point into void)

APPENDIX II: SPECIES LIST

Common Name	Scientific Name
Acacia	<i>Acacia sp.</i>
Agrimony	<i>Agrimonia eupatoria</i>
American willowherb	<i>Epilobium ciliatum</i>
Annual meadowgrass	<i>Poa annua</i>
Ash	<i>Fraxinus excelsior</i>
Birch	<i>Betula sp.</i>
Beech	<i>Fagus sylvatica</i>
Bellflower	<i>Campanula sp.</i>
Bindweed	<i>Calystegia</i>
Bird's foot trefoil	<i>Lotus corniculatus</i>
Black horehound	<i>Ballota nigra</i>
Black medick	<i>Medicago lupulina</i>
Bluebell	<i>Hyacinthoides non-scripta (c.f. x hispanica)</i>
Bracken	<i>Pteridium aquilinum</i>
Bramble	<i>Rubus fruticosus agg.</i>
Bristly ox-tongue	<i>Picris echioides</i>
Broad-leaved dock	<i>Rumex obtusifolius</i>
Buddleia	<i>Buddleja davidii</i>
Canadian fleabane	<i>Conyza canadensis</i>
Cedar	<i>Cedrus sp.</i>
Cherry	<i>Prunus sp.</i>
Cherry laurel	<i>Prunus laurocerasus</i>
Colt's-foot	<i>Tussilago farfara</i>
Common cat's-ear	<i>Hypochaeris radicata</i>
Common mouse-ear	<i>Cerastium fontanum</i>
Common sorrel	<i>Rumex acetosa</i>
Cotoneaster	<i>Cotoneaster sp</i>
Creeping bent	<i>Agrostis stolonifera</i>
Creeping buttercup	<i>Ranunculus repens</i>
Creeping cinquefoil	<i>Potentilla reptans</i>
Creeping thistle	<i>Cirsium arvense</i>
Curled dock	<i>Rumex crispus</i>
Dandelion	<i>Taraxacum agg.</i>
Dog violet	<i>Viola sp.</i>

Dogwood	<i>Cornus sanguinea</i>
Dove's-foot crane's-bill	<i>Geranium molle</i>
Enchanter's-nightshade	<i>Circaea lutetiana</i>
Evergreen oak	<i>Quercus ilex</i>
False acacia	<i>Robinia pseudoacacia</i>
False oat-grass	<i>Arrhenatherum elatius</i>
Figwort	<i>Scrophularia nodosa</i>
Flowering currant	<i>Ribes sanguineum</i>
Forsythia	<i>Forsythia sp.</i>
Fox glove	<i>Digitalis purpurea</i>
Garden privet	<i>Ligustrum ovalifolium</i>
Garlic mustard	<i>Alliaria petiolata</i>
Germander speedwell	<i>Veronica chamaedrys</i>
Greater plantain	<i>Plantago major</i>
Great willowherb	<i>Epilobium hirsutum</i>
Hare's-foot clover	<i>Trifolium arvense</i>
Hart's tongue fern	<i>Phyllitis scolopendrium</i>
Hawkweed	<i>Hieracium</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Heath bedstraw	<i>Galium saxatile</i>
Hedge woundwort	<i>Stachys sylvatica</i>
Hedgerow crane's-bill	<i>Geranium pyrenaicum</i>
Herb Robert	<i>Geranium robertianum</i>
Hoary willowherb	<i>Epilobium parviflorum</i>
Holly	<i>Ilex aquifolium and sp</i>
Horse chestnut	<i>Aesculus hippocastanum</i>
Ivy	<i>Hedera helix and Hedera spp.</i>
Japanese knotweed	<i>Fallopia japonica</i>
Lady's bedstraw	<i>Galium verum</i>
Lady's smock	<i>Cardamine pratensis</i>
Least lettuce	<i>Lactuca saligna</i>
Hop trefoil	<i>Trifolium campestre</i>
Lesser stitchwort	<i>Stellaria graminea</i>
Male fern	<i>Dryopteris filix-mas</i>
Meadow buttercup	<i>Ranunculus acris</i>
Meadow foxtail	<i>Alopecurus pratensis</i>

Mouse-ear hawkweed	<i>Pilosella officinarum</i>
Mulberry	<i>Morus nigra</i>
Nettle	<i>Urtica dioica</i>
Nipplewort	<i>Lapsana communis</i>
Oak	<i>Quercus robur</i>
Ox-eye daisy	<i>Leucanthemum vulgare</i>
Pampas grass	<i>Cortaderia selloana</i>
Pendulous sedge	<i>Carex pendula</i>
Perennial ryegrass	<i>Lolium perenne</i>
Poplar	<i>Populus sp.</i>
Ragwort	<i>Senecio jacobaea</i>
Red fescue	<i>Festuca rubra</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Rhododendron	<i>Rhododendron spp</i>
Rose	<i>Rosa sp.</i>
Rosebay willowherb	<i>Chamerion angustifolium</i>
Scarlett pimpernel	<i>Anagallis arvensis</i>
Selfheal	<i>Prunella vulgaris</i>
Sheep's fescue	<i>Festuca ovina</i>
Sheep's sorrel	<i>Rumex acetosella</i>
Silver birch	<i>Betula pendula</i>
Snowberry	<i>Symphoricarpos albus</i>
Soft shield fern	<i>Polystichum setiferum</i>
Sow thistle	<i>Sonchus arvensis.</i>
Spear thistle	<i>Cirsium vulgaris</i>
Spotted laurel	<i>Aucuba japonica</i>
Square-stalked willowherb	<i>Epilobium tetragonum</i>
Swedish whitebeam	<i>Sorbus intermedia</i>
Sweet chestnut	<i>Castanea sativa</i>
Sycamore	<i>Acer pseudoplatanus</i>
Tall fescue	<i>Festuca arundinacea</i>
Wild strawberry	<i>Fragaria vesca</i>
White clover	<i>Trifolium repens</i>
White dead nettle	<i>Lamium album</i>
White stonecrop	<i>Sedum album</i>
Wilson's honeysuckle	<i>Lonicera nitida</i>
Wisteria	<i>Wisteria sp.</i>

Wood avens	<i>Geum urbanum</i>
Wood dock	<i>Rumex sanguineus</i>
Wood rush	<i>Luzula sp.</i>
Yarrow	<i>Achillea millefolium</i>
Yellow flag	<i>Iris pseudacorus</i>
Yew	<i>Taxus c.f. baccata</i>
Yorkshire fog	<i>Holcus lanatus</i>

**APPENDIX III: EXTRACT FROM ECOLOGY HANDBOOK 24: NATURE CONSERVATION IN
CAMDEN. SITE DESCRIPTION FOR THE HAMPSTEAD HEATH SITE OF METROPOLITAN
IMPORTANCE**

Ecology: grounds of Athlone House and of The Elms

'The grounds of Athlone House are included within this site as they display a relict acid grassland flora and extend the wildlife habitat on the adjacent Heath. (Habitats similar to those on Hampstead Heath may also survive in the grounds of other houses near the boundaries of this Site of Metropolitan Importance).

The lawn which sweeps down from the old house itself is on infertile, acidic soil, and contains sheep's sorrel and heath bedstraw among a sward of fine-leaved grasses and moss; this would probably reveal itself to be an excellent acid grassland if it were mown less frequently. Also contributing to the interest of the area are the many mature trees and shrubs, such as pedunculate oaks and mature horse-chestnut and sweet chestnut trees. A fine line of Kentish cobnut trees

(Source: Waite *et al* 1990)

APPENDIX IV: NOTES FROM GLA SITE SURVEY, 2nd OCTOBER 1998 (UNPUBLISHED)

South east of pond: +/- 'enclosed' lawn (by tall hedge and trees to east, scattered shrubs on grass and more shrubs to west). Grass a bit longer here than on main lawn, and maybe damper. The *Rumex* here is mainly *acetosa*, not *acetosella*. *Prunella vulgaris* and *Bellis perennis* plentiful. Loads of *Stellaria graminea*, and (in parts) lots of *Cardamine flexuosa* in grass (a few in flower on path).

Sloping lawn, down from old house. Short(ish) mown. Most cuttings removed but not all: thickish thatch below grass. Bare patches and rabbit droppings, which are 'gungey'. Frequent patches of *Galium saxatile* (sometimes, in small patches: 5). *Pilosella officinarum* common on western slope. Old formal garden: short mown: nothing of interest seen. *Carex hirta* abundant in patches on lawn. (*Carex oralis* here last survey, but none seen). Old tennis court at west: lots of mosses – but no time to investigate'.

APPENDIX V: LEGISLATIVE BACKGROUND

Note: this summary does not represent a legal opinion

European protected species

All bat species (and great crested newt) are fully protected by the Wildlife & Countryside Act 1981 (as amended) and by The Conservation of Habitats and Species Regulations 2010. These make it an offence to:

- Deliberately or intentionally kill, injure or take an animal of the species;
- Possess or control any live or dead specimen or anything derived from the species;
- Damage or destroy or intentionally or recklessly obstruct access to any structure or place used for shelter or protection by the species;
- Deliberately, intentionally or recklessly disturb bats or great crested newts; in particular any disturbance which is likely to impair their ability to survive, breed or reproduce or nurture their young; or in the case of hibernating or migrating species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species.

The government's statutory conservation advisory organisation, Natural England, is responsible for issuing European Protected Species licences that would permit activities that would otherwise lead to an infringement of the Habitat Regulations. A licence can be issued if the following three tests have been met:

- **Regulation 53(9)(a)** - there is "no satisfactory alternative" to the derogation, and;
- **Regulation 53(9)(b)** - the derogation "will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range" and;
- **Regulation 53(2)(e)** - the derogation is for the purposes of "preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment".

Licences can be applied for following the grant of all planning consents required to permit the work proposed to be carried out under licence. The licence application must be accompanied by a method statement, and a reasoned statement of application showing how the proposals meet the three tests. Natural England aim to issue a decision on the application within 30 working days of its receipt.

Reptile

All reptiles are protected under the wildlife legislation in the Wildlife and Countryside Act 1981 (as amended) which protects these species against intentional killing and injuring (under part of Section 9(1) and Section 9(5)).

Breeding bird

Subject to the provisions of part 1 of the Wildlife and Countryside Act 1981 (as amended) it is an offence to intentionally:

- a) kill, injure or take any wild bird
- b) take damage or destroy the nest of any wild bird while in use or being built
- c) take or destroy an egg of any wild bird

It is also an offence to intentionally disturb any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young or disturbs dependent young of such a bird.

Schedule 9 invasive non-native species

Japanese knotweed and *Rhododendron ponticum* are listed on Schedule 9 of the Wildlife and Countryside Act 1981. It is an offence to “plant or otherwise cause to grow in the wild” any plant on this schedule. This has implications for control methods and disposal e.g. flailing can cause further spread of Japanese knotweed.

Vegetative material and contaminated soil of Japanese knotweed is classed as ‘controlled waste’ under the section 43 of Environmental Protection Act, 1990, and therefore must be disposed of at a licensed landfill site in accordance with the Environmental Protection (Duty of Care) Regulations, 1991 (as amended 2003).

**APPENDIX VI: EXTRACT FROM LONDON BOROUGH OF CAMDEN LDF CORE STRATEGY
(CAMDEN BOROUGH COUNCIL, 2010A)**

CS15 – Protecting and improving our parks and open spaces and encouraging biodiversity

The Council will protect and improve Camden's parks and open spaces. We will:

- a) protect open spaces designated in the open space schedule as shown on the Proposals Map, including our Metropolitan Open Land, and other suitable land of 400sqm or more on large estates with the potential to be used as open space;
- b) tackle deficiencies and under-provision and meet increased demand for open space by:
 - providing additional open space at King's Cross;
 - securing additional on-site public open space in the growth areas of Euston, West Hampstead Interchange, Holborn

and Tottenham Court Road, and other parts of Central London. Where the provision of on-site public open space is not practical on a particular site in these areas, the Council will require a contribution to the provision of additional public open space on identified sites in the vicinity. If it can be demonstrated to the Council's satisfaction that no such suitable sites are available, we will require improvements to other open spaces in the area;

- securing improvements to publicly accessible open land on the Council's housing estates; and
- securing other opportunities for additional public open space.

CS15 – Protecting and improving our parks and open spaces and encouraging biodiversity (continued)

- c) secure from developments that create an additional demand for open space, where opportunities arise, improvements to open spaces, including to:
 - the facilities provided, such as play and sports facilities;
 - access arrangements; and
 - the connections between spaces.

The Council will protect and improve sites of nature conservation and biodiversity, in particular habitats and biodiversity identified in the Camden and London Biodiversity Plans in the borough by:

- d) designating existing nature conservation sites;
- e) protecting other green areas with nature conservation value, including gardens, where possible;
- f) seeking to improve opportunities to experience nature, in particular in South and West Hampstead, Kentish Town and central London, where such opportunities are lacking;
- g) expecting the provision of new or enhanced habitat, where possible, including through biodiverse green or brown roofs and green walls;
- h) identifying habitat corridors and securing biodiversity improvements along gaps in habitat corridors;
- i) working with The Royal Parks, the London Wildlife Trust, friends of parks groups and local nature conservation groups to protect and improve open spaces and nature conservation in Camden;
- j) protecting trees and promoting the provision of new trees and vegetation, including additional street trees.

The Council will preserve and enhance the historic, open space and nature conservation importance of Hampstead Heath and its surrounding area by:

- k) working with the City of London, English Heritage and Natural England to manage and improve the Heath and its surrounding areas;
- l) protecting the Metropolitan Open Land, public and private open space and the nature conservation designations of sites;
- m) seeking to extend the public open space when possible and appropriate;
- n) taking into account the impact on the Heath when considering relevant planning applications;
- o) protecting views from Hampstead Heath and views across the Heath and its surrounding area;
- p) improving the biodiversity of, and habitats in, Hampstead Heath and its surrounding area, where opportunities arise.

The Council will preserve and enhance the Regent's Canal by:

- q) balancing the differing demands on the Canal, its towpath and adjoining land;
- r) implementing opportunities to make the Canal a safer place;
- s) applying the guidance in the Regent's Canal Conservation Area Management Strategy;
- t) implementing opportunities to provide additional nature conservation areas and improve the role of the Canal and its adjoining land as a habitat corridor (green chain);
- u) working with British Waterways, Natural England, other land owners/developers, users and the local community to improve the Canal and towpath.

APPENDIX VII: BAT SURVEY DATA

Location: Athlone House – southeast side Surveyor: Richard Moores Detector: EM3 + Anabat SD1 Survey date: 18.07.2012 Weather conditions: 16 degrees at start, SW wind force 3, 8/8 cloud, dry Sunset: 21.06		
Time	Species	Survey notes
21.50-21.55	Common pipistrelle	Foraging in lee of building

Location: Athlone House – northeast side Surveyor: Marion Macnair Detector: Batbox Duet + minidisc Survey date: 18.07.2012 Weather conditions: as above Sunset: 21.06		
21.51	pipistrelle species	Brief, distant and not seen

Location: Athlone House- west side Surveyor: Ben Nelumbu Detector: Pettersson D200 Survey date: 18.07.2012 Weather conditions: as above Sunset: 21.06		
21.28	Common pipistrelle	Probably foraging along woodland edge to northwest
21.32	Common pipistrelle	Possibly emerged from NW corner of building and flew north
22.09	Common pipistrelle	Not seen - probably feeding along woodland edge to north

Location: South western corner of Athlone House Surveyor: John Wenman Detector: EM3 Survey date: 16/08/2012 Weather conditions: Dry; Overcast; c. 18°C Sunset: 20:20		
Time	Species	Survey notes
20:25	Noctule	Distant unseen pass
20:56	Common pipistrelle	Unseen pass
20:59	Common pipistrelle	Unseen pass
21:06	Common pipistrelle	Unseen pass
21:10	Soprano pipistrelle	Foraging pass from east to west
21:16	Soprano pipistrelle	Distant foraging to the north
21:17	Soprano pipistrelle	Distant foraging to the north
21:18	Daubenton's bat	Unseen pass
21:24	Common pipistrelle	Unseen pass
21:30	Common pipistrelle	Unseen pass
21:35	Common pipistrelle	Unseen pass

21:39	Common pipistrelle	Unseen pass
21:41	Common pipistrelle	Unseen pass
21:43	Common pipistrelle	Unseen pass
21:44	Common pipistrelle	Unseen pass

Location: South western corner of Athlone House		
Surveyor: John Wenman		
Detector: EM3		
Survey date: 17/08/2012		
Weather conditions: Dry; Overcast; c. 15°C; brief light shower for c. 2 minutes		
Sunrise: 05:50		
04:34	Common pipistrelle	Unseen pass
04:38	Common pipistrelle	Unseen pass
04:46	Common pipistrelle	Unseen pass
04:49	Common pipistrelle	Unseen pass
04:50	Common pipistrelle	Unseen pass
04:55	Common pipistrelle	Unseen pass
04:56	Nyctalus sp.	Unseen pass
04:59	Common pipistrelle	Unseen pass
05:16	Noctule	Unseen pass

Location: South eastern corner of Athlone House		
Surveyor: Marion Macnair		
Detector: Batbox Duet and Anabat SD2		
Survey date: 16/08/2012		
Weather conditions: Dry; Overcast; c. 18°C		
Sunset: 20:20		
20:52-20:53	Common pipistrelle	Unseen – pass x 3 – likely foraging
20:53	Soprano pipistrelle	Unseen pass
20:58	Common pipistrelle	Unseen pass
21:02	Common pipistrelle	Unseen pass
21:04-21:05	Common pipistrelle	Unseen foraging towards south west corner
21:11	Soprano pipistrelle	Unseen distant pass
21:12	Myotis sp.	Unseen pass
21:15	Common pipistrelle	Unseen pass
21:17	Nathusius pipistrelle	Pass from south to north, over house
21:19	Daubenton's bat	Unseen pass
21:20	Common pipistrelle	Two bats foraging around SE corner
21:25-21:27	Common pipistrelle	Unseen foraging
21:27	Daubenton's bat	Unseen pass
21:59	Leisler's bat	Unseen pass

Location: South eastern corner of Athlone House		
Surveyor: Marion Macnair		
Detector: Batbox Duet and Anabat SD2		
Survey date: 17/08/2012		
Weather conditions: Dry; Overcast; c. 15°C; brief light shower for c. 2 minutes		
Sunrise: 05:50		
04:28	Common pipistrelle	Unseen pass
04:31	Common pipistrelle	Unseen pass, distant
04:35	Common pipistrelle	Unseen pass
04:37	Common pipistrelle	Unseen pass, brief

04:39	Common pipistrelle	Unseen pass
04:44	Leisler's bat	Unseen pass
04:52	Common pipistrelle	Unseen pass (distant)
04:55	Common pipistrelle	Brief, unseen
04:58	Nyctalus sp.	Unseen pass x 2
05:00	Common pipistrelle	Unseen pass
05:05	Soprano pipistrelle	Flew from N to S past east side of house
05:24	Leisler's bat	Flew from N to S past east side of house

Location: North eastern corner of Athlone House		
Surveyor: Kris Chan		
Detector: Batbox III and Anabat SD2		
Survey date: 16/08/2012		
Weather conditions: Dry; Overcast; c. 18°C		
Sunset: 20:20		
20.26	Noctule	Unseen pass
20.52	Common pipistrelle	Unseen pass
20.58	Common pipistrelle	Unseen pass
21.00	Common pipistrelle	Flew W along hedge to S of position
21.02	Common pipistrelle	Unseen pass
21.04	Common pipistrelle	Unseen pass
21.06	Common pipistrelle	Three bats unseen
21.22	Common pipistrelle	Unseen pass
21.24	Common pipistrelle	Unseen pass
21.59	Nyctalus sp.	Unseen pass

Location: North eastern corner of Athlone House		
Surveyor: Kris Chan		
Detector: Batbox III and Anabat SD2		
Survey date: 17/08/2012		
Weather conditions: Dry; Overcast; c. 15°C; brief light shower for c. 2 minutes		
Sunrise: 05:50		
04:44	Common pipistrelle	Unseen pass
05:18	Noctule	Unseen pass
05:26	Noctule	Unseen pass

Location: North western corner of Athlone House		
Surveyor: Ben Nelumbu		
Detector: Peterson D200 and Anabat SD1		
Survey date: 16/08/2012		
Weather conditions: Dry; Overcast; c. 18°C		
Sunset: 20:20		
20.24	Nyctalus sp.	Seen flying high from the west going east not heard, flew over the southern part of the site, seem to dive and continue to fly in a straight line.
20.26	Pipistrelle	Pass from the north towards Athlone House
20.49	Common pipistrelle	Seen foraging along the west of Athlone House
20.59	Soprano pipistrelle	Seen foraging by the north east corner over the buddleia shrub and passed towards north east

21.01-5	Common pipistrelle	Continuously foraging to the north of the building.
21.18	Common pipistrelle	Two bats seen following one another along the woodland edge to the west.
21.23	Common pipistrelle	Unseen pass
21:36	Soprano pipistrelle	Unseen pass
21.39	Common pipistrelle	Pass towards Athlone House from the woodland to the north
21.53	Common pipistrelle	Unseen pass

Location: North western corner of Athlone House Surveyor: Ben Nelumbu Detector: Peterson D200 and Anabat SD1 Survey date: 17/08/2012 Weather conditions: Dry; Overcast; c. 15°C; brief light shower for c. 2 minutes Sunrise: 05:50		
05:01	Common pipistrelle	Unseen pass
05:19	Common pipistrelle	Unseen pass