

# Cranbrook Basements Limited – Ecological Services to Support a Policy Review

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## Executive Summary

This report presents the findings of a document review, undertaken by experienced consultant ecologists, of the RBKC basement policy and supporting documentation relating to biodiversity.

Following this review, it is concluded that the need for a new policy to restrict basement development to a maximum of 50% of back gardens and no more than a single storey cannot be justified on grounds relating to adverse effects on biodiversity.

The current legislation and policy context is deemed sufficient to ensure the conservation of biodiversity interests within gardens in the Royal Borough of Kensington and Chelsea (RBKC). The proposed bespoke basement policy does not add additional levels of protection for biodiversity within the borough but instead provides an inappropriate blanket policy that would be better suited to be dealt with on a case-by-case basis as is currently the procedure.

It is important to emphasise that garden design is permitted development, as such it is not possible to control garden design for the benefit of biodiversity except at the planning stage through appropriate planning conditions.

As stated in the RBKC Biodiversity Basement Paper (Gunnell, 2014), the primary reason for changes in garden composition in recent decades relates to a shift in garden design choices and management. None of the documentation cited refers to basement developments contributing to these changes.

In the context of assessing the impact of development, every site warrants consideration on a case by case basis. The blanket assumption that all domestic gardens offer biodiversity value, and all gardens with subterranean development offer limited biodiversity value does not adequately address the complexity of the subject and is factually incorrect.

Broad brush restrictions, as outlined in the bespoke basement policy, will potentially and unnecessarily restrict legitimate development on sites where there are no trees, vegetation or biodiversity value of note thereby missing an opportunity for enhancement through planning conditions.

# 1. Purpose of this Report

AMEC Environment & Infrastructure UK Limited (AMEC) was commissioned by Cranbrook Basements Limited to provide ecological support in developing representations to the Royal Borough of Kensington and Chelsea (RBKC) following their recent partial review of the Core Strategy. A bespoke basement policy is part of this review and Cranbrook Basements Limited wish to submit representations on the soundness of the Publication Policies, including in relation to the impact of basement developments on biodiversity.

This report presents the findings of a document review undertaken by experienced consultant ecologists (CVs of the author and reviewer of this document are provided in Appendix A) of the RBKC basement policy and supporting documentation relating to biodiversity. It should be noted that the focus of this technical note is on biodiversity aspects of the policy only.

## 2. Policy Review Response

### 2.1 Legislative and Policy Context

In order to comment on the soundness of the RBKC bespoke basement policy, it is useful to consider the existing legislation and policy context that is in place, and that proposed development schemes within the Royal Borough of Kensington and Chelsea would need to adhere to in order to meet with the requirements of the planning system and avoid breaches in legislation. Full details of the relevant legislation and policies are provided in Appendix B (Box 1 and 2 and Table B1).

It is our view that the current legislation and policy context is sufficient to ensure the conservation of biodiversity interests within gardens in the Royal Borough of Kensington and Chelsea. The proposed bespoke basement policy does not add additional levels of protection for biodiversity within the borough but instead provides an inappropriate blanket policy that would be better suited to be dealt with on a case-by-case basis as is currently the procedure. Normal planning controls do exist to prevent unacceptable development in back gardens.

The council should be able, through the current planning system, to seek to ensure that gardens maintain their biodiversity function for flora and fauna and that they are capable of continuing to contribute to the landscape character of an area so that this can be preserved and enhanced. This can be achieved on a case by case basis as each garden will differ in its existing and potential biodiversity value.

Appropriate conditions, requirements and mitigation can be sought through the planning process as it currently stands – this system helps to ensure that adverse effects on biodiversity are mitigated and compensated for where appropriate and opportunities for enhancement are exploited to maximise the benefits of new development proposals within urban areas.

## 2.2 Ecological Value

Various factors contribute to a site's biodiversity value. For example, based on the widely accepted Ratcliffe Criteria<sup>1</sup>: size; position in a geographical unit; naturalness; rarity; fragility; diversity; and potential value all contribute to determining the nature conservation value of a site. As such, in the context of assessing the impact of development, every site warrants consideration on a case by case basis. The blanket assumption that all domestic gardens offer biodiversity value, and all gardens with subterranean development offer limited biodiversity value does not adequately address the complexity of the subject.

The Biodiversity Basement Paper<sup>2</sup> states quite correctly that subterranean development proposals 'may impact on biodiversity' but equally it must be argued that it may not. Without considering the specific site in question it is not possible to assess what features on the site offer biodiversity value and as such should be retained, conserved or mitigated for. The current bespoke basement policy intimates that by limiting the extent of development, ecological value is more likely to be maintained but there is no reason to assume that the biodiversity value of a particular site is not located within the allowed developable area. This issue further reinforces the need to consider each application on its own merits.

## 2.3 Biodiversity Basement Paper

The Biodiversity Basement Paper<sup>2</sup> references various studies relating to the biodiversity value of urban gardens and it is fully acknowledged that urban gardens do provide a valued green infrastructure that supports urban flora and fauna, supports biodiversity at a neighbourhood scale, and even helps us to adapt to climate change<sup>3</sup>. It is noted, however, that subterranean development does not necessarily impact upon this green infrastructure in a permanent way. The main causes in the decline of open space and domestic garden landcover in cities relates to changes in garden design and management (which is permitted development and as such outside planning control) as well as development activities that result in the permanent loss of soft landcover (i.e. garden buildings such as sheds and offices, as well as above ground extensions). Basement developments in the RBKC require the reinstatement of a minimum of 1m soil depth that support good vegetation cover. Smith *et al.* (2005)<sup>4</sup> outline the importance of vegetated landcover and landcover richness (the diversity of different landcovers) in offering biodiversity value and is not just focussed on the presence of mature trees (see further comments below relating to trees). It is the mosaic of different landcovers that gives a garden its biodiversity value – trees are certainly important, but a varied vertical structure, different substrates and specific features including compost heaps and even patio substrates offer varied opportunities for many species<sup>4</sup>. There is no reason why new landscaped areas with 1m depth soils cannot offer this diversity and in turn, value.

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<sup>1</sup> Ratcliffe, D. A. (1977). *A Nature Conservation Review*. Cambridge University Press.

<sup>2</sup> Gunnell, K. (2014). *Impact of Basement Development on Biodiversity: Partial Review of the Core Strategy*. The Royal Borough of Kensington and Chelsea.

<sup>3</sup> Smith, C. (2010). *London: Garden City?* London Wildlife Trust, Greenspace Information for Greater London, and the Greater London Authority.

<sup>4</sup> Smith, R., Gatson, K., Warren, P., & Thompson, K. (2005). Urban domestic gardens (V): relationships between landcover composition, housing and landscape. *Landscape Ecology*: 235-253.

### 2.3.1 Section 4, Biodiversity Basement Paper – detailed response

A more detailed response to specific statements provided within section 4 of the Biodiversity Basement Paper is provided in Table 2.1 below.

**Table 2.1 Detailed Responses to Specific Text within Section 4 of the Biodiversity Basement Paper**

RBKC Policy Text	AMEC Response
<p>If the works occurred during breeding or nesting season, the removal of the nesting sites could result in a lost generation and/ or severe stress on the breeding animal if they have to reproduce again in the same season. Such disturbance could also result in the breeding pairs abandoning the site never to return.</p>	<p>With certain exceptions, all wild birds, their nests and eggs are protected by the <i>Wildlife and Countryside Act 1981</i> (as amended). Therefore, it is an offence, <i>inter alia</i>, to: intentionally take, damage or destroy the nest of any wild bird while it is in use or being built; and take or destroy the egg of any wild bird. Any development activities would need to comply with this legislation.</p>
<p>Likewise, in the winter season, the works could disturb hibernating animals (this includes overwintering insects as well as small mammals). The energetic costs of being roused from hibernation are often lethal for the animal as they generally cannot replenish their reserves in the winter months.</p>	<p>Current wildlife legislation adequately protects species of conservation note and/ or from a welfare perspective. In accordance with the IEEM guidelines<sup>5</sup> it is widely acknowledged that it is not necessary to assess the impact of development on every species of plant or animal that may be affected. It is only necessary to consider those species or groups of species that are of sufficient nature conservation value. This does not include groups of common garden invertebrates or 'small mammals' likely to occur within the RBKC.</p>
<p>If the soil is taken away and redistributed to other sites, potentially in other regions, this will impact on the natural distribution of those animals, which could either lead to their death (if outside their preferred climatic zone) or more worryingly, could lead to introducing them to areas where they will out-compete local fauna.</p>	<p>There is no scientific basis for this statement. The removal of soil from a residential garden will not effect the natural distribution of invertebrate species present within RKBC (the remaining assemblages will far outweigh any individuals lost). The soil in question is located within a heavily urbanised area and there is no evidence to suggest that soil in the RBKC includes notable assemblages of invertebrate species beyond those commonly found in urban gardens across the UK. Common invertebrate assemblages will not out-compete local fauna elsewhere as they will broadly be of a similar composition to those present elsewhere. If there are non-native invertebrates (or even plant material) then the spread of these is covered by the <i>Wildlife and Countryside Act 1981</i> (as amended).</p>
<p>These impacts may not seem significant if considered for one individual property in a local area. However, if more than four properties out of ten undertook large-scale basement excavations at a similar time, then the cumulative impacts on local biodiversity could become significant. [Table 1 – Ecological Impact Table: During Construction]</p>	<p>There is no scientific basis for this statement. This assessment is not based on any standard guidance (i.e. IEEM) relating to assessing the impact of construction on ecological resources and there is no evidence to suggest that 4/10 properties undergoing basement excavations is significant. The statements included in the table are unfounded and not based on expert ecological reasoning.</p>
<p>If homeowners re-landscape their gardens in such a way that the habitats previously there are not replaced, or such that vegetative complexity is not re-introduced, then the temporary impacts from pre-construction become permanent.</p>	<p>This issue can already be addressed through the planning application process. In a wider context however, it is not deemed appropriate for the council to dictate how homeowners should landscape their gardens although there is a level of opportunity to influence this through the planning process.</p>
<p>Table 2 - Ecological Impact Table: Post construction</p>	<p>Table 2 has no scientific basis and is not based on any known standard guidance (i.e. IEEM) commonly used to assess the significance of impacts on biodiversity resources. The statements included in the table are unfounded and not based on expert ecological reasoning.</p>

<sup>5</sup> Institute for Ecology and Environmental Management (IEEM) (2006). *Guidelines for Ecological Impact Assessment in the United Kingdom*. IEEM, London.

## 2.4 ‘London: Garden City?’ Report<sup>3</sup>

The above noted report has been outlined as supporting documentation for the Biodiversity Basement Paper<sup>2</sup>, but not once does this document discuss subterranean or basement developments. The paper is solely concerned with permanent land take in urban gardens (resulting from the construction of sheds, garden buildings, above ground extensions and the introduction of hardstanding or non-vegetated landcover), and does not take account of or address any implications relating to basement construction where re-instatement of garden habitats are largely included as part of proposals. As such, its inclusion as a supporting document is questioned.

## 2.5 Landscaping and Garden Design

Basement developments do not preclude opportunities for vegetated landcover or landcover richness and can be seen to provide opportunities, through planning requirements and conditions, to enhance reinstated gardens through the provision of high quality landscaping designed to maximise biodiversity benefits, including through the integration of SuDS (Sustainable Drainage Systems), green roofs and green walls and diverse planting of species that provide known benefits to urban wildlife (e.g. fruit bearing shrubs, nectar rich flowering plants etc.).

## 2.6 Trees in Relation to Construction

BS5837:2005 ‘A guide for trees in relation to construction’ is utilised by ecologists, arboricultural experts, architects, builders/ developers and home owners across the UK as the standard and most appropriate and practical guidance to ensure the protection of trees during ground works. This is adopted not just during basement construction but in association with all development activities that occur close to trees. If this BS document is deemed inadequate (as inferred by the RBKC policy documents) then there would be a case for revising the guidance to reflect these inadequacies. Addressing the issue within the policies relating subterranean development is not considered appropriate as it does not encapsulate the issue at the broader scale, given that trees are affected by all groundworks and not just those associated with subterranean development proposals.

Furthermore, BS5837 is a guidance document and should only be used as such. Where mature trees are present within the zone of influence of policy proposals it is appropriate for an arboricultural report to be required as part of any application. This report will outline material constraints associated with trees present within the zone of influence of proposals, will identify significant conflicts and will help to prevent unplanned arboricultural impacts through the provision of an Arboricultural Impact Assessment and associated mitigation where appropriate. In this instance, the planning department will have the opportunity to consider the issue on a case by case basis rather than assuming that all works will affect the trees in question.

It is our view that soil depth again should be considered on a case by case basis – as the RBKC supporting documents<sup>6</sup> state, it is difficult to argue that newly planted trees will not survive in 1m of soil (this is then contradicted by the Biodiversity Basement Paper that states “*soil depth will be severely limiting for the growth of large trees*”).

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<sup>6</sup> RBKC (2014) *Trees and Basements*, RBKC, London

### 3. Conclusions

Broad brush restrictions, as outlined in the bespoke basement policy, will potentially and unnecessarily restrict legitimate development on sites where there are no trees, vegetation or biodiversity value of note thereby missing an opportunity for enhancement through planning conditions. In contrast, for other sites, the newly proposed restrictions will offer absolutely no additional protection or benefit from a biodiversity perspective as the features of nature conservation value within the garden may still be located within the permitted build footprint.

The amount of undeveloped garden land which it is desirable to retain will depend on the size and character of the site, the requirement to retain existing trees, and the results of the analysis of the existing surface water conditions.

In order to ensure the protection of biodiversity within the urban environment, the most effective and sustainable approach is to consider each proposal on a case by case basis within the current legislative and policy context.

*Author: Emma Toovey MSc BSc CIEEM*



*Reviewer: Katheryn Leggat MSc BSc CIEEM*



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# Appendix A

## CVs

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# Curriculum Vitae

## Emma Toovey



**Name**

Emma Toovey

**Current Position**

Associate Director

**Education and Qualifications**

2000, BSc (Hons), Biological Sciences with Environmental Resources, University of Warwick

2002, MSc, Environmental Assessment & Management, Oxford Brookes University

**Professional Memberships**

Chartered Institute of Ecology and Environmental Management - Full

**Career Summary**

2011, Associate Director, AMEC Environment & Infrastructure UK

2010, Associate Director, Entec UK Ltd

2008, Principal Ecologist, Entec UK Ltd

2007, Senior Ecologist, Entec UK Ltd

2006, Consultant Ecologist, Entec UK Ltd

2005, Senior Ecologist, White Young Green Environmental

2003, Ecologist, White Young Green Environmental

## Key Expertise

Emma has undertaken and project-managed a wide range of ecological assessments as stand-alone reports and as part of the wider EIA process. Emma’s extensive project experience covers a variety of habitat types and protected species for a range of development, regeneration and/or conservation proposals. Emma has extensive expertise in the design and implementation of mitigation strategies, working closely with architects, engineers, landscape architects, hydrologists and other environmental professionals. Emma’s experience extends to developing relationships and undertaking extensive consultation with stakeholders and statutory consultees for a variety of project types, both conservation- and development-led. Emma is also experienced in managing large technical teams, often including a range of ecological specialists, in order to meet the requirements of technically challenging projects.

Emma is also experienced at undertaking Habitats Regulations Assessments at the project level and on plans and programmes at the strategic level.

## Urban Ecology/Sustainable Design

Emma has particular experience in urban ecology and working on regeneration projects within a city setting in London and the South East. This has included working closely with architects, landscape architects and other environmental professionals to integrate

sustainable design solutions, particularly relating to biodiversity, into the overall scheme design. Such experience has included providing support for BREEAM and Code for Sustainable Homes Assessments, provision of technical specialist advice for the Carbon Challenge project, the provision of brown and green roofs on a major residential development on the south bank of the Thames and input into a sensitive and modern landscape design on the edge of a tidal creek in Kent.

## Selected Project Experience

### Arborfield Garrison Redevelopment - Ecological Impact Assessment for a large housing development

#### Defence states

Arborfield Garrison has been identified as a potential site for rationalisation of training services and future re-development for housing following its status as a Strategic Development Area within the LDF. Emma has acted as ecological task manager and technical lead for all ecological services across the proposed site in support of an Environmental Impact Assessment. The 300 hectare site has required an extensive range of survey work to be undertaken, including surveys for bats, dormice, reptiles, great crested newts, badgers, water voles and birds. Additionally, due to the proximity of the site to the Thames Basin Heaths Special Protection Area (SPA)(a European designated site), an extensive mitigation strategy has been designed that includes the provision of large areas of Suitable Alternative Natural Green Space (SANGS) in order to comply with the requirements of the European Habitats Directive. A detailed mitigation strategy has also been designed in order to mitigate effects upon the local badger population. This strategy will also require the granting of licenses from Natural England and AMEC will provide support in this regard once the mitigation strategy is to be implemented.

### Hailsham Sussex - Ecological Impact Assessment for a large mixed use development on greenfield land.

#### Hillreed Homes

Proposals for a large mixed use development on greenfield land in Hailsham, Sussex required that an Ecological Impact Assessment were undertaken as part of a wider EIA. This included the collation of baseline data for habitats and protected species and the design of an adequate mitigation strategy for a number of protected species confirmed to be present onsite including great crested newts, dormice, reptiles, badgers and nesting birds. Additionally, the presence of a European designated site for nature conservation within the vicinity required that a Habitats Regulations Assessment (HRA) was undertaken to ensure compliance with the European directive.

### Internal Guidance for Habitats Regulations Assessments for Plans and Programmes

#### AMEC

Emma has been the task manager for developing the internal guidance notes for AMEC in relation to undertaking Habitats

## Curriculum Vitae Emma Toovey

Regulations Assessments (HRA) of strategic plans and programmes. In liaison with the in-house technical committee of specialists, the guidance was developed through consultation with the relevant bodies, detailed study of current reference material and technical discussion.

### **New Build Nuclear Power Stations at Dungeness Sizewell Hinkley and Bradwell - Ecological Services**

EDF

AMEC have been commissioned to provide all ecological services required to support the development of proposals for four new nuclear power stations in the south of England. Emma has provided key ecological input for all four sites and is Project Manager for all ecological services at Sizewell in Suffolk. This work has included managing an extensive team of ecologists, both in-house and local experts. AMEC have collated and interpreted an extensive desk study of available information and historical reports in addition to undertaking a suite of detailed species and habitat specific survey work for all four sites. Due to the sensitivity of the site at Sizewell, Emma provides monthly input into the scheme design, working closely with engineers and architects and the wider EIA team. Emma is also leading a number of research studies that are considering options with regard to innovative and effective mitigation and enhancement strategies. The project has required extensive consultation with statutory consultees and other relevant parties and is currently working towards the provision of an Environmental Impact Assessment for Sizewell and Hinkley.

### **Waltham Forest BSF Schools - Project Manager for Ecological Support for BREEAM**

Bouygues UK Ltd (on behalf of Waltham Forest BC)

Emma was responsible for co-ordinating and technical reviewing ecological assessments for 17 schools sites in the London Borough of Waltham Forest in support of BREEAM assessments. Baseline ecological surveys and desk studies were undertaken for each school and assessment reports provided identifying which BREEAM credits could be achieved for each school if a variety of biodiversity related recommendations were implemented as part of the scheme design. Advice was given with regard to optimising sustainability, biodiversity benefits and BREEAM credits as well as ensuring compliance with the relevant wildlife legislation.

### **London Plan Alterations HRA support**

Greater London Authority

Technical advisor providing support relating to the requirements of the Habitats Regulations and their application resulting from alterations to the London Plan.

### **Specialist Advisor (Biodiversity) for the Carbon Challenge**

English Partnerships

Emma provided advice as part of AMEC's Sustainable Design Group, an integrated team lead including experts in urban design and architecture, energy, water, waste and materials, ecology and management. The group is part of the Carbon Challenge Network which is a partnership between the CLG, EP and other advisory

bodies such as the Building Research Establishment (BRE), Energy Saving Trust (EST) and Waste & Resources Action Programme (WRAP). AMEC acts as lead technical advisor to the Carbon Challenge Network through developing standard documents such as the Carbon Challenge generic brief as well as site-specific documents; facilitating procurement processes; evaluating tender submissions, liaising with site specific and regional teams and developers; and monitoring and evaluating outcomes at key stages of the Carbon Challenge.

The Carbon Challenge is being run by English Partnerships (EP) on behalf of Communities and Local Government (CLG) in order to equip the house building industry with the skills and technology needed to meet the goal set by the Government that all new homes will be zero carbon by 2016. In particular, the Challenge will act as a testing ground for the Government's Code for Sustainable Homes and the new Planning Policy Statement on climate change.

### **Tottenham Hale London - Ecological Assessment for a new waterside residential development**

ISIS Waterside Regeneration

Ecological baseline surveys for birds, water voles and bats and an Ecological Impact Assessment were required for a proposed residential development situated on a small site bounded by water courses on two sides within the Lea Valley. The site is located within 50m of an internationally designated site for birds. The water courses either side of the site also support protected species including water voles. Input into the scheme design was important to ensure that adverse effects upon the local bird population did not occur and a mitigation and enhancement strategy is currently being designed in order to improve the biodiversity value of the area and ensure compliance with wildlife legislation and national policy.

# Curriculum Vitae

## Katheryn Leggat



**Name**  
Katheryn Leggat

**Current Position**  
Principal Consultant

### Education and Qualifications

2006, MSc, Wildlife Biology and Conservation, Napier University  
2004, BSc (Hons), Conservation and Countryside Management, University of Derby

### Professional Memberships

Chartered Institute of Ecology and Environmental Management - Full

### Career Summary

2013, Principal Consultant, AMEC Environment & Infrastructure UK  
2011, Senior Consultant, AMEC Environment & Infrastructure UK  
2010, Senior Consultant, Entec  
2008, Consultant, Entec  
2006, Assistant Consultant, Entec  
2006, Assistant Ecologist, Herpetologic Ltd

## Key Expertise

Katheryn is an experienced project manager and ecologist, with a range of field and desk-based skills, particularly relating to ecological assessment and protected species work. She has expertise in carrying out extended phase 1 habitat surveys, followed by detailed species-specific surveys for a variety of taxa, including reptiles, otters, great crested newts, dormice, sand lizards and smooth snakes. She holds Natural England survey licences for the last four.

Katheryn's field data have contributed to research projects and planning proposals, as well as feeding into larger schemes such as Environmental Impact Assessments, often for ecologically sensitive sites. In the latter role, her experience has included the bespoke design and implementation of water vole surveys on uniquely challenging sites, and she has assisted national experts with detailed badger bait-marking and bat radio-tracking studies. Katheryn holds a Natural England Roost Visitor licence, with bats providing one of her main areas of expertise. She has therefore been responsible for managing and leading survey teams for large, complex bat surveys and impact assessments.

Katheryn's experience extends to working closely with design teams to minimise the potential effects of development, and taking responsibility for the design and implementation of mitigation strategies for sites supporting a range of protected species. She has also developed detailed habitat enhancement and management plans to maximise the biodiversity of sites in the long term.

Specialising in bats, Katheryn holds a Class 2 Natural England Bat Survey licence, and has taken responsibility for managing and leading survey teams for large, complex bat surveys and impact assessments.

## Selected Project Experience

### Bath Road Post Planning Ecology

#### Bewley Homes

Having been granted planning permission for the development of the Bath Road Reservoir site in Reading for residential housing, Bewley Homes require support to discharge a number of conditions relating to ecology. In her role as Project Manager for the scheme, Katheryn is working closely with the client, delivering practical solutions to prevent unnecessary delays to the commencement of work, while also complying with planning and legislative requirements. Katheryn is responsible for overseeing a team of ecologists working on the project. To date the work undertaken has included production of a Habitat Management Plan for a retained wildlife area, survey work for hibernating bats, the identification and initial assessment of potential reptile receptor sites, the monitoring of badger activity, and supervision of tree clearance works. At every step of the way Katheryn has liaised closely with the Council Ecologist to ensure that the approach taken is considered satisfactory. This has allowed sufficient planning conditions to be discharged to enable Bewley Homes to commence vegetation clearance at the earliest possible stage, with the support of Reading Borough Council.

In summer 2013, Katheryn will oversee the implementation of the Reptile Mitigation Strategy for the site, prior to the start of construction work.

### Botany Marshes Habitat Management Plan

#### Britannia Refined Metals

Katheryn was responsible for leading a programme of ecological baseline surveys within BRM's landholding on Botany Marshes in Kent. Initially she undertook an extended phase 1 habitat survey, to scope the site and map habitats present. Detailed survey work was then undertaken for a suite of taxa (including botany, birds, reptiles, water vole, otter and bats). Further scoping surveys were also completed for invertebrates and amphibians.

The resulting Ecological Baseline Report was used to inform a comprehensive Habitat Management Plan for the site, incorporating both terrestrial and aquatic habitats. Katheryn produced the document in liaison with the client to provide a comprehensive but realistic (in terms of practical and economic feasibility) plan for enhancing the on-site habitats for their biodiversity value, and managing them to maintain that value in the long-term. She incorporated 'pull-out' appendices that provided standalone Method Statements for individual tasks, suitable for provision directly to any contractor undertaking the works.

In spring 2013 the capital works commenced on-site, with Katheryn overseeing a team of ecologists providing assistance to

## Curriculum Vitae Katheryn Leggat

the client and contractors on the ground. Early indications suggest that the works have been successful, with water vole from nearby habitat moving into previously unoccupied, newly enhanced ditches.

### **Camp Hill Wind Energy Development Environmental Impact Assessment**

#### Partnerships for Renewables

Throughout 2011, Katheryn contributed to ecological baseline surveys on this proposed wind turbine site on the Isle of Wight. In addition to assisting with reptile and bat surveys, she led the survey work for dormice on the site. Once the baseline data had been collated, Katheryn acted as technical reviewer for a number of the protected species reports, and then went on to produce the ecological chapter for the Environmental Statement. In undertaking the Ecological Impact Assessment, Katheryn was required to consider potential effects not only on the designated habitats present on and surrounding the site, but also on reptiles, great crested newts, dormice and red squirrels. Most significant and complex however, was the impact assessment required for bats, not least because a number of the UK's rarest species were recorded on or near the site, and are known in nationally important numbers from the locality. Katheryn was required to ensure that the assessment took into account the most up-to-date developments in scientific understanding and research relating to bat interactions with wind turbines. In addition to effects from the proposed scheme, potential cumulative effects from other consented schemes in the local area were also considered.

### **Stone House Hospital**

#### PJ Livesey

The former Stone House Hospital in Dartford is undergoing redevelopment for residential use, with the original Victorian hospital building being refurbished and split into luxury apartments. Prior to the submission of the planning application for this work, Katheryn designed and led a programme of bat surveys, including external and internal building inspections, and a suite of dusk emergence surveys. The surveys identified a maternity roost of brown long-eared bats, a night time roost for serotine, and three small pipistrelle roosts. Katheryn went on to assist with the development of a comprehensive mitigation strategy designed to avoid negative effects on the bat populations using the site. This included incorporating roosting spaces into the design of the final scheme. The strategy formed the basis of a European Protected Species derogation licence application, which has been granted for the scheme. Katheryn is now providing on-going support and advice with the implementation of the licence, and has been responsible for supervising contractors removing roof tiles so that any bats roosting underneath can be removed to safety. She will also lead post-construction monitoring surveys related to the licence, to ascertain the success of the measures instituted.

### **Park Plaza Ecological Assessment**

#### The Co-operative

Katheryn was responsible for managing the ecological assessment of this site in Waltham Cross. She undertook an initial phase 1 habitat survey, which identified the need for detailed protected

species survey work. Katheryn led the successful completion of great crested newt presence/absence surveys, a reptile population assessment and bat survey work, keeping the client up to date with progress at regular intervals. Ongoing liaison with the client ensured that they were fully aware of the implications of the survey findings, and Katheryn was able to discuss in detail the options available for progressing with the proposed scheme to develop the site as a business park in compliance with the legislation that protects reptiles in the UK. A potential receptor site was identified for reptiles translocated from the Park Plaza site, and Katheryn took responsibility for assessing the suitability of this, including by carrying out presence/absence surveys for reptiles. An Ecological Mitigation Strategy was designed for the site, alongside a Habitat Enhancement and Management Plan for the proposed receptor site.

### **University of Greenwich School of Architecture & Construction EcIA & BREEAM Assessment**

#### University of Greenwich

In December 2009, Katheryn acted as project manager for the Ecological Impact Assessment of the University of Greenwich's proposed new School of Architecture and Construction. She undertook an ecological walkover survey to scope for potential ecological receptors, and then assisted with follow up surveys of the buildings to assess any potential bat presence. Katheryn was then able to use the survey data to work closely with the design team such that any potential effects on local ecological resources could be minimised. In addition, they were able to maximise opportunities built into the scheme to deliver an overall benefit to biodiversity. This included the design of green roofs and a sensitive lighting scheme. The final scheme was subject to an Ecological Impact Assessment, and as a result of the measures already built into the scheme during the design process, Katheryn's report was able to conclude that there would be no significant effects on ecology. The final report was also used to inform a BREEAM Assessment.

### **80 Charlotte Street and 65 Whitfield Street**

#### West London & Suburban Property Investments Ltd

Katheryn managed this project, which required an ecological assessment of a small site in central London. The initial survey highlighted no existing features of ecological interest, therefore it was possible for development to proceed with no further ecological survey work. Katheryn then worked with the project design team so that opportunities for biodiversity could be built into the scheme, such that the number of BREEAM credits obtained for the development could be maximised. Less than a week prior to the proposed submission of the planning application, the LPA highlighted the requirement for an arboricultural survey of the site. The client requested that Katheryn take responsibility for commissioning and managing this element of work within the extremely tight time restrictions. This was achieved successfully and the planning application submitted successfully.

# Appendix B

## Legislative and Policy Context

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**Box 1 Designated Wildlife Sites, and Priority Habitats and Species**

**Statutory Nature Conservation Sites**

Internationally important sites: Special Areas of Conservation (SACs) and candidate SACs, Special Protection Areas (SPAs) and proposed SPAs, Sites of Community Importance, Ramsar sites and European offshore marine sites.

Nationally important sites: Sites of Special Scientific Interest (SSSIs) that are not subject to international designations and National Nature Reserves (NNRs)

Local Nature Reserves (LNRs) are statutory sites that are of importance for recreation and education as well as nature conservation. Their level of importance is defined by their other statutory or any non-statutory designation (e.g. if an LNR is also an SSSI but is not an internationally important site, it will be of national importance). If an LNR has no other statutory or non-statutory designation it should be treated as being of metropolitan-level importance for biodiversity (although it may be of greater socio-economic value).

**Non-statutory Nature Conservation Sites**

Sites of local/borough/ metropolitan importance: the Greater London Authority designates and categorises SNCIs according to their level of importance for conservation on a scale of Metropolitan/Borough Grade 1/ Borough Grade 2/ Local.

**Priority Habitats and Species**

In this report, the geographic level at which a species/ habitat has been identified as a priority for biodiversity conservation is referred to as its level of 'species/ habitat importance'. For example, habitats and species of principal importance for the conservation of biological diversity in England (see the first bullet point below) are identified as of national species/ habitat importance reflecting the fact that these species/ habitats have been defined at a national level. The level of importance therefore pertains to the species/ habitat as a whole rather than to individual areas of habitat or species populations, which cannot be objectively valued, other than for waterfowl, for which thresholds have been defined for national/international 'population importance'.

- National importance: Habitats and species of principal importance for the conservation of biological diversity in England. These are listed on: <http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>. These include those UK Biodiversity Action Plan (UK BAP) priority habitats and species that occur in England.
- National importance: Species listed as being of conservation concern in the relevant UK Red Data Book (RDB) or the Birds of Conservation Concern<sup>7</sup> Red List.
- National importance: Nationally Scarce species, which are species recorded from 16-100 10x10km squares of the national grid.
- National importance: Ancient woodland (i.e. areas that have been under continuous woodland cover since at least 1600).
- Metropolitan importance: Species listed in the London BAP.
- Borough importance: Species listed in the Kensington and Chelsea Local BAP.

<sup>7</sup> Eaton, M.A. et al. (2009). Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. *British Birds* **102**:296-341.

**Box 2      Legally Protected and Controlled Species**

**Legal Protection**

Many species of animal and plant receive some degree of legal protection. For the purposes of this study, legal protection refers to:

- Species included on Schedules 1, 5 and 8 of the *Wildlife and Countryside Act 1981* (as amended), excluding species that are only protected in relation to their sale (see Section 9[5] and 13[2]), reflecting the fact that the proposed development does not include any proposals relating to the sale of species;
- Species included on Schedules 2 and 5 of *The Conservation of Natural Habitats, &c. Regulations 2010*; and
- Badgers, which are protected under the *Protection of Badgers Act 1992*.

**Legal Control**

Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) lists species of animal that it an offence to release or allow to escape into the wild and species of plant that it is an offence to plant or otherwise cause to grow in the wild.

Relevant biodiversity related policies are listed in Table A.1, along with an outline of the issues included in these policies that need to be considered.

**Table A.1      Policy issues to be considered**

Policy Reference	Policy Issue
<i>National planning policies</i>	
<b>National Planning Policy Framework (NPPF)</b>	The identification of effects on: designated sites of international, national and local importance; protected species, habitats and species of principal importance for the conservation of biodiversity in England; and ancient woodland and veteran trees.  The identification of measures to mitigate adverse effects and of opportunities for enhancing biodiversity.
<i>Regional planning policies</i>	
<b>The London Plan<sup>8</sup> Policy 7.19</b>  Biodiversity and access to nature	New development should improve existing or create new habitats or use design (green roofs, living walls) to enhance biodiversity and provide for its on-going management.
<b>The London Plan Policy 7.21</b>  Trees and woodlands	Existing trees should be retained wherever possible and any loss as the result of development should be replaced following the principle of 'right place, right tree'. Wherever possible the planting of additional trees should be included in new developments.
<i>Local planning policies</i>	
<b>RBKC Core Strategy Policy CR 5</b>	The council will (a) resist the loss of existing [iii] private communal open space and private open space where the space gives visual amenity to the public; (f) require all green open space to optimise biodiversity and wildlife habitat; (g) require all open space that forms part of a proposal to be designed and landscaped to a high standard.

<sup>8</sup> Mayor of London (2011). *The London Plan*. <http://www.london.gov.uk/shaping-london/london-plan/>

**Table A.2 (Continued) Policy issues to be considered**

<b>Policy Reference</b>	<b>Policy Issue</b>
<b>RBKC Core Strategy Policy CR 6</b>	The council will require the protection of existing trees and the provision of new trees that compliment existing or create new, high quality green areas which deliver amenity and biodiversity benefits. The Council will (a) resist the loss of trees unless: i) the tree is dead, dying or dangerous; ii) the tree is causing significant damage to adjacent structures, iii) the tree has little or no amenity value; iv) felling is for reasons of good arboricultural practise; (b) resist development which results in the damage or loss of trees of townscape or amenity value; (c) require where practicable an appropriate replacement for any tree that is felled; (d) require that trees are adequately protected throughout the course of development; (f) require landscape design to be fit for purpose and function and to be of a high quality and compatible with the surrounding landscape, and townscape.
<b>RBKC Core Strategy Policy CE 4</b>	The Council will require other development proposals to create opportunities, where possible, for attracting biodiversity and habitat creation, having regard to the national, regional and local Biodiversity Action Plans.
<i>Other policies</i>	
<b>Natural Environment and Rural Communities (NERC) Act (2006)</b>	Effects on habitats and species of principal importance for the conservation of biodiversity in England.
<b>London Local Biodiversity Action Plan (LBAP)</b>	Effects on priority habitats and species listed in the London LBAP.
<b>Kensington and Chelsea Local Biodiversity Action Plan (LBAP)</b>	Effects on priority habitats and species listed in the Kensington and Chelsea LBAP.