Parker House

Planning & Conservation Area Consent Applications

SD13: Ecology Statement (CfSH)

Prepared for Camden Council & E C Harris

November 2012

paul davis + partners
architects urban designers

The Ecology Consultancy

Parker Street House, Covent Garden/ CfSH Assessment **/ Report for EC Harris**

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Parker Street House, Covent Garden

Code for Sustainable Homes –

Ecology Assessment

Report for EC Harris

Parker Street House, Covent Garden / CfSH Assessment / Report for EC Harris

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Initial	**27.09.12**	**WM**	**JK**
Revision			
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Executive Summary

The Ecology Consultancy was commissioned by EC Harris to prepare a report providing the ecological components of a 2010 Code for Sustainable Homes Assessment for the development of Parker Street House, Covent Garden, London. The key findings of this report are as follows:

- On the basis of this report, the proposed development could receive six credits under Eco 1 – 4 of the Code for Sustainable Homes Assessment. However, this is subject to the recommendations for protected species mitigation and enhancement measures being carried out and the landscape planting scheme following the specification documented in this report.
- The site is not subject to any statutory nature conservation designations. The nearest statutory designated nature conservation site is the Camley Street Local Nature Reserve located approximately 2 kilometres north of the site.
- The habitats within the development site were dominated by a building currently utilised as a hostel; associated hard-standing with non-native planted trees along the pavement and a limited amount of introduced shrub and potted plants.
- The majority of the habitats on site were of limited extent and recent origin and comprised species likely to be both common and widespread in the local area. Overall the site is considered to be of low ecological value and is unlikely to support rare or diverse assemblages of species or large species populations.
- The building on the site, which is due to be demolished, has negligible potential to support roosting bats.
- It is recommended that any works likely to have an impact upon potential nesting habitat such as buildings should be scheduled outside the breeding bird season (March to August inclusive). This is to avoid harm or disturbance to nesting birds e.g. feral pigeon and to comply with the relevant legislation. It should be noted that birds can and do breed outside the typical season. Where such scheduling is unavoidable it will be necessary for an ecologist to make an inspection of any breeding bird habitat prior to work on buildings. All wild birds and their nests are legally protected from killing and injury or damage and destruction.
- If any unexpected discoveries of other protected species are made on site during site clearance or other works, then all activities in the immediate vicinity should be halted and further advice sought from an ecologist.
- Enhancement measures recommended include the installation of a green roof and the use of plant species of benefit to wildlife and good horticultural practices in landscape design.

1 Introduction

BACKGROUND

1.1 The Ecology Consultancy was commissioned by EC Harris to prepare a report providing the ecological components of a 2010 Code for Sustainable Homes Assessment for the development of Parker Street House, London.

1.2 This document presents the results of the ecological walkover survey and assesses the proposed development with respect to the following components of the Code for Sustainable Homes (CfSH) methodology (DCLG 2010):

- Eco 1- Ecological Value of Site;
- Eco 2 - Ecological Enhancement;
- Eco 3 - Protection of Ecological Features; and,
- Eco 4 - Change of Ecological Value of Site.

SITE CONTEXT AND STATUS

1.3 The proposed development site is approximately 0.14 hectares (ha) in extent and is situated in an inner city location. The site is located on Parker Street in Covent Garden, the area supports residential and commercial buildings and to the east Lincoln's Inn Fields, a large public square. The site is about 700 metres (m) north of the River Thames and its associated Habitat Action Plan (HAP) mudflats. The National Grid Reference for the centre of the site is approximately TQ 304 813.

1.4 The site is not subject to any statutory nature conservation designations. The nearest statutory designated nature conservation site is Camley Street Local Nature Reserve (LNR) located approximately 2 kilometres (km) north of the site.

DEVELOPMENT PROPOSALS

1.5 The development proposal is for the demolition of the existing building and the construction of a new five storey building with associated terraces and the installation of a biodiverse living roof.

2 Methodology

HABITAT SURVEY

2.1 The site description provided in Section 3 of this report is based on a walkover survey carried out on the 27th September 2012. Any features of ecological interest were described and mapped based on the standard Phase 1 Habitat Survey methodology (JNCC 2010) as adapted by the Greater London Authority (GLA 2002). This approach is designed to identify broad habitat types and to assist in providing an overview of the ecological interest at a site. It is generally the most widely used and professionally recognised method for initial ecological site appraisal.

2.2 A habitat plan of the site is provided in Appendix 1. Scientific names are given after the first mention of a species, thereafter, common names only are used. Nomenclature follows Stace (2010) for vascular plant species.

PRELIMINARY SPECIES ASSESSMENT

2.3 The potential of the site to provide habitat for legally protected species was assessed from field observations carried out at the same time as the habitat survey, an assessment of the suitability of on-site and adjoining habitat for the species included, and information on the wider distribution of these species in the UK and locally. The site was inspected for field signs indicative of the presence of protected species as follows:

- habitat likely to be of value for roosting, foraging and commuting bats;
- habitat likely to be of value for breeding birds.

2.4 The likelihood of occurrence is ranked as follows and relies on the findings of the current survey and an evaluation of existing data:

- Negligible – while presence cannot be absolutely discounted, the site includes very limited or poor quality habitat for a particular species or species group. Surrounding habitat considered unlikely to support wider populations of a species/species group. The site may also be outside or peripheral to known national range for a species.
- Low – on-site habitat of poor to moderate quality for a given species/species group. Presence cannot be discounted on the basis of national distribution, nature of surrounding habitats, habitat fragmentation, recent on-site disturbance etc.
- Medium – on-site habitat of moderate quality, providing all of the known key requirements of a given species/species group. Within national distribution,

suitable surrounding habitat. Factors limiting the likelihood of occurrence may include small habitat area, habitat severance, and disturbance.

- High – on-site habitat of high quality for a given species/species group. The site is within/peripheral to a national or regional stronghold. Good quality surrounding habitat and good connectivity.
- Present – presence confirmed from the current survey.

2.5 The purpose of this assessment is to identify potential constraints associated with protected species. The potential for invasive plant species is also noted within this assessment.

CODE FOR SUSTAINABLE HOMES ASSESSMENT

2.6 The assessment was carried out and this report was written by Wendy McFarlane who has over three years relevant experience, is a full member of the Institute of Ecology and Environmental Management (MIEEM) and thereby qualifies as a Suitably Qualified Ecologist (SQE) as defined under the DCLG (2010) CfSH guidance.

LIMITATIONS

2.7 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation and prediction of the natural environment.

2.8 The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the site. This is based on the suitability of the habitat, known distribution of the species in the local area provided from on-line sources and any direct evidence on the site. It does not constitute a full and definitive survey of any protected species group and is only valid at the time the survey was undertaken.

2.9 The assessment does not constitute a full botanical survey, or a Phase 2 pre-construction survey that would include accurate GIS mapping for invasive or protected plant species.

2.10 Overall, the survey was considered sufficient to meet the aims of the report and provide a robust basis for the assessment of credits within the CfSH assessment.

3 Results

HABITAT OVERVIEW

3.1 The proposed development site was dominated by a building and hard-standing with a limited amount of introduced shrub and potted plants in the courtyard and non-native planted trees along the pavement running along the front of the building.

Buildings and hard-standing

3.2 The entire building was a five storey brick structure. It had timber framed windows and had a flat roof with a number of small pitched and tiled roof out-buildings (for location see TN1 on the Habitats Map).

3.3 The hard-standing on site was typically in good condition with no colonisation by short ephemeral and opportunistic species typical of urban sites.

Trees

3.4 There were three non-native trees lining the pavement at the front of the building. These trees were not within the site boundary and will be retained.

Introduced shrub

3.5 In the courtyard there were three introduced shrub species both in planted beds and pots (for location see TN2 and TN3 on the Habitats Map).

PRELIMINARY PROTECTED SPECIES ASSESSMENT

3.6 The following protected species were included in the assessment, and the likelihood of their occurrence is summarised below:

Bats

3.7 The main building on the site was assessed externally for bat roosting potential. The tiled area of the main roof provides features for crevice dwelling species such as the common pipistrelle *Pipistrellus pipistrellus*. However, there was insufficient tree cover and habitat corridors to provide good feeding resources and commuting routes for bats. In addition, the surrounding habitat was poorly connected with large areas of open space and the urban setting of the site lends to high noise and light levels and therefore night time disturbance would be high. Therefore the potential of the building to support roosting bats was assessed as negligible.

Breeding birds

3.8 Brickwork was in good repair making the building unlikely to be used for nesting by birds including the UK BAP species house sparrow *Passer domesticus*. However,

during the survey feral pigeons *Columba livia* were observed perched on ledges of the building. Ledges located within the courtyard provide shelter and therefore have a limited potential for nesting in this species. There was limited vegetation suitable for nesting birds, including trees, scrub or climbing plants were present on site. Therefore the site was assessed to have low potential to support nesting or foraging birds.

4 Code for Sustainable Homes Assessment

4.1 The 2010 CfSH assessment methodology provides a number of ecology credits which are designed to encourage development on land that already has a limited value to wildlife and discourage the development of ecologically valuable sites.

ECO 1 - ECOLOGICAL VALUE OF SITE

4.2 One credit is given for minimising ecological damage by developing land of inherently low ecological value and demonstrating this by:

- meeting the defined criteria for low ecological value (using checklist Eco 1 - Land of Low Ecological Value);

OR,

- being confirmed by a SQE;

OR,

- an independent ecological report of the site prepared by a SQE which states that the construction zone is of low or insignificant ecological value;

AND,

- any land of ecological value outside the construction zone but within the development site will remain undisturbed by the construction works.

4.3 The habitats present at the site were limited to buildings, hard-standing and introduced shrub and small street trees. This habitat is common and widespread within urban environments and is unlikely to contain any notable or species rich assemblages.

4.4 Therefore, the site is considered to be of low ecological value in terms of the habitats and likely species assemblages present and can be awarded one credit for LE02 - Ecological Value of Land and Protection of Ecological Features.

ECO 2 - ECOLOGICAL ENHANCEMENT

4.5 One credit is given for designing-in features for positive enhancement of the site ecology in accordance with advice from a SQE. To achieve this credit it is necessary for all key recommendations, and over 30% of additional recommendations (i.e. one or more of the three options detailed below) to be adopted.

Protected species mitigation and legal requirements

4.6 At the Design Stage the information required to demonstrate compliance with the legislation relating to protected species, and to be awarded credit ECO 2, includes the

ecologist's report that must confirm: *"...that all UK and EU legislation in relation to protected species has been met and recommendations go beyond these requirements"*

4.7 Based on the results of the walkover survey and protected species assessment, the site was assessed as having negligible potential to support roosting bats and as having low potential to support widespread breeding birds.

4.8 **Birds:** Feral pigeon were observed on the window ledges of the building. If pigeon nests are discovered their removal may only be undertaken by a licenced pest controller where they present a danger to public health and safety and all non-lethal methods have proved unsuccessful. In the extremely unlikely event of discovering nesting bird species other than feral pigeon all work must be halted in the vicinity of the nest and advice sought from an SQE.

Key Recommendations

4.9 In order to go beyond legislation relating to protected species the following enhancement measures should be carried out:

4.10 **Provision of bird nesting and opportunities:** The inclusion of a minimum of two bird nesting boxes to be erected in close proximity to the green roof. Woodcrete bird boxes (Schwegler, 2010) are recommended as they include a broad range of designs, are long lasting compared to wooden boxes and insulate occupants from extremes of temperature and condensation. Bird boxes should be placed apart from one another, ideally on different building facades. The following models are most appropriate: 1SP, 1B hole-fronted, 26mm entrance hole and 32mm entrance hole, and 2H open-fronted 120mm opening. Nesting boxes will require cleaning out over winter months as part of maintenance requirements.

4.11 **Provision of a biodiverse living roof:** A biodiverse living roof should be installed on the proposed new development. Such roofs incorporate a variety of substrate types, are sown with a suitable wildflower seed mix with a high proportion of native species, have a varied and contoured substrate depth[1] and use commercially available brick-based substrates that are a recycled by-product of the building industry. The design should include a detailed specification by a company with extensive experience in designing biodiverse roofs. The installation of biodiverse green roofs would contribute to the Built Environment Habitat Action Plan (HAP) of the London BAP.

[1] Please note that the UK's Green Roof Code of Best Practice (GRO, 2011) advocates a minimum depth of 80mm for extensive green roofs.

4.12 **Provision of insect habitat:** Habitat for invertebrates should be incorporated onto the green roof this could be achieved by the addition of insect hotels/bee logs, log piles, shingle paths, habitat walls and/or patches of bare ground.

Additional Recommendations

4.13 **Wildlife garden planting[2]:** Wildlife garden planting should be incorporated into the landscape design to provide foraging, cover and nesting for birds and invertebrates. Where possible, trees should be under-planted with shrubs and herbaceous perennials to create a denser, more complete structure within the planting scheme to benefit a variety of wildlife. A list of recommended species is provided in Appendix 4.

4.14 **Ground cover and climbing plants***:* Landscaping should include the use of climbing plants to create green walls and provide vertical nesting habitat and foraging resources for birds and/or invertebrates. These should comprise native species or non-native species of known wildlife value and either deciduous or evergreen species depending on the specification. A list of recommended species is provided in Appendix 4.

4.15 **Good horticultural practice:** Good horticultural practice should be utilised in any landscaping scheme and should include the following simple methods to minimise off-site ecological impacts:

- the use of peat-free composts and soil conditioners to reduce the loss of important peat bogs;
- feeding of plants using organic based fertilisers and improving the soil structure by incorporating organic material, preferably composted waste;
- the use of mulches to lock moisture into the soil as 'water-wise gardening' helps reduce consumption of water which is especially important during drought periods; and,
- the use of pesticides (herbicides, insecticides, fungicides and slug pellets, etc) should be discouraged to prevent cumulative fatal effects to animals via the food chain, particularly invertebrates, birds and/or mammals. Ideally any pesticides used should be non-residual.

4.16 On the condition that the key recommendations (Section 4.9 - 4.12) and 30% of additional recommendations (Sections 4.13 - 4.15) set out above are followed, then

[2] Wildlife garden planting requires the use of native species and ornamental species that have a known attraction or benefit to local flora.

one credit can be awarded for ecological enhancement. The client must provide written confirmation that the recommendations will be followed, prior to the credit being awarded.

ECO 3 - PROTECTION OF ECOLOGICAL FEATURES

4.17 This credit can be awarded where there is a commitment to maintain and adequately protect features of ecological value during site preparation and construction works in accordance with the following criteria:

- Where all existing features of ecological value on the development site potentially affected by the works, are maintained and adequately protected during site clearance, preparation and construction works.
- The credit can be awarded by default where:
  - The site has been classified as having low ecological value in accordance with Eco 1 – Ecological Value of the Site and no features of ecological value have been identified.
  - If a SQE has confirmed a feature can be removed due to insignificant ecological value or poor health/condition (e.g. diseased trees which require felling, either for health and safety and/or conservation reasons), the credit can be achieved provided all other features are adequately protected in accordance with the ecologist's recommendations.

4.18 As discussed in Eco1 – Ecological Value of the Site, the site is of low ecological value, therefore **one credit** can be awarded for protection of ecological features.

ECO 4 - CHANGE OF ECOLOGICAL VALUE OF SITE

4.19 Four credits are available for change in the Ecological Value Score of the site. The aim of this credit is to reward steps taken to minimise reductions in ecological value and to encourage ecological enhancement. The credits are awarded for change in Ecological Value Score as follows:

- 1 credit for a change of between -9 and -3.
- 2 credits for a change of between -3 and +3.
- 3 credits for a change of between +3 and +9.
- 4 credits for a change of greater than +9.

4.20 The Ecological Value Score for the site is expressed as an area-weighted average of plant species for the different vegetation plot-types of the site. The change in

Ecological Value Score is calculated by comparing the areas of different vegetation types and their species-richness pre and post-development.

4.21 The pre-development Ecological Value Score was based on the number of dominant, abundant and frequent species present during the site visit prior to development. The post development Ecological Value Score is based on planting for the different proposed landscape types supplied by Paul Davis and Partners.

4.22 Species-richness values and areas for habitats pre-development are shown in Table 1.

- Introduced shrub comprised a minimal area, for this reason: has been scored as 0 species per ha.

Table 1 – Extent and species richness attributed to habitats within the site prior to development

Habitat type	Before Development		
	Area [ha]	Species richness	Area x richness
Buildings	0.114857	0	0
Hard-standing and introduced shrub	0.026139	0	0
Total	0.140996	0	0
Sum of area x species richness / area	0		

4.23 On this basis the species score prior to development is **0 species.**

4.24 Species-richness values and areas for vegetation types post-development are shown in Table 2 below.

4.25 It has been assumed a native wildflower seed mix would be used on the biodiverse green roof. On this basis the species score has been scored as 24 species per ha.

Table 2 – Extent and species richness attributed to habitats within the site after development

Habitat Type	After Development		
	Area [ha]	Species richness	Area x richness
Biodiverse roof	0.026147	24	0.627528
Shrub/trees/potted plants	0.013951	4	0.055804

Table 2 – Extent and species richness attributed to habitats within the site after development

Habitat Type	After Development		
	Area [ha]	Species richness	Area x richness
Hard-standing	0.100898	0	0
Total	0.140996	/	0.683332
Sum of area x species richness / area	4.846		

4.26 Following development, the Ecological Value Score will be **4.85 species.**

4.27 The change in Ecological Value Score is as follows:

4.85 (species score after development) – **0** (species score before development) = **+4.85 species.**

4.28 The change in ecological value is therefore between +3 and +9 species per hectare, which is classified as a positive change.

4.29 On this basis, **three credits** can be awarded in respect of Change of Ecological Value of the site subject to written confirmation that these vegetation types will be created.

5 Conclusion

5.1 In carrying out the ecological components of a 2010 CfSH assessment of the proposed development site and comparing the existing situation with that which is predicted on completion of the development, we have calculated that a total of **six credits** can be awarded, as follows:

- **Eco 1 - One credit** be awarded for Ecological Value of the Site.
- **Eco 2 - One credit** can be awarded for Ecological Enhancement**.**
- **Eco 3 - One credit** can be awarded with respect to Protection of Ecological Features.
- **Eco 4 – Three credits** can be awarded for Change of Ecological Value of Site.

5.2 The awarding of credits achievable under Eco 2 & 4 is subject to written confirmation from a licensed assessor. This is however subject to the recommendations for protected species mitigation and enhancement measures being carried out and the landscape planting scheme following the specification documented in this report.

References

British Standards (2012). BS 5837:2012- Trees in relation to design, demolition and construction.

Department for Communities and Local Government (DCLG) (2010). *Code for Sustainable Homes–Setting the standard in sustainability for new homes*. Department for Communities and Local Government, London.

Johnston, J. & Newton, J. 1992. *Building Green – a guide to using plants on roofs, walls and pavements.* London Ecology Unit.

MAGIC (2011). Multi-Agency Geographic Information for the Countryside. [On-line]. Available from www.magic.gov.uk [Accessed: 20.08.12].

Paul Davis and Partners, Architects Urban Designers. Planning proposal 1588 (SK)016.

Schwegler. 2010. Bird and Nature Conservation Products. No.68. [On-line] Available from http://www.schwegler-nature.com/Main/index.htm[Accessed: 20.08.12].

Stace, C.A. (2010). *New Flora of the British Isles (3rd Ed.).* Cambridge University Press, Cambridge.

Appendix 1: Habitat Plan

Figure 1: Habitat Plan

Appendix 2: Photographs

Photograph 1:
The front of Parker House and adjacent street trees.

Photograph 2:
A small amount of introduced shrub in the courtyard.

Photograph 3:
A pitched and tiled roof with negligible potential to support bats due to the urban location of the site.

Appendix 3: Species of Value to Wildlife

ORNAMENTAL AND NATIVE SPECIES OF WILDLIFE VALUE

The list below gives some easily sourced plants which are of proven value to wildlife. It includes a number of ornamental species which are not native and can be used in combination with native species in more formal situations. In informal landscapes the emphasis should be on the use of native species.

Different horticultural varieties of the following species are commonly available, but where available standard stock is advised, especially for native species. Single flowering plants should be chosen over double flowering ('flore pleno') varieties. With exception of those marked as * (biennials) and ** (annuals) all species are perennial. E = Exotic, N = Native.

N.B. Care should always be exercised in designing planting schemes. This list includes species that may be harmful if handled or ingested. Numerous sources of further information are available; see for instance *Poisonous Plants and Fungi: An Illustrated Guide* (Cooper, Johnson & Dauncey, 2003). Schedule 9 (Part 2) of the Wildlife and Countryside Act, 1981 (as amended) includes a list of invasive plants, including aquatic species, that should be avoided. Consideration should also be given to other species that may also have a negative effect on native habitats, if planted in the wrong location.

TREE

Cherry *Prunus* spp., *P. avium* (wild cherry), *P. padus* (bird cherry), *P. domestica* (domestic plum) N or *P. cerasifera* (cherry plum) E

Ash *Fraxinus excelsior* N

Apple *Malus* spp., *M. domestica* (edible apple), *M. sylvestris* (crab apple) N

Pear *Pyrus* spp., *P. communis* (edible pear) or *P. calleryana* (callery pear) E

Small-leaved lime *Tilia cordata* N

Silver birch *Betula pendula* N

Yew *Taxus baccata* N

Foxglove tree *Paulownia tomentosa* E

Lacebarks *Hoheria spp.*, *H. glabrata*, *H. lyallii* E

Tulip tree *Liriodendron tulipifera* E

Beech *Fagus sylvatica* N

LARGE SHRUBS

Hedge veronica *Hebe* spp. E

Hawthorn *Crataegus monogyna* N

Blackthorn *Prunus spinosa* N N.B. can produce suckering growth.

Rose *Rosa canina* (dog rose) *R. arvensis* (field rose) *R. pimpinellifolia* (burnet rose) N N.B. *R. rugosa* (Japanese Rose) is a Schedule 9 invasive plant species

California lilac *Ceanothus* spp., *C. arborea* E

Wild privet *Ligustrum vulgare* N

Common holly *Ilex aquifolium* N N.B. both male and female plants are needed for berry production unless a self-fertile variety such as 'J C Van Tol' is used.

Barberry *Berberis* spp. *B. darwinii*, *B. thunbergii*, *B. x stenophylla* E

Daisy Bush *Olearia* spp., *O. x hastii*, *O. macrodonta* and *O. traversii* E

Firethorn *Pyracantha coccinea* E

Hazel *Corylus avellana* N *C. maxima* E

Viburnum *Viburnum* spp., *V. lantana* (wayfaring tree) N, *V. opulus* (guelder rose) N, *V. tinus* (laurustinus) E Note: *V. lantana* can become invasive in more open habitats such as chalk grassland.

Butterfly bush *Buddleja* spp., *B. alternifolia*, *B. globosa* E Note: *B. davidii* should be avoided as can become invasive in more open habitats.

Dogwood *Cornus sanguinea* N

Broom *Cytisus scoparius* N

Mexican orange bush *Choisya ternata* E

Portuguese laurel *Prunus lusitanica* E

Flowering currant *Ribes sanguineum* E

Escallonia *Escallonia macrantha* E cultivar '*Langleyensis*' is a hardier version

Hardy fuchsia *Fuchsia magellanica* E

Buckthorn *Rhamnus cathartica* N

Spindle *Euonymus europaeus* N

Tutsan *Hypericum androsaemum* N

Yew *Taxus baccata* N

N.B. Some of these shrub species will form small trees when mature and/or can be trained (along with climbers) to create living walls.

HERBACEOUS PERENNIALS AND SMALL SHRUBS

Tree mallow *Lavatera spp*. *L. arborea* N, or *L. olblio*, *L. thuringiaca* E

Ice plant *Sedum spectabile* E

Lavender *Lavandula* spp., *L. angustifolia*, *L. x intermedia* E

Globe thistle *Echinops ritro* E

Foxglove *Digitalis purpurea** N or *D. lutea*, *D. x mertonensis* E

Michaelmas Daisy *Aster novi-belgii* E

Sunflowers *Helianthus annus*** E

Red valerian *Centranthus rubra* E

Hemp agrimony *Eupatoria cannabinum* N

Common knapweed *Centaurea nigra* N

Black-eyed susan *Rudbeckia* spp., *R. hirta*** or *R. fulgida* E

Rosemary *Rosmarinus officinalis* E

Rock rose *Cistus* spp. E

Shrubby cinquefoil *Potentilla fruticosa* N

Oregon grapes Mahonia spp. *M. aquifolium, M. japonica, M x media* E N.B. some species are stoloniferous and can spread.

CLIMBERS

Star jasmine *Trachelospermum jasminiodes* E

Jasmine *Jasminum* spp., *J. officinale* (summer jasmine) *J. nodiflorum* (winter jasmine) E

Ivy *Hedera helix* N

Climbing hydrangea *Hydrangea anomala* ssp. *petiolaris* E

Boston ivy *P. tricuspidata* E N.B. a similar species *P. quinquefolia* (Virginia creeper) is a Schedule 9 invasive plant species

Honeysuckle *Lonicera* spp. *L. periclymenum* N or *L. japonica*, *L. fragrantissima*, *L. standishii* E

Clematis *Clematis* spp., *C. vitalba* N or *C. armandii*, *C. alpina*, *C. montana*, *C. tangutica* E

Hop *Humulus lupulus* N

Firethorn *Pyracantha atalantioides* E

Nasturtium *Tropaeolum majus*** E

BULBS

English bluebell *Hyacinthoides non-scripta* N.B. Spanish bluebell *Hyacinthoides hispanica* is not recommended as it can escape from gardens and out-compete and hybridise with the UK native species.

Squill species *Scilla* spp. N/E

Snowdrop *Galanthus nivalis* N

Winter aconite *Eranthis hyemalis* E

Grape hyacinth *Muscari neglectum* N *M. armeniacum*, *M. comosum* E

Glory-of-the-snows *Chinodoxa* spp. E

Crocus species *Crocus* spp. *C. nudiflorus* (autumn crocus), *C. tommasinianus* (early crocus), *C. vernus* (spring crocus) E

Wild Daffodil *Narcissus pseudonarcissus* N

Onion species *Alliums* spp. *A. ursinum* (ransoms) N or *A. giganteum* (giant onion) E N.B. *A. triquetrum* (three cornered leek) and *Allium paradoxum* (few-flowered leek) are Schedule 9 invasive plant species.

Wood anemone *Anemone nemorosa* N

Lesser celandine *Ficaria verna* N N.B. can spread, particularly ssp. *verna* (syn. ssp. *bulbilifer*)

Appendix 4: Legislation

Important notice: This section contains details of legislation applicable in Britain only (i.e. not including the Isle of Man, Northern Ireland, the Republic of Ireland or the Channel Islands) and is provided for general guidance only. While every effort has been made to ensure accuracy, this section should not be relied upon as a definitive statement of the law.

A NATIONAL LEGISLATION AFFORDED TO SPECIES

The objective of the EC Habitats Directive3 is to conserve the various species of plant and animal which are considered rare across Europe. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2010 (formerly The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)) and The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended).

The Wildlife and Countryside Act 1981 (as amended) is a key piece of national legislation which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection obligations of Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Since the passing of the Wildlife & Countryside Act 1981, various amendments have been made, details of which can be found on www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CRoW) Act (2000).

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991;
- Countryside and Rights of Way (CRoW) Act 2000;
- Natural Environment & Rural Communities (NERC) Act 2006;
- Protection of Badgers Act 1992:
- Wild Mammals (Protection) Act 1996.

Species and species groups that are protected or otherwise regulated under the aforementioned domestic and European legislation, and that are most likely to be affected by development activities, include herpetofauna (amphibians and reptiles), badger, bats, birds, dormouse, invasive plant species, otter, plants, red squirrel, water vole and white clawed crayfish.

[3] Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora

Explanatory notes relating to species protected under The Conservation of Habitats and Species Regulations 2010 (which includes smooth snake, sand lizard, great crested newt and natterjack toad), all bat species, otter, dormouse and some plant species) are given below. These should **be read in conjunction with the relevant species sections that follow.**

- In the Directive, the term 'deliberate' is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.
- The Conservation of Habitats and Species Regulations 2010 does not define the act of 'migration' and therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered.
- In order to obtain a European Protected Species Mitigation (EPSM) licence, the application must demonstrate that it meets all of the following three 'tests': i) the action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment; ii) that there is no satisfactory alternative and iii) that the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

Bats

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2010 through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. all bats)
- Deliberate disturbance of bat species as:
  - a) to impair their ability:
    - (i) to survive, breed, or reproduce, or to rear or nurture young;
    - (ii) to hibernate or migrate[3]
  - b) to affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

Bats are also currently protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level);
- Intentional or reckless obstruction of access to any place of shelter or protection:

- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

How is the legislation pertaining to bats liable to affect development works?

A European Protected Species (EPS) Licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity of a local population.

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the Wildlife and Countryside Act 1981 (as amended). Among other things, this makes it an offence to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- Intentionally take or destroy an egg of any wild bird:
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.

Certain species of bird, for example the barn owl, black redstart, hobby, bittern and kingfisher receive additional special protection under Schedule 1 of the Act and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC). This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young;
- Intentional or reckless disturbance of dependent young of such a bird.

How is the legislation pertaining to birds liable to affect development works?

To avoid contravention of the Wildlife and Countryside Act 1981 (as amended), works should be planned to avoid the possibility of killing or injuring any wild bird, or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in

particular is to undertake work outside the main bird nesting season which typically runs from March to August[4]. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Those species of bird listed on Schedule 1 are additionally protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

[4] It should be noted that this is the main breeding period. Breeding activity may occur outwith this period (depending on the particular species and geographical location of the site) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

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