



Ecological Compliance & Best Practice

ECOLOGICAL ENHANCEMENT PLAN

71 STATION ROAD, CUFFLEY, POTTERS BAR,
HERTS EN6 4HZ.

for
RAMPARD LTD

NB. Information on legally protected, rare or vulnerable species may appear in ecological reports. In such cases it is recommended that appropriate caution be used when circulating copies.

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7040 - J001662

Bank House Martley Worcester WR6 6PB
United Kingdom

T +44 (0)1886 888445
E nature@bettsecology.com

www.bettsecology.com

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CONTROL SHEET

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INTRODUCTION

This Specification has been produced to satisfy a condition of Planning Application for the above-listed project, which reads:

No development above ground level (excluding works of demolition) shall take place until a Biodiversity Enhancement Scheme (BES) has been submitted to and approved in writing by the Local Planning Authority. The approved BES must be implemented prior to first occupation of the development and retained permanently thereafter.

REASON: To provide net gains for biodiversity in accordance in accordance with Policy R11 of the Welwyn Hatfield District Plan 2005 and the National Planning Policy Framework.

This document will support clients in ensuring compliance with current legislation, official policy, due diligence and agreed¹ standards of best practice relating to the construction of nine residential dwellings on the site.

¹ In particular the Chartered Institute of Ecology and Environmental Management (CIEEM) and British Standard BS 42020: 2013 *Code of practice for biodiversity in planning and development*.

BACKGROUND AND SITE DESCRIPTION

The property is a car showroom to the east of the Cuffley railroad station, in a suburban neighbourhood at the eastern edge between the small town and the surrounding rural landscape. It is to be demolished and replaced by a three-story block for twelve residences. The larger settlement of Potters Bar lies 5km to the west. The surrounding area comprises of similar residential roads and the railway line to the east and agricultural land used for both arable and livestock production to the west.

Trees and hedgerows on neighbouring land and gardens provide ideal nesting habitat for breeding birds, while the hedgerows marking the eastern boundary between the town and the agricultural fields provide suitable commuting and foraging habitat to local bat populations.

AIMS & OBJECTIVES

The aims and objectives of this Ecological Enhancement Plan have been drawn together based on the habitat types present on site and in the immediate surrounding area. This document provides recommendations for ecological enhancements incorporated into the site development to comply with national and local planning policy and legislation, namely; Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, National Planning Policy Framework 2019, and BS42020:2013 Biodiversity - Code of Practice for Planning and Development.

HABITAT ENHANCEMENTS

Bats

Foraging habitat for bats will be provided by planting a small hedgerow composed of *Pyracantha* sp. and three broad-leaved cockspur thorn *Crataegus persimilis* trees along the north-west corner of the property. A further, larger stretch of hedgerow composed of Portuguese laurel *Prunus lusitanica* alongside three Callery pears *Pyrus calleryana* will be planted along the southern boundary, as well as a separate Portuguese laurel hedge and two ornamental cherries *Prunus* sp.

All the above-listed species are non-native, ornamental varieties. Given that these would be among the most prominent ecological features present on the site, their ecological value can be further enhanced by replacing them with locally sourced native varieties. Suitable replacements for the hedgerows include: spindle *Euonymus europaeus*, dogwood *Cornus sanguinea*, holly *Ilex aquifolium*, hawthorn *Crataegus monogyna*, elder *Sambucus nigra* and coppiced hazel *Corylus avellana*. The northern hedgerow should also be ideally further extended towards the north-eastern corner of the property, thus creating a direct and relatively sheltered corridor between the agricultural fields, suburban gardens and vegetation surrounding the railway lines for local bats to commute through.

Artificial exterior lighting in the vicinity of a bat roosts causes disturbance and could potentially result in a poor take up of artificial bat roosts or roost abandonment. Exterior lighting may also impact negatively on foraging and commuting bats. All UK bat species are fully protected under international and domestic legislation. The EC Habitats Directive has been incorporated into UK law by means of the Conservation of Habitats and Species Regulations 2017 (England & Wales), and similar regulations in Scotland and Northern Ireland. These regulations are referred to as the Habitats Regulations, making it illegal to kill, injure, capture, or cause disturbance that affects populations of bats, obstructs access to bat roosts, or to damage or destroy bat roosts. Under the Wildlife and Countryside Act 1981 (as amended) it is illegal to cause 'intentional' or 'reckless' disturbance to individual bats.

Since 2018 there have been changes made by the Bat Conservation Trust to the use of bat-friendly exterior lighting; several previously recommended types of lighting have been phased out in 2020 and should no longer be used. The type of bat-friendly light source (luminaires) now preferred by local authorities are light emitting diodes (LEDs). This is because the light emitted is a narrow beam able to be accurately controlled; this avoids unnecessary light pollution affecting areas where light is not needed.

Luminaires come in myriad different styles, applications and specifications, which a lighting professional can help to select. The following should be considered when choosing luminaires:

- All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component.
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.
- The use of specialist bollard or low-level downward directional luminaires to retain darkness above can be considered. However, this often comes at a cost of unacceptable glare, poor illumination efficiency, a high upward light component and poor facial recognition, and their use should only be as directed by the lighting professional.
- Column heights should be carefully considered to minimise light spill.
- Only luminaires with an upward light ratio of 0% and with good optical control should be used.
- Luminaires should always be mounted on the horizontal, i.e. no upward tilt.

- Any external security lighting should be set on motion-sensors and short (1min) timers.
- As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

Birds

Foraging, shelter and nesting habitat for birds will be enhanced by planting the above-listed new hedgerows and trees across the property.

As addressed previously, replacing the chosen ornamental varieties with locally sourced native varieties of domestic pear *Pyrus communis* or rowan *Sorbus acuparia* would further enhance the ecological value of the site to local wildlife, attracting further specialized invertebrates and birds that feed on their fruits. The provision of fruit trees in particular will help to ensure net gains for biodiversity. These have high ecological value for their spring blossom, which is a vital resource for pollinating insects, and fallen fruit during the autumn/winter period which is an important source of food for birds, small mammals, and invertebrates. An area designated as a communal garden will be located on the roof of the proposed building, and will contribute to attracting further invertebrates and, in turn, local birds to the area.

The appropriate management of retained hedgerow boundaries will provide suitable corridors of connectivity, cover and foraging opportunities, and nesting habitat for birds. The hedgerows will produce larger quantities of fruit and seeds for over-wintering birds when cut on alternating sides every two to three years. This practice will also help to give the hedgerows greater structural variety and density, therefore providing improved nesting habitat. Well-managed hedgerows for biodiversity also provide a wider range of niche habitats for breeding invertebrates, which become a valuable and vital source of protein for the successful development of fledgling birds.

Provision of bird, bat and invertebrate boxes will enhance the biodiversity value of the site by providing additional nesting habitat.

BIRD, BAT & INVERTEBRATE BOXES

All enhancement measures are to be installed prior to completion of the site. Their relative positions are illustrated in the plan below

Birds

One **Schwegler 1B Nest Box (28mm hole)** and one set of multiple (two or more) sparrow boxes, such as **1SP Schwegler Sparrow Terrace** or several **32mm hole nest boxes** placed in a row are to be installed. These types are designed to attract small hole-nesting passerines generally, including blue tits, great tits, coal tits and house sparrows, although they will also attract other small birds as roosting places during cold weather. It should be installed on the south-eastern exterior of the new dwelling and the southern-facing wall of the communal garden area. Nest boxes should be hung at a height of at least two meters and should be angled so that they face away from the prevailing wind (usually south-westerly in the UK) and out of direct sunlight or artificial lighting. The chances of occupation are higher if there is good tree or hedge cover nearby as these will provide a good source of insect food for the nestlings when they hatch. Bird boxes require one annual clean in autumn (*i.e.* outside the bird breeding season, which is March to end of August in the UK).

Bats

One **Schwegler 2F bat box** should be mounted on the eastern exterior of the new dwelling in a secluded spot close to where bats are expected to commute and forage. Boxes are to be mounted a minimum of three meters above ground level in a south-easterly facing direction. The boxes shall be maintained for the lifetime of the development, please note that once bats have inhabited a roost or nursery site, they may only be disturbed by licensed bat workers.

Invertebrates

Two small **clay and reed insect block** should be installed within the hedge on the northern boundary and the communal gardens. While commercial models are widely available at garden centres, the most effective designs will focus more on providing holes of various sizes than additional features like pinecones and wood chips. These are best positioned at a height of 1.5–2.0m in a quiet, sunny position.

Hedgehogs

Any fencing should be developed allowing for hedgehog permeability. This is best done by providing a gap or raised section measuring at least 13x13cm, to be installed at the base of any new fencing being constructed along the eastern boundary.

CAPABILITY AND QUALITY ASSURANCE

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Nicholas Valori BSc MSc – Ecologist

Nicholas holds a Bachelor of Science degree in Zoology and a Masters in Ecological Consultancy from the Russell Group University of Newcastle-upon-Tyne. Modules encompassed Human-Wildlife Conflicts, Botany, Soil Surveys, use of Geographic Information Systems, Environmental Impact Assessment and Wildlife Legislation in theory and practice, plus a full range of other studies including Animal Behaviour, Applied Ecology, Biological Modelling, Ornithology, Entomology and small mammal trapping. Nicholas' field experience includes great crested newt surveying and trapping, bat surveys, habitat management and enhancement work, volunteer training and a variety of other UK, EU and international projects.

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Betts Ecology Ltd
Bank House
Martley
Worcester WR6 6PB
United Kingdom

T +44 (0)1886 888445
E nature@bettsecology.com
South-East UK Office: Kent
Northern UK Office: Yorkshire

More information is available at www.bettsecology.com

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