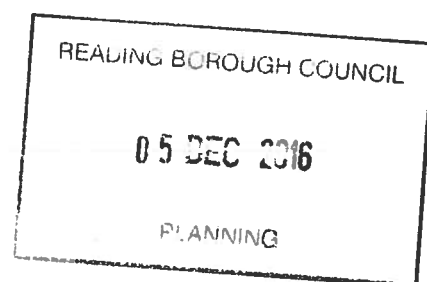


52-55 Friar
Street,
Reading

Biodiversity Assessment

July 2016



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Report Ref: SEB1520_01
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Non-Technical Summary

Site name and location	52-55 Friar Street, Reading (central grid reference SU 7129573613). Approximately 0.25 hectares in size.
Scope of works	Site survey in accordance with JNCC (2016), and web-based desk study.
Lead surveyor	Kate Hayward MCIEEM.
Results and evaluation	The site lies in the center of Reading and consists of a retail building and areas of hard-standing. There are no Local Biodiversity Action Plan (LBAP) Priority Habitats recorded on site or in the vicinity of the site and no potential for LBAP Priority Species. The construction zone is of low (negligible) ecological value. There is opportunity during extension and refurbishment of the buildings to create locally relevant habitats and to provide habitat for LBAP species.
Recommendations for protection of ecological features	The construction zone is of low (negligible) ecological value; there are no ecological features requiring protection.
Recommendations for biodiversity enhancements	Target Species identified are pipistrelle bat species <i>Pipistrellus</i> species, brown long-eared bat <i>Plecotus auritus</i> and house sparrow <i>Passer domesticus</i>. Suggestions for habitat creation include green walls, window boxes/planters, green roof/rooftop gardens, and trees and hedges. Combined, implementation of some or all of the above recommendations would provide net biodiversity gain within the scheme. The management and maintenance of new features should be detailed within a Habitat Management Plan for the site.



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1. Introduction

1.1 Background

- 1.1.1 In July 2016, Seasons Ecology was instructed by HurleyPalmerFlatt to undertake a biodiversity survey to inform a planning application for the redevelopment of a commercial building at 52-55 Friar Street, Reading.
- 1.1.2 The site is located centrally within Reading at OS grid reference SU 7129573613. The site is entirely composed of a building with a small area of hard-standing to the rear. Similar commercial and office buildings surround the site to the north and east. A residential building 'Central Studios' adjoins the site to the west; beyond which lies Greyfriars Road. Friars Street lies adjacent to the south of the site, beyond which are similar commercial buildings.

1.2 Objectives

- 1.2.1 The objectives of the biodiversity survey are to define the ecological value of the site, to identify any ecological features that will require protection and to provide recommendations for locally relevant biodiversity enhancements.

1.3 Personnel

- 1.3.1 The biodiversity survey was led by Kate Hayward. Kate is full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) and has extensive experience as a professional ecologist, providing support and technical input on a wide range of projects.

2. Methods

2.1 Desk Study

- 2.1.1 A web-based desk study was carried out in July 2016 to determine locally important sites and species, including a review of local Biodiversity Action Plans (BAP's).
- 2.1.2 The following sources were used to obtain existing information on designated sites of nature conservation interest and European Protected Species licences issued within 2km of the site (4km in respect of bats) and to assess the ecological context of the site:
- MAGIC website¹; and
 - Google Maps², including aerial photographs, maps and mapnik data.

¹ <http://magic.defra.gov.uk/website/magic/>

² <http://acme.com/planimeter/>

- 2.1.3 Other locally relevant documents were reviewed for incorporating locally relevant biodiversity features within the proposal. These are referred to in Section 4 'Recommendations'.

2.2 Phase 1 Habitat Survey

- 2.2.1 A systematic walkover of the site was undertaken on 22nd July 2016 in accordance with standard Phase 1 habitat survey methodology (JNCC, 2010³). The main habitats present were recorded and target notes were used to record any features of interest. A list was compiled of observed plant species (using the nomenclature of Stace, 2012⁴). The survey was extended to record provisional signs of protected/notable species.

2.3 Evaluation

- 2.3.1 Based on the desk study and survey, the site has been evaluated with reference to CIEEM (2016)⁵. Terminology used in the evaluation is provided in Annex 1.

3. Results and Evaluation

3.1 Desk Study

- 3.1.1 Berkshire Biodiversity Strategy 2014-2020⁶ has identified 788 species of flora and fauna which have been recorded in Berkshire and are listed as Priority Species under Section 41 of the National Environment and Rural Communities (NERC) Act, 2006). Those with relevance to the built environment include: Bird species, including house sparrow *Passer domesticus*; tree species, including juniper *Juniperus communis*; and flowering plant species, including cornflower *Centaurea cyanus*, chamomile *Matricaria chamomilla*, grape hyacinth *Muscari neglectum*, basil thyme *Clinopodium acinos* and pale dog violet *Viola lactea*.
- 3.1.2 The strategy has also identified 19 Priority Habitats (Section 41 (NERC) Act 2006). These include grassland, lowland beech *Fagus sylvatica* and yew *Taxus baccata* woodland, lowland fen, traditional orchards, and reed beds. While many of these habitats have little relevance to the built environment some species considerations can be incorporated into urban planting schemes.
- 3.1.3 Berkshire Biodiversity Action Plan (1999, as revised)⁷ (LBAP) details >76 statutory designated sites of nature conservation interest within the county, including 70 Sites of Special Scientific interest (SSSI's), four Special Areas of Conservation (SAC's), and two

³ Joint Nature Conservation Committee (JNCC) (2010) Handbook for Phase I Habitat Survey – a Technique for Environmental Audit. JNCC Peterborough.

⁴ Stace, C. (2010) New Flora of the British Isles 3rd Edition. Cambridge University Press.

⁵ CIEEM (2016) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal*, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester

⁶ Berkshire Biodiversity Strategy 2014-2010. Available at:
<http://berkshirelnp.org/images/Biodiversity%20Strategy%20Small.pdf>

⁷ Berkshire Biodiversity Action Plan (1999, as revised) Accessed at:
[file:///C:/Users/lala8/Downloads/CD01.07.35%20Guide%20to%20Berkshire%20BAP%20\(2\).pdf](file:///C:/Users/lala8/Downloads/CD01.07.35%20Guide%20to%20Berkshire%20BAP%20(2).pdf)

Special Protection Areas (SPA's). The county also has over 750 Local Wildlife Sites, and also identifies hedgerows as Priority Habitats within the county.

- 3.1.4 With reference to the MAGIC website, the closest statutorily designated site is located approximately 3km to the west (Lansehill Copse Local Nature Reserve).
- 3.1.5 With respect to bat species, fourteen European Protected Species (EPS) licences have been granted within 4km of the site. These include common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and brown long-eared *Plecotus auritus* (dated between 2011 and 2014). The closest is located approximately 630m east of the site for common pipistrelle, dated 2013-2015.
- 3.1.6 The only other EPS licence granted within 4km of the site is for great crested newt, located 3km south-west, dated 2010-2012.

3.2 General Description of Site and Surroundings

- 3.2.1 The site occupies approximately 0.25 hectares and consists of a building and hard-standing. The site is located in a central position within the city of Reading with high density commercial and residential buildings in all directions. There are few greenspaces in the immediate surroundings; the nearest small patch of grassland with a low number of trees is located approximately 20m west of the site. Tree species include mature sycamore *Acer pseudoplatanus* and sweet chestnut *Castanea sativa*.
- 3.2.2 Forbury Gardens is located approximately 500m north-east (approximately 1.8 hectares in size) and a recreation ground is located approximately 1km to the south-east (approximately 1.3 hectares in size). Both comprise grassland habitats with boundary trees.
- 3.2.3 Approximately 600m north-east lies the River Thames and approximately 500m south-east lies the River Kennet.

3.3 Habitat Descriptions

- 3.3.1 The site comprises two habitat types (buildings and hard-standing), which are described in Table 1 below and shown on the Habitat Map at Annex 2. Site photographs are given in Annex 3. Table 1 also considers the presence of LBAP Priority Habitats and Species and gives an overall evaluation of the habitat type.

Table 1: Habitat Descriptions and Evaluation

Habitat	Description	Suitability for protected species	Presence of LBAP Priority Habitats	Presence of and potential for LBAP Priority Species	Evaluation
Buildings	A brick-built, flat-roofed building of around four-storeys with shop frontage at ground floor level facing Friars Street. Varying roof levels.	No suitability for protected species	None present	None recorded and negligible potential	Negligible value
Hard-standing	There is a small adjoining concrete courtyard, with a gated entrance, located to the south-west of the building. One planter is present, containing ornamental palm species. An area of hard-standing is present in the north-west of the site.	No suitability for protected species	None present	None recorded and negligible potential	Negligible value

4. Recommendations

4.1 Protection of Ecological Features

- 4.1.1 There are no LBAP Priority Habitats recorded on site or in the vicinity of the site and no potential for LBAP Priority Species; therefore, no Priority Habitats or Species require protection. The construction zone is of low (negligible) ecological value; there are no ecological features requiring protection.

4.2 Biodiversity Enhancements

Species

- 4.2.1 Currently the site (building and hard-standing) offers negligible suitability to protected species and LBAP Priority Species. However, the proposal provides opportunity to enhance the site to such species. Due to the site's position within the urban area, being surrounded by buildings and roads with few green habitat patches, species such as butterflies and moths (small heath *Coenonympha pamphilus* and cinnabar moth *Tyria jacobaeae* are Priority Species recorded within the county) and bees (Red-shanked Carder-bee *Bombus rudarius* is a Priority Species recorded within the county) are unlikely to visit the site and those species for which roads and buildings are likely to form significant barriers, such as hedgehog *Erinaceus europaeus* (Priority Species), are unlikely to benefit from species-specific enhancements. However, more mobile species, including species of bat (all species are Priority Species, of which three have been recorded within 4km of the site (referring to the desk study)) and species of bird (namely house sparrow, a Priority Species) could benefit from species-specific enhancements. Of the bat species recorded, common pipistrelle, soprano pipistrelle, and brown long-eared are most likely to benefit from enhancements as they are associated with roosting in buildings and bat boxes. Of the bird species, house sparrow is most likely to benefit, the site being generally unsuitable for the other species.
- 4.2.2 Target Species: Pipistrelle species of bat, brown long-eared bat and house sparrow. Table 2 below details the recommendations for these species.

Habitats

- 4.2.3 The proposal to redevelop the site does not provide opportunities to create LBAP Priority Habitats on site. However, there is opportunity to create locally relevant habitats:
- 4.2.4 *Green walls* - There are opportunities to create green walls and vertical planting schemes on the building's south-facing frontage and on external walls within the proposed central courtyard. This could include sun-tolerant native plant species which would attract invertebrate species, in turn providing foraging for birds (house sparrow, a Priority species). Species such as honeysuckle *Lonicera periclymenum* (UK Priority species) and clematis *Clematis* species would provide cover and resources for invertebrates and birds. Green walls can be created from simple structures, such as wall trellis with climbing plants.
- 4.2.5 *Window boxes/planters* - There is scope for the positioning of window boxes on the frontage of the building, and within proposed courtyard/terraces, which could include native flowering species of plant, such as grape hyacinth, corn flower, chamomile, basil thyme, and pale dog violet (all local Priority species), to attract invertebrate species and pollinators. Courtyard/terraces also provide suitable locations for the positioning of planters.

- 4.2.6 *Green roof/rooftop gardens* - A green roof and/or rooftop gardens could be incorporated into the redevelopment. This would create additional potential habitat for birds and invertebrates and potential foraging habitat for birds and bats. Native shrubs and hedgerow species could be included into a roof-top garden planting scheme, such as beech and yew (both species are included within local Priority habitats). This would encourage nesting birds, and would help connect arboreal habitats in the area (connectivity of habitats is an objective of the Berkshire Biodiversity Strategy (2014-2020)). Wildflower swards and native herbaceous planting schemes could also be considered, providing structural and species diversity. Sections of green roof could also be incorporated using a sedum/wildflower mix.
- 4.2.7 *Trees and hedges* - There is potential to include trees and sections of hedges within the courtyard, again increasing habitat for birds, bats, and invertebrates. Traditional orchards are an LBAP habitat, therefore the inclusion of native fruit trees, such as apple *Malus* species, pear *Pyrus* species, plum *Prunus* species, and wild cherry *Prunus avium*, would add locally-relevant interest to the development. Hedge species such as beech, yew, and juniper could be considered.
- 4.2.8 A summary of these recommendations is provided in Table 2 below.
- 4.2.9 Rain water collection should also be considered, to provide water for planting on site.

Table 2: Summary of Biodiversity Enhancement Recommendations

Target Species/habitats	Recommendations
Pipistrelle species of bat and brown long-eared bat	Bat boxes, such as the Schwegler 1FF (suitable for inaccessible locations) could be installed on the external walls, preferably south, south-west and western aspects of the building in sheltered locations, preferably at an elevation of 5m to 7m.
House sparrow	House sparrow nest boxes could be installed on the south, south-west and western aspects of the building (sheltered aspects). The development is large enough to incorporate at least three nest boxes.
Green wall	A green or 'living' wall could be created on the building's south and west aspects. This could incorporate native species, such as honeysuckle (UK Priority species) and clematis, providing a potential habitat and food source for invertebrate species, and in turn potential foraging and refuge for target bird and bat species, whilst enhancing the building aesthetically.
Window boxes/planters	Planters could be installed at the front of the building (south and west aspects), courtyard and on any terraces. Planters containing flowering shrubs have potential to attract species of invertebrate, and subsequently bat and bird species. Window boxes could also be attached to the front of the building (south and west aspects) to provide additional planting and enhance the aesthetics of the building. There is also opportunity to place window boxes on to the building (all floors).

Green roof/roof top garden	Wildflower and herbaceous planting, and native shrub and hedgerow species could be used to create green roofs and/or rooftop gardens adding floristic interest to the site and offering foraging habitat for target species.
Trees and hedges	The proposed courtyard would be large enough to accommodate tree and hedge species, such as fruit trees and native hedgerow species such as yew and beech.

4.2.10 The site currently has negligible value to wildlife and supports no LBAP Priority Habitats or Species. The proposal to redevelop the site provides opportunity to create habitats for Priority Species, namely pipistrelle species of bat, brown long-eared bat and house sparrow with the provision of bat and bird boxes. There is also scope to create green habitat on site by the creation of green walls, window boxes/planters, green roofs/roof-top gardens, and trees and hedges.

4.2.11 Combined, implementation of the above recommendations would provide net biodiversity gain within the scheme. The management and maintenance of new features should be detailed within a Habitat Management Plan for the site.



5. Annexes

Annex 1: Ecological Evaluation

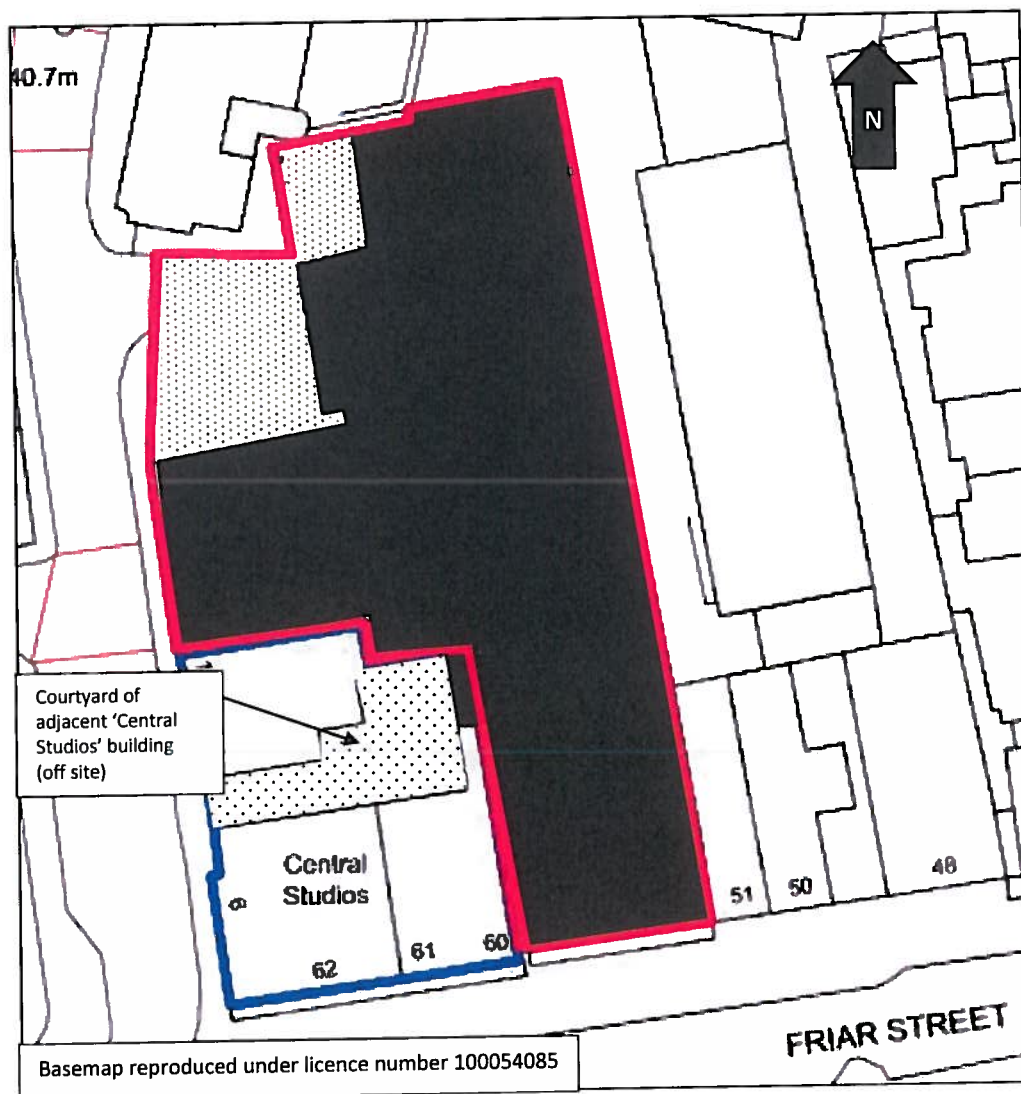
Ecological features, including habitats and species populations, if known, within the site boundary (or zone of influence) are considered in terms of a number of characteristics, including naturalness, rarity (either internationally, nationally or locally), diversity, connectivity and declining status, to assess whether they are important and therefore potentially affected by the proposal. Identified important ecological features are then considered within a defined geographical context using the following frame of reference (CIEEM, 2016⁸):

- International and European;
- National;
- Regional;
- Metropolitan, County, vice-county or other local authority-wide area; and
- Local.

Site importance (within the site boundary only) and negligible importance are also assigned to ecological features, where identified as lower than Local importance.

⁸ CIEEM (2016) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal*, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester

Annex 2: Habitat Map (July 2016)



Seasons
ECOLOGY

Site 52-55 Friar Street,
Reading

Title Habitat plan

Report ref SEB1520_01

Date July 2016

Scale Indicative only

Key

-  Site boundary
-  Buildings
-  Hard-standing

Annex 3: Site Photographs

Photograph 1 - Front of building (south elevation, Friar Street)



Photograph 2 – Front of adjacent building (Central Studios), showing gated entry to adjoining courtyard (view of west elevation, Greyfriars Road)



Photograph 3 - View of west and north facing elevations from adjacent courtyard



Photograph 4 - View of flat roofs and hard-standing on site, facing north-east

