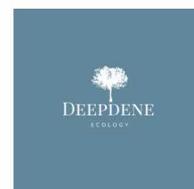


# Ecology Surveys 2021

Court Royal & Red Roof  
Surbiton

June 2021





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<b>Client</b>	William George Homes
<b>Site</b>	Court Royal & Red Roof
<b>Survey type</b>	Update badger survey & bat emergence survey
<b>Survey dates</b>	15 <sup>th</sup> May 2021 & 27 <sup>th</sup> May 2021
<b>Author</b>	Sally Dalrymple-Smith BSc MSc MCIEEM CEnv
<b>Review</b>	Roger Prosser MEng
<b>Associated reports</b>	N/A
<b>Version</b>	Version 1, issued by Deepdene Ecology Ltd

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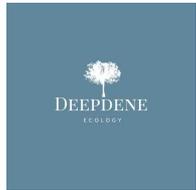
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The report is provided for the sole and exclusive use of William George Homes in response to their particular instructions for a planning application associated with Court Royal & Red Roof, Surbiton. This report has been prepared by an environmental specialist and does not purport to provide legal advice. You may wish to seek separate legal advice. All rights in this report are reserved. Any unauthorised reproduction or usage by any other person is prohibited.

The contents of this report have been produced with due consideration of current best practice guidance, and in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct.

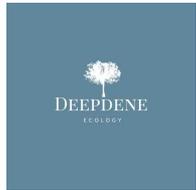
Data within this report is valid for a maximum of 18 months from the date of the survey. After this period, an updated site visit will be required to determine a new ecological baseline. More up-to-date survey data may be required for a planning application or licensing, depending on conditions and impacts.

Whilst every effort has been taken to ensure the accuracy of this report and its contents, in view of potential ecological constraints to development or the likely presence or absence of species, it must only be viewed as a snap-shot in time and, therefore, not be viewed as definitive. Due to external factors, such as seasonality, weather etc, having the potential to affect survey results, no liability can be assumed for omissions or changes that may, or may not occur, after the date this report was produced.



**EXECUTIVE SUMMARY**

<b>PROPOSAL</b>	Planning permission is being sought for the demolition of the buildings on the Site and their replacement with residential flats and houses.
<b>STUDIES COMPLETED</b>	Update badger survey & bat emergence survey of two buildings (B1 & B3).
<b>KEY FINDINGS</b>	<p>The Site consists of a pair of semi-detached residential bungalows and their associated gardens.</p> <p>A Preliminary Ecological Appraisal (PEA) was undertaken in November 2019 by Greenspace Ecology and the findings of that assessment should be read in conjunction with this report.</p> <p>Due to the time that has lapsed since the original PEA, an updated badger survey was undertaken and no signs indicative of badger were found during the survey.</p> <p>In line with the recommendations from the PEA, a single emergence survey was undertaken of the properties (B1) on site and the detached outbuilding (B3).</p> <p>No bats were observed emerging from either building.</p> <p>Foraging and commuting bats, predominantly common pipistrelle, were detected in the vicinity of the property during the survey.</p> <p>No further surveys for bats are considered necessary.</p>
<b>OVERALL FINDING</b>	<p>The mitigation and enhancement recommendations outlined within PEA (Greenspace Ecology, 2019) should be incorporated into the design.</p> <p>Enhancement measures have been recommended for bat roosting and bird nesting features which will help improve the biodiversity within the Site .</p>



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## 1 INTRODUCTION

### 1.1 Background

A planning application was submitted to The Royal Borough of Kingston Upon Thames for the demolition of the existing properties on Site and their replacement with 25 residential flats. In response to the application, the following comments were received:

*'Biodiversity Officer - Over 12 months has lapsed since the initial survey. Paragraph 5.4.2 of the submitted PEA states that an updated badger survey should be carried out if development works do not take place within 12 months of the date of the PEA (November 2019).*

*Bats - Paragraph 5.4.5 states that B1 and B3 will require a further dusk emergence/pre-dawn re-entry survey for roosting bats, conducted in line with good practice guidance. Can you please advise if these surveys have been carried out?*

In response to these comments, Deepdene Ecology Ltd was instructed by William George Homes to undertake an updated badger survey and a dusk emergence survey at Court Royal and Red Roof in Surbiton (hereafter referred to as the 'Site').

This report presents the findings of the two surveys and should be read in conjunction with the original Preliminary Ecological Appraisal (PEA) undertaken in November 2019 (Greenspace Ecology, 2019).

### 1.2 The Site

The Site is located in an urban area in the centre of Surbiton (OS grid reference: TQ 182 676) and consists of the semi-detached dwellings and the front and rear gardens (see **Photograph 1**).



**Photograph 1:** Site and context (indicative only).

### 1.3 Proposed Development

It is proposed that the existing buildings on the Site be demolished and replaced with a block of 25 residential flats and three houses with associated car parking, refuse/ storage and landscaping.

### 1.4 Scope of the Assessment

This report presents ecological information obtained during a badger walkover survey and a dusk emergence survey.

This report presents the results of the badger walkover survey and the bat emergence survey undertaken in May 2021. The aim of the surveys were to determine if badgers were utilising the Site and if either building supported roosting bats. Mitigation, enhancement and licensing has been outlined (where required) to ensure that the proposed development could proceed without contravening wildlife legislation.

### 1.5 Summary of relevant legislation

A summary of the relevant legislation and policy can be found in **Appendix A**.

## 2 METHODOLOGY

### 2.1 Badger walkover survey

A badger walkover survey of the Site was undertaken on the 15<sup>th</sup> May 2021. This survey followed standard survey guidance<sup>1</sup> and searched for any evidence of badgers which included setts, dung pits/latrines, badger paths, hairs, bedding, footprints and scratch marks on trees.

### 2.2 Bat emergence survey

In order to determine the location, extent and type of any roosts, a dusk emergence survey was undertaken on the 27<sup>th</sup> May 2021 following best practice survey guidelines (Collins, 2016).

In total, three surveyors were positioned around the building (see **Appendix B** for surveyor locations) to cover all the potential access points that had been identified during the PEA (Greenspace Ecology, 2019).

All surveyors were equipped with hand held bat detectors (Echo Meter Touch & Echo Meter Pro 2) and surveyors recorded any bat activity and categorised it where possible as emergence, commuting or foraging. The bat calls were logged and recorded for later confirmation of species, where necessary.

Two Canon XA-20 digital video recorders with the assistance of infra-red lighting were also used in conjunction with the surveyors. The recordings were viewed after the surveys were completed to help ascertain if any bats had emerged or re-entered the buildings.

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<sup>1</sup> Harris, S., Creswell, P. & Jeffries, D. (1989). *Surveying Badgers*. London: The Mammal Society.

The survey was undertaken in suitable weather conditions (see **Table 1**) and began 15 minutes before sunset and continued for just over an hour and a half after sunset. This is considered to be the optimum time for bats to emerge from a roost.

### 2.3 Surveyor information

The survey and assessments were led by Sally Dalrymple-Smith (Bat Class Licence holder, registration number 2018-34389-CLS-CLS). Sally is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM and CEnv) and has over 16 years' experience of undertaking ecological surveys.

### 2.4 Limitations

Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. Absence of evidence of any particular species should not be taken as conclusive proof that the species is not present, or that it may not be present in the future.

It should be noted that bats can use roosting features intermittently during the year and may be present in larger or smaller numbers depending on their breeding cycle, weather conditions, and in response to disturbance. Bats may be present at other times and the results should therefore be viewed with caution.

The survey visits were undertaken in accordance with best practice guidelines, during weather conditions that were considered as suitable.

Nevertheless, the results of the ecological surveys allow evaluation of potential constraints and the potential for negative impacts from the proposed works on roosting bats and badgers.

## 3 RESULTS

A summary of the findings of the surveys is provided below and photos are depicted in **Table 2**.

### 3.1 Badger walkover survey

No setts or signs of badger were detected during the walkover survey. The rear garden is largely surrounded by a high brick wall along the northern and eastern boundaries and a wall and an intact garden fence along the western boundary which, in its current condition, would prevent badgers from accessing. The small front garden is largely dominated by hard standing which is not considered suitable for sett creation.

### 3.2 Bat emergence survey

A single emergence survey of the two buildings was undertaken and **Table 1** details the timings and weather conditions during the survey.

**Table 1:** Emergence survey details

Date	Sunrise/ sunset	Survey timing	Weather conditions
27 <sup>th</sup> May 2021	Sunset: 2103	Start time: 2045 Finish time: 2233	Temperature: 18.1/ 15.1°C Cloud: 7/ 8 Wind (Beaufort Scale): 0 Precipitation (0-4): 0 Humidity: 52/ 60%

The follow section summarises the bat activity from the survey visit and any activity seen by surveyors is shown on the figure in **Appendix B**.

3.2.1 Summary of survey findings

No bats were observed emerging from the buildings during the survey. This was also confirmed through later analysis of the video footage.

Low levels of foraging and commuting activity by common pipistrelle *Pipistrellus pipistrellus* and occasional soprano pipistrelle *Pipistrellus Pipistrellus pygmaeus* bats were detected by surveyors intermittently during the survey.

The first bat detected was a common pipistrelle at 2111hours, approximately 8 minutes after sunset. It was faintly detected by the surveyor in the rear garden of Court Royal. Foraging activity by common pipistrelles was detected by both surveyors in the rear gardens at 2126 around the mature trees in the north of the Site. This was repeated intermittently until 2146.

Foraging by a soprano pipistrelle was detected in the rear gardens at 2140 and 2144 with a single pass by a Noctule *Nyctalus noctula* also detected at 2157.

The surveyor covering the front elevation only detected three passes by common pipistrelles throughout the whole survey.

**Table 2:** Court Royal & Red Roof.



**Photograph 1:** Red Roof (B1) – front elevation.

**Photograph 2:** Rear garden of Red Roof.

	
<p><b>Photograph 3:</b> Front elevation of Court Royal (B1).</p>	<p><b>Photograph 4:</b> Rear garden of Court Royal with B3 visible.</p>
	
<p><b>Photograph 5:</b> Outbuilding (B3).</p>	

## 4 ASSESSMENT

### 4.1 Discussion of findings

The PEA (Greenspace Ecology, 2019) did not find any signs of badger within the boundary of the Site and this was confirmed during the update survey undertaken in May 2021.

The findings of the PEA determined that two buildings on Site (B1 and B3) have low potential to support roosting bats and therefore a single bat emergence survey was undertaken following best practice guidelines. The survey did not detect the presence of any bat roosts within the buildings.

During the roost emergence survey, commuting and foraging activity by bats was detected predominantly by common pipistrelle bats.

### 4.2 Potential impacts

No setts or signs of badgers were detected during the surveys (2019 & 2021) and since the Site is located in the centre of an urban area, impacts on foraging badgers are not considered likely.

In the absence of any mitigation, the proposed works could result in disturbance and disruption to foraging and commuting bats through night-time working and lighting.

## 5 RECOMMENDATIONS

### 5.1 Roofing membranes

It is recommended that the roof of the new buildings should use bitumen felt (Type 1F) or timber sarking for the lining of the roof voids and avoid Breathable Roofing Membrane (BRM). BRM can cause bat mortality through entanglement. This precautionary measure removes the risk to any bats that could find and utilise the roof of the new properties.

### 5.2 Sensitive lighting

Night-time working and lighting should be avoided where possible. If required, lighting should be kept to a minimum and follow guidance from the Bat Conservation Trust 'Bats and artificial lighting in the UK' (2018)<sup>2</sup>. This includes the following:

- Direct any task lighting used during construction away from trees and hedgerows;
- Set any necessary security lighting on short timers (e.g. 1 minute) with a sensitivity to large moving objects only;
- Directional lighting or shielding such as hoods or cowls should be used to avoid light being directed at the sky or towards the boundary vegetation;
- Limit lighting times to provide dark periods;
- LED luminaires are preferred due to the lower intensity, sharp 'cut-off', colour rendition and dimming capability;
- All luminaires should avoid UV elements and metal halide fluorescent sources should not be used;
- Avoid white and blue wavelengths of the light spectrum and keep the brightness of the lamps as low as feasibly possible; and
- Carefully consider the height of columns to avoid light spill.

### 5.3 General mitigation

All recommendations for mitigation outlined in the PEA (Greenspace Ecology, 2019) are still applicable and should be adhered to.

It should be noted that the buildings and vegetation have potential to support nesting birds. Demolition of the buildings and vegetation clearance should be undertaken between September and February (inclusive) to avoid the breeding bird season. If this is not possible and works take place between March and the end of August, an ecologist should check potential nesting habitat immediately before works are carried out. Any active nests identified must be retained in situ with a suitable buffer until the ecologist has confirmed that the chicks have fledged and the nest is no longer active.

### 5.4 Ecological enhancements

National Planning Policy Framework (NPPF) states that local planning authorities should aim to conserve and enhance biodiversity where possible when determining planning applications. The

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<sup>2</sup> Bat Conservation Trust & ILP, 2018. *Bats and artificial lighting in the UK: Bats and the Built Environment Series* Institution of Lighting Professionals.

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development plans should maximise opportunities for enhancement, in order to achieve a net increase in biodiversity. This is in accordance with the NERC Act (2006) which requires that “*every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat.*”

It is recommended that the following enhancements are considered in the final development of the design:

Bat access tiles and bat access ridge tiles could be incorporated into the roof of the new buildings to create new roosting habitat for bats (see examples provided in **Appendix C**). It is recommended that at least one bat access tile or ridge tiles is incorporated into each building; Artificial bat boxes (such as the Schwegler 1FF or 1FD, see **Appendix C**) could be installed to create new roosting habitat for bats;

The installation of bird boxes around the Site; and

The inclusion of native trees and shrubs should additional landscaping be undertaken (see **Appendix C** for planting ideas).

## 6 CONCLUSION

This report is based on surveys undertaken in May 2021. Mitigation measures have been recommended to minimise any potential impacts on foraging and commuting bats and nesting birds. This would therefore ensure that the favourable conservation status of the bats using the Site will be maintained. All other mitigation measures outlined in the PEA (Greenspace Ecology, 2019) should ensure there are no impacts on any other protected or notable species.

## Appendix A - Summary of Relevant Legislation & Policy

Species	Legislation (England & Wales)	Offences	Licensing procedures and guidance (England & Wales)
<b>Bats</b> <i>European protected species</i>	Conservation of Habitats and Species Regulations 2017 (as amended) Reg 41	Deliberately capture, injure or kill a bat; deliberate disturbance of bats; or damage or destroy a breeding site or resting place used by a bat.  [The protection of bat roosts is considered to apply regardless of whether bats are present.]	A Natural England (NE) licence in respect of development is required in England.  <i>European Protected Species: Mitigation Licensing- How to get a licence</i> (NE 2010)  <i>Bat Mitigation Guidelines</i> (English Nature 2004)  <i>Bat Workers Manual</i> (JNCC 2004)
	Wildlife and Countryside Act 1981 (as amended) S.9	Intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb <sup>3</sup> a bat in such a place.	Licence from NE is required for surveys (scientific purposes) that would involve disturbance of bats or entering a known or suspected roost site.
<b>Badger</b>	Protection of Badgers Act 1992	Wilfully kill, injure or take a badger; or intentionally or recklessly damage, destroy or obstruct access to a badger sett or disturb a badger in its sett.	Where required, licences for development activities involving disturbance or sett interference or closure are issued by Natural England. Licences for activities involving watercourse maintenance, drainage works, or flood defences are issued under a separate process.  Licences are not normally granted from December to June inclusive when cubs may be present within setts.
<b>Birds</b>	Wildlife and Countryside Act 1981 (as amended) S.1	Intentionally kill, injure or take any wild bird; intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built; intentionally take or destroy the nest or eggs of any wild bird.  [Special penalties are liable for these offences involving birds on Schedule 1 (e.g. most birds of prey, kingfisher, barn owl, black redstart, little ringed plover).]  Intentionally or recklessly disturb a Schedule 1 species while it is building a nest or is in, on or near a nest containing eggs or young; intentionally or recklessly disturb dependent young of such a species.	No licences are available to disturb any birds in regard to development.  Licences are available in certain circumstances to damage or destroy nests, but these only apply to the list of licensable activities in the Act and do not cover development.  General licences are available in respect of 'pest species' but only for certain very specific purposes e.g. public health, public safety, air safety.

Appendix B – Survey results



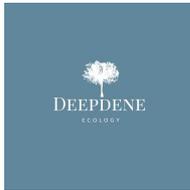


## Appendix C – Enhancements

**Wildlife Friendly Planting** (Natural England, 2008. Gardening with Wildlife in Mind. London: Natural England)

Native and wildlife-friendly trees

Common Name	Scientific Name
Pedunculate oak	<i>Quercus robur</i>
Ash	<i>Fraxinus excelsior</i>
Wych elm	<i>Ulmus glabra</i>
Whitebeam	<i>Sorbus aria</i> agg.
Rowan	<i>Sorbus aucuparia</i>
Aspen	<i>Populus tremula</i>
Apple	<i>Malus domestica</i>
Bird cherry	<i>Prunus padus</i>
Common alder	<i>Ainus glutinosa</i>
Crab apple	<i>Malus sylvestris</i>
Crack willow	<i>Salix fragilis</i>
Downy birch	<i>Betula pubescens</i>
Field maple	<i>Acer campestre</i>
Hornbeam	<i>Carpinus betulus</i>
Juniper	<i>Juniperus communis</i>
Large-leaved lime	<i>Tilia platyphyllos</i>
Small-leaved lime	<i>Tilia cordata</i>
Pear	<i>Pyrus communis</i>
Scots pine	<i>Pinus sylvestris</i>
Sessile oak	<i>Quercus petraea</i>
Silver birch	<i>Betula pendula</i>
Sweet chestnut	<i>Castanea sativa</i>
Wild cherry	<i>Prunus avium</i>
Wild service-tree	<i>Sorbus torminalis</i>
Yew	<i>Taxus baccata</i>



### Native and wildlife friendly shrubs

Common Name	Scientific Name
H azel	<i>Corylus avellana</i>
Elder	<i>Sambucus nigra</i>
Goat willow	<i>Salix caprea</i>
H awthorn	<i>Crataegus monogyna</i>
Dog rose	<i>Rosa canina</i>
Guelder rose	<i>Viburnum opulus</i>
Gorse	<i>Ulex europaeus</i>
Broom	<i>Cytisus scoparius</i>
Wayfaring tree	<i>Viburnum lantana</i>
Shrubby cinquefoil	<i>Potentilla fruticosa</i>
Raspberry	<i>Rubus idaeus</i>
Alder buckthorn	<i>Frangula alnus</i>
Wild privet	<i>Ligustrum vulgare</i>
Barberry	<i>Berberis × stenophylla</i>
Barberry	<i>Berberis vulgaris</i>
Bell heather	<i>Erica cinerea</i>
Bilberry	<i>Vaccinium myrtillus</i>
Black currant	<i>Ribes nigrum</i>
Blackthorn	<i>Prunus spinosa</i>
Buckthorn	<i>Rhamnus catharticus</i>
Butcher's-broom	<i>Ruscus aculeatus</i>
Cowberry	<i>Vaccinium vitis-idaea</i>
Cross-leaved heath	<i>Erica tetralix</i>
New Zealand holly	<i>Olearia macrodonta</i>
Daphne	<i>Daphne odora</i>
Dogwood	<i>Cornus sanguinea</i>
Field rose	<i>Rosa arvensis</i>
Firethorn	<i>Pyracanthus angustifolia</i>
Flowering Currant	<i>Ribes sanguineum</i>
Gooseberry	<i>Ribes uva-crispa</i>
Hebe 'Midsummer Beauty'	<i>H ebe</i> sp.
Holly	<i>Ilex aquifolium</i>
Japanese quince	<i>Chaenomeles japonica</i>
Lilac	<i>Syringa vulgaris</i>
Mexican orange	<i>Choisya ternata</i>
Mezereon	<i>Daphne mezereum</i>
Midland hawthorn	<i>Crataegus laevigata</i>
Oregon grape	<i>Mahonia aquifolium</i>
Osier	<i>Salix viminalis</i>
Portugal laurel	<i>Prunus lusitanica</i>



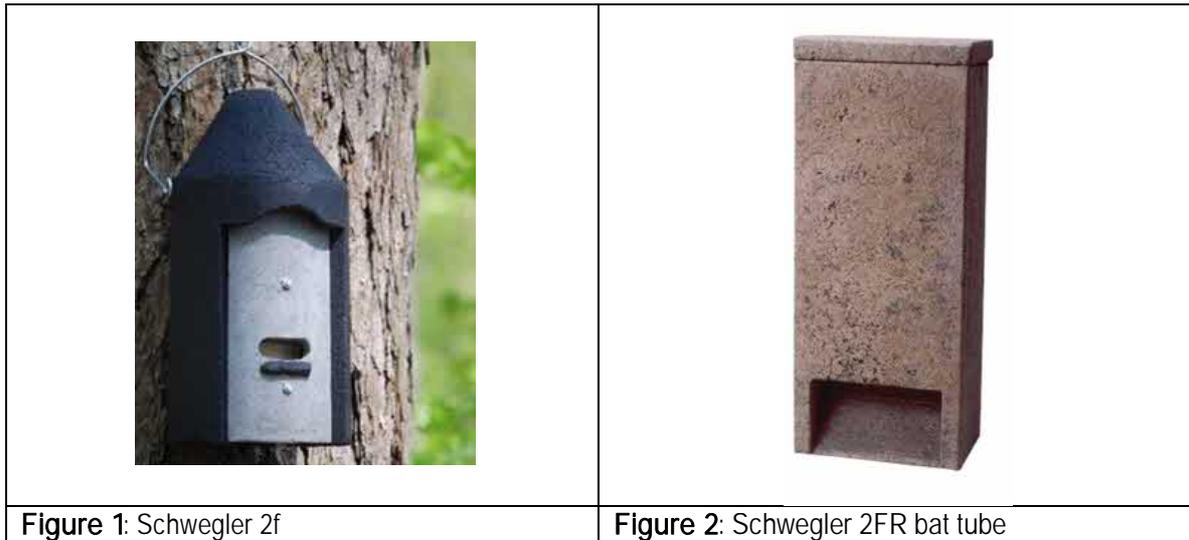
Privet	<i>Ligustrum ovalifolium</i>
Purple willow	<i>Salix purpurea</i>
Snowy mespilus	<i>Amelanchier canadensis, Amelanchier lamarck</i>
Spindle	<i>Euonymus europaeus</i>
Spurge laurel	<i>Daphne laureola</i>
Sweet briar	<i>Rosa rubiginosa</i>
Wild privet	<i>Ligustrum vulgare</i>

*Roost sites*

As an enhancement, bat boxes should be hung around the site or incorporated into the design of the properties.

For example, a Schwegler 2F double-fronted bat box (see **Figure 1**) which can be hung on the retained trees around the site. They should be positioned in a shady position, 3-5m above ground level, and face in a south/south-westerly direction with a clear flight path to and from the entrance.

The Schwegler 2FR bat tube (**Figure 2**) should be built into the masonry of the external wall.



*Retained roost sites*

Roost access tiles offer additional roosting opportunities for species (see **Figure 3**). They allow access by bats to the crevice between the roof tiles and the lining underneath.



**Figure 3:** Example bat access tiles