



Sandleford Park, Newbury

Appendix F7: Bat Roost Assessment of Trees & Bat Hibernation Survey



Bloor Homes & The Sandleford Farm Partnership

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Executive Summary

Contents	Summary
Site Location	The site is located at Sandleford Park in Newbury, West Berkshire, centred on OS Grid Reference SU 46847 64550. The site comprises agricultural fields with areas of grassland and several copses of ancient woodland. A central valley runs from the north-western corner of the site towards the River Enborne at the site's southern boundary.
Existing Site Information	WYG completed an initial ecological appraisal in 2008 with update surveys completed in 2011, 2013, 2015, 2016 and 2017. The most recent bat roost assessment was in December 2017, with a hibernation assessment in February 2018.
Scope of this Survey(s)	To review the bat roost suitability and hibernation potential of trees and buildings likely to be impacted by the current proposals.
Results	<p>T46, T67, T114, T121, T122, T123, T127, T128, T130 and G120 are all considered to be active bat roosts which are to be retained within the proposals, and as such avoidance measures are recommended (as highlighted below) to be implemented over the course of the construction phase. T127 and T130 have been scheduled for felling or pollarding in the arboricultural assessment (Barrell Tree Care, 2018), but this does not form part of the proposals.</p> <p>T61, T109, T116, T153, T154, T173 and the mature ash within G47 were assessed as having high or moderate suitability for roosting bats during emergence/return and climbed inspection surveys and are scheduled for felling/partial felling or pollarding within masterplan or arboricultural assessment.</p> <p>All of these trees will require pre-commencement surveys and a license from Natural England prior to works commencing if active roosts are known/identified.</p>
Recommendations	<p><u>Mitigation</u></p> <p>Pre-commencement surveys of trees scheduled for felling/partial felling or pollarding with a high or moderate suitability for roosting bats. An EPSM (European Protected Species Mitigation) license application from Natural England will be required if roosting bats are discovered.</p> <p>Wherever trees with low potential to support roosting bats require removal, we would recommend that, where possible, removal or pruning should be undertaken sympathetically using "soft-felling methodology".</p> <p><u>Avoidance</u></p> <p>To reduce disturbance to roosting bats during works, trees with confirmed roosts will be protected during construction, and all construction works in proximity to woodland and hedgerows will cease 30 minutes prior to dusk. The lighting across the development footprint will be sensitively designed with bats in mind.</p> <p><u>Enhancement</u></p> <p>Additional measures to enhance the site for bats include in-fill hedgerow planting and the provision of artificial bat roosts, which can be attached to trees that are being retained on the proposed development site.</p>



Glossary

AONB	Area(s) of Outstanding Natural Beauty
Badger Act	Protection of Badgers Act 1992
BCT	Bat Conservation Trust
BoCC	Bird(s) of Conservation Concern
BTO	British Trust for Ornithology
CEcol	Chartered Ecologist
CEnv	Chartered Environmentalist
CIEEM	Chartered Institute of Ecology & Environmental Management
CRoW Act	Countryside and Rights of Way Act 2000
EcIA	Ecological Impact Assessment
ECoW	Ecological Clerk of Works
EIA	Environmental Impact Assessment
EMP	Ecological Management Plan
EPS	European Protected Species
EPSL	European Protected Species Licence
GCN	Great Crested Newt
Habitat Regulations	Conservation of Habitats and Species Regulations 2017
HAP	Habitat Action Plan
Hedgerow Regulations	Hedgerow Regulations 1997
HPI	Habitat(s) of Principal Importance
HRA	Habitats Regulations Assessment
JNCC	Join Nature Conservancy Council
LERC	Local Ecological Record Centre
LBAP	Local Biodiversity Action Plan
LNR	Local Nature Reserve
LPA	Local Planning Authority
LWS	Local Wildlife Site
MCIEEM	Member of Chartered Institute of Ecology & Environmental Management
Natura 2000 site	A European site designated for its nature conservation value
NE	Natural England
NERC Act	Natural Environment and Rural Communities Act 2006
NNR	National Nature Reserve
NPPF	Revised National Planning Policy Framework
PEA	Preliminary Ecological Appraisal
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAP	Species Action Plan
SNCO	Statutory Nature Conservation Organisations
SPA	Special Protection Area
SPI	Species of Principal Importance
SSSI	Site(s) of Special Scientific Interest
W&CA	Wildlife & Countryside Act 1981



1.0 Introduction

1.1 Background

WYG was commissioned by Bloor Homes and the Sandleford Farm Partnership in December 2018 to review the findings of bat roost assessments at Sandleford Park, with reference to the current proposals.

This follows extended Phase 1 habitat surveys completed by WYG in 2008 (updated in 2011, 2013, 2015, 2016 and 2017) which identified the potential for bats to be roosting within trees and buildings within the site boundary. Hibernation surveys involving tree climbing and building inspections were completed in 2015 and updated in 2018. Ground level tree assessments were completed in 2012, 2014, 2015 and 2017. Nocturnal emergence/return surveys have been carried out on trees identified as having roost potential between 2011-2017 (Appendix F8).

This report has been prepared by Assistant Ecologist Alex Hellyar, and updated by Tamsin Clark MCIEEM.

1.2 Site Location

The site is located at Sandleford Park in Newbury, West Berkshire and is centred at Ordnance Survey National Grid Reference SU 46847 64550. The survey area, hereafter referred to as the 'site', is shown on Figure 1 and comprised of agricultural fields with areas of grassland and several copses of ancient woodland dispersed throughout. A central valley runs from the north-western corner of the site towards the River Enborne at the site's southern boundary.

For details of the development description, please see the main ES chapter.

1.3 Purpose of the Report

The objectives of this assessment are to carry-out:

- A review of the bat roost assessment of trees and buildings to determine suitability for roosting bats, and the bat hibernation survey to determine suitability for roosting bats;
- An overall assessment to identify possible constraints and licensing requirements associated with the proposed development and the disturbance/destruction of bat roosts.



2.0 Methodology

2.1 Desk Study

2.1.1 Previous Reports

WYG completed an initial ecological appraisal in 2008 with update surveys completed in 2011, 2013, 2015, 2016 and 2017 which identified habitat suitable for roosting bats. Subsequent bat roost assessment of trees and bat hibernation surveys were completed to identify the trees and buildings which offer potential to support roosting bats. The findings of these assessments provided the basis for emergence/return surveys conducted between 2012-2017.

2.1.2 Local Ecological Records Centre

Up to date information was requested from the Hampshire Biodiversity Information Centre (HBIC) and the Thames Valley Environmental Records Centre (TVERC) in November 2017, for information on any nature conservation designations and protected or notable species records within 2 km of the site.

The data search covers:

- Statutory designated sites for nature conservation, namely SACs, SPAs, Ramsar sites, SSSIs, NNRs and LNRs;
- Non-statutory designated sites for nature conservation, namely LWS;
- Legally protected species, such as great crested newts, bats and badger;
- Notable habitats and species, such as those listed as Habitats or Species of Principal Importance; and,
- Priority habitats or species within both HBIC and TVERC areas.

The data search did not cover:

- Tree Preservation Orders (TPOs); or
- Conservation Areas designated for their special architectural and historic interest.

2.2 Bat Roost Assessment of Trees

The trees within the boundary were appraised by an experienced ecologist for their suitability to support breeding, resting and hibernating bats using survey methods based on those outlined in the Bat Conservation Trust's Bat Surveys: Good Practice Guidelines (2016) and English Nature's Bat Mitigation Guidelines (2004). The bat roost assessments were completed in 2012 and updated in 2014, 2015 and, most recently on 11th December 2017.

In addition, a number of trees were assessed and surveyed along Warren Road, to the West of the site by WYG in 2016. However, Warren Road is no longer part of the redline boundary, and as such the results of these surveys have not been included within this report.

Bat roost potential is determined by a variety of factors including physical attributes of the tree, and proximity to good foraging sites and safe commuting routes. A brief summary of the known factors which influence a trees potential to support bats is provided in Table 1 below.



Table 1: Factors influencing potential for trees to be used by bats (adapted from Bat Conservation Trust, 2016)

Features of trees used by bats	Signs indicating possible use by bats
<ul style="list-style-type: none"> • Natural holes • Woodpecker holes • Cracks/splits in major limbs • Loose bark • Behind dense, thick-stemmed ivy • Hollows/cavities • Within dense epicormic growth • Bird and bat boxes 	<ul style="list-style-type: none"> • Tiny scratches around entry point • Staining around entry point • Bat droppings in/around/below entrance • Audible squeaking at dusk or in warm weather • Flies around entry point • Distinctive smell of bats • Smoothing of surfaces around cavity

These trees were visually inspected from ground level, using binoculars for their bat roosting potential, including potential access points into the trees and connectivity to the wider environment. These were categorised in accordance with Table 2, determined by a visual assessment of the trees to record the presence of features such as crevices, holes, fissures, split bark and arboreal ivy.

Table 2: Categories of trees, based on their potential to support bat roosts (taken from Bat Conservation Trust, 2016)

Tree category	Description
Known or confirmed roost	Confirmed bat roost tree with field evidence demonstrating bats are present e.g. droppings, scratch marks, grease marks or urine staining.
High	Trees with multiple, highly suitable features capable of supporting larger roosts.
Moderate	Trees with definite bat potential, supporting fewer suitable features than Category 1* trees or with potential for use by single bats.
Low	Trees with no obvious potential although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats.
Negligible	Trees with no potential to support bats

Please note that Tables 1 and 2 identify what are generally considered to be the most important influences on bat roost preferences. There are 18 species of bats in the UK, each with its own specific requirements. Additionally, males generally have different roost preferences to females and, therefore, it is not practical to assess a feature against all the possible permutations of an 'ideal' roost.



2.3 Bat Roost Assessment of Buildings

The trees and buildings within the boundary were appraised by an experienced ecologist for their suitability to support breeding, resting and hibernating bats using survey methods based on those outlined in the Bat Conservation Trust's Bat Surveys: Good Practice Guidelines (2016) and English Nature's Bat Mitigation Guidelines (2004). These inspections involved the systematic search of the structures' exterior to identify potential or actual bat access points and roosting places and to locate any evidence of bats such as live or dead specimens, bat droppings, urine splashes, fur-oil staining and/or squeaking noises. The search includes the ground (particularly beneath access points), windowsills, window panes, walls, behind peeling paint work, hanging tiles, cladding, lead flashings, and gaps under felt, tiles and slates. Following the external inspection, internal surveys to investigate evidence of bats including a search live or dead specimens and droppings were completed where possible. A full assessment within the agricultural storage building was completed, but was only possible by looking through the windows of the prefab shed. However, enough information was gained through these inspections to accurately assess the suitability for roosting bats.

2.4 Bat Hibernation Survey

Trees with potential to support hibernating bats were assessed producing descriptions of features present that were suitable for hibernating bats. An internal and external search was undertaken of the trees in 2015 and updated on 8th February 2018, using binoculars to identify potential bat hibernation features. Where potential bat roost features were present in a tree, ladders or rope access techniques (tree climbing) were used to inspect cavities with head torches and/or endoscopes. Characteristic field signs of bats, for example accumulations of droppings, bats or obvious scratch/wear marks were also identified where possible. All surveyors held City and Guilds tree climbing and aerial rescue award (Level 2).

The surveys were carried out during a period of suitable weather conditions (i.e. not during heavy rain, low temperatures or strong winds) as recommended within the Bat Conservation Trusts Bat Surveys: Good Practice Guidelines (2016).

2.5 Limitations

All trees which were unable to be fully inspected (due to height, obscured vision, etc.) were subjected to either climbed inspections or nocturnal emergence/return surveys to assess their use by roosting bats, and therefore do not represent limitations of the assessment.

Bat surveys have been ongoing over the site for past 10 years, so we have a good understanding of bat use of the site, and update surveys are scheduled summer 2019.

The details of this report will remain valid for a period of **18 months** (i.e. until winter 2019/20), after which the validity of this assessment should be reviewed to determine whether further updates are appropriate.



3.0 Results

3.1 Desk Study

A total of 185 records of bats within 2km of the site were returned including the following species: Daubenton's; Whiskered bat; Natterer's bat; noctule; common pipistrelle; soprano pipistrelle; brown long-eared bat and serotine. In addition to this, records were returned for unidentified bats from the *Pipistrellus* genus; *Myotis* genus and *Plecotus* genus. The nearest bat records are of a daubenton's, whiskered, brown long-eared and pipistrelle spp. >0.48km NNE from site, though the location is sensitive. The nearest recorded roost is of a brown long-eared roost which contained 12 individuals approximately 1.7km WNW along Enborne Street, Newbury. Both noctule and brown-long eared bats are Priority species under the NERC Act and noctule, brown long-eared and soprano pipistrelle bats are listed on the Berkshire Biodiversity Strategy 2014-2020.

3.2 Bat Roost Assessment

A total of 120 trees were assessed for their suitability to support bat roosts. The results of the tree assessment are summarised below, with full results given in Table 3 below. The location of the trees assessed is shown in the Barrell arboriculture master plan 14281-BT7a (Figure 2).

- **Known or confirmed roost** - **T46**, adjacent to **G47, T67, T114, T121, T122, T123, T127, T128, T130** have all been identified as known bat roosts across all surveys completed since 2012.
- **High Suitability** – As of the most recent 2017 survey, four trees (**T122, T129, T133, T154**) were identified as having multiple, highly suitable features capable of supporting larger roosts, such as large cavities or splits within the limbs or the trunk.
- **Moderate Suitability** – As of the most recent 2017 survey, eight trees and one group of trees (**T61, T109, T116, T153, T158, T159, T160, T173** and the **mature Ash within G47**) were identified as having moderate suitability as they had natural holes or cavities present.
- **Low Suitability** - As of the most recent 2017 survey, thirty-five trees have been identified as having low suitability with minor roost features or a thick ivy covering present.
- **Negligible Suitability** - The remaining trees assessed for their bat potential fall under this category, and have negligible potential to support roosting bats.

Sandleford Park, Newbury: Bat Roost Assessment of Trees & Bat Hibernation Survey



Table 3: Bat Roost Assessment of Trees

Known/Confirmed Roost	High Suitability	Moderate Suitability	Low Suitability	Negligible Suitability
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Barrell Tree No.	Species	2017		2015	
		Bat Roost Potential	Comments	Bat Roost Potential	Comments
G4	Oak	Negligible	No roosting features observed.		
G4	Oak	Negligible	Surrounded by dense bramble and holly at base. No roosting features observed.		
G4	Oak	Negligible	Dead tree. No roosting features observed.		
G32	Oak	Low	Covered in ivy , quite thin with no substantial branches. Close to adjacent school sports pitch floodlights		
G32	Oak	Negligible	Sparse ivy cover on eastern aspect. First branches approximately 4m up. No roosting features observed.		
T31	Oak	Low	Ivy cover on trunk. Broken limb on southern aspect. First branch approximately 5m up.		
T33	Oak	Low	Bramble cover around base. First branch approximately 5m up. Large hole in eastern aspect of main trunk at top of tree. Hole in branch and central trunk on western aspect approx 4m, which		

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Barrell Tree No.	Species	2017		2015	
		Bat Roost Potential	Comments	Bat Roost Potential	Comments
			overhangs adjacent school sports pitch.		
T34	Oak	Low	Bramble cover around base. Mature tree with cracked branches entrances both horizontal and vertical. Features on southern and eastern aspects. Thick base, first branches approximately 4m up.		
T35	Ash	Negligible	Mature tree. Adjacent to the sports pitch and floodlight. Branches overhang into school property. No roosting features observed.		
G36	Ash	Negligible	Mature tree. Overhangs sports fields, floodlight sits adjacent to the west. No roosting features observed.		
G37	Oak	Low	Stripped bark on western aspect. Adjacent to school sports pitches with floodlights. Cracks and holes present within area of stripped bark.		
G37	Ash	Negligible	Surrounded by dense bramble. Spindly with no notable roosting features, some sparse ivy cover. Adjacent to school sports pitches with floodlights.		

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Barrell Tree No.	Species	2017		2015	
		Bat Roost Potential	Comments	Bat Roost Potential	Comments
G37	Ash	Negligible	Covered in ivy around trunk. Thin first branches approximately 7m up. No roosting features. Adjacent to sports pitches with floodlights.		
T40	Oak	Negligible	Line of 5 mature trees. No roosting features observed.		
T42/ T43/ T44	Oak	Negligible	Cluster of 3 oak trees, southernmost covered in dead ivy. No roosting features observed on any of the trees.		
T46	Oak	Known/Confirmed Roost	Previously identified bat presence, single dropping. Cracked branch facing south. Now located off-site.	Known/Confirmed Roost	Lots of broken limbs, cracks and crevices
G47	Ash/Oak	Moderate	Now off-site situated adjacent to boundary. Cracks and splits in bark.	Moderate	No obvious features on most trees. Ash has cavity present.
T49	Oak	Low	As per 2014 survey		
T48	Oak	Low	As per 2014 survey		
T50	Oak	Low	As per 2014 survey		
T53	Oak	Low	No roosting features observed.		
T53	Oak	Negligible	Knot hole present within the main trunk with cracked limbs.		
T54	Oak	Negligible	No roosting features observed.		
W55	Oak	Negligible	No roosting features observed, mature tree. Tree overhangs adjacent land off-site.		

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Barrell Tree No.	Species	2017		2015	
		Bat Roost Potential	Comments	Bat Roost Potential	Comments
W55	Ash	Low	Trunk rotten at midway point allowing possible access into interior. Dead in places, so not climbable.		
T56	Oak	Negligible	Mature, first branch approximately 4m up. No roosting features observed.		
T57	Oak	Low	Mature tree, lower broken branches provide possible access to interior of tree although appears unlikely.		
T59	Oak	Low	Dense ivy covering lower section of trunk with cracked and broken lower branches. Potential danger to climbers from adjacent conifer leaning towards tree T24.		
T61	Beech	Moderate	Broken branches with cracked trunk, allowing internal access. Surrounded by dense bramble.	Moderate	Fallen beech tree with broken limbs and cavities.
W62	Oak	Negligible	Sparse ivy cover on southern aspect. First branch 3m up. No roosting features observed. Negligible potential		
W62	Oak	Low	Oak, edge of copse to east of track. Knot hole approximate 4m high within trunk.		
W62	Oak	Low	Tree appears dead with loose lifted bark on the tree providing potential roosting feature.		

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Barrell Tree No.	Species	2017		2015	
		Bat Roost Potential	Comments	Bat Roost Potential	Comments
W62	Oak	Low	Split tree limb facing South East approximate 10m up.		
W62	Oak	Negligible	Mature, no roosting features observed.		
W62	Oak	Negligible	Semi-Mature, no roosting features observed.		
W62	Oak	Negligible	No roosting features observed.		
T63	Sycamore	Negligible	No roosting features observed.	Negligible	Very smooth, no obvious features
T64	Oak	Negligible	Semi-Mature, no roosting features observed.	Negligible	Very smooth, no obvious features
T65	Oak	Negligible	Semi-Mature, no roosting features observed.	Negligible	Very smooth, no obvious features
G66	Oak	Negligible	Sparse ivy cover surrounds trunk from base to midway. Mature, no roosting features observed.		
G66	Oak	Negligible	Directly adjacent to T19. No roosting features observed.		
T67	Oak	Known/Confirmed Roost	A bat was observed emerging during a 2017 bat activity survey (Appendix F8).		
T69	Silver Birch	Low	Knot hole in southern aspect of trunk. Tree has spindly branches.	Negligible	Couple of shallow cavities – subject to climbed hibernation survey in February 2015 (deemed to be of negligible potential).

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Barrell Tree No.	Species	2017		2015	
		Bat Roost Potential	Comments	Bat Roost Potential	Comments
W72	Oak	Low	Sits on southern edge of Barn Copse. Base surrounded by holly. Holes in southern aspect of tree. First branches approximately 7m up.		
W72	Oak	Low	Southern edge of Barn Copse. Trunk covered in ivy. Knot hole in central branch near top. First branch approximate 8m up.		
T76	Oak	Negligible	No roosting features observed.		
T77	Oak	Negligible	No roosting features observed. Boggy ground surrounds tree.		
T78	Oak	Low	Split south eastern facing tree limb.		
T79	Oak	Negligible	No roosting features observed.		
G80	Oak	Negligible	Two mature trees, ivy covers the westernmost of the two. No roosting features observed.		
G80	Oak	Low	Tree has collapsed , propped against adjacent tree. Hole present in tree trunk.		
T81	Oak	Negligible	No roosting features observed.		
T83	Oak	Negligible	No roosting features observed.		
T84	Oak	Negligible	No roosting features observed.		

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Barrell Tree No.	Species	2017		2015	
		Bat Roost Potential	Comments	Bat Roost Potential	Comments
T85/ T86/ T87	Various	Negligible	Oak, sycamore, sweet chestnut and dead silver birch. The central tree (sweet chestnut) has cracked tree limb facing south. No roosting features observed.		
W90	Oak	Negligible	Thin spindly branches. No roosting features observed.		
W90	Oak	Low	Hole identified in branch South facing branch.		
T91	Oak	Negligible	Sparse ivy cover on main trunk adjacent to the stream. Boggy ground surrounds tree. No roosting features observed.		
G94	Oak	Negligible	Surrounded by holly adjacent to stream no roosting features observed.		
G94	Silver Birch	Negligible	Adjacent to the stream, no roosting features observed. Boggy ground surrounds tree.		
G94	Oak	Negligible	Adjacent to the stream, no roosting features observed.		
G96	Oak	Low	Sparse ivy cover on main trunk, split branch western side adjacent to stream which runs to South of tree. Used as pigeon shooting hide. Quite boggy surrounding tree.		

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Barrell Tree No.	Species	2017		2015	
		Bat Roost Potential	Comments	Bat Roost Potential	Comments
W97	Oak	Low	Ivy cover on the majority of the tree. Large broken limb next to tree. Understory surrounds base. Appears to be dead, not climbable. Tree 10m plus tall.		
W97	Oak	Negligible	Some cracked and broken lower limbs. No roosting features observed.		
W97	Oak	Negligible	No roosting features observed.		
G98	Alder	Low	Group of ten trees, surrounding ground boggy. A single tree is dead. Some holes present in a couple of trees. Not substantial enough to climb.		
T99	Oak	Negligible	Adjacent to stream. No roosting features observed.		
T100	Oak	Negligible	Sparse ivy cover on trunk, adjacent to a stream. No roosting features observed.		
T102	Oak	Negligible	No roosting features observed.		
T103	Oak	Negligible	No noticeable features		
T104	Oak	Negligible	No roosting features observed.		
T107	Oak	Negligible	Dead tree. No roosting features observed.		

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Barrell Tree No.	Species	2017		2015	
		Bat Roost Potential	Comments	Bat Roost Potential	Comments
T109	Wild Cherry	Moderate	Loose bark with gaps present and holes offering potential access to interior.	Moderate	Gaps behind bark, holes, possible cavities - lots of bats seen nearby during bat activity surveys completed between May and September 2013. No roosting bats seen (Appendix F8).
G110	Ash	Negligible	Several trees, no roosting features observed.	Negligible	Thin trunks, no suitable features
T111	Oak	Low	Bark stripped across majority of the tree. Hole with possible cavities identified towards top of tree, west facing.		
W112	Oak	Low	Sycamore, knot holes present facing north within trunk		
W112	Oak	Low	Dense ivy cover around trunk with holly surrounding the base of the tree. Knot hole present in a south facing branch. Most of tree obscured by surrounding vegetation.		
T114	Oak	Known/Confirmed Roost	Emergence and return surveys in 2017 identified an active bat roost (Appendix F8).		
T116	Oak	Moderate	Dead tree. Cracked limbs offer potential access points at tips of branches. Close proximity to main road, Unsafe to climb in 2018.	Moderate	No evidence when climbed in February or when subject to nocturnal surveys in 2014 (Appendix F8).

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Barrell Tree No.	Species	2017		2015	
		Bat Roost Potential	Comments	Bat Roost Potential	Comments
G117	Oak	Negligible	Three trees, blackthorn, ash and field maple. No roosting features observed.	Low	No obvious features
G120	Oak	Known/Confirmed Roost	Emergence/return surveys conducted in 2017 identified an active bat roost (Appendix F8).		
T121	Oak	Known/Confirmed Roost	Emergence/return surveys conducted in 2017 identified an active bat roost (Appendix F8).		
T122	Oak	High	<i>Formerly designated as T7.</i> Knot hole, facing west in trunk.		
T123	Oak	Known/	Emergence and return surveys in 2017 identified an active bat roost (Appendix F8).		
T125/T126	Oak	Low	<i>Formerly designated as G2.</i> No roosting features observed.		
T127	Oak	Known/Confirmed Roost	Emergence and return surveys in 2017 identified an active bat roost (Appendix F8).	High	Numerous suitable features
T128	Oak	Known/Confirmed Roost	Emergence and return surveys in 2017 identified an active bat roost (Appendix F8).	Moderate	Some suitable features
T129	Oak	High	<i>Formerly designated as T3.</i> Previously surveyed. Livestock in field prevented a closer inspection of the tree.		
T130	Oak	Known/Confirmed Roost	Emergence and return surveys in 2017 identified an active bat roost (Appendix F8).		

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Barrell Tree No.	Species	2017		2015	
		Bat Roost Potential	Comments	Bat Roost Potential	Comments
T131	Oak	Negligible	Formerly designated as TG1. No roosting features observed.		
T133	Oak	High	Previously surveyed with a emergence and a return survey (Appendix F8). Broken limb facing east.		
T142	Oak	Negligible	Small tree, no roosting features observed.		
T143	Oak	Low	Cracked branches		
G144	Oak	Low	Cracked branch offering potential access to interior.		
T145	Oak	Low	Cracked limb, hole with possible access to interior. Lowest branch approximately 4m up.		
T146	Oak	Low	Cracked split bark and lower limbs dead.		
T148	Oak	Low	Lifted bark present on tree limbs.		
T149	Oak	Negligible	Small holes present in trunk with cracked limbs. Too small for bats to enter. No other noticeable features to support roosting bats.		
T150	Oak	Negligible	Cracked limbs but no obvious sign of feature enabling access to interior.		
T151	Oak	Negligible	Healed pruning scars. No other features identified.	Low	Some well healed pruning scars

Sandleford Park, Newbury: Bat Roost Assessment of Trees & Bat Hibernation Survey



Barrell Tree No.	Species	2017		2015	
		Bat Roost Potential	Comments	Bat Roost Potential	Comments
T153	Oak	Moderate	Areas of rot/ bark disintegrated. Hole present.		
T154	Oak	High	Dead tree, multiple potential roosting features observed.	High	Numerous suitable features.
T155	Oak	Negligible	No roosting features observed.		
T158	Oak	Moderate	Large holes present		
T159	Oak	Moderate	Large holes present.		
T160	Oak	Moderate	Multiple large holes, allowing access into interior of tree. Branches are not substantial.		
T166	Oak	Negligible	No roosting features observed.		
T167	Oak	Low	Lifted bark on northern side. Climbing vegetation surrounds trunk. Thin limbs not climbable.		
G170	Ash	Negligible	3 trees, dense ivy cover on two southernmost trees. No roosting features observed.		
T172	Sycamore	Negligible	Has been felled. No roost potential.	Moderate	Some suitable features.
T173	Oak	Moderate	Rotten in places splits and holes in trunk. Rotten base. Small hole on west side of tree.	High	Numerous suitable features.
T174	Oak	Low	Broken branch tip, possible access into interior.		
G175	Oak	Negligible	Line of Semi-Mature trees. None more than 3m in height.		



3.3 Bat Hibernation Survey

Thirteen trees and two buildings are considered likely to be impacted by the current masterplan were inspected during the bat hibernation surveys completed in 2015 and 2018. Of these trees, the **mature Ash within G47** and **T160** were identified as having high suitability for roosting bats despite no bats being found during the climbed inspection. **T114** and **T159** are considered to offer moderate suitability to roosting bats despite no indication of active use during the climbed inspection. **T116**, **T153** and **T158** were assessed as having high or moderate suitability but were unable to be climbed due to safety reasons and the presence of a barn owl roost within **T158**.

The agricultural barn (**B1**) was assessed as having low suitability for roosting bats and contained no signs of bat use after being internally inspected. The prefab shed (**B2**) was assessed as having negligible suitability for roosting bats and did not support any external features which would be provide roosting opportunities for bats. Although it was not possible to gain entry into the building, the interior was inspected by looking through the windows, which revealed the building was in current use by the landowner and did not have any features suitable for roosting bats. The results of this survey are given in Table 4 below. The location of the trees and buildings are shown in Figure 3.





Table 4 Bat Hibernation Survey Results (Trees to be impacted by final masterplan)

				Results	
Tree Reference No.	Species	Potential Roost Features	Inspection	2018	2015
G47	Ash	No suitable features	Ground		Negligible suitability.
G47	Ash	Large cavities, loose bark and splits	Climbed	Large cavity with hollow base. No evidence, but high suitability.	High suitability , however no signs of bats found at the time.
G47	Ash	No suitable features	Ground		Negligible suitability.
T69	Birch	Three possible rot holes however not suitable as bat roost	Climbed	Three knot holes, no cavity. Negligible suitability.	Negligible suitability.
T116	Oak	Loose bark/cavities	Climbed	Dead tree, not climbable. High Suitability.	High potential for a bat roost, however no signs of bats found.
T77	Oak	No suitable features, previously assessed as moderate suitability	Climbed	Negligible suitability.	
T76	Oak	No suitable features, previously assessed as moderate suitability	Climbed	Negligible suitability.	
T78	Oak	Collapsed	Climbed	Negligible suitability.	
T114	Oak	Previous E/R surveys, possible emergence. Ivy covering trunk	Climbed	Large amounts of dead wood with splits but few cavities. Three tear-out wounds, one suitable cavity on top of limb at 5m. Moderate suitability , no evidence of bats.	
T153	Oak	Vegetation around base	Ground	Not climbable, mostly dead. Moderate Suitability.	

Sandleford Park, Newbury: Bat Roost Assessment of Trees & Bat Hibernation Survey



T160	Oak	Features possibly reachable with endoscope at ground level	Climbed	Large cavity on south face at 4.5m which was unsuitable to inspect. Tear out wound plus two holes at 3m north face but no cavity. Two frost cracks in trunk at 0.5-1.5m which leads to hollow interior. No evidence of bats, however high suitability .	
T159	Oak	Lower branches not substantial enough for climbing. Features possibly reachable with endoscope at ground level	Climbed	Three knot holes at 2m with one on the south face containing a cavity with no evidence of bats. Moderate suitability .	
T158	Oak	Some features possible to assess at ground level with endoscope	Ground	Barn owl roost identified. Large knot hole at 2m on north-east face. Moderate suitability.	
B1	n/a	Open sided agricultural storage building with timber frame and corrugated iron pitched roof and elevations. No elevations on southern side.	Internal		Building considered to offer low suitability to support roosting bats. No signs of bats found during survey.
B2	n/a	Prefab shed with a plastic liner recently installed beneath the roof with windows and a door. Contains tools which are stored on shelves and hung on the walls.	External		Building considered to offer low suitability for roosting bats. No evidence of bat activity or roost features were noted.



4.0 Relevant Planning Policy & Legislation

All British bat species are listed in Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended) and under Schedule 2 of the *Conservation of Habitats and Species Regulations 2017* as European protected species. Furthermore, the *Countryside and Rights of Way Act 2000* (Schedule 12, Paragraph 5) has amended Section 9 of the 1981 Act. They are, therefore, fully protected under Section 9 of the 1981 Act and under Regulation 41 of the *Conservation of Habitats and Species Regulations 2017* which transposes the Habitats Directive into UK law.

This makes it an offence to:

- Deliberately capture, injure or kill any bat;
- Deliberately disturb bats, in particular where it is likely to:
 - Impair their ability to breed or reproduce, or to rear or nurture their young;
 - Impair their ability to hibernate or migrate; or
 - Affect significantly the local distribution or abundance of bats.
- Intentionally or recklessly damage, destroy or obstruct the access to the place of shelter or protection; and
- Damage or destroy a bats breeding site or resting place.

The removal of trees within the site without prior surveys and pre-commencement checks may result in the direct destruction of bat roosts, whilst unmitigated removal of linear corridors such as sections of hedgerows and increases in habitat disturbance (through lighting, noise and vibration impacts) during construction and operational phases of a proposed development could indirectly impact bats that use the site to forage and commute. For example, lighting impacts could potentially sever a commuting route between a nursery roost and foraging ground such that it impairs bats' ability to rear young.

Such indirect and direct impacts could result in an offence being committed.



5.0 Interpretations and Recommendations

5.1 Potential Impacts on Roosting Bats

The masterplan has sought to retain mature trees and known bat roosts. Two trees (**T127** and **T130**) were identified as containing active roosts and are have been recommended for arboricultural works within the arboricultural assessment (Barrell Tree Care, 2018). However, this does not form part of the proposals. If works are required in the future, pre-commencement surveys are recommended to inform a license application to Natural England.

There are eight trees which are scheduled for felling/partial felling or pollarding which were assessed as having high or moderate suitability. This is further discussed in the emergence/return report (Appendix F8).

5.2 Potential Impacts Should Proposals Change

- If any further **moderate or high** suitability trees are to be impacted by the development, nocturnal bat emergence/return surveys will be required for these trees during the bat survey season (May to September). If roosts are confirmed then a Natural England development licence will need to be obtained.
- If other trees are to be impacted that have not been assessed for their potential to support roosting bats, further assessment will be required to determine their potential to support roosting bats.

5.3 Mitigation Prior to Felling

5.3.1 Update Assessment

Where trees identified as holding **moderate or high** potential for roosting bats are to be felled or subject to works, it is recommended that a pre-commencement emergence/return surveys are carried out between May and August. This applies to the following trees with high or moderate roosting potential which will be either as directly impacted part of the final development or, outside the proposals, may require arboricultural works:

- **T61, T109, T116, T153, T154, T173** and the **mature ash within G47**

Alternatively, if works are scheduled for September to April, then a pre-commencement climbed inspection to confirm the absence of bats would be recommended. If a bat is confirmed to be roosting, a Natural England European Protected Species Mitigation licence would be required to facilitate the works. Any felling, tree surgery or potential disturbance works should be undertaken between **late October and April inclusive** where possible, as these are the months during which bats (if present) are least likely to be occupying the trees. Reasonable avoidance measures are considered to be good practice.

5.3.2 Soft-felling

Wherever trees with any potential to support roosting bats (including low potential) require removal, we would recommend that, where possible, removal or pruning should be undertaken sympathetically using "soft-felling methodology". This is a generic term used to describe more cautious felling



approaches. Where possible, cross cutting in proximity to cavities or hollows should be avoided, and any sections felled containing cavities should be lowered carefully using rope and cushioning techniques to reduce the impact of felling limbs which may still have bats within cavities. The felled sections should be left on the ground (preferably for up to 48 hours) with the openings clear, allowing any remaining bats to escape. Split limbs that are under tension may need to be wedged open to prevent their closure when pressure is released, to avoid trapping bats.

5.4 Disturbance

T46, T67 and **T114** were identified as active roosts during tree assessment, emergence/return and activity surveys. These trees will be retained as part of the final development. To accommodate the A339 access road, trees which were identified as active bat roosts during emergence/return surveys (**T114, T121, T122, T123, T128, T130** and **G120**) may be subject to indirect disturbance from the works.

To reduce disturbance to roosting bats during works, trees with confirmed roosts will be protected during construction, and all construction works in proximity to woodland and hedgerows will cease 30 minutes prior to dusk.

The potential for the construction / operational impacts on commuting and foraging bats has been addressed within the scheme design and is discussed in detail in the bat activity report (Appendix F8).

Ecological consultation has been ongoing throughout the design stage so as to help avoid impacts to bats, and where this is not possible, to advise as to suitable mitigation measures.

5.5 Avoidance

The lighting across the development footprint has been sensitively designed with bats in mind, so that valuable foraging and commuting areas are retained and existing/new roost sites are not impacted by ambient light. No vegetated boundary including hedgerow, woodland or the central valley area will exceed 1 lux and hence it is unlikely to impact bats. Lighting mitigation comprising the installation of cowls, hoods or louvers into those lamps located close to hedgerows will help mitigate the effects of light spill into the surrounding environment (Appendix F20, Lighting Strategy).

5.6 Enhancement

Whilst enhancement is not a legal requirement, it is encouraged on site as it helps to meet the government objectives for planning to protect and enhance biodiversity, in accordance with the National Planning Policy Framework (NPPF).

A number of the measures outlined in the mitigation section, such as the planting of 'bat-friendly' plants (Appendix A) have the potential to enhance the site for bats.



5.6.1 Artificial roost provision

Additional measures to enhance the site for bats include the provision of artificial bat boxes in suitable habitat across the site.

Twenty bat boxes will be installed on mature trees within the site boundary. Trees within the existing woodland have been identified as the most suitable locations for bat boxes, as they are well connected to further areas of off-site habitat suitable for foraging and commuting bats. Bat boxes to be installed at the site will comprise a mixture of the following Schwegler bat boxes: Bat Box 2F, Bat Box 1FF and Bat Box 1FD, which are suitable for brown long-eared, noctule, common pipistrelle and soprano pipistrelle bats. Further details of specifications of bat boxes, bat tubes and their proposed location to be installed on site can be found in the ecological mitigation and management plan (Appendix F18).

Tree bat boxes will be installed at a height of 3 – 6 m, and will not be obstructed by branches or foliage that would restrict access to them by bats. Two or three bat boxes will be installed on each tree, facing differing directions around the tree trunk, so that if one box gets too hot or cold the bats can move to another. Boxes will be attached to the tree using an aluminium nail or tied in position using wire/leather.



6.0 References

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- Russ, J. (1999). The Bats of Britain and Ireland – Echolocation Calls, Sound Analysis and Species Identification, pp. 15-17. 81. Alana Books. Alana Ecology Ltd.
- WYG (2012a, updated 2016) Sandleford Park, Newbury, Bat Roost Assessment of Trees.
- WYG (2012b, updated 2016) Sandleford Park, Newbury, Bat Emergence / Return Survey of Trees.
- WYG (2014, updated 2016) Sandleford Park, Newbury: Update Extended Phase 1 Habitat Survey Report.
- WYG (2015) Sandleford Park, Newbury: Hibernation Assessment
- WYG (2018) Sandleford Park, Newbury: Lighting Strategy



FIGURES

Figure 1 – Site Location Plan

**Figure 2 – Barrell Arboriculture
Master Plan**

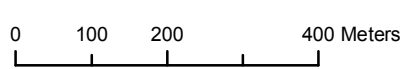
Figure 3 – Tree Roost Assessment



Rev	Date	Notes
A	09/03/18	Initial map production

Legend

 SiteBoundary



Site Plan - March 2018

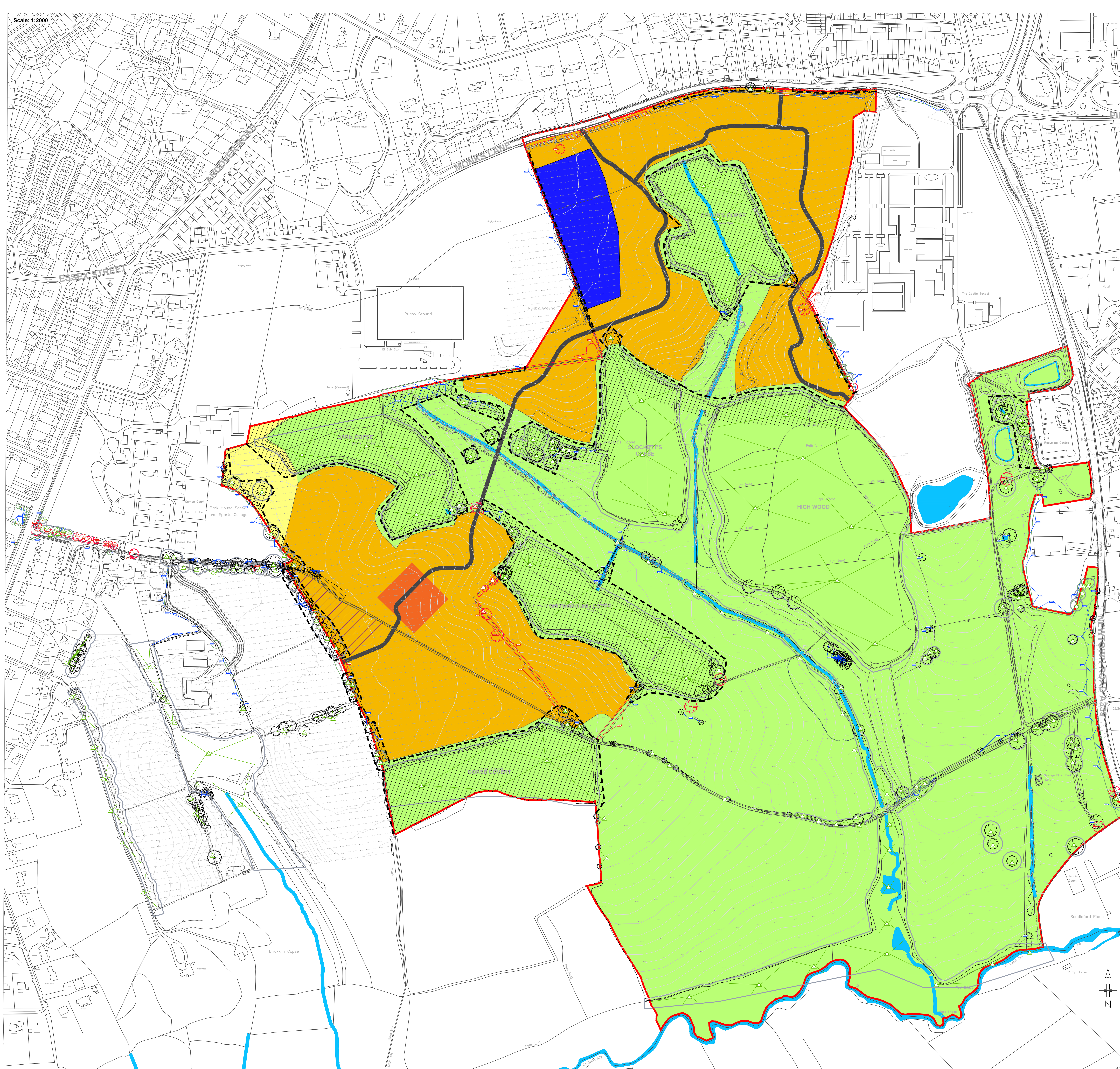
**Sandleford Park, Newbury
Bloor Homes & Sandleford Farm Partnership**

Scale at A3: 1:10,000	Project No: A070660-23	Drawing No: Figure 1	Revision: A
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Drawn by: Alex Hellyar	Drawn date: 09/03/2018	Approved by: Tamsin Clark
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Tree schedule

Tree No	Species	Category	RPA Radius	Tree Works	Tree No	Species	Category	RPA Radius	Tree Works
All retained trees & hedges					All retained trees & hedges				
Carry out safety check and lift over site to 3-4m as necessary.					Carry out safety check and lift over site to 3-4m as necessary.				
T1	Oak	B	10.8	Fell	T104	Oak	A	9.0	-
T2	Cherry	C	3.6	-	G105	Sycamore	C	3.0	-
T3	Oak	A	13.2	-	T106	Sycamore	C	3.6	-
T4	Oak	B	10.8	-	T107	Hawthorn	C	6.0	-
H5	Leyland cypress	C	3.6	-	G108	Thorn	C	3.6	Fell part
G6	Elm, sycamore, thorn	C	2.4	-	T109	Wild cherry	U	8.4	Fell for management
H7	Leyland cypress	C	4.2	-	G110	Ash, sycamore	B	4.8	Fell one tree
T8	Sycamore	C	6.0	-	T111	Oak	B	10.8	-
W9	Oak, ash, lime	B	9.6	-	W112	Oak, birch, sycamore	A	9.6	-
G10	Hawthorn	C	3.6	-	G113	Hawthorn	C	4.5	-
T11	Oak	C	5.4	-	T114	Oak	A	14.4	-
T12	Oak	A	12.0	-	H115	Thorn, oak, ash	C	1.8	Fell part
W13	Alder, oak, sycamore, beech, birch	A	5.4	-	T116	Oak	U	10.8	Fell for management
T14	Ash	B	9.6	-	G117	Thorn, ash, field maple	C	1.8	Fell part
G15	Alder, sycamore	C	4.8	-	T118	Oak	B	4.2	-
G16	Oak, ash	B	9.6	-	T119	Oak	B	4.2	-
G17	Ash, hazel	B	8.4	-	G120	Ash, hawthorn	B	15.0	-
T18	Ash	B	7.8	-	T121	Oak	A	10.8	-
T19	Ash	B	12.0	-	T122	Oak	A	12.0	-
T20	Oak	B	9.0	-	T123	Ash	A	12.0	-
T21	Oak	B	9.0	-	G124	Oak, ash	B	4.5	-
G22	Oak	B	4.8	-	T125	Oak	A	14.4	-
T23	Oak	B	9.0	-	T126	Oak	A	10.8	-
T24	Oak	B	7.2	-	T127	Oak	U	15.0	Fell or pollard to make safe
G25	Oak	B	9.0	-	T128	Oak	A	15.0	-
G26	Oak, ash	B	6.0	-	T129	Oak	C	10.8	-
T27	Oak	A	9.6	-	T130	Oak	C	12.0	-
T28	Oak	A	14.4	-	G131	Oak	B	6.0	-
T29	Oak	B	13.2	-	T132	Oak	B	4.8	-
G30	Ash, oak, holly	C	3.6	-	T133	Oak	A	15.0	-
T31	Oak	A	13.2	-	G134	Ash, hazel, thorn	C	4.5	-
G32	Oak	B	6.0	-	T135	Oak	A	9.6	-
T33	Oak	A	12.0	-	T136	Oak	B	8.4	-
T34	Oak	A	15.0	-	T137	Ash	B	6.6	-
T35	Ash	B	9.6	-	G138	Sycamore, horse chestnut	B	7.2	-
G36	Ash	C	3.0	-	G140	Sycamore, ash	C	3.0	-
G37	Oak, holly, sycamore, ash	C	3.0	-	G141	Mixed trees	C	1.2	-
G38	Ash	C	3.6	-	T142	Oak	B	7.8	-
G39	Oak	C	4.2	-	T143	Oak	A	15.0	-
T40	Oak	B	9.0	-	G144	Ash	B	6.0	-
G41	Oak, ash	C	7.2	-	T145	Oak	A	9.6	-
T42	Oak	B	7.2	-	T146	Oak	A	13.2	-
T43	Oak	B	8.4	-	G147	Birch, oak, ash	C	2.4	-
T44	Oak	B	15.0	-	T148	Oak	A	13.2	-
T45	Oak	B	15.0	-	T149	Oak	B	15.0	-
T46	Oak	A	13.2	-	T150	Oak	A	13.2	-
G47	Ash, thorn	C	6.0	Fell part	T151	Oak	U	10.8	Fell or pollard to make safe
T48	Oak	A	6.0	-	T152	Oak	A	12.0	-
T49	Oak	A	7.2	-	T153	Oak	C	15.0	-
T50	Oak	B	4.2	-	T154	Oak	U	12.0	Fell or pollard to make safe
G51	Ash, oak, thorn	B	4.8	-	T155	Oak	A	15.0	-
T52	Oak	B	8.4	-	T156	Alder	C	4.8	-
T53	Oak	B	9.0	-	W157	Alder	B	9.0	-
T54	Oak	B	9.9	-	T158	Oak	A	14.4	-
W55	Oak, sycamore, holly, ash	A	6.0	-	T159	Oak	B	15.0	-
T56	Oak	A	8.4	-	T160	Oak	A	14.4	-
T57	Oak	A	10.2	-	W161	Oak, alder, sycamore	A	6.6	-
T58	Larch	C	6.0	-	G162	Oak, sycamore	B	4.2	-
T59	Oak	A	10.8	-	T163	Oak	A	9.6	-
H60	Thorn, oak, beech	C	1.8	Fell	T164	Oak	B	7.2	-
T61	Beech	U	14.4	Fell for management	G165	Oak, sycamore, birch, thorn	C	2.4	-
W62	Oak, sycamore, ash	A	7.2	-	T166	Oak	A	9.0	-
T63	Sycamore	B	3.6	Fell	T167	Oak	B	6.6	-
T64	Oak	B	5.4	Fell	G168	Oak, birch, willow	B	3.0	-
T65	Oak	B	3.6	Fell	H169	Thorn	C	1.8	Fell part
G66	Oak	A	9.6	-	G170	Ash	C	4.5	-
T67	Oak	B	7.2	-	G171	Sycamore	C	2.4	-
G68	Hazel, thorn, goat willow, holly	C	3.9	-	T172	Sycamore	U	12.0	Fell or pollard to make safe
T69	Birch	B	7.2	Fell	T173	Ash	U	10.8	Fell or pollard to make safe
T70	Oak	B	5.4	-	T174	Oak	B	10.8	-
T71	Crack willow	B	6.0	-	G175	Oak	B	3.6	-
W72	Oak, ash, sycamore	A	8.4	-	G176	Oak, ash, sycamore	B	10.8	-
W73	Alder, willow, birch	C	3.6	-	G177	Oak, ash, various	B	9.0	-
T74	Oak	B	9.6	-	T178	Lime	B	8.4	Fell for access road
G75	Thorn, hazel, sycamore	C	3.6	-	T179	Lime	B	7.8	Fell for access road
T76	Oak	A	10.8	-	T180	Lime	C	7.2	Fell for access road
T77	Oak	A	10.8	-	H181	Red horse chestnut	C	2.4	-
T78	Oak	A	12.0	-	T182	Hawthorn, horse chestnut, ash	C	1.8	Fell for access road
T79	Oak	A	12.0	-	T183	Scots pine	C	4.8	Fell for access road
G80	Alder, oak, ash	B	8.1	-	T184	Scots pine	U	9.6	Fell for management
T81	Oak	A	10.8	-	T185	Lime	B	7.2	Fell for access road
G82	Holly	C	4.8	-	T186	Lime	B	7.2	Fell for access road
T83	Oak	A	9.0	-	T187	Lime	B	8.4	Fell for access road
T84	Oak	B	8.4	-	T188	Lime	B	6.6	Fell for access road
T85	Sycamore	B	9.0	-	T189	Lime	B	8.4	-
T86	Sweet chestnut	B	10.2	-	T190	Scots pine	B	7.8	-
T87	Oak	C	5.4	-	T191	Horse chestnut	U	4.8	Fell for management
T88	Holly	C	3.6	-	T192	Scots pine	C	4.8	-
G89	Holly, hawthorn	C	5.1	-	T193	Horse chestnut	B	6.0	-
W90	Oak, sycamore, birch	A	9.6	-	T194	Scots pine	B	4.8	-
T91	Oak	B	5.4	-	T195	Turkey oak	B	8.4	-
G92	Willow, thorn	C	3.0	-	T196	Scots pine	U	7.2	Fell for management
T93	Oak	C	6.0	-	T197	Lime	B	7.2	-
G94	Oak, birch	B	4.8	-	T198	Leyland cypress	B	6.0	-
G95	Ash, willow, thorn, birch	C	4.2	-	T199	Turkey oak	A	10.8	Fell for access road
G96	Willow, alder, oak	B	6.0	-	H200	Hawthorn, Turkey oak, beech, sycamore, yew, hazel, holly	C	1.8	Fell for access road
W97	Oak, birch, sycamore, ash	A	9.6	-	T201	Beech	B	5.4	-
G98	Alder	C	7.2	-	G202	Lawson cypress	C	7.2	-
T99	Oak	B	7.2	-	T203	Yew	C	7.2	-
T100	Oak	B	5.4	-	H204	Leyland cypress	C	1.2	-
T101	Hawthorn	C	5.1	-	H205	Leyland cypress	C	1.8	-
T102	Oak	B	8.4	-					
T103	Oak	B	6.0	-					
T104	Oak	A	9.0	-					

KEY - to be read in conjunction with plans PP03 and PP04

- Application Boundary for 'Application Three'

LAND USE

- Residential (Use Class C3)
- Local Centre Comprising of Flexible Mixed Uses (Use Classes A1 - A5, B1, D1 and C3)
- Potential Area for Residential (Use Class C3) or Extra Care Facility (Use Class C2)
- Proposed 2 Form Entry Primary School (Use Class D1)
- Area of land safeguarded for expansion of Park House School (To be no greater than 2 ha)

FOR CONTEXTUAL INFORMATION

- Proposed Main Access Road
- Existing Watercourses and Ponds
- Existing Attenuation Ponds
- Proposed Attenuation Ponds
- Green Infrastructure

BS category A Trees of high quality

BS category B Trees of moderate quality

BS category C Trees of low quality

BS category U Trees unsuitable for retention

Trees to be removed

Proposed layout

Estimated tree positions not included on original land survey and/or adjusted crown spreads

Construction exclusion zone (CEZ) to be protected by fencing and/or ground protection

Root protection area (RPA) boundaries for category A and B trees

Tree protection plan
Location of trees, categorisation & protection/management proposals at Sandelford Park Outline Masterplan, Newbury

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Barrell Plan Ref: 14261-BTT A

Provided Plan Refs:
730 SANDLEFORD PARK SEPTEMBER 09-SF1-REVA.dwg & 14.273-PP02 Rev K

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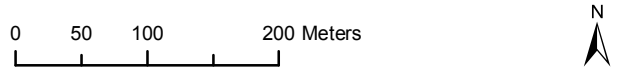
Rev	Date	Notes
A	09/03/18	Initial map production

Legend

Tree with bat potential

- High
- Moderate
- Low
- Negligible
- Confirmed Roost
- SiteBoundary

Basemap provided by Bloor Homes, drawing title
SOxxx-SL-301 (Merged Masterplan
Layouts 1-2000) - DL.jpg



Tree Roost Assessment Plan

**Sandleford Park, Newbury
Bloor Homes**

Scale at A3: 1:5,750	Project No: A070660-23	Drawing No: Figure 3	Revision: A
Drawn by: Alex Hellyar	Drawn date: 09/03/2018	Approved by: Tamsin Clark	

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Appendix A – Bat Friendly Plant Species



Gardening for bats

Aim at having flowers in bloom through the year, including both annuals and herbaceous perennials. Below are some suggestions, but this is by no means an exhaustive list. See what grows well in YOUR garden, and what seems most attractive to insects. Flowering times are approximate, varying in different areas. Regular dead-heading extends flowering period in many flowers. A=annual, HA=hardy annual, HHA=half-hardy annual, P=perennial, W=wild flower.

Flowers for borders			
St John's Wort	<i>Hypericum</i>	P	March-
marigolds	<i>Calendula</i>	H/A	March - Oct.
aubretia	<i>a. deltoidea</i>	P	March-June
honesty	<i>Lunaria rediva</i>	HB	March
forget-me-not	<i>Myosotis sp.</i>	A/P	March - May
elephant ears	<i>Bergenia</i>	P	April
Wallflowers	<i>Erysimum</i>	B	April - June
Cranesbills	<i>Geranium sp</i>	P	May - Sept.
Yarrow	<i>Achillea</i>	P	May -
Poppies	<i>Papaver sp.</i>	A	May - July
Dames violet	<i>Hesperis matronalis</i>	P	May - August
Red Valerian	<i>Centranthus ruber</i>	P	May - Sept.
Poached egg plant	<i>Limnanthes</i>	HA	June - Aug.
Knapweed	<i>Centaurea nigra</i>	P	June-Sept.
Phacelia		HA	June - Sept.
Ox-eye daisy	<i>Leucanthemum vulgare</i>	P	June - Aug.
Evening primrose	<i>Oenothera biennis</i>	B	June-Sept.
Candytuft	<i>Iberis umbellata</i>	HA	June - Sept.
Sweet William	<i>Dianthus barbatus</i>	B	June - July
Blanket flowers	<i>Gaillardia</i>	P	June -
Verbena	<i>V.bonariensis</i>	HHA	June - Oct.
Scabious	<i>knaulia arvensis</i>	P	July-Aug.
Night-scented stock	<i>matthiola bicornia</i>	HA	July-Aug
Pincushion flower	<i>Scabious sp.</i>	A/P	July - Sept.
Cherry pie	<i>helictrope</i>	HHA	July - Oct.
Mexican aster	<i>Cosmos sp.</i>	A/P	July - Oct.
Cone flower	<i>Rudbeckia sp.</i>	A/P	August-Nov.
Mallow	<i>lavatera sp.</i>	P	August-Oct.
Michaelmas daisy	<i>Aster sp.</i>	P	August-Sept.
Ice plant 'Pink lady'	<i>Sedum spectabile</i>	P	Sept.
Herbs - both leaves and flowers are fragrant			
Fennel	<i>Foeniculum vulgare</i>		July - Sept.
Bergamot	<i>Monarda didyma</i>		June - Sept
Sweet Cicely	<i>Myrrhis odorata</i>		April - June
Hyssop	<i>Hyssopus officianlis</i>		July - Sept
Feverfew	<i>Tanacetum parthenium</i>		June - Sept.
Borage	<i>Borago officinalis</i>		May - Sept.

Rosemary	<i>Rosemary officinalis</i>		March - May
Lemon balm	<i>Melissa officinalis</i>		
Coriander	<i>Copiantum sativum</i>		June - August
Lavenders	<i>Lavendula sp.</i>		
Marjoram	<i>Origanum sp</i>		
Trees, shrubs and climbers important to insects			
Oak	<i>Quercus sp.</i>		large gardens only
Silver birch	<i>Betula pendula</i>		
Common alder	<i>Alnus glutinosa</i>		Suitable for coppicing
Hazel	<i>Corylus avellana</i>		Suitable for coppicing
Elder	<i>Sambucus nigra</i>		Small
Pussy willow	<i>Salix caprea</i>		Suitable for coppicing
Hawthorn	<i>Crataegus monogyna</i>		Suitable for coppicing
Honeysuckle	<i>Lonicera sp.</i>		grow a variety for succession.
Dog rose	<i>Rosa canina</i>		Climber
Bramble	<i>Rubus fruticosus</i>		Climber
Ivy	<i>hedera helix</i>		Climber
Buddleia	<i>Buddleia davidii</i>		shrub
Gueider rose	<i>Vibernum opulus</i>		shrub
Gorse	<i>Ulex sp.</i>		shrub
Plants for pond edges and marshy areas			
Purple loosestrife	<i>Lythrum salicaria</i>	W	June - Aug.
Meadow sweet	<i>Filipendula ulmaria</i>	W	June - Sept.
Lady's smock	<i>Cardamine pratensis</i>	W	April - June
Water mint	<i>mentha aquatica</i>	W	July - Sept.
Angelica	<i>Angelica sylvestris</i>	W	July - Sept
Hemp agrimony	<i>Eupatorium cannabinum</i>	W	July - Sept.
Marsh marigold	<i>Caltha palustris</i>	W	March - May
Creeping Jenny	<i>Lysimachia nummularia</i>	W	May - August
Fringed water lily	<i>Nymphoides peltata</i>	W	June - Sept.
Water forget-me-not	<i>Myosotis scopioides</i>	W	June - Sept.

Allow part of your lawn to grow long in summer and cut in autumn, removing the clippings. Avoid using fertilizers. Compost heaps are good producers of insects too.

Add a seat to watch your garden come to life!