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WOODCROFT FARM, WECOCK

Bats: Detailed at height tree surveys
Grainger Plc

17/05/2013

Quality Management

Issue/revision	Issue 1	Revision 1	Revision 2	Revision 3
Remarks	Draft for comment	Final (project description updated)		
Date	November 2011	17/05/2013		
Prepared by	Species Ecological Consultancy and R Hall	YC and RH (WSPE)		
Signature				
Checked by	Rossa Donovan			
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Authorised by	Rossa Donovan			
Signature				
Project number	22941	22941		
Report number	001	002		
File reference	Woodcroft_Bat_ Re- port_Trees	Woodcroft_Bat_Trees_v2		

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Bats: Detailed at height tree surveys

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Executive Summary

WSP Environmental (WSPE) was instructed in October 2011 by Savills L&P Ltd on behalf of Grainger plc to undertake detailed at height inspections of trees identified as BCT Category 2a during the preliminary tree surveys at Woodcroft Farm, Waterloooville, Hampshire (central Ordnance Survey Grid Reference: SU 681 120), hereafter referred to as 'the Site'. It is proposed that the Site is developed for housing.

Species Ecological Consultancy, on behalf of WSPE, completed at height inspections of twenty three trees identified from the ground as having a high potential to support bats (BCT Category 2a) according to best practice guidelines (Bat Conservation Trust, 2007).

Of the twenty three trees considered to be of high potential examined, three trees were upgraded to confirmed roost status (BCT Category 1), twelve were confirmed as having high potential to support roosting bats (BCT Category 2a), seven were downgraded to Low-Moderate potential to support roosts (Category 2b) and one tree was downgraded to negligible value (BCT Category 3).

It is therefore considered that the Site overall is of high value for tree roosting opportunities for bats. This is due to the high number of oak trees on the Site of considerable age and size. The vast majority of features identified from the ground as having potential to be used by roosting bats were confirmed on climbing the trees for a closer inspection, with three trees confirmed as bat roosts, T26, T83 and G51c.

It is recommended that the confirmed roosts and all the trees identified as being of high potential for bat roosting are retained on the Site and buffered from any developmental impacts. These trees should in addition remain connected to the wider landscape wherever possible. Should works to Category 1 or 2a trees be unavoidable it is recommended these trees should be surveyed through bat emergence/re-entry survey to confirm presence/likely absence of roosts; and where roosts are present the species of bat and the numbers present.

1 Introduction

1.1 Project background

1.1.1 WSP Environmental Limited (WSPE) were instructed in October 2011 by Savills L&P Ltd, on behalf of Grainger plc, to undertake a detailed at height bat tree survey at Woodcroft Farm, Waterlooville, Hampshire (central Ordnance Survey Grid Reference: SU 681 120), hereafter referred to as 'the Site'. At height inspections were completed by Species Ecological Consultancy on behalf of WSPE.

1.1.2 The aims of the at height bat survey of trees were to:

- Further evaluate trees identified from the ground as having a high potential (BCT Category 2a) to support bats;
- Confirm the presence of bat roosts where possible;
- Establish whether additional surveys are required;
- Establish whether a European Protected Species (EPS) licence is required to ensure legal compliance;
- Recommend which type of mitigation measures would need to be employed.

1.2 Site description

1.2.1 Woodcroft Farm (hereafter known as the 'Site') is located in an agricultural landscape, adjacent to the residential area of Wecock in the Borough of Havant, Hampshire. Approximately 9.7 hectares in size it comprises six fields of close-grazed semi-improved grassland, separated by mature hedgerows; an occupied house and associated gardens; and an area of hard standing with a number of stable blocks and sheds. There is also a small area behind the sheds filled with old cars and other disused vehicles. A surfaced lane runs along the southern boundary of the Site, providing access to the buildings, whilst in the southern corner of the north western field there is a small sand riding arena. The Site boundary is shown on Figure 1.

1.2.2 The Site is accessible from Woodcroft Lane to the east, with a public bridleway running along the southern and western boundaries of the Site. The southern boundary of the Site runs parallel to the edge of the Wecock residential area whilst Lovedean residential area lies to the east. Immediately to the west lies an arable field, whilst to the north lie further horse pastures and James's Copse, which is an ancient semi-natural woodland.

1.3 Proposed work

1.3.1 The Site is allocated as a strategic site within Havant Borough Council's Core Strategy (HBC, 2011) for a 340 unit mixed use development. It is also listed within the Strategic Housing Land Availability Assessment (HBC, 2012) as an allocated strategic site for 320 dwellings. Grainger plc's proposals for the Site comprise development of 293 dwellings and include retention of the locally listed farmhouse, with the remaining outbuildings to be demolished. A replacement playing field for the school located immediately to the south will be created within the most easterly field; and a bridleway will be diverted, likely running adjacent to one of the existing hedges. Proposals include retention of the majority of the hedges and mature treelines. The proposals are hereafter referred to as the 'Proposed Development'.

2 Methods

2.1 Desk Study

- 2.1.1 Bat records were requested within 5km of the Site from Hampshire Biodiversity Information Centre (HBIC), in July 2011. HBIC confirmed they hold an up to date set of records from Hampshire Bat Group (updated April 2011), therefore Hampshire Bat Group were not contacted separately.
- 2.1.2 Please refer to Woodcroft Farm Bat Surveys (WSPE, 2012) for a summary of relevant legislation and policy information.

2.2 Detailed at height inspection of Category 2a trees

- 2.2.1 A climbing bat tree survey of trees identified from the ground as being of High or BCT Category 2a Status (by Keystone Environmental on behalf of WSPE) was undertaken by Species Ecological Consultancy on 10th and 12th October, 2011. This survey was completed by Dr Matthew Clarke (Natural England survey licence number 20112701) working in tandem with certified tree climbing arboriculturalists. Each Category 2a tree identified (Locations shown on Figure 1) was climbed and each feature considered to be potentially suitable to support bats checked visually, and if considered necessary, using an endoscope to examine the features more closely and to gain data on the size of the feature encountered. Features examined included knot holes, woodpecker holes, loose bark, cracks and splits and generally any cavities found within the trees. Evidence of bat presence such as oily staining, scratches and bat droppings were searched for.
- 2.2.2 Information on the features examined was recorded and is included in Table 1 and the trees were reassessed where considered necessary according to best practice guidelines (BCT, 2007); using the following categories.
- 1 – Confirmed roost
 - 2a – High roost potential
 - 2b – Moderate/Low roost potential
 - 3 – Negligible roost potential

2.3 Survey limitations

- 2.3.1 One tree, T62, was considered too dangerous to climb as all the lower branches were dead and there was no safe route to enter the tree.
- 2.3.2 Tree roosts are to some extent exposed to the elements and therefore droppings can be blown or washed away or breakdown more rapidly than they would within an enclosed stable environment such as a building. Equally it is often not possible to explore the full depth of many cracks and cavities due to their small size. Therefore, whilst climbing inspections can confirm presence and enhance understanding of suitability of features they cannot fully determine likely absence where suitable features are present.

3 Results

3.1 Desk Study

- 3.1.1 The ecological desk study (WSPE, 2011) highlighted records of a maximum of ten¹ bat species within 5km of the Site, (records dated within the last 10 years). These species are serotine *Eptesicus serotinus*, Bechstein's *Myotis bechsteinii*, whiskered/Brandt's/Alcathoe's *Myotis mystacinus/brandtii/alcathoe's*, Natterer's *Myotis nattererii*, noctule *Nyctalus noctula*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, and brown long-eared bat *Plecotus auritus*. These records are deemed sensitive and do not distinguish between roosts and individual sightings of bats (for example in flight), but do include records of larger numbers (>20) of bats for noctule, brown long eared, common pipistrelle and Bechstein's bats, which could be roost records. The desk study also considered previous ecological survey completed on this Site, Bioscan (2009) states common pipistrelle, soprano pipistrelle, *Myotis* spp. and serotine were recorded on the Site.

3.2 Detailed at height inspection of trees

- 3.2.1 Twenty three trees were highlighted on the Site as being BCT Category 2a, of high potential to support bats. All but one of these trees was climbed and inspected. One tree was considered too dangerous to climb. The results of the survey are presented in **Table 1** below.
- 3.2.2 Generally the trees on the Site were found to have a high level of features suitable for bat roosting. Of the twenty three trees considered to be of high potential which were examined, twelve were confirmed as being of high value for roosting bats and three trees were upgraded to confirmed roost status.
- 3.2.3 Of the three trees confirmed as bat roosts (BCT Category 1) two trees, numbers T26 and T83, contained pipistrelle-like bat droppings within tight splits within tree limbs. This type of feature is known to be favoured by bats due to their high level of protection from predators. A third tree, number G51c, was considered to have evidence of bat roosting being secreted from the base of a crack at the heart of the tree - an oily brown sticky substance with an ammonia smell.
- 3.2.4 Seven trees were found to have features that did not result in good cavity formation as appeared from the ground and these trees were downgraded to Low-Moderate value (BCT Category 2b).
- 3.2.5 The features of one tree were considered to have negligible value for bats when viewed up close and this tree was downgraded correspondingly to BCT Category 3.
- 3.2.6 Table 1 provides a description of each tree surveyed, along with details of any bat signs and potential roost features that were found and the resulting assessment of bat roost potential.
- 3.2.7 A revised tree plan of the Site is provided on Figure 1: Tree Location Plan and Results.

¹ Between eight and ten species may have been recorded. It is not possible to differentiate between whiskered, Brandt's and Alcathoe's bat using sonogram analysis; therefore, it is possible that records for whiskered/Brandt's bats (Alcathoe's bat was only found to be present in this country in 2011 but it is considered that it has been present all along) may be of for any one or more of these species.

Table 1 Detailed at height tree inspection results

Tree Number	Species	Features of Value to Bats	Surveyors Assessment of Tree Value for Bats	BCT Bat Tree Value Category and Description	
T12	Oak	Woodpecker hole in caught dead limb; dense ivy covers tree; bark shell with rotted wood gone leaving tube; hole goes upwards 30cm.	Moderate	2b	Moderate/Low
T16	Oak	Damage to top of limb that points SW – solid wood – no cavity; crack in top of limb – 7cm wide x 10cm deep – points upwards – 35cm long cavity that goes up and down the branch; knot hole points SW – does not go in far; gap at base of stags horn limb – goes 10cm downwards.	High	2a	High
T26	Oak	Hole points W on limb pointing S – 10cm deep; splits in upward pointing limb on W side – too small to allow access; stags horn limbs on N side; flaking bark at centre of tree; small hole to S – does not go in far; hole on lowest limb facing S – 30cm in depth but damp; splits in S-facing limb, faces W – bat droppings present in split area. Confirmed bat use.	Confirmed Roost	1	Confirmed Roost
T28	Oak	Minor split in limb on NE side; minor split in limb on S side, hollow at base; small woodpecker holes at centre of tree – do not go in far; upward pointing dead limb – crack too small. Cavity on S side, goes in 6cm; flaking bark in middle of tree but largely tight; 2cm wide crack in N-facing upward stags horn limb.	Moderate	2b	Moderate/Low
T31	Ash	Large cavity at base of former rotted limb on SW side; 3 knot holes on E-facing limb, 2 only go in 2cm, other 30cm deep, protected from rain by overhanging limb; rot hole cavity at centre on NE side, hollow at base; rot hole cavity on SE side; rot hole on limb facing N towards top of tree – does not go in far 2-3cm and points up; cavity on W side goes in 30cm.	High	2a	High
T41	Oak	Good split at centre of tree at the top, visible from SE side. Deep cavity into trunk – gap of 5-10cm; crack into split area – 15cm long; flaking bark along branch. Cavity in bark tube where remainder of branch lost.	High	2a	High

Tree Number	Species	Features of Value to Bats	Surveyors Assessment of Tree Value for Bats	BCT Bat Tree Value Category and Description	
T50	Oak	Very dense ivy; very large tree. Stags horn limb points E – cracks not big enough to allow access.	Low	2b	Moderate/Low
G51a	Oak	20cm split in limb – tight cavity; stags horn limb points SE – hollow limb, cavity at base points NW – hollow goes up and down. Broken off limb on NE side has a 20cm deep cavity.	High	2a	High
G51b	Oak	2 x Woodpecker holes – don't go in far – 10cm in only, not up or down. 3 x stags horn limbs which point up – one has 3-4cm split into hollow limb; hole 5m deep faces SW on central upward limb, hollow cavity at base of limb. Split at top - no cavity – filled with debris. Dead limb hollow – unsafe to climb and inspect further.	High	2a	High
G51c	Oak	Small, tight crack in trunk faces W – brown waxy staining at base; split limb points SW – gap into limb.	Confirmed Roost.	1	Confirmed Roost
T62	Oak	Tree climbers couldn't climb – all lower branches dead and unsafe to rely on to get into tree.	High	2a	High
T81	Oak	Woodpecker hole points N on NE facing limb – cavity extends up 4cm, down 15cm; thick ivy stems with gaps behind.	High	2a	High
T83	Oak	Wrenched off limb at centre, main torn hole points SW; hollow branch at centre of tree – 60cm long, hole goes in 10cm; split in W facing limb points S – cavity through whole branch and up limb – very suitable– bat droppings present.	Confirmed Roost	1	Confirmed Roost
T85	Oak	2 x woodpecker holes on W side – one 15cm wide, one 10cm – do not go in far; hole at base of wrenched off limb.	Low	2b	Moderate/Low
T88	Oak	Split faces S; splits at top in W leaning limb; small hole faces down; small die back limb with possible hole; wrenched and split limb at top – can see right through; gap on E limb; hole at end of broken limb points N on N side of tree; Woodpecker hole faces NE – good cavity, 50cm long.	High	2a	High
T95	Oak	Cracks into limb over road too minor to allow access; splits on stags horn	Negligible	3	Negligible

Tree Number	Species	Features of Value to Bats	Surveyors Assessment of Tree Value for Bats	BCT Bat Tree Value Category and Description	
		limb – minor; knot hole in central trunk points up – goes in 4cm; knot hole points SW on limb that points SE – does not go in.			
T98	Oak	Stags horn limb points NW – crack 45cm long x 7cm wide – gap goes right the way through. Fur found in cavity – animal has sheltered here; stags limb with crack points S – cavity of 15cm.	High	2a	High
T101	Oak	Hole at cut off limb of 15-20cm leads to opening pointing upwards – possibly too exposed; gap into loose bark on stags limb – does not go in far; hole facing up where branch snapped off does not go in far.	Low	2b	Moderate/Low
T107	Oak	Crack in limb points SW with splits in bark – not big enough to allow access; some damage to base of limb pointing SE 2/3 way up tree; dense ivy.	Low	2b	Moderate/Low
T108	Oak	Woodpecker hole points down on SW pointing limb – cavity is 15cm deep – dry; large area of damage to SE side of tree – several gaps into damaged wood with cavity behind.	High	2a	High
C	Oak	Split limb points S – hole into it above goes in 10cm; splits still solid wood; 30cm cavity along hollow limb that points NE; hole at base of splits – down 15cm on NW side but damp. Knot hole in 2 nd trunk – goes up 15cm.	High	2a	High
D	Oak	Knot hole points S, splits into upright stags limb with gap at base – does not go in far.	Low	2b	Moderate/Low
E	Oak	Split faces N, large limb on ground – cavity goes in 5cm; bark loose on dead limb pointing SW; gap into elbow of hanging bark; Hole pointing NE, 45 cm deep cavity.	High	2a	High

4 Evaluation and Recommendations

4.1 Evaluation

- 4.1.1 Of the twenty three trees considered to be of high potential to support roosting bats examined on the Site, three trees were upgraded to confirmed roost status, twelve were confirmed as having high potential for roosting bats (BCT Category 2a), and seven downgraded to low-moderate value (BCT Category 2b). One tree was downgraded to negligible value (BCT Category 3).
- 4.1.2 It is considered that the Site overall has a high number of tree roosting opportunities for bats. This is due to the high number of Oak trees on site of considerable age and size. The vast majority of features identified from the ground to have potential for bat roosting were confirmed on climbing the trees for a closer inspection, with three trees confirmed as bat roosts.
- 4.1.3 Nine bat species are recorded within 5km of the Site including records of tree roosting specialist species, noctule and Bechstein's bats, although many bats use tree roosts depending on the proximity of suitable foraging habitat and time of year. Noctule bats are considered uncommon and widespread whereas Bechstein's bats are considered restricted in distribution and very rare. As roosts of these tree dwelling bats are known from close to the Site and from further afield within the zone of influence, it is possible that these species may also roost on the Site, in addition to the roosts with pipistrelle type droppings that have been identified.

4.2 Recommendations

- 4.2.1 Should any works be proposed to tree numbers T26, T83 and G51c, a European Protected Species licence will be required from Natural England in order to proceed; as these trees are confirmed bat roosts.
- 4.2.2 Trees confirmed as bat roosts and those identified as having high potential to support bat roosts should be retained on the Site and be buffered from any developmental impacts.
- 4.2.3 In accordance with current guidance (BCT, 2007) tree surgery or felling, and disturbance (noise and/or lighting), of all category 2a trees should be avoided where possible. If this is not possible, dusk and dawn surveys should be undertaken to establish presence or likely absence of roosting bats. Should felling of any Category 2a trees be unavoidable it is recommended felled sections containing suitable roosting features are retained.
- 4.2.4 Confirmed bat roosts and trees with high potential to support roosts should remain connected to the wider landscape wherever possible in order to ensure that the trees remain as functional bat roosts. In addition new planting connecting isolated tree groups to existing hedgerows is recommended wherever possible.
- 4.2.5 Lighting of confirmed roosts and high potential trees, or the areas immediately adjacent should be avoided.
- 4.2.6 Tree surgery or felling, and disturbance to trees re-classified as category 2b trees should be avoided where possible. Where felling is unavoidable trees should be subject to 'soft felling' techniques; these comprise using lowering and cushioning techniques to reduce the impact of felling limbs which may still have bats within the cavities.
- 4.2.7 No constraints are placed upon the tree reclassified as category 3.

5 References

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- WSPE (2012) Woodcroft Farm, Wecock, Bat Surveys.

Figure 1 - Tree Location Plan and Results

Key

Site Boundary

Category 1 Tree (ID Displayed)

Category 2a Tree (ID Displayed)

Category 2b Tree (ID Displayed)

Category 3 Tree (ID Displayed)



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