



Cinderford Northern Quarter

Dormouse Nest Box Survey

2018 Survey Season

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1. Executive summary

- 1.1. Field survey's in June and September 2018 involved locating (June and September) and looking inside (September) 160 Dormouse wooden nest boxes installed as mitigation as part of European protected species licence 2014-501-EPS 9as amended) as well as 23 Schwegler woodcrete boxes installed around the bat roost building. Of the 160 timber nest boxes installed across the survey area 92.5% were found and considered to be in good condition as were all of the woodcrete boxes. No evidence was found to indicate any of the nest boxes had been used by Dormice. Use by other species was recorded with birds' nests recorded relatively frequently and a Soprano Pipistrelle bat recorded roosting inside 1 box.
- 1.2. Nest boxes in the main are considered to be within sub optimal habitats and locations with limited understorey, although Dormice are known to be present in the area (see appendix 3 example). Undoubtedly the nest boxes provide a useful nesting location resource for animals although use by Dormouse would be expected to be at very low density taking in consideration surrounding habitats, their extent and connectivity.
- 1.3. An external visual inspection in the spring followed by a more detailed inspection, as undertaken here, in the autumn may be appropriate strategy in future years and it is recommended that where possible, consideration be given to moving at least some boxes to lower locations, in more 'scrubby' areas, potentially creating these with the use of brush piles or corridors, to both encourage take up by Dormice and to make access for monitoring more easily achievable.

2. Introduction & Background

- 2.1. The Forest of Dean District Council is leading the regeneration of Cinderford and over the last 13 years has been working in partnership with Gloucestershire County Council, Gloucestershire College, the Forestry Commission and Homes England. To date, this partnership approach has enabled the formation of the Cinderford Regeneration Board, the completion of the Cinderford Northern Quarter Area Action Plan (CAAP), hybrid planning approval (P0663/14/OUT), Forest Renal Centre completion, Phase 1 spine road completion and the construction of the new education facility for Gloucestershire College.
- 2.2. The Cinderford Northern Quarter (CNQ) is set within a biodiverse area and development proposals have had to take account of a range of environmental factors. European Protected Species Licences have been issued in respect of bats, Great Crested Newts and Dormice.
- 2.3. Dormouse licence (2014-501-EPS (as amended)) set out a programme of mitigation works including the installation of 160 dormouse nest boxes in forestry commission woodland to the west of CNQ (Appendix 1 Location Plan).

- 2.4. Monitoring of the nest box is proscribed to be undertaken twice yearly in May & September for the first 5 years following installation This report covers the inspections over the 2018 survey season.
- 2.5. The lead surveyor has held a Dormouse licence in England and Wales for over 10 years, acted as named ecologist on a range of licenced projects and set up and taken part in several voluntary Dormouse Next Box Monitoring Programme rounds as well as development mitigation next box and nest tube surveys, habitat management and monitoring schemes for Hazel Dormouse in the Gloucestershire and South Wales regions.

3. Methodology

3.1. Survey objectives were twofold:

- i. To record the presence/absence of previously installed Dormouse nest boxes
- ii. To assess the use of the nest boxes by Dormice.

3.2. The nest box area was divided into five compartments (Appendix 2). At each compartment the lead surveyor assisted by ecologists Caroline Lidgett/ Natasha Wynne-Hughes searched the woodland locations for Dormouse nest boxes The surveys were undertaken during daylight hours in fair weather (dry, still, with varying temperatures typical of the time of year).

3.3. Nest boxes were externally visually inspected for signs of use and condition and then using ladder, where it was safe to do so, nest boxes were opened and inspected. Nest boxes were then closed and the box fixings checked. The following information was recorded:

Box found	Yes/No
Condition	Good / Repair / Replace
DM use	Details
Other	Any additional Information

4. Results

Survey records are provided in appendix 4 set out below is a summary of the findings.

Nest boxes located	148 timber 23 woodcrete
Nest boxes not located	12

Nest boxes damaged	3
Nest boxes that could not be opened / unsafe to access	12
Nest boxes containing birds nest / bees	53
Nest boxes containing unidentified nesting material	8
Nest box with bat present (Soprano Pipistrelle)	1
Nest boxes with evidence of Dormouse use	0

5. Conclusions & Recommendations

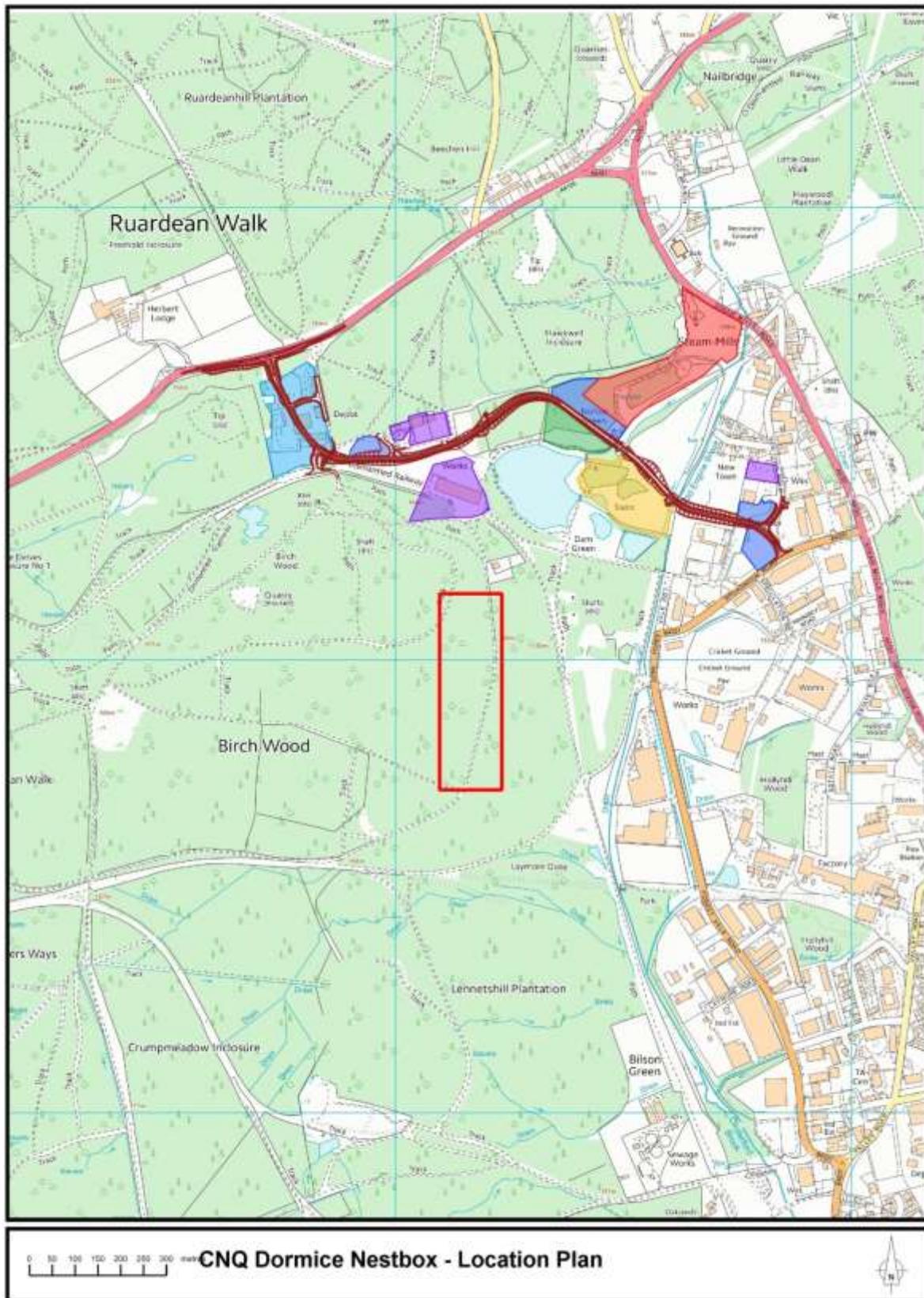
- 5.1. The objective of the survey is twofold firstly to consider if the nesting resource (nest boxes) are available to Dormice and secondly whether any are being used by Dormice.
- 5.2. 92.5% of timber nest boxes and 100% of woodcrete boxes were found and considered to be in good condition. This is considered to represent a good rate 'find' and retention' bearing in mind the woodland structure and open public access of the survey area. This is also a slight increase on the 90% found during 2017 surveys, possibly due to changes in vegetation as Wild Boar and deer foraging activity has opened up some areas of habitat.
- 5.3. No evidence of Dormouse use was found in relation to the nest boxes although 8 nest boxes did contain nesting material which was neither clearly bird nesting material nor Dormouse or other small mammals, none of these in the experience of the surveyor were typical of Dormouse and were more likely to have been left by birds and Wood or Yellow-necked Mouse.
- 5.4. 2017 was considered a particularly bad year for Dormouse populations generally across much of the country. Even sites with traditional good populations and optimal recorded in very low numbers on monthly box checks. 2018 seems to have been a year of some recovery although unpredictable weather is likely to be an ongoing factor affecting Dormouse breeding success and over winter survival.
- 5.5. 33% of boxes had been used by either nesting birds or bees, this is a significant take up and an increase by double the amount recorded in 2017. One of the timber boxes was in use as a roost by a single Soprano Pipistrelle bat.
- 5.6. The spring survey took place in June rather than May, this was comparable with the June survey in 2017 and is not considered to be a significant constraint, as any nesting materials left earlier in the year would still be present in June.

- 5.7. The height of the boxes made access more difficult and time consuming. The boxes are generally positioned on tall, sparsely branched trunks in relatively exposed locations as this is the general habitat type here, largely due to deer and Wild Boar. These conditions may favour the use by nesting birds and bees compared to small mammals, more than where boxes are lower down, in the 'scrub layer zone (there being little scrub here however). It is recommended relocating at least some boxes lower down and where possible in more scrub like conditions where these are available or could be created on woodland edges/ with brash piles etc.
- 5.8. Nest boxes in the main are considered to be within sub optimal habitats and locations with limited understorey (as this is the dominant habitat type here) although Dormice are known to be present in the area from pre-existing records and pre-development checks of the Cinderford Northern Quarter development (see appendix 3 example). Undoubtedly the nest boxes provide a useful nesting location resource for animals although use by Dormouse would be expected to be at very low density taking in consideration surrounding habitats, their extent and habitat connectivity.
- 5.9. An external visual inspection, including replacement and repair in the spring (March - June) followed by a more detailed inspection, as undertaken here, in the autumn could be a more appropriate strategy in future years achieving the objectives.
- 5.10. In relation to any following surveys it would be prudent to have in the region of 10% (16no) replacement boxes available to reduce those lost. During 2018 several boxes were renumbered and lids found and replaced.

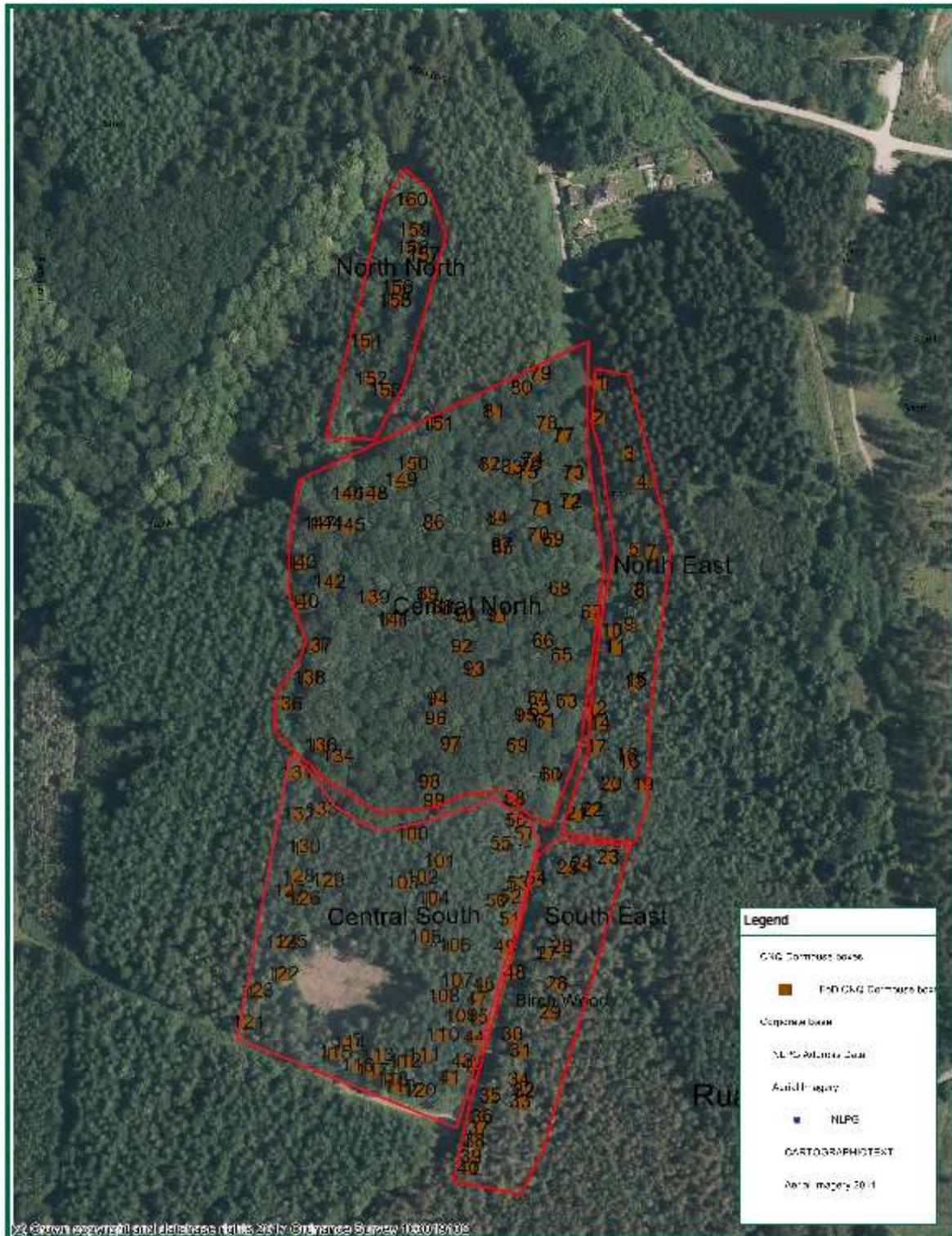
6. Limitations & Constraints

- 6.1. Locating the nest boxes was not straight forward and it is possible that some of the nest boxes recorded as not found, are in fact still in situ, they could just not be found at the time of the survey. This situation could be improved by marking nest boxes trees however this would draw attention to the trees and potentially increase the potential for disturbance and / vandalism., The survey shows overall a good nest box resource remains. There had been some significant wind damage preceding the September check with some hazards due to fallen and hanging branches and trees. As described above the height of the boxes was felt to be a constraint to the ease of safe access and increased the surveyor resource needed over lower boxes elsewhere.

Appendix 1 – Site Location



Appendix 2 – Nest Box Locations & Compartments

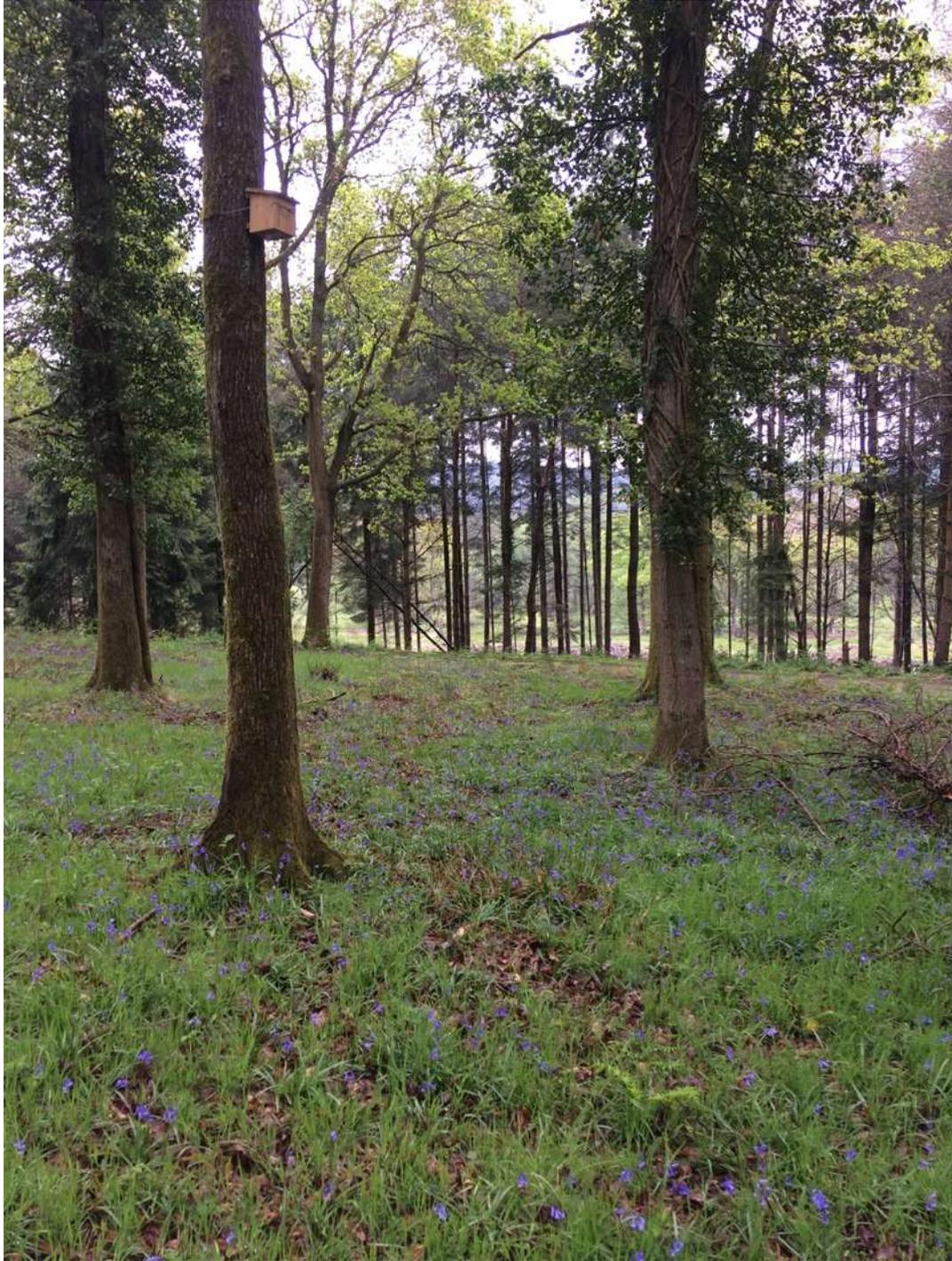


Scale: 1:2500
04 April 2017



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Appendix 3 – Typical nest box placements



Compartment – Central North

Appendix 4 – Survey Records

Box No.	Compart.	06/2018 Found	09/2018 Found	Condition	DM Evidence	Notes
58	CN	Yes	Yes			
59	CN	Yes	Yes			(second 100 renamed to 59)
60	CN	Yes	Yes			Moss, slugs
61	CN	Yes	Yes			Bird droppings
62	CN	Yes	Yes			Cobwebs
63	CN	No	Yes			Moss
64	CN	Yes	Yes			
65	CN	Yes	Yes			
66	CN	Yes	Yes			
67	CN	Yes	Yes			Insect muck, wire
68	CN	Yes	Yes			Insect muck, slugs
69	CN	Yes	Yes			Lid found and replaced
70	CN	No	No			
71	CN	Yes	Yes			Moss, earwigs
72	CN	No	No			
73	CN	Yes	Yes			Lid loose, crooked box
74	CN	No	No			
75	CN	Yes	Yes			
76	CN	No	Yes			Moss
77	CN	Yes	Yes			Bird's nest
78	CN	No	Yes			Not climbed, dangerous
79	CN	Yes	No			Wood pecker hole.
80	CN	Yes	Yes			Nesting material
81	CN	Yes	Yes			Lid found and replaced
82	CN	Yes	Yes			Nesting material
83	CN	Yes	Yes			Bird's nest
84	CN	Yes	Yes			Found 2 boxes labelled 84. Changed label on one to 84A -
85	CN	Yes	?			Not found could this be 84A??
86	CN	Yes	Yes			Bird's nest
87	CN	Yes	Yes			Bird's nest
88	CN	Yes	Yes			Bird's nest
89	CN	Yes	Yes			Box found but not sure if correct box. Box found labelled as 16. At location shown on
90	CN	No	No			

91	CN	No	No			
92	CN	Yes	Yes			
93	CN	Yes	Yes			Bird's nest
94	CN	Yes	Yes			Slugs, woodlice
95	CN	Yes	Yes			
96	CN	Yes	Yes			
97	CN	Yes	Yes			
98	CN	Yes	Yes			
99	CN	Yes	Yes			Bird's nest
134	CN	Yes	Yes			Lid stuck, box difficult to access
135	CN	Yes	Yes			Bird's nest
136	CN	Yes	Yes			
137	CN	Yes	Yes			Bird's nest
138	CN	No	No			
139	CN	Yes	Yes			Tree too thin to climb
140	CN	Yes	YES			Bird droppings
141	CN	No	YES			Very wet inside
142	CN	No	YES			Not climbed
143	CN	Yes	YES			Not climbed, dead tree
144	CN	Yes	YES			Bird's nest
145	CN	Yes	YES			
146	CN	Yes	YES			Bird's nest
147	CN	Yes	YES			Bird's nest
148	CN	Yes	YES			
149	CN	Yes	YES			
150	CN	Yes	YES			
151	CN	Yes	YES			Bird's nest
41	CS	Yes	Yes			V. high needs mirror, nest?
42	CS	Yes				
43	CS	Yes	Yes			Cobwebs
44	CS	Yes	Yes			Bird nesting material
45	CS	Yes	Yes			Debris
46	CS	Yes	Yes			Debris
47	CS	No	No			
49	CS	Yes	Yes			Moss
50	CS	Yes	Yes			Unsafe, dead, thin tree
51	CS	Yes	Yes			
52	CS	Yes	Yes			
53	CS	Yes	Yes			Lid stuck on
55	CS	Yes	Yes			Dean, unstable tree
56	CS	Yes	Yes			
57	CS	Yes	Yes			Very thin tree, not climbed
100	CS	Yes	Yes			Bird's nest
101	CS	Yes	Yes			Moss

102	CS	Yes	Yes			
103	CS	Yes	Yes			
104	CS	Yes	Yes			
105	CS	Yes	Yes			<i>Pipistrellus sp.</i>
106	CS	Yes	Yes			Bird droppings
107	CS	Yes	Yes			
108	CS	Yes	Yes			Bird droppings
109	CS	Yes	Yes			
110	CS	Yes	Yes			
111	CS	Yes	Yes			Moss
112	CS	No	Yes			
113	CS	Yes	Yes			Dead tree, dangerous, did not access
114	CS	Yes	Yes			
115	CS	No	Yes			Bird's nest
116	CS	Yes	Yes			
117	CS	Yes	No			CHECK: confusion on location
118	CS	Yes	Yes			
119	CS	Yes	Yes			
120	CS	Yes	Yes			
121	CS	Yes	Yes			
122	CS	Yes	Yes			
123	CS	Yes	Yes			
124	CS	Yes	Yes			
125	CS	Yes	Yes			
126	CS	Yes	Yes			
127	CS	Yes	Yes			
128	CS	Yes	Yes			
129	CS	Yes	Yes			
130	CS	Yes	Yes			
131	CS	Yes	Yes			Potential bee's nest
132	CS	Yes	Yes			Bird's nest
133	CS	Yes	Yes			Bird's nest
1	NE	No	No			
2	NE	Yes	Yes			Bird's nest
3	NE	Yes	Yes			Bird's nest
4	NE	Yes	Yes			Bird's nest
5	NE	Yes	Yes			Bird's nest & bees
6	NE	Yes	Yes			Bird's nest
7	NE	Yes	Yes			Bird's nest
8	NE	Yes	Yes			Bird's nest
9	NE	Yes	Yes			Bird's nest
10	NE	Yes	Yes			
11	NE	Yes	Yes			Lid stuck shut - bees?
12	NE	Yes	Yes			Bird's nest

13	NE	Yes	Yes			
14	NE	Yes	Yes			
15	NE	Yes	Yes			Bees
16	NE	Yes	Yes			
17	NE	Yes	Yes			Bird's nest
18	NE	Yes	Yes			Bird's nest
19	NE	Yes	Yes			Bird's nest
20	NE	Yes	Yes			
21	NE	No	Yes			Bees
22	NE	Yes	Yes			
152	NN	Yes	Yes			Bird's nest
153	NN	Yes	Yes			Box looked damaged but OK
154	NN	No	No			
155	NN	Yes	Yes			Bird droppings
156	NN	Yes	Yes			Bird droppings
157	NN	No	No			
158	NN	Yes	Yes			Bird's nest
159	NN	Yes	Yes			Bird droppings
160	NN	Yes	Yes			Bird droppings
23	SE	Yes	Yes			Lid Missing
24	SE	Yes	Yes			
25	SE	Yes	Yes			Bird's nest
26	SE	Yes	Yes			
27	SE	Yes	Yes			
28	SE	Yes	Yes			Bird's nest
29	SE	Yes	Yes			Bird's nest
30	SE	Yes	Yes			
31	SE	Yes	Yes			
32	SE	Yes	Yes			Thin tree, did not climb
33	SE	Yes	Yes			
34	SE	No	No			
35	SE	Yes	Yes			Bird's nest
36	SE	Yes	Yes			Lid stuck
37	SE	Yes	Yes			Bird's nest
38	SE	Yes	Yes			Very high no access to box
39	SE	Yes	Yes			Dead tree, dangerous, but did access
40	SE	Yes	Yes			Bird's nest
48	SE	Yes	Yes			
54	SE	Yes	Yes			Moss
W1	Schwegler		Yes			Bird's nest
W2	Schwegler		Yes			Bird droppings
W3	Schwegler		Yes			
W4	Schwegler		Yes			
W5	Schwegler		Yes			

W6	Schwegler		Yes			Bird's nest
W7	Schwegler		Yes			Bird's nest
W8	Schwegler		Yes			Bird's nest
W9	Schwegler		Yes			
W10	Schwegler		Yes			Bird's nest
W11	Schwegler		Yes			
W12	Schwegler		Yes			Bird's nest
W13	Schwegler		Yes			
W14	Schwegler		Yes			Bird's nest
W15	Schwegler		Yes			Bird's nest
W16	Schwegler		Yes			
W17	Schwegler		Yes			
W18	Schwegler		Yes			Bird's nest
W19	Schwegler		Yes			
W20	Schwegler		Yes			
W21	Schwegler		Yes			Bird's nest
W22	Schwegler		Yes			
W23	Schwegler		Yes			Bird's nest