

Dunsbury Park

2017 Dormouse Survey Results

Portsmouth City Council

February 2018

ATKINS



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This document has 18 pages including the cover.

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Non-Technical Summary

The 2017 update dormouse survey of the Dunsbury Park (hereafter referred to as the Wider Site) surveyed woodland strips bordering Plot 3 to the south, hedgerows along Park Lane Bridgeway, Hedgerow bordering Plot 6 and Hedgerows 2 and 3 bordering Plot 4 and 5. Dormice were recorded in Hedgerows 2 and 3 within the Wider Site confirming that dormice are still present at Dunsbury Park despite the proximity of construction works. Dormice disperse throughout suitable habitat and therefore dormice presence can be inferred in all suitable habitat connected to these areas.

A Natural England Development licence will be required for further works in suitable dormouse habitat such as severance of hedgerows that may be required for subsequent plot development or habitat creation and significant vegetation clearance of woodland or scrub habitat. Small Areas of vegetation where no dormice have been recorded may be cleared under a Precautionary Methods of Working under supervision of a suitably qualified ecologist. Mitigation will be implemented to maintain habitat connectivity across the Site and to enhance further habitat for dormice.

1. Introduction

1.1. Terms of Reference

Atkins Limited (Atkins) was commissioned by Portsmouth City Council to update Dormice surveys in suitable habitat at Dunsbury Park (hereafter referred to as the Site) in order to advise of ecological constraints and appropriate mitigation required in connection with the phased development of the site wide Business Park (hereafter referred to as the Scheme).

This report will be used to inform Ecological Impact Assessments for the phased developments of Plot 3, 4 and 5, all located within the Dunsbury Park Site. The Scheme is located near Havant in Hampshire, and the overall Site location is identified by the red line outline planning boundary on Figure 1 in Error! Reference source not found..

Typical habitat for dormice is hazel coppice or ancient semi-natural, species-rich, broad-leaved woodland. However, dormice are often found in other areas, including coniferous forest and species rich hedgerows¹.

The dormouse surveys at the Site have been undertaken with reference to current good practice² and form part of the technical information commissioned by Portsmouth City Council in connection with the Scheme.

This report is intended for advice in respect of project design, site layout and/ or site investigation to be read in conjunction with the Ecological Impact Assessments submitted for reserved matters planning applications at Plot 3, 4 and 5.

1.2. Legislative Background - Dormice

Dormice are legally protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended), which implements the EC Directive 92/43/EEC in the UK. Dormice are a European Protected Species (EPS) due to their declining numbers and distributional range. A development licence from Natural England with regards to dormice is required for any work that would otherwise be in contravention of the EU Directive. A licence can only be issued to permit otherwise prohibited acts if Natural England is satisfied that the following three tests have been met:

- a) *The work needs to be carried out to preserve public health or public safety or other imperative reasons of over-riding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.*
- b) *there is no satisfactory alternative;*
- c) *the action proposed will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.*

The conservation status of a species will be taken as “favourable” when:

- a) *The population dynamics of the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and*
- b) *the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and*
- c) *there is, and probably will be, a sufficiently large habitat to maintain its population on a long-term basis.*

The Natural Environment and Rural Communities Act 2006 requires public authorities to have regard to the purpose of conserving biodiversity in relation to habitats and species listed as being of principal importance

¹ Bright et al, 2006.....

² Chartered Institute of Ecology and Environmental Management (2013) *Guidelines for Preliminary Ecological Appraisal*.

for the conservation of biodiversity. The dormouse is included in this list and is a priority species in the UK and Hampshire Biodiversity Action Plans (BAPs).

1.3. The Scheme

The Dunsbury Park Site, for which outline planning permission has been granted, occupies approximately 20.2 ha of land (See Figure 1 in **Appendix A**) and will be developed in separate phases over a number of years to provide the following:

- industrial warehouses;
- a hotel;
- conference centre;
- a new junction to connect the Site to the A3 (M) via Hulbert Road;
- a bus gate to connect the site to Leigh Park through a bus-only access point;
- a link road which is now operational to define a primary circulation route through the development site and a dedicated transport link to maintain and improve circulation to and around the Site.

Plot 2, a 'Fat Face' warehouse distribution unit is already operational and the adjacent Plot 3 is pending reserved matters planning permission. Plots 4 and 5 to the north of the link road are undergoing pre-construction site preparation with cut and fill operations to level the plots ready for development. All plots were previously arable farm land or horse grazed pasture.

1.4. The Survey Area

The survey areas for the 2017 update surveys comprised:

- Area A: Broad leaved woodland to the east and south of Plot 3,
- Area B: Predominantly blackthorn and bramble hedgerow bordering the north of Plot 6 on the east of Park Lane bridleway
- Area C: Species rich hedgerow with mature trees on the east of Park Lane Bridleway
- Area D: Species rich hedgerow with mature oaks between Plot 5 and the Habitat Creation Area. Hedgerow referred to as Hedgerow 2 and joins Park Lane bridleway and Beechwood East.
- Area E: Species rich hedgerow with mature oak and willow between Plots 4 and 5 and Plots 5A and 5B. This hedge has canopy connection with Hedgerow 2.

The survey areas locations are shown on Figure 1 in Appendix A.

1.5. Previous Surveys and Natural England licences

1.5.1. 2010 – 2011: Environmental Statement

Dormouse presence or likely absence surveys for the Environment Statement³ for the link road and outline planning for the business park were undertaken within suitable habitat across the Site in 2010 and 2011. The areas surveyed were Cherry Tree Row woodland strips, Beech Wood East, Neville's Park and hedgerows across the site and Park Lane. This survey recorded dormice presence in all areas except Neville's Park woodland to the south west of the Site. These results are shown in Figure 2, submitted as Figure 15E as part of the Environmental Statement and included in **Appendix B**.

³ Atkins (2012) Dunsbury Hill Environmental Statement Volume 1.

1.5.2. Link Road Dormouse Mitigation Licence (2014 – 456-EPS-MIT)

Vegetation Clearance for the development of the link road were undertaken following a Natural England Mitigation Licence (2014 – 456-EPS-MIT). During works overseen by an ecologist an occupied summer dormice nest found during clearance of scrub adjoining Beech Wood East was re-located to a dormouse box within the woodland. This licence is valid until 31st October 2020 with monitoring surveys in Neville's Park Woodland, Cherry Tree Row woodland and Beechwood East being carried out in May and September each year. Dormouse presence has continued to be recorded in Beechwood East.

1.5.3. 2015 – 2016 Plot 2 Development

Update dormouse surveys of Cherry Tree Row and woodland surrounding Plot 2 (Fat face) were carried out in 2015. No dormice were found within the survey tubes but four summer nests were recorded in woodland edge habitat and scrub on the western side of Plot 2 confirming the presence of dormice.

1.5.4. Plot 2 Dormouse Mitigation Licence (2016-21182-EPS-MIT)

Vegetation clearance of woodland edges for the development of Plot 2 was carried out under licence Number 2016-21182-EPS-MIT valid from 11th March 2016 to 1st January 2019. Further nest boxes were installed in Cherry Tree Row woodland and adjacent to the Hermitage Stream which are monitored in May and September each year. No dormice have been recorded during the monitoring surveys. Many of the boxes have been tampered with by members of the public or overgrown and not found.

2. Methodology

2.1. Desk Study

No additional desk study data was considered necessary due to the level of dormice survey and monitoring effort across the Site since 2010. Dormice have previously been recorded within Cherry Tree Row woodland at the south of the Wider Site, Beechwood East bordering the east of the Wider Site and within hedgerows surrounding Plot 4 and hedgerows bordering Park Lane. Surveys for the Plot 2 development in 2015 recorded four summer nests in woodland edge scrub vegetation confirming presence of dormice within woodland surrounding Plot 2 (Fat Face).

2.2. Field Survey

In order to obtain updated information on the presence of dormice in the Site, 50 tubes were installed in March 2017 within hedgerows and woodland strips across the remainder of the Site to be developed. An additional four tubes were installed in June on the other side of Hedgerow 3 to increase coverage of the wide hedgerow. The survey areas are shown on Figure 1 in **Appendix A** of this report.

All dormouse surveys were led by a licensed dormouse handler (Richard Law) and were assisted by an ecologist (Charlotte Phillips).

The survey was carried out in accordance with the nest tube survey methodology as set out in 'The Dormouse Conservation Handbook'⁴. The 50 tubes were left out all season from March to October and checked in June, July, September and October. The additional four tubes (on the other side of Hedgerow 3) were installed in June and checked in September and October 2017. Using the index of probability of finding dormice present in nest tubes in any one month described in The Dormouse Conservation Handbook, the survey effort was calculated and resulted in a score of 23 which achieves an adequate survey effort score.

2.3. Limitations

Factors such as potential tampering with the nest tubes by members of the public (the area is well use by walkers and there are some homeless squats within the woodland) or animals could affect the results of the dormouse surveys. The nest tubes were therefore positioned and hidden as well as possible away from public footpaths and out of reach of any grazing animals. However, a small number of the nest tubes were not found during a number of the surveys (up to 10%) due to either dense vegetation growth of bracken and

⁴ Bright et al, (2006) The Dormouse Conservation Handbook, 2nd Edition, Natural England.

brambles and/ or removal by members of the public. This was not considered to be a significant limitation to the adequate survey effort.

3. Results

The continued presence of dormice was confirmed in Survey Area D (Hedgerow 2) which is situated at the north of Dunsbury Park between Plot 4 and the Habitat Creation Area, and survey Area E (Hedgerow 3) between Plot 4 and 5 during the September and October 2017 nest tube checks. Full results are included in **Appendix B**, and summarised in Table 1 below.

Survey Area A:

No dormice or evidence of dormice were recorded towards the south of the Site in woodland strips bordering Plot 3. However, dormice were previously recorded here in the 2010/ 2011 survey and the area is connected to the Cherry Tree Row woodland and bramble scrub where evidence of dormice was recorded during surveys for the Plot 2 development in 2015. An access track for construction purposes was cut across the woodland strip at the south of Plot 3 and the Cherry Tree Row woodland strip to the west of Plot 3 under licence. This did create fragmentation of the habitat but this work has now been completed and once planting has re-established the habitat will be better connected enabling dormice dispersal.

Survey Area B and C

No dormice were recorded in the Survey Area B (Hedgerow north of Plot 6) or Survey Area C (Park Lane eastern Hedge), however, these areas are connected to the Hedgerows 2 and 3, where dormice were recorded, via canopy linkages in places and any gaps including the Park Lane bridleway itself are less than 10 m, which dormice are known to be able to cross. Therefore, likely presence of dormice within these hedgerows across the Site can be inferred.

Survey Area D and E

Dormice were recorded in Survey areas D (Hedgerow 2) and E (Hedgerow 3) during September and October Surveys. In September, a total of six tubes had a dormouse nest or start of a nest present. Two nests were within tubes in Hedgerow 2 (one of which was occupied) and four nests, of which one was occupied, were within Hedgerow 3. Dormice were not disturbed to take biometric data for the purpose of a presence/ absence survey. During the final survey in October, five dormice nests were recorded, two in Hedgerow 2 (of which one was occupied) and three in Hedgerow 3 (of which two were occupied). One nest tube was found to have green leaves inside which could be the start of a dormouse nest. Again, no biometric data was taken for the purposes of a presence/ absence survey.

The two tubes with nests within Hedgerow 2 were situated on hawthorn plants. The other four tubes with nests within in Hedgerow 3 were found on willow, young oak, field maple or hawthorn. Both Hedgerow 2 and 3 offer excellent habitat for dormice with standard oak and willow trees, and a diverse species mix of willow, hawthorn, rose, bramble and blackthorn which offer food resource across the seasons.

Table 1. Summary of 2017 Dormouse Results

	May	June	September	October
No of tubes found and surveyed out of 50 in May and June and out of 54 in Sep and Oct.	37	40	49	53
Number of tubes with signs of dormice (green leaves/ unoccupied nests)	None	None	4	3
No of tubes with occupied dormouse nests	None	None	2	3
Total Tubes with evidence of dormice	None	None	6	6

4. Discussion and Recommendations

The 2017 survey results at Dunsbury Park show that dormice are still present within Hedgerows 2 and 3 within the Site despite the level of development in close proximity to these hedgerows.

Hedgerow 3 has not been affected by the development but existing farm entrances in Hedgerow 2 have been used to move spoil between plots and have been slightly widened to approximately 10 m wide.

The following measures are recommended:

- The hedgerows will be protected by heras fencing leaving a minimum buffer of 3 m of grassland either side, to be factored into the design of the Plots. This has already been implemented to protect hedgerows during pre-construction site preparation works.
- The buffer areas to protect the hedgerows also leave room for any long-term maintenance required. Maintenance of hedgerows will be carried out as per guidance in the Dormouse Conservation Handbook⁵.
- A Natural England Mitigation Licence is required for any removal of suitable dormouse habitat or severance of woodlands or hedgerows within the Site. Very small areas of vegetation removal where dormice have not been found or of less suitable habitat will be carried out under a Precautionary Method of Working as advised and overseen by a suitably qualified ecologist.
- Once spoil movement has been completed in 2018 from the development plots to the Habitat Creation area the farm entrances in Hedgerow 2 will be closed by planting new native hedgerow species including species beneficial to dormice such as hazel and honeysuckle. Planting will include some root-balled plants to establish cover sooner. Priority will be given to closing the most westerly gap so that dormice in Hedgerow 3 are not isolated and can continue to disperse to Beechwood East.
- Currently plans for the development, which has received outline planning permission, will include a minor road cutting through Hedgerow 3. This is for staff and visitor cars to Plot 5 only rather than delivery lorries and will be kept to a minimum width. Mitigation stated within the Environmental Statement to include a temporary dormouse bridge and planting of mature trees to provide canopy cover must be implemented to retain connectivity for dormice to adjacent habitat.
- Further options for mitigation to reduce fragmentation of dormouse habitat are to plant hedging between Hedgerow 3 and Beechwood East between plot 5a and 5b (as currently drawn), to be discussed and agreed with the client.
- Continued monitoring of the dormouse population until at least 2020 under the link road dormouse mitigation licence and any subsequent licences that are issued for subsequent Plot development.

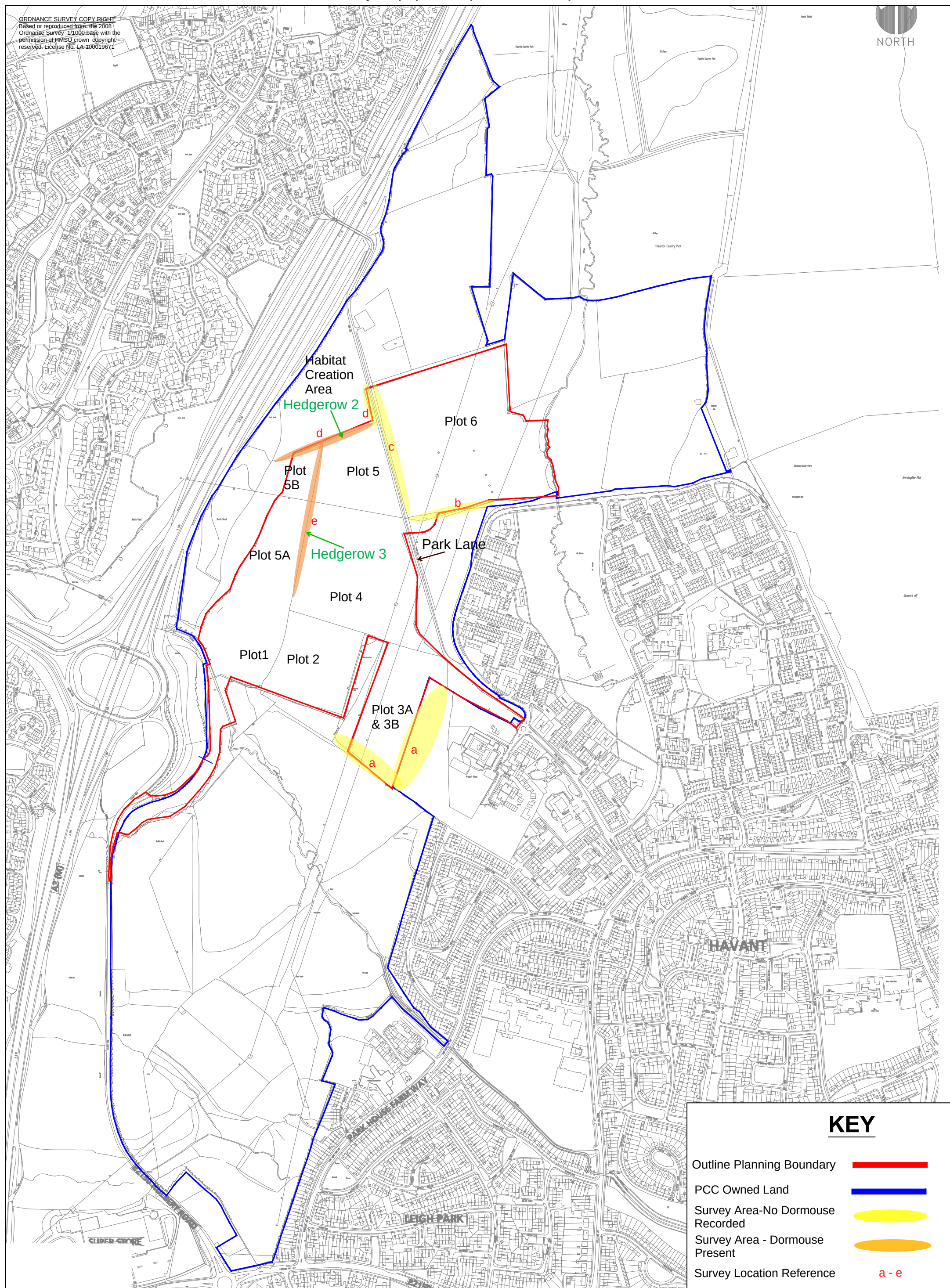
⁵ Bright et al, (2006) *The Dormouse Conservation Handbook 2nd Edition*, English Nature (Now Natural England)

Appendices



Appendix A. Site Map and Survey Locations

A.1. Figure 1: Site Plan Showing 2017 Survey Areas



All dimensions to be checked on site prior to commencement of any work

*** DO NOT SCALE FROM THIS
DRAWING***

Notify C.A. of any discrepancies before ordering materials.

Rev	Date	Revision Details (Amended by:)

	Drawing No				Revision No.
					-
	SURVEY	DESIGN	WORKING DRAWING	*	
	FEASIBILITY	TENDER	RECORD DRAWING		
Approved by	INFORMATION	CONTRACT	A. L		

Drawing Title	
Date 11/12/13	Scale NTS

Project Dunsbury Hill Farm
The Planning Application
Site Boundary
Figure 1.2

Design/Survey by	Drawn by EB	Checked by
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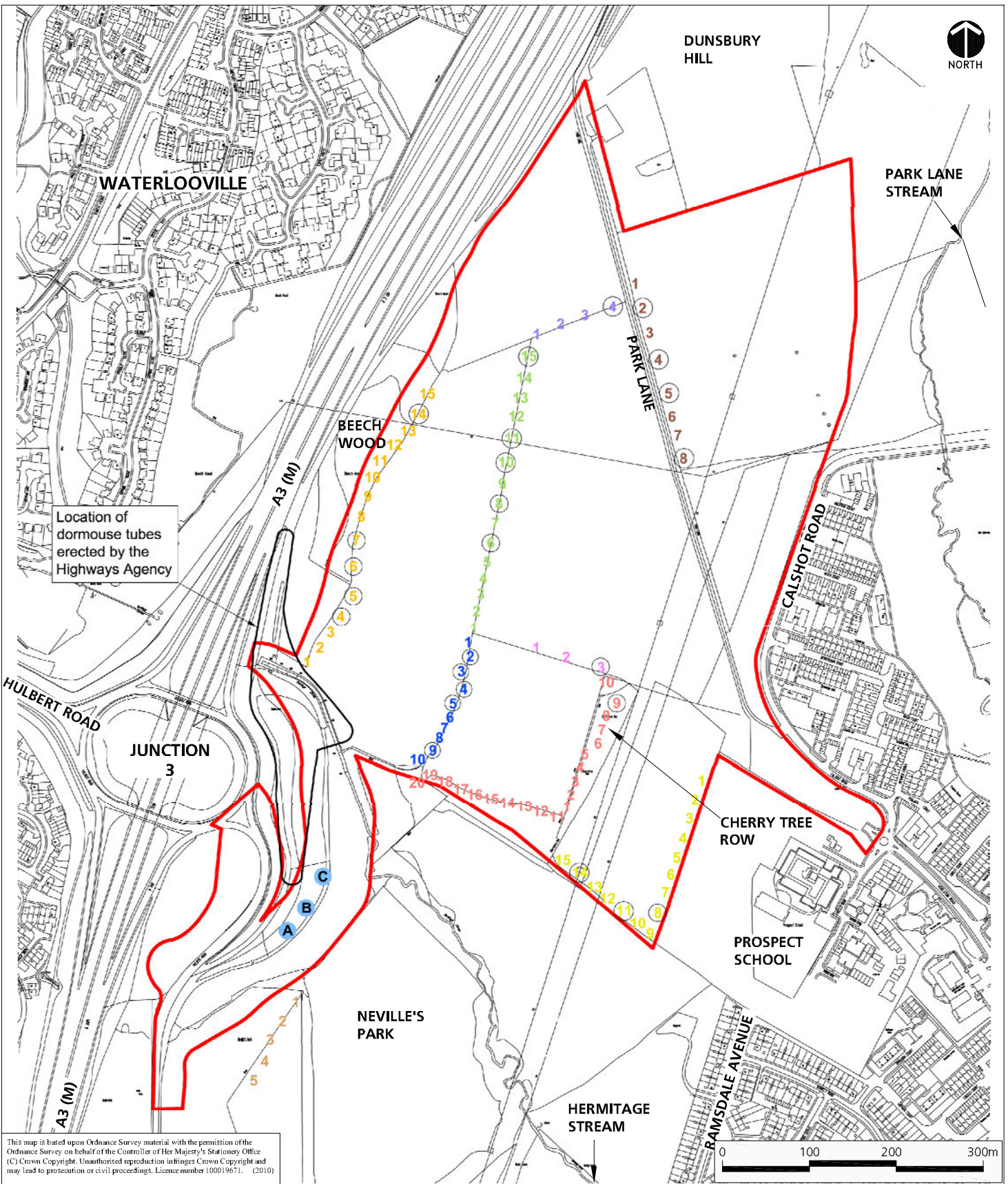
TRANSPORT AND ENVIRONMENT SERVICE

HEAD OF TRANSPORT AND ENVIRONMENT
SIMON MOON BTch MBA MIHT

Tel No: 023 9283 4955
Fax No: 023 9283 4866

A.2. Figure 2: Previous Dormouse Survey Results - 2010 and 2011

D:\GEOGRAPHICAL\PROJECTS\15099849 - Dunsbury Hill (Stage 2) - MAL\947\704 Technical\A3\00\waterplan\out\FIG 15E.1 DORMICE SURVEY LOCATION (5.12.11).dwg
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- KEY**
- PLANNING APPLICATION BOUNDARY
 - 1 PARK LANE LONG HEDGE (H1)
 - 1 PARK LANE SHORT HEDGE (H2)
 - 1 LONG HEDGE (H3)
 - 1 ADDER HEDGE (H4)
 - 1 BEECH WOOD EAST
 - 1 CHERRY TREE ROW 1
 - 1 CHERRY TREE ROW 2
 - 1 CHERRY TREE ROW 3
 - A BOUNDARY FENCE (Highways Agency)
 - 1 LOCATION WHERE DORMICE AND/OR NESTS WERE FOUND IN TUBES

Please note:
This plan uses an earlier version of the planning application boundary. Please see correct planning application boundary on Figure 1.2 of the ES.

**Dunsbury Hill Farm
Dormice Survey Location
Figure 15E.1**

Not to Scale
December 2011

Appendix B.

B.1. Dormouse Survey Results

Survey Area and Tube reference	National Grid Reference (SU)	Tree Species	Survey 1 June 14th 2017	Survey 2 July 10 th 2017	Survey 3 Sept 21st 2017	Survey 4 Oct 30 th 2017
Area A: Woodland Bordering south and east of Plot 3. – Installed 17 th March 2017						
A1	470185 108976	Field Maple	Empty	Empty	Empty	Empty
A2	470175 108959	Sycamore	Empty	Empty	Empty	Empty
A3	470159 108934	Semi Mature P. Oak	Empty	Empty	Empty	Empty
A4	470151 108914	Blackthorn	Empty	Empty	Empty	Empty
A5	470146 108893	Semi Mature Sycamore	Insert on Ground – Replaced	Empty	Insert on ground – replaced	Empty
A6	470139 108871	Sycamore	Empty	Empty	Empty	Empty
A7	470123 108839	Sycamore	Empty	Empty	Empty	Empty
A8	470114 108818	Field Maple	Empty	Empty	Empty	Empty
A9	470110 108805	Field Maple	Empty	Empty	Empty	Empty
A10	470103 108781	Field Maple	Empty	Empty	Empty	Empty
A11	470087 108790	Field Maple	Insert on Ground – Replaced	Empty	Empty	Empty
A12	470069 108807	Bramble	Empty	Empty	Empty	Empty

A13	470051 108824	Blackthorn	Empty	Empty	Empty	Empty
A14	470044 108837	Blackthorn	Empty	Empty	Empty	Wood mouse Nest
A15	470023 108857	Goat Willow	Empty	Empty	Not Found	Empty
Area B: Plot 6 Northern Hedge – Phase 2.						
B1	470134 109309	Bramble	Empty	Missing -New Tube Installed	Empty	Empty
B2	470159 109315	Blackthorn	Empty	Empty	Empty	Empty
B3	470184 109322	Blackthorn	Empty	Empty	Empty	Empty
B4	470211 109324	Bramble	Empty	Empty	Empty	Empty
B5	470240 109331	Blackthorn	Empty	Empty	Empty	Empty
Area C: Park Lane Eastern Hedge – Installed 17 th March 2017						
C1	470124 109333	Hazel	Empty	Empty	Empty	Empty
C2	470110 109375	Bramble	Not Found	Missing New Tube Installed in Bramble	Empty	Empty
C3	470102 109418	Bramble	Not Found	New tube installed in Oak	Empty	Empty
C4	470094 109454	Willow	Insert on Ground – Replaced.	Empty	Empty	Empty
C5	470090 109460	Bramble	Not Found	New Tube Installed in Willow	Empty	Empty
C6	470081 109487	Hawthorn	Empty	Empty	Empty	Empty

C7	470075 109508	Bramble	Not Found - Overgrown	New Tube in Bramble	Empty	Empty
C8	470073 109528	Bramble	Empty	Empty	Empty	Wood-mouse Cache
C9	470067 109548	Hawthorn	Insert on Ground - Replaced	Not Found	Empty	Empty
C10	470066 109561	Rose	Not Found	New Tube Installed in Rose	Empty	Empty
Area D: Hedgerow 2 – between Plot 5 and Habitat Creation Area- extending – (starts on corner adjoining west side of Park Lane) Installed 17th March 2017						
D1	470050 109559	Blackthorn	Empty	Empty	Empty	Empty
D2	470055 109535	Buckthorn	Empty	Empty	Empty	Empty
D3	470060 109507	Hawthorn	Empty	Empty	Empty	Empty
D4	470027 109492	Hawthorn	Empty	Empty	Empty	Dormouse nest unoccupied
D5	469985 109470	Bramble	Empty	Empty	Empty	Empty
D6	469949 109458	Hawthorn	Not Found - Overgrown	Empty	Empty	Empty
D7	469897 109439	Hawthorn/ Buckthorn	Not Found	New Tube Installed in Buckthorn	Dormouse Nest - occupied	Dormouse Nest - occupied
D8	469867 109421	Buckthorn	Empty	Empty	Empty	Empty
D9	469844 109403	Hazel	Empty	Empty	Empty	Empty
D10	469827 109373	Ash	Empty	Empty	Empty	Empty
Area E: Hedgerow 3 (East Side) Between Plot 4 and 5 and 5a/b – Installed 17 th March 2017						
E1	469949 109421	Hawthorn	Empty	Not Found	Not Found	Empty

E2	469943 109403	Hawthorn	Empty	Empty	Bird Droppings	Wood Mouse Nest
E3	469941 109354	Willow	Empty	Empty	Dormouse Nest	Dormouse Nest Occupied
E4	469934 109354	Hawthorn	No tray	Empty	New Tray Installed	Dormouse Nest Occupied
E5	469931 109333	Bramble	Not Found	Not Found	Not Found	Not Found
E6	469925 109314	Bramble	Empty	Empty	Empty	Empty
E7	469923 109296	Rose	Empty	Empty	Empty	Empty
E8	469918 109268	Hawthorn	Empty	Empty	Empty	Few Green Leaves – Potential Start of Dormouse Nest
E9	469914 109248	Rose	Empty	Empty	Empty	Wood mouse Nest
E10	469910 109218	Hawthorn	Empty	Empty	Empty	Empty
Area E: Hedgerow 3 (West Side) Between Plot 4 and 5 and 5a/b – Installed 5 th May 2017						
E11	No grid ref	Goat Willow		Installed	Dormouse Nest Occupied	Empty
E12	No grid ref	Hawthorn in Willow		Installed	Dormouse Nest	Empty
E13	No grid ref	Young Oak		Installed	Start of Dormouse Nest	Empty
E14	No grid ref	Young Field Maple under Oak		Installed	Dormouse Nest	Dormouse Nest



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