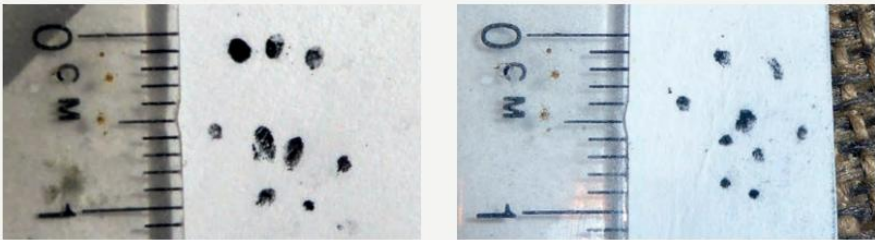


Amendments made between first printing (March 2025) and second printing (May 2025) of Hazel Dormouse Mitigation Handbook

(Wells, D., Chanin, P. & Gubert, L. (2025) *Hazel Dormouse Mitigation Handbook*. The Mammal Society.)

Page	Amendment / clarification																														
11	Table 3.1 is mentioned in the text but not included. Table 3.1 Dormouse survey methods summary. <table><tr><th>Survey method</th><th>Data provided*</th><th>Licence required?*</th></tr><tr><td>Nut searches</td><td>Presence/likely absence</td><td>No</td></tr><tr><td>Nest tubes</td><td>Presence/likely absence</td><td>Yes</td></tr><tr><td>Footprint tunnels</td><td>Presence/likely absence</td><td>No</td></tr><tr><td>Nest boxes</td><td>Presence only</td><td>Yes</td></tr><tr><td>Nest searches</td><td>Presence only</td><td>Yes</td></tr><tr><td>Trail cameras</td><td>Presence only</td><td>No</td></tr><tr><td>Hair tubes</td><td>Presence only</td><td>No</td></tr><tr><td>eDNA</td><td>Presence only</td><td>No</td></tr><tr><td>Acoustic ID</td><td>Presence only</td><td>No</td></tr></table>	Survey method	Data provided*	Licence required?*	Nut searches	Presence/likely absence	No	Nest tubes	Presence/likely absence	Yes	Footprint tunnels	Presence/likely absence	No	Nest boxes	Presence only	Yes	Nest searches	Presence only	Yes	Trail cameras	Presence only	No	Hair tubes	Presence only	No	eDNA	Presence only	No	Acoustic ID	Presence only	No
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15	In 3.4.9 the first reference (to Appendix 2) should refer to Appendix A . The second reference (to Appendix B) has been replaced with “... providing that the protocols specified below are followed. ”																														
15	Additional text added to end of 3.4.10: “ Footprint tunnels have been shown to be more effective than nest tubes at detecting dormice in scrub and hedgerow habitats, and as effective as nest tubes in closed canopy woodland. Footprint tunnels are also more effective at detecting dormice when they are present at low densities (i.e. in sub-optimal habitats) (Bullion et al. 2018). ”																														
15	References in 3.4.12 should be to 3.4.32 and 3.4.35																														

15	Second line in 3.4.13 “100 tubes and/or footprint tunnels” replaced with “ 100 tubes and a minimum of 30 footprint tunnels ”
16	text in 3.4.22 should refer to 3.5.2
18	The text from second para of 3.4.32 (down as far as Table 3.2) has been replaced with: <i>Recommended protocol:</i> • Tubes should normally be installed along transects or in a grid. Where a grid is used, the rows should be widely spaced (ideally >75 m apart), to maximise the number of home ranges sampled; • Spacing between tubes within a row or along a transect should be between 15 and 20 m and cover as large a proportion of the available habitat as possible; • As far as possible, surveys should focus on the woodland edge, ride edges and areas where the shrub layer is dense; • In very small sites reducing the spacing to 10 m on both axes is acceptable where there is no alternative (minimum area c 0.5 ha; minimum length 500 m); • More tubes may be used within each individual site/survey location and may lead to earlier detection, but the minimum period for adequate survey effort, is not altered; • Tubes should be checked once a month for the minimum periods shown below. <i>Survey effort for sites where habitat quality is fair or poor (see section 3.6):</i> • A minimum of 100 nest tubes should be deployed for a full season (monthly checks from April or May until November); • A minimum of 30 footprint tunnels should also be deployed for the period May to October <i>Survey effort for sites where habitat quality is good or excellent (see section 3.6):</i> • A minimum of 50 tubes should be used for at least the length of time set out in table 3.2.
19	Text after Table 3.2 in section 3.4.32 has been deleted.
19	In Figure 3.10a the photos showing front and hind prints were labelled the wrong way around – correct labels below. Figure 3.10a Dormouse hind footprint (left) and front footprint (right).  Figure 3.10b Wood mouse hind footprint (left) and front footprint (right). (NB yellow-necked mouse footprints are very similar)  Photos: Alison Looser

19	Para 3.4.35 should x-refer to HDCH table 5.6 (not 5.8)
25	Para 3.6.7. Added after the existing text (but before table 3.5a): “See also Tables 3.3, 3.4 & 3.5 in the Hazel Dormouse Conservation Handbook (Bullion et al, 2025).”
25	Table 3.5a: first row of character description under the Medium category “Canopy layer present with sparse or absent understorey but scrub layer generally present” has been <u>deleted</u> .
25	Table 3.5a: first line of text in the character description under the Low category has been amended to “Canopy present with sparse or absent understorey, with or without scrub layer”

FAQs / Clarifications

Question	Topic	Answer
Could I please confirm that the new survey methodology suggests footprint tunnels can be used solely for presence/absence surveys (without the need for nest tubes) and would be acceptable by LAs? If so, that data is only required to be collected between May and October in the X number of months required for associated number of tunnels to be used? As per Table 5.5. Is this correct for fair/low quality habitat or just good/excellent?	Footprint tunnel methodology Fair/poor habitat survey methodology	Yes, presence/absence surveys can be done using footprint tunnels or nest tubes, or nut searching if there is sufficient fruiting hazel. The statistical work done to inform the new guidelines suggest that if the recommended survey methodologies are followed, these methods are comparable in their effectiveness at detecting presence/likely absence. Footprint tunnel surveys should be done between May and October for three months (50 tunnels), four months (40 tunnels) or five months (30 tunnels), section 3.4.36 and table 5.5 in the HDCH. Footprint tunnels seem to be more effective at detecting presence when dormice are at low density (see para 5.5.3 of HDCH). So for tunnels the recommended survey effort does not depend on habitat quality, but for nest tubes it does.
Page 14: 3.4.1 Is the intention to say that surveys are not required if there are on-site records from the past 5 years? Doesn't this contradict CIEEM guidance/ NE requiring more up to date surveys for a licence? It's mentioned again in 3.5.7 (page 23)	Data from up to 5 years	The intention here is to avoid unnecessary repeat surveys, which are potentially time consuming and costly, when there is very little doubt about the status of dormice on a site. If there have been changes to the habitat or adjacent habitats, update surveys may be appropriate even if there is data from <5 years previously (section 3.5.7). Dormice are associated with habitats which change fairly slowly in the absence of management. They also disperse to new habitats relatively poorly (though not as poorly as previously believed). So there is a very high likelihood that if they were present or absent up to five

		years ago they still will be, unless the habitat or its connectivity have changed. The guidance was reviewed by NE/NRW. In England an application could be made using data 2-5 years old under licensing policy 4, in Wales I would expect them to allow standard applications with data up to five years old. The guidance has not been reviewed by ALGE or LPA ecologists, but we hope that they will see the logic of this approach and not require different standards for survey data than are presented in the guidance.
Page 18: Table 3.2 There seems no benefit, for situations where a client is paying for the work, in starting surveys in April/May and going to September if you can start in July and finish in September anyway - what was the reasoning behind that? Is it just that you'd hopefully get results quicker if you start in April/May?	Tube survey methodology	Interpretation is correct, nest tubes won't confirm absence any quicker if put out in April than July, but doing so may confirm presence of dormice sooner. The choice of survey method isn't solely an ecological one – client deadline and cost implications (as footprint tunnels require 2x trips to site compared to nest tubes) will mean that either method may be more appropriate for a particular site.
Page 44: 4.5.12 Using an endoscope - As a class licence does not cover using an endoscope, is the intention therefore that it could be used just in this situation without a specific licence to cover endoscopy?	Endoscope use	This section deals with site clearance under a mitigation licence. The use of an endoscope to minimise risk of harm during vegetation clearance would be covered under the mitigation licence, but should only be done by a survey licence/class survey licence holder, so that they can interpret what they are seeing reliably.
Is <i>Paragraph 3.4.32</i> just for when you are doing Nest tube surveys, or if <i>Paragraph 3.4.13</i> is implying that <i>Paragraph 3.4.32</i> is relevant whatever survey technique you are doing? So the basic question is for a Fair/ poor habitat site are we supposed to be doing both footprint tunnels and nest tubes or is it acceptable to just do footprint tunnels?	Fair/poor habitat survey methodology	Footprint tunnels seem to be more effective at detecting presence when dormice are at low density (see para 5.5.3 of HDCH). So for tunnels the recommended survey effort does not depend on habitat quality, but for nest tube surveys it does.
From what I understand, for sites scoring low or fair quality, a survey effort of (minimum) 50 footprint tunnels checked fortnightly (	Footprint tunnel methodology	So, for the query re. whether 50 footprint tunnels for 3 months giving 97.5% accuracy will be acceptable to LPAs: yes, it should be acceptable as this is slightly more reliable

twice a month) for a total of 3 months will give a 97.5% accuracy for detecting dormice. This would be classed as sufficient in terms of survey effort for assuming likely absence and accepted by the LPA?		than nest tube surveys (95%) which we have been using for the past 20 years.
It seems to suggest that tunnels can be used exclusively following this protocol and that nest tubes do not need to be used additionally?	Footprint tunnel methodology	Yes, on sites which are of good or excellent quality you can use either tunnels or tubes. The choice will depend partly on how quickly your client wants their report, as footprint tunnels will give results more quickly, but will tend to be more expensive due to the more frequent visits. On sites which are fair or poor quality, dormice will be present at low densities so more survey effort is appropriate to confirm presence/likely absence - in those situations the guidance recommends using both (see last part of para 3.4.32 in the mitigation handbook).
So essentially I could run a survey using 50 tunnels deployed for 3 months, checked + re-inked every fortnight between July-September (to include September incase hedgerows are dispersal corridors), and this should be accepted as adequate survey effort?	Footprint tunnel methodology	If you have 50 tunnels, you'll need to survey for three months within the May to October period, to reach confidence in presence/likely absence. For nest tubes, if you start anywhere between April and July you'll need to continue until end September. But if you start in August or September you'll get results after three months, because more nests are being constructed in those months (mainly by dispersing young).
So with poor / fair sites you will HAVE to do the 100 tubes for the full season (Apr/May to November) and tunnels (optional). Only with good sites can you use just footprint tunnels with no tubes in the survey?	Fair/poor habitat survey methodology	That's right, yes. On poor/fair sites more survey effort is required to confirm presence/likely absence*, so 100 tubes for the summer season, with footprint tunnels as well if possible, is the recommendation. Bear in mind though that this is guidance, not rules, and so there may be sites and situations where using one of the other methods instead of footprint tunnels could be justifiable. e.g. on a small site you might have to use fewer tubes and more tunnels. On good/excellent sites, surveys can use either tubes or tunnels. * I've been saying presence/likely absence in these responses, but obviously if you confirm presence at any point before the end of the survey period, you have answered the question the survey was set up to investigate. If dormice are present, no further surveys on that site are required,

		regardless how many months the surveys have been going for.
From what I understand, as soon as presence of dormouse is confirmed, no further survey is required as the number of dormice likely supported on site is calculated through a habitat suitability assessment and all suitable habitat on site would be considered to support dormouse.	Confirming presence	Yes, once presence of dormice is confirmed (by any method), surveys can stop because continuing them will provide no additional information. No survey method gives a population estimate, but the tables in section 3.6 provide a method for doing so.
It also says that dormouse survey data is considered valid for up to five years. As such if you have recent confirmed presence of dormouse in the site adjacent to yours with no dispersal barriers, you can assume presence within your site and do the habitat suitability assessment to calculate population capacity. Would you be able to apply for a mitigation licence with this?		Yes, what the guidance proposes is that if there are records <5 years old from a site re-surveys are not necessary (section 3.4.1). Different from standard LPA/NE requirements, but the logic is that dormice are associated with habitats which change fairly slowly or which are likely to maintain or improve for dormice over time (e.g. scrub) in the absence of management. So there is a very high likelihood that if they were present up to five years ago they still will be. Even before the current legislative challenge to the principle of pre-planning surveys in England, no-one wants to spend time and effort doing unnecessary surveys when the presence of dormice is near certain. You might decide to re-survey if there had been significant habitat change in that time, though. Clearly this hasn't been tested through NE or NRW licensing yet, but both organisations reviewed and commented on the draft text.
Does “all suitable habitat” mean ‘any vegetation over 1m high’?	Definition of suitable habitat	I wouldn't arbitrarily exclude low scrub below 1m if it was otherwise suitable for them. Have found natural nests at or below 1m in the past.