

**Theme:** BHLR Nature Conservation and Biodiversity; Dormouse (DM) issues - Discussion with Natural England (NE)

**Project number** 244424CA (BHLR)

**Location:** East Sussex County Council – County Hall, Lewes **Meeting Date** 10/03/08

**Present:** PC Dr. Paul Chanin (Independent)  
 NM Nigel Marshall (ESCC)  
 SC Simon Colenutt (ECOSA)  
 MA Marian Ashdown (NE)  
 AH Alison Hogan (EPR)  
 JB Julia Barrett (Mott MacDonald)

**Notes Taken by:** JB

**Note:** Meeting notes to be read alongside PC's BHLR powerpoint presentation

Item	Text																								
Context/ setting the scene	DM habitat within the works footprint and to the north appears to be good; high quality wildlife landscape. The scheme has potential to cause habitat fragmentation and habitat isolation issues.																								
The DM survey	<p>The Dormouse Conservation handbook sets out the standard and accepted (by NE) method for surveying DM for presence/ absence and estimating DM populations. It is based on a scoring system, which requires a survey of a minimum of 50 tubes for each site, over the months of April to November. Scores are allocated according to the month that the check occurs, and proportionally to the number of tubes put up (see below for monthly scores). Double the 50 tubes to 100 tubes for example, and you double the score.</p> <table border="1"> <thead> <tr> <th>Month</th> <th>Score</th> <th>Month</th> <th>Score</th> <th>Month</th> <th>Score</th> </tr> </thead> <tbody> <tr> <td>April</td> <td>1</td> <td>July</td> <td>2</td> <td>October</td> <td>2</td> </tr> <tr> <td>May</td> <td>4</td> <td>August</td> <td>5</td> <td>November</td> <td>2</td> </tr> <tr> <td>June</td> <td>2</td> <td>September</td> <td>7</td> <td></td> <td></td> </tr> </tbody> </table> <p>Paul Chanin and Michael Woods are responsible for devising this system following a 1600 tube survey (refer to English Nature Report number 524), looking for DM in areas where you wouldn't normally expect to find them. DM were positively identified in approximately 1/3 of the areas that they surveyed, with positive records found outside of the traditional survey season as well. PC makes the assumption that if DM are found at one site, then it can reasonably be expected that they are living in any/ all connecting habitat.</p> <p>For BHLR, 220 tubes were used:</p> <p>June = put up              July = no checks              August, September, October = Checks</p> <p>This gives a total score of 61.6 (4.4 x 14).</p> <p>PC concludes therefore that if the survey results gave no DM but had a score of less than 20, then the survey would be inadequate. Since the BHLR surveys gave a score of 61.6, AND DM were also identified, the survey is argued to be adequate.</p>	Month	Score	Month	Score	Month	Score	April	1	July	2	October	2	May	4	August	5	November	2	June	2	September	7		
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DM populations	<p>PC argues that DM populations are extremely difficult to assess (without methods such as micro-chipping).</p> <p>The DM Conservation Handbook takes Paul Bright’s estimation of the minimum required woodland area for a viable DM population as 20 Hectares.</p> <p>Calculations for the connected habitat south of the proposed BHLR route and north of a line that habitat to the south of does not appear to be connected, which is the area of habitat that may become isolated due to the scheme, shows connected habitat to be: 43 ha of woodland and 2.7 ha of hedges.</p> <p>Estimations of population densities vary.</p> <p>Therefore, estimations of population size are given as between 40 and 200 (PC suggests that they could be anywhere between 50 and 500!).</p>
Isolation	<p>Concern has been raised about the potential for the new road to isolate dormouse populations to the south of the road from populations to the north.</p> <p>Note: Isolation issues are not just related to the new road, but also to rivers and floodplain – additional site survey works will be required to assess isolation here (e.g. rivers may have a canopy overhead).</p> <p>These potential and additional isolated sites may result in as many as 4 separate populations within the area.</p> <p>If it is determined that there are isolated populations, then NM suggests that there is potential to bridge the gaps through planting.</p> <p>Compensation planting may also be beneficial for isolation issues in acting as new connecting habitat.</p> <p>Additional mitigation measures are discussed below.</p>
Mitigation measures – retain existing links	<p>Existing links at Queensway (to the eastern fringe of the scheme), will be maintained through additional planting. Mature planting exists and will remain at this location.</p> <p>To the west of this site, and following the line of the proposed road, there are a number of existing links which will be lost due to the scheme. Mitigation measures need to address this issue (see below).</p>

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Mitigation – Links across the carriageway	<p>This site is not large enough to support a population – DM have to be crossing the road. The carriageway is 8metres of tarmac and 2 metres of soft verge at this site.</p> <p>Conclusions that have been drawn from this and other examples are:</p> <ul style="list-style-type: none"> <li>• Small, minor roads (&lt;5m wide) = not a barrier to daily movements and it is assumed that dormice will cross them readily.</li> <li>• Medium sized roads (5 - 10m wide) = partial barrier in that dormice may not cross them in their daily movements but they will not prevent dispersal. (NB 10 metres is thought to be a conservative estimate here).</li> <li>• Large roads (&gt;10m) = complete barrier to movements, including dispersal.</li> </ul> <p>For BHLR, in the urban area, potential mitigation has been suggested for narrowing the road design at intervals.</p> <p>The present design determines the road surface as 2 x 3.65m (7.3m). The (soft) verge will normally be 2 x 3.5, giving a total width of 14.3m.</p> <p>If the soft verge was to be reduced to 2 x 1.5 m at intervals along the carriageway, then the minimum DM crossing width at these points would be reduced to 10.3 m (7.3 + 3), which is argued to be acceptable as sites where DM will occasionally cross, thus maintaining genetic variability.</p>
Mitigation - DM underpasses	<p>DM underpasses to be included in the final design. These will be comprised of fencing along an agricultural underpass, with planting through the fencing to give connecting routes between DM habitat.</p> <p>The example of the A30 at Bodmin has been used to illustrate the fencing idea. Here, the fence line is set high, so that agricultural plant moving through the pass does not damage the vegetation.</p> <p>NM raised concerns about potential vandalism of the fences. Suggest that the fences could be incorporated into the bridge structure, so that the vegetation is inset, with mesh across the front.</p> <p>It is also suggested that this fencing idea could be included on all bridges along the length of the road, providing habitat connections across the rivers as well as under the roads.</p>
Mitigation – muddy brown bridges	<p>This option of muddy brown bridges (under bridges and alongside river banks for example), although not incorporated into the main mitigation strategy, would be a bonus to the suggested mitigation.</p>
Full mitigation strategy - summary	<ol style="list-style-type: none"> <li>1. Maintaining and building on the existing connections at Queensway viaduct to the east</li> <li>2. Cross carriageway connections – narrowing at intervals</li> <li>3. Underpass connections</li> <li>4. Along carriageway connections – planting and “bulking out” of hedgerows along the route corridor</li> </ol>

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Additional surveys?	<p>PC suggests that additional surveys for the ES addendum at least will not be required, and are unlikely for licence work. MH points out that there may be a need for additional surveys at isolated sites for the licence (work to be carried out by EPR). In addition, monitoring of sites may be required.</p>
Additional comments	<p>No initial concerns or queries following this presentation and the suggested mitigation strategy and ES addendum approach.</p> <p>MA clarified that NE's concern with regards to DM populations wasn't about wanting to know how large the DM population is in the area, but rather how <i>small</i> the isolated populations are likely to be. MA feels that this has been shown well in the presentation today.</p> <p>MA happy in principle with the suggested mitigation strategy and approach for the ES addendum. Clarified that NE felt the impact of the scheme had not been assessed properly in the ES, but that she is much more comfortable that it is being assessed properly now.</p> <p>All confirmed that more detail will be required for the isolated sites, such as if they are definitely isolated (e.g. by the rivers and flood plain). This information will be available following an additional site visit by SC and PC (due to occur afternoon of 10.03.08) habitat mapping will most likely be required for the licence work.</p> <p>(EPR should discuss with Mott's which additional surveys will be required for the licence).</p> <p>NM confirms that there will be minor changes to the design arising from the mitigation strategy highlighted here, and potentially following outstanding feedback from the Environment Agency and LPA.</p>
Notes	<p>All received a copy of the powerpoint presentation given today.</p>