Bat Roost Creation: Are we working in the dark?

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Mitigation/monitoring data

- Conservation Evidence website
- Stone et al 2013
- National Trust bat mitigation research
- “Roost” website
Providing artificial roost structures for bats

- One study (USA) showed bats did not use any of 43 bat houses of four different designs.
- Other studies (Europe, South America, Australia) related to bat boxes with varying results from occupation of less than half of boxes to occupation of 100% of boxes.
- Studies also looked at location and design of bat boxes with again varying results.
Residential and commercial development

No evidence relating to:

- Conserving existing roosts within development
- Retention or relocation of bat access points
- Creation of alternative roosts within buildings
- Changing timing of building works
- Conserving old structures/buildings as roosts
Stone, E., Jones, G. & Harris, S. (2013)

Mitigating the Effect of Development on Bats in England with Derogation Licensing
• Data from 2003 – 2005
• 389 bat derogation licences analysed
• 1776 roosts and 15 species
• Overall effects of licensed activities were negative
• Majority (68%) of roosts destroyed
• Information provided by licensees inadequate and inconsistent; 67% submitted no post development reports
• Monitoring only conducted at 19% of sites
• £4.13 million cost for this period
“we believe that there is a need to overhaul the licensing process, to establish a comprehensive, standardised postdevelopment monitoring system, and to demonstrate that mitigation is commensurate with Britain’s legal obligations”
National Trust
50 building projects involving bats and their roosts

- Level 1 – Low impact, retained full Continued Ecological Functionality
- Level 2 – Moderate impact e.g. effects on roosts, partial exclusions, changed access points
- Level 3 – High impact e.g. full exclusions, roost destruction, new roost creation
## Results

<table>
<thead>
<tr>
<th></th>
<th>No cases</th>
<th>Success</th>
<th>Partial success</th>
<th>Failed</th>
<th>% success</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>12</td>
<td>11</td>
<td>1</td>
<td>0</td>
<td>95</td>
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<tr>
<td>Level 2</td>
<td>5</td>
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<td>Level 3</td>
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<td>0</td>
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<tr>
<td>Totals</td>
<td>19</td>
<td>15</td>
<td>1</td>
<td>2</td>
<td></td>
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</tbody>
</table>
Roost

- 24 case studies
- 4 not yet monitored
- 18 out of 20 deemed mitigation “successful”
- Unrepresentative?
Swift Ecology experience….

- Licences and non-licensed method statements over past 7 years (3 licence holders)
- Total 119 schemes, roughly 50% of each
- Of these 32% had problems at the mitigation stage
Mitigation issues....

1. Use of BRM instead of roofing felt
2. Work started in absence of ecologist/licence
3. Roost provision not as designed (e.g. loft too small, accesses in wrong place, accesses poorly constructed)
4. Specified mitigation not installed
5. Bats got back into building with BRM as had not been properly sealed
Monitoring issues....

64 sites (54%) where monitoring intended (mostly licensed schemes) (excludes those where monitoring not yet taken place)

- 8% problem with access
- 31% no bats or fewer bats than before work
Are we putting the effort in in the wrong place?
Do we have enough information to make informed decisions?
Solutions…..?

• Recognition of importance of monitoring

• Shift of emphasis from process to outcome - particularly for low-impact schemes

• Change focus from scheme-based assessment to person-based assessment
Acknowledgements

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And finally

Bats and breathable roofing membranes research....