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Able Marine Energy Park Environmental Statement

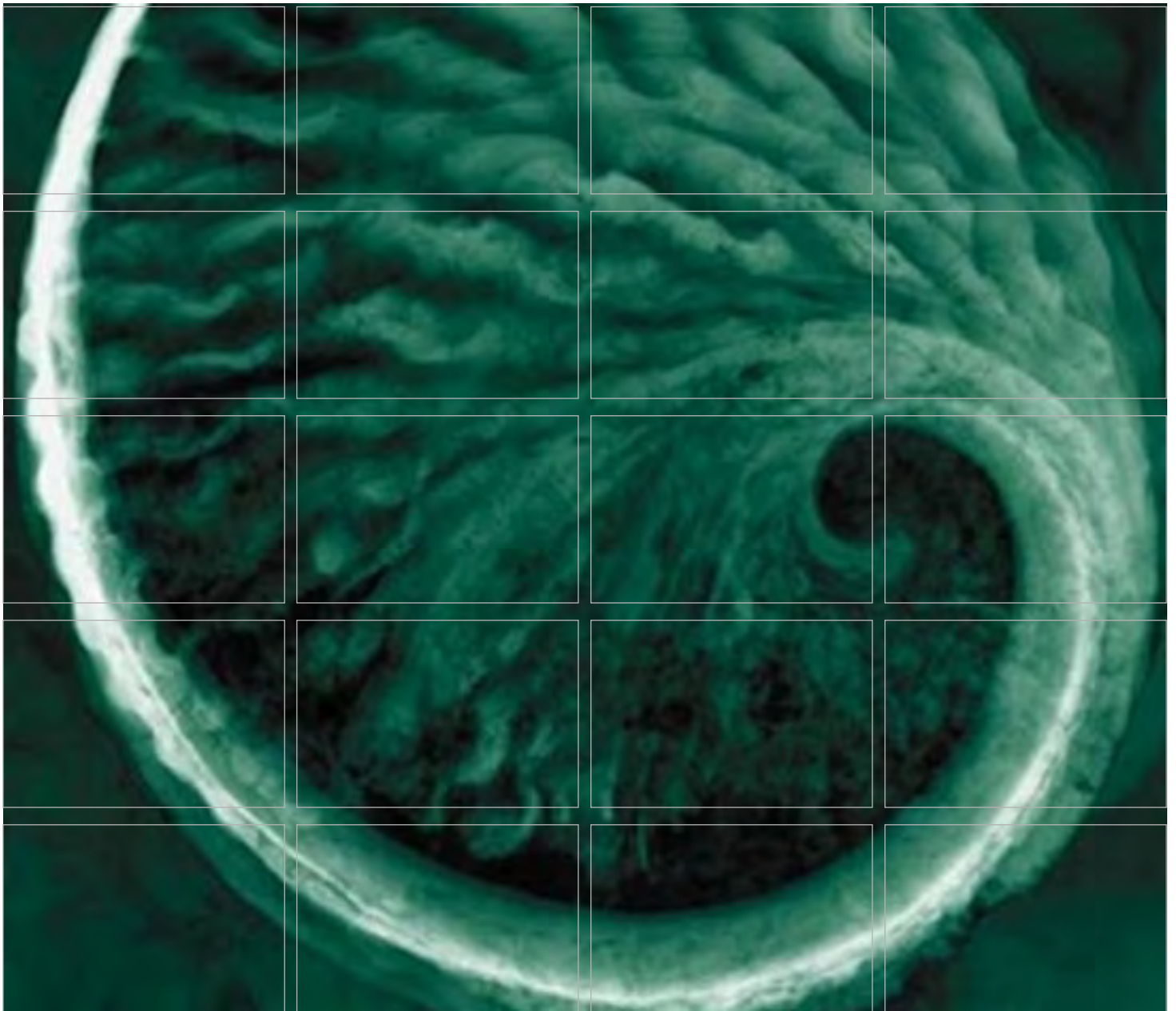
AMEP Bat Surveys: Supplementary Note

Supplementary Report EX 11.19

28th May 2012

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ERM



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1.1 INTRODUCTION

1.1.1 In their relevant representation on the AMEP application, Natural England stated that *“The survey work carried out for the application is not consistent with the Bat Conservation Trust bat survey guidelines in terms of the survey of individual trees to assess them for roost potential and the use of automated bat detectors for surveying the wider site. Additional survey work is required to determine with confidence whether bats utilise the site for roosting”*.

1.1.2 This explanatory note provides clarification about the surveys undertaken for bats as part of the AMEP application, and their suitability to inform the assessment of effects which has been made based on their findings.

1.2 THE BAT SURVEYS UNDERTAKEN AND PUBLISHED SURVEY GUIDANCE

1.2.3 Surveys as part of the AMEP application have been undertaken in 2006, 2010 (July / August) and 2011 (May). These surveys took account of the available guidance at the time which comprised:

- the Bat workers Manual (2004)¹ (2006 surveys);
- in addition to the above, the 2010 and 2011 surveys took account of guidance in the first edition of the Bat Conservation Trust (BCT) Survey Guidelines (2007)².

1.2.4 The guidance in both the Bat Workers' Manual and the 1st edition of the BCT Survey Good Practice Guidelines were less prescriptive than the 2nd edition of the Bat Conservation Trust (BCT) guidance³ published in April 2012, after the application had been submitted. They both however emphasise the need to plan a proportionate level of surveys based on a good ecological understanding of bats and their use of the landscape. For an area determined as low quality (based on factors such as roosting and foraging opportunities, land use, openness and exposure, connectivity within the landscape), a minimum of two to three transect surveys are recommended between March and September to provide confidence in a negative result if one is obtained (see Table 4.7 of the 2007 guidance).

¹ Mitchell-Jones, A J & McLeish, A P (eds) 2004 Bat Workers Manual (3rd Edition) JNCC

² Bat Conservation Trust (2007) *Bat Surveys – Good Practice Guidelines*. Bat Conservation Trust, London

³ Hundt, L (2012) *Bat Surveys Good Practice Guidelines*, 2nd edition Bat Conservation Trust

- 1.2.5 The surveys which were undertaken to assess the use of the trees on the site as roosts and the wider area are summarised below.
2006
- 1.2.6 This survey found only limited levels of activity, with no obvious signs of roosting, and concluded the AMEP site was of low value to bats.

2010
- 1.2.7 The extended phase 1 survey undertaken by Applied Ecology in April and September 2010 concluded that;

“Most of the hedgerows lacked trees of any sort; the roadside hedge flanking the football pitch adjacent to Rosper Road contained six semimature ash (Fraxinus excelsior), which were too small and young to possess any features attractive to roosting bats. Two roadside mature ash trees near the entrance to the fuel storage site (TN21) were the only other hedgerow trees on the survey site and one of these did exhibit potentially attractive roosting habitat for bats.”
- 1.2.8 Given the mobile nature of bats and the time elapsed since the 2006 survey, further survey was undertaken on 24th July and 24th/ 25th August 2010. Six automated detectors (Anabat SD1 and SD2) were used on each of the two survey nights. Anabat Location 1 was chosen to ensure coverage of the tree with roost potential (TN21) identified during the Phase 1 Habitat Survey.
- 1.2.9 Whilst Anabats typically provide depth of data in certain locations from continuous monitoring, they do so at the expense of wider data collection across an area. However, in line with the guidance available at that time, the surveyors used their knowledge of bat behaviour and the way that bats use the landscape, to carefully deploy the detectors at strategic locations around the most likely roosting, commuting and foraging areas. The locations used provided a high level of site coverage.
- 1.2.10 The survey on the 24th July, started in suitable conditions (warm and dry), but the threat of rain caused the removal of the Anabats 2.5 hours after the survey had begun (15 minutes before sunset). This is, however, after the usual emergence period of bats, as even late emerging species such as Natterer’s can be reasonably anticipated to begin leaving the roost 1.5 hours after sunset. The weather was good on the 24th August and the survey ran from 15 minutes before sunset, to 30 minutes after sunrise on the morning of the 25th.
- 1.2.11 The 2010 survey found only one possible indication of roosting, a common pipistrelle still foraging near the Old Copse at 05:08 on the morning of the 25th August. The conclusions of the report were that there was a low likelihood of roosting, and that there was generally low dispersal of bats within the site.

1.2.12 A daytime ground based inspection of all suitable trees on the AMEP site including the in the Old Copse was undertaken by licensed and experienced bat workers on the 4th and 18th April 2011 respectively. It was followed by intensive dusk and dawn emergence surveys on the night of the 10th May and morning of the 11th May respectively, both in good weather conditions. This involved the use of five automated detectors (left running continuously from 15 minutes before sunset till dawn the following day) strategically placed in areas of high roost potential associated with the Old Copse. In addition, two bat workers walked transects (interspersed with point counts) around the edges of the Old Copse.

1.2.13 The 2011 survey carried out an additional visual inspection of trees with bat roost potential. 21 trees were identified as having features potentially capable of supporting roosting bats, but no evidence of bat use was found and the potential was regarded as 'theoretical' (*ie* the 2b category referred to in the 2007 Bat Survey guidance). Of these trees nine were in the Old Copse and 12 along field boundaries in the southern part of the AMEP site and were subject to a more detailed dusk and dawn emergence survey supported by extensive use of Anabats. The 2011 report states:

"All of the bat species recorded during the detector surveys were recorded at times later than expected had they emerged from tree roosts within the woodland or, as in the case of Myotis bat/s (which were recorded relatively early during the emergence survey) were not recorded during the return to roost survey. This coupled with a virtual absence of bat activity within the woodland, and sightings of bats commuting into and away from the woodland at dusk and dawn respectively suggests strongly that the woodland did not support a significant bat roost during the survey, and that a breeding (maternity) roost of bats is not present within trees within the wood".

1.3 **OVERALL SURVEY FINDINGS (2006, 2010 AND 2011)**

1.3.14 The surveys found no evidence of occupied roosting, or resting places within any of the trees on the AMEP site on any of the surveys.

1.3.15 The commonest species recorded were common pipistrelles, and only at one location was the number of contacts regarded as frequent. This was near Killingholme pits, which are likely to have high levels of insect activity and this feature will not be affected by the project. Other species (a total of six species were recorded) were either occasional or rare, with contacts largely relating to occasional commuting passes. Of the species present pipistrelles normally forage within 2km of their roosts and noctules up to 15 km. The few contacts with *Myotis* species and a single brown long-eared bat were all well within range of either woodland, or urban infrastructure, outside of the site boundary.

1.4 SURVEY EFFORT

- 1.4.16 A daytime survey to identify potential roost sites was undertaken in 2011, following previous surveys in 2006 and 2010 during the Extended Phase 1 Habitat Assessment. Whilst the trees were not categorised using the nomenclature of the 2007 guidance available at the time of the 2010 report, it is clear from the information presented that the survey sought the correct information. It identified all trees with suitable roosting opportunities for bats and recommended subsequent dawn / dusk surveys at the Old Copse as well as a precautionary approach to felling that is consistent with the 2007 guidance.
- 1.4.17 The 2011 surveys comprised a survey on the evening of the 10th May and the morning of the 11th May. Under the new 2012 guidance this would only count as one visit rather than the suggested 2-3, however such overnight surveys are certainly recommended within the Eurobats guidance, not least as making the link between the previous evenings activity and the following mornings is not an unreasonable approach to understanding how an animal uses a landscape with limited roost resources. As these were completed within 24 hours they class as one survey only, against the guidance of 2-3 surveys.
- 1.4.18 However, both the 2010 and 2011 used a large number of Anabat detectors, as they were able to take advantage of the habitats present. For example in 2011 the fact that the survey area included a small isolated woodland, with specific hedgerows and ditches providing key commuting / foraging corridors linking in to it, and specific trees along hedgerows, allowed Anabats to be positioned to allow the recording of bat activity in areas where it could reasonably be expected that bats emerging from, or returning to any roosts in the Old Copse or in the hedgerow trees, would be found. These static detectors operated over a longer period than hand held detector surveys and hence provided extensive data about bat movements in key areas to and from potential roost sites, more so than might be expected from two or three surveys using mobile detectors and observations. This combined with a transect survey around the edge of the Old Copse is considered to provide sufficient data to assess whether roosts were present, or not.
- 1.4.19 At a landscape level the roost potential of the site has been assessed and the area where high bat activity and trees with most roost potential were identified has been subject to visual and emergence surveys at appropriate times of year during suitable weather conditions. Although no evidence of roosting was found the precautionary use of further surveys prior to felling has been recommended. Additional surveys would yield little extra data, and objectively would be unlikely either to alter the impact assessment or the mitigation proposed.
- 1.4.20 The assessment of the importance of the wider site usage has not altered between the two survey periods (2006 and 2010), and activity levels, distribution and species composition were essentially the same. The low levels of activity reflect the sub-optimal nature of the site which is generally

exposed, open and dominated by mainly intensive agriculture and, in this respect, the survey effort has been proportionate . The important features of the site that are more favoured by bats were identified and the mitigation plan will ensure that these will be incorporated into the landscape.

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