

(24 September 2012)

Planning Act 2008

Infrastructure Planning (Examination Procedure) Rules 20120

Proposed Marine Energy Park, Killingholme

Summary of Oral Representations by Associated British Ports at HRA/Ecology Hearings

11th and 12th September 2012

1 General

- 1.1 One matter addressed by ABP at the outset of the Hearing was the Applicant's assessment of the overall objective of the proposed development, having regard to its case on IROPI. In response to a request by ABP to define the overall objective of the project, the applicant's representative declined to provide clarification, and confined himself to repeating the broad objectives of the proposal detailed in section 7.2 of the HRA Report. As ABP indicated (by reference – for convenience – to the draft DEFRA guidance on the application of article 6(4) of the Habitats Directive) it is necessary for the applicant to demonstrate that there are no alternative solutions which would deliver the same overall objective as the original proposal. In the absence of such an overall objective, ABP notes that it is difficult for the Panel to recommend to the Secretary of State that there are no alternative solutions to AMEP.

2 Summary

- 2.1 During the issue specific hearing ABP made the point that there were considerable flaws in the baseline data for bats. Insufficient survey effort was undertaken, industry guidelines were not observed, and the surveys were completed by personnel who appear not to have the necessary training or experience. In consequence of these failings the mitigation/compensation does not address the impacts that will arise from

this scheme. Further, contrary to the assertion of Able, such survey data as does exist indicates that the Old Copse is highly likely to support bat roosts and that other mature trees within the site, which have not been subject to any activity survey, may also support roosts.

- 2.2 ABP confirmed that it had similar criticisms of other of aspects of the ecological survey and assessment work to those which it had levelled in respect of the Applicant's work on bats (as set out in the written representation of Mr Andrew Baker). However, due to the severe time constraints imposed at the hearing it was not able to address the ExA regarding these issues.

Preliminary

- 2.3 Owing to the limited time which it was afforded to voice its concerns during the Hearings, ABP was not able to explore the full extent of its concerns regarding ecology and the HRA. Instead, it confined its evidence to the survey work undertaken by the Applicant in connection with bats. There was very limited time to discuss the technical details of the issue; but given the high level of protection given to these species and the legal duties of the Examining Authority (ExA) associated with this protection, **the adequacy or otherwise of the work undertaken by the Applicant is of critical importance.**

- 2.4 ABP identified that as regards bats there are two issues that need to be addressed. Firstly, whether sufficient survey work was undertaken to inform the Environmental Impact Assessment (EIA) on the use of the site by bats, and secondly, whether the site supports bat roosts

- 2.5 ABP made the following points,

- i. The survey effort for bats was inadequate and insufficient.**
- ii. The surveys that were carried out showed the site to support a good assemblage of bats including two scarce species.**
- iii. The bat surveys of the woodland have been wrongly interpreted and there is a high likelihood of a roost being present.**

iv The proposed mitigation for bats is inadequate.

v. The equipment used to collect the data was out of data and therefore provided insufficient data.

2.6 The surveys for bats that were completed to inform the EIA are set out in the Annexes to Volume 1 of the EIA (Annex 11.1 Extended Phase 1 and Scoping Survey (Just Ecology May 2006), Annex 11.3 South Killingholm Protected Species survey (Applied Ecology September 2010) and Annex 11.8 Able Marine Energy Park Protected Species Report for Able UK Ltd May 2011).

3 Insufficient Survey Work

3.1 The scoping report produced by Just Ecology in 2006 (Annex 11.1) highlighted the need to carry out further ecological surveys (para 8.1.1) including *'foraging transects'* (bullet point 6, arrow point 3 on page 44). **No transect surveys of the site have been completed.** The bat surveys that were carried out in 2010 (Annex 11.3), rather than carrying out a walked transect, adopted an unusual survey method of placing remote bat detectors at six locations across the site on only two occasions (July 24th and August 24th 2010) on one of which the detectors had to be removed due to the prospect of rain.

3.2 At the time of the 2010 survey the current survey guidelines were the *'Bat surveys: Good practice guidelines' Bat Conservation Trust 2007*. In his oral evidence Mr Hatton incorrectly told the inquiry that the guidance current at the time was from 2004 (presumably Bat Mitigation Guidelines (Mitchell-Jones, 2004)). The 2007 guidance sets out the minimum surveys required for transects, and for a site of moderate interest the guidance recommends 2/3 surveys with at least one dusk and dawn (Table 4.7 p36). Importantly the guidance (para 4.6) states that *'a single survey method is rarely used in isolation'*.

3.3 **The surveys employed by ABLE UK to assess use of the site for bats therefore did not follow the advice of their own ecological consultant and did not following the guidance** current at the time of the surveys. Since 2011 the Second Edition of the BCT guidance has been published which further increases the minimum level of survey effort required to characterise a site.

4 Evaluation of the importance of the site for bats

- 4.1 The results of the 2010 and 2011 bat surveys are summarised in Table 1. Notwithstanding that the survey work for activity on the site was minimal, the surveys that were carried out show that the area supports a good assemblage of species. Of particular note are the presence of Leisler's bat and Nathusius pipistrelle, which are both scarce species. **The detection of either of these species would ring 'alarm bells' for any experienced bat ecologist** and would prompt a recommendation for increased survey effort. It is highly surprising that neither the 2010 reports nor the 2011 reports explore the implications of the rarity of these two species nor did the body of the Chapter 11 of the ES.
- 4.2 There are a number of aspects of the bat surveys that are also worrying and suggest that the **surveys were not carried out by experienced bat surveyors**. In neither report are the Noctules (Leislars / Noctule bats) separated out to the species level. While the calls of these two species are similar, an experienced bat worker can easily determine the difference between these two species. In the 2011 survey the *Myotis* sp detected are assumed to be Brandt's bats. Most *Myotis* bats are difficult to distinguish from recordings alone. It is notoriously difficult to separate Brandt's bat from Whiskered bats (*M. mystacinus*) and in fact these species can only be separated by having a bat in the hand and examining the dentition and/or penis morphology. In these circumstances it is of concern that the surveyors make an assumption that the *Myotis* species detected was 'probably' Brandt's bat. Brandt's bat is also a scarce species so this conclusion is peculiar given that Whiskered bat is the more common of the two. Finally the 2010 survey refers to the current legislation being the Conservation (Natural Habitats, &c.) Regulation 2007 (para 4.1.11). At the time the report was published, (September 2010) these regulations had been superseded by the Conservation of Habitat and Species Regulation 2010 by more than six months. **These elementary errors strongly suggest that the bat surveys were not carried out by competent personnel.**

Table 1 summary of bat species recorded during 2010 and 2011 surveys.

Species	2010 remote detector survey	2011 Copse survey
Common pipistrelle <i>Pipistrellus pipistrellus</i>	+	+
Noctule or Leisler's bat <i>Nyctalus noctula</i> or <i>N. leisleri</i>	+	+
<i>Myotis</i> sp (presumed to be Brandt's bat <i>M brandtii</i>)	+	+
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	+	+
Brown long-eared bat <i>Plecotus auritus</i>	+	
Narthusius pipistrelle <i>Pipistrellus narthusii</i>		+

5 High Likelihood of Bat Roost

5.1 Notwithstanding the inadequate survey effort, it is apparent from the results of the 2010 and 2011 surveys that **there is a high likelihood that the site supports a bat roost or roosts**. The 2010 survey (Annex 11.3 para 4.3.3) recorded a common pipistrelle bat in the morning and the report concluded that the roost 'was not far from the detector'. Location three is at the southern tip of the Old Copse. Paragraph 4.4.2 of the 2010 report presents the conclusion of the bat survey. This paragraph is critical and is reproduced in its entirety below:

"4.4.2 The survey findings infer that the site is not particularly important for roosting bats. However, the survey was designed to sample habitats considered to offer bats with the best foraging opportunity within the site, and did not take into account possible roost locations in its design. Detailed inspections of buildings and mature trees would be required before anything more definitive and reliable on the status of bat roosting within the site could be said. Such survey work is only recommended if buildings and mature trees / woodland are likely to be impacted by development proposals moving forward – either directly through demolition/habitat loss or indirectly through increased illumination after dark."

5.2 Further, more detailed surveys are recommended of mature trees and woodland as well as buildings to establish if roosts are present.

- 5.3 It can only be assumed that the 2011 survey intended to provide such detail; however **the survey methodologies employed were deficient and did not follow industry guidelines**. The approach adopted by any properly equipped and experienced ecologist would be to carry out a tree climbing survey during the winter/ early spring to examine the trees at close quarters (usually using an endoscope to examine rot holes and cracks) and look for signs of bat roosts. Alternatively each tree could be subject to an emergence survey during the summer months to detect bats as they leave the roost. In some cases both methods would be used where the trees exhibited high potential.
- 5.4 In this case **neither approach was adopted**. The tree inspection was done from ground level only – this approach cannot be definitive as signs of roosting can be easily missed. Ground based survey can only provide an assessment of potential to support roosts and, as stated in the current BCT guidelines, are not considered appropriated for trees that are to be felled as part of development. The 2011 surveys did not follow the then current BCT guidelines on assessment of trees for bat roosts. All the trees identified in Table 3.1 of the Annex 11.8 come under Category 2a of the BCT 2007 guidance on classifying trees for their potential for supporting bat roosts. The recommendation is that in the case of category 2a trees each tree should be subject to an ‘off the ground visual assessment’. The 2012 BCT guidance has refined the equivalent table and now recommends dusk and pre-dawn surveys as well as an off the ground visual assessment.
- 5.5 **The approach adopted by the 2011 survey by Applied Ecology is fundamentally flawed**. Instead of surveying each potential tree individually as would normally be the case, the approach was to survey the woodland as a whole to see if anything flew out at dusk or returned at dawn. This is not an emergence survey but rather an activity survey and as such does not indicate whether or not a roost is present. Bats emerging from the trees within the woodland could very easily have been missed. Once they had left the roost they may have stayed in the woodland for some time feeding and may not have been recorded due to the limitations of the Anabat recorders employed (see below).
- 5.6 Furthermore many of the trees identified as having bat roost potential are outside Old Copse (see Annex 11.8, Figure 1). **These trees were not subjected to any further activity survey**.

- 5.7 Turning to the results of the 2011 survey **the interpretation is clearly incorrect**. Paragraph 3.2.5 describes how a *Nyctalus* sp (Noctule/Liesler's) bat was recorded 20 minutes after sunset. Noctule bats generally emerge soon after sunset however there are many reasons why emergence can be delayed and indeed the published research shows an emergence time of between 0 and 40 minutes after sunset (Racey, 1991; Russ, 1999). **It is therefore unreliable to assume that a Noctule bat recorded 20 minutes after sunset was not roosting in the locality** – especially when the bat in question was not seen as is the case here.
- 5.8 Even with the poor level of survey it is clear that that interpretation of the 2011 survey is **unsound and cannot be relied upon** to exclude the possibility that bats are roosting in the Old Copse or for that matter in the other mature trees for which no activity survey was completed.
- 5.9 These substandard surveys indicate **it is highly likely that bats are roosting in the Old Copse** and there is potential for the mature trees elsewhere to support bat roosts.
- 5.10 The applicant claims that it adopts a 'precautionary approach' and that the trees would be checked in detail prior to felling. While such an approach is sensible it cannot be used as a substitute for proper survey. **The ExA has specific legal duties that must be satisfied should a bat roost be present**, that relate to the high level of protection afforded to all bat species. The level of survey provided by the applicant **does not allow the ExA to make an informed decision** on European Protected Species. The IPC screening opinion (October 2010) paragraph 3.36 required that '*all survey should be thorough, and up to date and that the scope of all further habitat and species surveys should be conducted in accordance with best practice*'. This clearly has not been done in the case of bats.

6 Inadequate Mitigation/Compensation for Bats.

- 6.1 Given that the surveys for bats are inadequate it follows that **the ExA cannot regard the proposed mitigation as being adequate**. The logical process of establishing the baseline conditions, assessing impacts upon that baseline, considering mitigation,

assessing residual impacts and proposing compensation has not been followed. As such, the required mitigation and compensation cannot be calculated.

6.2 Even if one accepts the existing level of survey work the mitigation is inadequate. The 2011 bat survey (Annex 11.8) touched upon what would be required to compensate for the loss of bat habitat; in paragraph 3.2.20 it is recommended that broadleaf woodland (unlit and well connected) is planted to compensate for any future woodland habitat loss. **No such planting is proposed as part of the mitigation.**

6.3 The mitigation for bats appears to be confined to the creation of wildlife corridors though the main development site and planting of scrub around the margins of Mitigation Area A (Landscape Masterplan Annex 4.5 ES Volume 1). The wildlife corridors through the development site do not meet the criteria of being unlit as they will be in the heart of the site, which is flood lit. **It is highly unlikely that bats will therefore use these mitigation corridors for foraging.** The planting of scrub along the periphery of Mitigation Area A offers little additional habitat for bats given that the boundaries of the site are already marked by mature hedgerows. If these areas are suitable for bats they will be being used currently and the mitigation does not provide additional habitat to compensate for the loss of woodland. In addition, linear habitat of scrub will not serve the same ecological function as a woodland block and therefore **is not appropriate mitigation/compensation.**

6.4 It should be born in mind that the proposed mitigation (inadequate though it would be) only addresses use of the site by foraging bats. No consideration had been given to the loss of bat roosts as the surveys were both inadequate and wrongly interpreted.

7 Surveys employed out of date equipment

- 7.1 ABP noted that both the 2010 and the 2011 surveys had **used equipment that was out of date**. Mr Hatton (for Able) appeared to misunderstand the point being made to him since he referred in his oral evidence to the difference between the Anabat SD1 and SD2 models. The point actually being made concerned the fundamental change in bio-acoustic equipment since 2009. In summary, in 2009 a new kind of remote bat detector was introduced to the UK that uses 'full spectrum' recording rather than 'zero crossing'. The advantages of full spectrum over zero crossing are well documented both by peer review and grey literature. For various reasons full spectrum recording is much more effective and provides considerably more data than zero crossing.
- 7.2 In addition the new equipment has the other advantage of using omnidirectional microphones rather than the unidirectional microphone used by the Anabat and has been shown in both laboratory and field conditions to detect up to ten times more calls. Further, the new equipment is waterproof – so does not have to be removed from the field during rain.
- 7.3 In line with the BATNEEC principle (Best Available Technique Not Entailing Excessive Cost) the new equipment is now used by the vast majority of ecologists and has become the industry standard. **It should have been used in the 2010 and 2011 survey work, but was not. Instead, Anabats, with all their various deficiencies, were used.**