

**Written Summary of the Oral Case
put at the Issue Specific Hearing
on Compensation Proposals
held on 12 and 13 November 2012
by the
Royal Society for the Protection of Birds**

20 November 2012

Planning Act 2008

In the matter of:

**Planning Application for construction of the Able Marine Energy Park on the
South Bank of the River Humber at Immingham, North Lincolnshire**

**Planning Inspectorate Ref: TR030001
Registration Identification Ref: 10015550**



THE RSPB CASE SUMMARY ON COMPENSATION
(FOLLOWING SECOND ISSUE SPECIFIC HEARINGS ON 12 AND 13 NOVEMBER 2012)

1. The RSPB has submitted detailed Written Representations on Ex28.3 (**the RSPB WR on Ex28.3**) under rule 8(1)(d) of the Examination Procedure Rules¹. That document (prepared with its experts – Dr Tony Prater and Mark Dixon) has not been rebutted in any written response from Able. Able responded shortly to certain points orally only at the Issue Specific Hearings held last week and deferred response to other points to its Case Summary and final submissions. The RSPB criticises this procedure below. For present purposes though the RSPB repeats and incorporates the RSPB WR on Ex28.3. This Note pulls together the key points raised by Dr Tony Prater and Mark Dixon and has been contributed to by them and approved by them.
2. Throughout this document reference is made to black-tailed godwit. However the same points apply generally to the SPA assemblage species unless otherwise stated.
3. These submissions consider:
 - a. The current importance of North Killingholme Marshes (**NKM**) and the package with North Killingholme Haven Pits (**NKHP**) including by reference to the food resource in the areas of NKM affected by the development and the physical characteristics of NKM which make it so ideal for black-tailed godwit;
 - b. The food resource which may be delivered at the managed realignment and regulated tidal exchange (**RTE**) including consideration as to the water volumes and hence invertebrate volumes; experience at Paull Holme Strays (**PHS**) and what confidence it can give as to food resource at the RTE; and the claimed alternative sources of food resource and their legal and factual relevance;
 - c. The physical conditions at the RTE including the bunds, the flat nature of the fields, the neap tide cycle;
 - d. The required quantum of intertidal mudflat and the inappropriateness of the 1:1 minimum requirement; the ability to deliver intertidal mudflat of the requisite quality having regard to the disturbance from dredging, risk of accretion to saltmarsh; and uncertainties and risks associated with this novel design in a very difficult environment;
 - e. The implementation programme; and
 - f. The CEMMP.

¹ Infrastructure Planning (Examination Procedure) Rules 2010.

4. Legal submissions on the Examining Authority's Rule 17 Request² will be made by close of business on Friday as understood to be required.

North Killingholme Marshes

5. The very great importance of NKM can be shortly stated (it is common ground). Black-tailed godwit use NKM in very high numbers and exceptional densities in the autumn moult³. This is remarkable for a small area of estuary (para 2.11 RSPB WR⁴). That basic position is of obvious central importance to the consideration of the adequacy of the compensation.
6. Black-tailed godwit use is overwhelmingly focused on areas C and D: see Table C2.9 to HRA⁵.
7. This exceptional level of use (throughout the key and vital autumn moult period when energy expenditure must be limited) is a function of: (1) the quality of the mud, its undisturbed nature and its ability to supply the birds with their full feeding requirements; and (2) the adjacent NKHP. This is the ecological function which is lost by virtue of the development.
8. The development will remove much of NKM (and the whole of the most important areas – C and D). This means that the DCO if granted will remove that exceptional habitat on which huge numbers of black-tailed godwit rely at the crucial autumn moult period. It is because that loss is of such importance that the RSPB has played a full part in and devoted very substantial resources to these proceedings to ensure that, if the DCO is granted⁶, appropriate compensation is secured.
9. It is common ground⁷ that the ecological resource and function which the compensation provision has to meet is:
 - a. Intertidal mudflat to support the feeding requirements of a substantial majority of the Humber population of black-tailed godwit in the autumn moulting period (at least a peak of 2,566 and possibly considerable higher); and

² Dated 15th November 2012 on Coherence of the Natura 2000 network.

³ RSPB Written Reps 29 June 2012 paras 2.11 – 2.16 (2.11 – 2.14 and 2.16 are common ground: see questions to Mr Hatton at first ISH on Compensation and the RSPB has proceeded on the basis of this common ground ever since).

⁴ Submitted on 29 June 2012 here after referred to as **RSPB WR**.

⁵ With almost no use of area A; very limited use of areas B and E. Of the peak of 2,566, 2,450 were on C and D (HRA, Annex C, pg C-34).

⁶ Submissions have already been made as the significance of the harm and thus the need for the IROPI (and alternative solutions) tests to be applied with significant rigour. Does the imperative reason outweigh justify such significant harm?

⁷ RSPB WR para 2.16 agreed by Mr Hatton at first ISH into compensation.

- b. Adjacent or readily accessible high quality roosting sites.
10. The ultimate question is whether the compensation package delivers that package (so as to replace that lost). I address the correct legal test at the end of these submissions. Whether the test is “requisite degree of confidence” or “no reasonable scientific doubt” makes no difference on the facts. Whichever approach is applied, the compensation package does not satisfy it.

The area of North Killingholme Marshes

11. The RSPB has always focussed on the ecological function which is lost and not the precise number of hectares which are lost. This is because the function will depend on the density which a site can sustain. Different quality of sites will sustain different densities and thus the essential consideration is the function rather than the size.
12. Nonetheless, consideration of areas is obviously an important starting point (not least because, so far as the RSPB is aware 1:1 compensation has never been accepted in any remotely comparable situation for the obvious reason that delivery of compensation – especially novel and unproven proposals in difficult circumstances – brings with it very substantial uncertainties and risks. Given the high international importance of areas C and D in particular of NKM for black-tailed godwit these uncertainties and risks are of significant importance).
13. There is common ground that 44ha of intertidal mudflat will be lost to the development.
14. At the stage of assessing the confidence one can have in the compensation proposals, Able contends that some of NKM will be lost anyway⁸. The RSPB rejects that approach as: (1) misconceived in principle given the timelines and uncertainty involved: and (2) unjustified on

⁸ In their answer to the Examining Authority’s (Rule 17 Request dated 1st November) Question 7 provided only on Friday 9 November 2012 at 4pm, Able claim that this could be up to 20ha.

the facts⁹. It is not understood how some possible long term future loss of intertidal mudflat at NKM affects the degree of confidence required when assessing whether the compensation package will replace now that which we know will be lost now.

Quality of food resource at North Killingholme Marshes

15. We are here concerned with densities of food for black-tailed godwit - particularly *Macoma* and also *Hediste*. Gill et al 2007 has demonstrated that black-tailed godwit cease to use sites when the *Macoma* abundance drops below 150/m² (please see RSPB WR Appendix B2 tab VI 7 for this reference).
16. The facts (and site visits) speak for themselves. No one who has seen thousands of black-tailed godwit landing in areas C and D at NKM and then feeding on the edge of the water as the tide ebbs and flows can doubt the quality and importance of the food resource. Very high numbers of black-tailed godwit feed at very high densities at NKM as the tide rises (and, to a lesser extent, falls). There is no evidence of any other site in the Humber at which they feed in such numbers and densities in the critical autumn moult. There can be no sensible doubt (and it is common ground) that NKM provides excellent feeding grounds¹⁰.
17. The only data we have for food resource at NKM is for May (Annex 10.1 to ES). We have none for the critical autumn period with which we are concerned:
 - a. The data for May is at the trough of the annual cycle – after the food resource has been exploited over the winter; and before the new generation has developed. *Macoma* and *Hediste* spawn in the spring and the larvae grow over the summer to a peak biomass in

⁹ First, the dotted line on fig 1 to Able's Q7 answer (p22) is based on extrapolating accretion at the top of the foreshore since Humber International Terminal was constructed for an indefinite period (leading ultimately to change from intertidal mudflat to saltmarsh). Yet the very rapid accretion at the toe of the foreshore from sub-tidal to intertidal mudflat shown at fig 1.7 (Ex28.3(2)) is inexplicably ignored. On the same assumption to that applied at the top of the foreshore (straight line extrapolation) the red line on figure 1 in answer to Q7 will move substantially outwards over time. The low water mark "will move out" - Mark Dixon - ISH 13 November 2012 Part 1. The 20ha inexplicably ignores this factor. There is no evidence that the dredge to the north will prevent this accretion to intertidal mudflat: there is ample space for accretion and the slope is relatively shallow – fig 1.4 of EX28.3(2). Able's analysis counts all the loss of intertidal mudflat and ignores all the gains of intertidal mudflat. Second, fig 1 (and 20ha) shows the position in 30 years time; the loss to be compensated for is that lost now. It is no answer to say some of it may be lost in the long term anyway. In any event, the time period within which we have been testing the RTE is 3/8/12 years; not 30. Third, fig 1 shows a very steep drop of 4.5m between the black line and the red line – "wave action will knock that down and the straight line will become an embayment" (Mr Dixon ISH 13th November Part 1). Fourth, the accretion to date has been in the lee of the stilted Humber International Terminal which provides protection from wave action. That buffer to wave action is not present for the rest of NKM – wave action will moderate any accretion. Fifth, all previous documents from Able repeat that the long term (30 year time frame) of NKM is "demonstrably uncertain" – see e.g. Ex28.3(2) para 1.4.8. Thus no weight can be attached to the 20ha figure. No answers have been given to any of these points and the RSPB will not now have any opportunity to rebut any new points made.

¹⁰ RSPB WR para 2.14 as agreed by Mr Hatton.

the early autumn before being depleted in the autumn moult, winter and into the spring. It is thus not possible to compare data from NKM in May with data from elsewhere in autumn. All comparisons must be on a like for like basis. Able relies heavily on data from PHS in autumn but there are no comparable data available for NKM – so any comparison is meaningless;

- b. Plainly the May data does not tell us just how good NKM (and especially areas C and D) is as a feeding area in autumn – in the absence of data for autumn we must rely on observation – those observations give an overwhelming picture of the quality of NKM in comparison with any other site including PHS; and
 - c. Even in May at NKM, densities of tissue dry (not AFDW) of the two species total $14.67\text{g}/\text{m}^2$ (see footnote¹¹) when averaged between transects 2 – 7 (Annex 10.1 fig 2 p17). The peak counts in areas where black-tailed godwit tend to feed are much higher¹² with a peak of $136\text{g}/\text{m}^2$.
18. We further know that at the beginning and through most of the autumn NKM must have *Macoma* at a greater density than $150/\text{m}^2$ because at this level black-tailed godwit abandon sites: see *Gill* (RSPB WR Appendix B2 tab VI 7). Given that the black-tailed godwit can normally feed here throughout the autumn moult before leaving to Pyewipes, this is strong evidence that the food resource far exceeds this figure at the start of the autumn and exceeds it at all times until late autumn.

Other features of North Killingholme Marshes

19. In terms of physical characteristics, NKM is classic intertidal mudflat.
20. Three points are of importance to black-tailed godwit:
- a. It is gently sloping with the result that the tide gently and slowly rises and falls with black-tailed godwit generally feeding right on the water's edge as the tide advances recedes. Whilst they can do so if they "have to"¹³, they do not choose to forage in 100mm of water;

¹¹ See footnote 9 to RSPB WR on Ex28.3 (as corrected orally on 12 November 2012 to refer to tissue dry).

¹² Richard Saunder's (NE) oral evidence on 12 November 2012 and see Annex 10.1 table 6 - 1.36×100 .

¹³ Mr Hatton's answer in response to Dr Prater's compelling case on this. No doubt some black-tailed godwit do sometimes feed in up to 10cm of water because "they have to" or because that is all that is available, but that is not their preferred method of feeding.

- b. It is a wide expanse of intertidal mudflat attractive to black-tailed godwit because of the opportunities for all round surveillance¹⁴; and
- c. The mud itself is undisturbed so that the invertebrates on which black-tailed godwit depend can prosper.

The RTE/managed realignment proposals

Food resource

- 21. Probably the most important single element in the assessment of the compensation proposals is whether there can be confidence that they will deliver adequate food resource to replace that lost. Unless the Examining Authority can be confident (to the required standard) that adequate food resource will be delivered, permission cannot be granted¹⁵ because the ecological function lost will not be replaced.

- 22. Inadequate water, spawn and food for invertebrates: In addressing the potential for an adequate food resource to be provided at the RTE, Able has consistently relied on experience at PHS¹⁶. Yet there is a fundamental difference between the managed realignment at PHS and the RTE proposed at Cherry Cobb Sands (**CCS**) which has not been considered by Able in evolving these proposals. The RTE works by limiting the amount of water which comes in to the site – to about 1/6th of that at PHS¹⁷. Able stated that at the managed realignment at Wallasea large numbers of invertebrates developed. But at the managed realignment at Wallasea 2million m³ of water enter the 80ha site each tide; here there will be about 200,000 m³ on an equivalent area (or about 1/10th)¹⁸.

¹⁴ Mr Hatton says that black-tailed godwit are found near sight line obstructions. That is not disputed and never has been. Dr Prater is however clear. They prefer and are found to predominantly utilise large open expanses of intertidal mudflat not close to sight line obstructions.

¹⁵ This is not a matter which can be left over to the CEMMP. It is fundamental at the consent stage. Is there the necessary confidence now? If so then the CEMMP can be the vehicle to ensure that the confidence is delivered in practice. But if there is not the necessary confidence now, Able cannot rely on the CEMMP to fill the gap. The CEMMP seeks to maximise the delivery within the parameters which will be fixed by the DCO – size/height/nature of compensation. It has to be demonstrated at this stage that the necessary food resource can be delivered within those parameters.

¹⁶ The EA has been clear that PHS is meeting its objectives. It cannot therefore be said – and is not said by Able – do not consider PHS because it is not working. Able positively rely on PHS as showing how the requisite food resource will be delivered here.

¹⁷ Oral evidence of Dr Dearnley ISH 12 November 2012.

¹⁸ New information from Mark Dixon in response to the oral discussion of this point and the 1/6th figure referred to orally by Able (Dr Dearnley).

23. This difference between the water volume in an managed realignment and an RTE will have a direct (and likely to be proportionate) impact on: (1) the amount of invertebrate spawn and larvae; and (2) the amount of food on which they depend which enter the site in the operational phase. Given that the biomass is a function of the amount of spawn/larvae at a site and the food available to them, if one reduces the volume of water one necessarily reduces the biomass. No answer has been given to this basic point¹⁹. The assumption that the food resource at the RTE will be as good as that at PHS is therefore flawed and based on no proper analysis as to how the food resource would be maintained over time²⁰ given the water volumes involved.
24. NKM/PHS/RTE comparative food resource: The requirement is to replicate the black-tailed godwit food resource at NKM (see para 2.16.1 RSPB WR). It is not enough to replicate the food resource at PHS unless it is shown that PHS and NKM food resource are equivalent.
25. Fundamentally there is no credible evidence that the food resource at PHS is equivalent to that at NKM on a like for like basis.
26. First, the data from PHS in *Franco and Mazik 2011* (RSPB WR Annex B2 Appendix VI 5) is autumn data. It cannot be compared with data from NKM in May. NKM biomass and abundance data in the autumn will necessarily be much higher than in Annex 10.1 and PHS data the spring will necessarily be much lower than shown in *Franco and Mazik*. There is no comparative data which shows that PHS biomass is equivalent at equivalent times of year to that achieved at NKM and on which the black-tailed godwit depend.
27. Second, we know that black-tailed godwit do not feed at PHS (in other than low numbers: see e.g. data for use of PHS in 2010). There is no evidence from usage that the actual food resource at PHS is sufficient to sustain significant numbers of black-tailed godwit (or other species) never mind the very large numbers at very high densities as achieved at NKM (see RSPB WR Annex B2 para 5.19). The site visit will have told its own story: NKM very heavily used; PHS lightly used.

¹⁹ And if an answer is now given in writing, there will be no opportunity for the RSPB to rebut it.

²⁰ Of course the water volumes will be higher in the fluxing phase but we are here concerned with the operational phase – year by year – when water ingress will necessarily be substantially limited.

28. Third, the data on PHS shows that whilst *Hediste* are present in relatively high numbers, *Macoma* are not. NKM supports much higher numbers of *Macoma* – black-tailed godwits preferred food - even in May than PHS in autumn. There is no evidence from black-tailed godwit usage that *Macoma* food resource at PHS is above the minimum threshold to which *Gill* referred, below which a site is abandoned by black-tailed godwit. The threshold was 150 *Macoma* per m². From the last part of table 5 (p58 of *Franco and Mazik 2011*) all but one area of PHS does not come close to this figure and that is even in September when the autumn depletion of the food resource has only just started. Compare the position at NKM (RSPB WR Appendix B2 para 3.5) where the average *Macoma* count in May across a wide area was 184 per m². This appears to be at least a large part of the reason why NKM supports high densities of black-tailed godwit in autumn and PHS does not.
29. Fourth, Able now say that the relevant biomass at PHS (*Hediste* only because *Macoma* levels are so low) is 13.28g/m² (and not the 6.53g/m² RSPB referred to from *Franco and Mazik 2011* at footnote 9 to its WR on Ex28.3²¹). Even if this figure is correct, it is lower in September than NKM biomass in May. There is no evidence there that biomass at PHS on a like for like basis is remotely similar to that at NKM.
30. In headline terms:
- a. The RTE will get a 1/6th of the water, the food for invertebrates and the imported spawn as PHS. There is no basis for assuming the invertebrate resource at the RTE will reflect that at PHS (or that colonisation will be as fast);
 - b. In respect of PHS:
 - i. PHS does not sustain large populations of feeding birds;
 - ii. PHS invertebrate relevant biomass in September appears (on Able's most recent figures) a little lower than transect 2-7 of NKM's biomass in May. If one were to look just at the transects where black-tailed godwit concentrate on NKM, the NKM biomass in May would be significantly higher than PHS biomass in autumn;
 - iii. Biomass at PHS is overwhelmingly dominated by *Hediste* with low *Macoma* counts. There is no evidence in black-tailed godwit usage or in *Macoma* abundance of an ability of PHS to sustain large densities of black-tailed godwit for any length of time (above the *Gill* threshold).

²¹ The RSPB relied on figures in table 4 understanding that these represented biomass (g/m²) because that is what the text of the report said. It now appears that the text is misleading and that the figures in table 4 are not g/m² and that to obtain g/m² it is necessary to analyse the appendices in detail. When Able have done this they come up with a figure of 13.28g/m².

31. There is therefore no evidence:
 - a. As to the levels of biomass in autumn at NKM necessary to sustain the large black-tailed godwit population there; or
 - b. That such biomass (whatever it is) can be delivered in an RTE at CCS.

32. Reliance on some theoretical, estuary wide biomass figure below which 10% of birds will die²² is inappropriate: see debate on *Stillman* et al 2005 on 12 November 2012 and shows how low Able has set its sights. This compensation is not about replicating the average biomass density across the estuary as a whole at which less than 10% of birds will die but about replicating NKM - a site which sustains exceptional densities of black-tailed godwit (and other birds) in far higher numbers and densities than across the estuary as a whole.

33. The compensation therefore fails at this first hurdle. This is not a question of confidence that adequate food will be available at the RTE to compensate for that lost at NKM. There is no evidence that there will be equivalent food to that lost. This is a basic failing in the evidence before the Examining Authority and the Secretary of State.

34. There is no sustainable evidence that adequate replacement food resource will be delivered on the intertidal mudflats or that the common ground in RSPB WR para 2.16.1 can be achieved.

35. Given that food resource is the essential foundation of the ecological function, this makes it logically impossible to have any confidence that the ecological function lost will be replaced through the compensation package. CEMMP para 103 correctly notes that provision of large prey items such as *Macoma* and *Hediste* poses “particular challenges”. This is correct. There is no evidence that these challenges can be overcome in an RTE. Therefore the minimum requirement of 1:1 (44ha) is necessarily wrong

36. Able and NE appear to think that a later survey of NKM quality in autumn 2013 could be used to set targets in the CEMMP. The logically necessary prior stage though is to be satisfied that the RTE can deliver that quality. There can be no lawful basis for reliance on a target in a CEMMP if there is no sustainable evidence that it can be met.

²² Ex28.3(2) para 1.13.2 third bullet point.

37. Able appear to rely on a number of other matters to overcome this basic flaw in their proposals:
- a. The potential availability of CCS foreshore as a supplementary feeding ground;
 - b. The ability of black-tailed godwit to supplement their food at the new wet grassland;
 - c. East Halton will provide supplementary feeding; and
 - d. There may be spare carrying capacity for black-tailed godwit elsewhere.
38. All points are inconsistent with the common ground established through RSPB WR para 2.16.1 at the last issue specific hearing (**ISH**) and upon which the RSPB has relied since. The intertidal mudflat in the compensation package have to be able to support the feeding requirements of (at least) 2,566 black-tailed godwit.
39. In any event all points are not justified on the facts/evidence.
40. CCS foreshore²³: There is no evidence of spare carrying capacity for *Macoma* eating black-tailed godwit at CCS foreshore. CCS foreshore is exceptionally heavily used throughout the year by a wide range of species at present (Ex35.14) who will be competing for its food resource. In particular it hosts nationally and internationally important knot populations of up to 5,000 birds from October to March (their critical over-wintering period). Knot are a specialist *Macoma* feeder²⁴. There are thus very large numbers of Knot dependent on *Macoma* at CCS foreshore in the winter. If black-tailed godwit were to extensively use CCS foreshore in the moult period, the food resource for knot in winter would be depleted. So (even if it was legally relevant which is not accepted) Able would have to show that there was spare carrying capacity at CCS foreshore over the annual cycle. They have not even sought to do so²⁵.
41. Wet grassland: the wet grassland is correctly put forward as a possible supplement to and not a substitute for intertidal mudflat. It is referred to in various places as a buffer or similar.

²³ Raised substantively for the first time orally at close of business on 12 November 2012 and never in writing.

²⁴ As explained by Dr Prater orally on morning 13 November 2012 and not rebutted. The RSPB will now have no opportunity to respond to any points Able make in response.

²⁵ Able appears to rely on Allen 2006 to demonstrate that CCS foreshore has a good food resource. Allen contains no biomass data at all and contains no data whatsoever (abundance, size or biomass) for *Hediste* or *Macoma*. Allen is therefore of no relevance and reliance on it is surprising. When one gets into the detail of Allen, all it shows is that in terms of invertebrate numbers, CCS foreshore has a very high number of one particular, irrelevant species (Ex34.2 p15). In so far as Allen is relevant at all, it shows that NKM (site 6 on the south shore) is the best site on the whole south shore (p12/p43).

42. The RSPB has always accepted that black-tailed godwits can and do use wet grassland at times: see photo at Ex28.3(2). However, wet grassland is not their chosen autumn feeding habitat (see *Gill table 2* at p46 - RSPB WR Appendix B2 tab VI 7). The autumn habitat is estuarine mudflats and “occasional use of river valleys and gravel pits” – not wet grassland. Wet grassland is used in winter or spring (see the same table) principally when the intertidal mudflats have been depleted (below the *Gill* threshold) or when the conditions on the intertidal mudflats are too harsh. Of course there will be exceptions to this general pattern but intertidal mudflat is needed for feeding in autumn and wet grassland is used later in the cycle.
43. The intertidal mudflat at NKM is black-tailed godwits feeding area of choice in the autumn period. It is that autumn function which is lost to them by the development at NKM and which has to be replaced in the RTE. That is why the common ground in the RSPB WR para 2.16.1 is correct. Replacing intertidal mudflat with wet grassland is not compensating for the ecological function lost. It is appropriate to remind ourselves of *Gill*. When *Macoma* resource in the intertidal mudflat falls below 150/m² black-tailed godwit cease using the site in question. Thus the intertidal mudflat here must deliver at least that or they will not be used and there will be no role for the wet grassland as an adjacent buffer food supply.
44. Spare carrying capacity across the estuary: Orally, it was contended that black-tailed godwit number continue to increase substantially and that therefore there must be spare carrying capacity. There is no evidence of continuing growth in black-tailed godwit numbers in the SPA. In fact quite the reverse is true (please see the RSPB Response dated 1 November 2012 to Examining Authority Rule 17 Request re: EU Management Plan Annex 1 page 4 showing black-tailed godwit numbers over the last five years which shows no increase).
45. East Halton: The proposal is for a grassland not a wet grassland. It will not be wet enough to serve any black-tailed godwit function. It is not near any intertidal mudflat that are currently used or which are usable by black-tailed godwit (too narrow). It is far distant from CCS and the RTE and there is no evidence that it can make a significant contribution to the feeding needs of black-tailed godwit. Also at present this area is used by Golden Plover, redshanks and others (Ex28.3 part 8 p14 - 15) and no consideration of the impact on these species has been carried out even if it was thought that black-tailed godwit could and would use this area.
46. Flawed legal analysis: In any event, the first and third point above rely on a flawed legal analysis. The whole SPA and the whole of its function including any spare carrying capacity is

currently available and is protected by the legislation. Here the development will destroy a very important part of the SPA (and undermine the function of functionally linked land at NKHP). The purpose of the legislation re: compensation is to ensure that SPAs do not find their overall ecological integrity impacted by individual developments. Part of their ecological function is their spare carrying capacity – their ability to cater for populations in extreme conditions and/or to cater for population fluctuations. It is wrong in principle for Able to contend that it can call on any proved existing spare capacity in the SPA so as to minimise the extent to which it has to provide compensation. The RSPB's position is that any losses to the SPA have to be replaced by provision of new habitat of equivalent quality: see UK Guidance²⁶ at paras 20, 21 and 22. The harm in para 22 is the ecological function lost – the compensatory measures must offset that harm.

The physical conditions in the RTE

47. In addition to food resource, five substantial points have been raised in RSPB WR on Ex28.3 to show why the mudflats in the RTE will not be of equivalent quality for black-tailed godwit to those lost:
- a. The bunds and the lack of very wide open spaces with unimpeded views (paras 13a and 68);
 - b. The flat nature of the fields in the RTE and the consequent implications for black-tailed godwit feeding (paras 13b, 69);
 - c. The neap tide cycle and availability of feeding areas (paras 13c and 70);
 - d. The disturbance to the mud by levelling and dredging and thus impact on the invertebrate resource (paras 77 to 79); and
 - e. The risk of accretion to saltmarsh given that the RTE ground levels will be well above Mean High Water Neap (**MHWN**)(at least 2.1m compared to a MHWN of 1.9mAOD).
48. The 4th and 5th of these points are considered under quantum below.
49. The bunds: Black-tailed godwit generally feed in large open areas where they can have unobstructed views over long distances. Areas close to bunds will be unattractive to black-tailed godwit. Mr Hatton has not sought to demonstrate that large numbers and densities of black-tailed godwit choose to feed in such enclosed spaces. The RSPB has never said that

²⁶ Defra Habitats Directive Guidance on the application of Article 6(4) (draft August 2012).

black-tailed godwit never feed in such areas – what it has said consistently is that they choose (in vast numbers) open areas in preference to areas close to obstructions. The field structure of this RTE therefore makes the intertidal mudflat less attractive to black-tailed godwit than those at NKM which have to be replaced.

50. Flat fields and tidal advance: The largely flat nature of the fields (necessary to ensure there is enough water in them: Ex28.3(3) para 4.5.11) means that once the tide outside gets above culvert level, the water level in the fields will rise uniformly and rapidly across the whole field. There will be no gentle and slow movement of the tide across the field. Yet black-tailed godwit feed (and at NKM they can be seen feeding) at the edge of the gentle and slowly advancing tide. The engineered solution by virtue of being flat means that the environment created will not be consistent with the feeding habits of black-tailed godwit.
51. The Neap Cycle: Ex28.3(3) p62 sets out a typical cycle²⁷ based on a field level of 2.1mAOD²⁸. It shows that one field will be inundated to more than 100mm for 16/28 of the cycle and not available to black-tailed godwit. So for more than half of the monthly cycle there will be even on Able's analysis a maximum of **44.9ha** of intertidal mudflat (taking into account disturbed areas: see para 8.2.7). This is just marginally greater than 1:1 – 44ha is not treated as a minimum requirement but as the close to the maximum amount of intertidal mudflat which can be delivered for most of each tidal cycle even from the outset of the operational phase. This and only just above Able's (self-imposed) minimum requirement and allows no scope for uncertainties, changes over time and/or under-performance of any fields.
52. But the point goes much further. One further field will be inundated to 100mm for 12/28 of the cycle (RTE4) and the other two fields will be inundated to that depth on an alternate basis for two tides each. All of this is necessary to keep the intertidal mudflat adequately wet for the invertebrates to survive and for birds to feed on them and to avoid emergence of saltmarsh. On the basis of that assessment for about ½ the cycle (in the scenario shown at p62) there will be just **15ha** acting as intertidal mudflat. Even then the ebb and flow of the water will occur only every other tide and will not be a natural ebb and flow – see above. This compares with the natural intertidal mudflat lost of 44ha.

²⁷ It is based on the MHWN. Some cycles will have higher levels in the neap tide and so may require less impoundment.

²⁸ The MHWN is 1.9mAOD here. The tide will have to be at least 0.2m above the average (mean) HWN before any other water enters the cells from the tides. It is therefore wrong to portray as Able sought to that this is a worst case scenario – it is an average scenario and there will persist at tides above even the mean.

53. Dr Prater accepts that black-tailed godwit have been known to forage in 100mm of water. His point is that they do not generally choose to do so. They choose to feed on the water's edge as the tide rises and falls - that is, by definition, ecologically preferable for them. Mr Hatton's response on this point was telling – they will feed in 100mm of water here because “that is what is available. They will have to here”. With respect that is the RSPB's point – the black-tailed godwit will have to feed in sub-optimal situations because they will have no choice.
54. All three of these points illustrate a stark difference of approach. The RSPB experts recognise that the success of a species depends on maximising advantages and minimising for example energy expenditure to obtain their food requirements. How they operate in nature is, by definition, that which is ecologically preferable for them. They feed, move and roost in ways which maximise their energy and survival prospects and minimise the energy expenditure and risks to which they are exposed. This approach of optimal foraging has been shown in all wader feeding studies and is a fundamental point in assessing their feeding choices and to their long term success.
55. For black-tailed godwit this means feeding in large open areas, at the water's edge and not in 100mm. None of these preferences will be available to them over most of the RTE for much of the time. Yet no account has been taken on this in identifying the size or design of the RTE.
56. It is noticeable that the last proposals did not have the second and third of these problems. They were gently sloping (then necessary it was said to achieve run off) and were not inundated for long periods. Those proposals were flawed because there was not enough water to keep the fields wet enough. In changing the proposals to overcome the problem with inadequate water, Able have inadvertently introduced new problems which carry the inevitable risk of seriously impacting upon the ability of the RTE to meet the needs of the displaced black-tailed godwits.
57. The correct approach once the managed realignment proposals failed and the first RTE proposals failed was not to seek to redesign within existing fixed parameters in order to overcome the identified problems but to start from the requirements which an RTE had to meet (wet enough to sustain the requisite quality of intertidal mudflat so as to deliver the excellent feeding grounds required, tidal effect so as to replicate as far as possible the natural environment; not impounded for long periods so as to be practically unavailable to black-tailed godwit; suitable environment for black-tailed godwit - so not flat, not constrained by major

obstacles). This would have dictated at the very least that the fields were designed at a much lower base level. If that could not be achieved here (because of the volume of spoil) then alternative sites at a lower level would have had to be investigated. If and to the extent that any sub-optimal features were to be introduced for the long term (intrinsic to the design) then that would necessarily require a long term uplift to the 1:1.

58. In any event, given each of the above factors independently there is no good basis for a minimum requirement of intertidal mudflat of 44ha (1:1).

Quantum

59. Once established, there will be no usable intertidal mudflat for black-tailed godwit in the managed realignment (RSPB WR on Ex28.3 para 65). Even at this stage no-one has disputed this²⁹. It is therefore necessary to look to the RTE itself to find the requisite amount of intertidal mudflat.

1:1 minimum requirement

60. 44ha is stated as a minimum requirement. In fact, on analysis, it appears that for half of each cycle this is in fact the amount of intertidal mudflat which is predicted to be delivered - it is not a minimum requirement at all but an actually delivered figure. This is because as shown above, for most of the average cycle, this 1:1 is only just exceeded if three fields are treated as available - 44.9ha (even though two of them will be inundated for prolonged periods to 100mm).
61. Able sets itself the minimum requirement of 44ha. It is telling how this has changed over time. Originally, 1:1 was deemed appropriate if and when the compensation proposals had been shown to be achieving their ecological objectives. Now the 1:1 is a minimum requirement against which performance is judged from the commencement of the operational phase, it is in fact the amount which can be delivered from the outset (for half the cycle) and there is no ability to secure more if performance is judged to be unsatisfactory. If the former, and correct approach was adopted now, it would necessitate far larger provision in the RTE.

²⁹ And of course the RSPB will have no further chance to respond to any point on this which is now raised.

62. 1:1 is entirely inappropriate as a minimum requirement at the commencement of the operational phase or at all. It is inconsistent with the guidance at both EU and UK level. There is no comparable case where 1:1 or anything similar has been required. Even in cases where there is disturbance to, but not loss of, intertidal mudflat, ratios greater than 1:1 for the whole disturbed area for just the compensation site has been required³⁰. Here we lose 44ha (not just disturbed but actually lost) and get back 44ha. There has been no rebuttal of the RSPB's analysis of ratios from elsewhere. Able has made reference to Bristol historically - this was not a 1:1 situation and in any event is plainly distinguishable on the facts for reasons explained by the RSPB. There has been no attempt to rebut that analysis.
63. Further, use of the 1:1 minimum fails to take into account:
- a. The major challenges in securing a food resource of anything like the quality of NKM. On the evidence available there is no basis for assuming that an RTE can deliver food resource on a 1:1 basis with that lost for the reasons addressed above;
 - b. The physical problems with an RTE which make it less usable ha by ha than that lost: the bunds; the lack of tides and the inundation points (and the dredging and saltmarsh points below);
 - c. The fact that RTEs in this sort of very high sediment environment are untried, untested and novel with consequent uncertainties and risks;
 - d. The fact that the method of keeping the RTE wet by impounding water (necessary because of the level at which the RTE is built) is untried, untested and no doubt poses significant challenges – see e.g. Mr Dixon's concerns about how the water will in fact flow from one field to the next through the culverts given that they are all on a level; whether the sluices are big enough etc... – all giving rise to uncertainties and risks;
 - e. The uncertainties and risks associated with heavily engineered solutions trying to replicate natural conditions.
64. Able has not suggested that each of these issues do not pose significant challenges nor do they claim that there are no uncertainties or risks attached. They have sought to downplay the significance of all these points but they do not deny their relevance (except perhaps the bunds – Mr Hatton orally).

³⁰ So if there is a disturbed area of 10ha, more than 10ha of compensation area has been required in addition to, of course, steps to mitigate as far as possible the extent of the disturbance on the disturbed areas. Thus one is left with 10ha disturbed, plus 10ha compensation.

65. The Examining Authority is reminded that on all substantive issues re: managed realignment and the first RTE, the RSPB experts highlighted flaws with the proposals which Able recognised it had to respond to. At each stage, it has been the RSPB's careful critique which has led to new proposals being worked up. Nobody claims that Mr Dixon and/or Dr Prater are anything other than top experts in their fields and doing other than giving the Examining Authority the benefit of their wealth of experience and expertise. They have put forward compelling reasons (with detailed evidence) in a very short time frame highlighting the problems with the current RTE proposals. There has been no rebuttal in writing of anything they have said. There is, on any view, a strong case which has to be answered in detail as to why these RTEs will not deliver ha:ha that which is being lost. There has been no such answer.
66. It follows that the minimum requirement is flawed on each basis set out above. Cumulatively, those matters demonstrate why, at this stage and on the current evidence, there can be no confidence at all that the compensation proposals will replace that lost (as agreed in the common ground).

The evidence on areas to be delivered

67. It is accepted that from a pure engineering perspective, the proposals might work (although see concerns re: water flow between flat fields and size of sluices. Fundamentally though NE's consultants, Royal Haskoning was not carrying out any assessment by reference to the ecological needs of black-tailed godwits or other species.
68. Whilst the engineered scheme may work, the evidence does not demonstrate that 1:1 will be delivered.
69. We now understand³¹ that each field will be 18ha of which Able assume 3ha will be unavailable by reason of: (1) concrete channels and pools; and (2) extensively disturbed areas from dredging (Ex28.3(3) para 7.5.16). This means that the maximum available intertidal mudflat within the RTE is about 60ha if all the assumptions of Able are correct.

³¹ Although Ex28.3(3) is unclear on this and the fact that chapter 8 has to be read as coming before chapter 7 is to say the least confusing.

Dredging

70. These figures takes no account of: (1) the areas less intensively dredged (a further 2.5ha per field – Ex28.3(3) para 7.5.16), (2) the areas levelled (0.4ha per field – para 7.5.8); or (3) uncertainties on these figures.
71. In respect of (1) and (2), making no allowance for these figures cannot be justified. On any view these operations will impact upon the quality of the intertidal mudflat resource. An allowance is required and will necessarily reduce the available intertidal mudflat to below 44ha (1:1). None of these operations occur at NKM and necessarily make it more difficult for the intertidal mudflat at the RTE to reach an equivalent quality as naturally achieved at NKM.
72. In respect of (3), there are a number of major uncertainties. We highlight just two.
73. First, the area dredged is directly linked to the sediment levels. If the sediment levels are greater than predicted (and the predictions appear to be central estimates) then the amount of dredging and area of disturbance will be greater.
74. Second, the time taken for areas to recover from dredging is assumed to be a few months/one year such that there is no cumulative impact year on year. That is at the highly optimistic end of the Marlin analysis³² for recovery from removal of sediment for *Macoma* and *Hediste* – moderate sensitivity – 1 – 10 years. Given that Marlin covers a wide range of environments (but not managed realignments) and given the very low volume of water coming into this RTE (see the 1/6th figure above) the use of the most optimistic recovery assumption in an untried, novel and highly experimental situation is not justified. To the extent that any recovery takes more than a year, there will be a cumulative effect with the next years dredging such that more of the intertidal mudflat will not be at full capacity. Allowance needs to be made for these factors.
75. No such problems arise at any of the 44ha at NKM.
76. Given these factors, the 60ha figure when there is no impoundment (and the 44.9ha for more than half the cycle) is optimistic, not precautionary and not based on sound science.

³² Ex28.3(2) Table 1-9 (in our version!).

77. Further, we repeat the basic point that the 60ha figure will only be intertidal for less than half of the cycle - p62. As soon as impoundment is required, the figure drops to 44.9ha. In reality for much of the cycle only 15ha will be operating as intertidal mudflat and available to black-tailed godwit for their normal feeding (and even then not in the same sort of environment re: water levels and tides as they choose in the natural environment).
78. All these factors demonstrate that the RTE levels are simply too high. If they were lower, there would be no need for impoundment, the fields could slope, dredging could be less intensive and a higher area of useable space would be maintained.

Saltmarsh development

79. The RSPB has set out in detail why the height at which intertidal mudflat will change to saltmarsh is at and above 1.9mAOD. It has explained this in detail at various points through the process. Able's rebuttal of this has been on the basis that experience at PHS shows that saltmarsh only emerges at 2.5mAOD. Mr Dixon has explained why this is the wrong conclusion to be drawn from PHS and his analysis has not been rebutted. The correct starting point is that, all other things being equal, saltmarsh will form at MHWN (about 1.9mAOD). Able did not rebut this orally. The correct starting point is 1.9mAOD not 2.5mAOD which has been Able's assumption throughout. Able's scheme has been built on a wrong starting point.
80. What Able say is that because of the way the RTE will be operated (inundation, reservoirs and maintenance of high water levels) saltmarsh accretion will be controlled. On their own data they do not appear to achieve the required number of annual inundations to avoid saltmarsh accretion. They do not demonstrate that water coverage of 100mm is enough to prevent saltmarsh development. They do not give any example of a site at above MHWN where saltmarsh development has been successfully prevented. They suggest it will be possible to pick out saltmarsh species by hand. Over 44ha? They seem to rely on chemicals, which are no longer available. The short point is that above 1.9mAOD there will be a constant battle to prevent saltmarsh development. That will necessitate regular, intrusive activities including potentially much more intensive dredging than assumed in the modelling and thus greater disturbance to the food resource and the birds. If the fields were designed to be operating below 1.9mAOD (as is the vast majority of NKM) none of these problems would arise.

Implementation/delivery

81. The RSPB does not accept that there is any arguable “over compensation” here such as to compensate for any delay in provision. Reliance is placed on all the above factors.
82. The submitted timeline³³ shows that:
- a. Impact on NKM will occur in June 2014 at a time when 9ha of wet grassland is partially functioning (having been developing for nearly two years) and 17ha of wet grassland will be partially functioning (having been developing for about a year). Neither period is anything like enough for the target level of worms to be delivered³⁴. Even if it was, the suggestion that wet grassland can be a substitute rather than a supplement to intertidal mudflat is wrong for reasons already addressed;
 - b. When the impact on NKM occurs the seawall at CCS will still be 15 months a year from breach – the intertidal mudflat compensation will not even be starting to be established;
 - c. Even on Able’s assumptions as to colonisation and timelines (apparently not allowing sufficient time for the stabilisation of the slopes – see EA oral comments) it will not be until the autumn of 2017 that black-tailed godwit will have biomass developing in the RTE and not until the end of 2018/19 that a full biomass will be delivered; and
 - d. There will thus be a 5-6 year delay between loss of NKM and delivery of what Able claim will be equivalent intertidal mudflat in the RTE.
83. The result will be that there will be complete loss of an intertidal mudflat of exceptional quality and importance for black-tailed godwit with no replacement for several years. That is not possible under EU or UK law or policy.
84. Put bluntly, the legal obligation (in reg 66 Habitats Regs³⁵) is not to secure/ensure that the overall coherence is protected at some future point in time. The reliance on the Humber Port case³⁶ is wrong for the reasons given at RSPB WR on Ex28.3 para 101. In *Humber Ports* there was no evidential case presented to the inquiry that the compensation was necessary contemporaneously and the criticism of the Secretary of State’s conclusions on this issue were not justified by the evidence. Here of course the RSPB case is that the compensation needs to

³³ Handed out at the start of ISH 13 November 2012.

³⁴ Only one paper shows a timeline of 2 years – it is wholly irrelevant referring to beetles etc... It is highly surprising that, even when the point had been raised by the RSPB in detail in writing, Able continued to rely on this paper. The other two papers are not about WGL at all but grassland.

³⁵ The Conservation of Habitats and Species Regulations 2010 (as amended).

³⁶ *Humber Sea Terminal v Secretary of State for Transport* [2005] EWHC 1289.

be contemporaneous because of the significance of the habitat lost, the numbers of birds involved and the lack of any equivalent alternative. The wet grassland is an attempt to provide a supplementary feeding resource but it does not replicate that lost.

85. As to the policy guidance, many relevant sections have been read out on 13 November 2012 and are not repeated here. Suffice to say, the overwhelming thrust of both sets of guidance is that compensation should normally be delivered before the adverse effect occurs (para 24 UK guidance³⁷). The guidance recognises that there may be cases where the compensatory measures may not be fully functioning (para 25) – “in such circumstances, it may be acceptable to....”. This is not a situation where the compensation measures are not fully functioning at the time when the harm applies – this is a situation where the RTE is not functioning at all at the time the harm is caused and on Able’s case will not be for many years. There is nothing in the UK guidance which contemplates such a position.
86. The EU guidance³⁸ is even clearer – the compensation must ensure “the continuity” (para 1.5.6) of the ecological processes essential for maintaining the biological structure and functions that contribute to the overall coherence of the network. Here that means securing the continuity of habitats necessary for the black-tailed godwit. That requires a tight co-ordination. It does not contemplate a major time lag. It is only where continuity cannot be “fully achieved” that over-compensation may be relied on to make up the gap – not where it will not be achieved at all. Further time lags are only permissible when they “would not compromise the objective of no net losses to the overall coherence....”. But here of course absent alternative habitat proved to be available there will be likely to be net losses to the overall coherence for black-tailed godwit. The examples given in the EU guidance strongly support the position of the RSPB.
87. Able appear to rely on examples elsewhere where some limited delay in provision of compensation has been tolerated. They have done no comparative assessment as to why such limited delay was acceptable in those cases or the extent of the harm which had to be compensated for. The RSPB is clear that there is no comparison on the facts between the harm here and the harm at those other sites.

³⁷ Defra Habitats Directive Guidance on the application of Article 6(4) (draft August 2012).

³⁸ EU Commission Guidance on Article 6(4) of the Habitats Directive (January 2007).

CEMMP

88. In respect of the CEMMP, an advanced draft was only provided at 9am on the final day of the hearings. It was quickly evident that it was not fit for purpose and in particular did not have appropriate objectives, targets and triggers for remedial action. The RSPB (not any other party) immediately demonstrated why the key target on black-tailed godwit was wrong – table 7 was quickly withdrawn. Yet now it appears that Able is going to be allowed to reformulate the CEMMP and submit it without the RSPB having any opportunity to comment on the revisions, the new targets, objectives and triggers. This might be appropriate if the changes were only drafting changes and the key issues had been agreed/debated but they have not. The RSPB cannot understand how last minute and fundamental changes to a key document on which it will not have any chance to comment is consistent with the statutory processes, with any concept of natural justice or with good environmental decision making. The Secretary of State will be making his decision on information and evidence which has not been through the statutory processes.
89. The RSPB has commented from the outset that a robust CEMMP is fundamental to the confidence in any compensation package. At all other port inquiries it has played a very active role in agreeing the package through the inquiry processes with the result that before the close of the inquiry the package was, in all cases, agreed (except Dibden). That process of agreeing what requirements the compensation had to meet, how it would do so, how compliance would be monitored and what feedback loops were, on the facts, necessary is complex and highly location and fact specific.
90. Even in a case where there is confidence that the proposals will work (because they are not novel or untried/tested) and where the compensation ratio is, even then, high enough to allow for uncertainty, where the harm by comparison with here is relatively limited and where the site is not predicted to be particularly accreting (or similar) such as to require major interventions, the CEMMP has to have feedback loops. Here the need for feedback loops to trigger further actions and, on the facts here, further compensation measures if the proposed compensation measures do not work, is stark. Yet what we have is a scheme which sets unclear targets and which simply requires Able to do its best to try to meet those targets within the fixed parameters of this compensation. Given that there is substantial uncertainty as to whether these proposals will work at all, that is not sufficient or appropriate. Put another way, for the Examining Authority to be able to sign off on the compensation package being

proposed including the CEMMP it will have to be sure that this package will work and will have the ability to achieve its objectives because there is no feedback loop in the CEMMP which would require different/greater measures if the proposals do not work.

91. In terms of the targets, table 7 has now been deleted. The data in table 6 is flawed. The only relevant column is baseline annual maxima (and perhaps the winter maxima and passage maxima). The 77.5ha summation at the top is wrong. The counts for black-tailed godwit were overwhelmingly on areas C and D. The total area lost which those totals of birds use is 44ha not 77.5ha. The use of 77.5ha wrongly reduces the required densities in the second part of table 6.
92. A further list of criticisms of the current draft CEMMP is attached (see Annex I).

The test on degree of confidence required

93. It is explained above that whether the test is “requisite degree of confidence” or “no reasonable scientific doubt” makes no difference on the facts here. However the RSPB repeats its submission that the correct test is no reasonable scientific doubt. That is simply an articulation of the precautionary principle in practice as adopted in the case law (not only *Waddenzee*³⁹ which built on existing case law on the precautionary principle and was not the point at which the precautionary test was invented).
94. The Habitats Regulations transpose the requirements of European law on environmental protection. By definition therefore and having regard to the recitals of the Habitats and Birds Directives, a purposive approach to construction and a precautionary approach to environmental issues is required. The legislation is to be construed in accordance with the purposes of both Directives which it transposes and Article 191 of the EU Treaty. It is plain that those purposes are to provide a high degree of protection to relevant species and their habitats and to create a situation in which the bird life of Europe can thrive. The precautionary principle is well known and applied as a matter of course across a wide range of EU law functions.

³⁹ C-127/02.

95. The question then is what does the precautionary principle require? The principle has been identified and applied in a number of cases where there has been scientific doubt. There are two possible scenarios – (1) where one is legislating on the basis of doubts to avoid possible risks before you can be sure from the science whether those risks will materialise; and (2) decision making on a precautionary basis where you are not sure what the consequence of the proposals being determined will be. These are two sides of the same coin. In the former, the precautionary approach can justify legislation before there is the scientific proof that the risk will materialise – what is required is more than mere supposition (*Monsanto*⁴⁰ at para 106) but specific evidence not excluding scientific uncertainty that makes it possible reasonably to conclude on the most reliable science available that implementation of those measures is necessary in order to avoid *potential* risks is sufficient (*Monsanto* para 113). The wording is somewhat opaque but the overall position is clear. Where the best science shows there is a doubt, that doubt can justify legislating to avoid potential risks on a precautionary bases. That was the approach to the law adopted by the Court in *R v Secretary of State for Trade and Industry ex parte Duddridge*⁴¹ if the precautionary principle applied (although it was then concluded that the precautionary principle did on the statutory scheme in issue there, apply). Applying that approach in the second scenario above and adjusting it to take account of the context, results in the no reasonable scientific doubt formulation (see how that test was justified and articulated in *Waddenzee* by reference to the Monsanto type authorities.)
96. Further the UK guidance refers to harm which “must” be compensated (not should be or should try to be) para 20; “must have confidence” – para 22 – one cannot have confidence if there remains reasonable scientific doubt; para 22 bullet three refers to “technically *proven*”, para 26 – “ensure”; para 24 – “must be secured”. None of these requirements can be met if there is reasonable scientific doubt as to whether the proposals will work. The EU guidance para 1.5.2 refers to the best scientific knowledge available, and no reasonable *guarantee* of success should not be considered. A lower hurdle than no reasonable scientific doubt is inconsistent with any of this language.
97. There is no basis in law or policy to treat the test in *Waddenzee* as somehow limited to the significant effect and integrity test stages.

⁴⁰ C-236/01.

⁴¹ [1995] Env LR 151 (DC) and [1996] Env LR 325 (CA).

Power to amend applications

98. In addition to our previous submissions, we refer the Examining Authority to the:
- a. Consultation on “Guidance for the examination of applications for development consent for nationally significant infrastructure projects”: DCLG April 2012 para 107-108. It is only if the Secretary of State accepts the change (para 107) that the Examining Authority’s options in para 108 apply. Here there has been no application to the Secretary of State to amend the application and no assessment by him as to whether it is appropriate to do so; and
 - b. The approach adopted by the IPC⁴² on the Covanta application for an EFW facility at Merthyr Tydfil where the IPC considered there was no power to amend in the circumstances and at the stage there pertaining.
99. The RSPB repeats its case that there is no power to amend here in the circumstances here pertaining.

The process adopted

100. The Examining Authority has tried to adopt a process which is fair. However, the very late amendment has made this impossible.
101. Irrespective as to the detailed legal points already made, the effect of the very late amendment of the RTE here is that the process for considering the fundamental changes has been significantly truncated into a timeframe which would not be allowed on a new application. The RSPB had only 4 weeks to assess the new proposals from beginning to end on major proposals for large and novel RTE schemes. Its successful rebuttal of earlier flawed schemes has necessarily taken much longer. The RSPB submitted detailed written representations so far as time allowed on the new proposals. However, the process forced on the Examining Authority by the late amendment has omitted the stage of Able responding in writing to the RSPB’s written reps – rule 8(1)(c) of the Examination Procedure Rules.
102. In a primarily written process that stage of written responses to written reps is fundamental. It allows the issues between the parties to be identified in writing and *for the RSPB to prepare its*

⁴² IPC letter to Applicant’s dated 14 July 2011.

case on those issues for the ISH. Instead here, the RSPB had no knowledge of Able's position on the key RTE issues the RSPB raised until points were raised orally in short form without the evidential material available on which Able's points were made. This is the opposite of how the process is meant to work and is unacceptable on an issue of this importance and self evident complexity (given the history).

103. Even more inappropriately, Able reserved its position to comment later (post ISH) on points made by the RSPB. This overall approach is wrong in principle. The statutory for Able to be given an opportunity in writing to respond to the RSPB so that the issues are distilled and then for an ISH (if appropriate) at which the differences between the parties on the key issues identified through the written processes can be debated on an informed basis as to what the respective positions of the parties are. The RSPB has been denied the opportunity of knowing before the ISH (or even now) what the detailed response of Able is to its fundamental concerns set out in RSPB WR on Ex28.3.

David Forsdick
Landmark Chambers
20 November 2012

ANNEX I

Able Marine Energy Park The RSPB's comments on the CEMMP submitted 13 November 2012

1. Summary

It is still a very poor report that does not appear to have understood the purposes and general principles of monitoring or what monitoring will be required at Cherry Cobb Sands (CCS) regulated tidal exchange (RTE) and new wet grassland sites or to have taken into account how the proposed sites would be managed and maintained. NE made the point (which we supported) that it needs to be a clear plan about exactly what will happen, how it will be monitoring, against what baselines, objectives etc and how the feedback loop mechanisms will work as well as the precise functions of the EAG (which should have more control and therefore be a steering group not an advisory group).

2. The purpose of monitoring

- The purpose of monitoring is to define if the site acts as a successful compensation habitat for that destroyed or lost, and for the species that depended upon it, and if the site is having any detrimental or positive impacts on adjacent parts of the SPA/SAC.
- To be effective the monitoring should also be able to guide any proposed remedial actions that may be required if the site falls short on delivery for the target species and habitats. If the site fails to deliver the required compensation, there must be a mechanism identified for assessing what additional measures are necessary outside the site if required and how that should be assessed.
- Monitoring programmes should be to an agreed timescale and budget to prevent “project creep” and assist in concentrating on essential data and practical management issues.

3. General principles of monitoring

- All monitoring must establish a pre construction data set (this is particularly important in relation to the invertebrate surveys they are carrying out at the appropriate time of year e.g. September), a post construction data set and a control site data set for objective analysis to be made.
- Before a monitoring programme can be established, quantifiable success and failure factors should be agreed.
- These success or failure factors should be used to define potential impacts and test if theory or models used in site design were correct. At present there is no proposed mechanism if the models and assumptions are shown to be incorrect.

4. Monitoring for Cherry Cobb Sands

- The CEMMP recommends monitoring for bird use, invertebrates and fish but appears to have neglected some very significant factors that will require detailed pre and post construction measurements.

- No monitoring is proposed to ensure that the models used in the sites' design are accurate, in particular the tidal flows and tidal volumes through the managed realignment breach and the RTE structures, accretion or erosion within the managed realignment or RTE areas, sediment in suspension in the swept tidal volumes, sedimentation rates within the RTE "fields", tidal frequencies, available bird feeding days.
- No monitoring within the RTE "fields" is proposed on e.g. water or mud temperatures, plant colonisation, mud strengths (sheer strength), sediments grain size.
- No monitoring is proposed on the operation and management of the site such as frequency of water control structure operation throughout a tidal cycle, dredging and flushing methods and efficacy and impacts on invertebrates or bird feeding, sea wall and bund condition, saline intrusion to adjacent farmland or ditches.
- Fundamentally no quantitative targets are set for success or failure factors including measuring the area of compensation habitat to be created. Although we do now have Table 6 which (if amended) will set out the numbers of birds affected but text will need to be changed as at present refers to Table 7 targets which has been agreed as inappropriate and deleted (the Issue Specific Hearing (ISH) on Tuesday 13 November 2012)
- The existing data sets proposed as a comparison seem very inadequate with little attention to establishing full pre construction data. Although it has now been agreed that a further baseline biomass data set will be established to show biomass on North Killingholme Marshes (NKM)(at the appropriate time of year e.g. September)(raised by NE and agreed to by the Applicant at the ISH on Tuesday 13 November 2012) and paragraph 105 states:

"105. Currently, it is only the site characterisation data from North Killingholme foreshore (as discussed above) that is available to help develop a quality objective for intertidal benthic invertebrates at the Compensation Site. There is the need to complete a more detailed baseline survey, ideally as close to pre construction phase as possible but, where possible, timed to also meet other criteria (for example on bird use and prey availability). Data from these surveys, which should cover the intertidal foreshore at both NKM and CCS, should be used to develop more detailed and robust targets."

- Little detail is given on the establishment of a control site or a fuller data set for the development site at NKM.
- There is an (incorrect) assumption (in paragraph 104) that because the Paull Holme Strays (PHS) managed realignment site has attracted invertebrates, birds will follow:

"104. The above would indicate, albeit with a limited data set, that mudflat within at least one managed realignment site in the middle Humber is capable of supporting an invertebrate assemblage and associated environmental conditions that are favoured by Black-tailed Godwit as a foraging habitat."

Although birds counts at PHS do not support this assumption and we wish to highlight that you cannot compare a managed realignment site with a RTE as the latter has far less water volume coming onto the site each tide. And it is no longer claimed that since PHS attracted suitable invertebrates within a 3- 5 year period, then so will CCS which is a RTE site. But it is still claimed that invertebrate numbers will rise quickly (paragraph 98 "...With suitable source communities

close by in the existing estuarine mudflats, this is likely to happen fairly quickly”) but no timings are provided.

- The Reference section (page 48) contains no monitoring programmes, results or protocols from other managed realignment or RTE sites.

In addition please see additional comments below.

5. Specific comments on specific paragraphs

- Paragraph 10 states:

“An assessment of the likely available feeding resource provided by the intertidal compensation site and the wet grassland predicts the potential available food resource to be **considerably greater** than that required to compensate for the direct and indirect loss of intertidal waterbird foraging habitat as a result of the AMEP development.” (emphasis added)

However no references (or cross references) are provided and therefore it is not clear on what this statement is based and therefore the evidence for it.

- Paragraph 11 cross references details of the compensation proposals to EX28.3 instead of clearly setting out what this CEMMP is for (please note that NE covered this point extensively in the ISH on Tuesday 13 November 2012 and its position was supported by the RSPB, MMO and others).
- Paragraph 15 states EMMP will last for ten years, but this should be at least 10 years after RTE has been established considering that we know it could take between 5 and 7 to years to do so (for example EA’s argument new slopes needing to settle for a year) and also should be linked paragraph 18 and requirement for longer periods if required.

EAG

- Welcome the RSPB being involved but more clarity is required for the whole of this section including e.g. more meetings will be required particularly in the initial stages, all monitoring information needs to be given to the EAG, an appropriate chair will need to be agreed. The RSPB agrees with NE’s concern about only being advisory and that at present there is a complete lack of clear objectives.

Ecological functioning of habitats

- Paragraph 25, last sentence states “It is also important to consider that management should have some adaptive element.” But where is the proposed monitoring for this and linking data/results back into proposed management for the site (the feedback loop mechanism)?

Intertidal habitats – baseline

- Paragraph 28, the existing baseline is not adequate but it has now been agreed during the hearings that a further invertebrates survey will be undertaken (at the right time of year) as well as further baseline surveying within this document – cross referencing to those provisions is required.

- CCS Saltmarsh Habitat, paragraph 32, penultimate sentence states “It is thought that this zone is gradually accreting”. This is meant to be a scientific document, there are plenty of data available on erosion/accretion in this area, and if not they should have been gathered to ensure data was available.

Habitat quality objectives

- Paragraph 35 states that the site should provide 88ha of intertidal mudflat but no information is provided on how is this to be measured?
- Paragraph 35 states that a minimum of 44ha of sustainable mudflat will be provided but again how is this to be measured and the number of days in a year that the mudflat should be available for needs to be included to ensure that black-tailed godwit and the assemblage species are adequately compensated for?
- Paragraph 37, 4th bullet states that the mudflat will be subject to 500 inundations per year but how will this be monitoring for success?

Management

- Paragraph 38 (and new management section below it starting at paragraph 48 (as well as paragraph 11 mentioned above)) cross refers to the details in EX28.3, Part 3 several issues with this:
 - As highlighted by NE this document needs to be a plan not suggestions as to what may happen with details being left to later.
 - There is a lack of details within Part 3 as well as being options, alternatives, different methods etc and therefore a lack of clarity on exactly what will be occurring.
 - A large quantity of new oral evidence was given by the Applicant during the recent ISH on 12 and 13 November 2012 including a number of substantial changes to the details contained within Part 3, some new details as well as a clear indication that e.g. the RTE design could change again due to the requirement for a detailed design stage.
 - The lack of complete monitoring requirements for any aspects of design, methods and management measures as set out below is also of concern.
- Paragraph 39 while discussing the breach states “...that the precise location and level of the breach area will be chosen during detailed design....” EX28.3 part 3 is supposed to be the final design for CCS but this is not the case as changes may still occur at a *detailed design stage* and there are no further opportunities for interested parties to consider these new design and/or details.
- Although there is additional monitoring requirements in this latest draft (new paragraphs 38–42 and 72, 74 and 75) it still excludes the need to monitor the following to provide a full picture of the performance of the compensation scheme:
 - The breach
 - Water temperatures in the RTE fields
 - Plant colonisation

- Wall and bund condition
 - Erosion within the managed realignment area
 - Dredging and flushing impacts on invertebrates
 - Mud strengths (shear strength)
 - Grain size within the sediment
 - RTE mudflat erosion
- In addition there is a lack of monitoring of the actual management measures to be used for example:
 - Methods and their efficiency
 - Pre and post measures re dispersal of dredgings
 - Pre and post measures Impacts on invertebrates
 - Bird disturbance

Objectives

- Overall comment is that there is a complete lack of detail within in this section.

Wet grassland sections on baseline, objectives, management, monitoring

- Reliance is placed on a number of documents that it is said will be used for the final management and monitoring plan. However many of these documents are not appropriate to use for a wet grassland area for autumn and wintering wader species since they are aimed at providing suitable habitat and conditions for breeding species (as acknowledged by Mr Hatton during Monday 12 November 2012 ISH hearing). For example RSPB 2008a and b – please see RSPB Written reps on Ex28.3, Annex D TEMMP (submitted on 9 November 2012) for our thoughts on this.

Birds: Objectives

- Paragraph 165 gives the overall objective as being for “population of bird species within the Humber SAC/SPA site to be maintained after taking account the bird numbers using the compensation site” – this is potentially inappropriate (see comments on paragraph 167 below) and too general due to annual fluctuations of bird numbers and will not accurately show whether the compensation sites are working or not.
- Paragraph 167 – The majority of this paragraph is not compliant with the requirements of Regulation 66, the Conservation of Species and Habitats Regulations 2010 (as amended):
 - Allowing development to occur despite its adverse effects on a SPA is only permitted if compensation measures are proposed that will *compensate* for the impacts resulting from the development. Reliance on re-distribution of species within the remaining part of the SPA is not compensation. Furthermore, it will place more competition and pressure on birds already using the remaining parts of the SPA as foraging habitat – as demonstrated below.
 - In the UK the SPA boundaries are drawn extremely tightly, unlike for example Holland where there are buffer zones around their SPAs and therefore every area within the UK SPAs has been included due to it contributing to the integrity of the site and that site’s designation species.

- In addition no assessment has been undertaken as to where within the SPA it is thought the impacted species could go – for example:
 - The Applicant’s consultant Mr Hatton suggested that CCS foreshore could be used whilst not recognising the critical value of this area for knots during the wintering period – this was observed during the Marine Site visit when approximately 5,000 knot were observed flying over this area of the estuary.
 - There has also been a suggestion that East Halton could be used by e.g. black-tailed godwits again not considering what species use it in the same period and later in the wintering period, or the requirements to make that area suitable for black-tailed godwit and assemblage species (which is not included). EX28.3 Part 8, pages 14-15, Table 5.3 showing use the area (over the last 35 years – with only a maximum of 33 black-tailed godwit being seen) and paragraphs underneath it clearly show that depending on e.g. which crops, rainfall, temperature the use of the area for species other than black-tailed godwit for example Graham Catley mentioned “past studies have shown this field to be of particular importance for roosting Lapwing and Golden Plovers with up to 10,000 Golden Plover and 5,000 Lapwing having been counted.” And when the fields have standing water “...a wider range of species including Dunlin, Ruff, Redshank, Curlew and Ringer Plover have been found roosting and feeding there”.
 - The Applicant is recognising within this paragraph that there is uncertainty as to the ability of CCS RTE (and CCS wet grassland area) to deliver the function lost at NKM and North Killingholme Haven Pits. If the full function were provided, it would be expected that, all other things being equal, the birds would use it. If the birds are not using it then the compensation has failed and the Applicant is responsible for altering its compensation measures accordingly. The integrity of the site must be maintained by any area/function lost being completely and adequately replaced.
- Paragraph 168 has partly been dealt with by the Applicant’s removing Table 7 on page 42 and recognising (as they did at the last hearings) that the function lost is the objective for the compensation sites. The Applicant will have to produce for agreement the actual numbers involved, which are to be tabulated in Table 6, ensuring the actual numbers of SPA birds displaced by direct and indirect loss of their feeding grounds, together with their densities on these areas, not densities calculated using the whole of NKM.
- Paragraphs 169 and 171 – it must be noted the low bird use of PHS recently and therefore reliance on it to demonstrate that the CCS RTE will work is not appropriate due to the bird numbers set out in Table 6 (once amended) that must be provided for. In addition PHS is a managed realignment site whereas the Applicant has proposed a RTE and the difference between the two must be recognised and factored in.
- Final sentence of paragraph 182, the comments set out for paragraphs 168 and 177 equally apply to this sentence. Although wider consideration and monitoring is always welcomed it is for the Applicant to provide adequate compensation sites for the impacts its proposed development would result in.
- Paragraph 183 needs to come out as inappropriate in this context and Table 7 has now been removed – please see comments made above.