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Our ref: 102513
Your ref: TR03001



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BY EMAIL ONLY

Dear Mr Southgate

Application by Able Humber Ports Limited for an Order granting Development Consent for the Able Marine Energy Park

I refer to your letter of 18 October 2013 notifying us that Able Humber Ports Limited (the Applicant) has submitted the information requested in the Department of Transport's letter of 28 August 2013 and is published on the Planning Inspectorate's website.

Natural England has worked closely with the Applicant and has provided detailed advice on this information which is set out in our letters dated 24 September 2013 and 11 October 2013. These letters are included in the documents submitted by the Applicant and published on the Planning Inspectorate's website.

Our response to this consultation is given below. We respond briefly to a number of specific points raised by the Applicant in their submission dated 15 October 2013 and reiterate the principle conclusions of our advice given to the Applicant in our letter of 11 October 2013. At the end of our letter we itemise the outstanding issues that we advise should be addressed by amendment to the Compensation Environmental Management and Monitoring Plan (CEMMP) and the DCO if the Secretary of State is to make an Order granting development consent for this project.

Natural England's advice is as follows:

The Applicant's Response to the Department of Transport's 'Minded to Approve' letter in respect of Compensatory Measures, 15 October 2013

The relevance of precedent

The Applicant's response considers issues of precedent and draws comparisons between Natural England's advice for the compensation measures proposed for Able Marine Energy Park (AMEP) with the advice given for other UK Port projects, at Immingham Outer Harbour and Bathside Bay.

We do not agree with the implication that Natural England's advice for AMEP is inconsistent with the advice given for these other Port developments with regard to the assessment of risk and uncertainty and the need for contingencies.

Natural England provides advice on a case by case basis and this advice is specific to the issues involved. In this regard, the issues for the AMEP development, in terms of type and scale of impact and of the level of risk that the compensation may not work are different from the other two schemes.

Novel design

We note that the Applicant challenges Natural England's assertion that the proposed RTE scheme for AMEP is a novel and untested design and presents examples of RTE schemes in operation on the Tees Estuary and the Schelde Estuary in Belgium.

Although of some relevance in respect of scheme design and operation, neither of these two examples are directly comparable with the proposal for AMEP. The AMEP proposal is attempting to establish and maintain a substantially greater extent of mudflat habitat within an estuary which is known to transport much greater sediment loads than either of the other examples. In this respect the RTE proposal on the Humber Estuary is novel and its effectiveness unproven.

Natural England's assessment of the level of uncertainty and risk

Natural England's advice remains as stated in our letter to the Applicant dated 11 October 2013 (enclosed). This advice confirms Natural England's position on the issue of risk as follows:

- Our assessment of the compensation proposals is that there has been some reduction in risk since the Examination, for example, as a result of the legal agreement and worked-up Environmental Management and Monitoring Plans (EMMPs). However, there remains a residual risk that the RTE scheme, as it is untested with respect to mudflat creation and maintenance in a highly dynamic estuary, may not deliver the agreed compensatory habitat (in extent and quality) and it may not be possible to resolve this through adaptive management.
- Our advice is that in order to mitigate this residual risk it would be necessary to have in place a mechanism for agreeing and for delivering contingency (see issue 1 in table below).

We note the Applicant's submission of 15 October describes various elements of their compensation proposals as contingencies. We do not accept that the compensation ratio, the EMMPs, or the wet roost can be considered as contingencies; they are part of the stated compensation package. The wet grassland habitat proposed at Cherry Cobb Sands and at East Halton could be described as contingency but neither of these proposals, in our view, would provide sufficient scale of contingency against failure of the RTE.

Outstanding issues which Natural England advises should be addressed by amendment to the CEMMP and the DCO if the Secretary of State is to make an Order granting development consent for this project

There are a small number of outstanding issues which we advise should be addressed if the Secretary of State is to make an Order granting development consent for this project. These issues are not new; they have all been identified in our previous advice. They are listed in the attached table along with Natural England's advice for their resolution.

We advise that these issues should be addressed, along with the actions proposed by the Applicant in their 15 October submission, by amendment to the provisions within the DCO and by amending the CEMMP that must be approved by Natural England under Schedule 11, paragraph 19(1) of the draft DCO. Natural England would be prepared to advise the Secretary of State further on the detail of these if required.

Yours sincerely

Andrew Hearle
Principal Adviser, Casework Solutions Team
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Outstanding issues, as set out in our previous advice, which Natural England advises should be addressed by amendment to the CEMMP and the DCO if the Secretary of State is to make an Order granting development consent for this project.

Issue	Resolution
<p>1. Residual risk that the RTE will not deliver the agreed compensatory habitat.</p>	<p>A mechanism is required for agreeing and for delivering contingency measures. The agreed mechanism should set out the principles by which contingency measures will be determined and implemented, and cover: the decision-making process; lead responsibilities; funding mechanisms; and enforcement procedures.</p>
<p>2. Cherry Cobb Sands RTE.</p> <p>Setting of targets for the benthic invertebrate prey species.</p>	<p>The Autumn 2013 survey of benthic invertebrates at Killingholme Marshes has improved our understanding about the quality of the existing mudflat habitat however the proposed method for setting targets for benthic invertebrate prey species at the compensation site remains unclear. The method suggested by the Applicant results in a minimum target for the prey species of just 3.8 g/m² for <i>Hediste</i> and 0 g/m² for <i>Macoma</i>; neither are appropriate targets for supporting the large numbers of birds which will be displaced by the development.</p> <p>The proposed approach to target setting for the benthic invertebrate prey species must be reviewed and the targets within the CEMMP revised and agreed between the applicant and Natural England to ensure the targets are capable of supporting the large numbers of birds which will be displaced by the development.</p>
<p>3. Proposed compensation at East Halton.</p> <p>Absence of buffers to core areas of wet grassland habitat</p>	<p>The Applicant proposes to provide additional wet grassland habitat at East Halton as compensation for AMEP. This is on land which has an existing planning permission for a separate development which requires the provision of wet grassland habitat as ecological mitigation.</p> <p>If this land is to be used as over-compensation for AMEP then it is important that this does not conflict with the legal requirement to provide mitigation as set out in the planning permission for this land. We advise that the DCO make clear that this cannot be double-counted as both ecological compensation and mitigation.</p> <p>The creation of wet grassland habitat for waterbirds should follow Natural England's advice as previously stated for this development: that is the creation of a core area of habitat with a surrounding buffer the width of which should be 150m where the adjacent landuse is unsecured. If the Applicant is able to secure the adjacent land, the width of the buffer may be reduced.</p>
<p>4. Draft DCO. Programme constraints.</p>	<p>There are inconsistencies within the draft DCO between the requirements of Schedules 8 and 11 with respect to the timing of the creation of the compensation site and its breach, and</p>

Inconsistencies between Schedules 8 and 11	<p>the timing of construction of the quay.</p> <p>The wording of the Schedules should be adjusted to ensure consistency whilst maintaining the intent to minimise the time lag between loss of existing habitat and establishment of the compensation habitat.</p>
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Natural England
November 2013

Date: 11 October 2013
Our ref: 99060
Your ref: RC.JD-KJ.A.L13-0902



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Dear Richard

Able Marine Energy Park – compensation measures

1. Thank you for Able UK's draft issue responses, received by Natural England on 25 September 2013, the further information received on 8 October 2013 and your letter dated 1 October 2013 which was received by Natural England the following day.
2. Natural England has assessed this additional information and has considered the points raised in your letter of 1 October 2013 in our advice which is given below. Natural England understands that Able UK may use our advice in amending the draft issue responses, where it feels it is appropriate to do so, before submitting them to the Secretary of State. This letter should be read in conjunction with Natural England's previous letter dated 24 September 2013.

Natural England's assessment of the level of certainty and associated risk at the end of the Panel examination 24 November 2012

3. At the close of the examination, Natural England's conclusion on its assessment of the ecological compensation measures was that there is a 'substantial risk' that they may not work.

Scale of ecological impact

4. The area of mudflat at Killingholme Marshes is important for more than 5,000 SPA/Ramsar waterbirds thereby demonstrating exceptional ecological functionality in terms of its ability to attract and support high numbers of foraging birds. In particular, the mudflat supports *internationally* important numbers of black-tailed godwits (peak count 2,566 representing 66% of the entire Humber Estuary SPA/Ramsar population¹) in addition to large numbers of seven other species of SPA/Ramsar waterbirds². The high numbers of black-tailed godwits feeding at Killingholme Marshes means that this one area of mudflat meets the qualifying criteria for SPA status in its own right.
5. It is also recognised that the importance of Killingholme Marshes as a foraging resource is linked to its proximity to a secure roosting site at North Killingholme Haven Pits, and this is considered to be particularly important for black-tailed godwits during their Autumn moult. Therefore, whilst this roost site "will remain undisturbed" (as acknowledged in your letter of 1 October 2013), it is agreed by Able UK that its value as a roosting site may be lost once the adjacent intertidal foraging habitat is developed.
6. Thus the scale of impact reflects the exceptional ecological functionality provided by Killingholme

¹ Informal counts of 3,800 black-tailed godwits at North Killingholme Marshes foreshore, September 2012

² Two other species – redshank and ringed plover – were present in numbers equating almost 10% of the site population

Marshes and the large numbers of waterbirds, particularly black-tailed godwits, which utilise this area.

Level of certainty that the compensation measures will work

7. Natural England's assessment of the level of certainty that the proposed compensation measures will work was made in terms of: i) the technical aspects of the scheme design and operation; and, ii) the ecological certainty of providing 'equivalent functional habitat'. This assessment was made within the context that the regulated tidal exchange (RTE) scheme is novel and is to be 'tested' within the dynamic environment of the Humber Estuary, known for its high sediment content and rapid rates of accretion.
8. During the examination, Natural England confirmed that it had low levels of certainty about several aspects of the proposed measures and expressed these in terms of four main issues, set out in our submission dated 16 November 2012, as follows:

*'The [compensation] proposal is however novel, and the environment in which it is located is challenging. It is possible that the compensatory measures will succeed, however there is a **substantial risk** that they will not. It is acknowledged that there will always be doubts in relation to compensation proposals, however the doubts in this case are amplified by a combination of the points noted above: time lag, limited extent, questionable quality and uncertain implementation'*

9. Thus, at the close of the examination Natural England's conclusion of 'substantial risk' was based on an assessment of the large scale of ecological impact and the low level of certainty about the compensation measures; specifically, time lag, extent of mudflat, quality of mudflat and uncertain implementation.
10. Put simply, the 'substantial risk' relates mainly to the unproven potential for an untested system of regulated tidal exchange (RTE) cells to provide the compensatory mudflat habitat necessary to support an internationally-important population of black-tailed godwits as well as large populations of seven other SPA/Ramsar waterbirds.
11. As you will be aware, the existing managed realignment sites on the Humber Estuary have been monitored extensively and it is known that creating sustainable mudflat habitat is difficult. Natural England agrees that an RTE has a higher chance of success than a managed realignment breach solution due to the adaptive management that can be carried out. However, given that the RTE is a novel approach untested at this scale in the UK (and never trialled on the Humber), it is our view that the level of uncertainty regarding the success of the compensation measures is greater in this case.

Further information provided by Able UK since the Panel examination

12. Further work has taken place since the Panel examination, and together with the further information provided by Able UK since 28 August 2013, this gives a greater level of confidence in the certainty around some of these issues. These are summarised in table 1 at the end of this letter.

The key points are as follows:

1. Time lag

13. Natural England's letter dated 24 September 2013 confirms our view that the Secretary of State's position on the time lag issue, as stated in the Department for Transport's letter of 28 August 2013, is that advice is being requested on the ecological risks associated with a time lag. Our letter also

acknowledged the Examining Panel's view that the relevant EU and Defra guidance on compensatory measures 'allow for a possible timelag; although they will not encourage it'.

14. Able UK has revised the base programme for the AMEP development taking account of programme constraints in the DCO agreed at the end of the Panel examination. These revisions are helpful in clarifying the indicative timelines for the compensation works, although there is some apparent contradiction in the requirements of the DCO schedules 8 and 11 on which we would welcome clarification.
15. The revised base programme gives a start date for quay construction in June 2015 with the wet grassland at Cherry Cobb Sands being constructed in July 2014 becoming fully functional after 4 years in September 2018 and the RTE/MR mudflat habitat becoming fully functional in September 2019. (We acknowledge the intention to create functioning wet grassland habitat at East Halton Marshes but, as indicated in our comments below, consider this will have limited benefit for the birds displaced by the development.
16. The post examination changes to the development schedule are relatively minor.
17. Natural England believes that the time lag, and therefore its associated risk could be further reduced by beginning the construction works for Cherry Cobb Sands wet grassland site as soon as practicably possible. This part of the compensation measures is subject to a separate planning permission and with the design details now amended and agreed in principle by Natural England (see our comments below).

2. Extent of compensatory mudflat habitat provision

18. Able UK has confirmed that the RTE will create c60ha of long-term sustainable mudflat, which will be reduced to c45ha as part of the operational management of the RTE when during neap tide cycles one of the 15ha cells will be impounded. This amounts to a compensation ratio of 1.5:1 (on occasions 1:1) as compared to the 2:1 ratio that was initially proposed by Able UK and agreed by Natural England. Natural England subsequently advised that a ratio of 1:1 is acceptable provided the RTE/MR meets its quality objectives and targets.
19. The additional information submitted acknowledges that at times there may be only 30ha of mudflat available (a compensation ratio of 0.66:1) as a food resource, albeit for a limited period of time "*The area available for birds to feed at the RTE site will almost always be greater than at Immingham because normally only one field would be impounded as a reservoir. An exception to this could occur if it were necessary to undertake maintenance activities (bed levelling and removal of sediment) whilst a field was impounded over spring tides. This would reduce the available area by a further 15ha during the period of impoundment for the maintenance.*"
20. There has been no additional information presented on the extent of compensatory mudflat however, our view remains that a ratio of 1:1 is acceptable provided the RTE/MR meets its quality objectives and targets.

3. Quality of compensatory habitat provision

3a Quality of compensatory mudflat habitat provision

- a) Technical certainty (scheme design and operation)
 - i) Able UK has provided further details and clarification about the RTE and MR management measures which provides more certainty in the design and operation of the proposed scheme.

- ii) Able UK has confirmed they are prepared to adjust the water management operations at the RTE in order to ensure a minimum depth of 150mm of mud is available for the benthic invertebrates, as advised by Natural England.
- iii) For the area of mudflat that will be lost, the 2013 benthic invertebrate surveys show much greater concentrations of key invertebrate prey than shown by the 2010 survey increasing certainty about the quality of the existing habitat. It should be noted however, that Natural England has concerns about the proposed target setting process for the compensation site using this information that will need to be discussed and resolved.

b) Ecological certainty (provision of equivalent functional habitat)

- i) The RTE scheme is novel and untested in the UK at this scale.
- ii) Natural England has expressed concern that the enclosed aspect of the RTE cells may inhibit the use of the RTE by black-tailed godwits, however accepts that there is little empirical evidence to give a conclusive view.
- iii) Able UK has provided further information on disturbance to the RTE during management operations. There is clearly some scope to minimise the level of disturbance through adaptive management but there remain uncertainties about whether the level of disturbance arising from the intensive management operations required to maintain mudflat habitat in the RTE will limit its functional value as feeding habitat for the high numbers of birds displaced by the development.

21. Our view is that the additional information has mitigated the risk, in terms of the technical issues of concern raised by Natural England during the examination, but that given the unproven nature of the RTE in this situation there remains a residual risk that the required functional habitat may not be created. In our view this risk can only be mitigated through planned contingency, which can be delivered if required.

3b Quality of compensatory roost and wet grassland habitat provision at Cherry Cobb Sands

a) Technical certainty (scheme design and operation)

- i) Able UK has provided a detailed design for the roost and wet grassland areas which gives an increased level of certainty in the delivery of a functional roost and functional wet grassland habitats.
- ii) Able UK has advised that it has made further assessments of the water quality in Keyingham drain and as a consequence propose works to replace the tidal gates to secure its suitability as a source of water for supplementing water levels in the roost and wet grassland. Confirmation of the details of the proposed scheme of works will increase confidence that the issue of securing an adequate water supply has been addressed. We welcome Able UK's suggestion that the works should be included as a management requirement within the CEMMP.
- iii) Further information on the frequency of wind speeds as recorded at a Met Office station located at Donna Nook, has been presented by Able UK to support their view that the use of wind pumps will be an effective mechanism for moving water around the compensation site. These records are for a site some distance from Cherry

Cobb Sands and may not be representative of wind speeds and their frequency at the compensation site. Nevertheless we suggest this issue can be resolved relatively easily by consideration of alternative means of moving water round the site, such as the use of motorized pumps, as back-up to cover any failure in the effectiveness of the wind pumps. We advise that a commitment to this effect in the CEMMP would increase confidence in these proposals.

b) Ecological certainty (provision of equivalent functional habitat)

- i) There is wide experience from the UK of successfully creating roosts and wet grassland habitats to provide ecologically functioning habitat for wading birds. Whilst the evidence shows that black-tailed godwits will preferentially utilise mudflat habitat for foraging and that their utilisation of wet grassland during the Autumn is not universal, there is ample experience of wet grassland creation to give confidence that it is possible to create habitat suitable for black-tailed godwits. The proximity of the proposed roost as well as the intertidal mudflat at Cherry Cobb Sands gives added weight to this confidence.

Our view is that the additional information has mitigated the risk, in terms of the technical and ecological issues of concern raised by Natural England during the examination.

3c Quality of wet grassland over-compensation habitat at East Halton Marshes

a) Technical certainty (scheme design and operation)

- i) Able UK has amended the detailed design for the wet grassland habitats at East Halton Marshes to address the needs of target bird species that will be displaced by the development at North Killingholme Marshes.
- ii) Able UK has provided some limited information to suggest sources of water to sustain wet grassland habitat.

b) Ecological certainty (provision of equivalent functional habitat)

- i) Whilst it is acknowledged that black-tailed godwits have been recorded in very low numbers on terrestrial land and on mudflats close to East Halton Marshes there is a high level of uncertainty that the creation of wet grassland in this location will provide anything other than habitat of modest value to the high numbers of birds that will be displaced by the development.

22. Our view is that the additional information has reduced the risk, in terms of the technical and ecological issues of concern raised by Natural England during the examination.

23. Whilst we have confidence that the proposals for East Halton Marshes can deliver functional habitat for waterbirds, the location of the site being some distance from suitable mudflat habitat is unlikely to be of significant value for the high numbers of birds that will be displaced by the development.

4. Implementation of compensation measures

24. Notwithstanding the proposed additional commitments referred to in our comments above, Natural England's assessment is as stated in our letter of 24 September 2013; that is the completion of a detailed CEMMP and legal agreement gives a high level of certainty and low risk in the delivery of compensation measures.

Natural England's assessment of the level of certainty and risk as at 11 October 2013

25. Progress since the examination has mitigated our view of 16 November 2012 that there was a substantial risk. Nevertheless, some risk remains.
26. The remaining areas of risk can be reduced further by reducing the time lag between the loss of mudflat habitat and the establishment of fully functioning mudflat and wet grassland habitats. For example, and as indicated above, where land is in the ownership or control of Able UK, as at Cherry Cobb Sands and the Able Logistic Park, then we advise that works to establish the proposed wet grassland habitat are begun as soon as practicably possible.
27. Overall, the compensation proposals appear workable and Natural England has increased confidence in the proposals, based on the increased level of certainty in the technical design and operation of the compensation measures and in their implementation. There is also an increased level of confidence in the establishment of functioning wet grassland habitat and a roost at Cherry Cobb Sands. It is also our view that the success or failure of the compensation measures hinges on the ability to recreate equivalent functioning mudflat habitat; the preferred feeding habitat for the internationally-important population of black-tailed godwits.
28. The key residual risk is a consequence of the large scale of impact and the RTE scheme being a novel approach, untested before on this scale in the UK, and requiring extensive intervention management and monitoring. In this respect the proposed RTE is experimental and the associated risk, in our opinion, is not comparable with other compensation schemes implemented in the UK. Thus there is a residual risk that the RTE scheme does not deliver the required compensatory habitat for black-tailed godwits, which it may not be possible to resolve through adaptive management.
29. Natural England recognises that there is already a process agreed within the CEMMP for monitoring and assessing the effectiveness of the compensation measures which includes targets and limits of acceptable change. The CEMMP also identifies a 'last resort' that in the event the compensation measures continue to fail this will be reported by the 'Compensation Site Steering Group' to the Secretary of State. Therefore it is Natural England's advice that as a minimum requirement Able UK should identify suitable contingency measures in the event of a failure of the RTE scheme.

Yours sincerely

Andrew Hearle
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Table 1

AMEP – Compensation Measures

Level of uncertainty and risk as assessed by Natural England based on ‘developments’ and further information provided by Able UK since the Panel examination on 24 November 2012

Compensation Measures – Issues identified as contributing to the assessment of substantial risk at the close of the hearing		Level of certainty and risk as at 11 October 2013
Time lag		Minor change to timetable but no overall change to the risk
Extent of RTE/MR mudflat		No change
Quality of RTE/MR mudflat	<i>Technical certainty (scheme design and operation)</i>	Risk mitigated
	<i>Ecological certainty (provision of equivalent functional habitat)</i>	No change
Quality of roost and wet grassland habitat at Cherry Cobb Sands	<i>Technical certainty (scheme design and operation)</i>	Risk mitigated
	<i>Ecological certainty (provision of equivalent functional habitat)</i>	Risk mitigated
Quality of wet grassland over-compensation habitat at East Halton Marshes	<i>Technical certainty (scheme design and operation)</i>	Risk reduced
	<i>Ecological certainty (provision of equivalent functional habitat)</i>	Risk reduced
Implementation of compensation measures		Risk mitigated