

From: Allison, Stephen [mailto:Stephen.Allison@cyfoethnaturiolcymru.gov.uk]
Sent: 28 October 2014 17:17
To: Swansea Tidal
Subject: EN010049 - NRW Summary of Case

FAO: Katherine Chapman – Case Manager

Dear Katherine

Please find attached our Summary of Case made at the Issue Specific Hearings on 21 – 22 October 2014.

We will provide further submissions on the Panel's Note of Information Proposed by Interested Parties to be submitted by the revised Deadline V date of 4 November 2014.

Regards
Steve

Steve Allison

Teitl swydd/Job title Technical Specialist Flood Risk Analysis (SW Area)
Cyfoeth Naturiol Cymru / Natural Resources Wales
Ffôn/Tel: (01792) 325679
E-bost/E-mail:
stephen.allison@cyfoethnaturiolcymru.gov.uk / stephen.allison@naturalresourceswales.gov.uk
Gwefan / Website:
www.cyfoethnaturiolcymru.gov.uk / www.naturalresourceswales.gov.uk

Ein diben yw sicrhau bod adnoddau naturiol Cymru yn cael eu cynnal, eu gwella a'u defnyddio yn gynaliadwy, yn awr ac yn y dyfodol.

Our purpose is to ensure that the natural resources of Wales are sustainably maintained, enhanced and used, now and in the future.

PINS Ref	EN010049
NSIP	Tidal Lagoon Swansea Bay
Applicant	Tidal Lagoon (Swansea Bay) plc

SUMMARY OF THE CASE OF NATURAL RESOURCES WALES

AT THE ISSUE-SPECIFIC HEARINGS HELD ON 21-22 OCTOBER 2014

1. This is a summary of the main points made by Natural Resources Wales (“NRW”) at the issue-specific hearings held in relation to the draft development consent order (“DCO”) on 21-22 October 2014. Discussions between the Applicant (“A”) and NRW are still continuing on several main issues. An update on the current position will be provided in NRW’s further written representations to be submitted on 04 November 2014. This document is intended only to provide a record of the points made orally at the previous hearing and does not necessarily reflect the updated position on 04 November 2014.

Day 1: 21 October 2014

Agenda Item 3: Coastal Processes

2. Since the issue-specific hearings in September, NRW and its coastal processes consultant has provided additional information and data to assist A with the further coastal processes work that it agreed to undertake. This comprised, mainly, of beach profile monitoring data, academic papers and other scientific reports. Before Deadline IV, NRW also provided A with comments on the AEMP, particularly in relation to beach profile monitoring proposals. This was done, in part, to inform the intertidal sediment sampling that A agreed to undertake to improve the understanding of the baseline.
3. As stated at Deadline IV, NRW maintains that further baseline evidence and assessment of the project impacts are necessary to ensure that a robust EIA is undertaken. This is not because NRW is looking for perfection in the EIA, or even any particular standard of excellence: it is simply so that that the likely significant impacts upon coastal processes, which are recognized to be dynamic in nature, are adequately understood. As the project is the first of its kind, NRW is keen to ensure, at a minimum, that any *unnecessary* uncertainty

that is outstanding is removed. The location of the project within the intertidal and shallow sub-tidal areas of the coast directly interferes with coastal processes and presents more significant, and entirely different, issues and risks than other marine NSIP cases, for example offshore wind. Whilst the AEMP does, in principle, provide an opportunity to deal with uncertainty, there is residual unacceptable uncertainty at present that could be reduced through further baseline data collection, modelling and analysis. This is a long-standing concern on the part of NRW.

4. To give two practical examples of unnecessary uncertainty associated with the baseline coastal processes assessment:
 - (1) There are the potential impacts of project options which have not been assessed (for example, changes to the Neath Estuary training walls). A has not yet adequately explained why this element of the project has not been assessed and the impacts determined.
 - (2) There is continuing uncertainty associated with the existing particle size of the intertidal sediments within Swansea Bay. This is essential to inform the impact assessment, future monitoring, and any mitigation. A has not adequately explained why this baseline data set has not been collected.
5. NRW is satisfied that it needs this information to ensure that the EIA is adequate, and to inform the AEMP. NRW understands that A is undertaking further work on the baseline and modelling assessments, but it is unclear when NRW will be consulted on the outputs of this additional work. NRW is concerned that the current examination timetable does not include a mechanism to enable it to comment on this further work.
6. Note: Included within A's Deadline IV submissions was a draft summary note of the meeting held between A and NRW about coastal processes during the ISHs in September, which was sent to NRW for comment. Unfortunately, amendments proposed by NRW to this note did not reach A. NRW and A have agreed to resolve this so that the outstanding actions on this topic are agreed between the parties.

Agenda Item 4: Habitat Regulations Assessment and European Sites

7. The current position on this issue is as set out in the relevant Statement of Common Ground, namely:
 - (1) The only potential adverse impact, in HRA terms, would be upon the Kenfig SAC.

- (2) It is agreed that the potential adverse effects upon Kenfig SAC can be avoided through early warning monitoring and mitigation, for example using an alternative disposal ground.
 - (3) It is agreed that such a scheme can be secured by a requirement in a DCO.
 - (4) NRW has proposed a draft requirement to A that it considers to be necessary.
8. At the hearing, A and NRW were continuing to negotiate the drafting of the requirement. NRW will update the Examining Authority on those negotiations.

Agenda Item 5: Natural Resources Wales Corporate View

9. NRW clarified an earlier answer that it gave in response to Q2.4 of the Examining Authority's Questions dated 16 June 2014. If that answer gave the impression that NRW would be coming to a view as to whether *this particular project* complied with NRW's statutory "purpose", it was necessary to make clear that the "purpose" is a high-level principle that guides NRW in all its spheres of activity; it is not intended to provide an additional development management test as that is the proper preserve of policies in the development plan and in national planning policy documents. In this examination, NRW sees its role as advising on the technical aspects of the proposal so that its likely significant impacts on the environment are properly understood. Other public bodies who are interested parties in this examination – notably, the local planning authorities and the Welsh Government – are better placed to advise the Examining Authority on compliance with planning policies.

Agenda Item 6: Adaptive Management

10. NRW made a series of detailed points about the AEMP at Deadline IV. A also submitted a revised AEMP at Deadline IV which, of necessity, could not anticipate all those detailed points.
11. NRW regrets that the majority of the concerns that it expressed at Deadline IV about the mitigation proposed within the AEMP have still not been addressed. The AEMP may now set out more clearly the sites to which the proposed mitigation applies (for example, Blackpill SSSI, Crymlyn Burrows SSSI and Kenfig SAC), but the mitigation measures themselves are still not considered to be adequate, particularly in relation to (i) Crymlyn Burrows SSSI and (ii) Blackpill SSSI. (NRW's position in relation to Kenfig SAC is already set out under 'Agenda Item 4' above).

12. Turning first to the Crymlyn Burrows SSSI, key issues still not addressed properly are the impact of the project on the dynamism of the foreshore and frontal dunes including the risk of increased stability and its ecological implications for habitats and species. Sand accretion is proposed to be managed by redistributing sand and/or introducing sand back into the wider bay as a source of replenishment. However, the practicality of this, and its potential impact on SSSI features, has not been investigated in detail. NRW needs adequate information to be able to assess whether this proposal is appropriate.
13. As for the Blackpill SSSI, the possibility of increased mud deposition in the intertidal area has still not been considered and no mitigation measures are currently proposed to deal with this scenario. The proposed mitigation deals only with the risk of beach erosion.
14. During the ISHs, both A and NRW made clear that discussions in relation to these and other matters relating to the AEMP were outstanding and that the Examining Authority would be updated at the earliest opportunity. NRW expressed its concern that there were significant issues still outstanding at this late stage in the examination process.

Agenda Item 7: Water Framework Directive

15. A submitted an updated WFD assessment for Deadline IV and NRW was still reviewing it in detail at the time of the ISHs. NRW's initial broad view is that the updated WFD assessment is a significant improvement on the previous draft. However, it is still necessary for NRW to carry out a detailed review of the additional information within the document to ensure that it contains sufficient detail based on robust evidence. **NRW expressed grave concern at the ISH about so much information coming forward late in the examination on this topic, particularly in relation to the Article 4.7 derogation.** A said that a further substantial document, dealing with the derogation, would be submitted at Deadline V. There is no clear opportunity for NRW to deal with this further information within the current timetable for the examination. In particular, NRW cannot make substantial progress on its own Article 4.7 assessment until: (i) the WFD assessment itself is satisfactory; and (ii) further information is provided by A to inform the Article 4.7 tests. Both of these matters are outstanding at this late stage in the examination.

16. The outstanding issues with the WFD assessment have implications for other aspects of A's case. Until the full extent of potential impacts on other water bodies has been identified in a satisfactory WFD assessment, NRW is not able to comment properly on the AEMP. Certainly, NRW considers that the WFD assessment would benefit from the further work that A has agreed to do on the coastal processes assessment.
17. The Examining Authority had previously asked NRW if it had any information about the Article 4.7 derogation being applied in other cases. NRW is unaware of any case in which Article 4.7 has been applied within the estuarine or coastal waters of the UK and Ireland. Article 4.7 has been used extensively in Scotland for freshwater hydropower schemes. In south-west Wales, it has been used in the past in relation to a minor freshwater power scheme. More recently, in England, it was used in relation to works to restore and improve the waterways linked to Maidenhead town. There is not a substantial body of precedents, therefore, for the use of Article 4.7.

Agenda Item 8: Eels

18. NRW is a competent authority under the Eels (England and Wales) Regulations 2009 ("**the Regulations**"). NRW have made the applicant aware of the requirements of these Regulations, including at Deadline IV. In summary:
- (1) NRW considers that the impacts upon eels protected under the Regulations should be assessed using eel-specific guidance issued by the Environment Agency on providing safe passage for eels and that it is not adequate to rely only on generic EIA guidelines. There should be a separate assessment.
 - (2) A has done extensive modelling to assess the impact on protected eels, but given the unprecedented scale of this development and the novel assessment approach NRW does not share A's confidence in the degree of impact identified.
 - (3) NRW will therefore require extensive eel-specific monitoring to show that the development will not lead to significant levels of eel mortality and that impact levels will remain within the predicted impacts so that an exemption may be granted under reg. 17 of the Regulations. **NRW notes that A has not yet sought an exemption from it under reg. 17 of the Regulations.** NRW understands that such an application might be made by A imminently. Again, NRW expresses concern that this matter is outstanding at this late stage in the examination.
 - (4) In the event of impact level exceeding the current predictions, NRW is seeking to agree appropriate monitoring methodology, trigger levels and mitigation through the AEMP.

Agenda Item 9: Fish

9.1 The use of acoustic fish deterrents

19. In the latest AEMP, it appears that acoustic fish deterrents (“AFDs”) will only be installed if operational monitoring shows impact levels to be above the levels predicted in the Environmental Statement. Due to the unprecedented scale of this development and the novel assessment approach, NRW considers that there is a high degree of uncertainty and, therefore, risk associated with the potential environmental impacts of the project. Accordingly, NRW considers that it is reasonable and proportionate that AFDs, which are proven to be effective and efficient, should be installed *before* the lagoon operation commences. A has included the use of AFDs in the fish and shellfish mitigation strategy in the draft DCO and NRW supports this.

9.2 Aeration of the lagoon

20. This is not a point raised by NRW.

Agenda Item 10: Marine mammals

10.1 Use of potential biological removal thresholds

21. NRW’s fundamental concern here is this: should fatal collisions of marine mammals prove to be higher than predicted, so that the development impacts on the conservation status of seals or any cetacean species, what does A propose to do? NRW considers that there must be provision in the DCO to set acceptable thresholds of mortality on cetaceans and seals, and further provision made for what happens if those thresholds are exceeded so as to have an impact on conservation status. If A is confident as it claims to be that the collision risk is low, NRW can see no good reason to object to having a PBR threshold.

22. The AEMP currently states that “*Any collision of a harbour porpoise will trigger further actions, which are expected to be secured by the EPS licence and DCO. Any collision of a seal will trigger further action.*” (Table 9.4). However, there is presently no such provision in the DCO, and no detail on what “further action” is proposed. Whilst A refers only to harbour porpoise, all cetacean species are listed in Annex IV of the Habitats Directive, while bottlenose dolphin and harbour porpoise are listed in Annex II. Provision should be made for all cetacean species with respect to collision thresholds. NRW awaits further progress by A in this regard.

10.2 Use of 'trash screens' either side of the turbines

23. NRW has previously advised that installing a protective ('trash') screen on either side of the turbines could eliminate the risk of collision for marine mammals entirely. NRW made the suggestion because A gives no reason not to use one other than saying in the ES that "*large objects such as these are rarely found in the sea and if present they would be on the surface*" and "*therefore, such measures [installation of trash screens] are not considered necessary for the purpose of this project*" (ES, Chapter 4, section 4.8.2.6). NRW is not persuaded by this reasoning when the installation of protective screens would negate the need for much of the proposed collision monitoring and mitigation.

10.3 Co-operation of external bodies

24. A states that the "*Integration of Lagoon programme [on carcass surveillance] would be developed and run in co- ordination with CSIP [Cetacean Strandings Investigation Programme]*". A has provided no evidence that they have discussed this with CSIP, that it has made any provision for funding to support this potential extra work, or that it has contingency plans for what would happen if CSIP ceased operation during the lifespan of the project. NRW would like to have a requirement in the DCO to secure funding for this potential extra work, and a commitment to secure this for the lifespan of the project. CSIP advised NRW on 24 September 2014 that, as of that date, it had not been contacted by A.

10.4 Mitigation for noise impacts upon marine mammals during both construction and operation

25. A has committed to following JNCC piling protocol guidelines to mitigate for noise impacts during construction. However, there is still some contradiction in the detail relating to this: see section 10.6 below.

26. More fundamentally, A has not measured the noise of the turbines proposed to be used in the development itself. It has committed to monitoring operational noise post-construction (AEMP, Table 9.4). Should it be discovered that operational noise is enough to cause disturbance to marine mammals, excessive noise will need to be reduced to an acceptable level. However, A has provided no information yet on proposed mitigation should noise levels be unacceptable.

10.5 Avoidance of the harbour porpoise breeding/rearing season during piling operations

27. Should A adhere to the JNCC piling protocol guidelines, as proposed, disturbance from piling operations should be adequately mitigated.

10.6 *Securing these matters through the DCO/CEMP/OEMP/AEMP*

28. The DCO does not contain any specific requirement for marine mammal mitigation or monitoring, in contrast with other receptors where specific requirements are set out. A relies on requirement 6 of the DCO to secure marine mammal mitigation and monitoring through the AEMP, CEMP and OEMP. In their current state, these documents contain conflicting information in relation to marine mammals, so NRW cannot be confident that the potential impacts will be adequately monitored or controlled. NRW has previously expressed concern about:

- (1) the lack of clarity and detail in the AEMP;
- (2) conflicting information between the CEMP and AEMP in relation to the piling protocol.

29. For example, in the written summary of its oral submissions at the ISHs in September 2014, A said this:

“7.1.5 TLSB proposed to include a definition of “daytime” as hours of daylight and periods of good visibility. This would be set out in the relevant part of the CEMP, rather than the DCO, in order to prevent the latter from becoming too long and unwieldy.

7.1.6 TLSB confirmed that the draft CEMP dated 5 August 2014 required updating, with deletion of references to procedures for transitions from vibropiling to percussive piling at night at paragraph 5.0.0.3 of part C. This will be addressed in the next draft.”

30. These revisions had not been made, as indicated, at the time of the ISHs. The revised CEMP, OEMP and draft DCO submitted for Deadline IV contained no amendments with respect to marine mammals. The revised AEMP contained a minor amendment with respect to the proposed piling mitigation (“daytime and good visibility in sea states less than 4”, which still contradicted the CEMP) but remains largely unchanged. As a result, NRW regrets that it cannot be confident yet that the necessary monitoring and mitigation will be secured through the DCO/CEMP/OEMP/AEMP.

Agenda Item 11: Inter-tidal and sub-tidal ecology

11.1 *Sabellaria*

31. There are several outstanding matters on this issue. Further assessment of the conditions necessary for *Sabellaria alveolata* reef survival is needed, particularly the likelihood of survival on a structure such as the one proposed. Such assessment has not, to NRW’s

knowledge, been undertaken, especially in terms of the slope, aspect, and structural design of the lagoon wall. NRW therefore continues to have low confidence that any translocation attempts will be successful.

32. As stated at the relevant ISH in September, it is unlikely that the lagoon wall would be a suitable environment for the survival of *Sabellaria alveolata* reef for several reasons:

- (1) *Sabellaria alveolata* settlement typically only occurs where larval settlement is high and is combined with the availability of suitable habitat. The lagoon wall structure is unlikely to provide such habitat.
- (2) *Sabellaria alveolata* tubes have been shown to be intolerant to translocation to areas of greater exposure, so tubes formed in the sheltered environment of the existing reef may not survive if placed in a more exposed position on the reef wall.
- (3) NRW considers that the lagoon wall profile seems too steep to allow the *Sabellaria alveolata* reef to develop.
- (4) Removing *Sabellaria alveolata* reef from its existing environment would be likely to destabilise the translocated blocks, and increase the likelihood of its washing away.
- (5) The ability of *Sabellaria alveolata* reefs to recover from anthropogenic disturbances depends partly on larval supply. Unless larval supply in Swansea Bay is understood the chances of any successful translocation are reduced.

33. NRW welcomes A's intention, as stated in the latest AEMP, to fund a PhD to understand the ecology and success of translocations for *Sabellaria* within Swansea Bay, but this only goes some way to making the AEMP adequate so far as this issue is concerned. In particular, a quantitative monitoring programme to assess the success of any *Sabellaria alveolata* reef translocation needs to be agreed with NRW as part of any AEMP. This was NRW's position when responding to the AEMP submitted at Deadline III and it made detailed comments on how the AEMP could be improved further in this regard in the submissions for Deadline IV. Although some further information has been supplied in the Deadline IV AEMP, the statement made above still largely stands.

11.2 Omission of baseline data regarding 'sheltered muddy gravel habitats'

34. NRW's concern relates to A's assessment of the potential impacts on these habitats. A suggests that the impacts upon this habitat will be minor. Due to NRW's lack of confidence in the coastal processes assessment, it has low confidence that A's assessment of these impacts is correct.

11.3 MINNS/INNS Bio-security Risk Assessments and strategies

35. NRW has already commented on the MINNS Risk Assessment that A submitted at Deadline III. NRW is not aware of a more recent version. NRW repeats its comments on the previous MINNS assessment below. (These detailed points were not made orally at the recent ISHs, but are repeated here for completeness.)
36. A has submitted a 'Draft Biosecurity Risk Assessment' (Appendix 1.15.3) which contains several significantly improved updates. NRW welcomes the addition of the updated document and is generally satisfied with the content. However, NRW seeks clarification on certain issues, namely:
- (1) Dredged spoil generated as part of the construction and/or operational phases, potentially containing *Crepidula fornicata*, may be translocated to the licensed Swansea Bay (Outer) deposit ground (LU120). Under section 14 of the Wildlife & Countryside Act 1981, it is prohibited to introduce into the wild any animal which is not ordinarily resident in, and is not a regular visitor to, Great Britain in a wild state, or any species of animal or plant listed in Schedule 9 to the Act. *Crepidula fornicata* is currently listed in Schedule 9 (Part 1), and so if it is present in the dredged material removed from Swansea Bay, redepositing that material without first removing *C. fornicata* would be a breach of section 14. As a result, appropriate mitigation measures against such translocation should be included in the MINNS Risk assessment.
 - (2) As well as including information about the potential risks from marine INNS from other European ports (e.g. Rotterdam) where vessels may be travelling to and from the development site, the biosecurity risk assessment should also contain adequate information about vessel movements within the UK, highlighting potentially high risk areas/ports. The UK should not be considered homogenous in terms of MINNS. There are several hotspots of INNS in the UK and there are many species that are present in England but not present in Wales. Similarly, there are species in south Wales that are not yet present in mid and north Wales. It follows that all potential vessel movements within the UK need to be incorporated within the biosecurity risk assessment.
 - (3) Key personnel or specific job titles (for example, the post of Environmental Liaison Officer) should be identified in the 'Risk Assessment', who should take the lead in ensuring that certain elements of the biosecurity risk assessment are undertaken at key

stages during the planning, construction, operational and decommissioning stages of the proposed development.

- (4) The CEMP has been updated to incorporate a biosecurity risk assessment. However, the risk assessment had not yet been appended to the CEMP when the ISHs were held.
- (5) NRW also welcomes the proposal to work with NRW's marine licensing team on the final version of the Biosecurity Risk Assessment, which is a requirement of the marine licence.

Agenda Item 12: Coastal birds

12.1 Beach nourishment mitigation for sanderling/ringed plover

37. As stated before, NRW has no knowledge of beach nourishment being used as mitigation to address the issue of potential mud deposition and is unsure of its efficacy. NRW has made enquiries of the ornithological community and it has no knowledge either of this mitigation being used in this way. If no further information about this technique is forthcoming from A, the Examining Authority will need to acknowledge the uncertainties inherent in the use of this technique.

12.2 Risk to diving birds

38. Cormorants have a mean foraging depth of 12.07m and a maximum foraging depth of 35m (this is averaged from 14 separate studies), so there is still the potential for collision with the turbines at 11m deep.

39. Great-crested grebes prefer water depth of 0.5 to 5m, but some grebes have been known to be caught in set nets in Switzerland at depths of 30m and birds are known to dive deeper in winter than in summer. Although there is less potential of collision than with cormorants, therefore, there still is a potential risk.

Agenda Item 14: Flooding

40. Subject to detailed design, NRW is now content that the proposed flood mitigation works are theoretically capable of offsetting the detriment caused by the tidal lagoon, which would be compliant with TAN 15.

Update on progress of draft marine licence

41. At the ISH on 22 October 2014, the Examining Authority asked NRW whether it would be able to provide a draft marine licence before the examination closes. Given that so many of the substantial issues between A and NRW are still the subject of discussion (particularly in relation to the coastal processes assessment and compliance with the Water Framework Directive), it is not possible to provide a meaningful comprehensive draft of a licence by Deadline V. In any case, NRW would not consider it appropriate to provide a comprehensive draft before its own decision-making process on the marine licence had been completed as this could be interpreted by A or others as tantamount to pre-determination. Nevertheless, NRW understands the Examining Authority's wish to have more information than it currently has about the progress of the marine licence application and NRW will provide as full an update as it considers to be appropriate at Deadline V.

Note

42. NRW reiterates that this document is intended to be a summary of the oral submissions made at the ISHs on 21-22 October 2014. NRW will be setting out its latest position on outstanding matters in its submissions for Deadline V.

GWION LEWIS
Landmark Chambers
London

27 October 2014