Date: 21 March 2011
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To

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Dear Sirs

WIGHTLINK PROJECT CONSENT APPLICATIONS : 1 SHORE WORKS; 2 W CLASS FERRY; 3 RECHARGE AND HABITAT CREATION WORKS

NATURAL ENGLAND SUPPLEMENTARY ADVICE TO COMPETENT AUTHORITIES IN RELATION TO THE NATURA 2000 SITES AND SSSI SITES AT THE LYMINGTON ESTUARY (listed at Annex 1)

Wightlink have submitted consent applications for the above elements described as 'The Project'. Natural England has already provided advice that the Shore Works, W Class ferry and Recharge and Habitat Creation Works, if considered together as a single project, should be the subject of an appropriate assessment under the Habitat Regulations in order to ascertain that an adverse effect on the integrity of the Natura 2000 sites will not occur.

Because the SSSI features and conservation objectives are largely co-incident with the N2K features and conservation objectives (with the exception of migratory fish) Natural England has objected to Wightlink's consent applications pending resolution of outstanding matters. Under section 28I of the Wildlife and Countryside Act 1981, we cannot, prior to the completion of an appropriate assessment in relation to the Natura 2000 sites that confirms that no adverse effect on integrity will occur, independently conclude that Wightlink's proposal will not damage the SSSI features of interest.

This supplementary response gives Competent Authorities more detailed advice on the technical information provided by Wightlink and the issues

that require resolution prior to being able to conclude 'no adverse effect' within an appropriate assessment and withdrawing our objection in relation to the SSSIs.

Natural England also provides a response to specific questions provided by the Competent Authorities at Annexes 2 to 5.

The comments below are specific to Wightlink's 'Technical Report to inform Appropriate Assessment' (WTR Ref 11b) unless otherwise specified. Reference is also made to other technical information provided by Wightlink. Natural England has also accrued a large body of technical expert information in relation to this case and will refer to this as required. A list of references is provided at the end of this supplementary advice which is common to both this advice and all the lists of questions provided by the Competent Authorities.

Natural England would also like to acknowledge the extensive, local technical advice and opinion provided by interested Stakeholders including the Lymington River Association, the Lymington Society, the Lymington and Pennington Community Forum, the Hampshire and Isle of Wight Wildlife Trust and others (Ref 8, 9, Annex 2 and 3 and consent consultation submissions) This advice has been influential in contributing to Natural England's understanding and advice in relation to this case.

Natural England's advice here relates to Wightlink's various consent applications, which themselves relate to the operation of the W Class ferry. Advice on risks of impacts relates to the 30 year operational life of the ferry. Given that the W Class ferry began operating in 2009, Natural England is also advising both Defra and Wightlink (the Competent Authority for the W Class ferry) in relation to any short term risks of impact to the designated sites prior to an appropriate assessment being concluded. Our advice is that the small, temporary impacts occurring to the lower inter-tidal area are not detrimental to the large, dynamic coastal sites. We are continuing to advise Defra and Wightlink in this regard.

<u>Summary of Natural England's advice on Wightlink's Technical Report to inform Appropriate Assessment</u>

1. Natural England continues to disagree with Wightlink on their assessment of the long term W Class impact. Wightlink argue that even over the long term there will be no measurable erosion that could be attributed to the W Class ferry and no detrimental consequences for the designated features (WTR Ch 6). Natural England continues to advise that there is a risk of significant erosion over the long term operational life of the W Class ferry that could result in detrimental effects on the N2K features such that there is a risk of an adverse effect on integrity being incurred (Refs 1,2,4 8).

2. Wightlink acknowledge and take account of Natural England's advice within their current assessment (WTR Ch 6.2 p101) and propose the

Recharge and Habitat Creation Scheme as part of the Project to mitigate any risk of adverse effect to N2K and SSSI features.

3. Natural England continues to advise that Wightlink's mitigation proposal is appropriate to offset any risk of detriment to the conservation objectives, but there are several areas that require further information or development before it can confidently be concluded that the risk of an adverse effect on integrity has been avoided.

   3.1. To be confident in the quantity of the risk of impact we continue to advise (as Ref 9) that there is a need for Wightlink to monitor and report on ferry speed to show that ferries are keeping to the speed limit within environmental tolerances (see 6.6 below). The environmental tolerance around the speed limit is much smaller than that required for navigational safety and regulated by the Lymington Harbour Commissioners.

   3.2. The 30 year ha-years of risk of ferry impact that the Recharge Scheme is required to deliver needs to be clarified and confirmed (see 6.4 below).

   3.3. Natural England has recently been considering timescales of impact and mitigation delivery following confirmation that the Recharge Scheme cannot be delivered this spring and in the light of representations made by the stakeholders, including the Hampshire WildlifeTrust (eg Q2 Annex 2), the RSPB (Q1 Annex 3) and Lymington River Association (Q2 Annex 2). Subsequently we would advise that:

      3.3.1. It is not clear how the figures for ha-years of mitigation benefit presented in WTR Table 6.3 p105 take account of the necessary timing of delivery of the 0.9ha placement benefit, currently anticipated to be summer 2015 (see 6.7.3 below).

      3.3.2. There is also a need to demonstrate how the new timeline for delivery of the 0.9ha of habitat benefit affects the delivery of ha-years of benefit compared to the cumulative potential impact of the W Class ferry (introduced 2009) (see 6.7.4 below).

   3.4. We continue to advise (as Ref 9) that there is a need to agree more specific criteria of success and monitoring for the 0.9ha of sediment placement benefit (see 6.7.5-7 below) The criteria and monitoring currently proposed remains inadequate for purposes.

4. There will be a need to agree a robust legally binding commitment to an approach to mitigation delivery that gives a high level of confidence in its success. The current draft of the S 106 Agreement does not give the necessary confidence in the success of delivery (see 6.7.8 below)

Detailed comments on each section of Wightlink's Technical Report to Inform Appropriate Assessment (Ref11b)

1. WTR Ch 1 Introduction

1.1. No detailed comments

2. WTR Ch 2 Methodology

2.1. The potential impact of, and proposed mitigation for, the W Class ferry have been calculated over the lifetime of the W Class ferry from 2009-2040 (WTR Ch2.3.1 p24), as previously agreed with Natural England. There is an argument, however, that any ferry impact that materialises continues after the operational lifetime. However the Lymington Estuary will be substantially altered by wind wave erosion and vegetation die-back by 2040, such that it is unlikely that any residual ferry impact would continue to exert a detrimental impact on remaining N2K features. There will be time, over the life of the W Class ferry, to keep this matter under review and take further action if necessary

2.2. Natural England's advice on the conservation objectives described at WTR Ch 2.5.2 refers to the potential impact of the W Class ferry on the Lymington Estuary. Should Competent Authorities wish to consider the possible effects of the Shore Works and/or Recharge and Habitat Creation Scheme then further objectives would need to be considered, for example relating to bird disturbance or migratory fish.

2.3. The method used to consider 'in combination' effects are discussed in WTR Ch2.8. An analysis of such effects is aimed at preventing the N2K site suffering 'death by a thousand cuts', where the site may be subject to many small impacts that together could result in an adverse effect on integrity. Within large and complex N2K sites such as the ones here, the risk of 'death by a thousand cuts' is very real, but at the same time undertaking 'in combination' assessments across their whole area is practically very difficult. One way to avoid such effects at source is to ensure that each development is at best neutral in its effects and preferably positive. In this event there would be no need to undertake a large and difficult 'in combination' assessment across the whole N2K site, because the development in question cannot add to any 'in combination' effect. This has been the approach that many developers in the Solent have chosen to take.

2.4. Natural England has previously advised Wightlink that it is only necessary to undertake an 'in combination' assessment where there is a residual negative effect of the project, however small, that could be combined with another significant impact to result in a combined risk of adverse effect.

2.5. Where it is not possible to be confident that a development is neutral or positive in its impacts, a unit based, for example an estuary-level, 'in combination' assessment is a pragmatic geographic area over

which to conduct this assessment. The aim here is to ensure that the estuary component of the wider N2K site is not at any risk of adverse effect as a result of 'in combination' effects, and further that there is no residual 'estuary level' negative effect that needs to be carried forward to the wider N2K site. In other words, the estuary component should not be subject to any negative effects of plans and projects if the 'in combination' assessment is limited to this area.

2.6. Sometimes developments can interact with each other to either reduce or increase their impacts, for example one development may cause sediment erosion but another sediment accretion. The interaction effect should be identified and accounted for in the impact assessment.

3. Ch 3 The Project

3.1. No detailed comments

4. Ch 4 The Protected sites

4.1. Natural England has given more specific advice that the N2K features potentially affected by the W Class ferry are inter-tidal mud habitat feature (SAC and Ramsar), and inter-tidal mud as a supporting habitat for the wintering birds feature (SPA and Ramsar) (Ref 4).

4.2. The Shore works and Recharge Scheme have also been considered (Ref 11b Ch 6) in relation to wintering bird disturbance and migratory fish.

4.3. Natural England has recently engaged in discussions with the Environment Agency and it has been confirmed that the New Forest SAC does not need to be included in the appropriate assessment in relation to migratory fish, in agreement with the Technical Report here.

4.4. Migratory fish are a feature of the Lymington River SSSI and Natural England is currently in discussion with the Environment Agency to reconsider the nature of any ferry impacts.

5. Ch 5 Existing Conditions

5.1. Natural England agrees, on the whole, with the description of existing physical processes described within WTR Ch 5.2, and future conditions described in WTR Ch 5.6, and the range of differing influences described that affect overall morphological change.

5.2. However we note that H R Wallingford have estimated the relative contribution of the differing 'forcing factors' to lower inter-tidal change along the navigation channel north of Pylewell, and conclude that it is likely that the C Class ferry caused significant erosion since the 1970's and that the W Class ferry is predicted to have a similar effect (Ref 1). However it is agreed that the estuary is predicted to change substantially over the life of the W Class due to the wider the

influences of saltmarsh die-back and wind wave erosion and this may affect any total ferry effect.

5.3. Natural England agrees, on the whole, with the existing aquatic ecology and ornithology described in WTR Ch 5.4 and 5.5, with the exception that the importance of Lymington Harbour for wintering birds has been under-estimated. Black and Veatch describe Lymington Harbour as an important feeding area for waders and waterfowl at low water, and feeding and roosting birds at high water (Ref 14).

5.4. Natural England has referred to the dramatic, landscape level, natural changes that are occurring to the Lymington Estuary and wider Solent within its advice on W Class impact assessment and mitigation (Ref 4). The conservation objectives for any site must be met 'subject to natural change', or 'despite natural change'. However the enormity of the extent of natural change at Lymington, and the predictable direction, is such that it is appropriate to take account of this when considering the impact of developments.

5.5. One consequence is that the predicted natural erosion loss of designated features at Lymington, and particularly the most threatened upper inter-tidal habitat features, has been judged to provide a mitigation opportunity is this particular case of slowing this natural erosion loss (see 6.5 below and Ref 4)

5.6. It is advised that the relevance of ongoing operations and the previous C Class ferry , currently discussed in the introduction to 'WTR Ch6 Assessment of Effects', could be discussed here under 'WTR Ch 5 Existing Conditions'. Any relevance of existing conditions for the integrity assessment could then be made in WTR Ch 6.6

5.7. The overall approach described in WTR Ch 6.1 sets out that the W Class impacts are assessed in reference to a C Class ferry baseline, where only the difference between the C and W Class impacts will be assessed (WTR Ch 6.1.7 p97). It was agreed with Wightlink long ago that this approach is incorrect for the purposes of appropriate assessment. For the purposes of appropriate assessment of the W Class ferry the W Class ferry should be assessed against a 'no ferry' baseline. However this amounts, in many places, to a presentational error primarily:

5.7.1. It is the W Class ferry in its entirety that has been the subject of ABPmer's and H R Wallingford's technical erosion assessments over the past 2-3 years (presented in WTR Table 6.2 p102), and Natural England's ecological assessments in the light of the conservation objectives (Refs 2 and 4).

5.7.2. Natural England disagrees with much of Wightlink's impact assessment, regardless of the baseline used in the current text, and offers alternative assessments (Refs 1,2,4, and 8).

5.8. Wightlink note case law in WTR Ch 6.6.2 p156 that 'in assessing the potential effects of a plan or project, their significance had to be established in the light, amongst other things, of the characteristics and specific environmental conditions of the site concerned'.

5.9. It should be noted that an important existing condition is that the potential impacts of the W Class ferry occur within a site that H R Wallingford advise has already suffered erosion as a result of the previous C Class ferry (Ref1). Natural England would advise that this past erosion would have caused a significant detrimental effect that will be recorded as 'loss and damage' against designated site condition.

5.10. While the consideration of the current Project cannot provide a mechanism for offsetting the past effects of the ongoing operation of the C Class ferry (operating at the time of designation of the N2k sites) any consequences of cumulative effects should be considered.

5.11. A consequence of the past loss and damage is that the Project here should be judged to have either a neutral or beneficial effect overall to avoid potentially significant or adverse cumulative effects even where the eventual impact of the W Class is found to be very small. The Adaptive Management and Monitoring Programme should be aware of this requirement

5.12. Other environmental risks from ongoing operations should also be reflected in the appropriate assessment as 'relevant environmental conditions', these might include the high level of recreational boating and associated dredging.

6. WTR Ch 6 Assessment of the Effects of the Project

6.1. WTR: Shore Works and Coastal processes Ch 6.2.3 p97, Aquatic Ecology and Ornithology Ch 6.3.1 p106, Water and sediment quality Ch 6.4.1 p114

6.1.1. Natural England has recently concluded relevant discussions with the Environment Agency and Marine Management Organisation and can now agree that there will not be a significant detrimental effect of the Shore Works on any of the designated features, and it can be considered neutral in its environmental impacts. However it may be subject to various conditions to ensure complete clarity on, for example, piling methods and timing, to avoid environmental impacts to birds and migratory fish.

6.2. WTR: W Class ferry and Coastal processes Ch 6.2.6 p98:

6.2.1. Natural England disagrees that natural factors have been dominant in morphological change along the navigation

channel north of Pylewell. See 5.2, above, where it is noted that the C Class ferry is judged to have had a significant erosion effect historically. Further Natural England disagrees that the current evidence shows that the ferries have not had an effect since 1990 and that the W Class ferry will have a small effect over its 30 year lifetime. Rather Natural England advises that there is a reasonable risk that the W Class ferry, over its operational lifetime, could cause significant erosion at Chart Datum and Mean Low water that Natural England has quantified as requiring mitigating at around 3 ha over the life of the ferry. (Ref 1, 4 and 8).This erosion prediction is the highest of the expert predictions available (WTR Table 6.2 p102) and Natural England is being precautionary in basing its advice on this estimate, as required under the Habitat Regulations.

6.2.2. To be confident in the quantity of the risk of impact we continue to advise that there is a need for Wightlink to monitor and report on ferry speed to show that they are keeping to the speed limit within strict environmental tolerances (Ref 9). This is because an increase in average speed of just 0.5 of a knot would increase the prediction of risk of impact by 38% (Ref 15). We do not agree with the position set out in Wightlink's Recharge Method Statement that this is not necessary (Ref 11c, Annex C Ch9 p51). The Lymington Harbour Commissioners monitor speed for navigational safety purposes and this allows a much greater tolerance, for example up to 8 knots.

6.2.3. The review of W Class monitoring strongly suggests that the current impact of the W Class is not significantly greater than H R Wallingford predict (Ref 10), and hence that the W Class is keeping to the necessary speed limit within environmental tolerances. Nevertheless it is important to know that Wightlink are able to regulate speed appropriately so that forward predictions of the 30 year risk of erosion impacts can be made, and the effectiveness of the Recharge Scheme judged accordingly.

6.2.4. The range in expert predictions of the possible effects of the W Class ferry, including those of Natural England, are described in WTR Ch 6.2.22, Ch 6.2.23 and Table 6.2 (p102). Here there has been a misunderstanding relating to Natural England's advice following Stakeholder Engagement in May 2010 (Ref 8). Our current advice, since Stakeholder Engagement, is based on the most recent H R Wallingford prediction of risk of erosion (Ref 8) which Natural England describes as requiring mitigation of 1.55ha per decade. If the agreed reduction in erosion rate with time is applied (50% per decade, ABPmer and HR Wallingford pers comm) the most likely total over 30 years would be 3ha. Of course it is recognised that this total may not be reached given the

substantial natural change that is expected over the coming 30 years.

6.2.5. In view of this misunderstanding Wightlink are advised to confirm the total ha-years that the mitigation is aiming to offset.

6.3. WTR W Class ferry and Aquatic Ecology/Ornithology 6.3.14p109.

6.3.1. Natural England disagrees that there will not be a detrimental effect on SAC and Ramsar lower inter-tidal habitat as a consequence of the possible long term erosion.

6.3.2. The potential loss of around a hectare of habitat at Chart Datum (assuming reducing rate of erosion) is a direct loss of designated N2K feature and contrary to the conservation objectives.

6.3.3. HR Wallingford continue to predict a risk of erosion of an average of around 1m recession of Mean Low Water per year, both sides of the navigation channel. It is emphasised that this figure is an average for illustrative purposes, and bathymetric data shows substantial variation along the channel. As an illustration, this average recession would amount to up to 24m MLW average recession, each side of the channel, over the lifetime of the W Class (Ref 1); Wightlink are wrong to describe this as a total of 8-9m recession over the life of the W Class ferry (Ref 11C); rather this is the risk of erosion per decade. All of these recession rates may be reduced as time goes by.

6.3.4. The inter-tidal mud area is currently 50-150m wide, and although the upper salt marsh vegetation is also receding year on year, it can be seen that the possible 30 year ferry-related MLW recession is substantial in relation to the current extent of habitat. As a consequence of this possible erosion topography will flatten further and the area of inter-tidal mud above MLW, and exposed most of the time, will be around 3-5 ha less than it would be without the ferry.

6.3.5. After the W Class leaves service around 2040, the habitat around MLW could be up to 24m further landward than it would have been without the ferry, further exaggerating past and future trends of erosion. A further consequence of the MLW recession is a reduction in the persistence of habitat above MLW.

6.3.6. The new invertebrate survey that Wightlink presents (Ref 11c) does show that there are subtle differences between communities below MLW and submerged most of the time compared to those that are above MLW and exposed most of the time

6.3.6.1. ‘*The key distinctions between the assemblages at each inter-tidal site occur, typically, as a function of their tidal elevation and also, to some degree, between western and eastern sides.....However, as noted above, these distinctions are subtle’* (Ref 11C Ch 6.27 p 63)

6.3.7. The slopes of the channel banks currently range from 1:200 to 1:40. The implications of topographical change for invertebrate communities will be most pronounced where banks are steeper and invertebrate communities along a tidal gradient more distinct.

6.3.8. The year on year potential impact on the inter-tidal habitat and invertebrate communities is small, but this is part of a ferry-induced progressive trend that continues to build with time.

6.3.9. Any ferry-induced change occurs within a site that is rapidly changing due to other factors. Consequently Natural England continues to advise that mitigation at 50% of impacted area is required to provide confidence that an adverse effect on integrity will be avoided (Ref 4).

6.3.10. Similarly Natural England disagrees that there will not be a long term detrimental effect on wintering birds. Natural England’s advice on SPA/Ramsar bird impacts has been based on the assumption that the navigation channel forms a functional part of the wider site in supporting feeding wintering birds; that is the navigation channel is not ‘unused’ or ‘unimportant’ for any specific reason such as excessive disturbance or polluted sediments.

6.3.11. Wightlink review ornithological data (Ref 11C Ch6.2.6 p 73) to conclude that the navigation channel is not important for feeding birds.

6.3.12. The data for the Lymington Harbour, including the navigation channel, was reviewed by Black and Veatch for the Harbour Commissioners (Ref 14 Ch7.5 p49). They concluded that ‘the harbour is an important feeding area for waders and wildfowl at low water. ..... ten species have populations with more than 1% of the SPA population feeding in the harbour at low tide’

6.3.13. Natural England does not agree that the sub-compartment data for the navigation channel alone, surveyed in one year, (Ref 11C Tables 16 and 17 Ch6.2.6) is sufficient evidence upon which to assess that the navigation channel is not a functional part of the wider estuary or harbour that, altogether, is important for wintering feeding birds.

6.3.14. Even one year's data shows that around 18 SPA/Ramsar criteria species were present along the navigation channel, with small numbers of wading birds (up to 11 for each species) and higher numbers of Black-headed gull (450), Common Teal (95, more than 1% of SPA population), Brent Geese (130) and Wigeon (70). Note that all the species listed fall within one of the SPA/Ramsar criteria, most within the 'Internationally Important Assemblage' criteria.

6.3.15. The consequence of the potential 30 year effect of the W Class ferry around MLW is that around 3-5 ha of inter-tidal feeding habitat will be submerged and unavailable most of the time rather than exposed and available most of the time. This change in prey availability is part of an ongoing trend of MLW recession, but does also occur within a background context where saltmarsh is changing to mudflat. As a consequence Natural England continues to advise that mitigation at 50% of impacted area is required to provide confidence that an adverse effect on the integrity of the SPA/Ramsar will not occur (Ref 4).

6.3.16. Migratory fish using the Lymington River are an interest feature of the Lymington River SSSI. The Environmental Agency are currently in discussion with Wightlink and Natural England about any measures needed to ensure the SSSI's are not compromised, and the outcome of this discussion will need to be reflected in the Environmental Statement.

6.4. <u>WTR W Class ferry and Water and sediment quality:</u>

6.4.1. Natural England has considered the potential effects and agrees that there is not a significant detrimental effect in relation to pollution (risks can be managed) or re-suspension of sediment (Ref 8) .

6.5. <u>WTR Recharge Scheme and Coastal processes (6.2 p103), Aquatic Ecology and ornithology (6.3 p112), Water and sediment quality (6.4.13 p116)</u>

6.5.1. Natural England's comments in this section relate to the Recharge Scheme as a stand-alone project. How well the Recharge Scheme works as mitigation to offset a risk of ferry impacts is considered in 6.27 below under 'Assessment of Effects on Site Integrity'

6.5.2. Natural England supports the approach of the Recharge Scheme, as a stand-alone project, to slow natural erosion and create a habitat benefit of increased habitat persistence in this particular circumstance (Ref 4). There is no opportunity for the

N2K site at Lymington to adapt to sea level rise within its designated boundary, and the historic trend of losses of vegetation and inter-tidal area can be expected to continue to a predictable point in the future where there will not be any designated inter-tidal habitat left (within 100 years). Slowing this natural trend of loss will give wildlife more time to adapt and move to find new habitats.

6.5.3. The benefit to the N2K site is delivered both through slowing the erosion of the 0.9ha placement area and maintaining this at a higher level in the tidal frame and through slowing the internal erosion and loss of the vegetated salt marsh. There will be small, short term detrimental impacts during the process of applying the sediment and while the placed sediment is settling and colonising, but these are not detrimental to such a large dynamic site in the context of a longer term benefit of increased habitat persistence.

6.5.4. It is agreed that there are likely to be added benefits achieved through preventing the fragmentation of this area of marsh and subsequent rapid erosion of both upper and lower inter-tidal habitat, and through increased protection of marsh areas behind the prolonged placement area.

6.5.5. In particular the benefit of such a scheme will be important for roosting and breeding birds, given the rapid losses of upper inter-tidal habitat occurring throughout the N2K sites and particularly at Lymington.

6.5.6. It is recognised that there will be a release of sediment from the recharge site. The location of the site was chosen specifically to limit the environmental consequences of this run-off, which will be to an area with high wave and current energy that will quickly disperse it. It is understood that the Environment Agency will seek monitoring of turbidity as a safeguard for water quality. Natural England agrees that there is not likely to be any significant detrimental effects for N2K or SSSI features.

6.6. WTR Table 6.4 Assessment of Impacts;

6.6.1. As discussed above, there are areas of agreement and areas of disagreement relating to impacts and these are reflected within the table.

6.7. WTR Ch 6.6 Assessment of Effects on Site Integrity.

6.7.1. Natural England and Wightlink clearly have differing opinions on the risk of impacts of the W Class ferry to the N2K sites.

Nevertheless Wightlink have had regard to Natural England's advice in proposing the Recharge Scheme. An appropriate assessment will need to consider whether the benefits of the Recharge Scheme mitigate the possible risks to the integrity of the N2k sites that Natural England has identified.

6.7.2. Natural England continues to broadly support the Recharge Scheme as providing appropriate benefit to offset the risk of impact of the W Class ferry (Ref 4 and 9). However, in light of stakeholders representations (see 3.3 above), we advise that further reassurance of some of the key parameters is now required before an appropriate assessment could confidently conclude that an adverse effect has been avoided.

6.7.3. It is not clear to the observer that the ha-year figures in WTR Table 6.3 p105 take account of the necessary time period to achieve the 0.9ha of placement benefit, although it is stated in the text that this has happened. There is a need to confirm and illustrate that the cumulative benefit quantification from year 1 of the Recharge Scheme takes account of the need to allow up to the three attempts necessary to have a high level of confidence that the 0.9ha of sediment will be successfully placed, followed by a period to allow the sediment to become ecologically functioning (recommended as 18 months following third attempt, EA and CEFAS pers comm)).

6.7.4. There is also a need to demonstrate how the current timeline for successful delivery of the 0.9ha of habitat benefit with a high level of confidence (advise summer 2015 if first attempt begins 2012) affects the delivery of ha-years of benefit compared to the cumulative potential impact of the W Class ferry (introduced 2009). This could usefully be shown graphically. It would be helpful to illustrate the resilience of the mitigation proposal to further delay in the implementation of the Recharge Scheme. Consideration should be given to changes to the potential benefit available at Boiler Marsh as it continues to erode year on year.

6.7.5. We continue to advise, as we have since Stakeholder Engagement (Ref 9), that there is a need to agree more specific criteria of success and monitoring for the 0.9ha of sediment placement benefit (Ref 9) The criteria and monitoring currently proposed remains inadequate for purposes given the lack of any specific measures of success and the reliance on qualitative changes.

6.7.6. If this sediment placement benefit is to be quantified as 0.9ha then its primary purpose relates to the 0.9ha itself and not as a buffer to the salt marsh, as currently described. After Stakeholder Engagement last May Natural England's ongoing work with other bodies clarified that the benefit from this kind of project should be defined as the maintenance of the placement

area (0.9ha here) at a higher level in the tidal frame and maintained, rather than rapidly eroding away. To monitor this sediment depth and cover will need to be included in the success measures. It is agreed that the benefit should be measured once the area meets simple 'ecologically functioning' criteria, but the specific nature of the habitat is not a criteria.

6.7.7. Natural England has continued to engage with Stakeholders and Competent Authorities on this matter and jointly agreed, improved criteria will be recommended by the Competent Authorities to Wightlink.

6.7.8. The proposal for an Adaptive Monitoring and Management Plan is supported.

6.7.9. A robust legal agreement is essential to the necessary level of confidence that the mitigation can be successfully delivered. The current draft S106 agreement will require amendment and Natural England is working directly with the Competent Authorities to achieve a new draft that can be proposed to Wightlink. Whilst we reserve our discretion to make further comments on the S106 as it evolves, we presently offer the following observations;

6.7.9.1. At clause 8.1.1 Wightlink will be released from liability under the agreement where it has 'parted with all of its interests in the Recharge Site'. Accordingly, the Competent Authorities must be assured that Wightlink's 'interests' (presumably as created by the license referred to in clause 2 (C)) are of a sufficient term to require Wightlink to deliver all of its obligations under the agreement.

6.7.9.2. We note at clause 8 of Schedule 1 that 'Additional Recharge' is made 'subject to obtaining the Necessary Consents'. Given that up to two additional recharges are likely to be required to ensure success we advise that consent for all three recharge attempts should be obtained now, and not be made subject to a future consenting process.

6.7.9.3. We query the length of time (five years) posed at clause 3.7 of Schedule 3 for the lifespan of the Environmental Management Panel, given the long term requirement for monitoring the ferry impacts and mitigation success.

7. Consideration of effects ‘in combination’ with current plans and projects

7.1. Natural England provided advice on the developing approach to ‘in combination’ assessments within the large Solent-wide N2k sites at 2 above. It is not currently clear whether the Wightlink Project here can be assessed as fully neutralised, and not requiring an ‘in combination’ assessment, until all outstanding matters have been resolved. The Wightlink project has the potential to be assessed in this way and may deliver overall positive benefit, but there are difficult judgments to be made about levels of confidence.

7.2. If it is considered appropriate to assess the Wightlink Project ‘in combination’ with other plans and projects then the approach to consider the Lymington Estuary as the unit of assessment is supported (see 2 above).

7.3. Natural England can offer further advice, in addition to the information provided at WTR Ch 7 p161, that offers reassurance that ‘in combination’ effects are not a significant issue at Lymington

7.3.1. The Lymington Harbour Protection development (Ref 14), including a Habitat Restoration project as part of its mitigation, was judged to be fully neutralised and even beneficial over the longer term, and did not require an ‘in combination’ assessment.

7.3.2. However Wightlink judge that there is a potential small interaction effect where any erosion caused by the ferries may be slightly increased as they pass the rock breakwaters of the Harbour Protection development. This slightly increased risk of ferry impact should feed into the overall risk of ferry impacts and it should be shown that this total risk of impact can be offset by the Recharge Scheme.

7.3.3. The initial trial phase of the Environment Agency Lymington River Reedbed Water Level Management Plan project is judged to be neutral in impact. Further phases will be assessed as they are developed.

7.3.4. The North Solent Shoreline Management Plan (NS SMP) recommends a ‘Hold the Line’ policy (HTL) for the seawall along the west of the Lymington Estuary. This policy has been judged to have an adverse effect on integrity, ‘in combination’ with other HTL policies across the N2K sites, causing coastal squeeze and loss of saltmarsh (Ref 17). The NS SMP therefore causes an adverse effect on integrity at Lymington. However another consequence of this HTL policy (seawall) effect is that as saltmarsh changes to mudflat in front of the sea wall, mudflat increases and there is not a detrimental effect on mudflat; the adverse effect is due to loss of saltmarsh. It is anticipated that the NS SMP will be permitted to proceed by the Secretary of State if compensation is provided (decision

pending under Reg 62 and 66). In view of this the NS SMP will be neutral overall for the N2K sites; the loss of saltmarsh will be fully compensated. Further given this plan does not cause a loss of mudflat (but a gain) it will not combine in a negative way with the Wightlink Project at Lymington.

I hope the above comments are helpful in considering Wightlink's consent applications, and I would be pleased to discuss this further if required.

Yours faithfully

Claire Lambert

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Natural England References

1. H R Wallingford Wightlink Ferries Lymington Geological advice contract to Natural England (impact assessment) Report EX5937 Jan 2009.
2. Natural England (impact assessment) advice to regulators v3 Feb 2009
3. Wightlink Ltd- Replacement Lymington to Yarmouth Ferries: Information for Appropriate Assessment Agreed Protocols for Monitoring the Effects of the W Class ferry Report R1509 S1 ABPmer July 2009
4. Natural England Consideration of the impacts of, and opportunities for mitigation for, the W Class ferry at Lymington Nov 2009.
5. H R Wallingford Wightlink Ferries Lymington Review of Monitoring Technical note DDM 6263/01-02 Dec 2009
6. Wightlink Ltd Replacement Lymington to Yarmouth Ferries: Information for Appropriate Assessment Agreed Protocols for Mitigating the Effects of the W Class ferry Report R1509 S2 ABPmer December 2009
7. H R Wallingford Wightlink Ferries Lymington, Further Comments on Natural England Questions relating to proposed approach to mitigating the effects of the W Class ferry at Lymington Report DDM/01-03 Dec 2009
8. H R Wallingford Wightlink Ferries Lymington Response to Stakeholder Issues Report DDM6263 H R Mch 2010
9. Natural England Stakeholder Response; summary and detailed response May 2010
10. H R Wallingford Wightlink Ferries Lymington Review of Monitoring Report DDM 6263-10C-01 July 2010
11. Wightlink Ltd consent application documents November 2010:
    a. Environmental Statement ERM Nov 2010
    b. Technical Report to Inform Appropriate Assessment ERM Nov 2010
    c. Selected Information for Appropriate Assessment including Annex C (revised) Method Statement for the Recharge/Habitat Creation Work ABPmer Oct 2010
12. Natural England Supplementary Advice to Regulators March 2011
13. Natural England note for Lymington River Association: Wightlink's quantification of benefit: explanation of ha years July 2010
14. Lymington Harbour Protection Environmental Statement Black and Veatch April 2005.
15. H R Wallingford Wightlink Ferries Lymington Response to queries regarding the effect of ferry speed DDM6263-10A-01 R2 Feb 2011
16. Environment Agency Lymington River Reedbeds Water Level Management Plan
17. North Hampshire Shoreline Management Plan NFDC

Annex 1

Statutory sites at the Lymington River to which Natural England's Supplementary Advice refers:

1. Solent and Southampton Water Special Protection Area
2. Solent and Southampton Water Ramsar site
3. Solent Maritime Special Area of Conservation
4. Hurst Castle to Lymington River SSSI
5. Lymington River SSSI

NEW FOREST DISTRICT COUNCIL

Table of objections to Wightlink Application Ref. 96387 raised by Members of the Public

Comment No.	Objection No.	Objection	Question	Question to whom?	Response
1	1,4,8,22,23,31,39, 43,44,49,53,56, 59, 61,64,67,69,70, 72, 86,89,90,99,109	Ferry illegally introduced.	Have ferries been illegally introduced?	N.E. and Legal Advice	See recent JR judgment which concluded that the introduction of the W Class was unlawful because it was a plan or project subject to the tests of the Habitat Regulations; NE had advised that there was likely to be a significant effect and it hadn't been shown that an adverse effect had been avoided. Hence Wightlink was advised to undertake an appropriate assessment and take NE views into account in that assessment. Wightlink are now going through that process.
2	1,2,8,10,11,12,13, 17,18,20,26,43, 45, 46,47,48,49,52, 57, 60,61,63,64,66, 76, 77,78,80,85,86, 87, 90,92,94,96,107 ,109	Ferry too large for the river.	Are the ferries too large for the river?	N.E. and LHC	The hydrodynamic impacts H R Wallingford predict for the W Class are due to their cross sectional hull area related to the size of the navigation channel (Ref 1). However vessel size is only one of several parameters that relate to environmental impacts; others are hull shape, speed, propulsion system and frequency of river trips and these can vary independently of vessel size. The W Class ferry, travelling at better regulated, slower speeds, is judged to potentially have a similar erosive effect to the previous smaller C Class ferry that has been judged to regularly exceed the speed limits (Ref 1).
3	1,7,10,11,12,15, 16,	Ferry causing erosion and	Are ferries causing	N.E.	There is a risk that the W Class ferry could cause erosion and loss of the designated habitat (Ref 1 and

	19,21,22,23,26, 28, 30,31,33,39,43, 44, 45,46,47,48,49, 53, 56,59,64,66,67, 68, 69,70,71,72,73, 74, 76,77,79,80,81, 84, 85,86,98,93,94, 96,99,100,103,1 04,105, 106,107,110	loss of European protected habitat.	erosion and loss of habitat?		8) and NE advises that this risk, over the long term, requires mitigation to be certain of avoiding a risk of an adverse effect (Ref 2 and 4). This position is precautionary rather than certain, as required under the Habitat Regulations. Recent monitoring has been reassuring (Ref 10). After a year of monitoring for thruster effects on the designated banks there is no sign that they are occurring. Further, the bathymetric survey strongly suggests that impacts will not be significantly greater than H R Wallingford have predicted (this has been a concern of the LRA), they could still be significantly less, it is too early to tell because the predicted erosion is so small each year. Currently the monitoring has not changed NE advice of the need for mitigation to offset a reasonable risk of a long term adverse effect.
4	1,10,11,13,17,2 0, 21,22,26,27,28, 32, 34,35,36,37,38, 39, 40,41,42,49,53, 54, 57,58,66,67,70, 72, 73,76,79,81,83, 85, 86,94,96,98,99, 109	Increased freight traffic across the National Park and through Lymington.	Do the W class ferries result in increased traffic across the National Park and Lymington and does this cause ecological, environmental and amenity harm?	N.E., NPA, HCC Highways, NFDC	Traffic through the Forest could affect pony deaths and commoning, erosion of road verges and atmospheric pollution. Pony deaths, road verge erosion and atmospheric pollution are not currently a cause of unfavourable condition for the New Forest SAC. NE agrees with Wightlink's Environmental Statement (Ref 11a) that traffic from the ferry is a small proportion of the traffic using the local area and a tinly proportion of the traffic using the wider Forest. Even close to the ferry terminal there are typically around 1 600 ferry vehicle movements at the local roundabout compared to 10 000 other vehicle movements. It cannot reasonably be said that the ferry (C or W)

					traffic will exert any significant effect on the New Forest SAC. The scale of traffic influences relevant to the Forest ecological condition might be of a scale of the socio-economic growth predictions for housing and business over a large area including Southampton and Bournemouth, as well as predicted increases in visitor numbers (currently of the order of 20 million a year).
5	1,10,11,26	Freight traffic must use small roads on Isle of Wight.	Do W class ferries result in freight traffic using small roads on Isle of Wight? Does this result in ecological, environmental and amenity harm?	N.E., HCC Highways, NFDC, Isle of Wight Council	Freight traffic is not a cause of unfavourable condition of IOW SSSI's.
6	1,13,14,49	Transport policy is to develop existing major access roads and ports not to over develop minor ports in protected areas.	Is policy to develop major access roads and ports?	HCC Highways and Planning	
7	1	No other small tidal river in	Is this statement valid and are		See 2 above.

		Britain has to cope with vessels the size of the W Class and it should not be allowed in Britain.	the ferries too large for the river?		
8	2,27,34,35,36,37,38,71,74,86	W class ferries have greater car and lorry capacity than old C class ferries.	Do the W class ferries have greater capacity for cars/lorries than C class ferries?	Wightlink, HCC Highways	
9	3,9,11,14,24,28,32,41,42,43,79,86	Terminal building/works too large, high and modern and not in keeping with environment.	Is the terminal appropriate for its environment?	NFDC Planning	
10	3,8,9,16,17,39,41,44,81	Noise and disturbance to locals as a result of increased traffic.	Will any additional traffic have an adverse effect on local residents in terms of noise and disturbance?	NFDC Planning/EHO	
11	3,9,10,14,16,20,21,24,25,27,43,44,45,46,47,48,	Additional traffic will have serious	Will any additional traffic have	HCC Highways	

	51,52,55,56,80, 81,82,91,92,95, 99	highway safety implications.	adverse highway safety implications?		
12	4,5,6,8,12,13,15 ,16,17,18,19,26, 28,29, 43,50,55,56,58, 59,60,61,63,65, 67.69,70,71,73, 77,78,81,83, 85, 86,89,94,99,	Mud recharge works will not work and will damage the marshes and may contain toxic material.	Is there potential for the recharge mud to contain toxic waste? Will works be successful and will damage be caused to the marshes as a result of mud dumping?	N.E.	<u>Will the scheme be successful?</u> HR Wallingford (Ref 7) advise that, provided the sediment placement is attempted on 3 occasions, with sufficient budget, there can be a high level of confidence that it will be successful. They warn of high costs that might be required, particularly if further intervention is needed. The delivery of the mitigation will be subject to a legal obligation through a S106 Agreement or Marine Licence. The appropriate assessment will need to assess whether the terms of the legal agreement are sufficiently robust to give the required level of confidence that the mitigation will be successfully delivered. This will include criteria for success and monitoring. Actual ferry impact and mitigation delivery will be overseen by an Environmental Advisory Panel including all statutory bodies (Ref 11C). The key role of this body will be to assess all monitoring information, look ahead and ensure that the mitigation proposal will be successful**.** <u>Will the Scheme damage Boiler marsh</u> See Wightlink method statement Ref 11c. NE agrees that any damage to the fauna of the 0.9ha sediment placement area will be temporary, and likely to recover in 18 months. Once recovered there will be a benefit in slowing erosion and retaining this area at a higher level in the tidal frame. NE further agrees with Wightlink that there is unlikely to be any significant damage from the process of

					applying sediment. <u>Will the recharge sediment be toxic?</u> Recharge sediment will come from annual maintenance dredging of the Marinas. As such it is likely to have mostly come from erosion of the marshes originally (this may have been shown). Wightlink (11C) have done an analysis of sediment contamination and NE and the EA are currently in discussion about the necessary standards. Through targeting areas of low contamination it will be possible to deliver the required standard to avoid any detriment (EA pers com) and this will be resolved through the legal agreement.
13	4,12,16,17,18,20,21,22,26,30,41,42,43,49,53,61,69,70,71,72,74,80,86,87,90,93, 94,96	Increased danger to river users as a result of operation of W class ferries.	Does operation of W class ferries give rise to increased danger to other river users?	LHC	
14	7	Ferries adhering to speed limits does not constitute mitigation.	Does control of ferry speed constitute mitigation?	N.E.	H R Wallingford (Ref 1, 8) advise that the potential for an erosive effect of the W Class is very sensitive to speed. Their advice that the W Class can be predicted to have a similar erosive effect to the C Class is based upon their assumption that the C Class frequently exceeded the speed limit while speed of the W Class speed has been much more closely controlled by the LHC.

					NE (Ref 9) agrees with the LRA that there is a need for Wightlink to demonstrate much more sensitive speed monitoring and reporting than the LHC undertake for navigational safety purposes. This is to demonstrate that the W Class is keeping, on average, to the speed limit and hence keeping to H R Wallingford prediction of erosion impacts. .
15	7,12,43,55,58,64,85	Is mud recharge work mitigation or compensation?	Is mud recharge work mitigation or compensation?	N.E., Legal advice	Please see text below from Ref 9 Natural England Stakeholder Response , 5 Process/Legal 5.5 pp11-12 Role of Habitat Restoration 'mitigation' or 'compensation'. (Please note in Ref 9 a confusion between the old and new Habitat Regulations nomenclature; where Reg 48 is written please read Reg 61, and where Reg 49 and 53 please read Reg 62 and 66) *'The Habitats Regulations allow for mitigation or avoidance measures to be incorporated into a plan or project for the purposes of avoiding an adverse effect on the integrity of the European site. It is Natural England's view that, in appropriate circumstances, such measures can take the form of habitat creation within the boundary of the site to ensure that the site's conservation objectives are not impaired and that an adverse effect on the site's ecological integrity does not result from the proposed plan or project, as required under Regulation 61 of the Habitats Regulations.* *Wightlink, as competent authority, will be undertaking an appropriate assessment of the introduction of the W class ferry under Regulation 61 and the assessment will consider whether the mitigation proposal avoids the risk of an adverse effect occurring.* A distinction should be made between Regulation 61 which covers issues of appropriate assessment and impact avoidance and **Regulations 62 and 66** of the Habitats Regulations which deal with alternative solutions, IRPOI and

					compensatory measures.'
16	10,11	New docking facilities would not mitigate damage caused by W class ferries.	Would new docking facilities mitigate damage caused by W class ferries?	N.E.	There is currently no sign that the docking of the W Class ferry is impacting the designated habitat to the East of the terminal, since recent bathymetry has shown the Mean Low Water line there to be accreting. There is no natural environmental advantage to new docking facilities. (There may be improved safety for other boat users because once in place the thrusters can be decoupled when the ferry is docked and the current high local turbulence reduced, (LHC concern pers com))
17	10,11,66	Shore works would have no benefit to the local community.	Would the proposed shore works benefit the local community?	NFDC Planning	Whilst the array of concerns raised are recognized, the shore works would benefit members of the local community who use the ferry service as the loading/unloading facilities would be safer and more efficient.
18	16,41,42,66,72	Reduction in amenity value of the harbor.	Will the proposals result in a reduction in the amenity value of the harbour?	NFDC Planning LHC	
19	22	A fixed link to the Isle of Wight would be a better long term solution.	Would a fixed link to the Isle of Wight be a realistic option?	HCC Highways	
20	27	Ferry moored	Is the	NFDC Planning	Whilst the ferry does have a visual impact and has

		at freshwater berth is visually intrusive to local residents.	moored ferry in freshwater berth visually intrusive?		been in situ for some time, it is not a permanent fixture and it would be difficult to justify a refusal of planning permission on these grounds.
21	27	Ferry search lights using freshwater berth harming residential amenity.	Does the use of the search light cause harm to residential amenity?	NFDC Planning EHO Wightlink	
22	27	Can a condition be imposed to require ferries to berth in line and only use freshwater berth as an exception?	Can a condition be imposed to require ferries to berth in line and only use freshwater berth as an exception?	NFDC Planning Wightlink	
23	27,45,46,47,48, 54, 82,86,99	Impact of noise arising from maintenance of ferries, alarm system and announcements on residential amenity.	What is the level of harm to residential amenity?	NFDC Planning EHO Wightlink	
24	27,54,73,85,98, 99	Increased traffic	What impact does any	NFDC Planning EHO	

		through the night.	increased night traffic have in terms of residential amenity?	Wightlink	
25	40	New ferries have resulted in less waterborne visitors to Lymington affecting local economy.	Has the introduction of the new ferries led to a reduction in the number of waterborne visitors to Lymington and has this affected the local economy?	NFDC Tourism and Economy Manager	
26	53,72,94	Ferries badly designed, do not have enough passenger capacity. Wightlink have hired small local ferries to move backlog of passengers.	Do the ferries have enough passenger capacity?	Wightlink	
27	54	Noise from ferry exhaust	Are noise levels of	NFDC EHO	

		fans in early hours and evening.	exhaust fans within acceptable limits?		
28	74	Wightlink scenario of no ferry service would not happen. Others would operate a ferry service – this is a very profitable route.	Is no ferry service a real possibility?	Wightlink	
29	75	Most damaging situation with thrusters is when ferries are at rest.	Has damage caused when ferries are at rest been assessed?	N.E. Wightlink	There is currently no sign that the docking of the W Class ferry is impacting the designated habitat to the East of the terminal, since recent bathymetry has shown the Mean Low Water line (most likely to be affected) there to be accreting (HR Wallingford pers com).
30	89	Plans do not accurately detail location of re-charge works/shore works.	Do the submitted plans accurately show the location of the re-charge works/shore works?	NPA Wightlink NFDC Planning	
31	89	Who will monitor re-	Who will monitor re-	NPA Wightlink	

		charge works to ensure correct volume of material is dumped and it is colonised by plants/fauna.	charge works?		

Natural England References

1. H R Wallingford Wightlink Ferries Lymington Geological advice contract to Natural England (impact assessment) Report EX5937 Jan 2009.
2. Natural England (impact assessment) advice to regulators v3 Feb 2009
3. Wightlink Ltd- Replacement Lymington to Yarmouth Ferries: Information for Appropriate Assessment Agreed Protocols for Monitoring the Effects of the W Class ferry Report R1509 S1 ABPmer July 2009
4. Natural England Consideration of the impacts of, and opportunities for mitigation for, the W Class ferry at Lymington Nov 2009.
5. H R Wallingford Wightlink Ferries Lymington Review of Monitoring Technical note DDM 6263/01-02 Dec 2009
6. Wightlink Ltd Replacement Lymington to Yarmouth Ferries: Information for Appropriate Assessment Agreed Protocols for Mitigating the Effects of the W Class ferry Report R1509 S2 ABPmer December 2009
7. H R Wallingford Wightlink Ferries Lymington, Further Comments on Natural England Questions relating to proposed approach to mitigating the effects of the W Class ferry at Lymington Report DDM/01-03 Dec 2009
8. H R Wallingford Wightlink Ferries Lymington Response to Stakeholder Issues Report DDM6263 H R Mch 2010
9. Natural England Stakeholder Response; summary and detailed response May 2010
10. H R Wallingford Wightlink Ferries Lymington Review of Monitoring Report DDM 6263-10C-01 July 2010
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16. Environment Agency Lymington River Reedbeds Water Level Management Plan
17. North Hampshire Shoreline Management Plan NFDC

NEW FOREST DISTRICT COUNCIL

Table of Responses-Objections to Wightlink Application Ref. 96387 raised by Consultees

Consultee		Comments		Questions	Response by Whom	Response
Lymington Society	ls 1	The application is enabling work which will lead to an adverse effect on the designated Natura 2000 habitats contrary to the Habitats Directive and Habitats Regulations.	1	Will the Natura 2000 Habitat be adversely affected by the proposals?	N.E.	In Feb 2009 NE advised (Ref 2) that there was a risk that the introduction of the W Class ferry could have a long term adverse effect on the integrity of the N2K sites at Lymington. Wightlink, working with NE and other authorities and experts, have proposed the 'Recharge and Habitat Creation works', with a view to mitigating the long term risk of W Class impacts. Wightlink have undertaken a draft appropriate assessment including the Recharge and Habitat Creation Works which has concluded that an adverse effect has been avoided. Other regulators are now in the process of undertaking their own assessment. Wightlink will finalise their judgment in the light of the Regulators assessment. NE continues to broadly support Wightlink's mitigation proposal, but advises (Ref 12) that there needs to be some modification to the currently proposed details, and appropriate speed monitoring and reporting needs to be agreed, before it can be shown that an adverse effect has been avoided.
	ls 2	The mud dumping proposal is not mitigation (under article 6.3 of the Habitats Directive but it is in fact compensation under article 6.4.	2	Mud dumping is not mitigation but compensation?	Legal Advice N.E.	Please see text below from Ref 9 Natural England Stakeholder Response , 5 Process/Legal 5.5 pp11-12 Role of Habitat Restoration 'mitigation' or 'compensation'. (Please note in Ref 9 a confusion between the old and new Habitat Regulations nomenclature; where Reg 48 is written please read Reg 61, and where Reg 49 and 53 please read Reg 62 and 66) *'The Habitats Regulations allow for mitigation or avoidance measures to be incorporated into a plan or project for the purposes of avoiding an adverse effect on the integrity of the European site. It is Natural England's view that, in appropriate circumstances, such measures can take the form of habitat creation within the boundary of the site to ensure that the site's*

						conservation objectives are not impaired and that an adverse effect on the site's ecological integrity does not result from the proposed plan or project, as required under Regulation 61 of the Habitats Regulations. *Wightlink, as competent authority, will be undertaking an appropriate assessment of the introduction of the W class ferry under Regulation 61 and the assessment will consider whether the mitigation proposal avoids the risk of an adverse effect occurring.* A distinction should be made between Regulation 61 which covers issues of appropriate assessment and impact avoidance and **Regulations 62 and 66** of the Habitats Regulations which deal with alternative solutions, IRPOI and compensatory measures***'***
	ls 3	Consider that alternatives to the current ferry service should be properly assessed before considering habitat creation or habitat augmentation schemes.	3	What alternatives to the current ferry have been considered?	Wightlink N.E.	The current stage of the Habitat Regulations process does not require an assessment of 'alternatives'. See above, Wightlink and other Regulators, are currently undertaking an 'appropriate assessment' under Regulation 61 of the Habitats Regulations to ascertain if mitigation or avoidance measures have been successfully incorporated into the plan or project such that an adverse effect on the integrity of the European site has been avoided. If it cannot be demonstrated (contrary to Wightlink's draft assessment) that an adverse effect has been avoided the plan or project goes on to the next stages of the assessment process, where a consideration of alternatives (Reg 62) and 'Imperative Reasons of Over-riding Public Interest' (Reg66) would be made. **.**
	ls 4	The mud dumping scheme is open-ended and does not have sufficiently reliable likelihood of being successful.	4	Will the mud dumping scheme be successful?	N.E.	HR Wallingford (Ref 7) advise that, provided the sediment placement is attempted on three occasions, with sufficient budget, there can be a high level of confidence that it will be successful. They warn of high costs that might be required, particularly if further intervention is needed. The delivery of the mitigation will be subject to a legal obligation through a S106 Agreement or Marine Licence. The appropriate assessment will need to assess whether the terms of the legal agreement are sufficiently robust to give the required level of confidence that the mitigation will be successfully delivered. This will include criteria for success and monitoring.

						Actual ferry impact and mitigation delivery will be overseen by an Environmental Advisory Panel including all statutory bodies (Ref 11C). The key role of this body will be to assess all monitoring information, look ahead and ensure that the mitigation proposal will be successful**.** .
	ls 5	4.65 hectares (11.5 acres) of Natura 2000 habitats will either be lost or seriously degraded directly as the result of the actions of the W class ferries.	5	Will 4.65 hectares of Natura 2000 habitat be lost as a result of W class ferries?	N.E.	As discussed in Ref 11C, the expert predictions of the possible lower inter-tidal erosion due to the long term 30 year operation of the W Class ferry range from 0.1ha (ABPmer), 0.5 ha (Black and Veatch) to a maximum of 2.1 ha at Chart datum and 5.1 ha at Mean Low Water (H R Wallingford). NE has based its advice on the worst case prediction of H R Wallingford and has interpreted the erosion in the light of the conservation objectives for the site (Ref 4). As a consequence NE has advised that the 30 year detrimental impact requiring mitigation should be quantified as all the designated habitat loss at Chart datum and half of the Mean Low Water recession. This amount, over 30 years, equates to 4.65 ha. However H R Wallingford notes (Ref 1) that the rate of erosion is likely to diminish with time and hence NE advises that 3ha of impact requiring mitigation is more likely (Ref 9). Wightlink's Recharge and Habitat Creation works are designed to cancel this erosion impact to the N2K sites such that an adverse effect does not occur.
	ls 6	The loss of saltmarsh will have a seriously deleterious effect on the natural beauty of the Lymington River Estuary visible from the town bearing in mind the Designations of the South Hampshire Coast Area of Outstanding Natural Beauty and in the New Forest National Park	6	Will loss of saltmarsh have an adverse impact on natural beauty of the Lymington River?	NFDC Planning	NE advises that the W Class ferry is not predicted to have any significant effect on saltmarsh (Ref 8). NE notes that any ongoing lower inter-tidal mud erosion effect of the W Class ferry would be dwarfed by the natural changes occurring at Lymington, and as described by Wightlink in Ref 11a.

		Authority's recently designated Conservation Area.				
	Is 7	Stone breakwaters are being built in the upper half of the river to protect the remaining salt marshes in this part of the river, the use of W class ferries would nullify the benefits of these works.	7	Will use of W class ferries nullify the benefits of the shone breakwaters?	N.E.	The environmental and harbour benefit of the Harbour Protection Scheme is to reduce wind waves at higher states of the tide, reducing erosion of the upper inter-tidal area and saltmarsh, primarily behind the western breakwater. The risk of significant ferry-related impact is to the lower inter-tidal around MLW and below, and the greatest effects from the C Class historically have been on the outer eastern bank of long reach and at Pylewell. Hence there is spatial separation between the effects of the two schemes and the use of the W Class ferry is not expected to nullify the benefit of the Harbour Protection Scheme.
	Is 8	The capacity of the W class ferries is considerably in excess of the old C class ferries, in combination with the Redrow development at Bridge Road traffic disruption at the level crossing will be greatly increased.	8	Is the capacity of the W class ferries greater than the C class ferries?	HCC Highways Wightlink	
	Is 9	Concerns that extra traffic would travel through the town or over the open Forest to Beaulieu. Consider that a detailed survey of all traffic (including night time freight traffic) and projections for a full 3 ferry service should be carried out as part of the full assessment of the application.	9	Will extra traffic travelling over the Forest and through Lymington (including night traffic) adversely affect ecology, environment and residential amenity?	HCC Highways N.E. NFDC Planning	Traffic through the Forest could affect pony deaths and commoning, erosion of road verges and atmospheric pollution. Pony deaths, road verge erosion and atmospheric pollution are not a cause of unfavourable condition for the New Forest SAC. NE agrees with Wightlink's Environmental Statement (Ref 11a) that traffic from the ferry is a small proportion of the traffic using the local area and a tiny proportion of the traffic using the wider Forest. Even close to the ferry terminal there are typically around 1 600 ferry vehicle movements at the local roundabout compared to 10 000 other vehicle movements. It cannot reasonably be said that the ferry (C or W) traffic will exert any significant effect on the New Forest SAC. The scale of traffic influences relevant to the Forest ecological condition might be of a scale of the socio-economic growth

						predictions for housing and business over a large area including Southampton and Bournemouth, as well as predicted increases in visitor numbers (currently of the order of 20 million a year).
	ls 10	The consultants for Wightlink have put the best possible case forward on behalf of the client (Wightlink). Most if not all concerns raised by local organizations and residents over the effects of these proposals appear to have been dismissed.	10	Have concerns raised by local organizations and residents been dismissed?	NFDC Planning	NE has been engaged in a series of meetings and correspondence with Stakeholders (eg Refs 8 and 9) for several years. We have listened, adjusting our advice where we have agreed with comments but offering a full explanation where we do not agree.
	ls 11	They do not consider that the Appropriate Assessment documentation and Environmental Statement fairly set out both sides of the arguments and suggest that NFDC should undertake a peer review of this documentation at Wightlinks expense.	11	Do the documents fairly set out both sides of the argument?	N.E. NFDC Planning HCC Highways	The purpose of an appropriate assessment is for a competent authority to consider available expert opinion, and, taking account of NE advice, make a judgment whether an adverse effect on integrity has been avoided. While NE does not agree with all the expert opinion expressed within the assessment, Wightlink have taken account of our key advice in relation to the risk of erosion and the requirement for mitigation. NE does have outstanding advice in relation to the monitoring and reporting of ferry speed and the mitigation success criteria that has not yet been fully taken into account.
Solent Protection Society	sps 1	Insufficient evidence to explain why Boiler Marsh is considered to be the best site for beneficial use of dredging.	1	Is Boiler Marsh the best site for use of dredging, is this justified?	N.E.	Please see Ref 6 and 11c Wightlink's Recharge and Habitat Creation method statement which explains how and why Boiler Marsh was chosen. - It has an area of internally eroding marsh providing an opportunity to slow this erosion - It is in danger of being split by internal erosion after which the block of marsh will rapidly erode away, providing a good opportunity to prolong the life of this block of marsh - It has a bowl shaped topography that will retain sediment - Any sediment run-off to the marsh front will quickly be dispersed - Navigation: It can be approached by a barge carrying dredged sediment

						NE supports this choice.
	sps2	Inadequate evidence on the effects of the propulsion system of the ferries and the effect on the river channel.		Is there sufficient evidence about the effects of the ferries?	N.E.	It was initially very difficult to predict whether the W Class thrusters would interact with the designated bank; although it was possible to predict that the anticipated further deepening of the navigation channel would not be a problem because of the width of the channel and gradient of the banks (Refs 1,2 and subsequently 8). In response to the uncertainty about thruster effects on the inter-tidal habitat, in June 2009, working with NE and H R Wallingford, Wightlink set up stake monitoring to specifically look for these effects. If the thrusters did interact with the banks impacts would be large and occur in the short term. After a year's monitoring both H R Wallingford (Ref 10) and ABPmer (Ref 11b) advise that there is no evidence of the thrusters interacting with the designated banks.
	sps3	Recharge works is not shown to be appropriate by Natural England.	3	Are the recharge works appropriate?	N.E.	NE advises that, subject to the resolution of outstanding issues, the Recharge and Habitat Creation works are appropriate as mitigation for the risk of impact of the W Class ferry. 1 The scheme is mitigation not compensation, and has the potential to offset any risk of detrimental effects of the W Class ferry. See ' LS 2' above 2 The most appropriate location has been carefully chosen by a panel of experts (see SPS 1 above) 3 We can have a high degree of confidence that the scheme will be successful in offsetting the risk of impacts once the terms of a legal agreement have been agreed. See 'LS 4' above. Note: The above judgments of benefit: impact have been made over the operational life of the W Class. The LRA asserts that there is a case to consider the situation after this, when the operational life of the W Class comes to an end but the impact remains and the Recharge Scheme can no longer provide the upper-inter-tidal benefit because the upper inter-tidal habitat it provides has largely eroded away. The Lymington estuary will be so radically changed after 30 years, with most saltmarsh vegetation gone and far greater

						penetration of wind waves and increased wave erosion, that it is not likely that the ferry impact would continue to have a detrimental effect after this time and hence require ongoing mitigation. In any event, as with the ongoing monitoring of the ferry impacts and the effectiveness of the mitigation works themselves, there will be time, over the life of the ferry, to keep matters under review and take further action as and when necessary.
Hampshire and Isle of Wight Wildlife Trust	hwt 1	Whilst recharge works may have some merit they are not convinced that it is mitigation for the adverse impacts of the W class ferries or compensation.	1	Are the proposed recharge works mitigation for adverse impacts of ferries or are they compensation?	N.E. Legal Advice	See LS 2 above
	hwt 2	Concerned that recharge works do not represent the benefits presented by the applicant.	2	Would the recharge works represent the benefits presented by the applicants?	N.E.	NE agrees that there is a need to rework the benefit profile (Ref 12). 1 There is a need to specify the success criteria for the 0.9ha placement more clearly. This has been discussed with other CA, HWT and Wightlink and draft text exchanged. 2 The quantification of mitigation benefit needs to reflect that the 0.9ha of sediment placement should not be counted as a successful benefit until it is ecologically functioning and meets the success criteria. 3 This period for achieving ecological functionality (18 months EA and CEFAS pers comm.) must follow the 3 attempts that H R Wallingford advise must be allowed to have a high level of confidence that the sediment can be successfully placed. 4 Therefore it needs to be confirmed that the ha year cumulative benefit takes account of the above time frames and that it cancels the potential cumulative ferry impact from year 1 of the ferry.
	hwt 3	Environmental Statement does not address issue of the impact of entrainment	3	Is the matter of entrainment of migratory fish	N.E.	Please see below exert from Ref 9 Natural England Stakeholder Response 7, 7.5 p33-

		of migratory fish.		addressed?		*'The Habitat Regulation 33 advice to the Solent European Marine Site Management Scheme describes the designated features of the different Estuaries in the Solent that comprise the European Marine Site (SAC, SPA and Ramsar). The 'estuary' SAC or Ramsar feature is present where an estuary has a high level of natural form and function (eg Medina, Beaulieu, W Yar). The 'estuary' feature (of which fish would be associated) is not present at Lymington because the Lymington Estuary is substantially modified through the tidal barrier truncating the estuary and the high level of harbour development.* *The SSSI does encompass wider interests and we have considered the impacts of thrusters on plankton, fish larvae, fish and eels. Plankton and fish larvae will not be significantly affected by the thrusters because of the small body size and the small proportion of the tidal prism of the estuary that is affected. Local salmonid and eel populations are not judged to be significantly affected given the small proportion of the channel base affected during any one passage of the ferry; the new legislation for eels is aimed primarily at removing obstacles to eels migration, such as tidal sluices, since this is the impact of greatest conservation significance.'* NE has been in discussion with the EA to review whether to include migratory fish as a New Forest SAC/Ramsar N2K issue and the decision has been made that migratory fish will not be included.
	h wt 4	A more structured and rigorous monitoring programme should be outlined before work commences.	4	Is the monitoring programme structured enough?	N.E.	There is a need to make some adjustments to the Recharge Scheme criteria of success and hence monitoring.
	h wt 5	Would be reluctant to permit the recharge works on land that the Trust leases whilst the legality of the operation in Habitat Regulation terms remains unclear.	5	Is the proposed recharge work legal in terms of the Habitats Regulations?	N.E. Legal Advice	See LS 2 above
Natural	n	Further development of	1	What further	N.E.	

England	e 1	the mitigation and necessary planning conditions is required.		development is required?	Wightlink NFDC Planning NPA	See NE Supplementary Advice Ref 12
	n e 2	Introduction and operation of the W class ferry, shore works and habitat restoration are together likely to have a significant effect on the Natura 2000 sites and an AA should be undertaken.	2	Who will undertake the Appropriate Assessment?	NFDC Planning	
	n e 3	Further definition and demonstration of W Class speed monitoring is required to give confidence that the magnitude of the risk of adverse effect will not be greater than that advised by Natural England.	3	Will the risk of adverse effect be greater following further definition and demonstration of W class speed monitoring?	N.E.	See NE Supplementary Advice (Ref 12) It is anticipated that Wightlink will be able to demonstrate that they are keeping, on average, to the speed limit . The monitoring review looking back at data from the first year of ferry operation (Ref 10) has provided evidence to strongly suggest that impacts will not be significantly greater that H R Wallingford predict, suggesting that speed was within the necessary limits. This demonstration of speed control for environmental purposes will provide reassurance that the risk of long term impact is not greater than H R Wallingford predict and that the Recharge is designed to mitigate. The method that Wightlink intend to use to demonstrate this needs to be agreed.
	n e 4	Further characterising and defining success measures for the benefit from the recharge and habitat creation works is required.	4	Is there more confidence in the success of the habitat creation works?	N.E.	See NE Supplementary Advice (Ref 12).
Lymington River Association (see also 50+ page document)	lr a 1	The W class ferry is too big for the river.	1	Is the ferry too big for the river?	N.E.	The hydrodynamic impacts H R Wallingford predict for the W Class are due to their cross sectional hull area related to the size of the navigation channel (Ref 1). However vessel size is only one of several parameters that relate to environmental impacts; others are hull shape, speed, propulsion system and frequency of river trips, and these can vary independently of vessel size..

						The W Class ferry, travelling at better regulated, slower speeds, is judged to potentially have a similar erosive effect to the previous smaller C Class ferry that has been judged to regularly exceed the speed limits (Ref 1).
	lr a 2	The ferry carries two thirds the number of passengers and is designed to carry 113 tonnes extra freight.	2	Are the boxes designed to carry fewer passengers and more freight than the C class ferries?	Wightlink HCC Highways	
	lr a 3	Increased risk to other river users and imposes restrictions on their activities.	3	Do the W class ferries adversely affect other river users?	LHC	
	lr a 4	The W class ferry erodes the river bed and intertidal mudflats which causes an adverse effect on the integrity of the protected Natura 2000 sites through which it travels.	4	Does the effect of the W class ferries cause an adverse effect on the integrity of the Natura 2000 sites?	N.E.	See LS 1 above
	lr a 5	The ferry also deepens and widens the river which weakens the coastal defences of Lymington Harbour. These effects are all unnecessary and highlight the need for a unified traffic plan for Hampshire and the Isle of Wight.	5	Does the generation of the W class ferries weaken the coastal defences?	N.E. LHC Coastal Defence Team NFDC	The Lymington saltmarshes are an important part of the local coast defences. The W Class ferry is not anticipated to have any detrimental effect on saltmarshes. Any effects of the W Class ferry on the inter-tidal mud are dwarfed by the extensive natural saltmarsh loss at Lymington.
	lr a 6	Essential freight traffic to the Isle of Wight is best served through the excellent deep water ports of Southampton and Portsmouth linked to the motorway network. The ferry should serve local traffic and passengers.	6	Should freight traffic be served by deep water ports at Southampton and Portsmouth?	HCC Highways HCC Planning	
	lr a	Recent evidence not noticed by Natural	7	Has this area of seabed been	N.E. LHC	There is a co-incidence of saltmarsh vegetation loss and the ferry

	7	England is that C and W class ferries have eroded the seabed adjacent to the ferry terminal (an approximation is that an additional 2.4 hectares of habitat would be lost in this area.		eroded by the C and W class ferries?		terminal. It is possible that the C Class ferry may have contributed in some way to this vegetation loss, although it is noted that the vegetation has receded a great distance from the terminal, almost to the foreshore, and much further than the ferry-induced turbulence could be seen by eye (personal site visit). Further work would need to be done before any conclusions could be drawn. However, examination of the 2008/10 LHC bathymetry has shown that MLW to the east of the ferry terminal has been accreting since the W Class has been running (H R Wallingford pers com). Currently, therefore, there is no evidence to suggest that the W Class ferry is causing any erosion here. There is currently no basis for altering H R Wallingford prediction of W Class impact.
	lra 8	The loss of habitat predicted by Natural England is avoidable by direct means (by amending the operational procedures of the ferries or by using smaller ferries designed not to erode the mudflats and navigation channel). The operation of the W class ferry has an adverse effect on the integrity of the habitats and no effective measures have been proposed by Wightlink to prevent it.	8	Is the loss of habitat avoidable by direct means?	N.E. Wightlink	See below exert from Ref 9 NE Stakeholder Engagement *'Operational mitigation has been considered. Slowing the speed of the ferries significantly reduces the risks of hydrodynamic impacts, but brings a trade-off with risks associated with the longer duration of thruster effects, and concerns about navigational control and safety (and further environmental risk).* *Natural England agrees that there would be environmental advantages to the W class ferry keeping to the centre of the navigation channel, but this would only reduce and not fully negate the risk of impact. Wightlink advise that they do try and keep to the centre as far as navigational constraints allow.* *Passing in the river causes the greatest risk of environmental impacts from hydrodynamic effects. However Wightlink advise that if the ferries were to pass outside the river it would significantly reduce the frequency of the ferry service, while only partially mitigating erosion.* *Having fully considered operational mitigation, Wightlink has decided to propose habitat benefit mitigation and Natural England advises that this is equally valid.'*
	lra	Even if the habitat creation scheme was	9	Would loss of habitat and	N.E. LHC	Re coast defences see LRA 5 above.

	9	viable and introduced by IROPI, loss of habitat would still occur adjacent to the river and damage to the harbor sea defences would continue unchecked.		damage to sea defences continue unchecked?	NFDC Coastal Protection Team	The Recharge and Habitat Creation Scheme will ensure that the N2K sites as a whole do not continue to suffer loss and damage to its habitats. It is not relevant in Habitat Regulations terms that the reduction in erosion provided by the Scheme is in a different place to the potential ongoing erosion of the W Class. See below exert from Ref 9 Stakeholder Response 7, 7.2 p32 *'Natural England's role in relation to the introduction of the W class ferry is to advise on the integrity of the Natura 2000 sites and SSSI. The integrity relates to maintaining their structure and function across the whole site and hence mitigation can take place anywhere where this purpose is served.* *The ferries are predicted to impact primarily the lower inter-tidal mudflat while the mitigation proposal will deliver benefits to upper inter-tidal habitat, and this is likely to benefit a mixture of both mudflat and saltmarsh.* *All habitats in the Natura 2000 site at Lymington are of equal value, but some are more threatened than others. In the dynamically changing Lymington Estuary the lower inter-tidal habitats that the ferry is at most risk of affecting will increase in area over the next 100 years as saltmarsh changes to mudflat and inter-tidal profiles fall. Conversely upper inter-tidal habitat (both mudflat and saltmarsh) is predicted to suffer substantial losses.* *In view of this Natural England advises that the integrity (particularly the range of functions) of the Natura 2000 sites will be better maintained over the next 50 years if priority is given to conserving the upper inter-tidal habitat (either mudflat or saltmarsh), both through positive endeavers such as Biodiversity Action Plan and through mitigation for development allowing lower inter-tidal habitat to be exchanged for upper inter-tidal. '*
	lra10	The recharge works are an attempt to mitigate the adverse effect of the ferries by indirect means by creating additional new habitat within the same SAC, the LRA considers this to be compensation	10	Is the proposed recharge works mitigation or compensation?	N.E. Legal Advice	See LS 2 above

		under the Habitats Directive, not mitigation.				
	lra11	The recharge scheme would have an adverse effect on the habitats at Boiler Marsh by destroying mudflat habitat at the site for a period of at least 6 year, Boiler Marsh needs and AA in its own right.	11	Would recharge works adversely affect habitats at Boiler Marsh for at least 6 years?	N.E.	NE does not agree that the Recharge Scheme would have an adverse effect on the Boiler Marsh because any loss of ecological value will be temporary within a scheme that would have long term benefits (Ref 11C). Once sediment has settled it will start to recover and colonise. This recovery could happen anytime after the scheme starts, but we can have a high level of confidence that it will start after year 3 (Ref 7). There is good evidence that deposited sediment quickly colonises and temporary losses of this kind of magnitude are not detrimental in such large and dynamic coastal sites. As a scheme in its own right, independent of the W Class ferry, NE advises that the Recharge and Habitat Creation scheme is beneficial in slowing natural erosion in this particular circumstance. (see LRA 6 below)
	lra12	Recharge scheme fails to provide the necessary compensatory habitat. Objects to recharge works because better means of mitigation are available.	12	Would recharge work provide necessary compensatory habitat, are better means of mitigation available?	N.E.	It is for the developer to propose the mitigation method. See also LRA 8 above, where operational mitigation is discussed. Please see LS 4 above where the likely success of the scheme is discussed. Please see HWT 7 above where it is explained that changes to the delivery profile of the benefit will be required.
	lra13	The works do not comply with the requirements of the Habitats Directive and the works fail to provide any additional habitat.	13	Do the recharge works comply with the Habitats Directive and to do the works provide any additional habitat?	N.E.	See LS 2 above See LRA 12 above The Recharge Scheme provides additional habitat by slowing the erosion and loss of an area of saltmarsh and mudflat to offset a risk of increased erosion of the navigation channel by the W Class ferry. It is true that eventually the Recharge area will erode away, but it will do this more slowly providing a benefit of increased habitat

						persistence.
	lra14	The shore works would facilitate the operation of the W class ferry and thereby allow the adverse effect on the habitats to continue.	14	Would shore works enable adverse effect on the habitats to continue?	N.E. Legal Advice	The shore works are proposed to provide necessary infrastructure for the new W Class ferry. Natural England has advised that there is a risk that the W Class ferry could continue to erode the designated banks of the navigation channel. Wightlink propose the Recharge and Habitat Creation Works to prolong the life of an area of saltmarsh and mudflat to ensure that the Natura 2000 sites do not suffer an adverse effect as a consequence of the W Class ferry. Natural England broadly supports the Recharge and Habitat Creation Works as offsetting any risk of ferry-induced erosion, but advises of some relatively small issues that need to be resolved in an appropriate assessment (Ref 12).
	lra15	Would also allow additional heavy freight traffic in Lymington and the New Forest when better alternative routes are available elsewhere.	15	Would the shore works enable more freight traffic in Lymington and the New Forest when better routes are available?	HCC Highways	
Lymington River Association Submission			lras1	The issue of past adverse effect by C class ferries has not been addressed. Is this relevant?	N.E.	H R Wallingford advise that the previous C Class ferry did cause erosion of the designated sites at Lymington (Ref 1). However the current legal process is related to considering the introduction of the W Class ferry and there is not a mechanism here to achieve the offsetting of the past impacts of the C Class. The past operation of the C Class ferry was an 'ongoing operation' and the European Marine Site Management Scheme has responsibility to ensure that such ongoing operations are sustainable of the site's conservation objectives. It is not clear how a past impact can be addressed. The past impacts of the C Class are relevant to the W Class assessment, however, because outstanding impacts can accrue cumulatively and this should be considered when assessing the impact of the new project, as NE did when issuing its advice in 2009 (Ref 2). The consequence of this is that any new additional impact of the W Class has greater significance and should be fully offset, as Wightlink propose in their Recharge and Habitat

						Creation Works.
			lras2	There is additional erosion at the ferry terminal. Is this correct? If so what are the implications?	N.E. Wightlink	See LRA 7 above
			lras3	Mitigation could be achieved by slowing down the ferries and not operating them near low tide. Is this correct?	N.E.	It is for the developer to propose the mitigation method. See also LRA 8 above, where operational mitigation is discussed.
			lras4	If it is correct is this an option which should be considered before the re-charge proposals are determined?	N.E. Wightlink	See LRA 8 above
			lras5	How will Wightlink ensure that its internal decision making processes comply with the requirements of the High Court decision?	Wightlink	
			lras6	Habitat – year concept is bogus and unlawful. UK government has a duty to restore habitat to favourable status.	N.E.	The ha-year measure is simply a measure, like ha or years. NE has provided the LRA with a fuller explanation (Ref 13). NE agrees that there is a responsibility to restore N2K designated habitat to favourable status. See below exert from Stakeholder Engagement 7.6 p35 '*The mitigation benefit will be achieved by slowing a natural rate of erosion (albeit that there may be an element of human impact in future climate change and sea level rise).*

						Through the Habitat Regulations Government has a duty to maintain the interest of the Natura 2000 series in light of the conservation objectives. The conservation objectives aim to prevent human-induced detriment to the features of interest; natural habitat losses due to vegetation die-back and wind wave erosion, for example, are accepted as part of the natural functioning of sites. As such there is no obligation through the Habitat Regulations to offset 'natural' habitat losses. *Natural England's coastal policy is to encourage natural processes to enable self-sustaining coastal habitats to form with sea level rise. It is only because of very special circumstances at Lymington that artificially slowing natural erosion can be considered as offsetting a risk of habitat loss due to a plan or project. Those special circumstances are that the designated sites at Lymington, within their statutory boundary, have no opportunity to become self-sustaining with future sea level rise, they are 'squeezed' against either a flood defence or naturally rising land. Hence this site has a finite life within the next 100 years. Further the means of slowing natural erosion has no knock-on detrimental effect on the site, it simply prolongs the life of a range of habitats in the upper inter-tidal for a period of time.* *In recognition of the future threatening habitat and species losses, rather than healthy natural habitat and species fluctuations, there are national Biodiversity Action Plan targets aimed at offsetting all losses (designated and undesignated) of saltmarsh and mudflat due to sea level rise and natural coastal squeeze. New habitat will mostly be created outside current designated boundaries and targets are proving hard to deliver. The existence of these targets and this work does not negate the habitat benefit that Wightlink proposes to cancel a risk of adverse effect within a designated site.'*
			lras7	The data provided by the applicants is uncertain (inadequate site data or trials). Is this correct? If it is	N.E. Wightlink	Taken from Ref 12, Stakeholder Response : '*Uncertainty is always a feature in dynamic coastal systems where there are high levels of natural change (wind wave erosion and vegetation die back) interacting with human impacts such as a risk*

				correct does the law not require the precautionary principle to be applied?		*of erosion from recreational boating or ferries.* *Recognising and managing uncertainty is then a key feature of both the predictions of W class impact and mitigation success. The appropriate assessment will need to show that uncertainty, which can never be completely avoided, is managed such that there is no risk of adverse effect to the Natura 2000 site.* *Uncertainty and risk will be carefully managed in light of the following:* *1 All professional expert technical opinions are currently that the ferry impacts are likely to be very small year on year, and Natural England advises that there is only a risk of adverse effect over several years. This pattern of risk of impact allows time for monitoring to give early warning of an increased risk before any impact is incurred.* *2 Wightlink propose to set up an Environmental Management Group, comprised of all statutory bodies and key stakeholders, who will regularly assess impact and mitigation monitoring information and advise whether the mitigation is indeed cancelling losses as time goes by.* *3 Ferry impacts will be monitored through all variations in ferry operating practise and frequency of sailing, as well as weather conditions, and monitoring results must be interpreted accordingly.* *4 H R Wallingford has advised that we can have a high level of confidence in the mitigation proposal at this stage. The success of the mitigation proposal will again be monitored. The predicted early excess habitat benefit (which it is recognised requires clarification see 8.2 below) will again allow time to consider the building body of impact monitoring evidence.* *5 H R Wallingford have advised of an increased prediction of impact but there is still potentially excess mitigation benefit of 2:1 if impacts decline with time as is most likely, or 1.25:1 if impacts are constant. While there is not an opportunity to increase the maximum potential delivery of habitat mitigation with current knowledge, there will be opportunities to ensure that habitat is maximised through increased intervention by Wightlink.*

						6 Finally if at any time now or in the future there becomes a reasonable risk that the mitigation will not cancel the risk of impacts there is a safety net for the European sites which can be used before any adverse effect is incurred. In such a circumstance Natural England can submit the evidence of a future risk to the Secretary of State and ask for consideration to be given to making a Special Nature Conservation Order to protect the site. A decision on whether to make such an Order is for the Secretary of State. Currently, in view of the current impact assessment and risk management measures, Natural England advises that the Natura 2000 sites are not at risk of adverse effect.' New comments re 4 above, NE advises that there is a need to reprofile the mitigation delivery to take account of the time required to have confidence in the deposit ion of sediment and the time taken for the sediment to colonise.
			lr a s 8	ABP Mer's Table 2. The figures/mathematics referred to in this table are incorrect. In respect of size of habitat and 6 year recovery period. Comments please.	N.E.	NE is not aware that the size of habitat used in Table 2 is incorrect, but will investigate this further. Re calculations in Table 2 (Ref 11C) please see WHT 2 above.
			lr a s 9	Mudflat habitat has been ignored. It is assumed to disappear when salt marsh goes?	N.E.	The habitat benefit is valued as retaining mudflat or saltmarsh at a higher level in the tidal frame, and for longer, than would be the case without the scheme. Hence the comparison 'with' and 'without' the scheme is based only on the presence of higher level habitat. This scheme was designed with NE advice that the higher level inter-tidal habitat is particularly threatened in the N2k site as a whole and retaining this, contrary to natural erosion trends, can greatly benefit the site's conservation objectives in this particular circumstance (see LRAs 6 above) The Scheme assumes that without the scheme the 0.9ha placement area would continue to erode away. Once the inner erosion breaks through the saltmarsh block, after a few years,

						setting up a new tidal flow through the middle, the whole block would rapidly disappear. It could be argued that the benefit is slightly over-estimated because the ongoing presence of some eroding inner mud habitat is not subtracted. On the other hand it could be argued that the benefit is under-estimated because the prolonged life of associated lower inter-tidal mud habitat is not included, neither is the increased rapid loss of the whole salt-marsh block after current break-through occurred. Similarly any sheltering benefit of the longer-lived salt marsh block to marsh areas behind the scheme is not included. Therefore NE is satisfied that the approach to estimating the benefit is reasonable.
			lras10	Erosion of deposited mud is assumed to be zero although dumped mud only has 33% of the strength of in-situ mud.	N.E.	The sediment recharge will be protected from tidal and wave energy by structures specifically designed to keep the sediment in place and allow it to de-water and colonise (Ref 11C 4.4.2). Nevertheless Wightlink do present data to show that the benefit calculations work even when the retaining structures are not assumed to be 100% effective (Ref 11C 4.4.2). Wightlink are correct to emphasise the importance of the Environmental Management Group to monitor both the actual ferry impact and the progress of the Recharge Scheme in offsetting this, so that further intervention in the Recharge Scheme can be achieved if necessary. NE has taken independent advice that we can have a high level of confidence in the success of this scheme (Ref 7). There is now a need for Wightlink to amend the mitigation benefit profile to take account of the advise at LRA 8 above.
			lras11	The enabling works at the terminal will result in additional erosion from ferry docking. This could be 2.3 ha by 2040.	N.E.	Please see LRA 7 above.

		General	g 1 2	Can you please explain why if the W class ferries cause damage, that damage is not assumed to be significant until 2011?	N.E.	Natural England's Supplementary Advice (Ref 12) relates to Wightlink's various consent applications, which themselves relate to the operation of the W Class ferry. Advice on risks of impacts relates to the 30 year operational life of the ferry. Given that the W Class ferry began operating in 2009, Natural England is also advising both Defra and Wightlink (the Competent Authority for the W Class ferry) in relation to any short term risks of impact to the designated sites prior to an appropriate assessment being concluded. Our advice is that the small, temporary impacts occurring to the lower inter-tidal area are not detrimental to the large, dynamic coastal sites. We are continuing to advise Defra and Wightlink in this regard.
		General	g 1 3	The test for an Appropriate Assessment is whether Regulators can say beyond reasonable scientific certainty that that there will not be an adverse effect on the integrity of the European Site. Does it follow from this that if there is doubt about the likely success of the re-charge works or differing serious scientific opinions about the level of harm or the likely outcomes of the off-setting works the precautionary principle should be applied i.e. the	N.E.	1. Natural England agrees that an appropriate assessment should be able to show, beyond reasonable scientific doubt, that an adverse effect will be avoided. 2. We have taken independent advice from H R Wallingford that there can be a high degree of confidence that Wightlink's 'Recharge and Habitat Creation Scheme' will be successful, provided Wightlink commit to three attempts to place the sediment and commit to the necessary ongoing intervention. 3. The necessary specification to achieve a high degree of confidence can be achieved through a legally binding agreement such as a S106 Agreement or Marine License. 4. Clear criteria for success and monitoring will be set out in an appropriate legal agreement. An Environmental Management Group, including all statutory bodies, will oversee both the monitoring of impacts and the delivery of mitigation to ensure impacts are offset. 5. Natural England has advised that the timeline for mitigation benefit and cumulative ferry impact requires clarification.

				AA cannot conclude that an adverse effect on site integrity will not occur.		
		General	g 1 4	Is the draft S106 agreement fit for the purpose of achieving the re-charge in a manner which is consistent with the requirements of the Habitats Regulations?	N.E.	The draft S106 or Marine Licence agreement requires further development, as set out in NE Supplementary advice.
Lymington Harbour Commissioners	1	Objects to the detailed design of the berth works for Standby Berths 1 and 2 as the low new three pile tubular steel mooring dolphins are significantly outside of the parameters agreed by the Commissioners.	lh c 1	Can this concern be resolved?	LHC Wightlink	

Natural England References

1. H R Wallingford Wightlink Ferries Lymington Geological advice contract to Natural England (impact assessment) Report EX5937 Jan 2009.
2. Natural England (impact assessment) advice to regulators v3 Feb 2009
3. Wightlink Ltd- Replacement Lymington to Yarmouth Ferries: Information for Appropriate Assessment Agreed Protocols for Monitoring the Effects of the W Class ferry Report R1509 S1 ABPmer July 2009
4. Natural England Consideration of the impacts of, and opportunities for mitigation for, the W Class ferry at Lymington Nov 2009.
5. H R Wallingford Wightlink Ferries Lymington Review of Monitoring Technical note DDM 6263/01-02 Dec 2009
6. Wightlink Ltd Replacement Lymington to Yarmouth Ferries: Information for Appropriate Assessment Agreed Protocols for Mitigating the Effects of the W Class ferry Report R1509 S2 ABPmer December 2009
7. H R Wallingford Wightlink Ferries Lymington, Further Comments on Natural England Questions relating to proposed approach to mitigating the effects of the W Class ferry at Lymington Report DDM/01-03 Dec 2009
8. H R Wallingford Wightlink Ferries Lymington Response to Stakeholder Issues Report DDM6263 H R Mch 2010
9. Natural England Stakeholder Response; summary and detailed response May 2010
10. H R Wallingford Wightlink Ferries Lymington Review of Monitoring Report DDM 6263-10C-01 July 2010

11. Wightlink Ltd consent application documents November 2010:
    a. Environmental Statement ERM Nov 2010
    b. Technical Report to Inform Appropriate Assessment ERM Nov 2010
    c. Selected Information for Appropriate Assessment including Annex C (revised) Method Statement for the Recharge/Habitat Creation Work ABPmer Oct 2010
12. Natural England Supplementary Advice to Regulators March 2011
13. Natural England note for Lymington River Association: Wightlink's quantification of benefit: explanation of ha years July 2010
14. Lymington Harbour Protection Environmental Statement Black and Veatch April 2005.
15. H R Wallingford Wightlink Ferries Lymington Response to queries regarding the effect of ferry speed DDM6263-10A-01 R2 Feb 2011
16. Environment Agency Lymington River Reedbeds Water Level Management Plan
17. North Hampshire Shoreline Management Plan NFDC

Issues Raised by Consultees and Interested Parties	Element of Project	Natural England Response
Hampshire and IOW Wildlife Trust **HWT 1)** Unconvinced that it is mitigation for the adverse impacts of the introduction of the "W" class ferries. Consider that the Recharge proposals contain elements that are more characteristic of compensation than mitigation. Therefore premature to determine this application.	**R**	NE Please see text below from Ref 9 Natural England Stakeholder Response . (Please note in Ref 9 a confusion between the old and new Habitat Regulations nomenclature; where Reg 48 is written please read Reg 61, and where Reg 49 and 53 please read Reg 62 and 66) *'The Habitats Regulations allow for mitigation or avoidance measures to be incorporated into a plan or project for the purposes of avoiding an adverse effect on the integrity of the European site. It is Natural England's view that, in appropriate circumstances, such measures can take the form of habitat creation within the boundary of the site to ensure that the site's conservation objectives are not impaired and that an adverse effect on the site's ecological integrity does not result from the proposed plan or project, as required under Regulation 61 of the Habitats Regulations. Wightlink, as competent authority, will be undertaking an appropriate assessment of the introduction of the W class ferry under Regulation 61 and the assessment will consider whether the mitigation proposal avoids the risk of an adverse effect occurring.* A distinction should be made between Regulation 61 which covers issues of appropriate assessment and impact avoidance and **Regulations 62 and 66** of the Habitats Regulations which deal with alternative solutions, IRPOI and compensatory measures**.'**
HWT 2) Not in a position to assess the accuracy of differing assessments of likely impacts of ferries on intertidal habitats within Lymington River. Degree of certainty is required in determining applications on N2K Sites.	**W**	NE Taken from Ref 9, NE Stakeholder Response : '*Uncertainty is always a feature in dynamic coastal systems where there are high levels of natural change (wind wave erosion and vegetation die back) interacting with human impacts such as a risk of erosion from recreational boating or ferries.* *Recognising and managing uncertainty is then a key feature of both the predictions of W class impact and mitigation success. The appropriate*

		assessment will need to show that uncertainty, which can never be completely avoided, is managed such that there is no risk of adverse effect to the Natura 2000 site. *Uncertainty and risk will be carefully managed in light of the following:* *1 All professional expert technical opinions are currently that the ferry impacts are likely to be very small year on year, and Natural England advises that there is only a risk of adverse effect over several years. This pattern of risk of impact allows time for monitoring to give early warning of an increased risk before any impact is incurred.* *2 Wightlink propose to set up an Environmental Management Group, comprised of all statutory bodies and key stakeholders, who will regularly assess impact and mitigation monitoring information and advise whether the mitigation is indeed cancelling losses as time goes by.* *3 Ferry impacts will be monitored through all variations in ferry operating practise and frequency of sailing, as well as weather conditions, and monitoring results must be interpreted accordingly.* *4 H R Wallingford has advised that we can have a high level of confidence in the mitigation proposal at this stage. The success of the mitigation proposal will again be monitored. The predicted early excess habitat benefit (which it is recognised requires clarification see 8.2 below) will again allow time to consider the building body of impact monitoring evidence.* *5 H R Wallingford have advised of an increased prediction of impact but there is still potentially excess mitigation benefit of 2:1 if impacts decline with time as is most likely, or 1.25:1 if impacts are constant. While there is not an opportunity to increase the maximum potential delivery of habitat mitigation with current knowledge, there will be opportunities to ensure that habitat is maximised through increased intervention by Wightlink.*

		6 Finally if at any time now or in the future there becomes a reasonable risk that the mitigation will not cancel the risk of impacts there is a safety net for the European sites which can be used before any adverse effect is incurred. In such a circumstance Natural England can submit the evidence of a future risk to the Secretary of State and ask for consideration to be given to making a Special Nature Conservation Order to protect the site. A decision on whether to make such an Order is for the Secretary of State. Currently, in view of the current impact assessment and risk management measures, Natural England advises that the Natura 2000 sites are not at risk of adverse effect.' New comments re 4 above, NE advises that there is a need to confirm the mitigation delivery figures to take account of the time required to have confidence in the deposit ion of sediment and the time taken for the sediment to colonise and to show how this balances against cumulative W Class ferry impacts.
HWT 3) Important that the potential benefits of the scheme are not overstated, particularly in years immediately following the recharge works. Applicant has identified recharge area itself as representing a gain of habitat in 2011 immediately following recharge. This is unjustifiable. For this assertion to be valid 2 assumptions must be true. Existing habitat onto which dredging must take place has no value to N2K interests and secondly that that the dumped material immediately supports N2K features. If either assumption is unsound the areas should not be used in calculations. The bird count indicates the area is a functioning area of intertidal habitat and supports N2K features. Second assumption is addressed in para 6.4.20 '*It is concluded that the effects will at worst be neutral in terms of infaunal abundance and therefore prey availability'.* Therefore neither of requirements has been fulfilled and calculations should be done to reflect this reality. Question whether the scheme represents the benefit presented by the applicant.	**R**	NE NE agrees that there is a need to confirm the benefit quantification. 1 There is a need to specify the success criteria for the 0.9ha placement more clearly. This has been discussed with other CA, HWT and Wightlink and draft text exchanged. 2 The quantification of mitigation benefit needs to reflect that the 0.9ha of sediment placement should not be counted as a successful benefit until it is ecologically functioning and meets the success criteria (18 monthys EA and CEFAS pers com). 3 This period for achieving ecological functionality must follow the 3 attempts that H R Wallingford advise must be allowed to have a high level of confidence that the sediment can be successfully placed. 4 It needs to be clear that habitat benefit profile takes account of the above, and matches the potential cumulative ferry impact from year 1 of the ferry.

HWT 4) Impact of entrainment on migratory fish was raised as a concern in scoping reports. Environmental Statement does not address this issue. Significant Omission.	**W**	NE Please see below exert from Ref 9 Natural England Stakeholder Response 7, 7.5 p33- *'The Habitat Regulation 33 advice to the Solent European Marine Site Management Scheme describes the designated features of the different Estuaries in the Solent that comprise the European Marine Site (SAC, SPA and Ramsar). The 'estuary' SAC or Ramsar feature is present where an estuary has a high level of natural form and function (eg Medina, Beaulieu, W Yar). The 'estuary' feature (of which fish would be associated) is not present at Lymington because the Lymington Estuary is substantially modified through the tidal barrier truncating the estuary and the high level of harbour development.* *The SSSI does encompass wider interests and we have considered the impacts of thrusters on plankton, fish larvae, fish and eels. Plankton and fish larvae will not be significantly affected by the thrusters because of the small body size and the small proportion of the tidal prism of the estuary that is affected. Local salmonid and eel populations are not judged to be significantly affected given the small proportion of the channel base affected during any one passage of the ferry; the new legislation for eels is aimed primarily at removing obstacles to eels migration, such as tidal sluices, since this is the impact of greatest conservation significance.'* NE has been in discussion with the EA to review whether to include migratory fish as a New Forest SAC/Ramsar N2K issue and the decision has been made that migratory fish will not be included.
HWT 5) Monitoring Strategy will not provide data of sufficient quality or quantity to assess impacts of recharge, beneficial or otherwise. Capturing of Ornithological data is dependent on ad hoc records provided by casual observers. Would expect a more structured and	**R**	NE There is a need to make some adjustments to the Recharge Scheme criteria of success and hence monitoring

rigorous monitoring programme.		
HWT 6) Reluctant to sign up to an operation on land whilst legality of operation remains unclear.	**R**	NE See HWT 1 above
Solent Protection Society **SPS 1)** Deficiencies in the Environmental Statement. Insufficient evidence to explain why Boiler Marsh has been chosen, or others that have been considered.	**R**	NE Please see Ref 6 and 11c Wightlink's Recharge and Habitat Creation method statement which explains how and why Boiler Marsh was chosen. - It has an area of internally eroding marsh providing an opportunity to slow this erosion - It is in danger of being split by internal erosion after which the block of marsh will rapidly erode away, providing a good opportunity to prolong the life of this block of marsh - It has a bowl shaped topography that will retain sediment - Any sediment run-off to the marsh front will quickly be dispersed - Navigation: It can be approached by a barge carrying dredged sediment NE supports this choice.
SPS 2) Inadequate evidence on effects of the propulsion system and effect on the river channel. In view of this omission, consider that Natural England have not shown that suggested recharge of 2000 cu. Metre is appropriate.	**R/W**	NE It was initially very difficult to predict whether the W Class thrusters would interact with the designated bank; although it was possible to predict that the anticipated further deepening of the navigation channel would not be a problem because of the width of the channel and gradient of the banks (Refs 1,2 and subsequently 8). In response to the uncertainty about thruster effects on the inter-tidal habitat, in June 2009, working with NE and H R Wallingford, Wightlink set up stake monitoring to specifically look for these effects. If the thrusters did interact with the banks impacts would be large and occur in the short term. After a year's monitoring both H R Wallingford (Ref 10) and ABPmer (Ref 11b) advise that there is no evidence of the thrusters interacting with the designated banks.

Verderers Concerned only if works were to result in channel between the site and foreshore were to become shallowed or silted up completely as this may result in ponies walking out onto marsh and becoming trapped by incoming tide.	**R**	NE There is no reason to suggest that this could happen. Although it is expected that sediment will be lost from the placement area, the route that this runoff will take is to the south to the front of the seaward marsh. Here there is high wave and current energy that will quickly disperse the runoff. In addition, I am told that the flood current through Pylewell lake has increased in velocity in recent years, and this will keep the channel open and even widen and deepen it.
Environment Agency No evidence that benefits of scheme have been properly analysed. Believe that initially benefits will not be readily measureable and in first instance the scheme will have a negative impact on the extant habitat. Applicant hopes that over time scheme will take on a value that outweighs the value of existing habitats. Reserve judgement until applicant provides further information that will enable better understanding of the ecological losses and gains to be had by the scheme.	**R**	NE See HWT 3 above
RSPB **RSPB 1)** Share concerns that benefits of scheme may have been overestimated. Firstly due to recharge area still being a functioning part of the SPA and secondly because colonisation by plants and animals following recharge may take some time.	**R**	NE See HWT 3 above. The greatest threat to the SPA is the loss of upper inter-tidal habitat over the coming 50 years, especially at Lymington where all saltmarsh vegetation is expected to be lost by 2040. The crucial judgement in the mitigation benefit is that the sediment placement area is in a process of erosion and change, and has no long term future as inter-tidal mud. The benefit of this aspect of the scheme is to slow this loss down and maintain 0.9ha of ecologically functioning habitat at a higher level in the tidal frame over a 30 year period.

		Intervention will also slow the erosion of surrounding saltmarsh and associated mudflat. Given the importance of this block of upper inter-tidal habitat for breeding and roosting birds, this intervention should be clearly beneficial to the SPA.
RSPB 2) Concerned by timing of works (Feb/March). As the site is important for wintering waders and wildfowl work should not be started until March, but is equally important to finish by April due to breeding seabirds such as black headed gulls and several tern species.	**R**	NE Ref 11C Wightlink method statement: The works are not planned to start until the end of February and then will result in a low level of disturbance for a few days (see ABPmer method statement 7.5.2 p46). NE is satisfied that this aspect of the method will not have any significant detrimental effect.
RSPB 3) Would like to see a dedicated bird monitoring programme agreed in order to assess impact on ornithological value of the site as part of monitoring strategy.	**R**	NE There is a need to make some adjustments to the Recharge Scheme criteria of success and hence monitoring The recharge site is known to be important for roosting and breeding birds, and of some low importance for feeding birds (Ref 11c). Without the scheme it will erode away more quickly than it would with the scheme; its impacts on the ornithological value can be judged to be beneficial without detailed bird monitoring. However some low level of monitoring of bird use of the recharge area will be appropriate as part of its assessment of 'ecologically functioning'.

Letters of Objection **Obj 1)** Recharge works are too far from affected area of impact of ferries.	**R**	NE The Recharge and Habitat Creation Scheme will ensure that the N2K sites as a whole do not continue to suffer loss and damage to its habitats. It is not relevant in Habitat Regulations terms that the reduction in erosion provided by the Scheme is in a different place to the potential ongoing erosion of the W Class. See below exert from Ref 9 NE Stakeholder Response 7, 7.2 p32 *'Natural England's role in relation to the introduction of the W class ferry is to advise on the integrity of the Natura 2000 sites and SSSI. The integrity relates to maintaining their structure and function across the whole site and hence mitigation can take place anywhere where this purpose is served.* *The ferries are predicted to impact primarily the lower inter-tidal mudflat while the mitigation proposal will deliver benefits to upper inter-tidal habitat, and this is likely to benefit a mixture of both mudflat and saltmarsh.* *All habitats in the Natura 2000 site at Lymington are of equal value, but some are more threatened than others. In the dynamically changing Lymington Estuary the lower inter-tidal habitats that the ferry is at most risk of affecting will increase in area over the next 100 years as saltmarsh changes to mudflat and inter-tidal profiles fall. Conversely upper inter-tidal habitat (both mudflat and saltmarsh) is predicted to suffer substantial losses.* *In view of this Natural England advises that the integrity (particularly the range of functions) of the Natura 2000 sites will be better maintained over the next 50 years if priority is given to conserving the upper inter-tidal habitat (either mudflat or saltmarsh), both through positive endeavers such as Biodiversity Action Plan and through mitigation for development allowing lower inter-tidal habitat to be exchanged for upper inter-tidal. '*

Obj 2) Mud that is recharged from bottom of the river and will be contaminated by many substances that settle out of the water and in river bed. Will not be similar in composition to surface mud that nourishes spartina grass and other plant life that grows on the salt marsh.	**R**	NE Recharge sediment will come from annual maintenance dredging of the Marinas. As such it is likely to have mostly come from erosion of the marshes originally (this may have been shown). Wightlink (11C) have done an analysis of sediment contamination and NE and the EA are currently in discussion about the necessary standards. Through targeting areas of low contamination it will be possible to deliver the required standard to avoid any detriment (EA pers com) and this will be resolved through the legal agreement.
Obj 3) Strong possibility that mud could be detrimental to plant life and no studies support this action.	**R**	NE See Objection 2 above
Obj 4) Mud is toxic (chromium, copper, lead, Mercury, Nickel, Zinc and hydrocarbons)	**R**	NE See Objection 2 above
Obj 5) Mud likely to be washed away by next high water that covers it. Could be dispersed to east and west by tidal action.	**R**	NE HR Wallingford (Ref 7) advise that, provided the sediment placement is attempted over at least 3 years, with sufficient budget, there can be a high level of confidence that it will be successful. They warn of high costs that might be required, particularly if further intervention is needed. The delivery of the mitigation will be subject to a legal obligation through a S106 Agreement or Marine Licence. The appropriate assessment will need to assess whether the terms of the legal agreement are sufficiently robust to give the required level of confidence that the mitigation will be successfully delivered. This will include criteria for success and monitoring. Actual ferry impact and mitigation delivery will be overseen by an Environmental Advisory Panel including all statutory bodies (Ref 11C). The key role of this body will be to assess all monitoring information, look

		ahead and ensure that the mitigation proposal will be successful**.**
Obj 6) Scheme will not work as mud will block channels and require dredging again.	**R**	NE See Objection 5 above.
Obj 7) Quantity looks insignificant and by applicants admission 50% will be lost immediately.	**R**	NE See Objection 5 above
Obj 8) No firm evidence that scheme will create new habitat and risk of greater damage. No idea of types of habitat population in terms of numbers, diversity and quality.	**R**	NE Evidence that scheme can be successful See Obj 5 above Risk of damage to Boiler Marsh NE does not agree that the Recharge Scheme would have an adverse effect on the Boiler Marsh because any loss of ecological value will be temporary within a scheme that would have long term benefits (Ref 11C). Once sediment has settled it will start to recover and colonise. This recovery could happen anytime after the scheme starts, but we can have a high level of confidence that it will start after year 3 (Ref 7). There is good evidence that deposited sediment quickly colonises and temporary losses of this kind of magnitude are not detrimental in such large and dynamic coastal sites. As a scheme in its own right, independent of the W Class ferry, NE advises that the Recharge and Habitat Creation scheme is beneficial in slowing natural erosion in this particular circumstance. What will be created? The aim of the Recharge Scheme is to slow a natural rate of erosion to offset a risk of increased erosion. NE's view of the aim of the 0.9ha of recharge is to provide 0.9ha of ecologically functioning habitat that is maintained as 0.9ha at a higher level in the tidal frame than it would be without the scheme. It also has an effect of slowing the internal erosion of the remaining saltmarsh. There is a need to firm up the success criteria and monitoring criteria for this 0.9ha recharge area, however it will not be critical

		what kind of habitat it evolves into, providing it meets simple 'ecologically functioning' criteria.
Obj 9) Vessels may cause damage to the creek causing more erosion.	**R**	NE See Wightlink method statement, Ref 11c. NE agrees that barges delivering sediment will not cause damage to the creek
Obj 10) Potential damage to flora and fauna	**R**	NE See Obj 8 above
Obj 11) Strength of wind and tide is likely to dislodge brushwood/heather. Dredging would leach onto foreshore	**R**	NE See Obj 5 above
Obj 12) Bird counts taken at mid-tide which for a mudflat area is not ideal as most feeding occurs at low tide (and below the vegetation line). Works proposed will reduce amount of mudflats and decrease abundance of invertebrates.	**R**	NE See RSPB 1 and 3 above The 0.9ha recharge area used to be saltmarsh, and is in a process of erosion and loss. It is used by a few birds but even without survey it is clear that this will not be a key bird feeding area (Ref 11C). The works proposed will slow the natural erosion and increase the life of the saltmarsh and mudflat block , of particular benefit to roosting and nesting birds, for which this is a key area at Lymington.
Obj 13) Operation of ferries is causing irreversible damage to river bed. Current ferries to large for such a narrow river.	**W**	NE See SPS 2 above re no evidence for thruster effects on designated inter-tidal habitat. It is expected that the navigation channel may deepen by around 0.5m, but this is not expected to have a detrimental consequence for the designated habitat. <u>Are the ferries too large for the river?</u> The hydrodynamic impacts H R Wallingford predict for the W Class are due to their cross sectional hull area related to the size of the navigation channel (Ref 1).

		However vessel size is only one of several parameters that relate to environmental impacts; others are hull shape, speed, propulsion system and frequency of river trips, and these do not relate to vessel size. The W Class ferry, travelling at better regulated, slower speeds, is judged to potentially have a similar erosive effect to the previous smaller C Class ferry that has been judged to regularly exceed the speed limits (Ref 1).
Obj 14) Increase in engine power necessary to counter increase in windage of ferries resulting in boats having difficulty in holding station in the river.	**W**	NE Please refer to LHC re any increase in safety incidents since W Class came into service.
Obj 15) Well documented that C Class vessels did major damage to river and this will inevitably be exacerbated by much larger vessels.	**W**	NE NE acknowledge that the 30 year operation of the C Class ferry will have caused damage to the inter-tidal habitat (Ref 1 and 8). H R Wallingford consider that because the speed of the new W Class ferry is better regulated it will have a similar rather than greater effect (Ref 1 and 8) Current evidence has not shown any signs that the W Class thrusters have impacted the banks of the channel. (Ref 10). Current monitoring evidence strongly suggests that the impact will not be significantly greater than H R Wallingford predict (Ref 10).
Obj 16) Increased capacity of vessels for freight results in increased adverse impact on forest roads and danger to forest animals by virtue of increased traffic. (Larger freight cannot travel via Ampress Works Bridge)	**W**	NE Traffic through the Forest could affect pony deaths and commoning, erosion of road verges and atmospheric pollution. Pony deaths, road verge erosion and atmospheric pollution are not a cause of unfavourable condition for the New Forest SAC.

		NE agrees with Wightlink's Environmental Statement (Ref 11a) that traffic from the ferry is a small proportion of the traffic using the local area and a tiny proportion of the traffic using the wider Forest. Even close to the ferry terminal there are typically around 1 600 ferry vehicle movements at the local roundabout compared to 10 000 other vehicle movements. It cannot reasonably be said that the ferry (C or W) traffic will exert any significant effect on the New Forest SAC. The scale of traffic influences relevant to the Forest ecological condition might be of a scale of the socio-economic growth predictions for housing and business over a large area including Southampton and Bournemouth, as well as predicted increases in visitor numbers (currently of the order of 20 million a year).
Obj 17) Applicants assert traffic levels are down. This is due to recession only and will increase in time.	**W**	NE See above Obj16
Obj 18) Data provided is dis-information. Deadweight capability of ferries increases by 223% and gross tonnage increases by 341%.	**W**	NE has relied upon independent expert opinion to assess risk of erosion impact (Ref 1 and 8)
Obj 19) Boundary of N2K site is immediately adjacent to dock works. Action of stern thrusters in strong westerly winds will cause damage to mudflats between the terminal and Walhampton Shore.	**W**	NE There is a co-incidence of saltmarsh vegetation loss and the ferry terminal. It is possible that the C Class ferry may have contributed in some way to this vegetation loss, although it is noted that the vegetation has receded a great distance from the terminal, almost to the foreshore, and much further than the ferry-induced turbulence could be seen by eye (personal site visit). Further work would need to be done before any conclusions could be drawn. However, examination of the 2008/10 LHC bathymetry has shown that MLW to the east of the ferry terminal has been accreting since the W Class has been running (H R Wallingford pers com). Currently, therefore, there is no evidence to suggest that the W Class ferry is causing any erosion here. There is currently no basis for altering H R Wallingford prediction of W

		Class impact.
Obj 20) Reports by Wallingford, ELP Navigation Review and Black and Veatch clearly state W Class are too large for the river.	**W**	NE See Obj 13 above
Obj 21) Regulators have not required Wightlink to provide force and radius of vectoring thrusters output at various rpm and blade pitches such that authorities can require applicants to evidence that flows on river beds and banks will not cause erosion and loss of habitat. BMT commissioned by LHC stated the wash from stern thrusters was intolerable. As a result forward thrusters is used as a propulsor forcing the full effect of thrusters flow between hull and riverbed accentuating erosive damage done by the ferries. Submitted photo evidence would suggest it is irrefutable that C Class vessels have caused erosion on shore side of terminal over 30 years in operation. Power of W class is 196% increase and they are positioned only 15cm above the keel line, some 1m closer to riverbed than C Class. Sooner, rather than later an adverse effect will be caused by more powerful thrusters propelling a vessel with 76% extra displacement and 85% more windage.	**W**	NE See SPS 2 above
Obj 22) Omission in work carried out by applicant. No consideration given by them to extensive damage to 2-3ha of habitat between the ferry terminal and Walhampton Shore that can be solely ascribed to Wightlink operations. Historic charts show saltgrass up to ferry terminal. Now there is virtually no salt grass. Potential for damage due to W Class ferries much greater and source of damage will not be ameliorated in any way by extensions and alterations proposed for the terminal.	**W/S**	NE See Obj 19 above
Lymington River Association **LRA 1)** Proposal does not comply with requirements of Habitats Directive	**R**	NE See HWT 1 above
LRA 2) Fails to provide sufficient area of habitat to mitigate or compensate for predicted adverse effect from W Class ferries.	**R**	NE See HWT 3 above
LRA 3) Fails to prevent further ferry-induced loss of coastal protection to Lymington Harbour.	**R**	NE is not responsible for coast protection.

		Nevertheless we would note that the loss of marshes through wind wave erosion and vegetation die back dwarfs the worst possible ferry effect.
LRA 4) Consider works to be Compensation under Article (6) 4. Direct mitigation is possible removing adverse effect at source.	**R**	NE See HWT 1 above
LRA 5) If recharge is allowed further erosion of river would continue unchecked. Do not consider that scheme of 0.9ha will provide necessary additional habitat of 4.65ha in 2040. Even if it does, 4.65 ha of habitat would still be lost alongside the riverbanks and the scheme would not provide protection against the further erosion by ferries of outer marshes protecting Lymington Harbour from the action of Solent waves.	**R**	NE See HWT 3 above See Obj 1 above
LRA 6) Existing habitat would initially be destroyed. They assume after three years the mudflats will recover. So in 2017 the net new area of habitat will be zero.	**R**	NE See HWT 3 above.
LRA 7) Mud recharge scheme will also require an AA under the Habitats Directive due to initial destruction of Habitat.	**R**	NE See Obj 8 above Risk of damage to Boiler Marsh
LRA 8) Concept of 'Habitat Years' method is flawed in principle. ABPmers figures show area of habitat either with or without the scheme will be less in 2040 than 2010. Thus proposal fails to deliver a compensatory area of habitat equal to or greater than the area of habitat lost by the W Class ferry by 2040. (This issue is considered in great detail by LRA and regard should be given to their detailed report in providing s response to the issues raised)	**R**	NE Natural England has discussed this several times with the LRA. The use of ha-years is simply a measure of habitat persistence or loss and it is an appropriate measure to use here (Ref 13). It is true that, even with the Recharge scheme, there will be a net erosion loss of habitat at Boiler Marsh. The benefit of the scheme is derived from the fact that this erosion loss is slowed to offset a potential increase in erosion along the navigation channel from the W Class ferry. The LRA believe that because there is still a net loss of habitat even with the scheme, the scheme cannot be considered to offer any benefit. NE disagrees.

		Through the Habitat Regulations Government has a duty to maintain the interest of the Natura 2000 series in light of the conservation objectives. The conservation objectives aim to prevent human-induced detriment to the features of interest; natural habitat losses due to vegetation die-back and wind wave erosion, for example, are accepted as part of the natural functioning of sites. As such there is no obligation through the Habitat Regulations to offset 'natural' habitat losses. Natural England's coastal policy is to encourage natural processes to enable self-sustaining coastal habitats to form with sea level rise. It is only because of very special circumstances at Lymington that artificially slowing natural erosion can be considered as offsetting a risk of habitat loss due to a plan or project. Those special circumstances are that the designated sites at Lymington, within their statutory boundary, have no opportunity to become self-sustaining with future sea level rise, they are 'squeezed' against either a flood defence or naturally rising land. Hence this site has a finite life within the next 100 years. Further the means of slowing natural erosion has no knock-on detrimental effect on the site, it simply prolongs the life of a range of habitats in the upper inter-tidal for a period of time. Wightlink's mitigation benefit is designed to offset the erosion of the W Class over its 30 year life. The LRA have a legitimate argument that, if there is erosion caused by the W Class, that loss will persist longer than the life of the ferry. However the Lymington estuary will anyway be so radically changed after 30 years, with most saltmarsh vegetation gone and far greater penetration of wind waves, that it is not clear that the relatively small ferry effect would still be considered adverse and hence require ongoing mitigation. There will be time over the life of the

		ferry to keep this under review and take action if still considered a problem.
LRA 9) There is no mention of 'habitat years' being an acceptable device for calculating mitigation or compensation in the Habitats Directive.	**R**	NE Ha years is simply a measure of habitat persistence, it has no place in the Directive, any more than ha or km (Ref 13)
LRA 10) Claim by applicants that scheme will prevent habitat from eroding as rapidly as it would without the scheme is based on conjecture unsupported by calculations using measured in-situ data or by trials.	**R**	NE See Wightlink's Method Statement (Ref11C), and H R Wallingford Ref 7. NE is satisfied that NFDC field data and measures from aerial photography have been appropriately used to assess the 'without scheme' situation., and hence the possible 'with scheme' benefits. The management of uncertainty in the prediction of any ferry impact and in the delivery of mitigation will be managed to avoid any risk of adverse effect (Ref 11C, HWT 2 above)
LRA 11) ABPmers predictions for 'without recharge' scheme have ignored mudflat habitat. ABPmer have not calculated the loss of mudflat over time. Loss of total habitat over time predicted for Boiler Marsh without the scheme has therefore been greatly exaggerated to applicants benefit.	**R**	NE The habitat benefit is valued as retaining mudflat or saltmarsh at a higher level in the tidal frame, and for longer, than would be the case without the scheme. Hence the comparison 'with' and 'without' the scheme is based only on the presence of higher level habitat. This scheme was designed with NE advice that the higher level inter-tidal habitat is particularly threatened in the N2k site as a whole and retaining this, contrary to natural erosion trends, can greatly benefit the site's conservation objectives in this particular circumstance (see LRAs 6 above) The Scheme assumes that without the scheme the 0.9ha placement area would continue to erode away. Once the inner erosion breaks through the saltmarsh block, after a few years, setting up a new tidal flow through the

		middle, the whole block would rapidly disappear. It could be argued that the benefit is slightly over-estimated because the ongoing presence of some eroding inner mud habitat is not subtracted. On the other hand it could be argued that the benefit is under-estimated because the prolonged life of associated lower inter-tidal mud habitat is not included, neither is the increased rapid loss of the whole salt-marsh block after current break-through occurred. Similarly any sheltering benefit of the longer-lived salt marsh block to marsh areas behind the scheme is not included. Therefore NE is satisfied that the approach to estimating the benefit is reasonable.
LRA 12) For the scheme with the recharge ABPmer has included new area of mudflat habitat they claim will be created. This is inconsistent with their treatment of the 'without scheme'. Therefore greatly exaggerates the benefits to their advantage.	**R**	NE Examination of the visual model of the 'with' and 'without'scheme Fig 2 Method Statement (Ref 11) does not suggest that inappropriate areas have been used (Ref 7). It has been agreed that the recharge area can be counted as 0.9ha of benefit once it is ecologically functioning.
LRA 13) ABPmer have not allowed for time delay of 6 years for mud dump habitat **to** be created.	**R**	NE See HWT 3 above
LRA 14) Lack of a site trial. Without this the viability of the scheme remains in doubt. How can the applicants convince the regulators about the long term durability of previously eroded silt only 20cm thick and protected from tides and waves by straw bales or heather? A recent recharge trial in Southampton Water lasted only for one tidal cycle of about 12 hours	**R**	NE See Obj 5 above
LRA 15) Degree of technical merits of recharge scheme is such that precautionary principle required by Habitats Directive must be invoked and permission for recharge scheme declined.	**R**	NE 1. Natural England agrees that an appropriate assessment should be able to show, beyond reasonable scientific doubt, that an adverse effect will be avoided.

		2. We have taken independent advice from H R Wallingford that there can be a high degree of confidence that Wightlink's 'Recharge and Habitat Creation Scheme' will be successful, provided Wightlink commit to three attempts to place the sediment and commit to the necessary ongoing intervention. 3. The necessary specification to achieve a high degree of confidence can be achieved through a legally binding agreement such as a S106 Agreement or Marine License. 4. Clear criteria for success and monitoring will be set out in an appropriate legal agreement. An Environmental Management Group, including all statutory bodies, will oversee both the monitoring of impacts and the delivery of mitigation to ensure impacts are offset. Natural England has advised that the timeline for mitigation benefit and cumulative ferry impact requires clarification.
LRA 16) Introduction of C Class ferries led to rapid erosion of the riverbed sediments and erosion of intertidal mudflats between low and high water marks and in permanently submerged navigation channel at an increased rate. Photographic evidence shows loss of saltmarsh increased from0.8m to 2.8m per year after introduction of C Class. HRW report in 1991 concluded that C Class was a significant cause of erosion and predicted magnitude of river bed loss in 10 years. Recommended that C Class reduced speed in the river. Advice was ignored by ferry operator and Harbour Commissioners. Evidence shows ferries actually speeded up in Long Reach.	**W**	NE This is historic comment. NE technical advice from H R Wallingford (Refs 1 and 8) on the potential effects of the W Class are based on interpreting the past bathymetric data and the likly effects of the C Class. This history has been taken into account.
LRA 17) Introduction of W Class has an increased displacement of 70%, increased windage of 100% and increased engine horsepower of %450.	**W**	NE H R Wallingford has taken the specification of the W Class into

W Class requires 20% additional power to drive the hull at same speed as C Class and 100% extra thrust to offset the increased windage.		account when advising NE (Ref 1 and 8). A recent review of monitoring has shown that there is currently no evidence of the W Class thrusters interacting with the designated bank habitat (Ref 10)
LRA 18) Applicant claimed that C Class had habitually travelled at 8 knots but that the W Class would stick to limit of 6 knots. Statements were untrue. Upstream from Pylewell evidence shows C Class did travel at 6 knots but from entrance of the river travelled at up to 9 knots, only slowing at the end of Long Reach. Evidence from LHC has shown, until recently W Class still exceeded 6 Knot speed limit.	**W**	NE H R Wallingford has considered these comments in revising their advice to NE (Ref 8), and this revised advise has been taken into account when showing that the Recharge Scheme can still offset the risk of impact (Ref11C). As explained above (HWT 3) there is now a need to reprofile the delivery of benefit of the Recharge. Following LRA advice, NE was made aware that the LHC speed monitoring was not sufficiently sensitive for environmental purposes. NE consequently advised Wightlink that the sensitivity of H R Wallingford's prediction of potential erosive impact to speed requires much more sensitive speed monitoring (NE Stakeholder Response Ref 9).
LRA 19) Consequence of C Class was to enlarge the river and deepen the river. 50 ha of lost habitat can be attributed to C Class. Result has allowed larger waves to enter the harbour. LHC attempted to counter this by timber wave screen and now rock barrier, Evidence now of erosion close to sea wall west of yacht haven marina and elsewhere.	**W**	NE It is accepted that there has been erosion of the designated habitat by the previous C Class ferry; this past effect has formed the basis for advice on the risk of effects from the new W Class ferry (Ref1 and 8) The primary cause of erosion and loss of saltmarsh at Lymington is vegetation die back that is occurring across the Solent, and wind wave erosion at the sea-ward edge of the marshes. The W Class ferry is will not cause any significant impact on salt

		marshes (Ref1 and 8)
LRA 20) Conclusion that omissions, inconsistencies and unjustified assumptions in applicants submissions are intended to provide a smokescreen to give impression that the scheme will effectively mitigate the damage to habitats predicted from the W Class ferries. Doubt about the science on offer provides doubt and Regulators should err on the side of caution. Precautionary principle is enshrined in Habitats Directive.	**R/W**	NE NE has taken independent advice on both the risk of impact of the W Class (Refs 1 and 8) and the confidence that can be placed in the mitigation scheme (Ref 7). It is recognised that there is uncertainty about the risk of W Class impacts. Monitoring has strongly suggested that impacts will not be greater than HR Wallingford suggest (Ref 10). Similarly the risks involved in successfully delivering the Recharge Scheme have been recognised and managed (See LRA 15 above). Managing these uncertainties is built into the legal agreement to regulate delivery of the Scheme and into the role of the Environmental Management Group to ensure that there is no risk of an adverse effect being incurred (Ref 11C, Wightlink method statement)
LRA 21) Suggest reduction of speed of ferries in the river, stop sailing when tide is below an agreed level, avoid two ferries crossing in the river, avoid sailing in strong winds	**W**	NE See below exert from Ref 9 NE Stakeholder Engagement *'Operational mitigation has been considered. Slowing the speed of the ferries significantly reduces the risks of hydrodynamic impacts, but brings a trade-off with risks associated with the longer duration of thruster effects, and concerns about navigational control and safety (and further environmental risk).* *Natural England agrees that there would be environmental advantages to the W class ferry keeping to the centre of the navigation channel, but this would only reduce and not fully negate the risk of impact. Wightlink advise that they do try and keep to the centre as far as navigational constraints allow.* *Passing in the river causes the greatest risk of environmental impacts from*

		hydrodynamic effects. However Wightlink advise that if the ferries were to pass outside the river it would significantly reduce the frequency of the ferry service, while only partially mitigating erosion. *Having fully considered operational mitigation, Wightlink has decided to propose habitat benefit mitigation and Natural England advises that this is equally valid.'*
LRA 22) The data for vehicular traffic has been carried out on assumption of a much reduced service which currently runs and not based on the potential 3 ferries per hour service.	**W**	NE This needs checking but there is doubt that it would make a significant difference.
The Lymington Society **LS 1)** Application is enabling work which will lead to adverse effect on N2K habitats contrary to Habitats Directive and Habitats Regulations	**R**	NE The shore works are proposed to provide necessary infrastructure for the new W Class ferry. Natural England has advised that there is a risk that the W Class ferry could continue to erode the designated banks of the navigation channel. Wightlink propose the Recharge and Habitat Creation Works to prolong the life of an area of saltmarsh and mudflat to ensure that the Natura 2000 sites do not suffer an adverse effect as a consequence of the W Class ferry. Natural England broadly supports the Recharge and Habitat Creation Works as offsetting any risk of ferry-induced erosion, but advises of some relatively small issues that need to be resolved in an appropriate assessment (Ref 12).
LS 2) Scheme is not mitigation but is in fact compensation	**R**	See HWT 1 above
LS 3) Scheme is open ended and does not have a sufficiently reliable likelihood of being successful. No incentive for Wightlink to undertake any schemes to reduce damage in the river itself. Scheme is at variance with established definition of "integrity of the habitat" which the mitigation is supposedly trying to achieve. Current proposals do not comply with EU guidance concerning integrity of habitat.	**R**	Likelihood of Scheme success HR Wallingford (Ref 7) advise that, provided the sediment placement is attempted over at least 3 years, with sufficient budget, there can be a high level of confidence that it will be successful. They warn of high costs that might be required, particularly if further intervention is needed.

		The delivery of the mitigation will be subject to a legal obligation through a S106 Agreement or Marine Licence. The appropriate assessment will need to assess whether the terms of the legal agreement are sufficiently robust to give the required level of confidence that the mitigation will be successfully delivered. This will include criteria for success and monitoring. Actual ferry impact and mitigation delivery will be overseen by an Environmental Advisory Panel including all statutory bodies (Ref 11C). The key role of this body will be to assess all monitoring information, look ahead and ensure that the mitigation proposal will be successful**.** . <u>Direct impact reduction: Operational mitigation</u> See LRA21 above <u>Proposal at odds with maintaining site 'integrity.</u> See NE Stakeholder Response 7.7 p36 *'While it is important for Natura 2000 sites to be self-sustaining, as far as possible, it is recognised that there is no opportunity for the upper inter-tidal habitat to achieve this within the current designated boundary at Lymington in the medium term and for the inter-tidal habitat per se over the long term. The mitigation proposed by Wightlink, while requiring intervention, will enable the greater persistence of a range of upper inter-tidal habitats (mudflat and saltmarsh) over the medium term to provide functional benefit to the integrity of the site in the medium term'*
LS 4) Little scientific justification with 'habitat year' concept being invented to fit this scheme.	**R**	See LRA 8 above
LS 5) Loss of such a large amount of the already reduced saltmarsh in	**W/R**	

the Lymington River Estuary visible from the town will have a seriously deleterious effect on natural beauty of the river over the next few decades.		The W Class ferry will not have any significant effect on salt marsh (Ref1 and 8) Vegetation die back and wind wave erosion will have dramatic effects on the landscape of Lymington River over the next 40 years.
LS 6) The outcome of the project to introduce W Class Ferries would appear to nullify one of the principal aims of the harbour protection scheme being carried forward by LHC, namely the protection of the remaining salt marshes in the Lymington River. Whilst the scheme proposed may technically satisfy NE that overall effect on the N2K habitats may be minimal, the effects on the river itself may still be substantial, thereby effectively undermining one of the main aims of the Harbour Protection Scheme.	**R/W**	The environmental and harbour benefit of the Harbour Protection Scheme is to reduce wind waves at higher states of the tide eroding the upper inter-tidal area and saltmarsh, primarily behind the western breakwater. The risk of ferry related impact is centred on the lower inter-tidal around MLW and below, and the greatest effect historically have been on the outer eastern bank of long reach and at Pylewell. Hence there is spatial separation between the effects of the two schemes.
LS 7) A very detailed traffic assessment should be carried out as part of the full assessment of this application, including night time survey of freight traffic.	**R/W/S**	See Objections 16 above
LS 8) Do not consider that the AA documentation and ES produced by Applicants consultants fairly sets out both sides of the arguments for and against the proposals advanced by Wightlink.	**R/W/S**	The purpose of an appropriate assessment is for a competent authority to consider available expert opinion, and, taking account of NE advice, make a judgment whether an adverse effect on integrity has been avoided. While NE does not agree with all the expert opinion expressed within the assessment, Wightlink have taken account of our key advice in relation to the risk of erosion and the requirement for mitigation. NE does advice in relation to the monitoring and reporting of ferry speed and the mitigation success criteria, and profile of mitigation delivery that needs to be considered.
Lymington and Pennington Community Forum (Mr Hebard) **H1)** Examples where similar methods have been used differ in key	**R**	**See LS 3 above.**

respects to Boiler Marsh, in that they have a robust coffer dam or containment to retain sediment long enough for it to consolidate or have substantial wave protection. Boiler Marsh is regularly flooded or traversed by powerful waves.		.
H2) Proposal for use of low ground pressure vehicles would require them to have to be tracked and skid-steered doing serious damage to the marsh. The pipeline would be damaging but would also require to be flushed with water at the end of delivery. Over 100 tonnes of contaminated water would be washed off the marsh each time flushing away much of the sediment before it settles.	**R**	Options for delivering sediment are described in Wightlink's Method Statement (11C). There is no intention to use vehicles on the marsh. It will be possible to fix and use the pipe without significant damage. It is recognised that there could be a high level of run-off from the site and that issues such as flushing the pipe will need to be dealt with. Importantly it is judged that there will be ways of dealing with these matters, and an initial experimental time is built into the 3-year program required to have a high level of confidence that the scheme can be delivered (Ref 7)
H3) Even if the sediment is initially retained it is likely to be re-fluidised by wave action and washed off the marsh. This is of concern as local fishermen say that it is the spawning ground for their primary fish catch, cuttlefish.	**R**	See Ref 11C Wightlink's Method Statement ; 7.4 Sediment retention and wave attenuation methods. NE has taken independent technical advice that such methods can be successful, and it is recognised that repeated intervention at significant cost may be involved (Ref 7). The obligation to ensure success will be achieved through a legal S106 agreement or Marine Licence.
H4) The need for a breakwater is a direct consequence of the widening of the river by the effect of the ferries. If the erosion is allowed to continue further phases of the Breakwater Project will need to be brought forward. This has serious consequences as significant areas of the SAC will be covered with rock that is alien and out of character and may accelerate local erosion of saltmarshes.	**W/R**	The need for the Breakwater is primarily a consequence of wind wave erosion of saltmarshes and saltmarsh vegetation die back, neither of which are related to the ferries.
H5) The sizing of the recharge is based on an estimate of the ferries erosive impact which is one or more orders of magnitude too small.	**W/R**	

Advisors to applicants have all calculated amount of erosion of sides of the channel caused by wash and drawdown of ferries and these estimates alone have been used to size the recharge. None of the parties have estimated the impact of the ferries thrusters which disperse the sediment. The four primary sources of replenishing sediment all pass down or across the channel bed and would settle in outer reaches, were it not for the dispersion caused by the ferries thrusters. The impact of the thrusters is to cut off the lifeblood of the salt marshes. (Detailed explanation of this can be found in representation from Mr Hebard and regard should be given to this by NE in their response)		H R Wallingford considered the possibility of the ferries interacting with the sediment supply of the marshes and concluded that any such effects would be extremely small compared to the hydrodynamic effects (Ref 8). As a consequence NE advises that there is not likely to be a significant effect here (Ref 9).
H6) Information presented to confirm that ferry erosion is minimal is observation of sediment levels at graduated stakes but this is inconclusive – Accretion was observed initially and then erosion later, but since any sediment eroded by storms or stirred up thrusters at the river mouth where both erosive effects are believed to be most severe, is most likely to settle out in the location of the stakes and either would cause accretion in that location, no conclusions can be drawn and no other reliable evidence is presented. (Detailed explanation of this can be found in representation from Mr Hebard and regard should be given to this by NE in their response)	**W**	The Stake monitoring is only designed to pick up direct thruster effects on the banks; these would be large scale and short term if they occurred (Ref 3, 6). After a year's operation of the W Class ferry there is no evidence that such effects are occurring. It is the LHC biannual bathymetric survey that is the long term monitoring for other hydrodynamic effects, and the results of this so far are inconclusive, as expected after so short a time. Because the current bathymetric survey and stake monitoring tend to tell the same story there are some useful conclusions that can be drawn; current evidence strongly suggested that the hydrodynamic impacts will not be greater that HR Wallingford predict (Ref10).
H7) Need to mitigate erosion at source – Suggest to ask Wightlink to keep to centre line of river voluntarily and for LHC to monitor and publish their level of compliance. Would ensure the ferries keep a maximum distance from the most critical areas of erosion, doubling it in most cases; aver obvious and simple measure to reduce primary erosion. Avoid ferries passing in the river. Suggest applicant offers incentives to	**W/R**	Operational mitigation has been considered. Slowing the speed of the ferries significantly reduces the risks of hydrodynamic impacts, but brings a trade-off with risks associated with the longer duration of thruster effects, and concerns about navigational control and safety (and further environmental risk).

sail at less congested times. Would reduce congestion. Suggest erosion of river banks could be mitigated directly by using small subsurface geotextile bag reefs.		Natural England agrees that there would be environmental advantages to the W class ferry keeping to the centre of the navigation channel, but this would only reduce and not fully negate the risk of impact. Wightlink advise that they do try and keep to the centre as far as navigational constraints allow. Passing in the river causes the greatest risk of environmental impacts from hydrodynamic effects. However Wightlink advise that if the ferries were to pass outside the river it would significantly reduce the frequency of the ferry service, while only partially mitigating erosion. Having fully considered operational mitigation, Wightlink has decided to propose habitat benefit mitigation and Natural England advises that this is equally valid (Ref 9 NE Stakeholder Response)
H8) Suggest restoration of saltmarsh to the west of Lymington where the saltmarsh is more heavily depleted. Area chosen in Boiler Marsh is designated "no active intervention "in Shoreline Management Plan whereas site in Western Lymington is designated as "hold the line".	**R**	See SPS 1 above
H9) Suggest that NFNPA take independent advice or allow the LPCF to challenge their advisors in front of the Planning Committee	**W/R/S**	N/A to NE.

Natural England References

1. H R Wallingford Wightlink Ferries Lymington Geological advice contract to Natural England (impact assessment) Report EX5937 Jan 2009.
2. Natural England (impact assessment) advice to regulators v3 Feb 2009
3. Wightlink Ltd- Replacement Lymington to Yarmouth Ferries: Information for Appropriate Assessment Agreed Protocols for Monitoring the Effects of the W Class ferry Report R1509 S1 ABPmer July 2009
4. Natural England Consideration of the impacts of, and opportunities for mitigation for, the W Class ferry at Lymington Nov 2009.

5. H R Wallingford Wightlink Ferries Lymington Review of Monitoring Technical note DDM 6263/01-02 Dec 2009
6. Wightlink Ltd Replacement Lymington to Yarmouth Ferries: Information for Appropriate Assessment Agreed Protocols for Mitigating the Effects of the W Class ferry Report R1509 S2 ABPmer December 2009
7. H R Wallingford Wightlink Ferries Lymington, Further Comments on Natural England Questions relating to proposed approach to mitigating the effects of the W Class ferry at Lymington Report DDM/01-03 Dec 2009
8. H R Wallingford Wightlink Ferries Lymington Response to Stakeholder Issues Report DDM6263 H R Mch 2010
9. Natural England Stakeholder Response; summary and detailed response May 2010
10. H R Wallingford Wightlink Ferries Lymington Review of Monitoring Report DDM 6263-10C-01 July 2010
11. Wightlink Ltd consent application documents November 2010:
    a. Environmental Statement ERM Nov 2010
    b. Technical Report to Inform Appropriate Assessment ERM Nov 2010
    c. Selected Information for Appropriate Assessment including Annex C (revised) Method Statement for the Recharge/Habitat Creation Work ABPmer Oct 2010
12. Natural England Supplementary Advice to Regulators March 2011
13. Natural England note for Lymington River Association: Wightlink's quantification of benefit: explanation of ha years July 2010
14. Lymington Harbour Protection Environmental Statement Black and Veatch April 2005.
15. H R Wallingford Wightlink Ferries Lymington Response to queries regarding the effect of ferry speed DDM6263-10A-01 R2 Feb 2011
16. Environment Agency Lymington River Reedbeds Water Level Management Plan
17. North Hampshire Shoreline Management Plan NFDC

Wightlink Flood Defence Consent Application - Questions to NE from the Environment Agency.

Questions to NE from the Environment Agency	NE's response (Yes/No)	Explanation - NE advice
1) Can NE confirm they are content with saltmarsh habitat creation mitigating for the loss of intertidal mud habitat? This mitigation is not "like-for-like" habitat replacement in a literal sense.	Yes, but see explanation	Ref 9 NE Stakeholder Response : Natural England's role in relation to the introduction of the W class ferry is to advise on the integrity of the Natura 2000 sites and SSSI. The integrity relates to maintaining their structure and function across the whole site and hence mitigation can take place anywhere where this purpose is served. The ferries are predicted to impact primarily the lower inter-tidal mudflat while the mitigation proposal will deliver benefits to upper inter-tidal habitat, and this is likely to benefit a mixture of both mudflat and saltmarsh. All habitats in the Natura 2000 site at Lymington are of equal value, but some are more threatened than others. In the dynamically changing Lymington Estuary the lower inter-tidal habitats that the ferry is at most risk of affecting will increase in area over the next 100 years as saltmarsh changes to mudflat and inter-tidal profiles fall. Conversely upper inter-tidal habitat (both mudflat and saltmarsh) is predicted to suffer substantial losses. In view of this Natural England advises that the integrity (particularly the range of functions) of the Natura 2000 sites will be better maintained over the next 50 years if priority is given to conserving the upper inter-tidal habitat (either mudflat or saltmarsh), both through positive endeavers such as Biodiversity Action Plan and through mitigation for development allowing lower inter-tidal habitat to be exchanged for upper inter-tidal.
2) Can NE confirm the recharge scheme is mitigation and not Compensation, under the terms of the Habitats Regulations?	Yes	Please see text below from Ref 9 Natural England Stakeholder Response (Please note in Ref 9 a confusion between the old and new Habitat Regulations nomenclature; where Reg 48 is written please read Reg 61, and where Reg 49 and 53 please read Reg 62 and 66)

		'The Habitats Regulations allow for mitigation or avoidance measures to be incorporated into a plan or project for the purposes of avoiding an adverse effect on the integrity of the European site. It is Natural England's view that, in appropriate circumstances, such measures can take the form of habitat creation within the boundary of the site to ensure that the site's conservation objectives are not impaired and that an adverse effect on the site's ecological integrity does not result from the proposed plan or project, as required under Regulation 61 of the Habitats Regulations. *Wightlink, as competent authority, will be undertaking an appropriate assessment of the introduction of the W class ferry under Regulation 61 and the assessment will consider whether the mitigation proposal avoids the risk of an adverse effect occurring.* *A distinction should be made between Regulation 61 which covers issues of appropriate assessment and impact avoidance and* ***Regulations 62 and 66*** *of the Habitats Regulations which deal with alternative solutions, IRPOI and compensatory measures**.'***
3) Can NE confirm that this project will not stop, on its own, the Natura 2000 (and Ramsar) sites achieving their Conservation Objectives? Will this project be a reason for the constituent SSSIs being reported as being in unfavourable condition?		NE advised in 2009 that it had not been shown, beyond reasonable scientific doubt, that there will not be an adverse effect on the integrity of the N2K sites as a result of the 30 year operational life of the W Class ferry. As a result Wightlink have proposed the Recharge and Habitat Creation Works. NE has currently advised that the operation of the W Class ferry, the Recharge and Habitat Creation Works and the construction of shore works should be subject to appropriate assessment. The purpose of this assessment will be to enable any necessary adjustment and regulatory framework to be agreed to ensure that there can be a high level of confidence that the Conservation Objectives will be met. It continues to be our view that it will be possible to achieve this high level of confidence and hence that site condition will not be detrimentally affected by the project, but some adjustment to the proposal , and an enforcement mechanism, is required (see NE Supplementary Advice) Given that the W Class ferry began operating in 2009, Natural England is also advising both Defra and Wightlink (the Competent Authority for the W Class ferry) in relation to any short term risks of impact to the designated sites prior to an appropriate assessment being concluded. Our advice is that the small, temporary impacts occurring to the lower inter-tidal area are not detrimental to the large, dynamic coastal sites.

		We are continuing to advise Defra and Wightlink in this regard.
4) Do NE agree with the final conclusion of Wightlink's draft Appropriate Assessment?	N/A	NE does not agree that Wightlink's draft appropriate assessment has demonstrated that an adverse effect has been avoided, but we advise that it should be possible to show this with further development, in summary 1 The recharge/habitat creation success and monitoring measures need to be more specific . 2 The recharge/habitat creation benefit calculations need to reflect the likely time until the 0.9ha is ecologically functioning; this should run after having allowed 3 attempts to achieve sediment placement with a high degree of confidence. 3 Wightlink needs to present evidence to demonstrate that the ferries are keeping, on average, to 6 and 4 knots since the prediction of risk of impact is very dependent on speed. 4 The draft S106 needs to be agreed as a reliable form of regulation and enforcement This advise is set out more fully in Ref 12 NE Supplementary Advice
5) Do NE agree with Wightlink's proposed Section 106 Agreement heads of terms and, if not, what modifications to it do NE advise are necessary in order to secure Wightlink's proposed mitigation?		Please see Ref 12 NE Supplementary Advice .
6) Can NE confirm that the Lymington estuary is not an interest feature of the Solent Maritime SAC?	Yes	The Lymington estuary is part of the Hurst Castle to Lymington River SSSI, and this is a component site of the Solent Maritime SAC. 'Estuaries' are an interest feature of the Solent Maritime SAC, but this interest feature is not demonstrated at Hurst Castle to Lymington River SSSI. See below exert from Ref 9 Natural England Stakeholder Response

		'The Habitat Regulation 33 advice to the Solent European Marine Site Management Scheme describes the designated features of the different Estuaries in the Solent that comprise the European Marine Site (SAC, SPA and Ramsar). The 'estuary' SAC or Ramsar feature is present where an estuary has a high level of natural form and function (eg Medina, Beaulieu, W Yar). The 'estuary' feature is not present at Lymington because the Lymington Estuary is substantially modified through the tidal barrier truncating the estuary and the high level of harbour development. *The nature conservation interest at Lymington is reflected by the site boundary and is the inter-tidal habitat at the mouth of the estuary. The inter-tidal area has been used to describe impacts because it is the common habitat upon which the designated features of all the Natura 2000 and SSSI sites depend. Inter-tidal habitat (mudflat or saltmarsh) is the designated habitat feature of the SAC and ramsar sites. The inter-tidal area is also the supporting habitat for populations of SPA and ramsar wintering birds, the key features of those sites.* *The SSSI does encompass wider interests and we have considered the impacts of thrusters on plankton, fish larvae, fish and eels. Plankton and fish larvae will not be significantly affected by the thrusters because of the small body size and the small proportion of the tidal prism of the estuary that is affected. Local salmonid and eel populations are not judged to be significantly affected given the small proportion of the channel base affected during any one passage of the ferry; the new legislation for eels is aimed primarily at removing obstacles to eels migration, such as tidal sluices, since this is the impact of greatest conservation significance.*
7) We are minded to scope-in the risk of impacts on migratory fish in terms of off-site impacts on typical species of the New Forest SAC, on the basis that Sea Trout (*Salmo trutta* L.) and Eel (*Anguilla anguilla*) are typical species of the New Forest SAC. (For the record, we believe migratory fish to be intrinsically typical species of maritime Natura 2000 estuary features ; and we recognise these species are interest features of Hurst Castle and River Lymington Estuary and the River Lymington SSSIs). Do you agree with that interpretation? And if so, do you advise that the scope of our AA should take-in migratory fish, for off-site impacts on typical species of the New Forest SAC?		NE does not currently consider that trout and eels, as 'typical species ' of Alluvial Forest feature of the New Forest SAC, need to be considered in an appropriate assessment. Please consider the following**.** **New Forest SAC** The relevant SAC conservation objective is 'subject to natural change maintain New Forest riverine woodland feature in favourable condition with particular reference to *Alnus glutinosa* and Fraxinus *excelsior*.' Site condition

		monitoring then refers to the condition of the woodland habitat and its functionality. NE's guidance on the management objectives for the New Forest SAC is set out in the Management Plan (Wright and Westerhoff 2001). Here it is noted that 'the Forest is probably of national importance for its native fish populations, though further work is required to provide data for full description and evaluation' It is noted that the Habitat Directive refers to 'typical species' and NE would agree that Sea Trout and Eel are typical species of New Forest SAC riverine woodland. The Directive objectives here are to ensure that the population dynamics of the species concerned are maintaining themselves as a viable component of the riverine woodland. Natural England has not developed condition assessment parameters for the New Forest SAC that include suits of typical species of a feature which may be affected by off-site impacts and has not advised Wightlink that these should be considered here. However we appreciate that this is a matter for clarification between NE and EA. If the EA wish to include Sea Trout and Eel in an appropriate assessment of the Wightlink project we would advise that it would be necessary to explain how the project is likely to have a significant effect on their population dynamics affecting their ability to maintain themselves as viable components of riverine woodland. The focus here is population viability rather than protection of individuals. **Hurst Castle and Lymington River Estuary SSSI** Sea Trout and Eels are not criteria features of this SSSI, please refer to criteria sheet upon which designation was based and explained in the citation. **Lymington River SSSI** Sea Trout and Eels are interest features of this SSSI. Please see Stakeholder Response 7 Technical; NE criteria for mitigation 7.5 p34 (above) where we assessed (having taken EA advice) that these SSSI interest features would not be significantly affected on the basis of the small

		proportion of the channel base affected during any 1 ferry passage.
8) Can NE confirm you are of the same opinion as the Agency, regarding the general categories of noise disturbance for migratory fish acceptable for designated waters? At present we have adopted a two tier approach to protecting migratory fish protected by current legislation. **Migratory fish covered by Habitats Regulations (either as an interest feature, or as a typical species)** At least half of the fish-navigable estuary width should be below the noise threshold at which we start to see a behavioural disturbance (precautionary) [i.e. low likelihood of disturbance]; **Migratory fish <u>not</u> covered by Habitats Regulations** At least half of the fish-navigable estuary width should be below the noise threshold at which we expect a mild avoidance reaction in a majority of individuals. [i.e. moderate likelihood of disturbance]. These thresholds may seem rather stringent but it must be recognised that noise intensity will be much higher close to the source and carries the potential for hearing loss, physical damage and even death for some sources at close range. We normally find that through scheduling, design or through careful operational mitigation that nearly all projects can work within these guidelines. We have operated these general guidelines since the Dibden Bay Inquiry highlighted the potential for impact on salmonids that need to pass through the estuary at least twice to complete their life-cycle. Work on salmon indicated that if they did not find suitable conditions during a narrow window of opportunity on return to freshwater that an alarmingly significant proportion of the population did not subsequently reproduce. It is not clear whether this behaviour is evident in Sea trout which undertake similar migrations.		NE advises that any impact described as a consequence of these thresholds would then need to related to the N2K interest features and their conservation objectives. For example to use these thresholds within a Habitat Regulation assessment for typical species such and Sea Trout and Eels, of an SAC feature such as riverine woodland, it would need to be explained that there was a link to whether there was likely to be a significant detrimental effect on the ability of the population to maintain itself as a viable species component of New Forest riverine woodland. If there was likely to be a significant population level detrimental effect an appropriate assessment would then consider whether the viability of the populations was maintained such that the New Forest riverine woodland did not experience an adverse effect on integrity. Impacts at population level would be assessed alone or in combination/cumulatively.
9) What sediment standards should be used for assessment of sediment to be deposited on the recharge area?		NE and the EA are currently in discussion about appropriate toxicity thresholds.

1. Should sediment which has contamination above the Canadian TEL standard but below the PEL standards be allowed to be deposited on a Natura 2000 site? 2. Should sediment which is between the CEFAS AL1 and Canadian TEL standard be allowed to be deposited on a Natura 2000 site? 3. Finally, should sediment which is between CEFAS AL1, but above PEL standard be allowed to be deposited on a Natura 2000 site? We are concerned that the sediment to be deposited on a Natura 2000 site must have low levels of contamination. There are at least three sets of standards that can be used to assess sediment quality: • CEFAS Action levels (AL 1 and AL2) • Dutch quality standards (TV, RV) • Canadian standards(Threshold Effects Level and Predicted Effects Level) Overall each set of 'standards' has two thresholds. But some contaminants are not listed in some of the standards. For example there is no TBT threshold in the Canadian standards. However there are no PAH standards in the CEFAS standards. (table 6 in ABPmer report summarises all standards) In general the Dutch standards are the least strict, and I would not propose to use them to determine whether sediment can or cannot be deposited within a Natura 2000 site. CEFAS Action levels were used to assess dredged material and its suitability for disposal at Sea…….and in most cases, to a disposal sites offshore and outside Natura 2000 sites. The FEPA licence normally only precludes sediment which exceeds Action Level 2 (AL2) from being deposited at sea… and AL2 are much greater than Canadian PEL standards. Sediment levels below the lowest thresholds used by CEFAS (AL1) and Canadian standards (TEL) are perceived to be uncontaminated and would not be considered to have an adverse effect on the Natura 2000 site. In addition, sediment contamination with levels greater than the Canadian PEL standards are perceived to be contaminated and would be considered to have an adverse effect on the Natural 2000 site according to the WQTAG paper, but they would not be considered an issue for CEFAS if they are below AL2.		

10) We wish to ascertain the following:- Which sections of Wightlink's draft AA does NE agree with\not disagree with? Which sections of Wightlink's draft AA does NE disagree with\not agree with? Please respond on a section by section basis, as set out below.				Please see NE Supplementary advice..
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Environment Agency
11th February 2011

Natural England References

1. H R Wallingford Wightlink Ferries Lymington Geological advice contract to Natural England (impact assessment) Report EX5937 Jan 2009.
2. Natural England (impact assessment) advice to regulators v3 Feb 2009
3. Wightlink Ltd- Replacement Lymington to Yarmouth Ferries: Information for Appropriate Assessment Agreed Protocols for Monitoring the Effects of the W Class ferry Report R1509 S1 ABPmer July 2009
4. Natural England Consideration of the impacts of, and opportunities for mitigation for, the W Class ferry at Lymington Nov 2009.
5. H R Wallingford Wightlink Ferries Lymington Review of Monitoring Technical note DDM 6263/01-02 Dec 2009
6. Wightlink Ltd Replacement Lymington to Yarmouth Ferries: Information for Appropriate Assessment Agreed Protocols for Mitigating the Effects of the W Class ferry Report R1509 S2 ABPmer December 2009

7. H R Wallingford Wightlink Ferries Lymington, Further Comments on Natural England Questions relating to proposed approach to mitigating the effects of the W Class ferry at Lymington Report DDM/01-03 Dec 2009
8. H R Wallingford Wightlink Ferries Lymington Response to Stakeholder Issues Report DDM6263 H R Mch 2010
9. Natural England Stakeholder Response; summary and detailed response May 2010
10. H R Wallingford Wightlink Ferries Lymington Review of Monitoring Report DDM 6263-10C-01 July 2010
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14. Lymington Harbour Protection Environmental Statement Black and Veatch April 2005.
15. H R Wallingford Wightlink Ferries Lymington Response to queries regarding the effect of ferry speed DDM6263-10A-01 R2 Feb 2011
16. Environment Agency Lymington River Reedbeds Water Level Management Plan
17. North Hampshire Shoreline Management Plan NFDC

WIGHTLINK SHORE WORKS AND HABITAT RECHARGE WORKS, QUESTION FROM THE MMO TO NATURAL ENGLAND.

QUESTIONS FROM THE MMO	NE's response
1) Is the safety review created by BMT Seatech, which recommended that the ferries stick to the centreline of the river, being fully adhered to, and can the LHC monitor this?	Natural England agrees that there would be environmental advantages to the W class ferry keeping to the centre of the navigation channel, but this would only reduce and not fully negate the risk of impact (Ref 8). Wightlink advise that they do try and keep to the centre as far as navigational constraints allow. As far as NE is aware, the LHC are not able to monitor or regulate navigation to this degree.
2) Do the ferries create a dredging effect on the river fundus through the effects of the bow and aft thrusters?	Please see Wightlink's Monitoring protocol (Ref 3) and HR Wallingford's monitoring review (Ref 10). NE is satisfied that one year's stake monitoring since the W Class has been running has shown no evidence of thruster effects on designated inter-tidal habitat. Deepening of the navigation channel is

	expected but not judged to affect inter-tidal habitats (Ref 1 and 8). This is because of the relative width of the channel and the slope of the inter-tidal.
3) Does Natural England consider that the “re-charge” material to be anoxic in the short term?	Please see Ref 11C where Wightlink describe that a new recharge can provide a pulse of new invertebrates in the initial weeks. Colonisation by a more permanent fauna can then be achieved within months. However NE agrees with Wightlink that a period of time should be allowed from successful sediment placement until the area can be considered ecologically functioning and hence a benefit. Recent discussions with the EA and CEFAS have concluded that 18 months after successful recharge would be an appropriate time to achieve ‘ecologically functioning’ status.
4) Can the shore works be screened out of the AA?	The Shore Works can be screened out if they are not judged to have a significant detrimental effect. Having concluded discussions with the Environment Agency Natural England can advise that the Shore Works can be judged to be environmentally neutral, although conditions may be required to ensure key environmental parameters are met, eg method and timing of piling.
5) Can the area of shore works discovered to be under the jurisdiction of the LHA be re-	

delegated as the responsibility of Wightlink to be Appropriately Assessed, under regulation 65, as this would be judged to be more appropriate?	NE is unable to advise here.
6) With the SPA target (favourable condition/ Conservation Objective) specifying that there should be 'no decrease in extent for mudflat, and the SAC target specifying 'no significant deviation from established baseline' for the same mudflat: With it being the same mudflat, could it be judged that the SPA target could be considered to be breached if there is loss? The SAC target unlikely since it's 0.1% and therefore probably not 'significant'. However given the SPA Conservation target, could this ever be described as 'significant'? This is in the context of the SPA designating habitat only for its role in supporting bird 'features.'	NE disagrees with Wightlink's assessment of impact of the W Class ferry (Refs 1, 2, 4, 8 and 9). NE has advised, and continues to advise, that the there is a risk of adverse effect of the W Class alone. This is on the basis of H R Wallingford's prediction of erosion of 0.7ha per decade at Chart Datum (2.1ha over 30 year life of ferry) and 1.7ha per decade at Mean Low Water (5.1ha over the 30 year life of the ferry). These impacts are likely to be reduced by a reducing erosion rate with time. NE has quantified this as impact requiring mitigation of 3- 4.65 ha over the life of the ferry, and this advise has formed the basis of Wightlink's Recharge and Habitat Creation Scheme.
8) Do the three surveys in February/March constitute an overwintering survey? This could be an area where further data is required/requested. Although the works are proposed to occur in February/March, if the works were to be carried out at another time, due to changes in the dredging regime, the conclusions of the surveys might be considered to be unsound.	NE advised Wightlink that there was no need to undertake invertebrate or bird survey of the recharge area. This is because it is a habitat undergoing change and loss. It used to be salt marsh and now is muddy habitat in a process of erosion and loss. It has no long term future as an inter-tidal mud habitat. There is therefore no useful baseline to be achieved; whatever is measured one year can be expected to change. Further NE advises that the aims of the sediment placement should be to retain 0.9 ha of ecologically functioning habitat at a higher level in the tidal frame, whatever that habitat turns out to be. The

	criteria for 'ecologically functioning' need further development, but will be simplistic to reflect the purpose of the scheme- slowing erosion of a range of upper inter-tidal habitat. The window of opportunity for placing the sediment is fixed due to the time when the marina's are dredged to provide the sediment and avoiding wintering birds or migrating fish.
9) Given the nature and scale of the site, the type of habitat and the nature of the works, do Natural England agree that the short-term negative impacts on habitat quality will be outweighed by the longer term benefits in terms of habitat persistence?	NE agrees that the Recharge and Habitat Creation Scheme alone is beneficial, because any negative impacts are minor and short term while there are long term beneficial impacts.
10) How will the recharge scheme address a need to recharge a greater area? If more 'recipient' land is required, could it be available?	The current Recharge Scheme does not consider additional areas, it considers recharging 0.9ha of Boiler Marsh. Within this scheme the only variable is how successful it is, and this can be influenced by the level of Wightlink's intervention. Wightlink present data showing different levels of success (Ref 11C). H R Wallingford have advised NE that there can be a high level of confidence that the scheme will be successful (Ref 7).
11) If the monitoring determines that the recharge works are ineffective, is there an alternative location or approach which can still adequately mitigate the potential impact of the ferries?	H R Wallingford have advised NE that there can be a high level of confidence that the Recharge scheme will be successful (Ref 7).

	Wightlink do not propose alternatives. However it will be possible to increase the level of intervention in the site if required to increase the level of success.
12) Will the obligation to comply and to monitor be sufficiently strong to cover the project lifespan, particularly if variations are required in later years? In order to be 'mitigation' the created habitat must be ecologically functioning in advance of the losses being caused. Further addition to the monitoring strategy may be required to confirm that the replacement habitat is effective.	Natural England's Supplementary Advice (Ref 12) relates to Wightlink's various consent applications, which themselves relate to the operation of the W Class ferry. Advice on risks of impacts relates to the 30 year operational life of the ferry. The purpose of the Recharge Scheme is to avoid an adverse effect. Given that the W Class ferry began operating in 2009, Natural England is also advising both Defra and Wightlink (the Competent Authority for the W Class ferry) in relation to any short term risks of impact to the designated sites prior to an appropriate assessment being concluded. Our advice is that the small, temporary impacts occurring to the lower inter-tidal area are not detrimental to the large, dynamic coastal sites. We are continuing to advise Defra and Wightlink in this regard Natural England agrees that the criteria for success, and monitoring of success, of the 0.9ha placement benefit of the Recharge Scheme requires further development. These parameters will need to be reflected in the S106 or Marine License. The MMO will need to consider if the S 106 or new

	Marine Licence could regulate for the necessary period

Natural England References

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