The Planning Inspectorate

Appeal Decisions

Inquiry opened on 11 October 2011 and sat 11-14 and 18-21 October 2011
Site visits made on 10 and 20 October 2011

by M T O'Rourke BA (Hons) DipTP MRTPI

an Inspector appointed by the Secretary of State for Communities and Local Government

Decision date: 29 November 2011

Appeal A: APP/B1740/A/11/2152093
Lymington Car Ferry Terminal, Shore Road, Lymington, Hampshire SO41 5SB

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a failure to give notice within the prescribed period of a decision on an application for planning permission.
- The appeal is made by Wightlink Ltd against New Forest District Council.
- The application Ref 10/96387 is dated 5 November 2010.
- The proposed development is described as 'the shore works involve the replacement and upgrading of the existing berthing arrangement. Modifications are required to the ship berths, passenger ramps and linkspan bridges. New fender piles are to be installed on the main berths and standby berths no. 1 and no. 2. As part of the project, planning permission is being sought from the New Forest National Park Authority for recharge and habitat creation works.'

Appeal B: APP/B9506/A/11/2152094
Intertidal zone at Boiler Marsh, Boldre, Lymington, Hampshire SO41 5QF

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a failure to give notice within the prescribed period of a decision on an application for planning permission.
- The appeal is made by Wightlink Ltd against New Forest National Park Authority.
- The application Ref 10/95896 is dated 5 November 2010.
- The proposed development is described as 'planning permission is being sought for recharge and habitat creation works. Materials excavated that have been licensed for disposal will be used to create the works in Lymington River. These works are taken as a precautionary approach to the protection of the integrity of special environmental status sites in the Lymington River. As part of the project planning permission is being sought from New Forest District Council for shore works at Lymington Pier ferry terminal.'

Procedural matters

1. The above descriptions of development are taken from the application forms. In the interests of clarity I have amended their wording. I have dealt with the Ferry Terminal appeal on the basis that permission is being sought for shore works to include the replacement and upgrading of the existing berthing arrangement, modifications to the ship berths, passenger ramps, walkway canopy and linkspan bridges, new fender piles on the main berths and standby berth. In respect of the Boiler Marsh appeal, it is sufficient to describe the development as recharge and habitat creation works.

Decisions

2. **Appeal A is allowed** and planning permission is granted for shore works to include the replacement and upgrading of the existing berthing arrangement, modifications to the ship berths, passenger ramps, walkway canopy and linkspan bridges, new fender piles on the main berths and standby berth at Lymington Car Ferry Terminal, Shore Road, Lymington, Hampshire SO41 5SB in accordance with the terms of the application, Ref 10/96387, dated 5 November 2010, subject to the conditions set out in the attached schedule A.

3. **Appeal B is allowed** and planning permission is granted for recharge and habitat creation works at the intertidal zone at Boiler Marsh, Boldre, Lymington, Hampshire SO41 5QF in accordance with the terms of the application, Ref 10/95896, dated 5 November 2010, subject to the conditions set out in the attached schedule B.

Background

4. A ferry service has operated between Lymington and Yarmouth on the Isle of Wight since 1830. The route is 3.4 nautical miles of which about 1.4 nautical miles are in the Lymington River. C class ferries were in operation on the route from 1973 to February 2009 when, because of issues of reliability, safety and cost, they were replaced by the W class ferries. The 3 new W class ferries were specifically commissioned, designed and built for the Lymington to Yarmouth route. The C class ferries have been scrapped.

5. The Lymington estuary is ecologically important. It is within the Solent Maritime Special Area of Conservation (SAC), the Solent and Southampton Water Special Protection Area (SPA) and the Solent and Southampton Water Ramsar site (European protected sites and also known as Natura 2000 sites)[1]. It is also within the Hurst Castle and Lymington River Estuary SSSI. The Lymington River SSSI is upstream of the ferry terminal but is relevant as migratory fish (a notified feature of the SSSI) pass through the estuary.

6. The decision to introduce the W class ferries was challenged by the Lymington River Association (LRA) in judicial review proceedings and in February 2010 the High Court gave its judgement. Whilst confirming that Wightlink's proposals for the introduction of the W class ferries had been widely publicised with extensive consultation with stakeholders and that sufficient consultation had been undertaken, the judgment[2] determined that the decision taken by Wightlink to introduce the new vessels was unlawful, being in breach of its duties as a competent authority for the purposes of the Conservation of Habitats and Species Regulations 2010 and the Habitats Directive 92/43 EEC and that an Appropriate Assessment (AA) was required in respect of the introduction of the W class ferries.

7. Following the judgement, a comprehensive AA methodology was developed by Wightlink's advisers and adopted by Wightlink's Board in May 2010. Wightlink published and consulted widely with stakeholders on the methodology including with the LRA and the relevant competent authorities and NE agreed the procedure. The methodology included the submission of the planning

[1] The Solent and Southampton Water SPA covers 5,506ha and was designated in October 1998. The Southampton Water Ramsar site covering 5,346ha was designated the same month. The Solent Maritime SAC, covering 11,325ha, was proposed as a site of community importance in October 1998 and designated in April 2005.
[2] R (on the application of Akester) v Department for Environment, Foods and Rural Affairs [2010] Env. L.R. 33

applications, now the subject of these appeals, as well as applications to the Environment Agency and Marine Management Organisation (MMO) for consents under the Food and Environment Protection Act 1985 (FEPA), Coast Protection Act 1949 (CPA) and the Water Resources Act 1991. These are now to be determined by the MMO as two Marine Licences under the new integrated consents procedure. As a competent authority the MMO is also required to carry out an AA of the effects of the project on the protected sites prior to issuing consents. Wightlink Ltd also has to carry out its own AA as statutory harbour authority for the ferry terminal.

8. In accord with the AA methodology, the applications were submitted in November 2010. Subsequent to the appeals being lodged, the local planning authorities (LPAs) considered the applications and, had they been in a position to do so, would have refused permission.

The deemed reasons for refusal

9. In respect of the recharge works the New Forest National Park Authority (NFNPA) resolved that planning permission would have been refused for a single reason that '*it cannot be ascertained that the proposed continued operation of W class ferries between Lymington and Yarmouth will not adversely affect the integrity of the Solent and Southampton Water Special Protection Area and Solent Maritime Special Area of Conservation. The grant of planning permission for the proposed works, by reason of their connection with the ferry operations, would therefore be contrary to the Conservation of Habitats and Species Regulations 2010 and in conflict with policy CP1*[3] *of the Core Strategy and PPS9 (biodiversity and geological conservation).*'

10. The New Forest District Council (NFDC) similarly resolved that it would have refused permission for the shore works for the same reason (but by reference to policy CS3 of its Core Strategy), as well as for an additional reason relating to harm to the domestic natural conservation interest in the Lymington River Site of Special Scientific Interest (SSSI).

11. Both LPAs also resolved on the basis of the advice they had at that time from Natural England (NE), in their respective roles as competent authorities under the Conservation of Habitats and Species Regulations 2010 (the Habitats Regulations), that had they been able to determine the applications they would have adopted Appropriate Assessments (AAs) in similar terms.

Updated advice from Natural England and Environment Agency

12. Subsequently on 28 June 2011 NE updated their advice to the LPAs as a result of further information supplied on behalf of Wightlink. Its advice was now that on the basis of the current evidence, and subject to two matters, that the operation of the Wightlink W class ferries would not have any adverse effect on the integrity of the SAC, SPA or Ramsar site and would not be likely to damage the Hurst Castle and Lymington River Estuary SSSI. The two matters were the provision of an acceptable Section 106 agreement (S106) that incorporated all the obligations on the part of Wightlink (including the proposed operational

[3] It was confirmed at the inquiry and there was no dispute that the NFNPA committee report and deemed reason for refusal should have referred to New Forest Core Strategy policy CP1 not policy CP2.

measures) required to ensure the efficacy of the recharge and habitat creation works, and the commencement of those works by spring of 2012[4].

13. On receipt of further information from the EA that it had no objection in principle to the shore works subject to two conditions to protect the watercourse and to protect migratory salmonids, the NFDC also indicated that its second deemed reason for refusal was no longer being pursued.

NE's and the LPAs' position at the inquiry

14. At the Pre-Inquiry Meeting, and in their Statements of Case, NE and the LPAs indicated that in the event that an updated S106 was offered that fully addressed NE's outstanding concerns such that NE removed its objection, the LPAs would not pursue their reasons for refusal nor resist the grant of planning permission for the appeal proposals.

15. There is an agreed Statement of Common Ground (SOCG) between Wightlink, the two LPAs and NE.

16. Prior to the inquiry on 7 November, by letter from its solicitors to the Planning Inspectorate, NE formally withdrew its objection to the appeal applications subject to a S106 being completed in substantially the same form as that provided by the applicant to NE on 6 November[5].

17. On opening the inquiry, having regard to the position taken by NE, the LPAs advised that on balance, they no longer resisted the grant of permission, subject to appropriate conditions and to the execution of an agreed S106 in terms acceptable to NE. The LPAs' witnesses were therefore not called to give oral evidence but their proofs were tendered as written evidence.

18. In order to assist the inquiry, NE called its witnesses to give evidence in chief and tendered them for cross examination by the Rule 6(6) parties who opposed the grant of permission. As there was no longer anything between NE and the applicant, neither asked questions of the other's witnesses. However opposition to the appeal developments was maintained by the other three Rule 6(6) parties – the Lymington River Association (LRA), the Lymington Society and Peter Hebard - who presented evidence to the inquiry and cross examined the witnesses for NE and for Wightlink.

The 'Lymington and Pennington Community Forum'

19. During the inquiry, it became clear that whilst Mr Hebard believed he had a mandate to represent the views of the community as a result of interviews and research he had undertaken when the Forum was set up in 2008 as part of the Market Towns Initiative, the Forum had ceased functioning and no longer existed. I have therefore considered any views put forward as being those of the Forum as being the personal views of Mr Hebard alone.

S106 Agreement

20. During the inquiry, the applicant submitted further versions of the draft S106 for discussion and formal comment. The Agreement was duly executed and completed prior to the close of the inquiry. Briefly the Agreement provides for

[4] As summarised in NE's statement of case paragraph 6.1 based on letters of 28 June 2011 sent to NFNPA, NFDC, the EA, MMO and to Wightlink.
[5] Essentially the same as the draft agreement included as APP/GEN/1

Wightlink to carry out the habitat works and recharge scheme; to monitor and review its ferry operations and the recharge scheme in accord with an agreed monitoring protocol; and to establish and administer an Environmental Management Panel (EMP). Membership of the EMP is to include the two LPAs, the EA, NE, the Lymington Harbour Commissioners (LHC), the MMO and the Hampshire and Isle of Wight Wildlife Trust and the South Hampshire Wildfowlers Association.

21. The purpose of the EMP is defined as being to supervise implementation of the adaptive management process which entails monitoring the effects of the ferries, the success of the habitat works and adapting the recharge scheme if necessary to ensure its objective is achieved. In addition Wightlink covenants to restrict the speed of the ferry and to limit the number of trips per calendar year to 16,500 or such annual trippage figure as indicated in the appeal decision as being appropriate and acceptable and there is a defined mechanism for reviewing the annual trippage through the EMP. I consider the weight to be given to its provisions in my reasoning below.

Legal submissions

22. Prior to the inquiry in response to my request made at the Pre Inquiry Meeting the main parties, NE and the LRA made legal submissions on two matters. The first was whether the shore works, ferry operations and recharge/habitat creation works should be considered as a single '*project*' for the purposes of the Habitats Regulations. The second was whether the recharge/habitat creation works could lawfully be taken into account in determining whether the continued operation of the W class ferries would have an adverse effect on the integrity of the relevant European protected sites for the purposes of the Habitats Directive Article 6(3)/regulation 61(5) of the Habitats Regulations[6]. My conclusions on these matters are set out in my reasoning below.

Environmental information

23. The applications were accompanied by an Environmental Statement (ES) which considered the operation of the W class ferries together with the shore works and the recharge/habitat creation works (the project). The SOCG confirms, and I am content that the ES, including the amended Non Technical Summary, complies with the relevant statutory requirements of the 1999 EIA Regulations. I am satisfied that sufficient information has been provided to assess the environmental impact of the project.

24. In addition the applicant submitted a Technical Report to inform the AA (TRAA). It is consistent with the ES and subject to the same public consultation.

Duplicate applications

25. On 3 May 2011 Wightlink submitted duplicate planning applications which await determination. Taking account of the need for further consultation neither is likely to go to the LPAs' respective committees until late December at the earliest but more likely in mid January 2012.

Main Issues

26. The main issues in these appeals are:

[6] Colloquially referred to as the 'mitigation or compensation' issue.

a) The effect on the European Protected sites and their conservation objectives and on the SSSI, having regard to the precautionary principle, the available evidence and the conditions and restrictions of the S106;
b) The effect on the coastal zone;
c) The effect on the purposes of the National Park and on the nearby Conservation Areas;
d) The effect on traffic, congestion and highway safety;
e) The visual impact of the proposed works;
f) The effect in terms of noise/environmental impacts;
g) The benefits attached to the proposed project and the implications if it is refused; and
h) Compliance with development plan policies.

Reasons

Issue a) The effect on the European protected sites

27. Before turning to address the issues that arise with respect to the impact of the proposal upon the European sites as they have emerged in evidence, it is important to outline the context for that consideration; more particularly, the principle features of the protected sites, coastal change in the Solent and at Lymington, and the procedure of AA.

The principle features of the European nature conservation sites

28. The Lymington estuary is an important component of the Solent Maritime SAC and the Solent and Southampton Water SPA/Ramsar site. These are large complex sites covering the greater part of the Hampshire and Isle of Wight coastline and located in one of only a few major sheltered channels in Europe. The Solent and its inlets are unique in Britain and Europe for their complex tidal regime with a double tidal flow and long periods of slack water at high and low tide. The sheltered location and unusual tidal regime explains the complex and dynamic range of marine and estuarine habitats found in the area, many of which are interest features of the designated sites in their own right.

29. The Solent Natura 2000 sites are known for their extensive saltmarshes and mudflats which are not only important habitats in their own right but also because large numbers of wintering and breeding birds rely on them to feed, roost and breed. They support a diverse patchwork of coastal habitats and are home to many nationally rare plants and invertebrates. Lymington estuary and its component saltmarshes and mudflats are an important part of these larger Natura 2000 sites, contributing to their overall integrity and the wider Natura 2000 ecological network.

30. Conservation objectives for the protected sites were most recently published by NE in 2001. The relevant objectives, their attributes and measures and targets set by NE are set out in the SOCG. The objectives are '*subject to natural change*'. Principal features of the nature conservation sites include the intertidal mudflats and sandflats, pioneer saltmarsh, saltmarsh, birds and fish.

31. Intertidal mudflats and sandflats, submerged at high tide and exposed at low tide, are the predominant intertidal habitat in the protected sites. They are an

extensive interest feature of the Lymington estuary either side of the navigation channel and of the Solent Maritime SAC. The intertidal mudflats support qualifying bird populations protected by the SPA as well as being a Ramsar criterion 1 (wetland habitat, characteristic of the biogeographic region). The intertidal mudflats are also features of the Hurst Castle and Lymington River Estuary SSSI.

32. Pioneer saltmarsh (a Habitat Directives Annex 1 feature of the SAC) occurs within the estuary on areas of mudflat and sandflat that are protected from strong wave action and is found mostly in the lower reaches of the saltmarshes where the vegetation is frequently flooded by the tide, in small saltpans and along the margins of creeks within the saltmarsh. It provides important feeding areas and a food source for many species of waterfowl. It is an interest feature of the SSSI as well as a Ramsar criterion 1.

33. Saltmarsh (a Habitat Directives Annex 1 feature of the SAC) occurs within the estuary. The Solent forms the second largest aggregation of saltmarsh in the south and southwest of England and almost 3% of England's total saltmarsh resource. The Solent saltmarshes are generally ungrazed and therefore particularly interesting and support a range of marine and terrestrial fauna and flora, including invertebrates and birds. Saltmarshes are an interest feature of the SSSI and part of the Ramsar criterion 1 wetland habitat.

34. The Lymington estuary's main interests are the extensive saltmarshes and mudflats within the mouth of the estuary and the large numbers of wintering birds that these habitats support. The estuary itself is much modified upstream, being truncated by a causeway and a busy harbour and therefore does not support the '*estuaries'* interest feature of the SAC or Ramsar site. The sub-tidal navigation channel is outside the SAC (which borders the channel at approximately chart datum (CD)). It is within the SPA and Ramsar site but is not an interest feature of these sites. The sub-tidal area of the navigation channel is within the SSSI, designated in 1986. Its gravelly base, as a result of the operation of the ferries probably from before 1973, is not a natural habitat but considered to be a 'naturalised' component of the SSSI.

35. NE describes the bird interest features of the SPA, Ramsar site and SSSI that the Lymington estuary is important for and which may be affected by Wightlink's operations as the internationally important numbers of regularly occurring Annex 1 species (SPA feature); regularly supporting 1% of the individuals in a population of one species or subspecies of water bird in any season (Ramsar criterion 6); aggregations of non-breeding birds (SSSI feature); internationally important assemblage of wintering wildfowl (SPA feature); regularly supporting 20,000+ waterbirds (Ramsar criterion 5); and breeding birds.

36. The River Lymington SSSI does not extend into the estuary. NE does not believe there will be direct effects by Wightlink's proposals on the SSSI. However the potential impact was considered because migratory fish swim up the estuary to reach the SSSI. Fish are not an interest feature of the SSSI but are listed as a characteristic. A key measure of the objective to maintain the flowing river is to maintain indicators of local distinctiveness, for example rare species and habitat features.

Coastal change in the Solent and at Lymington

37. The Natura 2000 sites affected by Wightlink's project are large dynamic coastal sites. Evidence to the inquiry was that all are undergoing substantial habitat changes and habitat loss due to natural and other processes. Most obviously *Spartina* saltmarsh vegetation is dying back and being replaced by mudflat. These changes to the intertidal area bring particular pressures for birds that use the upper intertidal areas and saltmarshes to roost and breed. In exposed areas of the Solent, such as Lymington, both the saltmarshes and mudflats are retreating through wave erosion. Overall lower intertidal habitats are generally increasing as the upper intertidal habitats are threatened.

38. The Solent Dynamic Coast Project estimates that 500-600ha of saltmarsh vegetation will be lost in the Solent over the next 100 years as a result of these processes. The prediction is of a net gain in mudflat as the saltmarsh erodes but then is followed by a period where the mudflat also erodes.

39. NE advised that shoreline managers have now been asked to plan for up to a metre rise in sea level over the next 100 years. The North Solent Shoreline Management Plan (SMP) which sets the flood and coastal defence policies for the North Solent including Lymington has recently been finalised. It concludes that Solent wide coastal squeeze losses of saltmarsh will have an adverse effect on the integrity of Natura 2000 sites and a strategic plan to compensate for losses of saltmarshes due to the SMP policies has been agreed with the EA.

40. The evidence of the Channel Coastal Observatory (CCO), which formed the background to the SMP and major coastal projects by DEFRA and the EA, shows a consistent long term pattern of significant saltmarsh loss, confirmed by anecdotal evidence at the inquiry. Of the 266.3ha of saltmarsh at Lymington in 1946, 39% had been lost by 1971 and between 1946 and 2001 155.4ha were lost. Similar losses were recorded at Keyhaven and at Beaulieu, where no ferries operate.

41. All parties are agreed that the Lymington estuary is rapidly changing. Saltmarsh habitat is being lost because of coastal squeeze, the estuary being hemmed in by the seawall and port structures to the west and across the head of the estuary and naturally rising land to the east, preventing the habitat rolling back. Monitoring by NFDC shows natural die-back of saltmarsh vegetation at a similar rate to other estuaries but as the saltmarshes at Lymington are more exposed to wind waves, they are eroding more rapidly. The Channel Coastal Observatory (CCO) assesses Lymington as losing 2-3ha of saltmarsh a year. Predictions are that most of the saltmarsh within the protected sites at Lymington will be lost by 2040 and the intertidal SSSI will largely be lost to the sea in around 100 years.

42. NE accepts that some areas of the Solent Natura 2000 sites, including the Lymington estuary, have a limited ability to adapt and be self-sustaining and in the future it will have to look to conserve coastal habitats and species over a wider geographic scale. Through the EA's strategic plan compensation for coastal squeeze losses of saltmarsh at Lymington will take place elsewhere in more sustainable locations and include areas further up the River where new marshes can be created.

43. Notwithstanding this, the application of the conservation objectives and the precautionary approach of environmental legalisation require that the '*integrity*'

of protected sites is maintained as long as is possible so that wildlife has time to adapt and to move to new and more sustainable locations. The Lymington estuary is on a background trend of habitat loss, but allowing plans and projects that accelerate that loss would still be considered detrimental to the conservation objectives and potentially to the integrity of the protected sites. Having said that, the finite life of the protected sites, within the next 100 years, is a significant site context within which judgements about the project and particularly mitigation opportunities have to be and have been considered.

The procedure of Appropriate Assessment

44. Given that there appeared to be some confusion about this at the inquiry it is useful to set out what an AA requires to be done. The Solent European sites are subject to the protection required by both the Birds Directive[7] and the Habitats Directive[8]. The relevant key provisions are those at Article 6(2), 6(3) and 6(4) of the Habitats Directive. Article 6(3) and Article 6(4) form two separate stages of a strict system of protection, described in the EC 2000 guidance on Managing Natura 2000 Sites (MN2000) as a '*step-wise procedure'*.

45. The legal submissions on behalf of NE usefully set out the staged approach to be taken. The first stage requires assessment of the plan or project's implications for the site. That assessment is to be conducted '*in view of the site's conservation objectives'.* The second stage, again within Article 6(3), is a decision as to whether it can be said, with the high degree of confidence required, that there will not be an adverse effect on integrity. Whether or not the site's integrity will be adversely affected is to be ascertained by reference to its conservation objectives. Only if it is not possible to confirm no adverse effect the decision maker then turns to the next stage(s) within Article 6(4).

46. An AA is an assessment of the implications of the plan or project for the site concerned in view of the site's conservation objectives. It is a process intended to inform the answer to the question of whether the plan or project will adversely affect the integrity of the site (the integrity test). It is the outcome of the integrity test that determines whether the competent authority may or may not allow the plan or project to proceed.

47. The focus of the AA is on the site(s) and the enquiry into the site's '*integrity'* requires consideration of the functioning of the site(s) as a whole, rather than individual elements. The definition of '*integrity*' is provided in Circular 06/2005 at paragraph 20 and is '*the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the level of populations of the species for which it is classified'*.

48. It was confirmed at the inquiry and in closing that Wightlink's case is made under Article 6(3). The project is not directly connected with or necessary to the management of the site for nature conservation. It was accepted that the project is likely to have a significant effect on the protected sites and thus it should be subject to AA as to its implications for the European sites in view of their conservation objectives. It was confirmed that if an adverse effect on the integrity of the protected sites were to be found, contrary to the evidence of NE, the appeals should be dismissed.

[7] European Directive on Conservation of Wild Birds (74/409/EEC) 1979
[8] European Directive on the Conservation of Natural Habitats and Wild Flora and Fauna (92/43/EEC) 1992

49. Therefore in terms of the '*step-wise procedure'* described in MN2000 and illustrated at Figure 1 of ODPM Circular 06/2005, the inquiry was not required to, and did not, address Article 6(4) and questions of alternative solutions, imperative reasons of overriding public interest or compensatory measures.

The role of Natural England

50. The Habitats Directive is given effect in England by the Habitats Regulations and Article 6(3) is transposed by Regulation 61. Regulation 61(3) provides that '*the competent authority must for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body ..'* It was accepted at the inquiry that I am now the competent authority required to carry out the AA and that this decision will provide that AA. NE is the appropriate nature conservation body and gave advice to the LPAs as to whether or not the project is likely to adversely affect the integrity of the protected sites.

51. NE has been actively engaged since May 2007 when it was first informed that Wightlink was planning to introduce a new ferry on the Lymington to Yarmouth route and its officers have worked closely with HR Wallingford (HRW), NE's advisers on geomorphologic and estuarine processes. It is clear from the substantial documentation, correspondence and reports that NE and HRW have worked hard to fully explore and understand the matters at issue and to reach conclusions based on the full breadth of material. This includes information from other interested parties, including the LRA, and despite some parties being confused by the source of responses, I am satisfied that throughout there has been thorough and timely stakeholder and public engagement.

52. NE's witnesses including experts from HRW gave detailed evidence of their independent assessment of the operation of the W class ferries. They showed that the precautionary assumptions that underpin the habitats assessment had been significantly influenced by them and discussed and agreed with ABPmer, Wightlink's consultants.

53. NE has withdrawn its objection being satisfied that the combination of the recharge and habitat creation works with the monitoring and the power available to the EMP, provided for within the S106, are sufficient to avoid an adverse effect upon the protected sites from the operation of the W class ferries and that their delivery can be satisfactorily secured.

54. Having regard to the Hart judgement[9] considerable weight should be given to the views of NE. Indeed in the Akester decision, the judge commented in respect of Wightlink giving weight to the advice of NE that there would have to be '*cogent and compelling reasons for departing from it'.* The counter arguments to the views of NE are considered in my reasoning below.

What is the project?

55. Questions about this were raised at the application stage. In terms of the provisions of the Habitats Regulations and the Habitats Directive and having regard to the legal submissions made, other guidance and the approach taken with respect to the EIA Directive and project splitting, I take the same view as the applicant that there is one project. The shore works at the ferry terminal, to replace the temporary mooring and passenger boarding arrangements, the

[9] Hart DC v Secretary of State [2008] 2 P&CR 16

recharge and habitat creation works at Boiler Marsh, together with the operation of the W class ferries, form the project which Wightlink proposes to undertake. Without the ferries there would be no need for Wightlink to undertake the shore works or for the recharge/habitat creation works. They are inextricably linked and flow from the ferry operation. The fact that several consents are required does not mean that there is more than one project. It seems to me logical to view the 3 elements as a single interconnected project.

56. This is consistent with the judgement of Sullivan J in the Hart case[10] that the competent authority when answering the first question under Article 6(3)/Regulation 61(1) as to what is the plan or project, is not considering the likely effect of some hypothetical project in the abstract but undertaking a practical exercise. That case was concerned with the initial screening stage. But it is relevant here in that no sensible reason has been put forward as to why the inclusion of certain features in the project in order to avoid (or mitigate) any likely effect on the SPA and SAC should be ignored.

57. In any event, given the very particular facts of this case, whether there is considered to be one or more projects is not a distinction on which I find much rests. Regulation 61 (1) (a) refers to the assessment of a project '*either alone or in combination with other plans or projects'*. As NE points out in its submissions and is explained in the evidence of Dr Lambert, one large project comprising all the various elements can be assessed as whether overall there is an adverse effect on site integrity, or the '*in combination'* effects of all the elements which might be considered as separate projects can be assessed as to whether together there is an adverse effect on site integrity. Regardless of the position adopted, the outcome in terms of the advice from NE would be no different.

58. Whilst the LRA sought to argue that an assessment of each of the elements '*alone*' would somehow give rise to a different outcome, the argument was not well developed and I am not persuaded on the facts of this case that it takes me any further.

59. NE was also clear that the previous C class ferry operation is not a plan or project to be assessed '*in combination'* with the W class ferries. The assessment of in-combination effects required consideration of other plans or projects that are '*on the table'*. This is consistent with MN2000 which advises restricting '*the combination provision to other plans or projects which have actually been proposed'*. Thus the ES and TRAA consider the cumulative impact of the project with the Lymington Harbour Protection Scheme to inform the AA.

60. The NE Coastal Lead Adviser made clear her view that it was right to consider the historic operation of the C class ferries as outside this as those ferries were operating at the date of designation of the European sites and thus '*ongoing*'. Although any past effects as a result of their operation were relevant in considering background environmental considerations and made it all the more important for the NE to be satisfied that the W class ferries would not have any adverse effects, it has now satisfied itself on this.

61. There was also disagreement with the LRA as to whether the recharge/habitat works should be considered as '*mitigation*' or '*compensation*' and thus whether

[10] Hart DC v Secretary of State [2008] 2 P&CR 16

they fall to be considered under Article 6(3) or 6(4). However that pre-empts the stepped approach that the Habitats Directive requires to be undertaken. I deal with that matter later but first I turn to consider the first step - the likely effect of the project on the European sites.

The effect of the ferries on the European sites

62. The matters that need to be addressed with respect to the impact of the proposal upon the European protected sites as they emerged in evidence are principally:

    1. The adequacy of the evidence base.
    2. The likely impact of the ferries in terms of:
        - drawdown;
        - return currents;
        - the thrust effect of the Voith-Schneider propulsion system;
        - erosion of the channel bed;
        - ship wash;
        - blockage;
        - sediment and dredging.
    3. The likely success of the proposed recharge/habitat creation works at Boiler Marsh, particularly in terms of:
        - the principle of delaying erosion and the loss of habitat;
        - the use of an adaptive management process;
        - the proposed mechanism of the S106.
    4. The operational mitigation proposed, including restrictions on ferry speed and trippage.
    5. Other mitigation measures suggested by the Rule 6 parties.
    6. In terms of the application of Regulation 61 of the Habitats Regulations and Article 6(3) of the Habitats Directive to the evidence:
        - whether the offsetting measures which form part of the project – a) properly fall to be taken into account in carrying out the AA of the impact of the project and its individual components; or b) may only legally be taken into account as compensation following an AA conclusion that there is an adverse effect on integrity and the derogation process in Article 6(4) and Regulation 62.
        - whether, on the basis that the proposed offsetting elements of the project properly fall to be taken into account in carrying out the AA, the measures taken as part of the project demonstrate that there will be no adverse effect on the integrity of the European sites applying the precautionary principle and the judgments of the CJEU[11] and UK courts.

1. The adequacy of the evidence base

63. The relevant attributes of the conservation objectives for the SAC and SPA are all qualified as '*subject to natural change'*. In that context, objectors were concerned that there was not enough evidence to disaggregate the ferry effects from the influences of natural processes to properly determine the impact on the protected sites and enable proper judgements to be reached on the AA. However the evidence from HRW and ABPmer was of the wealth of work that had been undertaken and the accumulation of a comprehensive and very long

[11] European Court of Justice

dataset from which it was reasonable to measure the impacts of the ferries and derive erosion rates and about which there could be a high level of confidence.

64. There has been extensive investigation and reporting on the Lymington River Estuary, including bathymetric surveys of the Harbour, as well as investigations on the operation of the former C class ferries and now the W class ferries. In addition to ABPmer's reports dating from May 2008, there is information from a number of other sources including the technical reports by B&V for the LHC. The evidence base includes historic charts going back to 1870, surveys and analysis of saltmarsh decline, NFDC's 2007 measurements of the current rate of saltmarsh recession and information from the CCO. Advice to NE from HRW includes reports, responses to stakeholders and reviews of monitoring.

65. A large amount of work has been done on behalf of Wightlink. There has been an extensive process of historic and recent bathymetric data collation and GIS mapping; physical and numerical modelling studies of the Voith Schneider propulsion system; field trial measurements and reports carried out by BMT SeaTech investigating the wash drawdown and flow associated with the W class and C class ferries (as part of the review of operations and marine safety on the river); and field navigational studies. In addition there is the considerable body of detailed desk-based numerical prediction studies and reports by ABPmer and B&V as well as by HRW to inform assessments of the W class ferries' effects.

66. Whether more investigative field study was needed was specifically considered in May 2009 when appropriate monitoring measures to address questions raised by NE on the short term and long term effects of the ferry operations were reviewed. The parties engaged in developing those monitoring measures included NE, LHC and Wightlink, all with their own technical advisers, and an independent advisor from the CCO.

67. The agreed protocol recognised that the proposed monitoring would not provide any greater confidence in disaggregating the ferry effects from the influences of natural processes concluding that '*such investigative field study would be very expensive, impracticable to implement given safety constraints in the navigation channel, and will not necessarily provide clear answers. Hence it has been agreed to continue to address the situation taking account of the current level of uncertainty rather than seeking to resolve it'*.

68. The monitoring protocol identified bathymetric and stake monitoring as the best way to understand the ferries' effect and to describe changes in sediment elevation on the low shore mudflat. The graduated stakes around the navigation channel have been surveyed almost monthly since June 2009. Other than a request to extend the stake monitoring due to the value of the information being obtained, NE has not asked for more survey work.

69. An EA commissioned LiDAR[12] survey describing the elevation of the whole outer estuary was carried out in November 2010 with a Wightlink commissioned GIS based analysis of the data. Ecological surveys were also carried out in 2010 of the benthic invertebrates on the mudflats and field surveys of the invertebrates, birds and marshes within and around the recharge area.

[12] LiDAR – Light Detection and Ranging

70. Responses from NE, EA, MMO and CEFAS[13] to the 2010 ES scoping exercise did not reveal any need for new surveys. At the inquiry none of the NE witnesses identified evidence that they considered should have been obtained in order to carry out the AA and made clear that they were satisfied that sufficient confidence could be had in the assessments undertaken by ABPmer.

71. The LRA was critical of what it saw as a lack of clarity in the information provided in support of Wightlink's applications and failings in the method of inquiry. In their view it was for Wightlink, after consultation with others, to have produced a clear adverse effect prediction, together with error bands rather than ABPmer tabling reports for consideration by NE; NE asking HRW to advise them; and then NE, on the basis of that advice predicting larger ferry induced adverse effect, issuing its own separate report. That, however, is to misunderstand the AA exercise.

72. The 2011 EC guidance specifically states that '*factors such as the extent, the magnitude, the complexity, the probability, the duration, the frequency and the possible reversibility of the impact should be considered. This exercise should be done by the competent authorities'* (my underlining). I am satisfied that the lengthy collaborative process of investigation, consultation, discussion and inquiry, including with the LHC's consultants, was appropriate and was appropriately directed to the purpose of allowing NE to reach its considered view and advise the competent authority.

73. The failure to model the operation of the ferries in the river was criticised by objectors. Modelling can be a useful tool and is suitable for certain matters. However the view of Wightlink's technical witnesses was that it would not be able with any degree of accuracy to model the complex mechanisms at work in a system such as the Lymington estuary. Modelling had been considered at an early stage but NE, through HRW, did not ask for any. Given the considerable amount of data available on the actual operation of the system, I do not consider that the absence of modelling here weighs against the studies undertaken or the conclusions drawn from them.

74. Considering the breadth and depth of the technical evidence made available to the inquiry, it is debatable whether much would be gained by further in situ measurements of the ferries and whether any studies could be viably undertaken which would significantly reduce the residual uncertainties associated with the project. Clearly there is always more that can be known and science is a process of continual enquiry. However regard has to be had to the purpose of any investigation and in this case I give considerable weight to the conclusion of NE that its view was based '*upon what it considers to be an impressive body of objective and expert evidence'* which it commended to the inquiry as '*the best scientific knowledge in the field'.*

75. I am satisfied that there is sufficiency of evidence of a technical, scientific and operational nature to enable proper and informed judgements to be reached on the AA. That process has been public and detailed. The assumptions made by ABPmer for Wightlink have been subject to the scrutiny of NE and of NE's appointed technical experts who have specifically addressed the issues of the impact of the ferries, the operation of the proposed recharge and the adaptive mechanism. Despite the criticisms of the LRA, Mr Hebard and others there is

[13] Centre for Environment, Fisheries and Aquaculture Science (an executive agency of DEFRA)

nothing to indicate that undertaking further studies would significantly reduce the residual levels of uncertainty.

The level of certainty

76. In referring to the probability that an adverse effect being exceeded should be less than 5% and likewise that the probability of success at Boiler Marsh should exceed 95%, the LRA appears to be seeking the same high level of assurance/certainty as for an engineering project. I agree with NE that in the context of Article 6(3) reference to percentages are not only unhelpful but liable to mislead.

77. As to the AA, and the standard to be met in order that a conclusion of no adverse effect may be reached, NE referred to the judgement of the CJEU in Waddenzee[14]. The competent authority must be '*sure*' or '*convinced*' that the plan or project will not, alone or in combination, adversely affect the integrity of the protected site. Such certainty will exist '*where no reasonable scientific doubt remains as to the absence of such (adverse) effects'.* It is a high bar. However as the 2011 EC guidance on estuaries and coastal zones explains it does not mean that all scientific uncertainty, however minor, must be removed before a conclusion of no adverse effect can be reached.

78. Whether no reasonable scientific doubt remains as to the absence of adverse effect will always turn upon the particulars of the case, just as what amounts to an AA will vary from project to project, depending on the specific facts. There is no specified form, method or content for an AA other than it must be recorded and reasoned.

79. Decisions in the CJEU and the UK Courts and guidance in MN2000 have all made clear that there are case specific judgements to be made in each case based on scientific evidence. That evidence will include the scientific judgements of experts as well as empirical data. Assumptions have to be made about certain effects. In complex and dynamic environments such as those in the Lymington estuary, NE has accepted that it is almost inevitable that some uncertainty will remain, even with the benefit of the best available scientific knowledge. What is important is to manage that uncertainty to avoid risk of damage or adverse effect to the site. It is for that reason that NE has concluded that an adaptive management regime, that provides for monitoring and the potential to mitigate for the worst case predictions, with sufficient flexibility to manage such minor uncertainty, if bound within a S106, can be rightly treated as part of the project.

Conclusion on the adequacy of the evidence base

80. I am satisfied that there can be confidence that the assessment to inform the AA has been undertaken on a proper and thorough scientific basis. The assumptions made have been set out and explained as have the limitations of the data. I take further comfort in that NE, the government's nature conservation adviser, having considered the advice from their own technical advisers, were satisfied that the judgements reached met the rigorous criteria expected by the CJEU for AA and for compliance with the Habitats Directive.

[14] Landelijke Vereniging tot Behoud van de Waddenzee and Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw, Natuurbeheer en Visserij [2004] E.C.R. 1-7405

2. Likely impact of the ferries

81. The Lymington River is narrow, has shallow water, a number of bends and is used by a large number of leisure craft. The ferries have to be extremely manoeuvrable and able to operate double ended as there is not enough room to turn round at the berth. In order to comply with the latest safety and collision damage regulations, the W class ferries are heavier than the C class, similar in terms of overall dimensions but with a greater displacement and different cross section of the hull below water. To allow them to operate safely they are fitted with a Voith Schneider propulsion system, like the C class.

82. It is agreed between the parties that the operation of the W class ferries is likely to have a significant erosive effect on the protected sites. There are differences of opinion on the precise size, significance and measurability of the effects and the implications of these physical changes on the protected sites and their conservation objectives. ABPmer and HRW differ in their interpretations of data and the effects of various mechanisms in the estuary, both in the past and now, and thereby the likely impacts of the W class ferries. However I see no great benefit in seeking to explore those differences in any depth as it was made clear at the inquiry that Wightlink has accepted the view of NE, albeit seeing it as being highly precautionary and based on worst case assumptions.

83. Many objectors however questioned the technical evidence and the conclusions of the experts advising NE and Wightlink and offered their own theories on the erosion arising from the operations of the W class ferries. These were generally unsupported by any expert evidence (Professor Pye for the LRA largely confining his evidence to the limited issue of the rate of erosion at Boiler Marsh); often relied on reports that had subsequently been reviewed and revised; or arose from a misunderstanding of the data.

Alleged erosion by the ferries

84. HRW has identified that ferries and ferry passage can impact on the estuary in the following ways – erosion of the bed underneath the ferry caused by the propulsion system and the backflow of water induced by the ferry motion; erosion of the foreshore by jets generated by the propulsion system; creation of waves (shipwash); local lowering of pressure (caused by the backflow of water from the vessel motion) leading to an initial fall and then rise in water level as the ferry passes (drawdown); and the motion of ferries through channels of limited cross section area inducing a flow in the opposite direction to the ferry's travel (return flow or current). In addition others consider that the operation of the ferries affects sediment transport and the sediment budget in the estuary.

85. The data used to assess the effects of the W class ferries is extensive. It includes measured wave heights, current velocities, current velocities near the bank as ferries pass, drawdown measurements, measurements of shipwash, measurements of intertidal elevation, intertidal bathymetric surveys, measurements of ferry speed, aerial photography, as well as use of original study results and grab samples, biota surveys and vegetation surveys to add to the general understanding.

<u>Drawdown</u>

86. Evidence from the measurements of drawdown from C class and W class ferries by BMT SeaTech indicates that this mechanism is of a magnitude that induces currents over the lower part of the intertidal sufficient to cause erosion and which are considered by HRW to be more significant than the effects of wind waves. This evidence is consistent with HRW's previous measurements and 1991 analysis of erosion by the C class ferries at Lymington. HRW's analysis of the 2009 BMT SeaTech measurements also indicates that the drawdown resulting from the W class ferries is larger than that of the C class ferries when adjusted to take account of variations in ferry speed.

87. Drawdown is an important mechanism of ferry erosion. The extent of drawdown and hence the rate of erosion is sensitive to the speed of the ferries. The method used by HRW to evaluate the effect of changes in speed on the erosion rate is suitable. Because of the sensitivity of the erosion rate to ferry speed Wightlink agreed to the adoption of a voluntary 0.5 knot reduction in speed in the lower channel until 2014. This translates into a 25% reduction in NE's estimate of loss of extent and quality of habitat.

88. The potential for further reductions in ferry speed and thus reduce the erosive impact further was considered but slower speeds could impact on the ferries' ability to safely navigate as well as on the frequency of sailings. The S106 provides for the EMP to consider the continuation of the current speed restriction, or any other, if indicated desirable as a result of monitoring.

Return flow or currents

89. Return currents are strongest, with the greatest capacity to cause erosion, when the tide is running against the direction of movement of the vessel and thus have the greatest capacity to cause erosion when the ferries are moving upstream on a spring ebb tide. Return flows are marginally higher in general with the W class than the C class. HRW considered ABPmer's assessment of the magnitude of the return currents to be flawed because it underestimated the shear stress imposed by the return currents and its re-calculation indicated that return currents will contribute to some erosion of the lower mudflat.

90. Even though ABPmer's assessment is that return currents would not be sufficient to induce measurable increased erosion, Wightlink's willingness to adopt HRW's assessment that there would be some impact indicates its support for the precautionary approach and the robustness of the agreed assessment of the rate of erosion. I agree that return currents have an erosive impact.

The thrust effect of the Voith Schneider propulsion system

91. The Voith Schneider propellers or thrusters combine propulsion and steering in a single unit. They allow thrust of any magnitude to be generated in any direction quickly, precisely and in a continuously variable manner. The arrangement and use of the thrusters on the W class ferries differ from the position with the C class. They are located on the centreline and not offset; there is a forward and an aft thruster which operate independently; the vessels are more manoeuvrable; require less power; and unlike the C class the thrusters can be declutched/turned off when berthed. Evidence from Wightlink was that the W class ferries already operate using less power in the river than the C class did. This is because Wightlink only run two of the 4 engines in the river and the aft operates at reduced power.

92. In addition to the evidence from ABPmer and HRW considering BMT SeaTech measurements and assessment of sea trials of the W class ferries, evidence to the inquiry was provided by a ferry master in his personal capacity. Dr Hay and others were critical of where and how BMT SeaTech took some measurements, however I am satisfied that the conclusions reached about the operation of the W class ferry in the river are fundamentally sound. I was able to travel on the bridge of the ferry and observed the line taken in the river, the passing place and passing manoeuvre, and saw the wealth of live data available to the master and crew as to the speed and location of the vessel including daily records of transits and speeds.

93. Claims made by the Rule 6 parties and other objectors are not supported by the evidence of HRW and ABPmer who had regard to the series of reports by BMT SeaTech as well as the bathymetric surveys and stake monitoring of erosion to the channel. Critical factors in the assessment of effects are the distance of the thrusters from the bed/bank; the flow speeds they create; and the rate of turbulence dissipation over distance relative to the known erosion threshold. Contrary to the views of some objectors, BMT SeaTech noted that the largest thruster effects are confined to the upper water column.

94. Impacts on the bed of the channel will only occur when the water depth is less than vessel draught plus the effect of the thrust. That is assessed at -0.2m CD. Thus any disturbance of the bed would be very infrequent when ferries pass at the lowest water levels and where the river is shallowest. As to effects on the sub tidal channel, given their location on the hull, thruster induced flows are unlikely to extend beyond the width of the vessel, when travelling in a straight line, and no effect on the channel sides greater than that which occurs at peak ambient flows is indicated. Data from recent comparative bathymetric surveys do not indicate change at CD or of the channel profile that would be indicative of potentially significant and detectable thruster erosion effects.

95. Where the thrusters might contribute to erosion of the banks is when the vessels are manoeuvring, avoiding a collision, transiting bends and/or offsetting the effects of wind with the worst case being if the vessel is close to the edge of the channel and the thrust is directed perpendicular to the bank. However all the evidence is that such events are infrequent and of short duration and that any erosive impact would not be detectable.

96. It was accepted by HRW that there may be some benefit, as Mr Hebard claims, by ferries sailing down the centre of the channel in that return currents and the drawdown effect tend to reduce with increasing distance from the banks. However the effects of drawdown/return currents are commonly calculated on blockage and vessel speed, both of which are unchanged by the lateral position of the ferry, and to determine the extent of any reduction in the magnitude of effects as a result of keeping to the centre line would require detailed modelling and/or measurement which neither HRW or ABPmer have done. Given the wealth of other technical studies that is surprising. Nevertheless, the clear evidence of Wightlink to the inquiry was that for operational reasons ferries do keep to the centre of the navigation channel where safe navigation allows. The vessels' navigation system allows the route taken by each sailing to be plotted and the data I saw for the morning of my trip indicated close adherence to the same lines along the channel. The note in the updated risk register in November 2010 was of good compliance with ferries keeping to the centre of the channel with no further risk control measures identified.

97. Landward of the Cocked Hat bend as the channel narrows the ferry is forced down the middle of the channel anyway. Seawards of Pylewell the effect of sailing down the middle of the channel will only be slightly beneficial as the effects of the ferry are reduced anyway because of the greater channel cross section area. For safety reasons the ferries pass at the same location in the navigation channel. If this contributed significantly to erosion, a local deepening and/or widening of the channel would be expected. There is no evidence to show this to be the case and slope data from the 2010 bathymetric survey data shows generally steeper slopes on the outside of the meander bends whilst on the inside of the bends they tend to be shallower.

98. As to the assertion that the loss of saltmarsh next to the ferry terminal is directly attributable to the C class and now the W class ferries, there was localised scouring by the berths because the C class thrusters could not be disengaged. That is not the case with the W class. Attributing the loss to the passage of the ferries is understandable as the obvious regular event in the estuary but ignores the extensive evidence at Lymington and elsewhere in the western Solent of general derogation of the saltmarsh as a result of many complex interrelated natural and anthropogenic processes.

99. Also the main navigation channel has been shown to have a natural meandering tendency and an increase in the tidal prism would accelerate the speed of channel relocation. The relocation of navigation posts indicates accretion, characteristic of a channel meander deposit, whilst the '*cliffing*' shown in the LRA photographs indicates erosion as the channel migrates eastward. If the ferries were playing a significant role, erosion might be expected to be seen on both sides. The erosive effects of the ferries might be being masked on the western side of the channel by naturally occurring accretion but this still indicates the scale of morphological changes by natural processes is of greater magnitude than ferry effects. Also when the flow depth approaches its lowest state and is confined to the navigation channel, data indicates that the erosive capacity of the estuary flow is at its greatest and some degree of channel erosion like the '*cliffing*' might occur that is entirely attributable to the natural tidal flows.

100. The collapse on the upper intertidal bank beside the channel near Pylewell Post is similar to that seen nearer the mouth of the estuary where exposure is greater to wind waves and where ferry impacts are accepted as being much less. The ferries are present in the estuary at all different states of the tide yet this recent erosion appears episodic in nature. This suggests strongly that the ferries are not implicated. Otherwise much more erosion of this nature would be seen in the sheltered part of the estuary, yet it is not.

101. Interestingly, and indicative of the wide range of views heard at the inquiry, some objectors who saw the thrusters as the problem thought that slowing the ferry in the river would cause more erosion, contrary to the views of others who thought the ferries should go slower.

102. From all the evidence, including the verification provided by the stake monitoring since the W class ferries came into operation and the recent bathymetric and LiDAR data, there is no indication of potentially significant erosive thruster impacts on the navigation channel morphology or on the subtidal and intertidal areas.

<u>Erosion of the channel bed</u>

103. The SPA, SSSI and Ramsar site include the navigation channel and the concern was that thruster induced flows by deepening and widening the subtidal channel in turn would cause an overall morphological change to the channel and through 'over-steepening' of the channel sides lead to a slumping of the sediment and a corresponding loss of subtidal and intertidal at CD.

104. As Wightlink try to keep the ferries in the centre of the channel, the thrusters only have the potential to erode channel sediments for a very small fraction of the tidal cycle at low water. Erosion is also inhibited by the bed armour layer of gravel. It has been estimated that the larger and more powerful W class ferries could deepen the channel by 0.5m. But having reviewed existing gradients, ABPmer's assessment is that the change would be insufficient to cause any changes to the intertidal areas above CD. The SOCG concludes that there are no likely significant effects from slumping of the channel margins from channel deepening. There is no reasoned evidence to indicate a different conclusion.

105. As to under-hull turbulence affecting the bed, because the modelled vertical profile of increased flow from the thrusters reduces to less than the ambient flows (0.5m/s) within 1.5m of the hull, this would only affect flows at the bed for very low water levels when I was told ferry speeds will be lower anyway.

Ship wash

106. Shipwash from the W class ferry has not been found to be an important erosion mechanism. The LRA appears to have misunderstood the results of the 1991 HRW report which concluded that shipwash arising from the C class vessels would not be sufficient to erode the adjacent mudflats.

107. The Tuscan Consultancy report looked at the combined impacts of ferry wash and natural waves but relied upon information from ABPmer in 2008. That data was updated because as part of the Phase 2 sea trials, it was found by BMT Sea Tech that with the aft ferry propeller working on an idle setting and the forward on an operational setting, wash from the W class ferry was considerably reduced and less than for the C class. The evidence from Wightlink and my observation was that those settings are now the company's established operational practice.

108. BMT SeaTech has now concluded that W class ferries do not produce any appreciable shipwash. ABPmer's updated assessment is that the use of the measured wash data in combination with natural waves results in the bed shear stress increasing by less than 5% and not the 11% to 30% claimed in the Tuscan Consultancy report. The threshold bed shear stress value for the intertidal sediments is inherently uncertain. Whilst this slight increase could tip the system into an erosive state, greatly accelerated erosion is not being detected. Moreover, using a lower bed roughness value more appropriate to the smooth muddy beds of sediment makes it unlikely that ferry wash would raise the instantaneous bed shear stress by more than 1-2% above the ambient level.

109. Lymington is a busy harbour. Evidence to the inquiry was of some 1700 berths and moorings in the river. On my boat trips around the estuary considerable wash from vessels smaller than the ferries travelling along the channel was seen despite them observing the speed limits in the inner and outer harbour of 4 and 6 knots respectively. Wave wash from other vessels

greater than that of the ferries was noted in the BMT SeaTech November 2008 report and similar observations on the way in which high speed cruisers and RIBs[15] move through the channel were made by a local boat owner at the inquiry. This is not to downplay the ferries' impact but merely to indicate that there are other vessel impacts in the estuary, albeit of different magnitudes, frequencies, duration and location.

Blockage

110. Analysis of the greater blockage of the W class ferry, whether assessed as 17% or 30%, is that there will be no detectable effect in terms of net loss of intertidal. There was no reasoned evidence to the contrary.

Sediment and dredging

111. The LRA is critical of the level of understanding of the sediment dynamics of the Lymington estuary, and has advocated an extensive measurement campaign. For that to be meaningful information would need to be acquired over many years. That would improve knowledge of the estuary and might help explain descriptions of deposition at the river mouth. However it would not assist in the management of the protected sites at this time when decisions need to be made on the impacts of the ferry operation.

112. The subtidal and intertidal areas have been treated as a continuum for the purpose of conceptual models of the estuary. Contrary to Professor Pye's assertion, which may have arisen because of his late instruction, changes below CD have been considered and any distinction made has only been in relation to the extent of each of the protected sites.

113. There were concerns about the impact of the ferry on the supply of sediment to the vegetated marshes. The sediment supply to Lymington Harbour is from suspended sediment brought in from the Solent on each flood tide. Fine sediment from marine sources settles within the inner harbour (requiring dredging) and also settles onto saltmarsh areas. HRW's advice to NE was that '*the ferry has a minimal effect on the sediment budget of the intertidal areas within the harbour'*. It is agreed in the SOCG that there are no likely significant adverse effects on the European protected sites or damage to the SSSIs through '*the re-suspension and re-distribution of sediments in the centre of the channel from the transit of the ferry'*.

114. HRW's analysis had regard to a number of data sources which were used to define the processes that would lead to erosion by the W class ferries. It is not reliant on extensive data sets of bed sediment properties and is appropriate to the assessment of impacts arising from the W class ferry.

115. The suggestion that the ferry has a scouring effect and therefore a detrimental effect on the estuary sediment budget has been considered and rejected. Whilst the action of the propulsion system during ferry passage could cause mud to be re-suspended from the bed of the navigation channel or prevent it settling, for the reasons set out above, such re-suspension would not, of itself, have a direct effect on the intertidal areas. The potential effect of marina construction on tidal currents within the estuary increasing the tidal prism was also ruled out as a source of ongoing erosion of the lower intertidal.

[15] Rigid inflatable boats

116. HRW's 1991 study observed a rise in suspended sediment on each tide just before low water but no indication that it rose when a ferry passed. Otherwise the survey recorded very low average concentrations in the river. Even if there were no time between successive ferry passages for disturbed sediments to settle, the amount of sediment placed in suspension by their action was very small. Since sediment re-suspension was not detected from the C class ferries, there is no reason why the W class should re-suspend sediment.

117. Criticism of the value of the 1991 data because of the position of the measurement point is unfounded. It was selected to be sheltered from wave action so as to measure ferry induced re-suspension isolated from other forcing factors. At other locations in the channel where the ferries travel at higher speeds sediment disturbance might be greater but even a ten fold increase in concentrations as a result of the ferries would be substantially less than the recorded natural concentrations resulting from tidal bed interactions.

118. The indirect effect of sub tidal erosion caused by the ferry on the intertidal areas generally throughout the Lymington estuary and the potential effect on the overall sediment supply has been considered. The conclusion that the ferry has no significant effect is based on assessment of the mechanisms of sediment supply to intertidal areas in the estuary. With an ebb dominant navigation channel and flood tides too weak by themselves to re-suspend sediment from the bed and carry it onto the intertidal areas, requiring wave action, the continual process of re-suspension and advection will tend towards sediment export rather than import. Since the ferry re-suspends fine sediment approximately equally on flood and ebb tides, because of its operating schedule, the net transport caused by re-suspension will be broadly in balance.

119. The LRA produced no alternative hypothesis to explain the effect of the ferries on the sediment budget. As to Mr Hebard's view that somehow the operation of the ferries would result in sediment being exported from the channel, this was not accepted by either HRW or ABPmer and would appear to attribute all change in the estuary to the ferries, ignoring other activities and processes. It is inconsistent with the view of the LHC of a general trend of accumulation. Mr Hebard's analysis of dredging returns relied upon data used by Pontee that B&V has shown to be inconsistent and incomplete (these errors include the absence of any records of the dredging for the Berthon and Yacht Haven Marinas between 1965 and 1972). Further the data makes no distinction between capital and maintenance dredging or in location (at least prior to 1999).

120. Other literature (Goodman et al 1959) suggests that maintenance dredging throughout the navigation channel ceased well before 1959 implying a very small dredging effect of the ferries. It is not possible to know what the maintenance dredging requirement of the navigation channel would have been without the effect of the ferries. Nonetheless the evidence points to it being small and does not support Mr Hebard's suggested dredging effect of the ferries of 25,000-30,000 cubic metres of fine sediment per year exported from the estuary. Indeed the increased requirement for dredging since 1980 indicates that the estuary is not starved of sediment, as some have claimed.

121. The HRW and ABPmer experts were also critical of the value of the settlement experiments undertaken by Mr Hebard and strongly disagreed with the conclusions that he drew from them as to the way that the re-suspending action of the ferry would cause sediment to behave differently and settle in the

upper harbour or outside the estuary rather than move onto the intertidal areas. His arguments appeared to me to be based on an incomplete knowledge of cohesive sediment dynamics.

122. In any event the judgement about site integrity is not focused on whether sediment moves as a result of the ferry operating but the significance of such effects and the extent to which this, alongside other combined physical and ecological processes, affect the coherence of the protected sites' ecological structure and function, across their whole area. In making that assessment I give more weight to Dr Spearman's and Professor Williams' professional experience and knowledge of cohesive sediment dynamics and their considered views on the effects of the ferries.

The assessment of ferry related impact

123. The NE witness described predicting the physical consequences of the introduction of the W class ferry as '*technically challenging and complex'.* The potential worst case impacts of the ferries on the adjacent intertidal area are likely to occur through a combination of the effects of '*return flow'* and '*drawdown*' effects by accelerating the rate of erosion of the lower intertidal mudflat and lowering the shoreline profile.

124. There are no likely adverse effects from the ferry operations on the protected sites or any effects likely to damage the SSSIs through ferry wash effects altering sediment supply to the designated features; slumping of the channel margins from channel deepening; or the re-suspension and re-distribution of sediments in the centre of the channel from the transit of the ferry. No reasoned evidence was presented at the inquiry that indicates a different view should be taken to that in the SOCG.

125. The current recorded trend is of net erosion of lower intertidal mudflat along the sides of the Lymington navigation channel. Analysis of stake monitoring since 2009 at and above MLW shows a current rate of net vertical erosion of 10-20mm per year, consistent with earlier calculations of HRW based on historic changes in MLW and CD contours derived from bathymetric surveys of the harbour[16].

126. The ferries only affect intertidal mudflat habitat and will not significantly affect saltmarsh habitat which is declining as a product of die back of saltmarsh vegetation. Arguments were put at the inquiry about the impact of the ferries on the sediment budget and replenishment of the saltmarshes. However there is no evidence that the C class ferries had a direct impact on saltmarsh at the upper end of the intertidal or contributed to the erosion of saltmarsh adjacent to the navigation channel and no reason why the W class should either.

127. HRW in advising NE has assumed that 75% of the erosion of the low part of the mudflat (at or below MLW) adjacent to the navigation channel landward of Pylewell Post is caused by the ferries and 25% by the ferries seaward. It is a reasonable and informed assumption using professional judgement, taking account of the effects of other vessels and the contribution of wind waves and having regard to water levels, the amount of shelter, and the slower speeds of the W class compared to the C class ferries together with their greater blockage effect.

[16] MLW is the elevation of the highest rates of mudflat recession; CD is the effective limit of intertidal habitat.

128. Contrary to the understanding of some objectors at the inquiry, that is not 75% or 25% of the total erosion to the intertidal but how Dr Spearman has assessed the distribution of ferry erosion, i.e. 75% of such erosion as he assessed may be caused by the ferry below MLW. That is only a small proportion of the total erosion and it was confirmed in closing that NE was, and is, apportioning between the ferries and the other causes of erosion at the lower intertidal, not the full intertidal.

129. Erosion is the physical effect that the ferries may have. This has then been assessed by NE in terms of potential impact against the conservation objectives. As part of that assessment it has been accepted and I agree that it is reasonable to expect that the annual rate of erosion will reduce with time as the channel widens and adjusts, equivalent to 50% per decade.

130. The NE worst case 30 year ferry related impact is assessed as a 2ha combined loss of mudflat (at CD) and change to mudflat (at MLW). The impact is subject to an error bar of +/-2. Thus whilst 2ha is the most likely, the impact could be as low as 1ha or as high as 4ha but these extremes are considered unlikely by NE. The erosion from the W class ferries is characterised as around 4m (2-9m) erosion of designated habitat at the lowest CD level and around 9m (4-18m) recession of MLW, along each bank of the navigation channel. Together with the past erosion of the C class ferries since 1998 (assessed at 5m) and including the maximum error, this would result in a worst case 23m recession of MLW along the navigation channel.

131. The value of 1.4ha in the SOCG has been reduced from the 2ha following discussions with NE in April and May 2011. It reflects certain key considerations. In addition to the reducing rate of erosion, it is based on a reduced number of ferry trips being limited to 16,500 a year and a temporary reduction in ferry speed in the river below the wave screen.

132. Reducing the number of trips is predicted to reduce worst ferry related effects by around 21.4%, based on the assessment of C class erosion since 1998 and the number of C class ferry trips. The 5.5 knot temporary speed limit below the wave screen until 2014 (when the recharge is intended to be complete) will reduce the worst effects by around 25% during the period up to 2014. I am satisfied that the likely impacts of reducing the number of trips and speed are based on reasonable assumptions and are well founded.

The context for the consideration of the ferry impacts

133. The main parties are agreed that even the worst case ferry impacts '*are dwarfed by the landscape-scale natural erosion changes that have occurred and will continue to occur in the Lymington Estuary'* and '*are a relatively small component of the many other influences on the Lymington estuary, including natural change'*[17]*.*

134. The Lymington estuary and adjacent coastal environments are highly dynamic and subject to an ongoing process of progressive and inevitable intertidal habitat retreat. There are many influences on the habitats of the protected sites which are also present (absent ferries) in other parts of the Solent. Technical specialists and coastal managers agree on the historic broad scale changes in the estuary. Around 150 years ago there was no marsh and the habitat was mainly mud. Colonisation by saltmarsh plants at the end of the

[17] SOCG paragraph 12.8

1800s and early 1900s was rapid before declining with marsh recession already being recorded at Beaulieu in 1928.

135. Around 63% of saltmarsh in the estuary was lost between 1946 and 2001; the bulk along the seaward edge of the outer marshes, indicating that natural wave attack is the dominant erosive process. MLW has retreated by around 100m during the past 100 years. Comparison of 2005 and 2010 LiDAR data confirms rates of retreat of around 2-5m/year. NFDC has estimated an average annual rate of erosion of 3m/year. Saltmarsh loss from wave erosion is occurring to a lesser degree in the channel with marsh retreat of c. 1m/year.

136. Saltmarsh is also being lost from die-back. Although not completely understood, it is thought to be a consequence of factors that include sea level rise, sediment supply changes, wider alterations to coastal processes, biological succession, sediment anoxia and/or fungal disease of plants. In addition to external erosion, internal dissection of the marshes to the east of the Lymington channel, the result of a complex function of physical, biological and chemical factors, has increased their vulnerability to erosion.

137. The trend throughout the western Solent, unrelated to the ferry operations, is of progressive erosion and die-back of saltmarsh habitat and as a consequence an increase in mudflat habitat at a lower elevation. This process is set to continue beyond the next 30 years. At first that mudflat is upper intertidal but then progressively becomes lower intertidal mudflat and will eventually become subtidal and be lost to the Natura 2000/Ramsar habitat altogether. This process is largely driven by natural change. The Lymington estuary is presently losing in the order of 2-3ha of saltmarsh a year. Although at this time the net amount of mudflat is generally expanding in extent, the longer term trend is loss of intertidal width and lowering of the intertidal profile and ultimately decline in mudflat extent. Thus any effect of the ferry on the intertidal mudflat has to be seen in the context of accelerating a process that is already occurring.

138. As well as first order natural processes that are both regular and episodic in nature, there are secondary anthropogenic activities. These include marina construction in the 1960s and 1970s, capital and maintenance dredging, harbour defence works, as well as the operation of the C class and W class ferries and other vessels, the impacts of which have been largely ignored by objectors. There are also long term changes such as the wave climate and sediment supply, although in morphological terms these will be much less significant over the relatively short time frame being considered here.

139. The suggestion by the LRA that the W class ferries impact on the Lymington harbour sea defences was not substantiated. Such an impact has not been suggested by the LHC, NE, the LPAs or Wightlink. Indeed the effect of the ferries on the intertidal has been stated to be '*dwarfed*' by natural processes occurring in the estuary.

140. That habitat is eroding from other causes does not mean that the adverse effects which the W class ferries have or may have on the habitat can be ignored or downplayed. However it is of relevance when looking at adverse effects to already diminishing habitat and it is important to understand what impact is likely to result from the ferry and what arises from other sources.

141. The 2011 EC guidance advises on the range of information required for the protected site and it includes '*likely future natural change and the degree to which those changes need to be managed to deliver the site's conservation objectives'*. The precautionary approach does not mean that all erosion of habitat in the estuary should be treated as caused by the ferries, ignoring other anthropogenic and natural effects. Even Dr Spearman for HRW described the worst case impacts as being '*the erosion of a modest amount of designated habitat'* and as involving '*relatively small morphological change'*.

The integrity test

142. NE most recently published conservation objectives for the protected sites in 2001. The relevant attributes and measures of the conservation objectives and the targets set by NE are set out in the SOCG.

Effect on intertidal mudflats (SSSI, SAC and Ramsar habitat features)

143. The erosion of mudflat at CD will result in a progressive loss of area of an Annex 1 feature. The recession at MLW will not result in a loss of area but there will be a reduction in profile and volume of the bank and eventually a reduction in the persistence of habitat as MLW moves landward. Although the loss of habitat at CD will be experienced cumulatively and that at MLW will not be a loss until towards the end of the period, both are loss of a feature where the full range and extent of inter-tidal features are of value in maintaining the extent and distribution of the habitats and species. The profile of the banks is already low, but the increase in tidal inundation has consequences for the variety of invertebrate species and feeding opportunities for birds.

144. The lower intertidal habitat that will be lost is widespread and increasing in area across the Natura 2000 sites with the recession of the upper intertidal habitat primarily due to other forcing factors. Nonetheless the acceleration of the movement of the sub-tidal and MLW landwards and loss of intertidal width as a result of the ferries will exacerbate the background trend of losses, reducing the longevity of the sites and may continue to reduce the diversity of invertebrate communities to some extent. Taking a precautionary approach I agree with NE's assessment of the impact as all of the erosion at CD and half of the erosion at MLW.

Effect on bird populations (SPA, Ramsar features and wintering birds, SSSI)

145. Lymington estuary is an important part of the low water feeding area for wintering birds, supporting more than 1% of seven of the species that contribute to the 20,000 waterfowl criterion. This includes the intertidal mudflats along the navigation channel where Wightlink's own surveys observed the presence of around 18 SPA/Ramsar criteria species plus other SPA population birds.

146. As well as the impact on the extent of habitat, the lower flatter profile of the bank will mean a greater proportion of feeding habitat submerged and unavailable most of the time for the birds to feed. The reduction in prey availability due to ferry related erosion occurs within a background context where both locally, and more widely across the SPA, lower intertidal mudflat is increasing in extent, helping maintain these important feeding areas for birds. Thus whilst the erosion between CD and MLW caused by the ferries will have a detrimental effect on the extent and distribution of habitat and food availability

(which are SPA conservation objectives), NE's quantification of this impact as 50% of the plan area at MLW recession is reasoned and reasonable.

Benthic ecology (SAC and SSSI)

147. This is affected by the change in topography and the change to the pattern of tidal immersion and exposure around the MLW area. The habitat between CD and MLW has as high a value to the SAC as the intertidal above MLW. The accelerated MLW recession under the worst case scenario could have varying impacts on the benthic communities of the intertidal habitat depending on the existing slope and the varying erosion along the channel. As a precaution again it seems reasonable that it should be mitigated at 50% of the plan area MLW recession.

148. Dr Axelsson's report appended to Mr O'Flynn's proof was withdrawn at the inquiry. It appears he had not been given all the necessary information about the project nor had he seen the macroinfauna survey.

Shore Works

149. These have the potential to disturb qualifying bird populations of the SPA and Ramsar site and the Hurst Caste and Lymington River SSSI as well as migratory fish species of the Lymington River SSSI. However, subject to the imposition of appropriate conditions to ensure clarity on piling methods and timing, I do not consider that the Shore Works will have an adverse impact on the Natura 2000 sites or the SSSIs.

Recharge Works

150. I discuss this below as a stand alone element of the project as to whether it is damaging or beneficial in the light of the conservation objectives of the relevant Natura 2000 sites and SSSIs and the potential benefit as mitigation to offset the risk of ferry impacts.

Interim conclusion

151. Having regard to the conservation objectives and having considered the loss of Annex 1 feature and the deterioration of habitat collectively, I agree with NE's assessment that the operation of the W class ferry will have an adverse impact and, unless in Dr Lambert's words that is '*fully neutralised*', it is not possible to be confident that there will not be an adverse effect on the integrity of the site, particularly in combination with other plans and projects across the whole Natura 2000 sites.

152. Whatever the professional and personal views of the ABPmer consultants, both they and Wightlink accept HRW's approach for the purpose of informing NE and of informing the AA. I consider that the assumed worst case of 1.4ha impact is well founded, based on objective expert scientific evidence, applying robust assumptions and subject to a realistic error bar of +/-2. It represents the greatest impacts assumed by any of the experts considering the effects of the W class ferries on the European sites and this gives me confidence that no reasonable scientific doubt exists.

153. Having regard to the stepwise procedure required by the Habitats Directive, I conclude in the same terms as the NE that the impact on the protected sites is such that, absent further measures, an adverse effect on the integrity of the protected sites over the lifetime of the W class ferries cannot be excluded.

The next step

154. That is not however the end of the matter. Regulation 61(6) states that in considering whether a plan or project will adversely affect the integrity of the site, '*the authority must have regard to the manner in which it is proposed to be carried out or to any condition or restrictions subject to which they propose that the consent, permission or other authorisation should be given'*.

155. It is NE's view, and one with which I agree, that it is entirely proper that measures, designed to avoid adverse effects of a project on a site, should be included as integral parts of the project as submitted to the competent authority, and should be taken into account in the Article 6(3) AA in determining whether the project will adversely affect the integrity of the site. Wightlink are proposing to carry out recharge/habitat creation works at Boiler Marsh and has agreed a S106 which includes an adaptive management process and operational mitigation measures.

156. The impact requiring mitigation is estimated to be around 50% quantitative loss of mudflat habitat and 50% quantitative change of mudflat habitat. This corresponds to approximately 0.7ha loss and 0.7ha habitat change. I consider NE's approach to be robust and the information and analysis that has been used to estimate the physical impact is appropriate for applying a precautionary approach in the Habitats Regulations assessment. Even if there were found to be any minor uncertainty, which is almost inevitable in a case such as this where there are dynamic processes at work, it was NE's view that this can be managed to avoid risk of adverse effect through the monitoring and adaptive management regime built into the S106.

157. NE's position, given in advice to Wightlink's solicitors in July 2011, is that it does not, at the present time, have confidence that no adverse effect is arising as a result of the operation of the ferries if the recharge scheme is not in place by spring 2012. However this does not mean that there is certainty that any such effect will occur immediately after the spring of 2012.

3. The likely success of the proposed offsetting measures

158. In view of NE's advice as to why it was not possible to conclude no adverse effect alone or in combination, with respect to the operation of the ferries, Wightlink has proposed action to mitigate, or avoid, any adverse effects of the W class ferry. NE has confirmed that mitigation of the C class ferry is not required and any adverse effect on the European protected sites from past events/operations is a matter to be addressed outside of this assessment.

159. The predicted impact of the ferries is accepted as likely to be very slow year on year, building cumulatively over many years. This is different from other developments, such as the construction of a dock, where there is a one-off loss of footprint to be mitigated. However it means the timing of the benefit is critical to avoid an adverse effect occurring.

160. The 2011 EC guidance on the implementation of the Birds and Habitats Directive in estuaries and coastal zones advises that '*measures to eliminate or reduce significant effects (mitigation) should be foreseen during the project design phase. If necessary, they can be completed during the appropriate assessment (design revision, complementary mitigation). The project can then possibly reach a level where it will have no adverse effects on the integrity of the site'*.

161. As part of the project Wightlink has proposed both to reduce effects at source (operational mitigation) and provide habitat benefit mitigation (by way of the recharge scheme) to deliver a benefit to the conservation objectives to offset the predicted impact of the ferry operation.

162. Because of the debate about mitigation/compensation in terms of the Habitats Directive, which I address below, Wightlink has described its proposals for recharge/habitat creation works at Boiler Marsh as '*offsetting measures'*, rather than mitigation, as a way to neatly encompass the intention of both the proposals at Boiler Marsh and the operational restrictions in relation to the identified impact. For clarification and to avoid the possibility of any confusion, offsetting should not be taken here as meaning '*biodiversity offsetting*' as defined in DEFRA's White Paper: The Natural Choice.

163. In the case of the recharge scheme, NE has made the judgement that, in view of the ongoing threat to the upper intertidal habitat in the estuary through natural processes, which it would be inappropriate to attempt to defeat, the conservation objectives of European sites would be better served by offsetting increased erosion to the lower intertidal habitat (because of the operation of the ferries) by slowing erosion to the upper intertidal habitat.

164. A quantitative value has been applied to the value of restoring the recharge area to a higher level in the tidal frame and protecting it from future erosion. The quantity of the benefit therefore includes a value judgment and the mitigation benefit is valued more highly than the equivalent impact. I consider it reasonable for NE, as the national nature conservation adviser, to make that judgment. What the quantification of the recharge scheme needs to show is that the benefit would be of the right order of scale to offset the maximum prediction of impact.

The recharge/habitat creation works

165. The October 2010 Method Statement for the recharge/habitat works, annexed to the ES and TRAA and appendix 4 of the S106, describes its genesis and development during 2009 and 2010 which included a detailed inclusive and extensive consultation and review process with a range of stakeholders and technical experts.

166. The full details of the scheme are in the Method Statement. In brief it involves the beneficial use of maintenance dredging arisings from the upper Lymington channel and Yacht Haven areas through their deposition within an area of eroding saltmarsh to the east of the outer Lymington channel. The extent of the area at Boiler Marsh where the mud would be laid is defined by MHWN[18] and extends to around 0.9ha of intertidal zone around a creek which it is expected would take around 2,000m^3 each annual recharge to fill to 0.62m ODN[19]. The dredged sediments would be delivered by pipe to the recharge area which would be prepared with retaining structures, such as heather or straw bales, to impound the sediments and allow the discharge water to settle out.

167. Boiler Marsh has the advantage of being bowl shaped (clearly seen when on site and evident on the latest LiDAR data) which would help to retain and trap the deposited sediment. As material would have to be pumped by pipe across

[18] Mean High Water Neap
[19] Ordance Datum Newlyn

the protected habitat from a dredger or barge of some sort, the location's accessibility is also an advantage. I give considerable weight to confirmation by the NE's witnesses that in terms of the geography of Boiler Marsh it was the place where there could be most confidence that a recharge would be effective.

168. The works would be required by the S106 to be completed between the beginning of February and mid March to minimise disturbance to roosting wintering or summer breeding birds. As such they would not significantly affect SPA and Ramsar populations. The Method Statement indicates 3 annual recharges in February/March 2012, 2013 and 2014. The S106 provides for regular monitoring of the recharge site and the surrounding area and the adaptive management process allows for more recharges if deemed necessary.

169. The recharge has the potential to have significant benefit in terms of delaying the eventual (and inevitable) loss of both Boiler Marsh and the other intertidal areas around it which are changing as a result of natural processes. In particular the recharge has the potential to slow down the progress of the expansion of the channel that is currently cutting rapidly through the marsh and to delay its breakthrough. I saw on my site visit that if it were to break through it would result in a fracturing of the marsh, expose more marsh edges and lead to accelerated rates of erosion in the future both on this marsh and the Pylewell habitats to landward.

170. Some objectors suggested that the only place where dumping mud could be acceptable to offset the ferry effects would be where the erosion occurs, that is immediately beside or into the channel. That would itself have effects on the protected intertidal and sub tidal areas which were not considered. Site integrity relates to maintaining structure and function across the whole Natura 2000 site. Hence I agree with NE that mitigation could take place anywhere where this purpose is served. In the context of the Solent wide Natura 2000 sites, the recharge works would deliver benefit very close to the area of impact, within the Lymington estuary.

171. The S106 defines the objective of the recharge/habitat creation scheme as '*achieving increased habitat persistence within the boundary of the European sites by delaying the loss of intertidal habitat to ensure that there is no adverse effect on the integrity of the European sites by reference to the conservation objectives*'. Whilst NE's approach to coastal management is to embrace natural change, as enabling the habitats of dynamic sites to evolve will lead to more sustainable sites in the long run, the evidence is overwhelming that the Lymington estuary has largely lost its ability to be self-sustaining. The intertidal habitats have a finite life of less than 100 years. Slowing the rate of natural erosion at this site would create a habitat benefit of increased habitat persistence, providing wildlife with more time to adapt to natural coastal change and to find new habitats.

172. There would be small short term detrimental impacts during the works. The advice of NE is that these would not constitute an adverse effect and the recharge works would be beneficial to the conservation objectives of the protected sites in delivering a longer term benefit of increased persistence of the upper intertidal saltmarsh and mudflat.

173. NE, the LPAs, and Wightlink are satisfied that the recharge works as proposed are appropriate mitigation for the operation of the W class ferries when considered alongside the adaptive management process and the

operational mitigation. It is also common ground that there will not be an adverse effect on the integrity of the European sites when the project is assessed as a whole including the recharge/habitat creation works.

174. However others were critical of the efficacy of the scheme and I now turn to address their concerns before making a judgement as to whether the risk of adverse effect on integrity can be avoided.

Whether there can be confidence in the recharge

175. There are well documented examples of recharge schemes in the UK over the last 15-20 years, including at Horsey Island and Shotley in the Orwell estuary in Suffolk. The lessons learned have been applied here, having regard to the particular circumstances of the Lymington estuary. The conclusion of Dr Dearnaley advising NE was that, having considered some of the practical problems that might be encountered at Boiler Marsh, there could be a high degree of confidence, which he placed at being greater than 60% chance, that the mitigation would be successful. This was subject to Wightlink committing to up to 3 campaigns of sediment placement and investing the necessary effort and resources. There would be an element of trial and error. Some techniques might not work in the Lymington estuary given its particular topography, vegetation and tidal regime, or not work as well as expected, and lessons would be learned and adaptations have to be considered.

176. The commitment to 3 recharge attempts is set out in the ES and the strategy of successive recharges is included in the S106. The adaptive management and monitoring mechanism provides the flexibility to adapt and modify the measures in the light of experience of the first recharges through the regular reporting to the EMP and there are good grounds for confidence.

177. Again the LRA sought to apply a pedantic degree of statistical certainty in an area where conclusions are reached on the basis of expert judgement applied to the data and having regard to other examples. The complexity of coastal and estuarine processes is recognised by the publication of the EC 2011 guidance on the implementation of the Birds and Habitats Directives. The guidelines for assessment include advice that '*subject to the reversibility of actions, minor remaining uncertainties should however not block or restrain projects indefinitely*'. Where there is uncertainty, developers are advised to '*assess the nature of the remaining uncertainties and manage them through targeted monitoring and adaptive strategies'*. That is what is provided for here.

178. At the inquiry there were two sessions on the terms of the S106 negotiated between the main parties and further changes were made before it was signed. I am satisfied that the S106 and the adaptive management process removes the uncertainty from the offsetting measures by introducing a flexible and robust process of monitoring and management. It provides for the EMP to review evidence and amend the measures taken so as to ensure that the recharge is adapted as necessary to be successful. This could include the number and extent of the recharges and also could include adjustments to the operational measures, for example extending the period of the temporary speed limit if monitoring of the channel indicates this as being advantageous.

179. Given the adaptive management regime built into the project through the S106, NE has confirmed that it is satisfied that no reasonable scientific doubt exists and that any uncertainty is well catered for. I conclude on this matter

that there can be confidence that the recharge of Boiler Marsh can be achieved and would be successful in its aims.

Whether there should be a trial scheme

180. There is no reason why there would need to be a trial of the recharge as suggested by Mr Hebard and others. There is an established record of success of recharge schemes in the UK. ABPmer are experienced in estuary and coastal development. They have planned the recharge scheme for some time. That work has been reviewed and found acceptable by HRW whose Director has considerable experience of the design and implementation of mitigation, compensation and other beneficial use schemes. Whilst some of the technology might be novel and methods might need to be refined, there is flexibility in the adaptive management process if needed after the initial and any subsequent recharges.

181. A trial recharge scheme would still require permission and a MMO licence. It would build in a further delay into obtaining permanent permission/licences. I do not consider that to be desirable or necessary. ABPmer considers the recharge could be delayed until 2013 without adverse impact on the integrity of the European sites. However, NE has always been clear that it requires the works to be started in 2012.

Whether there should have been a study of comparative sediment particle size

182. The LRA presented no evidence of its own on this point. However questions to the HRW and ABPmer witnesses were critical of the lack of any study of sediment particle size. Without any comparison of the dredged material with those found on the recharge site and their relative shear strength, it was suggested that there could be no certainty that the mud would remain on the recharge and would be washed away on the first tide.

183. The response from Professor Williams was commendably simple – the material to be dredged from the marinas is mud from the estuary. The mud in the estuary has come in from the Solent or river, been deposited on and then eroded off the intertidal areas. No empirical evidence has been put forward that contradicts his view that the salt marshes and intertidal areas will have a range of sediment particle sizes similar to that of the dredged sediment.

184. The sediment would be tested for toxicity before being delivered by barge and pumped via a pipe onto the central muddy area of Boiler Marsh. It has been assumed up to 50% of the sediment as it is delivered could be lost to the recharge area. Also once the recharge area is fully inundated a proportion of the recharge sediment could be dispersed vertically into the water column and exported. The risk of such dispersion would be highest under the largest tides.

185. The redistributed sediment would remain in the system and would still contribute to the estuary's overall sediment supply, just not on the recharge area. The sediment would be deposited in thin layers over a month. Evidence from elsewhere is that marsh plants can tolerate levels of sedimentation of around 30cm deep. Whether sediment on the recharge would be lost would depend on the weather as well as the retention and wave attenuation mechanisms used. Doubts about the efficacy of the structures proposed to retain the sediment are not borne out by evidence elsewhere.

186. The absence of studies of particle sizes is not something that I find weighs against the proposed recharge scheme.

Whether the recharge fails to consider the mudflat as protected habitat

187. The LRA has suggested that erosion delay cannot be considered a positive benefit unless it first reverses natural erosion. There is already a requirement in the UK to address habitat losses arising from coastal squeeze. Only an area of net habitat gain could be used to mitigate the ferry impact. This was not accepted by NE which considers natural change, including erosion, is part of the natural functioning of the Natura 2000 sites.

188. There is a duty on the UK to maintain favourable conservation status. However it is now clear from the Solent Dynamic Coast Project that sea level rise against rising land or sea defences will mean the predicted loss of hundreds of hectares of coastal habitat, including Lymington estuary. NE is actively involved in coastal management decisions to allow the coast to adapt so that new coastal habitats can form inland where they naturally want to and where they will have longevity. The conservation objectives for the European sites are '*subject to natural change'*. It will not be possible over the next 100 years to keep the current distribution of habitats and species and the Natura 2000 series will need to evolve.

189. Mudflat habitat is as equally important as saltmarsh habitat within the Natura 2000 sites and SSSI. Whilst it was asserted by the LRA that intertidal habitat would only be lost completely when it becomes subtidal, the relevant attributes and measures of the European sites' Conservation Objectives include extent and distribution of habitat, topography (shore profile) as well as food availability and disturbance. These depend on there being a full range of intertidal habitats.

190. The current threat is to the upper intertidal mudflat and saltmarsh while the lower intertidal mudflat is increasing in extent. This changes the extent and distribution of habitat, topography, food availability and disturbance. NE has identified it as beneficial to the conservation objectives of the Natura 2000 sites and SSSIs to slow the loss of upper intertidal marsh and mudflat at Boiler Marsh. The S106 has the objective for the habitat works of 'Increased Habitat Persistence' within the boundary of the European sites. This is achieved by prolonging the life of the upper intertidal habitat. The recharge site would be counted as contributing to that when it is '*ecologically functioning*'. This is defined in the S106.

191. The area chosen for the recharge is degraded habitat. It is anoxic comprising black mud, covered in algae and much reduced in species diversity. It is not typical mudflat habitat within the European site. The purpose of the recharge is to preserve for a longer period the eroding ecosystem of the European sites as a whole (not simply one element of it). This is not double counting. It does not require there to be a net habitat gain. The benefit to the Natura 2000 sites is in taking the recharge area up the tidal frame.

192. There would be short term detrimental impacts during the process of placement and consolidation through the physical smothering of the mudflat and potential physical damage to saltmarsh vegetation as the pipe is laid. However the current mudflat habitat is of poor quality and the evidence was that the benthic community would adapt quickly and once consolidated the

recharge sediment would start to colonise within months. NE's view was that the area could be expected to become an ecologically functioning habitat in around 18 months. Others thought this might be achieved earlier. This further confirms that predictions are based on the worst case scenario.

Erosion delay as a benefit

193. Erosion delay is a recognised ecological benefit. The benefit is achieved in this case by slowing down the natural processes. The estuarine and coastal habitats of Lymington are under pressure and all the evidence points to their erosion at a significant rate. Boiler Marsh itself has become increasingly vulnerable. All the evidence points to the saltmarsh having all but gone by 2040 and following that the mudflats will progressively erode and disappear.

194. Slowing the natural erosion is a meaningful way of mitigating a risk of accelerated erosion due to development. The integrity of the protected sites relates to the ability of the interest features to be sustained across the whole of the sites. The habitats in the Lymington estuary contribute to the overall integrity of the Solent protected sites and of the Natura 2000 network. The objective of the recharge works is to delay erosion of the ecosystem.

195. Although the ferries primarily impact on the lower intertidal mudflat along the navigation channel, the mitigation proposal would deliver benefits through increased persistence of the upper intertidal habitat as a mixture of both mudflat and saltmarsh. A further benefit of increased habitat persistence at Boiler Marsh would be extended protection of the saltmarsh areas behind it and to the north which would be more vulnerable to wind wave action and erosion if the creek broke through Boiler Marsh and the marsh in front was fragmented.

Erosion rate at Boiler Marsh

196. The LRA disputed the rate of erosion at Boiler Marsh. From his analysis of ortho-rectified aerial photographs taken in 2001, 2005 and 2008 and comparison of LiDAR data from 2005, 2007 and 2009, Professor Pye suggested that contrary to the evidence of ABPmer there had been average erosion of only 1.75m/year along the outer edge and no net internal erosion since 2001.

197. Setting aside whether LiDAR can be accurately used for inter-comparative surveys without extensive re-processing, the marshes are eroded both by small changes over long time scales and by irregular events. Large storm events have played a key role in the past in driving acute episodic retreats of the marsh and future storms, which may become more frequent as sea level rises, could have a similar impact. Dieback is also a substantial long term influence on the marshes and a key factor in their deterioration. Professor Pye did not visit the site. Aerial photographs may show the marsh edge as stable but I saw that there are many internal patches devoid of vegetation.

198. The short time frame of the LRA analysis does not fit well with the CCO's and NFDC's strategic forecasts which extrapolate long term trends. These were used in the LHC's Harbour Breakwater ES and in developing ABPmer's schematic map predicting the rate of marsh loss around the recharge area. In reality the retreat of marsh will be more complex and episodic and the predictions are inherently precautionary. When questioned Professor Pye agreed that Boiler Marsh had become more vulnerable in recent decades due to erosion and breaching by creeks, accelerating its exposure to erosive forces.

199. The most recent survey and comparison of LiDAR data from 2005 and 2010, released early to ABPmer and appropriately processed, indicate retreat of the exposed outer face of 15m in 5 years, consistent with the 3m per annum used by ABPmer, and in places, especially on the seaward edge, an annual rate of 5m. Thus I consider that the average recharge erosion rate is appropriately defined in the S106 as 3m per annum.

200. The internal rate of erosion is more uncertain and difficult to measure. Compared to Mr O'Flynn's approximate measurements taken by putting a scale to a web page on screen, Mr Scott's assessment of an internal rate of retreat of vegetation of 3m per annum was derived from a combination of long term mapping analyses and application of his and NE's professional judgement. He gave evidence of his visits to the site in 2009, 2010 and 2011 when he noted decay in the habitat around the creeks and changes showing continued erosion. I consider that the internal erosion rate used is reasonable, particularly when rates of 10m/year have been identified elsewhere in similar conditions.

201. In any event, as Dr Spearman demonstrated, using lower average internal erosion figures would give similar meaningful 30 year benefits.

Quantification of the benefits

202. ABPmer's mathematical model of impact/benefit compares the delay in erosion at Boiler Marsh as a result of the recharge to the loss predicted over the operational life of the ferry. The ferry impact requiring mitigation is expressed as cumulative hectares rather than an annual rate as a measure of how the impact builds over time. As explained above, the 30 year cumulative impact is around 1.4ha (in a range 0.7 to 2.8ha) that is required to be offset. Although exact quantities have been used for forward planning purposes, these do not represent an expected precision but rather an approximate order of magnitude to give an idea of potential. Because of the inherent uncertainties involved in trying to predict forward 30 years in an unpredictable and dynamic environment subject to long term natural change, they incorporate value judgements and have precaution built in. However whilst that does not undermine the model's usefulness, it does mean that care needs to be taken when comparing exact numbers, something not all participants at the inquiry appeared to appreciate.

203. Success criteria for the sediment placement were drawn up by NE with the EA, NPA, MMO and the Hampshire Wildlife Trust and are now agreed with Wightlink. The benefit is to be measured as the area of raised and ecologically functioning recharge achieved. Thus 100% success would be 0.9ha over 30 years. The benefit would be counted from the year when it is successfully delivered which NE say would be 2015, 3 years after initial placement. There would also be an erosion delay benefit by raising and protecting the central placement area.

204. The impact and benefit has also been quantified in hectare years (ha-years). As a measure of habitat persistence this is useful when the impact and benefit accumulate with different rates over time. Some objectors were critical of the concept, how they were calculated, and the tabulated results. However Dr Lambert was very comfortable with the concept as a way of showing whether the mitigation is offsetting the impact. B&V used the same approach in comparing impacts and benefits as part of its EIA and Habitats Regulations assessment of the LHC Harbour Breakwater where it was accepted that the

effect of the breakwater would be offset by the breakwater enhancing the longevity of the deteriorating saltmarsh and mudflat behind. Therefore the idea of erosion delay benefit is not new to the Lymington estuary.

205. Wightlink's tables and graphs show that the potential ferry related impact would be offset through the 30 year ferry operation by the cumulative benefit achieved by the recharge works. The habitat persistence benefit would continue to rise over the 30 year life of the ferry and if the recharge works were 100% successful would provide around double the predicted potential impact and offset even the unlikely worst case impact. Even if the recharge works were less successful, they would offset the likely potential impact. Simply put, the recharge works would provide more habitat for longer than would be lost over the life of the ferry.

206. The potential benefit is projected to peak around 2033 and then fall due to the external erosion of the marsh starting to eat into the 'saved' internal habitat. Future rates of external erosion are uncertain. If they increase, this would reduce the benefit provided towards the end of the life of the W class ferries. However what is more likely is that the maximum potential erosion of the W class ferries would not be reached because of the substantial natural changes taking place in the estuary.

207. The benefits are shown as starting at 2015. The operation of the ferry will accrue impact before this slowly building up from 2009 and would be fully offset, or neutralised, at 2015. If the recharge works were as successful as Mr Scott suggested, and Dr Dearnaley thought they could be, then the offset would be earlier. Any detriment as a result of a potential temporary impact up to 2015 has to be considered in the context of the large dynamic coastal sites.

208. I am satisfied that the Boiler Marsh recharge works would be of an appropriate scale to provide an erosion delay benefit capable of offsetting the 30 year risk of increased erosion from the ferry and could be successful. This precautionary numerical approach does not take into account the additional unquantified benefit of prolonged protection of the marsh behind.

Conservation objectives, attributes and measures

209. Subject to the timing of the recharge works being controlled through the S106 to avoid disturbance to the feeding and breeding grounds for wintering birds, the recharge works would have no adverse effect on bird populations (SPA, Ramsar features and wintering birds, SSSI). There would be an overall beneficial impact by delaying the loss of roosting and nesting marsh habitat as well as mudflat habitat (SSSI, SAC and Ramsar habitat feature), and enhanced shore profile with increased food availability for birds (SPA, Ramsar wintering birds). Boiler Marsh is degraded habitat with reduced species diversity. Evidence was that there would be no harm to the existing benthic ecology (SAC and SSSI) and the site would rapidly recover to be ecologically functioning.

210. Consideration has been given to the impact of the recharge works on sediment and water quality (SAC, SPA, SSSI intertidal habitat feature). There are shellfish (oyster) beds in the Solent. Subject to the inclusion of appropriate monitoring requirements within the MMO licence the EA has no objections. By delaying the loss of saltmarsh habitat which is important as a nursery and feeding ground for fish species, the recharge would be beneficial to fish and to water quality.

The use of an adaptive management process

211. Although there remain uncertainties about the future impact and success of the recharge works, the upper limits of the potential impact have been identified. I am satisfied on the evidence that the recharge works have the potential to offset the worst case outcome. Further their success is within the applicant's control.

212. The S106 provides for the management of these uncertainties through an adaptive management process to include the establishment of an EMP, comprising representatives of statutory bodies, key stakeholders and Wightlink. The suggestion that the LRA should be a member of the EMP was resisted by Wightlink, who questioned who it actually represented. Local interests would be appropriately and satisfactorily represented on the EMP by the two LPAs. Whilst Wightlink would provide the secretariat and chair the EMP meetings, that is an administrative convenience. The S106 confirms that the EMP shall seek to adopt a consensual view but may proceed by simple majority thus Wightlink would not have a casting vote. Once it was set up, the EMP could vote for a different arrangement if it so wished.

213. The S106 obligations provide for the EMP to manage both the monitoring of ferry impact and the success of the recharge works and to secure delivery of the necessary level of mitigation to ensure that adverse effects would be avoided. This approach is possible here because the very small year on year impact of the ferry gives time to make adjustments to future predictions and if necessary to undertake additional management of the recharge before any adverse effect would be incurred.

214. A detailed monitoring protocol is set out in the S106. It requires the recording of the details of each recharge as well as twice yearly visits to monitor the recharge area and the surrounding area and carry out surveys. In addition erosion rates in the estuary and at Boiler Marsh are to be assessed. Ferry impacts are to be monitored by way of the stake monitoring and biennial bathymetric monitoring. In addition data on the ferries' speed would be provided to the EMP.

215. Preparation of a regular annual monitoring report for review by the EMP provides the mechanism for conclusions to be reached on whether the recharge scheme or the monitoring protocol should be adapted in order to meet the defined objective and specified criteria of success. As advised in the 2011 EC guidance the monitoring scheme is designed in a way that would signal '*any unexpected developments at a stage where effective corrective measures can still be taken'*. These could include changes to the recharge scheme and/or monitoring protocol or the implementation of alternative actions which could include maintenance or reinstatement of the temporary speed reduction or changes to the annual trippage (subject to a minimum of 16,500). The adaptive management process gives a high degree of confidence that the recharge scheme would appropriately offset the impacts of the ferry operation.

The mechanism of the S106

216. To avoid an adverse effect on the integrity of the European sites, using the adaptive management process proposed, it is necessary a) to be confident that the mitigation package has the potential to offset the worst case impact; b) to predict the future scale of ferry effect before it occurs; and c) to adjust the

scale of mitigation to neutralise the ferry impact before adverse effect is incurred.

217. Currently a package of measures involving the recharge works and reduced ferry trips and temporary speed reduction is proposed in the S106 that have the potential to neutralise the worst-case ferry impact. The obligations in the S106 would secure the delivery of the recharge scheme to a clearly agreed standard that would achieve the required outcome; would monitor the impacts of the ferry and the success of the recharge scheme; and would ensure that any impact detected is mitigated throughout the operational life of the ferry. Further it would deliver speed and trippage mitigation to reduce the ferry's impact and sets out a mechanism to allow the EMP to review the annual trippage mechanism. I deal below with what is an appropriate level of trippage at this time.

218. The S106 only provides for the EMP to be in place for 10 years whereas the ferries have a 30 year life. The EMP can extend or reduce that period depending on the success of the recharge, the results of monitoring ferry impacts, etc. Given the interests of the organisations represented on the EMP, it is most unlikely that it would be wound up before its work was considered by the members to be conclusively completed.

219. I am satisfied that the terms of the S106 (subject to my conclusion below on the appropriate trippage) are necessary to make the development acceptable in planning terms, directly relate to the development and are fairly and reasonably related in scale and kind to the development. Accordingly I conclude that the agreement complies with Regulation 122 of the Community Infrastructure Levy Regulations 2010 and with Circular 05/2005 and its provisions should be given significant weight in the determination of these appeals.

4. Operational mitigation – ferry speed and number of trips

220. The S106 retains the current temporary speed restriction until March 2014 and imposes a restriction on the number of ferry trips per year.

Ferry speed

221. The 5.5 knot speed limit is measured over the ground. That is how the ferries currently record their speed and how the LHC monitor and enforce the harbour speed limits. Reducing the ferry speed is agreed to result in a 25% reduction in ferry impacts. This is significant and there is clearly considerable scope, if for whatever reason monitoring identifies increased ferry impacts or reduced recharge benefits, for Wightlink to offer or the EMP to ask to continue with the slower speed.

Trippage

222. The S106 provides that if planning permission is granted the trippage should not exceed 16,500 trips per calendar year or '*such annual trippage figure as may be indicted as being appropriate and acceptable in the Appeal decision'*.

223. The impact from the W class ferries is assumed to be linearly related to the frequency of ferry passages. Restricting the number of trips to 16,500 would reduce the worst case predicted effect of the W class ferries by 21.4%. The NE's reasoning is that the predicted effects of the W class ferries are based on

an analysis of the impact of C class trips and in the period 1995-2008 these made on average 21,000 trips per annum.

224. In terms of the AA, once NE had concluded that there was likely to be an adverse effect it was for Wightlink to suggest mitigation. It offered the recharge works, a temporary speed limit and this maximum 16,500 annual trippage figure. It had initially been 16,000 as the average of the 15,460 and 16,433 trips by the W class in 2009 and 2010 respectively. It was on the basis of 16,500 trips that NE assessed the 1.4ha ferry impacts.

225. Having agreed 16,500, at the inquiry Wightlink asked for a maximum limit of 18,000 trips per calendar year, the rationale for which does not derive from any amended assessment but was explained as the effective operational limit of the 3 W class ferries. Evidence to the inquiry was that this year (April 2011 to March 2012) there will be 17,500 sailings.

226. Social and economic factors should play no part in the AA to be carried out under Article 6(3) of the Habitats Directive. However a key recommendation of the 2011 EC guidance is that '*the design of plans or projects should always be based on mutually beneficial strategies with a view to achieving dual goals of both Natura 2000 conservation objectives and socio-economic objectives, according to the 'working with nature' concept'*. It advises at paragraph 3.3 that '*a widespread misunderstanding is that the EU nature directives are based on a "no-unless" approach. This is an interpretation based on the view that environmental policy objectives always take precedence over economic policy objectives. This approach is in contradiction with sustainable development principles, which balances environmental benefits and societal and economic requirements (see article 2.3 of the Habitat Directive). Early integral planning and the development of integrated projects are crucial, as they will promote a "yes, if" approach and pave the way for win-win solutions*.'

227. The evidence of Wightlink was that restricting the number of ferry trips would have two key impacts. It would mean an ending to night sailings, with consequential impacts on the economy of the Isle of Wight, for example in terms of early morning deliveries to stores on the island and commuter traffic, and important social impacts, eloquently put by Dr Hinton at the inquiry. With fewer sailings there would be job losses. Written representations by the Isle of Wight Council and the Island's MP along with others expressed very serious concerns about the implications of both for the Island's rather fragile economy.

228. NE took a more bullish line and pointed to the absence of any socio-economic assessment of the effect of the 16,500 trips restriction; that Wightlink previously operated sub-16,500 with night sailings so that job losses were not inevitable; and the adaptive management process would allow the number of trips to be revisited by the EMP in the future. However I consider it is important now, because of the serious and potentially irreversible impacts, that the 16,500 trip restriction should not be imposed unless it is necessary to protect the European sites.

229. NE's position in closing was that it could not be confident in the event that a higher annual trippage is permitted. However that view is not borne out by the evidence which suggests that the restriction is unduly precautionary. Dr Lambert thought the predicted worst case impacts of the ferries were '*unlikely*'

to materialise and in any event were '*modest*'[20]. Witnesses for NE expressed a high level of confidence that the recharge scheme could be successfully delivered and would offset even the worst case impact of the ferries.

230. Speed rather than trips appears to have by far the greatest effect. The temporary speed limit agreed by Wightlink reduces any ferry impacts by 25%. Wightlink considers this to be an underestimate as there is a non-linear relationship between ferry speed and the worst case impact in the model. Also the evidence is that the ferries are operating in the estuary at slower speeds than 5.5 knots. Trippage is far less effective a means to reduce impact with a linear relationship between number of passages and ferry impact. Nonetheless restricting the number of trips to 18,000 would still reduce impacts by around 15%. When considered together with the speed restriction, the consequence of this would be to reduce the impacts from 2ha to 1.6ha (rather than the 1.4ha impact with 16,500 trips per annum). But if the EMP continued the speed restriction beyond 2014, this could reduce further.

231. Wightlink referred to the S106 which would allow for the EMP to subsequently reduce any raised annual trippage, if the monitoring indicated harm arising. NE thought to rely on that provision would not be appropriately precautionary. However it seems to me that taking the necessary precautionary approach still requires the evidence to be looked at in the round and an assessment made as to harm. I consider there can be confidence that, even with 18,000 trips per annum, the benefits predicted to result from the recharge and operational mitigation would still be of the right order to offset the worst case impacts of the ferries. To take a more restrictive line, knowing the potential adverse socio-economic consequences, is not warranted having regard to the evidence and could run counter to principles of sustainable development. Accordingly I conclude that an annual trippage figure of 18,000 trips per calendar year would be appropriate and acceptable. It might increase the ferry impacts by 0.2ha but as there are more than sufficient predicted benefits to deal with the unlikely worst case I consider that the uncertainty is capable of being managed through the adaptive management process.

5. Other suggested mitigation measures

232. At the inquiry, the Rule 6 parties and others suggested operational or other offsetting measures in addition or in substitution for those agreed by the main parties. They include no ferries running at low tide; slower speed; no passing in the river; the ferries to pass in a different place; adherence to sailing in the centre of the channel; trippage reductions; no sailing in adverse weather conditions; smaller ferries; and strengthening the banks of the navigation channel. They were dealt with in evidence and not found to be justified.

233. The likely impacts of the ferries' thrusters and under hull turbulence at low water have already been considered. No view was offered as to what period of time either side of low tide it would be necessary to prohibit ferry sailings. Such a ban would impact so severely on the reliability and regularity of the service as to make it unusable.

234. No suggestion was made as to how fast or slow the ferry should go. Slow speeds affect manoeuvrability and safety. The speeds of the ferries are monitored automatically by Wightlink and checked by the LHC. There is

[20] Dr Lambert's answers when questioned by Mr O'Flynn

already a temporary 5.5 knot speed restriction embedded in the S106 which the EMP could decide to continue beyond 2014 if found to be justified.

235. If passing in the river is restricted, Wightlink could not run a 3 vessel service. A 2 vessel service would require less staff, could compromise the economic viability of the route and cause its closure with all the adverse socio-economic impacts that would flow from that. As to a different passing place for the ferries in the river no indication was given as to where that might be until the LRA's closing that suggested the north end of Long Reach. The clear evidence of the company was that the ships are required to pass in the river at Short Reach and that was the only place where they can do so safely.

236. Subject to compatibility with safety regulations, the masters keep the ferries to the centre of the channel. Operating restrictions already apply when weather conditions are adverse. No specific further restrictions were suggested. The suggestion by the LRA that there should be a further restriction on the number of ferry trips was not supported by any specific proposals. Less than 16,500 trips would be excessively precautionary and could result in the service becoming uneconomic and closing.

237. The W class ferry was specifically designed for the requirements of the route. There is no evidence that a ferry with reduced carrying capacity would necessarily have less impact on the protected sites. Less capacity might mean more ferries, more trips and greater overall environmental impacts. A smaller ferry would not accommodate as much freight with implications for local people, businesses and services both in the New Forest and on the Isle of Wight and potential unmet demand. Whether there would be any operator willing to operate such a service had not been considered.

238. As the ferry erosion is to the banks of the channel it was suggested that these could be strengthened. It was firmly rejected by Mr Scott as totally inappropriate on environmental grounds.

239. In closing the LRA proposed an operating profile for the ferries based on a matrix of speed limits for each combination of wind speed, location and water depth. With 3 sets of 3 variables offering 27 possible options for each of the 52 sailings a day, not only was it complicated but it had never been put to any of Wightlink's witnesses to consider.

240. I conclude that I am satisfied that the operational mitigation measures proposed by the company are the most appropriate.

6. The application of Regulation 61 of the Habitats Regulations and Article 6(3) of the Habitats Directive

241. I have already concluded that I am satisfied in terms of the Habitats Directive and Habitats Regulation, that the operation of the ferries, the recharge works and the shore works form a single project. The LRA was unable to explain in what way combining the elements into a single project would affect the AA. Whether that is right or not in law, it does not alter the fact that the effects of all the components of the project have been assessed in combination and cumulatively.

242. I agree with NE that the historic operation of the C class ferries is outside the assessment of in combination effects. The SOCG identifies that there may be a small in combination effect with the Lymington Harbour Protection

Scheme. Any such effect can be readily accommodated by the proposed mitigation measures. The benefit of the recharge would not be affected.

243. The remaining question is:

Are the offsetting measures to be considered in the AA or subsequently as compensation?

244. Detailed written submissions were made by the LPAs, NE, Wightlink and the LRA on this point. The argument put on behalf of the LRA was that the recharge/habitat creation works amount to '*compensation*' rather than '*mitigation*' and thus Article 6(4) was invoked. None of the main parties agreed and referred to various CJEU and English judgements. The submissions were circulated prior to the inquiry and were added to in the main parties' opening/closing submissions which are also inquiry documents.

245. Neither the Habitats Directive nor the Habitats Regulations make any mention or use of the term '*mitigation*'. However it is commonly used to describe measures designed to avoid or ameliorate the adverse effects of a development on wildlife features or other interests. NE refers to mitigation as being widely used in the context of the application of Article 6(3) and in the evaluation of the environmental and other impacts of development generally.

246. There is clear European authority that a project is to be assessed as a whole. It is clear from European and domestic law that the habitat creation works can be taken into account as part of the project when assessing whether or not the project will have an adverse effect on the integrity of the European protected sites by reference to the sites' conservation objectives.

247. MN2000 considers the content of the assessment to be made and advises that '*as regards mitigation measures, these are measures aimed at minimising or even cancelling the negative impact of the plan or project, during or after its completion'*. The examples given are operational mitigation measures but nothing in its reasoning is contrary to the above analysis.

248. The 2011 EC guidance makes it clear that it is not the role of the Habitats Directive to prevent beneficial socio-economic development and that there can be '*win-win solutions'*. On the same theme it also refers at page 27 to the Natura 2000 conservation objectives being considered together with the technical project objectives from an early stage in project design and development and that '*as a general rule, damage prevention or avoidance measures should always be preferred to compensation measures'*.

249. The central question under Article 6(3) is whether the project would adversely affect the integrity of the site. If the taking of steps can avoid an adverse effect on the site, then Article 6(4) is not engaged. NE's view is that works can be considered to be mitigation if they enable the competent authority to conclude that an adverse effect on the site is avoided.

250. The recharge works are to take place within the protected sites, close to the channel that is being eroded by the ferries and are proposed specifically in order to ensure that the operation of the W class ferry has no adverse effect on the integrity of the protected sites through the acceleration of the already occurring erosion of intertidal habitats. Erosion will happen in any event, with or without the W class ferries. The risk is that the W class ferries will accelerate that inevitable erosion. The effect of the recharge would be to slow

that natural erosion. The purpose is precisely to avoid adverse effect on the sites' integrity, in light of their conservation objectives.

251. It is the effect of the project as a whole on the sites as a whole (as opposed to some individual geographic part or ecological/habitat component of it) that is to be assessed and the effect on the integrity of protected sites is assessed by reference to the sites' conservation objectives. These include the extent and distribution of habitat and shoreline profile.

252. The approach taken by NE and Wightlink is consistent with the most recent EC advice. The offsetting measures have been designed in parallel with applications for those aspects of the project that currently require permission/consent. In considering whether a plan or project will adversely affect the integrity of the site regulation 61(6) requires the authority to have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions. This would include the obligations contained in the S106 and the conditions recommended to be imposed.

Conclusion on Article 6(3), Regulation 61(5) and the Appropriate Assessment

253. In the foregoing I have carefully considered the evidence that has been presented to advise and assist me as the competent authority in making an AA of the implications for the European sites in view of their conservation objectives. In so doing I have had regard to the representations made by NE and taken account of the opinion of the general public. In the light of the conclusions of that assessment Regulation 61(5) requires that as the competent authority I may agree to the project '*only after having ascertained that it will not adversely affect the integrity of the European site'*. In so doing, I have to have regard to the manner in which it is proposed to be carried out or to any condition or restrictions subject to which it is proposed that the consent should be given.

254. I have concluded above in the same terms as the NE that the impact of the operation of the W class ferries on the protected sites is such that, <u>absent further measures</u>, an adverse effect on the integrity of the protected sites over the lifetime of the W class ferries cannot be excluded. An annual trippage rate of 18,000 would add marginally to the predicted impact.

255. I also agree with the conclusions of the technical experts advising NE and Wightlink, and also the view of NE's Coastal Lead Adviser, that a high degree of confidence can be placed on the recharge/habitat creation works proposed at Boiler Marsh being successfully delivered, and in achieving the predicted erosion delay benefit to offset the ferry impacts. Further there is sufficient benefit to offset the increased impact as a result of the increased trippage.

256. I am satisfied that it can be concluded with the requisite degree of confidence that the operation of the project would not have an adverse effect on the integrity of each of the SAC, SPA or Ramsar sites, either alone or in combination with any other plans or projects. The requirements of Article 6(3) of the Habitats Directive and Regulation 61 of the Habitats Regulations are therefore satisfied. Thus there is no need to consider Article 6(4).

257. I also conclude that neither the Hurst Castle and Lymington River SSSI nor any other SSSI would be damaged by the project.

258. Having concluded in positive terms on the AA and on the absence of an adverse effect on the integrity of the European sites, I am also able to conclude in terms of national and local planning policies, that the developments, the subject of these appeals, would comply with PPS9 and Circular 06/2005, with NFDC Core Strategy policies CS3 and CS10 (d), and with policies CP1 and CP2 of the NFNPA Core Strategy and Development Management Policies DPD.

Other issues

259. The LPAs did not raise any other putative reasons for refusal. Nonetheless other issues were raised both at the application stage and during the appeal which I now turn to address having regard to relevant national and local policy.

Issue b) The effect on the coastal zone

260. The focus of the consideration of the implications of the project on the European sites has been on shoreline morphology. The same considerations affect the wider coastal zone. Across the wider coastal environment of the Solent large scale changes to coastal morphology are happening at an unprecedented rate.

261. The relevant agencies, including the LPAs, NE and the EA, are actively engaged in addressing the issues raised by coastal squeeze and the SMP sets out the agreed policy and implications for each identified policy unit in the short, medium and long term. To the east of Lymington, the final policy option is no active intervention. From Elmers Court to the west the policy is to hold the line but recognising the continued loss of European and national nature conservation designated habitats through coastal squeeze and the need for mitigation and compensation elsewhere.

262. In the context of these large scale changes, any impacts of the ferries on the coastal zone will be insignificant and local to the estuary. Mitigation is proposed by way of the recharge scheme within the estuary. I have concluded that it has a high chance of successfully delivering benefits to the European sites that would be more than sufficient to offset the likely worst case ferry impacts.

263. The suggestion that the ferry operation has an impact on the sea defences at Lymington was not supported by any evidence nor was LHC concerned.

264. The shore and recharge works proposed are compatible with shoreline management planning and meet the guidance in PPG20 on coastal planning. The project is consistent with policy CS6 of the NFDC's Core Strategy which deals with flood risk and refers to '*a sustainable and practicable approach to coastal protection and flood defence for the built up areas.*' The policy also refers to the provision of replacement habitats in mitigation for continuing to maintain some of the sea defences along the coastline. The recharge works would help to delay the breakthrough of Boiler Marsh and consequential accelerated erosion of the marsh behind it. The project is also consistent with the objectives of the NFNPA Core Strategy and Development Management DPD policies CP4 and DP4 on climate change and flooding and the coast.

Issue c) The effect on the purposes of the National Park and the nearby Conservation Areas

265. The SOCG confirms that the South Hampshire Coast Area of Outstanding Natural Beauty was de-designated when the National Park was created. The recharge site is within the National Park and the ferry terminal directly abuts the Park boundary.

266. The ferry operation has been assessed as likely to result during its lifetime in the loss of between 0.8ha and 3.2ha[21] of mudflat and a wider channel. This is in the context of an estuary where much of the mudflats will be lost anyway over the next 100 years as a result of natural processes. I agree with the LPAs that in visual impact terms the loss is minor, bearing in mind that the recharge/habitat creation works would stabilise an area of eroding saltmarsh.

267. It was clear to me from my visits both by boat to Boiler Marsh and to the foreshore nearby that the visual impact of the recharge works would be limited. Other than the temporary pipe and mooring of a barge near Pylewell Post whilst the sediment was being laid, which would not look out of place in the estuary where there are moored boats and other structures, the only noticeable change in the view would be the retaining structures. The landscape and seascape of the National Park are of significant importance but these would not be large features and I agree with the NFNPA that the recharge works would not impact significantly on the character of the area or on the appearance of the marsh. Thus they would comply with the NFNPA Core Strategy and Development Management DPD policy DP5.

268. The shore works are limited to the immediate area of the ferry terminal and the berths and alter and replace existing structures/works in order to properly accommodate the new larger ferries. The NFNPA concluded in its committee report that '*the shore works are not considered to impact on the existing character of the locality given the context of the existing ferry terminal'.* The NFDC also concluded that the proposed shore works would have '*a negligible visual impact'* and '*would not look out of place in the context of the ferry terminal*'. Thus the physical works proposed would comply with the first statutory purpose of conserving and enhancing the Park's natural beauty, wildlife and natural heritage and the NFNPA have confirmed there would be no impact on the other purposes of the National Park.

269. For the same reasons there would be no adverse impact on the Forest South East Conservation Area, within the National Park and adjacent to the ferry terminal. The Lymington and Kings Saltern Conservation Areas are on the other side of the river and any views of the shore works would be in the context of the existing ferry terminal and berths. I conclude that there would be no material harm to either the character or appearance of the Conservation Areas or their settings, and thus the proposals would comply with national legalisation, with PPS5 and with the objectives of the LPAs' Core Strategies.

270. There were objections to the appearance of the ferries on the river. This was rejected by the LPAs as not being a legitimate planning reason for opposing the appeal applications. I am of the same view. The appearance of

[21] On the basis of the NE agreed 1.4ha plus the 0.2ha additional impact from the increased trippage to 18,000 pa and the +/- 2 error band.

the ferries in motion is too remote from the matters subject to planning control, and the effect transient, to support this as a reason for their refusal.

Issue d) The effect on traffic, congestion and highway safety

271. The SOCG confirms agreement that: the proposed development would not result in a material increase in traffic movements (including HGV freight) or passenger numbers; the assumed worst case (that each W class vessel operates at full capacity) would result in a <10% increase in traffic movements; the local highway network is operating below capacity; such additional traffic would not result in a significant adverse impact on the local highway network; the relatively small increase in traffic generation expected would not be a significant cause of concern in terms of a risk of increased animal road deaths in the New Forest. Highway matters were not a putative reason for refusal.

272. Nevertheless objectors at the inquiry raised highway and transport concerns and the applicant put forward further highway evidence.

Traffic generation

273. The W class ferries have a carrying capacity of 65 car equivalent units (CEU) compared to the 52 CEUs of the C class. It has 110 lane metres of freight space; the same as the C class. At full capacity it can carry 13 more cars per trip. The configuration of the W class ferries with a garage deck and a fixed mezzanine allows flexibility as to the mix of cars and freight. Contrary to some representations that suggested the ability to carry very high vehicles gives the Lymington ferry an advantage, the clearance on the W class is less than that on the Red Funnel ferries from Southampton to Cowes. The A337 rail bridge height restriction also limits the ability of HGVs to use the Lymington ferry.

274. Traffic volumes are relative to the number of ferry trips. I have concluded that 18,000 trips per calendar year would be acceptable. This is around 15% less than the annual trippage of the C class ferries. Since 2009, when the W class was introduced, there has been a reduction of more than 20% in the annual number of trips. The decline in the actual number of ferry trips in 2009 and 2010 may be due to economic conditions. However to be technically robust, the ES assessed traffic impacts based on the W class operating at full capacity and at an assumed frequency of 4 sailings per hour.

275. On this worst case the predicted percentage increase in weekday and weekend traffic movements would be less than 10% and the ES concluded that the '*W class ferry will not have an adverse impact on highway capacity, resulting in no significant environmental effects*.' The Highway Authority has accepted this assessment.

276. To verify that the 2008 and 2010 traffic data analysis was still valid, further surveys were undertaken in June 2011 which confirmed that traffic movements remained broadly similar. Undershore Road operates well within its estimated capacity with around 50-60% of traffic (during busy periods) being related to the terminal. The W class has not been shown to cause a dramatic increase in traffic along Undershore Road as has been suggested.

Queues at the level crossing

277. As to complaints about lengthier delays at the level crossing, traffic has to queue when the gates are closed. The length of the closure is dictated by railway safety requirements. But once they reopen it was accepted by Dr Mackenzie that the queue dissipates quickly. It will be worst when the level crossing closure coincides with the ferry unloading. But assuming the ferry is at full capacity and allowing for other traffic joining the queue, Mr Tregear's professional judgement was that queuing back to the Waggon and Horses public house would be unlikely to occur regularly.

278. The Redrow development to be built next to the railway is to have a new signal crossed junction close to the level crossing. The transport assessment for that development, and the Highway Authority in its considerations, would have had regard to the amount, character and source of the existing traffic including that generated by the ferries.

HGV movements at night

279. The first ferry sailing from Lymington is at 03.45 hours in the summer and the last sailing is 23.59 hours. Comparing the HGV traffic for the 24 hour period with the 16 hour data shows that between 00.00 and 06.00 hours 17 HGVs were recorded travelling eastbound (towards the terminal) on the Wednesday with the average over the week of 12 HGVs. The maximum number of HGVs travelling west again on the Wednesday was 3 with an average over the week of less than 2 HGVs. This empirical evidence does not support Dr Mackenzie's evidence of being woken up during the early hours by convoys of lorries every 10 to 20 minutes travelling along Undershore Road. It also confirms that the vast majority of HGV movements are during the day.

280. The numbers of HGVs recorded are not untypical for night time movements and it is a reality of modern life that freight transport companies will often programme movements at night to avoid general day time road congestion. Also many of the freight vehicles on the first sailings of the day could well be travelling to the Isle of Wight to make early deliveries to food stores, etc.

281. The Highway Authority in its consultation reply to the NFDC did not consider that the introduction of the W class ferries was likely to attract significantly greater numbers of HGVs. Contrary to suggestions that Wightlink offers cheap rates to encourage commercial traffic to travel on the ferries at night, the Operations Director explained that the commercial rate is a flat rate for travel at all times.

282. There is no reasoned evidence that there has been an increase in commercial traffic at night related to the W class ferries such as to justify the refusal of planning permission. The LPAs were of a similar view as there is no putative reason for refusal on traffic grounds. I find no conflict with policy DP1 of the NFNPA Core Strategy and Development Management Policies DPD or with NFDC Core Strategy policies CS10 and CS24.

Issue e) The visual impact of the proposed works

283. This issue has already been considered above in the context of effect on the National Park and Conservation Areas. The conclusion is that there would be no adverse visual impact as a result of the recharge works or the shore works

and that arising from the passage of the ferries is not a matter that could properly lead to a refusal of planning permission for the appeal developments.

284. Objections to the visual impact of the shore works together with the vessels berthed in the altered/extended facilities are not well founded. The proposals are for relatively minor physical changes to the existing infrastructure. Whilst the superstructure of the W class ferries is bulkier than the C class, the setting is a busy open port on a navigable river and I find it difficult to see how in principle there could be a planning objection to the docking and berthing of vessels of a size capable of navigating the river. Views of the berthed vessels are at a distance and any impact is localised. I give this very little weight.

Issue f) The effect in terms of noise/environmental impacts

285. The NFNPA is satisfied that the recharge/habitat creation works would not give rise to any unacceptable noise or other pollution. Sediment and water quality have already been considered in relation to the conservation objectives of the European sites. Subject to the imposition of appropriate conditions the EA has no objections. As such the proposal complies with policies CP6 and DP1 of the NFNPA Core Strategy and Development Management Policies DPD.

286. There are residential properties close to the ferry terminal that are within the National Park. Representations were made to the NFDC at the application stage in relation to noise during the construction phase and disturbance as a result of the ferry operation including from maintenance work, tannoy announcements, alarm testing, exhaust fans and search lights. The Council's Environmental Health team considered these objections but raised no objection to the ferry operation subject to certain conditions being imposed to control the construction works and to approve details of the modified linkspan bridge.

287. Piling work to upgrade the berths would be limited in duration. Subject to appropriate conditions to cover the times and method of piling and the modifications to the linkspan bridge, both LPAs are agreed that there is no sustainable objection to the shore works on the grounds of noise or environmental impacts and there would be no unacceptable harm to either residential amenity or the tranquillity of the National Park. There would therefore be no conflict with PPG24, with the objectives of the NFDC's Core Strategy policy CS5 or with policies DP1 and CP6 of the NFNPA Core Strategy and Development Management Policies DPD.

288. The Lymington Society had concerns about disturbance to residents from HGV movements at night. These have been considered above. Having regard to the advice in PPG24 on planning and noise, there is no evidence to indicate that the numbers of HGV movements associated with the ferry terminal would be likely to give rise to unacceptable internal night time noise levels in properties along Undershore Road. The level of night time HGV movements is not a sustainable reason to refuse the grant of planning permission for the shore works and for the recharge works.

289. Objections were made about disturbance from lights on the ferries when docked and tannoy announcements. These are required for safety reasons. The Marine Coastguard Agency sets the minimum decibel level for safety announcements. Similar announcements were made on the C class ferries and there were more C class trips each year. As they are a health and safety requirement, the NFDC committee report advised that this took precedence

over any nuisance action. Similar considerations apply with respect to the mezzanine deck alarms and safety lighting on the vessels when docked. I do not consider it would be appropriate to control these matters by condition.

Issue g) The benefits attached to the proposed project and the implications if it is refused

290. The landward element of the shore works is needed to improve accessibility and convenience for foot passengers getting on and off the ferries. The covered passenger ramp designed for use with the C class ferry does not line up with the doors on the W class. Foot passengers have to walk along the linkspan bridge used by the vehicles. It is open to the weather, has an uneven and sometimes wet surface unsuitable for those with pushchairs or wheeled suitcases or anyone in a wheelchair. Its use delays the unloading of vehicles and slows down the ferry's turning round time. The berths and fenders need to be upgraded to align with the different height and shape of the W class ferries. For similar reasons, the linkspan bridges also need to be modified. These works are long overdue and would benefit all users of the ferries.

291. The benefits of the recharge works are described above in terms of both offsetting any adverse impacts of the operation of the ferries but also in delivering real benefits in conservation terms by habitat creation and enhancement in an area that is subject to long term irreversible decline.

292. The applications were supported by a socio-economic report which examined the potential impacts of the ferries' continued operation on the economies of the Isle of Wight and the New Forest area.

293. The Isle of Wight Council and the Island's MP have written of the importance of the route to the Island's economy. Further evidence was given at the inquiry including from the Yarmouth Harbour Commissioners as to the adverse consequences if the ferry ceased to operate. Many letters made at the application stage, and also at the appeal stage, from those living on the Island as well as on the mainland supported the continued ferry operation. Dr Hinton spoke about the various groups including commuters, school and college pupils who relied upon the ferries and the reverse traffic of tourists and visitors to the Isle of Wight supporting local businesses in West Wight which is particularly locationally disadvantaged.

294. The Isle of Wight proposed submission Core Strategy supports the existing ferry crossings as being of strategic importance to ensure future flexibility and the deliverability of services. In its representations the Council specifically referred to the Lymington to Yarmouth ferry route as '*a vital component of the Island's economy*' and that its loss '*would have a severe and detrimental effect on the Island's economic well being*'. Hampshire County Council's Third Local Transport Plan similarly describes the ferry service as providing '*an important link with the Isle of Wight'*, especially for those coming from the South West. Its mainland train link is a particular advantage.

295. The economic importance of the ferry operation is agreed in the SOCG and the principal adverse economic and social effects if it were to close are listed. They range from the loss of jobs and visitor spending to increases in travel times, increases in vehicle operating costs, and general competitive disadvantage for local firms and significant inconvenience for all present and future ferry users.

296. The economic losses and associated negative social impacts are even more significant when seen in the context of the Isle of Wight's geographic isolation which even with the Lymington to Yarmouth ferry link continues to undermine the Island's competitive position and disadvantage its economy.

297. The evidence to the inquiry, to which I give significant weight, is that if Wightlink were prevented from operating the W class ferries, in which it has made a substantial capital investment, it would mean the cessation of the service between Lymington and Yarmouth. The suggestion that different vessels operated by a different company could operate the route was mere speculation, unsupported by any evidence, and refuted by Wightlink.

298. Wightlink did initiate a worldwide search but found no other vessels currently available that could be used to maintain the service. The route requires a very specific type of vessel as the river is narrow, has shallow water, a number of bends and is used by a very large number of leisure vessels. The ferries have to be very manoeuvrable and able to operate '*double ended*' because of the lack of space at the berth to turn around. Given the constraints, a ferry of very similar dimensions and features to the W class would be required. To start again and design and build a new ferry would take at least 3-4 years. Whilst it would be a primary design objective to limit the new vessel's impacts on the European sites, it would not be possible to confirm until the vessel was in the water that impacts would be acceptable to NE and the competent authorities.

299. I take very seriously the evidence of Wightlink that should permission not be granted and should DEFRA consider it necessary to issue a special nature conservation order (SNCO) to restrict the operation of the ferry, it could result in the ferries being withdrawn from service. Whether if that happened there would be a realistic prospect of the ferry service being reinstated is uncertain.

300. The socio-economic arguments did not form part of the considerations in respect of the AA. I have concluded above in terms of the Habitats Directive and Habitats Regulations that the operation of the W class ferry would have no adverse effect on the integrity of the European sites. However it is important when weighing all the considerations in the balance that regard is also had to the implications and possible outcome if permission were to be refused. I consider these to be very significant and they weigh heavily in favour of the grant of permission for both the shore works and the recharge scheme.

Issue h) Compliance with development plan policies

301. The formal development plan comprises the South East Plan and the Core Strategies that have been adopted by the two LPAs. The SOCG sets out the planning policies considered to be relevant to the determination of these appeals. From my consideration of the main issues I am satisfied that the applications, when subject to appropriate conditions and the S106, would comply with all relevant policies.

302. The only development plan policies cited in the LPAs' putative reasons for refusal relate to habitat matters. The reasons were dependent on the position taken by NE on these matters. NE's position was made clear at the opening of the inquiry and confirmed in closing that it was now satisfied that the project, of which the appeal proposals are two elements together with the operation of the W class ferries, would not have an adverse impact on the integrity of the European sites.

303. I have set out above my reasons and conclusions as to why I accept NE's position, as the appropriate nature conservation body, on all matters, bar the number of ferry trips annually. In the light of my conclusions on the AA, and having ascertained that the project will not adversely affect the integrity of the European sites, I have concluded as the competent authority that the project can be agreed.

304. Having come to that conclusion, there is no breach of NFNPA Core Strategy and Development Management Policies DPD policies CP1 and CP2 (in respect of the SSSIs) or NFDC Core Strategy policy CS3. I also find no conflict with PPS9 or with the objectives of NFDC Core Strategy policies CS1 (sustainable development principles), CS10 (d) (the spatial strategy) and CS25 (developers' contributions).

305. In addition, the applications by supporting the maintenance of an important ferry link to the Isle of Wight, accord with the Government's aims for sustainable development set out in PPS1 on Delivering Sustainable Development, PPG13 on Transport and in the draft National Planning Policy Framework (NPPF); with the Local Transport Plan; and with policy SP7 of the proposed submission Core Strategy for the Isle of Wight.

306. The appeal proposals would deliver high quality development through the upgrading of existing facilities and efficient use of materials and resources and would encourage accessible transport and promote social inclusion. As such they accord with NFDC Core Strategy policies CS10 and CS24.

307. The Government has indicated through the Ministerial statement on Planning for Growth and the draft NPPF, that it expects planning authorities to give greater weight to the local economic benefits of development proposals. I have set out above the economic benefits of the development and also the economic impacts if permission were to be refused.

308. In respect of issues b), c), d) and f), I have already concluded that the proposals would accord with PPG20, PPG24 and PPS5 and there would be no conflict with policies DP1, DP4, CP4 and CP6 of the NFNPA Core Strategy and Development Management Policies DPD or with policies CS5, CS6, CS10 and CS24 of the NFDC Core Strategy.

Green Belt policy

309. There is one policy matter outstanding in that the shore works fall within the defined South West Hampshire Green Belt. Green Belt policy is set out in PPG2 and the District Council's Core Strategy policy CS10 (o) refers to retaining and supporting the Green Belt in order to … '*preserve the setting of towns and villages, in particular the historic towns of Ringwood and Lymington'*.

310. Whilst the shore works consist essentially of operations to alter and replace existing maritime structures, I consider that the changes, including those to the passenger walkway and ramps, fall to be considered in PPG2 terms as the construction of new buildings. They are outside any of the exceptions listed in paragraph 3.4 and would be inappropriate development. Inappropriate development is by definition harmful to the Green Belt.

311. In that the proposals are to alter and modify existing structures at the ferry terminal, their visual impact would be very limited in this already developed location and there would be no loss of Green Belt openness. All the works are

within the current terminal site and would replace existing structures. From what I saw on my visit any impact on the stated purpose of including the land in the Green Belt would be extremely small.

312. In view of the presumption against inappropriate development, paragraph 3.2 of PPG2 indicates that substantial weight must be attached to the harm to the Green Belt. Very special circumstances to justify inappropriate development will not exist unless the harm by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations.

313. A number of matters are put forward as weighing in favour of the proposals. The Lymington Pier is a long standing and essential transport facility which is of strategic importance and is required for the use of the ferries. The shore works could not sensibly be constructed elsewhere. They are needed to facilitate the safe and convenient ferry operation. These are important considerations to which I attach considerable weight.

314. The existing arrangements provide less than desirable accessibility for foot passengers. The shore works would provide improved access arrangements making them safer, more efficient and fit for purpose with separate access and egress arrangements for passengers and vehicles. They would facilitate disabled access to the ferries. The modified berthing arrangements would improve the ferry operation and improve turn round times and safety. These are all substantial benefits to which I attach very considerable weight.

315. I conclude that the other considerations, as a whole, clearly outweigh the identified harm, including that by reason of inappropriateness, such that very special circumstances to justify the development exist.

Conditions and legal obligations

316. Suggested conditions were discussed at the inquiry. For the avoidance of doubt and in the interests of the proper planning of the area, conditions are needed to confirm the approved plans and to clarify that the detail of the recharge works are described in the submitted application, in the ES and in the DAS. Further details are needed of the materials to be used for the passenger walkway to ensure its acceptable appearance. In order to minimise the potential for noise as vehicles move onto the ferry over the modified linkspan bridge, details of its design and the materials to be used should be agreed before the modifications are carried out.

317. To limit the potential for disturbance to those living near the terminal, it is necessary and reasonable to restrict the times when construction works and deliveries can take place and, in the interests of highway safety, to ensure there is parking and turning provision on site. Similarly it is relevant, reasonable and necessary to have a condition to confirm that vibro-piling is preferred, both to minimise noise nuisance to residents and to protect migratory salmonids, but if percussive piling needs to take place that advance notice is given to local residents and the LPAs. The times when piling can be carried out should also be restricted: during the week to avoid unsocial hours, and to the period 1 December to 15 March inclusive to prevent disturbance to migratory salmonids. To protect the watercourse, a condition is needed to ensure that all debris and surplus materials are removed.

318. The specific provisions of the S106 have been considered with regard to issue a) above. I have concluded that it meets the tests of both the CIL Regulations and the Circular and is a material consideration to which I have attached very considerable weight in my determination of these appeals.

Conclusion on the ES

319. I have considered the adequacy of the ES. I am satisfied that it provides adequate information on the likely main impacts of the proposals and the mitigation measures that may be required. As such I take the view that the ES is adequate and meets the requirements of the relevant Regulations.

Other matters

320. In this decision I have concentrated on what I identified at the inquiry as the principal important controversial issues. Many other matters were raised in written representations and at the inquiry that I have not addressed either because they are encompassed in the main issues, even if not specifically so described, or because they are peripheral to the main issues or because they relate to matters that are outside the auspices of the planning system.

321. However one matter raised which I do think needs to be addressed is the question of environmental damage and the provisions of the Environmental Damage (Prevention and Remediation) Regulations 2009. The ED Regulations transpose the requirements of Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage.

322. DEFRA guidance clearly indicates that the ED Regulations are intended to cover '*only the most serious cases*'. It advises on what constitutes environmental damage and how it should be assessed including the scale and severity of the impact. Whilst it has been alleged that the ferries are causing environmental damage that would be captured under the ED Regulations, NE has consistently advised that the ferries are not currently having an adverse effect on the integrity of the European sites. Consequently there is no evidence that the ferries are currently causing damage to the protected sites, let alone environmental damage under the ED Regulations.

Overall conclusion

323. I have concluded, having regard to the project as a whole, including the ferry operations, that it will not adversely affect the integrity of the Natura 2000 sites and there would be no damage to the SSSI. Having considered all other matters, I am satisfied that the appeal developments accord with the provisions of national and local planning policy and are acceptable. Accordingly for the reasons given above I conclude that the appeals should be allowed and planning permission granted.

Mary O'Rourke

Inspector

APPEARANCES

FOR THE LOCAL PLANNING AUTHORITIES:

Gordon Nardell QC	Instructed by the solicitors for the respective authorities. He did not call any witnesses but tendered the proofs of Christopher Elliott (for NFDC) and Rob Ainslie (for NFNPA) as written statements to the inquiry.

FOR WIGHTLINK LTD:

David Elvin QC and James Maurici of Counsel	Instructed by James Good of Berwin Leighton Paisner LLP
They called	
Paul Tregear BSc BPhil MICE MRTPI	Director, PFA Consulting
John Burrows	Operations Director, Wightlink Ltd
Professor Jon Williams PhD BSc (Hons) PGCert (HE) FHEA	Head of Modelling and Research, ABP Marine Environmental Research Ltd
Colin Scott BSc (Hons) MSc	Principal Environmental Consultant, ABP Marine Environmental Research Ltd
Ian Gilder MA DipTP MRTPI FRSA	Head of Planning, Environmental Resources Management

FOR NATURAL ENGLAND:

James Burton of Counsel	Instructed by Laura Graham of Browne Jacobson LLP
He called	
Dr Jeremy Spearman BA MSc PhD	Principal Scientist at HR Wallingford Ltd
Dr Michael Dearnaley BSc PhD	Director responsible for Estuaries, Coasts, Dredging and the Environment at HR Wallingford Ltd
Dr Claire Lambert BSc (Hons) MSc PhD	Coastal Lead Adviser for Natural England

FOR THE LYMINGTON RIVER ASSOCIATION:

Michael O'Flynn BSc MSc	Representing the LRA who gave evidence and asked questions of the witnesses for Natural England and for Wightlink.
Professor Kenneth Pye ScD PhD MA CGeol FGS	Director of Kenneth Pye Associates Ltd, environmental geoscience consultants, who gave evidence and asked questions of the witnesses for Natural England and for Wightlink.

FOR THE LYMINGTON SOCIETY:

Dr Donald Mackenzie	Press Spokesman for the Society and Spokesman on the Wightlink W class ferries who gave evidence and asked questions of the witnesses

	for Natural England and for Wightlink.
Edmund Sutton	Chairman of the Society

FOR PETER HEBARD:

Peter Hebard BSc CEng FIMechE	Who gave evidence and asked questions of the witnesses for Natural England and for Wightlink.

INTERESTED PERSONS:

Anna Rostand	Major of Lymington and member of the New Forest District and Lymington Town Councils
Barry Vaughan	Ship Master and Wightlink Captain
Dr Kenneth Hay	Local resident and member of the LRA
Michael Derrick	Local resident
Marion Jakes	Local resident
Dr Brian Hinton	Resident of the Isle of Wight
Andrew Pearson	Local resident
Martin Walbank	Local resident

GENERAL DOCUMENTS HANDED IN AT THE INQUIRY

1 NFNPA letter of notification of the inquiry and list of those notified
2 List of Core Documents and detailed breakdown of CD/3.1 to CD/3.16
Inspector's note: At the inquiry an additional document was provided as CD/6.34 - Extract from DEFRA website on sea level rise
3 Certified copy of the executed S106 Agreement dated 21 October 2011 (sent by covering letter to PINS from Berwin Leighton Paisner of the same date)
4 Letter dated 11.10.11 from Hampshire and Isle of Wight Wildlife Trust
5 Letter dated 11.10.11 from the Yarmouth (Isle of Wight) Harbour Commissioners
6 Letter dated 13.10.11 from Andrew Turner MP for the Isle of Wight
7 Statement to the inquiry by Councillor Mrs Anna Rostand
8 Statement to the inquiry by Mr Vaughan
9 Statement to the inquiry by Dr Hay, his paper dated 5.9.11 on thruster damage (originally sent in by the LRA), hard copies of attachments to that paper and comments on ABPmer rebuttal of his submission on thruster damage.
10 Statement to the inquiry by Mr Derrick and various documents produced on 21.10.11
11 Appellant's note dated 21.10.11 on documents produced by Mr Derrick
12 Statement to the inquiry by Mrs Jakes
13 Statement to the inquiry by Dr Hinton
14 Statement to the inquiry by Mr Pearson
15 Statement to the inquiry by Mr Walbank and attached figures I to III
16 Letter dated 20.10.11 from Mrs Jakes about the site visit
17 Lymington Tidal Planner

LOCAL PLANNING AUTHORITIES' DOCUMENTS HANDED IN AT THE INQUIRY

NFDC/5 and NPA/4	Opening statement on behalf of the local planning authorities

NFDC/6 and NPA/5	Potential timeline for committee determination of the re-submitted applications
NFDC/7 and NPA/6	Closing submissions on behalf of the local planning authorities

APPLICANT'S DOCUMENTS HANDED IN AT THE INQUIRY

APP/GEN/1	Draft S106 Agreement dated 11.10.11 A Briefing note on S106 Agreement for inquiry session 12.10.11 B Wightlink's response to comments made by Rule 6 parties C, D and E Amended versions of the S106 dated 14.10.11, 17.10.11 and 21.10.11 09.00 hours Inspector note: Final certified S106 Agreement is included as General Inquiry Document 2 above
APP/GEN/2	Opening submissions on behalf of the applicant
APP/GEN/3	List of appearances
APP/GEN/4	A Draft conditions for the NFDC Shore Works application B Draft conditions for the NFNPA Recharge Works application C Final agreed conditions for the NFDC Shore Works application D Final agreed conditions for the NFNPA Recharge Works application
APP/GEN/5	Email exchange between Mr Gilder and the Lymington Town Clerk in September 2011 about the Lymington and Pennington Community Forum
APP/GEN/6	Minutes of the 2008, 2009, 2010 and 2011 Annual General Meetings of the Lymington Society
APP/GEN/7	Chairman's Report for the AGM of the Lymington Society held on 18.3.09
APP/GEN/8	Information on Red Funnel vehicle ferries operating between Southampton and East Cowes and maximum height of 4.9m
APP/GEN/9	Note on the publication of the Environmental Statement (attached by Inspector to Ian Gilder's appendices APP/IG/3)
APP/GEN/10	Lymington River Association's accounts, certificate of incorporation, memorandum of association, company appointments and articles of association
APP/GEN/11	Closing submissions on behalf of the applicant
APP/GEN/12	WWF UK Ltd v Secretary of State for Scotland [1999] Env. L.R. 632 referred to in closings
APP/JRB/5	Lymington-Yarmouth Trippage Report 2011 (attached by Inspector to John Burrows' appendices APP/JRB/3)
APP/JW/4	Note on the tidal prism associated with the marina (attached by Inspector to Jon Williams' appendices APP/JW/3)
APP/JW/5	Diagram provided by Professor Williams' to show tidal 'pumping' (attached by Inspector to Jon Williams' appendices APP/JW/3)
APP/CS/5	Plot of the modelled trajectory for the worst case ferry effect with and without operational mitigation measures for trippage and ferry speed (attached by Inspector to Colin Scott's appendices APP/CS/3)

NATURAL ENGLAND'S DOCUMENTS HANDED IN AT THE INQUIRY

NE1	Opening submission on behalf of Natural England
NE2	Closing submission on behalf of Natural England

LYMINGTON RIVER ASSOCIATION'S DOCUMENTS HANDED IN AT THE INQUIRY

LRA1	Summary of statement of case handed in on morning of 13/10/11
LRA2	LRA comments on the draft S106 Agreement with attached email of 13.10.11 from Richard Buxton
LRA3	Letter dated 18.10.11 from Richard Buxton providing information about the LRA with attached witness statement and Hansard extract
LRA4	Closing submission for the LRA

LYMINGTON SOCIETY'S DOCUMENTS HANDED IN AT THE INQUIRY

LS1	Dr Mackenzie's opening statement
LS2	Statement of Mr Sutton given at the inquiry
LS3	Minutes of meetings of the Executive Committee of the Lymington Society between July 2007 and October 2011
LS4	The Society's transcript of the public meeting called by the Society in November 2007 regarding the new ferries proposed by Wightlink
LS5	Dr Mackenzie's closing statement

MR HEBARD'S DOCUMENTS HANDED IN AT THE INQUIRY

PH1	Mr Hebard's opening statement with his own handwritten additions
PH2	Mr Hebard's statement entitled evidence in chief
PH3	Note drafted by Mr Hebard entitled 'Position of the Rule 6 Parties on the 106 Agreement' – not agreed
PH4	Mr Hebard's recommendations for matters to be included in the S106 Agreement
PH5	Extract from the DEFRA website on projected future changes in relative sea level in the Lymington Estuary with attached page from J Haigh et al/Continental Shelf Research 29 (2009) 2083-2098 page 2098
PH6	Mr Hebard's closing statement

PLANS

A	Applications' drawings are listed and provided as CD/1.14
B	Relevant plans and pictures of the general arrangements of the C and W class ferries, the Yarmouth and Lymington terminals, navigation posts in the Lymington River, a context plan and photographs of the C and W class ferries provided by the applicant as APP/Plans/1
C	Plans and photographs of the proposed recharge area at Boiler Marsh provided by the applicant for the site visit on 10.10.11

Annex A

APP/B1740/A/11/2152093

NFDC Ref. 10/96387

Schedule of Conditions

1) The development hereby permitted shall begin not later than three years from the date of this decision.

2) The development hereby permitted shall be carried out in accordance with the following approved plans: 100701-01 Rev B, 100701-02 Rev B, 100701-03 Rev B, 100701-04 Rev B, 100701-05 Rev C, 100701-06 Rev C, 100701-07 Rev C, 100701-08 Rev D, 100701-09 Rev C, 100701-10 Rev C, 100701-11 Rev C and the Shore Works Site Plan Rev 1.

3) No part of the development that comprises the passenger walkway hereby permitted shall take place until samples or exact details of the facing and roofing materials to be used have been submitted to and approved in writing by the local planning authority. Development shall be carried out in accordance with the approved details.

4) Before the permitted modifications are made to the linkspan bridge, details of the design and materials to be used to minimise the noise arising from vehicles using the linkspan bridge and its opening/closing shall be first submitted to and approved in writing by the local planning authority. The modifications shall be carried out in accordance with the approved details and thereafter retained.

5) No construction works or deliveries shall take place outside the following times:-
07.00 hours to 19.00 hours Monday to Friday,
07.00 hours to 13.00 hours Saturdays and Public Holidays
unless with the prior written approval of the local planning authority.

6) Details of provision to be made during the construction period for the parking and turning of construction and operatives' vehicles on land clear of the public highway shall be submitted to and approved in writing by the local planning authority and fully implemented before development commences. The approved provision shall be retained for the duration of the construction period.

7) Upon completion of the construction works all debris and surplus material shall be removed from the banks of the watercourse.

8) Piling works shall only be carried out during the period between 1 December and 15 March inclusive.

9) Only vibro-piling shall be used during the construction works unless prior notification, including the reasons why percussive piling needs to be used and details of any measures to be used to mitigate noise impacts, has been given to the local planning authority and to all residential properties within 400 metres of the location of the piling works no later than 18.30 hours on the day preceding the intended percussive piling. No piling shall taken place outside the hours of 08.00 to 18.30 hours Monday to Friday and at no time on Saturdays, Sundays or Public Holidays.

End of Annex A

Annex B

APP/B9506/A/11/2152094

NFNPA Ref. 10/95896

Schedule of Conditions

1) The development hereby permitted shall begin not later than three years from the date of this decision.

2) The development hereby permitted shall be carried out in accordance with the following approved plan: Recharge and Habitat Creation Works Site Plan Rev 0.

3) The development hereby permitted shall be as described on the application form, as amplified by the description in Section 2.3 in the Environmental Statement November 2010 and in Section 3 of the Design and Access Statement November 2010.

End of Annex B