

Town & Country Planning Act 1990 Section 77 Anglesey County Council Planning Application by Anglesey Boat Company Ltd.

Gallows Point Marina Report L6805/
X/00/513782

6. The Likely Effect on Areas of Ecological Importance

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Impact upon Landscape and Planning Policies

6.1 Case for the Applicants

- 6.1.1 The loss of inter-tidal area would have no significant effect on the proposed Marine Nature Reserve. The area affected by the development was surveyed in 1983 and 1998 (ES Doc 9, section 9.3). The habitats and communities were typical of other areas in the Strait, with no uncommon species observed. The mussel bed dredging operation has led to modification of the area and the communities present.
- 6.1.2 The development would cause the displacement of birds that would otherwise visit the area. There are however alternative locations in the Strait with sufficient carrying capacity for the displaced birds in the eastern Menai Strait, and there would be no significant effect due to bird displacement on the SPA. This is agreed in the evidence submitted by the CCW.
- 6.1.3 The potential for indirect effects on ecology has been studied extensively to identify any likely changes in water/tidal and sediment movements (hydrodynamics and geomorphology), which could result from the construction and operation of the marina. The results of these studies have then been used to inform the assessment of potential changes to the adjacent inter-tidal and sub-tidal biological communities, taking into account their nature conservation designations as appropriate. The following studies have been undertaken:

- Qualitative analysis of marina placement on hydrodynamics and geomorphology (Doc ABC3, section 3.2)
- Mathematical modelling of marina placement on hydrodynamics and geomorphology (section 3.2)
- Survey and assessment of baseline sub-tidal ecology adjacent to the site (section 4.4)
- Assessment of dredging on adjacent marine communities and shellfisheries (section 3.3.4)
- Potential for pollution from operational marina activities on marine communities and shellfisheries (section 3.4.3)
- Influence of marina operation on birds (section 4.5)

- 6.1.4 With regard to tidal circulation and sediment movement, a large body of evidence is available including detailed 2-dimensional hydrodynamic modelling, indicating that the development of a marina at Gallows Point would have no significant effect on tidal circulation outside the marina footprint. Gallows Point Bay is considered to be ideally suited to marina development, as it forms a backwater adjacent to the main channel. There would be no significant change to tidal currents or velocities caused by the marina development and, therefore, there would be no change to sediment movement.
- 6.1.5 Several surveys have been undertaken of the sub-tidal ecology of the main channel adjacent to Gallows Point, concentrating on the 'deep hole' area at the confluence of the River Ogwen and the main channel. The deep hole does not support a particularly diverse biological community, but has an interesting clay cliff feature that supports a population of piddocks (bivalves which bore into the substrata). The piddocks have been variously described as nationally scarce by CCW and others. However, the population of piddocks and the deep hole habitat would not be significantly influenced by the marina development.
- 6.1.6 The proposed construction and maintenance dredging has raised concerns about its impact on ecology. Geophysical and sediment quality field surveys have confirmed that the sediment at Gallows Point is of a fairly coarse sandy nature, uncontaminated, with relatively low silt content.
- 6.1.7 Analysis shows that sediment plume dispersion would be limited to the local area as dredging operations would be limited to inside the breakwater in shallow waters. The possibilities of fugitive emissions in these circumstances are limited. However, to safeguard local marine ecology and the shellfisheries, a monitoring programme would be undertaken and actions prescribed to control the dredging operations.

- 6.1.8 Maintenance dredging would be at the most every 2 to 3 years and probably at longer intervals, and the dredged volumes would be approximately 10% of those during the construction phase. This would take place almost entirely within the marina basin, and no significant effects are predicted from this activity. The applicants have undertaken to dispose of all dredged materials at suitably licensed MAFF disposal grounds.
- 6.1.9 The proposed marina activities have the potential to be polluting if not adequately controlled. The range of activities identified in the ES includes fuel and oil storage, boat cleaning, boat and facilities building sewage disposal etc., as well as accidental spillages. The applicant Company has given an undertaking to implement an Environmental Management Plan that encompasses the Environmental Code of Practice from the British Marine Industries Federation. The Environment Agency, which has a statutory duty to protect water from polluting activities, is satisfied that the environment would be adequately protected given the application of suitable pollution prevention measures.
- 6.1.10 There would be potential disturbance to adjacent bird populations. Consideration has been given to the species for which the SPA is designated, but from monitoring experience elsewhere and relevant literature, it is concluded that the effects would not be significant.
- 6.1.11 CCW has recently raised the issue of potential disturbance from boating activities of the autumnal moulting bird species, notably great crested grebe, red breasted merganser and goldeneye. CCW has no data on the population numbers or locations of any of these species in the Menai Straits or Conwy Bay. Similarly, it does not have available any research on the implications of recreational sailing on disturbance to these moulting populations in coastal waters. These concerns are therefore unsubstantiated at this time. Supplementary evidence is provided to show that there would be no significant impacts on the bird population from the marina construction or its operation.
- 6.1.12 The need to balance human activities and the natural environment is acknowledged by CCW in the introduction to the proposed Marine Nature Reserve consultation document, where a specific paragraph deals with people's rights and the interference to their use and enjoyment of the Strait. The report states that "there is no chance that, for example, sailing and angling could be prohibited by CCW, even if we wanted to. In the end, the success of the marine nature reserve will depend upon CCW winning support and willing co-operation of the people. This can be achieved by persuasion and example, not dictat."

6.1.13 It is concluded that there is no real cause for concern for local ecology. However, if it is considered that a precautionary approach should be adopted, this could be achieved by the following approach:

As proposed at a meeting on 31 May 2000 with YMCC, CCW and the Environment Agency, the applicants have agreed to provide funding for a research programme to identify the numbers, locations and disturbance effects of sailing on moulting birds in the eastern Menai Straits.

In the event that the potential disturbance of the bird populations is regarded as significant, CCW could consider the use of recreational zoning of the disruptive areas within the SPA. This technique has been used successfully elsewhere to protect sensitive habitats and species in similar circumstances. An added benefit would be the wider public recognition of the nature conservation value of the SPA, proposed MNR and proposed SAC.

6.2 Case of the Countryside Council for Wales

6.2.1 Concern is expressed about the likely impact of the proposed development on nature conservation interests, in particular the proposed Menai Strait Marine Nature Reserve (MNR), the possible Menai Strait and Conwy Bay Special Area of Conservation (SAC), the Gallows Point Regionally Important Geological Site (RIGS), and the Traeth Lavan Special Protection Area (SPA).

6.2.2 The following nature conservation concerns were identified in July 1999, at the time of the planning application and the submitted ES (Doc CD9):

- The need for an "appropriate assessment" under Regulation 48(1) of the Conservation (Natural Habitats etc) Regulations 1994 in relation to the SPA or proposed SAC;
- Inadequate consideration of alternative sites for the marina proposal;
- ES conclusions about tidal flow changes, sediment transport and geomorphological and water quality issues were not substantiated, and were based on inadequate field data;
- The breakwater structure was considered to be ill-defined, being based on conjecture about the underlying geology - its modification could negate predictions about tidal flow, sediment transport, geomorphological and water quality changes;
- The ecological impact assessment was unsubstantiated, without assessments of the value of the sub-littoral habitat, bird usage of the area, geological and physiographic features.

- 6.2.3 Following receipt of the Supplementary Report to the ES (Doc CD10), in November 1999 CCW accepted the assurances of the developer on some issues but reiterated concerns over key elements of the proposal. The planning authority's consultants Enviros Aspinwall also evaluated the proposal and ES Supplementary Report (Docs CD11 & 12), and concluded that although generally adequate, several areas of concern remained, including validation of the hydrodynamic model and the socio-economic appraisal.
- 6.2.4 CCW maintains that the planning authority should have required an "appropriate assessment" under the "Habitats Regulations" before deciding to permit a project which may have a significant effect on a European site (SPA or SAC). This assessment is not the same as an Environmental Assessment and its conclusions must be based only on scientific considerations (Doc CCW7). The National Assembly now has the responsibility for making sure that an "appropriate assessment" is carried out before the planning application is determined.
- 6.2.5 The Traeth Lafan Special Protection Area (SPA) is designated for its wintering oystercatchers and curlew and its late summer moulting flocks of great crested grebes as well as nationally important numbers of shelduck, goldeneye, red breasted merganser, ringed plover, redshank and greenshank. Little information exists on the bird interest of the Gallows Point site itself and only one day of survey in September 1991 was included in the Supplementary ES. No information was provided by the applicant of birds, especially great crested grebes, red breasted mergansers and goldeneye, on the low water channel which could be impacted by increased navigation induced by the low tide access capability of the proposed development.
- 6.2.6 Since the preparation of the ES and Supplementary Report, a possible Special Area of Conservation (SAC) encompassing the Menai Strait and Conwy Bay has been submitted by the conservation agencies in advice to the National Assembly. This could be selected for designation on the basis of intertidal mudflats and sandbanks, subtidal sandbanks, reefs and the river lamprey, along with a series of other features. Initial assessment indicates that there are unlikely to be additional impacts on the possible SAC arising from the proposed development which have not already been addressed in relation to the proposed MNR.

- 6.2.7 The Marine Nature Reserve is proposed on the basis of the large variety of intertidal and subtidal communities/biotopes, the presence of nationally scarce and uncommon marine communities and the unique physiographic and environmental conditions. Of particular note in the Gallows Point area are subtidal reef communities and intertidal sediment communities on gradients of tide and wave exposure, a nationally uncommon faunal turf on subtidal mixed substrata, and nationally scarce subtidal clay and peat cliffs with piddocks.
- 6.2.8 Only limited data is available for the intertidal communities from the ES and Supplementary Report and access to the intertidal zone has been denied to CCW staff by the landowner. The shore appears to be predominantly sheltered mixed or muddy sand shore with boulders. The shore is not known to be species-rich or to support any uncommon or scarce communities, and a proportion has been modified by mussel dredges.
- 6.2.9 Data on the subtidal communities is limited. However within the 19m deep lying to the south of Gallows Point is a subtidal clay cliff with a community of piddocks which are nationally scarce. This is not a static feature as there is evidence of continual erosion of the clay associated with the tides and currents in the vicinity. A sponge dominated community recorded from the adjacent boulder and cobble slope is nationally uncommon with a rich faunal turf on tide-swept substrata. There is no evidence that the breakwaters would be a good habitat for sponges etc.
- 6.2.10 The RIGS at Gallows Point is a series of volcanic intrusions or dykes in the exposed rock along the upper shore. About 60% of this site would be covered by the landfill to create the car park and boat storage area. The infill area needs to be re-designed in an agreed manner to protect public accessibility and visibility of the RIGS.
- 6.2.11 Scientific evaluation of the impact of the proposed marina has included consideration of direct effects and indirect effects (loss of habitat under the development, changes to currents and sediment regimes and consequential impacts, pollution including oil, anti fouling, and sediment disturbance, etc), during both construction and operation of the facility. Much of this evaluation hinges on the predictions of minimal impact to currents and sediment regime made by the hydrodynamic modelling which still requires validation.
- 6.2.12 It is not conclusively proven that the influence of the proposed development on the tidal currents and sediment characteristics would be insignificant. Validation of the hydrodynamic model is required as noted by the Envirospire Aspinwall report on the Supplementary Report.

- 6.2.13 There remain matters to be agreed regarding the detailed conditions required to ensure that the assertions and commitments made in the ES and Supplementary Report are carried through to fruition, should the development be granted planning permission. These include an Environmental Management Plan, Codes of Practice for Construction and Operation, a Method of Working Plan and a programme of monitoring water quality, sediment plumes, impact on bird usage, changes in inter-tidal and subtidal biotopes and shoreline morphology.
- 6.2.14 CCW's overall conclusion is that the development is unlikely to have a significant effect on the proposed MNR, the possible Menai Strait Conwy Bay Special Area of Conservation (SAC) and Gallows Point RIGS, provided that the predictions of the ES are correct, and appropriate conditions and safeguards can be agreed and implemented. However, it is not proven that there would be no impact on features of the Traeth Lafan Special Protection Area (SPA).

6.3 Inspector's Conclusions (The bracketed numbers refer to source material in the parties' cases and documents)

- 6.3.1 The Assessor's Report (Appendix 1) deals with concerns about potential changes in currents and wave action, sediment loadings and the potential for the development to introduce contaminants into the surrounding water during dredging and operation of the marina (paragraphs A3.1-3.20).
- 6.3.2 I am in agreement with the Assessor's findings on these issues. The use of the Delft 2 hydrographic model to predict currents is considered to be fit for the purpose, and the outputs are likely to be acceptable indications of the scale and nature of any future changes to currents and sediment loadings (A3.6-7). Changes to the currents in the Strait, as a result of the development, would be likely to be insignificant in the region of the SPA, Beaumaris, the main channel or the "deep hole", and negligible in the inter-tidal area to the south-west of the site. Whilst there might be some slight change in currents and sedimentation pattern in the inter-tidal area to the south-west of the marina, it would affect only a small area, with an unremarkable ecology (A3.8).
- 6.3.3 The waters of the Menai Strait are naturally turbid, and mussel bed dredging already causes a degree of sediment disturbance. It is likely that sediment loadings from dredging for the marina construction would fall within acceptable parameters of the Shellfish Waters Directive, but monitoring and mitigation measures, as proposed in the Section 106 Agreement, would be essential. There is no evidence to show that long term changes to suspended sediment loadings would occur, and the hydrographic modelling shows that any effects would be insignificant (A3.10-13).

- 6.3.4 Maintenance dredging of the marina once in operation would have less of an impact than the construction work, although the material removed would be finer sediment. Provided that good practice, mitigation measures and monitoring were closely followed, sediment suspension should not be a problem (A3.14).
- 6.3.5 The risk of water contaminants from dredged material during construction has been analysed from the sediment on site. This revealed very low levels of metal content. The proposed mitigation measures and monitoring would cover many more potential contaminants, including organic chemicals, and a commitment is made to agree monitoring programmes and mitigation measures with the CCW and the Environment Agency. These checks would be incorporated into an Environmental Management Plan, and the Assessor can find no reasons to expect significant widespread problems of contamination from dredging (A3.15).
- 6.3.6 The bacteriological water quality of the Strait has been improving, and the mussel farmers are concerned about possible sewage disposal contamination from boat users in the marina (A3.16). The effect of the marina development on bacteriological water quality depends on strict control of toilet waste disposal from up to 450 boats with on-board facilities. As the Assessor concludes, it is not the use of on-board toilets that would cause contamination problems, but whether the waste is discharged into the sea (A3.17). The likelihood of significant problems occurring would be small if the rules on disposal of waste were rigorously applied (A3.18).
- 6.3.7 The statutory controls and guidelines to prevent sea contamination from anti-fouling paints containing TBT are already employed in the applicants' existing boatyard and would be incorporated into design plans and the proposed Section 106 Agreement for the development. These would be in place to ensure that no copper contaminants would be allowed to cause ecological harm around the proposed marina (A3.19). Safeguards agreed with the Environment Agency, included in the draft Section 106 Agreement, appear adequate to deal with these and other wastes from the development (A3.20).
- 6.3.8 With regard to the marine ecology in this area, the Menai Strait is an important conservation area, mainly for wildfowl and wading birds. The application site lies close to the large area of the Traeth Lavan SPA, which is classified under Article 4 of the EC Directive on the Conservation of Wild Birds (79/409/EEC) (The Birds Directive), and the proposed Menai Strait and Conwy Bay Special Area of Conservation (SAC), to be designated under the EC Directive on the Conservation of Natural Habitats and of Wild Fauna & Flora (92/43/EEC)(The Habitats Directive).

- 6.3.9 The site also falls within the proposed boundary of the Marine Nature Reserve, to be designated under Section 36 of the Wildlife and Countryside Act 1981. The purpose of the MNR would be to provide opportunities for the study of marine flora and fauna, geographical or physiographical features of special interest in the area.
- 6.3.10 The SPA and SAC designations are intended to protect the habitats of threatened species of wildlife. Article 4 of the Birds Directive requires that special measures should be taken to conserve the habitat of species listed in Annex 1 of the Directive in order to ensure their survival and reproduction in the area of distribution. Article 6(2) of the Habitats Directive requires appropriate steps to be taken to avoid significant deterioration of natural habitats and the habitats of species for which the SPA and SAC sites have been designated. However, none of the birds listed in Annex 1 of the Directive are present in surveys of the eastern Menai Strait.
- 6.3.11 My Assessor concludes that the most contentious issue is the potential impact of the development on the SPA, the bird habitat (A4.3). As the CCW states (6.2.14), provided that the predictions in the ES are correct, and with sufficient conditional safeguards in place, the development is unlikely to have a significant effect on the proposed MNR or SAC, or the Gallows Point RIGS. However, Dr Holt agrees with the CCW, that it is not proven that there would be no impact on the Traeth Lavan SPA.
- 6.3.12 Although the development site lies outside the SPA, it would be included within the proposed SAC, and it is possible that the development would have a significant impact upon the wildlife of the Traeth Lavan. Therefore, before any consent, permission or authorisation is given for the proposed marina development, an "appropriate assessment" of the likely impact is required from the applicants under Regulation 48(1) of the Conservation (Natural Habitats Etc) Regulations 1994.
- 6.3.13 Dr Holt concludes that the ecological effect of the loss of inter-tidal shore within the footprint of the marina would not be significant and it would be offset to some degree by colonisation of the marina breakwaters (A4.5). Small changes in the inter-tidal area to the south-west would be unlikely to be of ecological significance in the wider context. The hydrographic model shows there would be little risk of changes to the current/sediment regime in the sub-tidal area, including the deep hole area. Therefore the marine communities of piddocks and sponges would be unlikely to be harmed by the construction of the marina.

6.3.14 Although there would undoubtedly be an immediate impact on those bird species which feed in the marina inter-tidal area (A4.11), the parties agree that this would be of little significance. However, it is strongly argued by CCW and RSPB that flocks of moulting great crested grebes and other bird populations in the Traeth Lavan area could be disturbed by increased boating activity in this part of the Strait (6.2.5). There is no direct evidence in the form of surveys to show that numbers of great crested grebes frequent the area of the proposed marina site or the deep channel at the critical time (A4.14). However, my Assessor concludes that an "appropriate assessment" is needed to evaluate this potential impact (A4.13-14).