



Adroddiad

Ymchwiliad a agorwyd ar 04/11/03

Report

Inquiry opened on 04/11/03

gan/by Stuart B Wild MRTPI MCMI

**Arolygydd penodwyd gan Cynulliad
Cenedlaethol Cymru**

**an Inspector appointed by the National
Assembly for Wales**

Dyddiad/Date **30-03-2004**

TRANSPORT AND WORKS ACT 1992

INQUIRY INTO PROPOSED OFFSHORE WINDFARM AT SCARWEATHER SANDS
OFF PORT TALBOT AND PORTHCAWL

BY UNITED UTILITIES SCARWEATHER SANDS LTD

File Ref: DPI/26/1/230

Site location: Scarweather Sands, in Swansea Bay off Port Talbot and Porthcawl

- The proposal is for an application for an Order under the Transport and Works Act 1992 and associated request for a direction that planning permission is deemed to be granted for the development which fall to be considered by the National Assembly for Wales.
- The application is made by United Utilities Scarweather Sands Ltd.
- The development proposed is the construction of an offshore windfarm and associated works.
- The part of the development which lies onshore and above the low water mark lies within the area of Neath Port Talbot County Borough Council.
- On the information available at the time of the pre-inquiry meeting the following were specifically mentioned in the Statement of Matters as the matters on which the National Assembly particularly wished to be informed for the purpose of its consideration of the application:-
 - (i) The need for the proposal, including an evaluation of it in the context of UK and Assembly Government policies on energy, including renewable energy and sustainable development, with reference to potential benefits and dis-benefits.
 - (ii) An evaluation of the socio-economic and other benefits and dis-benefits of the development.
 - (iii) The main alternative site locations considered and the reasoning for the choice of this site location against others.
 - (iv) The need to evaluate the impact on the environment including the adequacy of any proposal for avoiding, reducing or remedying any adverse impacts caused by the construction and operation of the windfarm. These include: the likely impacts on the landscape and coastline; the likely impacts of the proposal on marine and coastal processes, and on water quality; the likely impacts on ecology, ornithology and other non-human life forms; the likely impacts caused by noise and vibration, and the potential effects of electromagnetic interference.
 - (v) The likely effects on commercial and non-commercial navigation, and on safety.
 - (vi) An evaluation of the company's intentions and detailed plans regarding the de-commissioning of the proposals.
 - (vii) The purpose and effect of any changes to the Transport and Works Act Order proposed by the application since the application was made; whether anyone likely to be affected by such changes has been notified; and whether any proposed changes to the Order either on their own or taken together would amount to a substantial change in the proposals for the purposes of section 13(4) of the Transport and Works Act 1992.

Summary of Recommendation: I recommend that the Order is not made and that the Direction that planning permission is deemed to be granted is not given.

The Applications

1. Before the Inquiry were two applications. The first for an order under section 3 of the Transport and Works Act 1992 (The Order) and the second for a direction under section 90(2A) of the Town and Country planning Act 1990 that planning permission be deemed to be granted in so far as necessary (The Planning Direction). The precise extent of the proposal and powers are to be found in the Filled-up Order (Doc CD87) and associated plans. In effect the Order is required for the majority of the proposal which lies beyond the low water mark and planning permission is required for the comparatively small amount of the proposal which lies onshore. To enable the development to proceed a further approval from the Assembly is required in respect of a Food and Environment Protection Act (FEPA) licence. That is a separate issue which was not before the inquiry. The proposal has generally been described by United Utilities as being off Port Talbot. The actual site is closer to Porthcawl and I shall refer to the proposal as being off Port Talbot and Porthcawl.

Format of Report

2. The report is intended to cover all aspects of the proposal as covered by the Order and the Planning Direction, whether or not such matters were the subject of evidence at the inquiry. In addition to the normal issues for and against the windfarm, there are aspects of property acquisition and powers for rights of access, wayleaves etc which are included in the Order.
3. Conditions could be imposed on the proposal, either by inclusion of specific sections in the Order, by conditions imposed on the Planning Direction or by conditions attached to the FEPA licence. Generally I shall refer to these as conditions in the report until the specific section on conditions where I comment on the most appropriate approval for the specific condition. Since all are subject to approval by the National Assembly there seems little point in conditions being duplicated on more than one approval unless legally necessary for enforcement purposes.
4. Appendices are attached to the report containing the List of Appearances, Inquiry Programme, Core Documents and Proofs of Evidence including documents submitted by individual parties.
5. The closing submissions of the main parties are also included as appendices to the report. These were presented to the inquiry in person except for Greenpeace who submitted their submissions in writing. These submissions represent the main points of the cases as made at the inquiry. I shall not repeat them in detail in the main body of the report but shall make specific reference to those aspects which are appropriate to illustrate the conflicting points between parties as I discuss particular aspects of the issues. The closing submissions on behalf of United Utilities (Appendix A) those of Bridgend CBC (Appendix B) contain a useful series of cross references to documents and evidence on which they rely in support of their submissions. These are many of the cross references to which I have had regard in reaching my conclusions.
6. The Environmental Statement (ES) and Supplementary Environmental Statement (CD76, 77, 78 & 82) contain a great deal of technical information. Generally I will only refer to these documents or their contents where issues were in dispute at the inquiry. Those matters which are not specifically referred to in my report or appendices can be taken as accepted by the parties or at least not subject to significant challenge.
7. There have been a very large number of written representations concerning the proposal. At an early stage a petition of several thousand objectors was submitted by SOS Porthcawl. Subsequently several thousand letters and e-mails of support were submitted, many in the form of standard letters via Greenpeace. In addition there were many individual letters of objection and a significant but smaller number in support. In general these letters do not help my considerations as they either express general support or objection to the principle of windfarms. Where letters are specific they refer to similar matters to those raised by the parties who participated at the inquiry. I have taken these representations into account in my overall considerations but I shall only refer specifically to those which raise points which would otherwise not be mentioned.

Procedural Matters

8. The Statement of Matters was circulated in July 2003 and a pre-inquiry meeting held at the Aberafan Beach Hotel, Port Talbot on 24/07/03. The inquiry opened on 4/11/03 and sat from

Tuesday to Friday each week during November until it closed on 27/11/03. All sittings were at the Aberafan Beach Hotel except for that on the afternoon and evening of 18/11/03, which took place at the Seabank Hotel, Porthcawl. In total the inquiry sat for 15 days and evidence was given by 47 witnesses.

9. United Utilities's witnesses presented most of the evidence in favour of the proposal supported by Greenpeace, Friends of the Earth Cymru, Sustainable Wales and a small number of individuals. Of the four local authorities closest to the site Bridgend CBC were present as major objectors to the proposal. Swansea CC were intending to be represented but decided to make their views known by way of written representations. Neath Port Talbot CBC and the Vale of Glamorgan Council made no formal objection to the proposal. CPRW gave evidence and represented a number of other objectors. This is their usual practice and it helps avoid repetition and thus saves considerable inquiry time. SOS Porthcawl were also major objectors and again their co-ordinated approach helped to ensure the views of local people were expressed with the minimum of repetition. Other bodies such as the RYA (Royal Yachting Association), fishermen, surfers and golfers generally made comments only insofar as the proposal affected their specific interests, again avoiding repetition and saving inquiry time. In addition a number of individuals gave evidence against the proposal.
10. In addition to the absence of Swansea CC mentioned above, United Utilities did not call any witness directly employed by the Company to answer specific questions on the proposal. CCW were not present to give evidence so it was not possible to probe their position regarding the effect of the proposal on their interests. CCW were represented at the discussion on proposed conditions. Several other bodies including Trinity House, Railtrack and England, Wales and Scottish Railways were not present. Their concerns appear to have been resolved before the inquiry. Subsequent to the inquiry DEFRA wrote to the National Assembly on 14/01/04 confirming their wish to withdraw their objection since their remaining concerns can be covered by conditions on the FEPA licence.

Site Inspections

11. As part of the preparation for the inquiry United Utilities arranged two accompanied site inspections with myself and representatives of the objectors. The first, on 11/09/03, was to the Middelgrunden offshore windfarm at Copenhagen, and the second, on 22/10/03, was by boat from Swansea to the site of the proposal. In addition I travelled extensively on my own to visit the viewpoints identified in the Environmental Statement ranging from the western end of the Gower, around Swansea Bay, Porthcawl area, along the Glamorgan coast and the North Devon coast. Whilst on these inspections I viewed the site from a large number of vantage points in addition to the specific viewpoints in the ES.
12. On the afternoon of 24/11/03 I made an accompanied inspection of Rest Bay to observe surfing. After the close of the inquiry on 28/11/03 I made an accompanied inspection of that part of the proposal situated onshore and the Port Talbot docks area. On 9/12/03 I made an unaccompanied inspection of the North Hoyle windfarm off the North Wales coast. On Sunday 14/12/03 I made further unaccompanied inspections of the Porthcawl area to observe surfing and the effects of the proposal on the two local golf courses and to visit several other locations in the area which had been referred to in the evidence.
13. The quality of photomontages included within the ES is often the subject of serious criticism at windfarm inquiries. However the main witnesses on visual impact all agreed that they do not use the photomontages when making their assessment of visual impact. They are helpful

in identifying where in a view the windfarm would be located and the relative height of the turbines. However just how visible the turbines would be on any one day can be affected by a wide variety of factors, mainly governed by prevailing weather and light conditions. It is therefore important to bear in mind that it is not possible to make a detailed assessment without extensive field visits. It is on the basis of my personal observations of the viewpoints in the ES and many other views that I judge the weight to be given to the conflicting evidence.

The Proposal

14. This proposal is one of the Round 1 offshore windfarm proposals. In Welsh waters there is this proposal together with two approved schemes off the North Wales Coast at North Hoyle and Rhyl Flats. The seabed is owned by Crown Estates who invited tenders from interested parties for the Round 1 proposals. These proposals were restricted to 30 turbines. United Utilities were successful in their bid for this site. The intention is that a lease would be granted for 22 years after which the windfarm would be decommissioned and removed.
15. The details of the proposal before the inquiry are shown on the Works Plans and Sections and Land Plans (CD86) and the necessary powers are contained in the Filled-up Order (CD87). The windfarm would consist of 30 wind turbines each with a rated capacity of up to 3.6 MW. The turbines would comprise tubular steel towers and nacelles with a hub height of 83m above Mean Sea Level (MSL). On the tower a three blade rotor would be placed with a radius of 52m. The total height of each turbine from MSL to the tip of the rotor blade would be 135m. Up to 20m above MSL the towers would be painted yellow in colour for navigational and safety reasons. Above that the towers, nacelles and rotors would be grey. The turbines would be positioned in six curved rows with approximately 800m between the rows and 500m between adjacent turbines. Each turbine would be sited on a foundation on the seabed. Three foundation options are included in the proposal. The final choice would depend on further ground investigation studies. Additional offshore components would comprise two steel 80m meteorological masts
16. The electricity generated would be transmitted to the shore by means of 4 buried cables linking the turbines to an onshore electrical sub/switching station, and then connected to the local distribution network by a combination of buried and overhead cables.

The Site and Surroundings

17. The site of the turbines is an area of about 5 kms east to west and 2.5 kms north to south on the northern side of Scarweather Sands in Swansea Bay. The site is about 10 kms south south west of Port Talbot and about 7 kms west of Porthcawl. The depth of water where the turbines would be sited varies up to a maximum of about 16m. The tidal range in this part of the Bristol Channel is up to a maximum of about 11m. The minimum water depth at low tide around any turbine would be about 4m. None of the turbines would be on the exposed area of Scarweather Sands since access by boat may be required at all times for maintenance purposes.
18. The turbines would be connected to the shore by 4 cables running for about 8 kms. These would cross the beach immediately to the south of the Margam Steel Works complex to the south of Port Talbot. The onshore plant and equipment would be in a secure compound

immediately inland of the steelworks weighbridge buildings and therefore partially screened from view from the beach. Cables would connect this compound to the existing SubStation complex adjacent to the BOC (British Oxygen Company) premises to the east of the main railway line. The cables would generally run parallel to the existing east-west track which is a public footpath. The cables would be mainly above ground west of the railway and underground beneath the railway tracks and to the east of the railway.

Policy Framework

19. There is a wide range of policy documents relating to windfarms and renewable energy. These include policies at UK and Welsh National level and the various local Development Plans. They are all generally consistent in that they support the development of renewable energy subject to the usual environmental considerations. A reasonably succinct overview of the policy background can be found in sections 9-14 of Appendix A.

The Main Issues

20. I shall deal with the main issues raised at the inquiry and in writing generally in the order set out in the Statement of Matters. Some more detailed issues emerged such as surfing and fishing. I shall deal with these after the Statement of Matters issues to which they are most closely related. My comments refer to the offshore aspect of the proposal. No significant issues were raised concerning that part of the proposal which would be located onshore. I shall comment separately on that aspect below.
21. Some objectors raised concerns concerning the track record of United Utilities in respect of alleged breaches of regulations and harm to the environment generally. In my view these are not matters which should have any weight in my consideration of the planning merits of any particular proposal. Therefore I do not comment on any of those objections in my considerations of this case.

Needs and Benefits

22. The proposal would have an installed capacity of up to 108 megawatts. It is claimed in the ES that this would supply up to 82,000 homes. There was some dispute at the inquiry as to the precise number of homes which might be served. However it is clear that despite the limitations of the intermittent nature of power which is generated by windfarms, this proposal would generate a significant amount of electricity. It would have a beneficial effect on reaching the targets for renewable energy at UK and Welsh levels.
23. There is no direct way of limiting the use of power generated in an area to that area once it is linked to the national grid. However there is a clear benefit in locally generated electricity which reduces the power losses over long distance transmission lines. There is also a beneficial effect for security of supply when electricity is generated close to consumers.
24. There was no serious dispute at the inquiry regarding the general support for offshore windfarms in principle. Most of the parties made it clear that they supported this form of electricity generation and that the objections related to the suitability of the specific site chosen.

25. It was suggested by some supporters of the proposal that if approval were not granted then it would send the wrong signal to the industry and potentially jeopardise the success of further offshore development. A possible consequence of this would be a return to the generation of electricity by nuclear power. In my view such matters are for consideration by Government when producing National Policy. There is every indication that most, if not all, the Round 1 offshore proposals are proceeding. The failure to approve one of the Round 1 sites would be seen in that context.
26. Similarly suggestions that this proposal is unnecessary because of the progress towards Round 2 offshore schemes and the development of other forms of renewable energy does not, in my view, carry significant weight. This proposal uses generally known technology but at the current limit of experience for development on the sea bed. There is no convincing evidence that it is not a practical proposal. If approved it would be possible to proceed in the near future. Government targets for renewable energy are minimum targets. Any extra electricity generated above the targets would be a further advantage.
27. What decisions the Government may take in the future concerning other forms of renewable energy and nuclear power is a matter for the Government to consider at some future date. In my view it is important in this case to concentrate on the merits and problems with this specific proposal.
28. In my view the proposal would have considerable benefits. There is a need for further offshore windfarms, using generally proven technology, if current Government targets for renewable energy are to be met.

Alternative Sites

29. The evidence concerning the suitability of this site from an engineering and technical point of view was not significantly challenged by professionally qualified and experienced witnesses. I accept from a practical point of view the site is suitable. Therefore the main witnesses regarding possible site selection on behalf of United Utilities were Mr Clarke and Ms Hawkins dealing with planning and landscape/visual effects respectively. Neither of these two witnesses had been employed at the time the Scarweather Sands site was selected. From the evidence it appears that the requirement of CCW to be at least 5km off the coast was a significant constraint on site selection. No witness attended on behalf of CCW. No witness attended on behalf of the Company who was directly involved with the discussions with CCW and others prior to the selection of the site. Therefore it was not possible to ascertain whether the 5km restriction was a general one relating to the whole or significant lengths of the Welsh coastline, or whether it was a specific restriction aimed at protecting the Kenfig (candidate special area of conservation) nature reserve area and other designated areas in the locality.
30. The evidence gave general details of the strategic search for sites off the Welsh coast. Generally environmentally sensitive areas such as National Parks and Heritage Coasts were avoided. However no details were given to justify the selection of Scarweather Sands as the best site in the Bristol Channel area. Even taking into account the general restrictions, there is no detail to compare this site to any other potential site in the general area of Swansea Bay. There may be no specific requirement for the EIA to consider alternative sites in detail but the justification for a site may be much stronger if it can be shown that all other potential sites are not as acceptable as the one chosen.

31. The restrictions of deep water and commercial navigation routes do limit the effective area of search but there does appear, at first glance, to be other sites that could be equally suitable. The physical nature of the seabed is a constraint but here the evidence seems to prove that the chosen site is physically suitable without looking in any detail at the potential suitability of other sites.
32. Ms Hawkins in cross examination explained that alternative sites were considered. However the extent of alternatives was limited to the 50% within the lease site requirement of Crown Estates and only really extended to different arrangements of the pattern of the turbines on the same already selected site.
33. As a general comment the evidence on site selection appeared to jump from the strategic level to this particular site without any detailed explanation. Therefore I am not satisfied that other sites within the Swansea Bay area might not be equally suitable or even more suitable than the Scarweather Sands site.

Landscape and Coastline - Visual Impact

34. It must be borne in mind that the turbines are extremely large structures. Setting aside the variations in weather and light condition, they will be visible from a very wide area. However, with the exception of a relatively small number of observers viewing the windfarm from on board boats, most observers will view the turbines from distances of 6km or more. This effectively reduces their apparent size.
35. This is the topic on which most objectors have the firmest views. The possible effects on the appearance of views out to sea potentially affect a great many persons overlooking Swansea Bay and the Bristol Channel.
36. There were some significant differences between the details of the methods used to assess the potential impact of the proposal on the landscape and coastline. Different emphasis had been placed on different factors such as the definition of seascape and landscape units. Much of the methodology is relatively new when applied to an offshore development. However, in my view, all these methods are no more than attempts to introduce a greater degree of objectivity into what is finally a subjective assessment. I therefore take note of the conflicting views on the methodology but attach little weight to those detailed differences. I note that in general terms there was a considerable level of agreement about how significant the effects would be on the landscape and coastline closest to the windfarm. My conclusions on these effects are as follows.
37. I have already expressed my reservations regarding the use of photomontages in the Site Inspections section above. These turbines would be visible in the broad expanse of the open sea. Unlike onshore locations there will be no screening by topography, buildings, trees or other visual features. Only distance from the turbines would effectively mitigate their size. I take no firm view on what distance is appropriate to be regarded as a significant visual effect. The curvature of the Earth will reduce the apparent height of the turbines when viewed from low level viewpoints. The extreme tidal range of the Bristol Channel would also affect the apparent height of the turbines when viewed at different stages of the tide. However even a relatively small feature attracts the eye when it is set in the open sea, whether it is a static or moving feature. The windfarm would be a large group of turbines with moving blades. I consider that they would attract an observer's attention at any distance in which they are potentially visible. The factors that would reduce the significance of any impact are the

distance, bearing in mind the normal quality of light and air clarity, and whether the turbines would be seen against a background of land or open sea.

38. When viewed from the Gower the turbines would be between 23 and 11km from the viewpoints, from Swansea seafront and the city area at least 14 km, and from Ogmore-by-Sea 12kms. From the English coast the turbines would be over 25km from viewpoints. In all these cases the windfarm would be seen against, or close to, a background of land. Given the distances involved, even on a clear day, I do not consider that the visual impact from these general locations would result in serious harm. The development would be visible from a wide variety of points inland from the Porthcawl and Port Talbot area, including the M4 motorway and the high ground to the north of Margam Park. Again the distances involved and the intermittent nature of many views are such that the impact would be significantly reduced. Whilst visible from the M4 I do not accept the suggestions that the windfarm could act as a distraction to motorists, given the distance from the viewpoints.
39. Where I consider that the effects would be significant and harmful are those viewpoints in and around Porthcawl and its immediate hinterland. This area extends from the harbour to Sker Point and inland to include Kenfig Burrows, The Royal Porthcawl Golf Club and the Pyle and Kenfig Golf Club. One significant difference about views from this area is that the views are towards the west. The turbines would appear silhouetted against the horizon of the open sea. There is no land directly behind the turbines until Newfoundland. The setting sun generally lights the evening sky which would highlight the presence of the turbines out to sea, even when the sun does not set directly behind the turbines. Given that the viewpoints are mainly less than 10kms from the turbines, and in some cases as low as 6.1kms, I take the view that the visual impact from these locations would be significantly harmful.
40. Some objectors took the view that no site within the Swansea Bay area would be acceptable. Others thought that their objections would be significantly reduced if the windfarm were further from the shore. Given that the site is in the direct view from Porthcawl to the horizon, moving the turbines twice as far from the shore would still result in a similar impact on this sensitive view. Similarly reducing the height of the turbines would not remove this level of objection. However, such variations in the proposal would be outside the scope of this inquiry.
41. United Utilities' evidence tends to minimise the extent of the visual impact by including a wide range of receptors together under general headings. I consider that this significant effect would be experienced by residents from their homes, by residents going about their normal daily business such as driving to work or the shops, or walking the dog along the seafront paths, by tourists visiting Porthcawl for its general seaside facilities, by golfers using both courses, by surfers on the beaches, by visitors to the Kenfig Nature Reserve, and by any other persons passing through this area close to the sea. In my view residents and persons in the area for recreational purposes are potentially significant receptors. This is both in terms of numbers and the sensitivity they would experience from any effects on the general visual amenity of the seascape and landscape.
42. Concern was expressed regarding the colour of the turbines, particularly the need to paint the lower section yellow for safety reasons. Having observed the turbines at North Hoyle which are similarly coloured, I do not consider that the yellow warning paint makes any significant difference to the appearance of the windfarm when viewed from the shore. Similarly I do not accept that the necessary warning lights would be unacceptably harmful to the appearance of the area.

43. Cumulative impact is a potential problem with such large scale developments. There is one existing windfarm at Taff Ely and several other proposals along the South Wales coastal belt. Taff Ely is sufficiently far from this site not to cause any significant problems of cumulative impact. Even if some or all of the other proposals were built they are all onshore. Most would lie inland of the M4. In my view this proposal would be seen in a materially different vista than the other proposals. The proposals for single turbines at Swansea and Baglan would be close to the shore, but as single turbines they would be visually much less intrusive than this proposal for 30 turbines. In my view the cumulative effect would be restricted to views of a series of separate windfarms and turbines mainly seen by persons passing through the area such as on the M4. I do not consider that such cumulative impact would be sufficient to refuse this proposal.
44. Shadow flicker was raised by a number of objectors to the proposal. This is not just a reference to shadows being visible as the blades pass through the line of sunlight, but refers to the specific fluctuation in the level of light experienced within rooms inside buildings. It will only occur when the distance from the turbine to the window and the width of the window have very specific relationships. Generally it is restricted to buildings less than one to two kilometres from a turbine. It is not possible for these effects to be caused by this proposal because of the distance from the turbines to the nearest buildings.

Marine and Coastal Processes

45. The main areas of concern under this topic is that the windfarm would result in significant changes to the shape and size of the sand banks and coastline in the area of Scarweather Sands. This has been the subject of considerable study by United Utilities. As far as the size and pattern of waves are concerned, the effects of the turbines would not be significant beyond the immediate area of the windfarm. It is most unlikely that any changes would be noticeable by the time the waves reach the shore.
46. The more serious problem could be the effects of scouring around the base of the turbines given the very large range of the tide and the strong currents which are created. The possible effects on the shape of the sandbanks has been studied by modelling techniques. These were criticised for not using data over a long enough period. My understanding is that the data collected over about 6 months was used to verify the modelling techniques. After that stage the historical data for many years was applied to the model. In my view this is a reasonable approach.
47. The results of the modelling again show no significant effects on the shape and size of the sandbanks and associated channels. The doubts about the accuracy of any modelling would be mitigated by continuous monitoring of the situation. This is already being undertaken in respect of the existing windmast, although the data has not yet been collected over a sufficient length of time to carry significant weight.
48. The effects of scouring will depend to some extent on the details of the foundations ultimately used. However, it is most important from United Utilities point of view that the turbine foundations are not undermined by scouring. This is a matter which would require monitoring throughout the life of the windfarm. I have no doubt that any prudent operator would ensure that any scouring was kept under control in their own interests.
49. I see no clear evidence to suggest that, subject to adequate monitoring, the proposal would have unacceptable consequences on the marine and coastal processes.

Water Quality

50. Any major engineering work on the seabed is likely to result in some disturbance of sediment and hence effects on the water quality and clarity. Concern was expressed that this proposal could jeopardise Porthcawl's Green Flag beach status. Given the distance from the turbines to the beach and the evidence of minimum effects on the coastal processes I see no clear evidence to suggest that these concerns are justified. There is also no firm evidence to suggest that the work could release harmful toxic waste. The normal requirements for minimising effects on the water quality for any such engineering works are matters which could be controlled by conditions.

Surfing

51. The witnesses for the surfers gave clear evidence of the scale and importance of this activity to tourism in Porthcawl. They also explained why Porthcawl is particularly special for surfers. It is a readily accessible destination from South Wales, London and the Midlands because of the proximity of the M4. The particular nature of the beach, together with the funnelling effect of Scarweather Sands and other banks, results in wave formation on the beaches which is both varied in character and available at one beach or another throughout most stages of the tide. Such circumstances are very rare and make Porthcawl particularly important for surfing in the UK context both for experienced surfers and beginners.
52. The anecdotal evidence of the surfers' regarding the wave formation and patterns appeared very consistent with that produced by the modelling of United Utilities' expert. This gives a greater degree of confidence in the prediction that any effects would be of a magnitude not exceeding 1%.
53. I note the concern that United Utilities were unwilling to provide financial assistance to appoint the surfers' preferred consultant. However in my view it is for the individual parties, in the first instance, to appoint the consultants of their choice.
54. Having considered the evidence produced by the parties and given my findings on marine and coastal processes above, I do not consider that the proposal would jeopardise the specific relationship between waves, currents and sandbanks which create the special surfing opportunities at Porthcawl.

Marine Aggregates

55. Bridgend County Borough Council raised concerns regarding the future supply of marine aggregates. Marine aggregates are an important and long established source of the supply of sand and gravel for the South Wales building industry. Scarweather Sands has been identified as a possible source of future supply. This proposal could reduce the options for future exploitation. The Council were concerned that the removal of marine sources would result in greater pressure for the extraction of aggregates from land based sites.
56. From the evidence available at the time of the inquiry the future of the industry is uncertain. Detailed discussion on new policies for the future are continuing within the context of the Welsh Assembly and affected interests. There are problems with the exploitation of existing sites but alternatives could result in the need for larger dredgers which could only off load at certain ports. These uncertainties could result in the need for a significant level of new

investment for the industry. Sites like Scarweather could probably be exploited by existing dredgers using existing ports.

57. However there are a large number of aspects to consider before any particular resource could be exploited. In the case of Scarweather any significant level of extraction would be likely to have greater impact on the marine and coastal processes than the windfarm. In addition the windfarm would only sterilise the site for about 25 years. In the long term the aggregate material would still be potentially available.
58. In the circumstances of this case I do not consider that the potential removal of Scarweather Sands as a source of marine aggregates for about 25 years would be sufficiently harmful to the continued supply of aggregates to justify withholding consent to this proposal.
59. During the course of the inquiry correspondence was received from the British Marine Aggregates Producers Association (BMAPA) representing the marine aggregates industry. They maintained that they had not been consulted on the proposal. United Utilities had records of notification to this organisation who appear not to have replied at the consultation stage. They did not take the opportunity to attend the inquiry although their written representations were before the inquiry. In any event their concerns appear to be basically the same in principle as those raised by Bridgend CBC.

Ecology, Ornithology and other Non-human Lifeforms

60. At the inquiry the significant evidence concentrated on three aspects, cetaceans, sea birds and sabellaria.
61. The main concern regarding cetaceans was the possible disturbing effect of noise on the harbour porpoise population, particularly during the construction phase. Agreement appears to have been reached with CCW about a monitoring scheme with only the details of the period when work should not take place to be agreed. This is a matter which would be covered in detail by the FEPA licence (Doc UU/0/49).
62. As regards sea birds no doubt there is a risk of collision between individual birds and turbine blades. However this site is not located on a major migratory route and collisions are unlikely to be in any significant numbers. Again CCW appear satisfied with the proposed monitoring arrangements.
63. Sabellaria are a type of worm which burrows in the sand close to the shore. The potential threat is that the sand would be submerged by disturbed material which would smother the worms. In this case the major works are some distance from known major concentrations. The laying of the cables between the windfarm and shore would be the most likely cause of problems. However in my view the potential for smothering is remote given the effects of dispersion of any disturbed material and the likely limited amount of deposition in any area where sabellaria are known.
64. I note the concerns expressed, particularly those raised at the inquiry by Bridgend CBC. However, the various assertions were not supported by substantive factual data or evidence of a known significant adverse effect of offshore windfarms or comparable developments. Such levels of concern do not justify applying a precautionary approach in this case. I place greater weight on the views of CCW who are the acknowledged experts in this field and statutory consultees to the Welsh Assembly. These concerns are matters which can be subject to conditions to ensure adequate monitoring of the situation over time.

Noise and Vibration

65. In addition to the possible problems of noise and vibration affecting marine creatures which I have dealt with above, noise and vibration may generally give cause for concern during the construction phase and during the operational phase of the proposal.
66. The amount of noise likely to result from the construction work would be heavily influenced by the type of foundations chosen. If piles were used then the normal percussion method of installation would be clearly audible from onshore. However such noise is common with many building operations and unreasonable levels of intrusion are normally controlled by the imposition of conditions, in particular those which prevent noisy activities at unsocial hours.
67. As regards the level of noise from the turbines when in operation the evidence given to me at the inquiry was that in certain circumstances it would be possible to hear the noise of the turbines from the shore. For example if there was a gentle offshore wind which resulted in little noise from waves breaking on the beach but still sufficient to turn the turbines. However in normal circumstances the predicted noise level from the turbines at say Rest Bay would be 30dB (decibels) whereas the measured background noise mainly from the sea is 35dB. In these circumstances the noise of the turbines would be masked by that of the waves breaking. When one moves further inland within Porthcawl the background noise levels reduce but the distance from the turbines is greater and hence that noise level reduces further. In the area of Kenfig Burrows the background noise level from the M4 traffic during the normal working day would be significantly greater than that resulting from the turbines.
68. The imposition of conditions to limit noise levels is a normal requirement for windfarms. This controls the possible increase in noise resulting from any undue wear and tear of the turbines over time. Concern was expressed about the enforcement of conditions particularly given that the approval would be under the Transport and Works Act. The powers for enforcement are a legal matter but in my view, subject to appropriate conditions, the impact of operational noise would not be unduly harmful.
69. Some local residents were concerned that navigational safety would require the provision of foghorns to warn shipping of the presence of the windfarm. Such safety measures are a matter for Trinity House. Assuming they are necessary I would anticipate that they would be largely directed towards the main shipping routes and not towards the shore and Porthcawl. Their use would be intermittent and only at times of restricted visibility. Even if they were audible onshore I do not consider their effect would be unacceptably harmful.

Electromagnetic Interference

70. There are two main areas where the proposal could have an impact under this issue. They are effects on users of electromagnetic waves as a transmission medium, eg telecommunications and UHF television reception, and effects on certain types of fish, particularly migratory species, which use natural electrical and magnetic fields for communication and navigation.
71. No formal objections were outstanding from the main users of telecommunications networks such as military and civil aviation. No significant effects are anticipated by local communication networks or television interests. The only likely effect would be on marine navigation systems when vessels are moving very close to or between turbines. This would be a localised and temporary effect.

72. As far as any effect on fish is concerned there is no objection from CCW and no firm evidence was submitted to the inquiry to suggest that this would be a significant problem. The monitoring of the project by CCW would in my view provide an adequate safeguard.

Navigation

73. I understand that Trinity House withdrew its objection once agreement had been reached to re-site turbine 25 out of the channel between Hugo Bank and Kenfig Patches. This has been accommodated in the revised proposal. Therefore I see no objection to the proposal from the point of view of large commercial shipping interests subject to the normal requirements for ensuring that the turbines are safely marked by colour, lights etc.
74. The RYA represented the interests of recreational sailors. In essence their objections centred around the interference with the right to navigation and the imposition of blanket "exclusion zones" around the turbines. There was some disagreement between the parties as to whether the term exclusion zone or safety zone should be used. In my view the issue does not turn on the name. The intention of the Order is to provide safety zones around parts of the site or turbines during construction and operation. I shall use the term safety zone.
75. The Maritime and Coastguard Agency (MCA) were not represented at the inquiry. Their position was not wholly clear. They seemed to support the need for safety zones but were of the view that they should be included in National Legislation rather than in an individual Order. They also seemed unsure which Government Department should be responsible. I share the views expressed by Mr Newcombe in sections 60 & 61 of his closing submissions on behalf of United Utilities (Appendix A) that accidents will not wait until the paperwork has been put in place.
76. Whether it is appropriate to include safety zones in the Order or not is a legal matter. My understanding of the Order as now drafted is that any specific safety zones would cease to have effect if National Legislation is introduced. On the assumption that legal advice supports their inclusion in the Order rather than waiting for National Legislation my views are as follows.
77. I understand that safety zones defined by distance are in place around offshore oil and gas installations. Whilst the size of structure and distances may vary I consider that they are a generally comparable form of offshore structure. The suggestion that safety would be ensured merely by a provision which banned landing on, or mooring from, turbines would not, in my view, give an appropriate level of security to the developers or sailors.
78. I note the practical objection to safety zones of a specific distance eg 50m and the difficulty for sailors of estimating their exact distance from a turbine. However some distance must be used and no doubt any prosecution in court would take into account the degree of alleged incursion and any resulting consequences. The suggestion that the safety zones should be related to a specific risk assessment might be applicable if the exact nature of the foundations were known at this stage. Given these current uncertainties and the common sense need for the safety zones to be of the same dimension for each turbine in the same windfarm, then I consider that the provisions as now included in the Filled-up Order (Doc CD87) are appropriate and necessary.
79. During construction operations different and larger safety zones are required. Given the scale of the engineering operations and the need to involve a number of large vessels then it

appears common sense to make provision to prevent other vessels approaching too close to the site of the works.

80. These provisions would have the effect of reducing the right to free passage over part of the open sea. However in my view such restrictions are the minimum necessary to provide reasonable safety measures for sailors and their vessels and for the safety of the windfarm. Most recreational vessels would still be able to sail along the Shord Channel between the turbines if they wished, although given the proximity of the treacherous Scarweather Sands, most prudent sailors would avoid most of the windfarm site in any event. There are a number of alternative routes available for recreational craft travelling between Swansea and the ports further east along the Bristol Channel which would not be directly affected by the proposal. The use of the channel between Hugo Bank and Kenfig Patches would not be prevented following the resiting of turbine 25 at the request of Trinity House. The area which would be restricted during the operational phase of the proposal would be too small to have any significant harmful effect on the legitimate interests of recreational sailors in the Swansea Bay area.

Fishing

81. There are two main aspects of fishing to consider, commercial fishing and recreational fishing. Trawling within the confines of the windfarm would not be permitted. United Utilities' evidence tended to suggest that this would be the limit of the restrictions. The reef effect of the turbine foundations and reduced fishing could provide a new habitat which would encourage an increase in fish stocks.
82. Commercial fishing in the area is largely restricted to inshore fishing craft. The evidence was that during 2003 fish stocks had been severely restricted and the few larger boats which operated from Swansea have moved elsewhere. The boats which are largely based at Swansea, Port Talbot and Porthcawl are of limited size and power. Generally they are operated by one or two men. They are too small to safely fish in the deep waters of the Bristol Channel. Fishing methods include trawling, drift nets, line and pots. Most of the commercial fishermen will be engaged in more than one type of fishing depending on the season and what fish stocks appear in the area.
83. It seemed generally accepted that the fish stocks had been low during 2003 and therefore the observed fishing patterns were not necessarily typical of the area over a number of years. Whether the changes are permanent due to an overall decline in fish stocks, or just temporary, remains to be seen. The evidence from the fishermen suggested that the reef effect of the windfarm might provide a new habitat but may well only result in the existing fish becoming concentrated in that area rather than representing an increase in stocks.
84. It was clear from the evidence that Scarweather Sands is normally fished in two main ways. Boats trawl across the sands and in the channel adjacent to the bank. Effectively this would be prevented. In addition drift nets are released on one side of the Sands and allowed to pass over the area on the tidal current. The boat then goes to the other side of the Sands to collect the net and any catch. This is done when the water level is such that the waves disturb the sea bed and release food. This in turn attracts the fish. The depth of water is normally such that it is not safe for the boat to sail directly across the Sands. Although most of the windfarm is adjacent to rather than on top of the Sands this method of fishing would be prevented because of the danger of the nets drifting and becoming entangled with the nearest turbines. The possibility of one boat releasing the nets whilst another waits to collect them is not in my

view practical given the small size of the fishing fleet, its boats and the limited number of fishermen involved.

85. Therefore I consider that the proposal would have a significant effect on the area within Swansea Bay which would be available for commercial fishing. I do not necessarily accept the degree of reduction in fishing which was suggested in the fishermen's evidence. That evidence does not suggest to me that commercial fishing would effectively be prevented by this proposal. It is more a case that it would be reduced. However this is a matter which could reasonably be covered by conditions relating to an appropriate method of compensation.
86. As far as recreational fishing is concerned this would not be prevented by the presence of the turbines. The ban on commercial trawling within the windfarm and the possible reef effect of the turbine foundations could provide new habitats and increased concentrations of fish around the windfarm. This could result in some improvement in recreational fishing opportunities. In any event the proposal is unlikely to be harmful to the recreational fishing interests beyond any restrictions to navigation and visual intrusion to those engaged in fishing.

Golf

87. There are two golf courses which overlook the sea immediately to the north of Porthcawl. These are the Royal Porthcawl Golf Club and the Pyle and Kenfig Golf Club. In general they shared a common concern that the windfarm would represent a significantly harmful intrusion into the setting of the courses which would spoil the enjoyment of players using both courses. In addition the Royal Porthcawl Golf Club is being considered as a potential site for the British Open. This has never taken place in Wales and the attraction of such a prestigious event with its worldwide television and media coverage would be of great benefit to the image of Wales and the Porthcawl area in particular. This could be of considerable value to the Tourism industry. The concern is that the windfarm would be so harmful to the setting of the course that the organisers of the Open may decide that the course would no longer be acceptable and the opportunity would be lost.
88. The proposal would not physically affect either course in terms of restricting the way golf could be played. However both courses have extensive views out to sea. This is particularly so for the Royal Porthcawl which is a typical links course constructed immediately above the beach. All holes have extensive views out to sea and there are no intervening topographical or landscape features to screen the view of the windfarm. No doubt the presence of the windfarm would be a visual distraction to players on the course who might be looking out to sea whilst waiting for their turn to play. However I do not consider that the turbines would be so prominent that they would distract someone who was actually playing.
89. The question of possible effect on the use of the course for the British Open is a matter for conjecture. No firm evidence was available one way or the other. It could be that the windfarm would be seen as a blot on the seascape which would destroy the visual setting of the course, and hence make the venue unsuitable. Equally it could be seen as an example of Wales embracing new technology which would create a new and vibrant image to the rest of the world. In my view the objection to the proposal carries the weight that it would significantly affect the visual relationship between the course and the open sea which is a fundamental part of the character of the course.

90. The same general concern applies to Pyle and Kenfig Golf Course but reduced in significance as the course is not so close to the seashore and there is intervening vegetation and topographical features which would screen the turbines from about 40% of the course.
91. There are a number of other golf courses in the general area which would have some view of the open sea but they are sufficiently far from the windfarm not to be significantly affected.

Historic Buildings and Landscapes and Ancient Monuments

92. As far as most historic buildings or landscapes are concerned, such as Margam Park, and Merthyr Mawr, the proposal would be sufficiently far away and/or partially masked by intervening landscape features that any impact on the visual quality of the setting of these features would not be significantly harmful. The two features which are nearest to the windfarm are Kenfig Burrows and Sker house.
93. In addition to its importance as a nature reserve Kenfig Burrows is an important Historic Landscape. It contains evidence of the previous Castle and settlement which was engulfed by the moving sands. What remains today is a landscape dominated by the pattern of sandunes. There are numerous footpaths throughout the area linking the adjoining roads passing the Burrows to various vantage points and locations of interest and extending to the seashore between Sker Point and Margam Steel Works. Part of the enjoyment of the area are the unspoilt views out to sea. These would be affected by the presence of the windfarm. However there are many areas within the Burrows where the sand dunes would screen the view of the turbines. The fundamental relationship of the area to the sea and an understanding of the historical significance of the effect of the sea on the landscape would not, in my view, be fundamentally weakened by the presence of the windfarm.
94. Sker House would be the nearest dwelling to the windfarm. It is a listed building of considerable historical significance. It has been the subject of considerable recent expenditure. At the time of the inquiry it was on the market as a dwelling. The physical relationship of Sker House to the open sea is an important part of its setting. However the house appears to face mainly inland away from the open sea. The windfarm would be clearly visible from Sker House and would be an inevitable part of some views. However other views would still be available of Sker House without the windfarm in the same view. In addition the turbines would be about 7 kms from Sker House. In these circumstances I do not consider that the effect of the proposal on the setting of Sker House would be sufficient to justify withholding consent.
95. There are a number of ancient monuments etc both on land and on the sea bed which are in the general area of the proposal. These are identified in the ES and the proposals appear sufficiently far from all recorded sites for there to be no material impact.

Tourism

96. Porthcawl is an important holiday town. A significant part of its employment and service industries rely on tourism. Bridgend CBC has made significant endeavours to improve and publicise the range of facilities available. Despite earlier suggestions it was made clear at the inquiry that the present proposal contained no specific proposal for a visitor centre or any other tourist related development. In that case the only tourism gain would be limited to

visitors attracted to see the windfarm and any private initiatives which might be developed, such as boat trips from Porthcawl out to view the windfarm.

97. Balanced against that is the uncertainty that the proposal could adversely affect the perception people would have of Porthcawl as a visitor destination. Several attempts had been made to measure visitor attitudes but all were subject to a greater or lesser degree of criticism of the methods used or questions asked. Similarly evidence from other windfarms was criticised as not being sufficiently robust and objective or too restricted in its scope.
98. In my view the evidence is unclear. It would only be possible to be precise if detailed before and after surveys were undertaken on an objective basis. That evidence is not available in this case. Attitudes to onshore windfarms are not, in my view, comparable to an offshore proposal. No doubt there would be some people who would dislike the windfarm so much they would choose not to visit the area, but they might well be balanced by those who were firmly in favour of such proposals. In between there would be a wide range of differing views.
99. In the more detailed sections above on matters such as golf, historic landscapes, wildlife, surfing etc I have made no comments on the general effect of the proposal on what visitors would see in the view. All visitors to the area would be aware of the windfarm. Whilst it might not directly affect the specific activity which had brought them to Porthcawl the general visual amenity is part of the attraction of the resort. The area between the harbour and extending along the coast northwards towards Sker Point is largely a coastline of natural unspoilt beauty. It is this character which is a fundamental part of what would sell the resort to visitors. The introduction of such a large scale manmade feature directly off the coast and in line with the evening setting sun would have a very significant effect on what people would see. Whether the person was there as a golfer, surfer, walker or for any other recreational activity this proposal would have a significant effect on what they now enjoy.
100. In my view the evidence does not help in trying to exactly quantify the degree of effect but in the absence of any real and specific tourism benefits the balance appears to me to lie against the proposal.

Decommissioning

101. Numerous parties were concerned about the provisions for the decommissioning of the windfarm at the end of the lease. Failure to remove the turbines and associated structures would result in the continuation of any visual impact and the restrictions on fishing, navigation and possible extraction of aggregates. The provision for the decommissioning is potentially covered by the terms of the lease, the specific provisions of the Order and any conditions on the FEPA licence. The acceptability of these provisions to the National Assembly are a legal matter, however my views are as follows.
102. The proposals by United Utilities are set out in the Decommissioning Statement (Doc UU/UU/1). That document contains a copy of the lease. Further background information is included in the Agreement for Lease (Doc UU/0/38) and the Filled-Out Order (Doc CD87).
103. Generally these provisions appear to relate to the works offshore. The provisions appear to give back up powers to the National Assembly and provide for approval for any change of operator and provide for United Utilities PLC to act as guarantor for United Utilities Scarweather Sand Ltd as the operator of this proposal. The suggested conditions (see below)

which would be applied to the Order, deemed planning permission, or FEPA licence should ensure the removal of the windfarm and associated development from the sea bed.

104. What is not clear to me is how this would ensure the removal of plant and equipment onshore. My understanding is that the lease relates to the sea bed. The part of the development onshore is subject to the deemed planning permission and the Order grants rights to acquire land or rights over land. There appears no direct provision to ensure the removal of these aspects of the proposal. If I am correct then the matter could be covered by the inclusion of appropriate conditions on the deemed application to ensure the removal of plant and equipment and the restoration of the land to its present condition.
105. Subject to that reservation and legal confirmation of the provisions then I consider that the proposals for decommissioning are reasonable.

Human Rights

106. Some concern was expressed about the effect of the proposal on the human rights of objectors. Whilst there would inevitably be an interference with their human rights to the enjoyment of their own property, I note that the provision of renewable energy has strong support in national and local policies. Given the distance from the windfarm, the effect on any individual objector would not be disproportionate to the benefits to the wider community. In my view there is no justified objection in the terms of the Human Rights Act.

Adequacy of the Environmental Statement

107. The adequacy of the ES was questioned by a number of objectors. No doubt every individual reading the ES would like to have more information about the topics which are of particular interest. The ES was submitted to the Welsh Assembly and further information requested and supplied. Some suggestions were taken into account whilst some, such as the provision of a full size mock up of a turbine floating on a boat on site were considered impractical.
108. The ES and Supplementary documents provide a wealth of information on the proposal and its likely effects. They formed the basis of much of the evidence at the inquiry. In my view the information contained was adequate for the purpose of informing the public and consultees and provided an adequate background from which various parties could expand their cases for or against the proposal. Although much further detailed information was forthcoming during the inquiry I do not consider that the ES was inadequate in any significant respects.

Onshore Works

109. All the onshore works lie within the area of Neath Port Talbot CBC. I am not aware of any outstanding objections to any part of the onshore works. From my observations the site for the onshore compound has been carefully selected where it would involve the minimum of visual impact. The cable routes are short and direct. The character of the immediate area is dominated by existing industrial premises. I see no objections to these elements of the proposal subject to the normal conditions for such matters as landscaping, those required to

protect the environment from pollution and those requested by CCW to protect the neighbouring SSSI.

110. The ES refers to a site within the Port Talbot dock complex which could be used for the erection of the turbines etc. Because of their large size most of the major components would have to be brought by sea. This is not a formal part of the Order but from my observations the area appears both convenient and adequate for the purpose. The use of this area would ensure the generation of the minimum of road traffic. Given the nature of the proposal this is not a matter which would need to be covered by specific conditions.

Written Representations

111. I have already referred to the large number of individual representations and to the observations of CCW, MCA and BMAPA. The only other major party to rely on written representations to the inquiry was the City and County of Swansea (SCC).

112. In essence SCC's main concerns are the methodology used in the ES concerning the assessment of seascape and landscape character and the visual impact of the proposal, the adverse impact on tourism particularly bearing in mind Swansea's waterfront location, the adverse effect on recreational sailing and the use of Swansea Marina, and the layout of the turbines.

113. Generally these areas of concern were covered at the inquiry by other witnesses and my comments are incorporated above. The suggestion of a turbine layout in a single curved alignment following the line of the coast was not a matter pursued at the inquiry since such an amendment to the proposal would go beyond the site covered by the Crown Estates lease and would represent a different proposal.

114. I have had regard to SCC's written representations together with all other such representations which I have not specifically mentioned. In my view these representations do not raise any significant additional points which would outweigh those which have led to my recommendation.

Order Matters

115. The details of the Filled-Out Order as at the close of the inquiry is included in Doc CD87. Section 1 is a statement of the publicity given to the application and subsequent additional publicity. In my view this has been adequate to give members of the public and affected bodies sufficient formal notification of the proposal to consider whether or not they would be affected. Section 2 is the Order and Section 3 explains the nature and reason for the amendments. They extend to the re-siting of turbine 25, omission of offshore substations and simplification of onshore access routes and amendments to the routing of the onshore cables. They are all generally within the scope of the original Order and reduce its effects rather than extending them. In my view the current Filled-Out Order (CD87) does not amount to a substantial change in the proposals for the purposes of section 13(4) of the Transport and Works Act 1992.

116. The amount of land acquisition is relatively small being that necessary to site permanent plant and equipment. Rights of way for access and wayleaves for cables etc are the minimum

necessary to implement the proposal. No objections appear outstanding to these provisions and I see no reason why approval should not be granted for these aspects of the proposal.

Conditions

117. In general I take the view that conditions which are applicable to the offshore elements of the proposal should either be included as specific articles in the Order or be attached to the FEPA licence. Those which are applicable to the onshore works should be attached to the Planning Direction and hence imposed on the deemed planning application.
118. In the section on fishing above I came to the conclusion that provision should be included for compensation for commercial fishermen. United Utilities had prepared a draft article headed compensation for fishermen (Doc UU/0/2). In my view that article should be included in the Order.
119. Section 4 of Document CD87 contains draft planning conditions and section 5 includes draft FEPA conditions. The FEPA licence was not formally before the inquiry but the suggested conditions appear to appropriately apply matters related to the onshore development to the Planning Direction and those related to the offshore development to the FEPA licence. In my view this appears sensible to avoid unnecessary duplication. The suggested planning conditions appear necessary and relevant and should therefore be attached to any approval. I mentioned my concerns about the decommissioning of the onshore elements above. An appropriate condition for the planning direction would be "this permission is for a temporary period being the operational life of the windfarm. If power has not been generated for a period of 6 months then the onshore plant and equipment shall be removed within a period not exceeding 12 months from the date of the last generation of electricity. The site shall be restored to its condition prior to the commencement of the development unless the local planning authority give written approval to any alternative method of reinstatement". In my view no other specific planning conditions are necessary.
120. It would appear that the interests of CCW for post development monitoring etc are covered by an agreement between them and United Utilities. This is detailed in a letter dated 25/11/03 from United Utilities (Doc UU/0/46). Other concerns were dealt with in a letter dated 24/11/03 (Doc UU/0/47). CCW's reply dated 26/11/03 (Doc UU/0/49) confirms their acceptance of all matters other than conditions for the FEPA licence to limit when construction work may take place to protect marine mammals.

Overall Conclusions

121. In my view the main determining issues in this case are the balance between the advantages of the proposal in the production of sustainable energy and the impact of the proposal on the visual amenity of the Porthcawl area and the possible related impact on the tourist industry and related areas of outdoor recreation. The other issues are of less significance or are matters which could be mitigated or overcome by the imposition of appropriate conditions.
122. Turning first to the visual impact it is the nature of the Bristol Channel that on a clear day most distant views out to sea are seen against a background of land towards the horizon. Therefore objects in the sea are not so prominent. Hence views of the proposal from the Gower, Swansea seafront or more distant views from Devon coast would be quite acceptable. What is different and special about the view from Porthcawl seafront, from the harbour along to Rest Bay and beyond past the Royal Porthcawl Golf Club up to Sker Point, is that this view is out to a clear horizon. The first land fall in that westerly direction is Newfoundland. Any object in the sea is immediately apparent as shown by the existing wind mast on site. It draws the eye from the open sea to the fixed point. The windfarm would have the same effect but on a larger scale. Smaller turbines or turbines further offshore would be similarly prominent if they were seen against the open sea horizon.
123. In my view the windfarm would be at its most prominent approaching sunset with the light behind the turbines. This would back light the turbines and make them more clearly visible silhouetted against the evening sky. This would occur at times other than just those periods when the sun would be seen setting immediately behind the turbines. It is also a time of day when residents and visitors might reasonably be expected to be enjoying a quiet walk along the sea front admiring the view.
124. I observed a distinct difference between this proposal and that at North Hoyle off Prestatyn. At North Hoyle the windfarm lies to the north in what is a more open seascape. The sun set here would not create comparable silhouetting effects. Also the seaside resorts of Prestatyn and Rhyl have far more facilities and activities on the sea front which attract the eye. The equivalent area of attractions at Porthcawl is Coney Beach which is screened from the windfarm by the harbour area. The area around Porthcawl centred on Rest Bay would have the most significant views of the turbines. This part of the tourist offer of Porthcawl is the natural beach and coastal paths with the views over the sea. In my view the assessment of impact on this area was underestimated in the evidence produced by United Utilities.
125. Other tourist activities include playing golf, surfing, general bucket and spade beach activities, visits to local historic buildings and landscapes and the Kenfig nature reserve. All these activities would not be physically affected by the windfarm. However they all have an element of passive outdoor recreation which is enhanced by pleasant views across the open sea. It is not possible to make any certain predictions about any direct effect on tourism in general. One would only know for certain if the windfarm was built.
126. As far as the wish to attract the British Open to the Royal Porthcawl is concerned it may be that the picture of a windfarm off the coast may spoil the view from the course. However it could be argued that this would give a modern and progressive picture of Wales adapting to new challenges. What is clear is part of the unique challenge of that course is its position immediately adjacent to the sea and the views out to sea are a fundamental part of the character of the course.

127. The limitations of the Crown Estates lease are that the turbines can only be moved by up to 50% out of the identified site. To overcome this detailed problem of siting it would be necessary to move the whole site further into Swansea Bay north of a line of sight from Sker Point to the southerly visible end of the Gower. Such a degree of movement is outside the terms of the lease and beyond the scope of this inquiry. It is not possible to identify any alternative site in Swansea Bay since detailed analysis of all the factors was not before the inquiry. However in the absence of a detailed analysis of alternative sites in Swansea Bay I am not satisfied that this site is the only acceptable site for a windfarm in this area.
128. The visual impact of a windfarm in the specific location of this proposal would be so prominent when viewed from Porthcawl and its immediate area that I consider that the harmful effects on this view are sufficient to outweigh the benefits of this particular proposal.

Recommendation

129. I recommend that the Order is not made and that the Direction that planning permission is deemed to be granted is not given. In the event that my recommendation is not accepted, then I recommend that the Order is made and that the Direction that planning permission is deemed to be granted is given subject to the conditions discussed above, and approval of the provisions for the decommissioning of the whole of the proposal.

Inspector

APPENDIX A

CLOSING SUBMISSIONS ON BEHALF OF UNITED UTILITIES

Approach

1. These are the Closing Submissions on behalf of the applicant, United Utilities Scarweather Sands Limited (“UUSL”).
2. These closing submissions follow the same pattern as that adopted in opening. I deal firstly with various preliminary matters and then turn the various matters identified by the National Assembly for Wales as being matters about which they wish to be informed in considering the relevant application(s). Finally, I deal with various other matters which have arisen.

The Various Applications

APPLICATIONS BEFORE THIS INQUIRY

3. There are before this Inquiry applications: (1) for an order under section 3 of the Transport and Works Act 1992 (“the TWO”); and (2) for a direction under section 90(2A) of the Town and Country Planning Act 1990 that planning permission shall be deemed to be granted in so far as necessary (“the planning direction”).
4. The extent to which planning permission is in fact required is comparatively small in the overall context of the scheme as a whole given the limited seaward extent of the planning jurisdiction. The planning direction sought effectively relates to the onshore aspect of the scheme. An updated list of proposed conditions to be attached to any direction for deemed planning permission is before the Inquiry.

5. In accordance with normal practice, there has been prepared a final revised filled-up TWO. Various changes and modifications in or affecting the scheme have been proposed and, in so far as necessary or appropriate, are reflected in that revised filled-up order. These include removal of the option for an off-shore sub-station and confirmation that this will be located on-shore. Additionally, following discussion with Trinity House, it is proposed that turbine 25 be moved some 350 metres to the south-west, ie further from the channel which runs north of the Hugo Bank. Indeed, the withdrawal of TH's objection is conditional on this been carried through into any ultimately approved TWO. These and other modifications are explained in the Note on the Revised Filled-up Order.

CONNECTED APPLICATION

6. As has been made clear in the Statement of Case and in this Inquiry, an associated application has also been submitted for a licence under section 5 of the Food and Environment Protection Act 1985 which deals with the deposit of substances or articles in the sea etc ("the FEPA licence"). That licence application is to cover those aspects of the proposal which fall within the ambit of the FEPA scheme of control. That application is not before this inquiry and will be considered separately. Any such licence granted will be subject to conditions and a draft of possible conditions is before this inquiry for information purposes. One matter which is included in that revised list is a condition to cover submission at the appropriate time of a decommissioning scheme for approval by the Assembly.

Compulsory Acquisition

7. The scale of compulsory acquisition is very limited and there is not understood to be any substantial dispute remaining in practice about this aspect. Nonetheless, the onus remains on UUSSL to demonstrate that the land is required. The BOC Group set out their

requirements for withdrawal of their objection in the letter to the Welsh Assembly of 20th August 2003. Those requirements have now been reflected in the revised plans and the filled-up order. Discussions continue with them to finalize a formal agreement. But it is not, however, considered that matters of substance remain outstanding.

SofM 1 and 3, need, policy and alternatives considered.

8. The approach to need and policy is primarily to be found in the evidence of Chris Clarke.

THE INTERNATIONAL, EUROPEAN AND NATIONAL CONTEXT

9. All of the relevant dominant policy context is rooted in a broad international consensus on the approach to and role of renewable energy. The EC Directive itself, for instance, in expressly acknowledging the present underuse of renewables within the EC, does so in the context of Kyoto¹. The Kyoto Protocol includes 'a global indicative target' that, by 2010, 12% of gross national electricity consumption within signatory countries will be from electricity generated from renewable resources². The EU committed the community as a whole, independently of whatever individual commitments its Member States made, to an indicative share of 22.1% of electricity consumption from renewable resources by 2010³.
10. Renewable energy sources are not a 'nice-to-have', they are of the essence. There are legal requirements for the establishment of targets for renewables and such targets are enshrined with some precision in policy at various levels. The UK targets include achievement of

¹ EC Directive recital 1 – UU/CC/3-1 Appx 7

² UU/CC/1 para 2.3

³ Art 3(4) of the Renewables Directive – UU/CC/3-1 Appx 7

10% supply from renewables by 2010⁴ and an aspiration to achieve 20% by 2020. In its Final Report, the Economic Development Committee of the Assembly recommended that the Assembly set a benchmark for renewables of 4TWh per year (just over 10% of Welsh electricity production), expecting that initially this would be made up of roughly equal parts of on-shore wind, off-shore wind and other renewable resources⁵. In a Cabinet Statement the Welsh Assembly Government gave its response, including the following:

The Committee has made six primary recommendations, which are embodied in the vision I have set out. On carbon reduction, the Committee favours a zero carbon electricity system in the next twenty to fifty years. Last week I gave a clear lead on and set an ambition to achieve a 20% reduction in carbon by 2020.

There can thus be no debate or dispute about the targets to be achieved or the measures to be used. It is also noteworthy that the dominant policy theme is all one way and there can be no serious debate but that the present proposal accords with it.

11. It is to be noted that draft PPS22⁶ (which applies to England) states that:

Targets should be reviewed on a regular basis and revised upward (if they are met) subject to the region's renewable energy resource potential and capacity. The fact that a target has been reached should not be used as a reason for refusing planning permission for further renewable energy projects.

Whilst the Assembly has yet to express itself in identical terms, the present and pragmatically sustainable policy of the Assembly to renewables would, at the very least, imply a not dissimilar approach. Targets are, after all, determined in large measure by considerations of the achievable and are always underlain by the high desirability of doing better and of treating targets as minima rather than absolutes. This draft policy represents the clearest Government recognition of the crucial importance of renewable energy.

⁴ White Paper para 1.22 – CD 6

⁵ CD 9 para 5.5

⁶ UU/0/7 para 3

12. If there is to be significant progress on delivering the UK White Paper objectives by 2020 all the Round 1 sites, including Scarweather, will need to come forward and significant input will be required from Round 2 proposals⁷. It must be remembered that, although the process for identifying Round 2 sites is now under way, there must be significant doubt whether they will offer any, or any material, contribution to the more immediate 2010 targets. It is common ground with, for instance Mr Sumner, that even if ... *the current project [ie Scarweather] be approved and its capacity added to the two other Welsh Round 1 offshore wind farms at North Hoyle and Rhyl Flats, total capacity will still fall well short of WAG's target*⁸. Although Mr Sumner takes a different view on other aspects, this aspect of agreement is significant. Thus this Inquiry is considering an unequivocal present need with Scarwether necessary not merely to help achieve targets but to minimise under-achievement.

DEVELOPMENT PLAN POLICY

13. Section 54A of the Town and Country Planning Act 1990 provides that determinations under the planning Acts shall be made in accordance with the development plan (unless material considerations indicate otherwise). Three points arise. First, the only decision here under the planning Acts is actually that under section 90(2A) of the 1990 Act in respect of the planning direction sought for that part of the scheme within the planning jurisdiction. Second, in applying section 54A, it is important to recognize that almost any proposal will inevitably reveal 'tensions' between various policies. The courts have confirmed that, in approaching section 54A, it is necessary to read the development plan as a whole and to determine whether a proposal accords with the dominant policy or theme

⁷ UU/CC/1 para 2.14

⁸ Sumner Supp proof para 3.1

so revealed⁹. Provided there is this dominant policy/theme accord, then the mere fact that it can be argued that a proposal runs counter to one or more other policies does not mean therefore that there is a failure to accord with the development plan. Third, merely because section 54A does not apply does not mean that the development plan ceases to be material. It will, on general principles, remain a material consideration if and in so far as relevant.

14. Again, in so far as relevant, the dominant policy matrix at this level is wholly supportive of the proposal.

OVERALL POLICY POSITION

15. In all the circumstances, the dominant policy imperative is sufficiently focussed and supportive to require those who oppose the scheme to identify some substantial and overriding reason why it should not proceed. It is also common ground with most if not all other parties that no one consideration here is dominant. Even if it were to be concluded, for instance, that the landscape aspect is as Mr Sumner argues, and thus that Ms Hawkins is wholly wrong, that does not of itself dictate refusal of the scheme since the matter must be weighed in the overall planning balance.

16. It is perhaps also instructive at this stage to mention the somewhat ambivalent position of Bridgend County Borough Council ("BCBC") at this Inquiry. The following points are relevant:

- a. As identified in xx of Cllr Jones, BCBC's position is as stated in their SofC; thus any cross-examination or evidence on other matters, as expressly confirmed by Cllr Jones, does not form part of the BCBC case. There was no compulsion on him to say that. He could easily have said that BCBC had had further thoughts and decided to run other points. But he did not and BCBC must abide by his

⁹ Planning Encyclopedia Vol 2 at **P54A.07**

unequivocal evidence with such fortitude as they can muster. This is not a sterile or trifling point. Local authorities, for very good reason, have procedures to ensure that views are not attributed to the body corporate unless and until they have been properly authorised in accordance with the scheme of delegation. This is a necessary and important part of the democratic function and of popular accountability. Unless and until so authorised, the views of officers, whether well-founded or not, remain just that – the personal views of individual officers.

- b. Subject only to the matter of aggregates (as to which see below) the view of Mr Hooker remains unchanged in all material respects and BCBC has not sought either in its SofC or its evidence to revisit the overall policy matrix or balance. It follows that, on BCBC's own evidence before this inquiry, the overall planning balance still falls in their view to be drawn as expressed by Mr Hooker/Mr Rhodri-Gwynn Jones in the report to Members of February 2003¹⁰:

4.4.6 In view of the above, I consider that the positive aspects of the proposed windfarm significantly outweigh the potential impacts.

- c. It is perhaps surprising that whilst the views of Mr Moon were incorporated in the report, those of Mr Sumner and of Ms Fletcher were not. Nonetheless, Mr Hooker expressly confirmed in xx that, even taking account of those views, and notwithstanding his personally changed view on aggregates, the balance still falls to be drawn in the same manner. BCBC, in the absence of having called any other evidence and in the further absence of having taken the point in their SofC, are thus fixed with Mr Hooker's view and evidence. It will be recalled that all that BCBC authorised was the points contained in their SofC. Had they wished to

¹⁰ Clarke Appxs UU/CC/1 Appx 5.3 p 25 of 25

depart in any other material respect from the view expressed in the officers' report they would have needed to say so. They did not.

- d. BCBC's SofC raises no point in relation to alternatives, a topic to which I now briefly turn.

ALTERNATIVES CONSIDERED

17. At first blush, there is the temptation to assume that the moment one moves to considering off-shore sites, then there is infinite scope for siting them at random, or at least so far as lies within the 12-mile limit. Such an impression is, however, false. Limitations include the limits of Round 1 technology, timescale, water depth, minimising any interference with the public right of navigation, European designated sites, relationship to designations such as national parks and AONBs and the list goes on. Properly understood, the offshore environment is subject to significant restriction and the siting of the present proposal represents an appropriate response to balancing the prevailing limitations. The evidence of Messrs Clarke, Macleay, MacDonald, Appleby and of Capt Drennan amongst others all indicates clearly why the wind farm must be where it is. Approaching it from the other direction one can see that, for instance, moving it further offshore would, amongst other things, push it into deeper water (see evidence of Macleay), out into the navigational lanes (MacDonald, Drennan and, indeed, Ramsden) and out into a different aggregates area under draft MADP which is Policy 1 rather than merely Policy 4. Additionally, as Kay Hawkins identifies, it is not the case that the Round 2 sites, albeit further offshore, will have less visual impact¹¹.

18. No objector has sought to identify a realistic, site-specific alternative. Many suggest moving it further away or make vague suggestions as to other locations but such assertions

are in every case reduceable to another way of saying '*we don't want it here*'. Cllr Jones, in response to a question from the Inspector, put the matter wholly negatively by identifying that he just did not want it in Swansea Bay. As such no party has advanced a credible alternative location (or indeed a credible alternative solution). Nor is BCBC then able still to dabble in the alternatives pool in the hopes of discovering a case to run. Although alternative sites may potentially be a material consideration, no party opposed has in fact engaged that consideration by identifying such an alternative. At most there has been wishful thinking and nebulous assertion. Such arguments as have been advanced by objectors on the subject of alternatives are no more than a forlorn exercise in smoke and mirrors.

19. It must be remembered that there is here no requirement to demonstrate that there are no alternative sites or solutions (Contrast the position where there is a negative appropriate assessment under the Habitats Regs in relation to a European site). The ES has, in compliance with the relevant regulations, included *an outline of the main alternatives by the applicant and an indication of the main reasons for his choice, taking into account environmental effects*. The approach to alternatives has also been listed as one of the areas in the Statement of Matters and Mr Clarke and others have amplified UUSSL's approach in their evidence.

SofM 2 – socio-economic and other benefits/dis-benefits

20. A number of aspects potentially arise under this head.

Tourism

¹¹ Hawkins Supp paras 6 and 7

21. Several objectors raise impact on tourism as an issue. This is a wholly unsubstantiated fear. In so far as evidence exists, it provides a clear indication that what is feared in prospect will not occur in actuality. In a section entitled "Renewable Energy: Myths and Legends" the Assembly's Economic Development Committee concluded that:

There is no objective evidence available as to whether wind turbines increase or decrease tourist interest in an area. There have been several different surveys in other areas which generally report that the majority of people are not influenced one way or another by the presence of wind farms. The most recent surveys, carried out by MORI in Scotland and reported recently in the Times, concluded that "Nine out of ten tourists visiting some of Scotland's top beauty spots say the presence of wind farms makes no difference to the enjoyment of their holiday, and twice as many people would return to an area because of the presence of wind farms than would stay away". Whether the same is true in Wales remains to be established.

Recent work on this, expressly relevant to Wales, is to be found in the evidence of Chris Clarke and Kay Hawkins. This includes a recent study by the University of Glamorgan (September 2003) entitled The Scarweather Sands Offshore Windfarm: A Public Opinion Survey¹². These reinforce the conclusion that the same position is likely to pertain in Wales.

22. Mr Hooker, in the BCB report¹³, expressed the view that:

The developers estimate that up to 120 jobs relating directly to the project would be created during the construction, and up to 15 jobs would be created during operation' (ES page 2-5 para 2.2.3 refers). Many of the jobs created would be local in nature and could reasonably be expected to accrue for the 'economic benefit' of both Neath Port Talbot County Borough Council and this Authority, and possibly Swansea as well, and this would of course be welcomed. Also, the offshore wind farm, as a feature of human interest and potential attractor of visitors, tourists, and certain forms of sea-life, could offer new recreation and tourism opportunities, and consequently may well generate further secondary employment opportunities, rather than having a negative impact on local tourism.

This remains Mr Hooker's view and contrasts markedly with Ms Fletcher's more parochial and pessimistic view.

23. In xx Ms Fletcher confirmed that:

¹² UU/CC/3-3 Appx 10

¹³ UU/CC/3-1 Appx 5.3 p 15 of 25

- a. She acknowledged the potential attraction of visitors, even without a visitor centre, to look at the wind farm – though she categorised these as ‘hit-and-run’ tourists. Even assuming she were correct in that latter point, she acknowledged that such attraction would, in so far as it had an effect, lead to an increase not decrease in visitors. Yet more interestingly, she characterised the likely attraction factor as a ‘nine-day wonder’. This is on any analysis a significant point. In the result Ms Fletcher effectively accepts that any effect of the wind farm, positive or negative, is transient. In point of fact, it seems highly unlikely that even the small minority surveyed who have in prospect and anticipation expressed a disinclination to visit Porthcawl were the windfarm built will allow such a development to deter them from visiting the town. The importance of Ms Fletcher’s view is to confirm that even were there to be an initial deterrent effect, the ‘nine-day wonder’ character would mean business was soon back to normal. Her ‘nine-day wonder’ point is also most material to the question of visual impact. However unconscious her aside was, it lays bare the true nature of that aspect as well ie anticipation hugely exceeding reality.
- b. She acknowledged that there would be tourism benefits of which she had not taken account in her proof eg recreational fishermen with the improved fishing within the wind farm site.
- c. She confirmed that the people who came to Porthcawl wanted a traditional British beach holiday or at least a traditional British sea-side resort. Even in the highly unlikely event that there were a material deterrent effect over a period of time, its effect would only be to transfer a small element of trade from Porthcawl to another Welsh or English beach resort. Even taken at its highest, her evidence goes no further than to suggest some diminution in profit from the tourist/visitor trade.

- (i) The mere occurrence of an economic impact is not of itself a sufficient reason to oppose the wind farm. Were it otherwise any development could be opposed on the ground that the returns from existing businesses ought to be protected from competition or other justified development. In so far as her evidence went, and even taken at its highest, it fell orders of magnitude short of establishing any materially adverse impact on the local tourist industry as whole.
 - (ii) This proposal is being promoted in the national (both Welsh and UK) interest. Any diversion of tourist spend to other resorts within the national area thus has no effect on the overall Welsh or UK economies. Ms Fletcher had given no consideration to these wider aspects and the resulting balance which must be drawn.
- d. The support of Parkdean at Trecco Bay is significant¹⁴. Mr Chislett in his proof states that *in 2002 the income to Parkdean (the operators of Trecco Bay leisure park) alone was £16million*¹⁵. Ms Fletcher sought to distinguish Trecco Bay on the basis that only 257 of the 2000 caravans were let to tourists. She however accepted that (1) even an eighth of £16m is a significant sum and Parkdean would still be objecting if they were not wholly confident; (2) that, in any event, there was a mobility of ownership in the remaining caravans and again Parkdean would not have expressed support if they had thought people would no longer wish to own

¹⁴ UU/CC/3-1 Appx 5.4

¹⁵ SoS Porthcawl proof p 36

caravans in the area. She also states¹⁶ that ... *employment generated by Trecco Bay totals approximately 110-145 fte (full time equivalents) which is only 9% of employment in tourism in the town.* It is interesting that in this context she apparently thinks 9% an immaterial figure.

- e. She produced an extract from *Natural Wales, Pure Golf*. This document inclined to a somewhat purple prose style. A revealing quotation was to the effect that ... *wherever you go in this green and friendly land, you are never far from a world-class parkland course or an inspirational coastal links.* This goes to the heart of the issue raised by Pyle and Kenfig and Royal Porthcawl Golf Clubs. As the brochure confirms, wherever one seeks to place an off-shore wind farm, the likelihood is that an objection will spring up from AN Other Golf Club in very similar terms. Ms Fletcher was not prepared to grapple with this necessary corollary when it was put to her. In point of fact, the objection of the Golf Clubs in the instant case is misconceived and over-stated. It is inconceivable that the Open would be denied to Royal Porthcawl, all other things being equal, because of the wind farm. Indeed, the presence of the wind farm and the increasing attractiveness of 'green' initiatives is, if anything, likely to operate as a positive attractor.

24. There is in truth no material objection on tourism. Mr Hooker rejected it at the outset and his view has not changed. In circumstances where their own Assistant Director (Planning) rejects any material adverse impact on tourism, it is perhaps surprising that the point was pursued with such vigour.

Socio-economic environmental benefits

25. Nor should the wider benefits of the scheme be forgotten. In terms, for instance, of carbon dioxide emissions, the Scarweather proposal will reduce such emissions by approximately

¹⁶ Supp proof page 3 of 11

270,000 tonnes per year, or nearly 6 million tonnes over its lifetime¹⁷. Merely rehearsing the figures tends to underplay the significant contribution this will make both in isolation and as part of an overall strategy. This is on any analysis a significant benefit of local, regional and national importance and having clear wider benefits beyond this as part of the European and international approach to a known problem.

Aggregates

26. It may well not be strictly necessary to deal with the aggregates point taken by BCBC given that Mr Hooker himself confirms that, even if he is right in this respect, the planning balance still militates decisively in favour of permitting the scheme. Nonetheless the point has been raised and I must cover it.

27. The following points emerged from xx of Mr Hooker:

- a. Area CBC 4 falls outwith BCBC's (and any other LPA's) planning jurisdiction. The decision making process in this respect is one for the Government.
- b. It is perhaps surprising that it was the Caerphilly direction which brought about Mr Hooker's change of view. That direction does no more than require Caerphilly to comply with the essentially landward looking TAN, and makes no mention of the sea-dredged aspect of MADP.
- c. CBC 4 is only a Policy 4 area and thus comes at the bottom of the hierarchy in terms of coming forward. Mr Hooker referred to uncertainties in the timescale 20 to 25 to 30 years. The lease for the windfarm at a mere 22 years would fit such a timescale very well and there would not, in any event, be any sterilisation of an asset. At the end of the lease the matter would be reconsidered.

¹⁷ UU/CC/1 para 1.7

- d. Table 4.13 in draft MADP describing CBC 4 draws attention to significant risks with the site coming forward as an aggregate resource¹⁸. Those significant risks include the effects of marine dredging on fishing interests and sediment transport links between sandbanks and nearby beaches (sensitive to erosion and flooding), risk of damage to SAC features, increased saltmarsh erosion, coast defence upgrade, damage during severe winter storms, inhibition of response to sea-level rise etc. Given the level of caution expressed by CCW and BCBC about the possible coastal processes effects of the very minor changes wrought by the wind farm proposal it would seem unlikely in the extreme that the massively greater bed-intrusion involved in dredging the Banks for aggregates would ever be sanctioned NB also the Minister's statement on similar concerns at Nash Bank¹⁹.
- e. Table 4.13 also identifies a potential resource but *not of proven commercial interest*. Mr Townend elaborates and indicates that:

Details which ABPmer has compiled from a number of studies, including the previous investigations, identify that the grade of sediment on the various sandbanks is markedly different. Scarweather is formed of very well-sorted fine sands whereas both Nash and Helwick are formed of well-sorted medium sands. On this basis the grade of sands which is available on Scarweather would not meet the requirements of a commercial aggregate since it is composed of fine sands that do not meet current specification of either Grade 'M' or Grade 'F' aggregate.

It must be remembered that ABPmer have had an extensive role in assisting the emergence of the aggregate review and thus maybe taken to know what they are talking about.

- f. Although Mr Hooker referred to the limitation on the depth to which the present generation of dredgers could operate, he agreed that they can operate up to 30

¹⁸ UU/0/11

¹⁹ Hooker Appx 3

metres without modification and to 40 metres with modification²⁰. He accepted that, for instance, the neighbouring IBC 6 was a Policy 1 area and was, for the most part, within the range of existing dredgers. In any event, he further accepted the general trend of commercial vessels, including dredgers, to adapt to suit the markets in which they operated and the move towards larger vessels.

- g. He accepted that the policy document containing CBC 4 was a draft liable to change and MADP already expressly acknowledged the Scarweather scheme.
- h. He accepted the underlying logic and impetus of Policy 7 of MADP directing marine dredging further off-shore and the recent Assembly Position Statement on Sand and Gravel Supply indicating that *generally dredging should be steered towards the western areas of the Bristol Channel*²¹ ie to an area which does not include Scarweather.
- i. As Mr Clarke identifies²², paragraph 12 of Minerals Policy Wales (2000) states:

... the use of marine-dredged materials should be taken into account where this can be obtained in a sustainable way. However, these sources must not be relied upon to justify failing to adequately assess the potential supply of land-based resources and to safeguard potential primary land-won mineral resources for future generations.

Mr Hooker, in his argument, appears to have been trying to do precisely that which Minerals Policy Wales prohibits. Equally, the Caerphilly direction appears to be telling that authority to do precisely what the policy enjoins.

28. In all the circumstances, it seems difficult to attach any weight to the question of aggregates in the context of the present proposal.

²⁰ MADP – UU/0/11 p 25

²¹ Hooker Appx 4 para 2.5

²² UU/CC/2 para 4.68

29. I turn lastly to BMAPA. They were consulted, though, for whatever reason, they either did not receive it or did not respond. In any event, their views are now before this Inquiry. It is to be noted that these views are expressed in the most general terms and add little or nothing to the points made by BCBC.

SofM 4(a) - Visual impact

30. This forms one of the biggest areas of generalised objection. There is a need for some restraint and judgement in approaching this topic. Clearly the turbines are large structures and, subject to prevailing weather conditions, will be visible from a variety viewpoints. To say that is no more than to reveal a startling glimpse of the obvious and that fact does not, of itself, constitute a ground of objection. Were it otherwise, no physical or operational development, from a garden shed to an office block, could or would ever be permitted. The test is rather whether what is proposed is acceptable when weighed in the overall planning balance having regard to all material considerations. Mr Sumner expressly accepted that this was the appropriate approach.

31. Landscape, or indeed seascape, and visual assessment can be said broadly to involve two stages. First there is the somewhat mechanistic application of guidelines to achieve, in so far as is possible in this largely subjective area, an objective appraisal. There then follows the application of judgement. Whilst it is important that the various techniques are appropriately and sensibly applied, it must be remembered that they are the means to an end and not an end in themselves. The mantle of robust, and informed, common sense is in this respect perhaps to be preferred.

32. Inevitably there has been reference to work into people's perceptions of windfarms. It would not be helpful to review that yet again in closing. It is sufficient to identify that what is clear beyond doubt is the broad, indeed overwhelming, public recognition of and

support for green energy initiatives (including windfarms) generally. Thus, in anticipating or predicting people's reactions to a windfarm at the location here proposed, one must remember that the reaction of any putative viewer (whether golfer, tourist, resident or whatever) is likely, all other things being equal, to be formed in the context of a general predisposition – in principle – in favour of green energy initiatives. The existence of what might be termed the 'informed eye' factor is important. In so far as it exists, its effect will necessarily militate in favour of acceptance of the windfarm. It is also important to bear in mind the tendency, borne out by the various studies, for anticipation to be materially worse than actuality. The various studies also afford confirmation of Ms Fletcher's instinctive recognition of the 'nine-day wonder' factor.

33. I make one preliminary point. Only three professional witnesses appeared before the Inquiry to give evidence on landscape and visual matters. One, Ms Hawkins, is a chartered landscape architect, a member of the Landscape Institute and, a former examiner for that Institute's professional practice oral examinations. The fact that each of the other two witnesses, Messrs Sumner and Sinclair, lack such relevant professional qualifications is in marked and surprising contrast to their willingness to enter into and criticise an area calling for appropriate technical competence. Miss Douglas in closing properly used the phrase 'landscape professionals' – such a term attaches only to those whose professional competence and training has been recognised by relevant, formal qualifications. Mr Sumner confirmed that not only did he lack the relevant qualifications, no member of his team possessed them either. I do not seek to be personally rude to Mr Sumner or to Mr Sinclair, nor is it any reflection on Mr Sinclair's long involvement in and association with wind farm proposals. Nonetheless, the interpretation and application of landscape (and seascape) methodology and best practice is a matter for experts and requires expertise. Many of the criticisms levelled at UU and the work of Ms Hawkins result from a simple

misunderstanding by a non-expert of what has been done and of what is required. I note that BCBC clearly regard the possession of appropriate expert qualifications to be a material consideration since Miss Douglas cross-examined Mr Tyndale to ask him whether, amongst other things, he possessed a landscape qualification. Sauce/goose. Sauce/gander.

34. The following matters emerge from the evidence of Mr Sumner:

- a. The only relevantly qualified input into Mr Sumner's evidence came from TACP who were instructed at a very late stage and on a very narrow basis. They dealt with three matters, namely (1) one solitary sample assessment for comparison with the ES (Locks Common/Rest Bay), (2) 12 km boundary definition and (3) Visibility (in terms of Met Office data). Mr Sumner fairly accepted that (3) represented a clear misunderstanding of matters by TACP and the point was not pursued. Nonetheless, since TACP attached some weight to the point, it seems likely that their mistaken identification of what they mistakenly took to be a material flaw clearly coloured their overall approach to the rigour and thoroughness of the ES. TACP's comments on other matters must therefore be read subject to this mistake they made. As to (1), it is perhaps difficult to understand the robustness, or indeed the fairness, of a criticism levelled at a professionally produced ES where that criticism is based on what was necessarily very hurried consideration by the criticising party of just one landscape area. As to (2), the criticism is yet more bizarre. The approach to the 12 km decision is fully explained in the ES and Ms Hawkins sought to amplify the matter in evidence. Quite apart from this, Mr Sumner was xx'd re Mrs Moon's proof and her view of the acceptability of the 2nd Round/13 km distances; he indicated that he took a not dissimilar view. He acknowledged that the role of the ES was to deal not with

every effect but with those that are significant. He further accepted the truism that visual impact diminishes with distance. It thus follows that, whatever else, Mr Sumner's point is going nowhere.

- b. A further example of Mr Sumner's lack of familiarity with the relevant guidance arises in relation to the definition of local units in the Seascape Guidance²³. He purported to give a definition of this in his proof but did so in terms different from the Guidance²⁴. In the scale of things this is in some respects a small point but an eloquent one in the context of the way BCBC put their case. Those who are qualified in, familiar with and regularly practice in such matters do not need to be told that there is a precise definition expressly set out in the Guidance.
- c. BCBC advance criticisms of the approach of the ES to Landmap and to the Historic Landscape. I ignore for present purposes the demonstrable failure to prefigure the point in the BCBC SofC. As to the substance of the criticism, the point is barren. Ms Hawkins explained the response that was given in answer to her request re Landmap. In any event, the position of CCW is instructive. They have maintained no such criticism, notwithstanding the fact that they are the statutory landscape adviser in Wales and have a particular interest in both Landmap and Historic Landscapes. For instance, the Chapter 1 to the Landmap Information System Document states²⁵:

Managing the LANDMAP information System

This is a national responsibility for the Countryside Council for Wales on behalf of the National Assembly for Wales. But it is also an important partnership with the Local Authorities and the National Park Authorities. The Countryside Council for Wales carries the final responsibility for the quality of Landmap Information ...

²³ CD 38

²⁴ Sumner proof para 5.2.3 and Guidance para 4.5

²⁵ CD 10

It may be doubted whether, in such circumstances, CCW would have remained silent had there been a material failure in relation to Landmap in the ES. Similarly, they would not have remained silent on matters concerning the Historic landscape, or indeed on any other shortcomings they perceived in landscape/visual terms in the ES. The position of CCW, who undoubtedly do have appropriately qualified personnel in this regard, serves to put in context the concerns still advanced by BCBC. In short the view of CCW is to be preferred.

- d. It is also salutary to recall Mr Hooker's unchanged view on landscape. The BCBC report dealt at some length with a review of landscape and visual impact. It then went on, in Mr Jones'/Mr Hooker's italicised comments, in these terms - *Having examined the ES in some detail I am content to agree with the developer's findings as summarised above*²⁶.
- e. The brochure of the Ogwr Ridgeway Walk (exhibited by Ms Fletcher) offers a useful litmus test of the assimilation of windfarms post-construction. Here is an example of a 1994 scheme (with admittedly fewer and smaller turbines) being adopted and proudly referred to as a point of interest in a promotional brochure for walkers (both tourists and residents). It is a document produced by Mr Sumner's own team.
- f. Mr Sumner, and to a lesser extent Mr Sinclair, made a number of other criticisms of the ES methodology. I am content to rely on, without repeating them, the answers given both in writing and orally by Ms Hawkins.
- g. He was referred to the photomontages, taking as examples those showing the sea front at Porthcawl with the wind farm to the left of the picture and with vertical

elements, including flag-poles and lamp standards in the centre and right hand foreground. He confirmed that, irrespective of any questions about brightness, visibility etc, he did not question the accuracy of the wire-frame inputs or of the incorporation of these into the photograph itself. He thus further accepted, as did Mr Sinclair, that the relative scales of the existing physical features (ie the flagpoles etc) could be used, together with the photomontages themselves, on site as an aid to judging the height and thus visual impact of the turbines. This is an important and helpful point of agreement.

- h. Whatever be the visual effects of on-shore wind farms, Mr Sumner agreed that off-shore turbines partook of some of the character of ships, turbine and vessel each being designed with a functional purpose. Indeed, UU would submit that the turbines do more than merely echo other elements of the maritime scene and this characteristic plays an important part in making turbines an appropriate element in the seascape rather than, as objectors would argue, a wholly alien feature.

35. The following matters emerged from the xx of Mr Sinclair:

- a. He was unable to identify any example of CPRW having supported (in accordance with what is their policy) any wind farm proposal whether on shore or off. It is apparent that CPRW do not like wind farms, oppose them with considerable vigour on land and have yet to find one to support off-shore. I accept entirely that they refrained from commenting on North Hoyle and on Rhyll Flats but that appears largely to have been treated by them as a learning exercise. There is nothing wrong in CPRW's dislike of wind farms. It does not condemn the body to an eternity of outer darkness. But, in the prosaic context of this Inquiry they must accept the

²⁶ UU/CC/3-1 Appx 5.3 p 19 of 25

consequences - their policies are little more than a fig leaf vainly trying to obscure a fundamental disagreement with a key aspect of national renewables policy. In Wales, as already identified, the effect of the report of the Economic Development Committee final report²⁷ and the resulting Cabinet Statement²⁸ is that Wales is pursuing renewables in the form seeking 4 TWh per year benchmarked to 2010 (amounting to just over 10% of Welsh production) made up in roughly equal parts of on-shore wind, off-shore wind and other renewable resources. This could not be clearer and contrasts starkly with CPRW's dislike of wind farms.

- b. Although Mr Sinclair was unhappy for CPRW to be categorised as a single-issue pressure group, that is effectively how they must be viewed for the purposes of this inquiry given the case they run. Thus it is that, as I understood him to accept, CPRW tend to view visual impact as an overriding consideration rather than as merely one constituent part of the overall planning balance.
- c. His index of potential visual effect ("IPVE")²⁹ has little use as a tool, allowing as it does no input for speed of rotation, layout or distance from the observer. In any event, in so far as it is used, Scarweather is shown to be materially less in terms of mass than the taller schemes already consented at Rhyl Flats, Barrow, Kentish Flats, Lynn, Inner Dowsing and Cromer³⁰. This results because, irrespective of how far the turbines in those schemes are from shore, they are all higher. Similarly, Robin Rigg, though the same height as Scarweather, has twice the number of turbines and, again, a materially greater effect.

²⁷ CD 9

²⁸ UU/CC/3-1 Appx 8

²⁹ Sinclair proof section 3.5 and 2nd Supp proof p 3

³⁰ UU/KFH/4 p 2

- d. Similarly, the Sinclair-Thomas method is of perhaps dubious or at best limited assistance. Mr Sinclair very fairly acknowledged the criticisms it had attracted in the Scottish Natural Heritage Report (2002). Amongst other things, that matrix ignores the number of turbines and thus fails to distinguish between one or thirty or sixty. The limitations are obvious. Even if one does use it here, one again notes that in many respects, Scarweather compares favourably with schemes already consented.
- e. In so far as concerns North Hoyle etc, Mr Sinclair tells us that ... *CPRW did not object to either the North Hoyle or Rhyl Flats projects off the N Wales coast, and which are a similar size and configuration to the Scarweather Sands proposal ...* (emphasis added)³¹. He merely suggests that the present scheme is in a more sensitive location.. Yet CPRW fail to suggest a realistic alternative, and indeed Mr Sinclair, when asked about possible movement of the site, took a stance not dissimilar to that of Cllr Jones ie nowhere in Swansea Bay and you'll have to go out some way.
- f. I do not propose to deal in closing with Mr Sinclair's various points on cameras and other technical matters. I rely on the answers, written and oral, of Ms Hawkins.

36. It is entirely understandable that this issue has engendered concerns and opposition. It would be strange had it not done so. Nonetheless, there is, on the evidence produced, no rational basis for concluding that what is proposed is unacceptable. In any event, any effect falls to be weighed in the overall balance which, as Mr Hooker identified, is significantly in favour of the scheme.

³¹ Sinclair Main Proof para 1.3

SOFM 4(B) MARINE AND COASTAL PROCESSES

Coastal processes generally

37. This is, like noise, an area where technical competence and expertise are required. The matter is to be found in the evidence of Ian Townend. He deals both with coastal processes generally and with the specific objection maintained by the surfers.

Surfers/surfing

38. It is to be regretted that, without calling any technically competent witness here to support their objection, some in the surfing community have sought to substitute mere assertion for rational and technically supported and supportable argument. It is not appropriate to treat a view with which a person disagrees as being synonymous with a view which is biased. Still less is it acceptable where the person with concerns has no scientific basis to justify disagreeing with the professional view expressed.

39. The true ambit of the surfers' case can be gleaned from the following two quotes, the first from Mr Reed's proof and the second from Dr Russell's e-mail quoted by Mr Anderson:

...we are not satisfied an independent study has been carried out by a sufficiently qualified, surfing-conscious consultant to gauge the potential effects ... a dangerous precedent could be set if the project were to go ahead without any such study being completed and analysed since future development of off-shore technologies could lead to the endangerment of popular UK surf-breaks.³²

... The modelling will have some potential flaws which you may be able to use to support your case, though the question that remains is, 'are these flaws significant to the overall findings? Maybe not? ... it remains my opinion that the likely effect on surf will be minimal in this case (and it is a fairly unique case, given the offshore banks) though I certainly accept and support your point that a dangerous precedent might be being set if effects on the surf are not given due consideration in future schemes.³³

40. Thus:

³² WCSC/2/DR REED proof paras 1 and 2

³³ Anderson Appendices Appx C – e-mail from Dr Paul Russell to Mr Anderson of 8 Sep 2003

- a. The surfers confirmed in xx that Dr Russell would not have expressed an opinion lightly. He has given what can only be described as a crystal clear view, which reinforces the equally clear view given by Mr Townend. Without more this answers the question the surfers originally posed. The fact that neither the WCSC nor the BSA is prepared to be bound by the view now expressed by Dr Russell begs the question of whether they would in fact have signed up to any other work by Dr Russell which they wanted UU to fund.
- b. The real bone of contention for the surfers is not this scheme but other, future schemes. They are seeking to use Scarweather to lay the groundwork for such other schemes. This is not an appropriate use of this Inquiry's time or of the resources of the other parties. No question of precedent arises. In any given case, there is either enough evidence or there is not. Here there is substantial evidence, effectively independently validated by Dr Russell's freely and clearly expressed opinion.

41. It is in any event nonsense to suggest that there is some mystic quality in waves discernible only to surfers and which will defeat the expertise of appropriately qualified experts in hydraulics and morphology. What the surfers argue is akin to a Channel swimmer who objects to some notional development in the Straits of Dover and who argues that not only will that development have some effect on sea conditions and waves but that only an expert who is also a Channel swimmer will be able to grapple with the question. This is nonsense on stilts.

Appropriate Assessment

42. Although it was concluded that there is no likelihood of a significant effect on the Kenfig cSAC, ABPmer nonetheless went on to carry out an appropriate assessment exercise³⁴ without prejudice to the fact that this was not strictly required. That exercise confirms that there will be no adverse effect on the integrity of that site. We do not understand this to be seriously challenged. CCW confirm their satisfaction on this point³⁵ and Mr Moon confirmed that, although raised in the BCBC SofC, the council do not pursue that point either.

SOFM 4(C) - ECOLOGY, ORNITHOLOGY ETC

43. These matters were extensively dealt with in both the ES and the Supplementary Environmental Information. Marine birds and terrestrial ecology generally were dealt with in the evidence of Stewart Lowther. Non-avian marine ecology was covered by Dr Stephen Hull.

44. No material issue would appear to arise in respect of the terrestrial element of the proposal. I turn accordingly to those matters raised by Mr Moon and to various other matters.

Cetaceans

45. Mr Moon confirmed that he did not challenge the noise material contained in the Supplementary Environmental Information. Accordingly the only issue apparently turns on the sufficiency of information and its interpretation.

46. As so often is the case, no matter how much information is available, those opposed to a given scheme fall back on the assertion that more information is required and that, until further (often unspecified) information is obtained, the project should not proceed.

³⁴ UU/IHT/3 – Appx G

Frequently this is allied to a reference to what the objector asserts is 'the precautionary principle'. The principle is helpfully set out in UK policy³⁶ and no party has challenged that formulation.

The precautionary principle means that it is not acceptable just to say 'we can't be sure that serious damage will happen, so we'll do nothing to prevent it'. Precaution is not just relevant to environmental damage – for example chemicals which may affect wildlife may also affect human health.

This first element of the principle has a positive effect here. There is little room for debate about the environmental damage which the provision of renewables (and off shore wind farms in particular here) seeks to address. There is therefore in the first place the very strongest support at the UK, and indeed international level, for the type of initiative represented by the present proposal. A very clear level of material harm, whether in respect of cetaceans or otherwise, would be required to weigh the balance against the proposal here. The precautionary principle continues:

At the same time, precautionary action must be based on objective assessment of the costs and benefits of action. The principle does not mean that we only permit activities if we are sure that serious harm will not arise, or there is proof that the benefits outweigh all possible risks. That would severely hinder progress towards improvements in the quality of life.

This second limb is directly relevant to Mr Moon's concern about paucity of information. Ecologists, as Mr Lowther confirmed, would always like more information, if only out of professional curiosity. The question however is whether there is sufficient information on which a decision on a particular proposal can appropriately be based. The precautionary principle, properly understood, recognizes this and does not strive after absolutes. Mr Moon's incorrect characterisation of the principle is flawed in two respects – (1) it falls into the trap expressly warned against in the correct formulation of the principle by seeking unachievable and unrealistic absolutes; and (2) the (flawed) formulation of the

³⁵ UU/0/8

³⁶ UU/0/39 – A Better Quality of Life

principle for which he apparently contends is so narrow and obstructive as to hinder the very progress towards sustainability which correct application of the precautionary principle seeks to encourage.

47. In the case of cetaceans there is, as Dr Hull expressly confirmed, adequate information on which to found a decision. CCW similarly recognize this. There will also be a benefit here in that implementation of the proposal will be subject to additional monitoring requirements as identified in the undertaking to CCW. It should be stressed that such monitoring is not necessary to allow a decision to be taken and it is for that reason that it is contained in a wholly separate undertaking outside the statutory elements of the TWO and the conditions to be attached to any deemed planning permission.

48. I have dealt here in some detail with the precautionary principle in respect of cetaceans. The points I make are equally relevant to all the areas where Mr Moon or others raise questions as to the sufficiency of information. They are of general application but I will not seek to repeat the points *ad nauseam*.

49. By way of footnote I should mention the matter raised by CCW under point 5 of their letter of 20th October 2003³⁷. As the applicant has identified, these are matters which are appropriate for consideration in the context of the FEPA application where a proposed condition already provides for the submission of a Project Environmental Management Plan for the approval of the licensing authority in consultation with CCW and prior to the commencement of construction works. This amply covers CCW's concerns. Additionally, in regard to CCW's suggestion of excluding 'noisy' construction work from May, June and July, Dr Hull explained that this could have the very opposite effect to that which

³⁷ UU/0/8

CCW wish to achieve. In any event this aspect, as with the others is appropriately to be controlled and controllable through the FEPA licence procedure as already set out.

Sea birds

50. Mr Lowther has explained why there is no substance in the points Mr Moon raises under this head. Additionally he confirmed that Scarweather, unlike the Spanish example often quoted, is not on a migration route. It is further to be noted that a question about birds forms no part of the matters raised by BCBC in their SofC as a basis of objection to the TWO. The point in the SofC from BCBC's perspective is limited to seeking to ensure the imposition of monitoring requirements should the project proceed. No amount of sophistry can promote this into a point of outright objection. The monitoring matter, in respect of birds and of other matters, is adequately dealt with in the undertaking to CCW.

Elasmobranchs

51. Mr Moon offered no evidence on this and no point on this is now pursued by BCBC.

Sabellaria

52. I infer from Miss Douglas's closing submissions (Chap 4 para 10) that this point is not (seriously) pursued. In any event, as Dr Hull explained, there will be no direct effect on this species. And any potential for smothering is remote given the effects of dispersion and limited deposition.

The position of CCW

53. Given that CCW is the statutory adviser on nature conservation in Wales, the stance it has adopted in regard to this matter offers material comfort on the ecological issue. Whilst Mr Moon sought to suggest concerns on the part of officers within CCW, there is no evidence, as opposed to assertion, of that before the inquiry. In any event, the position of CCW as a

body is a clear and there has been no suggestion that CCW has behaved other than wholly properly and professionally.

54. It has also secured a collateral but material benefit for itself and for the body of scientific research and knowledge through the undertaking given to it by UU in respect of various elements of project monitoring. As explained above, the position now adopted by CCW reflects that it is satisfied that there is sufficient information already available on which a decision on this project can properly be based. It is for this reason that the commitment to the further monitoring is contained in a wholly separate, non-statutory undertaking which, although under no compulsion, UU were content to give. That is also why I describe it as a 'collateral' benefit.

55. There can be no question here but that there is an appropriate matrix of material upon which a robust decision can be based and there is no ecological or ornithological reason to prevent this scheme proceeding.

SOFM 4(D) – NOISE AND VIBRATION

56. This is a technical area requiring professional knowledge and expertise. It is entirely understandable however that people should be concerned about this aspect. Indeed, it is a rare project of any size where such concerns are not raised, and many infrastructure projects do, on any analysis, have material noise impacts which must then be weighed in the overall balance to determine whether or not the project should proceed. Here however the technical evidence is clear. There is no reasonable basis for imputing noise generation as a reason for refusing this project. No party adduced any technically competent evidence to this inquiry to the contrary and Mr Hayes' evidence is substantially unchallenged. Although BCBC included a noise objection in their SofC, that element of their case has

been withdrawn; that such a body with an environmental health function has not felt it necessary to pursue this issue is of itself eloquent of the lack of any material impact

57. In so far as concerns construction noise, even if the foundation solution chosen involves a percussive element, only the night-time raises any possible question of potential for any impact and even that will be controlled within appropriate limits by a noise limit between the hours of 2300 and 0700³⁸. As regards operational noise Mr Hayes concludes that environmental noise impact due to turbine operations here will be insignificant. The matter of operational noise is further secured by a provision of the TWO. No material vibration effect will occur.

Sof M 5 - Commercial and non-commercial navigation, safety

NAVIGATION

58. Trinity House have now withdrawn on condition that the proposed amendments that have been agreed with UUSSL are carried through into law in any TWO which is here made.

59. The RYA object on two points in relation to exclusion zones. The first, as explained in their SofC, is an objection to the proposed operational safety zone around the turbines. The second is in relation to the construction safety zone. UUSSL's case in respect of safety zones, and navigation generally, was dealt with primarily in the evidence of Mr MacDonald and Capt Drennan. Mr Ramsden for the RYA, in xx, confirmed that:

- a. He was not giving evidence on behalf of any commercial vessels, he was only dealing with those vessels with which the RYA was concerned, namely recreational vessels. It follows that no party has appeared to give evidence

challenging safety zones for those other vessels. It would thus appear that the RYA, with its largely amateur membership, seek to argue to be exempted from those provisions which, *ex hypothesi*, will be applied to all other vessels, particularly to those with professionally qualified masters and crews. There is necessarily a tension in the RYA case without more.

- b. It became apparent that, notwithstanding much debate about the appropriateness of the criminal sanction, an alleged (though wholly unclear) distinction between safety and exclusion zones and the asserted difficulty of judging distance, the only sticking point for Mr Ramsden and the RYA is a requirement for risk assessment.
- c. He indicated that, in his view, even 50 metres might not be a sufficient outward extent for a safety zone. Surprisingly though, he declined to express a view on the minimum size of such a zone. This is perhaps of a piece with his, and the RYA's, naïve faith in the skill and competence of all recreational sailors. It is surprising that, whilst the RYA rightly assert that even one recreational sailing death or serious injury is one too many³⁹, they resist safety zones designed to assist and protect their own members. Clearly many recreational sailors are experienced, competent, properly qualified and appropriately cautious. Equally clearly, there are those who are less competent and whose judgment is questionable. Anyone can for instance go to the Boat Show, buy a powerful motor boat and take to the water to their own and others' hazard without any requirement for training or licensing. The picture attached to the end of UU/0/34 provides a graphic illustration of the point as does the text of that document outlining certain proceedings before the magistrates.

³⁸ Clause 15 of the draft TWO

³⁹ RYA/ER/07B

The text of the revised clause 28 in any event provides, on any reasonable analysis, a sufficient recognition of the RYA's concern. It would clearly be wholly irresponsible not provide for appropriate mechanisms for safety zones in both construction and operation.

60. The MCA's position is perhaps difficult to follow. It is clear that they have no difficulty with the risk assessment which has been carried out (and to be found in the Supplementary Environmental Information) nor with the agreement reached with Trinity House over the Shord Channel. They have also expressly made clear that they have no fundamental objection to safety zones. Moreover, although expressly invited to confirm that, in their view, enforceable safety zones are not required in relation to this project, they have to date not ventured an answer to that question. As UU understand it, the only elements of concern are that the MCA appear (1) to be waiting for such zones to be brought in by projected public general legislation and (2) to be fussed as to which department will ultimately have responsibility for such zones. As to the first, UU's proposal expressly provides for zones under the TWO to cease to have effect when such future legislation comes into force. As to the second, it is perhaps difficult to understand how an apparent turf war between Whitehall departments can justify a hiatus period where safety zones are undoubtedly required but their implementation is delayed pending identification of the enforcing authority. Many and mighty are the attributes of bureaucracy but even so it still lacks the ability Canute-like to bid accidents not happen until the paperwork catches up.

61. Whilst the MCA no longer doubts the legal competence of the Welsh Assembly to deal with this matter, it is perhaps surprising that they seem reluctant to allow the Assembly to exercise its legislative functions to address what they seem to accept is a present need. See generally correspondence pack UU/0/45. The MCA appear to be focussing on the mechanism and who runs it rather than on whether safety zones are required.

62. There is still some suggestion of a point being run in relation to an alternative channel (page 11 of RYA closing). Mr Townend's evidence is clear and ample for the purpose. On the basis of that evidence, it can be concluded that no material deposition will occur. The RYA have produced no evidence to the contrary.

63. The following comments arise in respect of the RYA closing submissions:

- a. The comment of Mr MacDonald that *The Bristol Channel including Swansea Bay was identified to be a relatively busy area for recreational sailing and angling* is quoted on page 1. It is then repeated, in shortened form - *the area is relatively busy for recreational sailing and angling* - to challenge Captain Drennan's view that the area around the wind farm is not highly utilised by leisure users. It is not appropriate or fair to move from a general comment about the Bristol Channel including Swansea Bay to the specifics of the wind farm area in this way. Clearly there is no uniformity of use across the whole Bristol Channel or even within Swansea Bay; some areas are well used, others less so.
- b. On page 5 at (a) the RYA confuse the question of the safety zone being at least 5m from the scour protection. The RYA unhelpfully ignore the difference between, on the one hand, using the criterion of 5m from the scour protection as a mechanism for calculating how large the safety zone should be with, on the other, the way in which the distance so calculated would be promulgated to mariners ie by publicising a stand-off distance from the turbine. No one is asking masters or skippers to guess at the extent of the scour protection, indeed one of the aims of operational safety zones is to avoid them having to worry about such matters.
- c. No authority is provided for the proposition that the public right of navigation may only be removed after public consultation. In any event, one of the key functions of

this order is to authorize such interference and, even ignoring the previous consultation, this inquiry has offered a more than adequate public debate.

- d. The RYA has throughout runs its case on the basis of objections on various technical aspects and without challenge to the principle of the TWO. Mr Eardley of the RYA, in the e-mail forwarding the RYA's notice of objections to the TWO was at pains to state *Please note that the objections are technical: we are not objecting to the principle of the development.* I simply note that on the last page of the closing submissions the RYA now apparently, and for the first time, submit that *this proposal should be refused.*

COMMERCIAL FISHERIES

64. The precise ambit of the objection has from the outset been unclear. Dr Lockwood's proof, for instance, advances a figure, which, he concludes, should form the basis for *any negotiation of compensation for the local fishing industry*⁴⁰. Clearly, as he accepted, this inquiry is not the forum in which any particular award of compensation can be canvassed or determined.

65. It is to be noted that Dr Lockwood asserted a loss of a 30% of viable fishing grounds and of a third of turnover attributable to that loss of area⁴¹. He did not explain or justify why that necessarily carried through into a loss of profits (eg why fishing could not simply continue at the same level elsewhere) and, as identified below, he accepted that his estimate of the percentage loss of ground and of any financial loss was materially overstated in any event. That claim of loss is now, nonetheless, stated in the fishermen's

⁴⁰ Lockwood proof para 10.11

⁴¹ Proof para 10.5 and 7.13

closing submissions to be that *the proposed siting of turbines would reduce their established fishing practice not less than 50% in time and earnings by as much as 80%*⁴².

66. The evidence of Dr Lockwood was, in any event, subject to substantial modification in cross-examination;

- a. He explained that he had been consulted at the very last moment and thus had had very little time to consider or prepare his evidence. This was a frank a fair admission to make but it engenders very little confidence in the figures he produced.
- b. Dr Lockwood had proceeded upon the assumption that the relevant fishing was contained within an area he had marked on his Appendix 7 and of which he asserted only 10 sq nm were available. This was in direct conflict with the evidence of Mr Wisby who spoke to much more expansive fishing grounds to the west and south of that area. Dr Lockwood necessarily had to accept that his 10 sq nm represented a material under-estimate of grounds available and thus, even assuming a reduction in area equated directly to a diminution in turnover, his figure of a 30% reduction of fishing area was again a material over-statement.
- c. Equally, Dr Lockwood had made no allowance either for the extent of non-trawling fishing activity which could continue within the windfarm area or for the ability of fishermen to fish elsewhere without diminution in turnover. Nor had he made due allowance for the ecological and fishery improvement wrought by the reef effect and by the cessation of trawling within the windfarm.
- d. For reasons which remain wholly unclear he had not been provided with any catch returns, accounts etc by the fishermen for the relevant area. Instead he had had to

⁴² para 5 of SWSFC closing submissions

attempt to cobble together a prediction of turnover from figures for Scotland, the Thames and the English Channel. No satisfactory explanation was given for this or for why the figures which he produced could be applied with any confidence to the instant area.

- e. Even assuming the figures he used bore any relevance to the area here to be considered, his use of them was fundamentally mistaken. He relied on turnover (ie gross figures) and had had no regard to the necessary process of netting off costs and outgoings. In the result, even if unimpeachable in every other respect, his conclusions of loss and impact are grossly inflated. If the bottom line figures are taken from the sources he used, they actually reveal in several cases a loss ie curtailment or cessation of fishing would actually, in such circumstances, leave the fishermen in question better off. Even if one has regard to crew share and boat share, the figures he derives are still materially over-stated.
- f. Mr Appleby in his evidence⁴³ identified that, on Dr Lockwood's figures, the area he had reviewed would have been fished some 75 times per year, ie 18.75 times higher than the most intensively fished area of the North Sea of which Mr Appleby was aware. The only criticism made of this calculation by Messrs Wisby/Lockwood was a request to revisit it changing one variable. The revised calculation showed a figure of 48 times per year⁴⁴ and still speaks for itself. Dr Lockwood sought to suggest that a figure of 50 times per year was not unusual and produced an extract from a paper by Rijnsdorp and others. The extract omitted page 416 which amplified in tabular form the correct context for the figure of fifty. Whereas Mr Appleby's figure related to the whole area in question, the figure of

⁴³ Supp proof UU/SA/04 section 3

⁴⁴ UU/0/25

50 related to 0-4% of the area being trawled 10-50 times per year. Dr Lockwood accepted that his figure did not represent an apples-with-apples comparison with that of Mr Appleby.

- g. Dr Lockwood asserted in his proof that it was probably only those boats with engines over 100kw that could tow rock-hopper gear⁴⁵. He also identified photograph 4 (SA 8) as having such gear⁴⁶. Since SA 8 on his own evidence⁴⁷ boasts just under 90 kw there is a necessary tension between his two statements. In point of fact, the use of rock-hopper gear is much more wide-spread than Dr Lockwood's evidence indicates. This necessarily further increases the flexibility of fishermen to fish elsewhere, even if the windfarm proceeds.
- h. Dr Lockwood's Supplementary proof refers to ... *undeclared landings* and '*back-door*' sales⁴⁸. It is clear that such catch has been included in his calculations. Equally clearly, however, it would be wholly inappropriate to have regard to any such unlawful or undeclared trade either for present purposes or for the purposes of any compensation provision.
- i. In terms of underwater noise, he confirmed he had carried out no study or calculation of his own and did not seek to criticise or challenge those produced on behalf of UU in the Supp Env Info and spoken to by Dr Hull.

67. Mr Wisby in evidence confirmed that:

- a. In any event, fishing, particularly trawling, had already ceased within the windfarm area because the commercially exploitable fish were not there. Thus, even without

⁴⁵ Lockwood main proof paras 5.6-7

⁴⁶ UU/0/20 photo 4 – confirmed as SA 8 by Mr Wisby

⁴⁷ Lockwood Appx 5

⁴⁸ Supp proof paras 4.3 and 4.6

the proposed development, the area is already sterile in terms of such species and implementation of the windfarm would necessarily occasion no loss.

- b. By reference to UU/0/19 he identified a wide area open to the fishermen to exploit for fishing, an area materially more extensive than that identified by Dr Lockwood.
- c. He confirmed that he had produced details of Mr Thomas's earlier claim without realising that it had been settled expressly on the basis that it should not be used for the purposes of calculating future levels of loss⁴⁹. He accepted that it had no relevance to the present debate. He agreed to ask Mr Thomas to submit to the inquiry the daily EC log sheet(s) which are required to be submitted to DEFRA (by over 10m vessels) and which would detail the catch he had landed and sold to A & J Fisheries. That return has, however, not yet been produced to the Inquiry.
- d. Mr Wisby was referred to an earlier e-mail which he had sent to Gill Lock of Hyder and which stated:

Thanks for the reply. It seems there are already rumblings of discontent. One camp of fishermen who have fished according to state law ie albeit almost truthfully and filled in data are disturbed that the fishermen who have not declared year on year their catches will get compensation based on their integrity. They feel the criteria for compensation is declared income as was the case with the sea empress at Milford. The others who have not declared income or who have historically not used their boats feel that they should get what the others are getting. Based on the full timers I personally feel that declared income should be the basis. There are also others catching wind of the proposed development suggesting that they will buy boats and fish them up to the development just to enjoy any possible package. I have suggested to these that the announcement of putting the windfarm there could be the cut off period for any additional claims (the two build projects excluded) For obvious reasons we as fishermen must distance ourselves from the criteria.

This allows an interesting side-light on the issues.

68. It is entirely the fishermen's choice that there is not before this inquiry the necessary evidence (including comprehensive as opposed to sample audited accounts etc) to allow an

objective assessment of the overall value of the fishery to be made. Whilst some accounts were made available to the applicant, it is understood that these were for the higher earners. UUSSL cannot tell whether accounts for the other vessels exist. In any event, it is impossible to form an accurate picture on the basis of a small snapshot.

69. The question for this inquiry, and for the Assembly, is, in UUSSL's submission, the effect, if any, that the scheme would have on commercial fishing. Not only have the fishermen chosen – notwithstanding UUSSL's renewed request⁵⁰ - still not to make available full financial details, they have also failed to produce any cogent evidence to demonstrate that, even with the windfarm, they would suffer any loss. This year Scarweather is apparently a fish-free zone in so far as concerns commercially exploited species. Nor is there any evidence to demonstrate that the various vessels cannot modify their patterns to fish elsewhere and/or to use methods other than trawling. Indeed, they must of necessity already be making such alternative arrangements given the non-availability of the Scarweather area. In the absence of such evidence, it must be doubted whether there will be any material impact.

70. It should also be noted that the public right of fishing is not merely a private fiefdom for the commercial fishermen and is, in any event, a public right inextricably linked with the public right of navigation. We assume it is for this reason that, as the note of the per-inquiry meeting indicates⁵¹, what is there described as commercial fishing navigation falls to be considered under the navigation topic. Commercial fishermen choose to exercise that public right in such a way as to allow them to hunt fish for profit. Fish themselves are a wholly mobile prey and the abundance of any given species varies from location to

⁴⁹ UU/0/27

⁵⁰ UU/0/22

⁵¹ PIM Note at para 8

location. Indeed, at any given location that abundance can vary from month to month, season to season and year to year.

71. The freedom to fish commercially has been further constrained by statutory intervention (eg licences) and an increasing pattern overall of decline in English and Welsh commercial fishing over the past 25 years. There are also biological factors at work and well-founded concerns that fish populations are becoming, or have become, acute. For instance, the ICES Advisory Committee for Fisheries management is concerned that the sole spawning stocks in ICES sub-area VII f&g are below safe biological limits with a steady decline in biomass⁵². Such concerns can result in the imposition of restrictive quotas. It is thus of the essence of commercial fishing that it must conform to whatever restrictions exist at any given time on the public right of navigation and, subject to that and to any restrictions through quotas etc, must go where the fish are. In such circumstances, it is perhaps difficult to understand why a given and, it is to be assumed, necessary restriction on the public right of navigation should – without more - crystallize into a right to compensation for fishermen merely because there may be, now or in the future, relevant prey species there which, in the absence of that restriction, could be hunted at that location. The material question is, rather, whether there will be a material effect on commercial fishing.

72. The Secretary of State for Trade and Industry has recently issued four decision letters on sites in England at Gunfleet Sands, Lynn, Inner Dowsing and Cromer⁵³. In, for instance, the Lynn decision a number of objections were made in relation to fisheries including to the adequacy of any compensation. The SoS concluded that:

The Secretary of State does not consider that it is a matter for her to assess whether compensation is merited nor the level that should be paid if it is. As to the adequacy of the ES, the Secretary of State is satisfied the ES sufficiently set out the

⁵² UU/SA/2 para 4.1.5 and Fig 2.6 on p 14

⁵³ UU/0/1a-d

environmental implications of the development. In addition, the Government's statutory consultees namely English Nature and the Environment Agency, as well as the Centre for Environment, Fisheries and Aquaculture Science, had an opportunity to comment on it and after making representations about the need for adequate monitoring conditions to meet their concerns, they were satisfied that the application should not be refused. The Secretary of State is therefore of the view that the environmental implications of the development have been properly considered

Concerning the likely impact on fishing and sea bed habitats, the Secretary of State accepts that although there is likely to be some impact on fishing and sea bed habitats, she concludes that these would not be sufficiently significant for the application to be refused. [The decision letter goes on to refer to the parallel process under the Food and Environment Protection Act 1985 for the FEPA licence and to the relevant monitoring conditions to be attached thereto.]

The decision is instructive. In the Scarweather case at this inquiry the ES records

consultation with various bodies, including CCW, EN (whose comments were

incorporated in the CCW response), CEFAS and the EA⁵⁴. The TWO application is

paralleled by an application for a FEPA licence. It should also be remembered that in the

present case it is not proposed that there be a blanket ban on fishing in the relevant area.

The material aspects of the proposed restrictions are to exclude all vessels (not just fishing boats) from the operational safety zone around the turbines and to preclude trawling (but not other forms of fishing from within the site and 200 metres outwards. A flexible approach has been sought to construction.

73. There is, in any event, evidence of a material decline in abundance wholly independent of the present proposal. Dr Lockwood states that:

It is most probable therefore that any deviation from the current abundance and distribution of fish resulting from construction of a wind farm will be undetectable relative to the inter-annual variations in abundance and distribution. In other words, the potential effects on fish abundance and distribution will, in all probability, be trivial.

Given his acceptance that there will be no material diminution in abundance or distribution, any issue is confined primarily to the materiality of any effects referable to any restriction

⁵⁴ ES Appx 1.1

on fishing ground and resulting effects on catch, and also to Mr Appleby's view that there will in fact be a materially beneficial effect on abundance by virtue of the windfarm creating a haven effect. In circumstances where fish stocks are in decline, any such beneficial effect becomes disproportionately important, given that fish are mobile prey.

74. Clearly, if there is no material impact on commercial fishing, it follows that any question of compensation is academic without more. Only if there is some material impact (which cannot be mitigated by fishermen, for instance, modifying their practices, whether by fishing other areas or however) can any question of compensation arise. If, however, the Assembly conclude that there is some such effect, then compensation becomes relevant and UUSL have produced a draft compensation provision for inclusion in the TWO in such circumstances. Inclusion of such a provision would thus deal with the situation which would arise should it be concluded that any effect on commercial fishing might otherwise be unacceptable and a compensation provision required.

75. In considering such a provision it is also relevant to recall that UU offered an undertaking to the fishermen to be bound – outside the order – by a compensation provision. That offer has not been accepted and the fishermen have thus already effectively decided to forego such protection.

76. By way of footnote I make the following points in relation to the file of additional documents produced by Mr Wisby at the beginning of the fisheries topic:

- a. At page 26 of that bundle was a letter from Mr Hearn of DEFRA to Mr Wisby. It was not copied to UU. It is in many ways an extraordinary letter for a civil servant to be writing to an objector to an order in circumstances where the Department to which that civil servant belongs has relevant statutory functions to exercise. The minutes of UU's meeting with DEFRA had been copied to that department in the

hopes that any comments would be made promptly. Although it was then indicated to UU that DEFRA did have some comments to make and that the substance of such comments would be forwarded to UU, I am instructed that they have still not been received. It is perhaps difficult to understand how UU could have regard to comments the substance of which had yet to be communicated. Additionally, the suggestion by the DEFRA employee of UU apparently having an ... *agenda/hidden agenda* is bizarre, unsubstantiated and unfair.

- b. At page 28 of the same bundle is an e-mail from Mr Coates, the Director of SWSFC to Mr Wisby, who is a member of that committee. It is yet another bizarre exchange between a statutory body and an objector, an exchange which again was not copied to UU.

Recreational Fishing

77. In so far as concerns recreational fishing interests, a generally positive view appears to have been adopted about UUSL's proposals. Thus, for instance, the South West Wales Association of Sea Angling Clubs has written to confirm that it has decided ... *to give United Utilities [its] full backing*. That this stance has been taken expressly reflects the assistance and concerns shown by UUSL about marine ecology⁵⁵.

SofM 6 – De-commissioning

78. UUSL have provided a written statement to deal with this aspect⁵⁶. Relevant matters include:

⁵⁵ Letter from SWWASAC of 11th July 2003 – Appleby Appx 14

⁵⁶ UU/UU/1

- a. The Crown Estate lease⁵⁷ under section 1 of the Crown Estate Act 1961 will impose obligations to decommission and remove any works.
- b. Clause 10 of the draft TWO provides for the abatement of works and Clause 36 requires the Assembly's consent to any transfer of powers. It is also proposed that a requirement for submission and approval of a decommissioning scheme to and by the Assembly form a condition on the FEPA licence.
- c. The Agreement for the Lease⁵⁸ provides for the execution of a guarantee by the Guarantor, United Utilities plc. Thus, even assuming there were substance in the concerns raised by various objectors as to the financial robustness of UUSL, the involvement of a company of the undeniable substance of UU itself, and the attendant legal obligations under the required guarantee, mean that the point raised is completely addressed in any event. The guarantee will cover the obligations under the lease which include the obligation to comply with any other legal obligations. It will therefore apply to the obligations imposed by the TWO and under the FEPA licence.

These matters fully address the concerns expressed by others and, in particular, fully meet the two concerns of the RYA, namely a requirement for governmental consent to any transfer of powers and a requirement for some financial guarantee mechanism⁵⁹. I further note, for instance, the comments of the Secretary of State for Trade and Industry on the recent decision on Gunfleet Sands⁶⁰.

On the question of decommissioning of the wind farm, the Secretary of State considers that the provisions in the Crown Estate lease for the [site], together with the

⁵⁷ UU/UU/1 Appx 1 clause 3.15

⁵⁸ UU/0/38

⁵⁹ Ramsden proof Appx 1, RYA statement of case.

⁶⁰ UU/0/1(a) para 14

conditions in the Order itself offer sufficient safeguards to ensure proper removal of the wind farm at the end of its life.

No party so far as I am aware has sought to distinguish the present case from that situation or to argue that there is some particular characteristic in the present case to require some additional safeguard over and above that already proposed. In all the circumstances, UU submit that there is no requirement for additional provision in this regard.

SofM 7 – Post-application changes to TWO

79. As already identified, these are explained in the Note on the revised filled-up TWO and have been explained to the Inquiry.

Adequacy of the ES

80. By letter dated 6th December 2002, the Assembly identified various suggestions for scoping the ES. Some reliance has been placed upon these by BCBC. There was some apparent suggestion for instance that the Assembly had required *a full-scale mock up of a turbine attached to a ship or barge if necessary ...* In fact the Assembly merely stated that *this should be considered* ie it was a suggestion.

81. Irrespective of this and other matters in the scoping opinion, the Assembly, through Mr Ancrum, wrote to Winckworth Sherwood (acting for the applicant) on 6th May 2003 indicating that *The environmental statement has now been considered and it appears to the Assembly Government that the information contained in it is adequate to permit a proper evaluation of the project's environmental effects. The Assembly Government, therefore, does not consider it necessary to direct the applicants to provide it with further information under Rule 8(8) of the Application Rules.* Nor has any such direction been issued to date. Additionally, it is to be noted that the Assembly were thus satisfied even without the additional environmental information which the applicant subsequently,

voluntarily provided following further discussions with, amongst others, CCW and the MCA. Similarly CCW are now satisfied in this respect.

82. In all the circumstances it is perhaps difficult to comprehend the criticisms which some objectors continue to make of alleged shortcomings in the ES material. Some objectors have frankly confessed when asked that they have either not read the ES or have relied only on the NTS or have seen the main ES but not considered the additional material subsequently provided. Others have fundamentally misapplied or misunderstood the relevant provisions of the regulations. Dr Johnson, who appeared as part of the surf school case, very fairly set out the documents which he had read in order to inform the various opinions he expressed. They were the proofs and appendices of Messrs Townend and Lowther and of Dr Hull and the Non-technical Summary of the ES. He confirmed in answer to my question that this was the base from which he had proceeded. He thus advanced views without having apparently considered, for instance, the two main volumes of the ES itself or the Supplementary Environmental Information, all of which contained information material to the concerns he was advancing.

83. A further example, as already identified, is those who argue that the treatment of alternatives is deficient when the wording of the regulations makes clear what the duty actually is, ie to provide an outline of the main alternatives considered etc. It may well be that objectors would prefer the law to provide otherwise but until the EC and the national Parliament provide otherwise, that is the law.

84. BCBC in closing submissions dwelt at some length on the adequacy or otherwise of the ES. The fact that they did so at quite such length is of itself instructive. The underlying substance of the point, if indeed it has substance, is misconceived. First, Ms Hawkins, and the other relevant witnesses on behalf of the applicant have dealt with the various criticisms made. Second, the mere fact that there are differences of approach, opinion and

judgement between experts should occasion no surprise, whether in the context of an ES or more generally. It must be remembered that an ES is not intended to be a statement of common ground, though any measure of agreement is to be welcomed. It would be a rare and probably wholly anodyne ES which prompted no debate or disagreement between experts. But that fact, of itself, involves no necessary flaw in the ES in question. Third, even assuming that each and every one of Miss Douglas's carefully crafted points in closing were unassailably and unequivocally correct (which they are not), the position would be no different. The applicant does not ask the Assembly to pass the ES into law, it asks rather that the TWO be made. The ES is merely an element in preparing the ground for a decision to be made; an important element, but still only an element. BCBC concentrate, for want of other material, on the ES, but even assuming that their wraiths and chimera had the form of criticisms of substance rather than forensic flourishes, their target is mistaken.

85. At risk of revealing a little known fact, let me make clear that the perfect ES is creature unknown to the world and will remain as mythical as the Grail. That is not to because the experts who contribute to and compile them for a given project are incompetent or biased or in any way other than human. As I have already observed in this inquiry, 20/20 hindsight is an admirable quality and one with which only lawyers seem to be endowed. The ES here is no different but it remains a robust document. It expresses views and explains why. Merely because some take a different view, or even disagree violently does not make it wrong.

Human Rights

86. SoS Porthcawl make fleeting reference to Human Rights⁶¹. They refer in passing to the Human Rights Act 1998, Art 8 of the ECHR and Art 1 of the First Protocol to the ECHR. These provisions do not advance their case in any material respect. Their evidence fails to establish any breach, present or future, of the rights referred to. On any analysis, none of the objectors is presently a 'victim' for these purposes. In any event, to establish in the future that they would require a judgment formed on evidence and not mere assertion. Moreover, as identified elsewhere, none of the impacts here is unacceptable either in itself or judged, in so far as relevant, against national and international standards and guidelines.

87. There is here no sustainable allegation of any impact in terms of noise or other 'pollution'. The main issue has turned on, and repeatedly returned to, visual impact. Even assuming there is a materially adverse impact on visual amenity (which is not accepted) that is insufficient to engage the relevant rights here. It falls orders of magnitude short of the necessary degree of intrusion. Were it otherwise, human rights would always be engaged and determinative in any development proposal.

Objectors and Supporters and the approach to evidence

88. As is so often the way, the scheme has generated material opposition, though a substantial proportion of the objections consists of variants on a handful of standard form letters. A dominant element in such objection is a desire to protect private interests and it is important to understand the extent to which such interests are, and are not, material considerations. Planning Policy Wales identifies⁶²:

⁶¹ Section 4.7 of SoS Porthcawl proof

⁶² PPW paras 4.1.7 and 4.1.8

*The planning system does not exist to protect the **private interests** of one person against the activities of another. Proposals should be considered in terms of their effect on the amenity and existing use of land and buildings in the public interest. The courts have ruled that the individual interest is an aspect of the public interest, and it is therefore valid to consider the effect of a proposal on the amenity of neighbouring properties. However, such consideration should be based on general principles, reflecting the wider public interest (for example a standard of 'good neighbourliness'), rather than the concerns of the individual.*

*When determining planning applications local planning authorities must take into account any relevant view on planning matters expressed by neighbouring occupiers, local residents and other third parties. While the **substance of local views must be considered**, the duty is to decide each case on its planning merits. As a general principle, local opposition or support for a proposal is not, on its own, a reasonable ground for refusing or granting a planning permission; objections, or support, must be based on valid planning considerations ...*

It may also help to bear in mind paragraph 64 of PPG 1 which, although relating to England, correctly identifies that:

... the basic question is not whether owners and occupiers of neighbouring properties would experience financial or other loss from a particular development, but whether the proposal would unacceptably affect amenities and the existing use of land and buildings which ought to be protected in the public interest ...

In so far as concerns property prices, even if it were a material consideration, its relevance is limited at most to a question of compensation. Progressively, since the nineteenth century, Parliament has evolved a statutory scheme known as the Compensation Code. That deals with, amongst other things the circumstances in which compensation may be payable for injurious affection where no land is taken, and, in particular, for the physical effects of public works (under Part 1 of the Land Compensation Act 1973). Parliament has thus considered the extent to which, in given circumstances, compensation is or is not to be payable. As regards the particular matter of property prices, it should be noted in any event that Mr Clarke has produced a helpful paper dealing with the inter-relationship of wind farms and property prices and which suggests little, if any effect⁶³. It must also be

⁶³ Clarke Appx 5.5

remembered that property prices are sensitive to many factors. Here we have an example of a significant, organised body of opinion publicising and trumpeting the allegedly adverse effect the proposed development will have on the area. If that campaign has had or will have a material affect on saleability or price in the local property market, such effect is demonstrably not referable to the wind farm itself but is rather, and however paradoxically, attributable to the actions of the objectors themselves.

89. It is apparent that many of the objections have come forward as part of an orchestrated campaign of opposition. There is nothing to be criticised in such an approach. Indeed, it is in everyone's interests that, in so far as possible, those with concerns about a scheme organise themselves together in order that their concerns can be co-ordinated and presented in the most effective and efficient fashion. Various organisations here appear to have done this and it is helpful that concerns are thus focussed through a spokesman. Various matters, however, call for a degree of caution.

90. First, it is entirely understandable that objector organisations often have strong views about schemes. They rightly and properly publicize those views in order to make sure people are aware of what is going on and in the hopes that more can be persuaded to add their voice against a given scheme. In so far however as resulting objectors base their views of the scheme on such publicity material and without looking at the scheme itself, there is a real danger of people objecting on the basis of a misunderstanding of the scheme and an overestimate of its impacts. This may well lead to people objecting in circumstances where, had they had a better and more objective understanding of the proposal, they might very well have formed a different view. Mrs Barraclough, a supporter, had some trenchant comments on this matter.

91. Second, where there are strong feelings, it is often the case that objections are expressed with some vigour and in robust terms. Again, no criticism attaches to this and it is a

strength of the inquiry system that it allows a public expression of views. However, the views expressed must be relevant and must meet the criteria of material considerations referred to above. They must also, if they are to carry any weight, go beyond mere assertion or invective and adduce relevant, cogent and appropriately informed evidence to support the view advanced. Additionally, there is a requirement of fairness which extends as much to promoters of schemes as to objectors. Thus fairness requires, for instance, that objectors avoid mere abuse of the promoter and concentrate on the issues. In a number of areas here objectors' submissions have gone materially beyond that which is fair. UU rejects utterly the various criticisms which have been levelled at it and its consultants. Additionally it reiterates that the second round of consultation had to be curtailed because of the degree of confrontation it produced. It is difficult, if not impossible, to consult and inform people in a confrontational and adversarial climate.

92. Notwithstanding the number of objections lodged, the actual issues raised come within a comparatively narrow compass. They divide broadly into two categories. First, a finite number of generalised concerns taken by many, if not quite all, objectors; examples include visual impact and noise. Second, there is a small number of particular objections taken by a single objector, or a small number of objectors; these nearly all relate to one particular (alleged) impact such as commercial fisheries or aggregates. UU witnesses have sought to cross-reference their proofs appropriately and UU/0/21 provides detailed tabulation

93. Inevitably, public inquiries tend to concentrate on grappling with the matters raised by objectors. It is easy therefore to ignore the silent majority who have not felt moved to object. The operation and drift of the statutory approval system, of which the public inquiry forms a part, is such that the objector is likely to express his objection whereas those who are neutral will remain silent, as indeed will many who, on balance, support a

given scheme and its objectives. Nor should it be forgotten that in the present case there has, in fact, been a material degree of actively expressed support for the scheme. The views of Greenpeace and Friends of the Earth command attention and respect. The views of Sustainable Wales equally are cogent and they attract additional weight since they are not uncritical of certain aspects of UU's work; they do not for instance shrink from criticising certain aspects of UU's consultation process. This reinforces their detachment. The views of Bethan Thomas in particular are eloquent in support, coming as they do from someone with strong local affinities.

Conclusion

94. All agree that there is a balance to be weighed. Whatever else, it is not reasonably or realistically possible to deny the unusually strong and uniformly supportive policy environment and the need for the scheme to assist in attempts to meet legal and policy targets. These are aims and initiatives which, in general terms, most, if not all, objectors appear to support and endorse. Once that it is established, it follows that the very strongest of countervailing reason(s) is required to reverse or even alter the balance so struck. The issue of tourism, even taken at its very highest against the scheme, is incapable of such effect here. Visual impact is clearly a most material consideration. But ultimately it is a matter for calm and dispassionate judgement informed by common sense on the ground. When so viewed, it can be appreciated that what is proposed will not have the cataclysmic impact which is alleged. The relevant views will, subject to the vagaries of the weather, be changed by a number of structures. These, though large, will be some kilometres off the shore, even at their nearest. Like the ships and boats which ply for trade or pleasure across the existing seascape, they will be functionally designed. They will fulfil a role which all seemingly assert they support, namely the production of green energy to assist us all. It is that actuality which falls to be assessed. So viewed, it is impossible to categorize such change as unacceptable and, in any event, it must be weighed in the same balance as the other constituent parts of the decision which falls to be made.

95. On behalf of the applicant I commend the scheme to the Inquiry and to the Assembly

2 Harcourt Buildings

Temple

ANDREW NEWCOMBE

27th November 2003

APPENDIX B

Submissions of behalf of Bridgend County Borough Council

Scarweather Sands Off-Shore Windfarm

The Weighing Exercise

1. The first part of the public inquiry process draws to a close. You have gathered from the parties before you the information required and now begins the onerous task of weighing what you have heard and reporting upon it. The people of Bridgend are content that you will carry out that second part with the scrupulous fairness that you have brought to the first. They ask no more than that. Justice requires no more than that: a fair weighing of the benefits of the proposal against its adverse effects.
2. Whenever justice is portrayed she is shown blindfolded and holding scales. The blindfold ensures her impartiality whilst she weighs the evidence in the case. The problem with being blindfolded is that you cannot see if one of the parties has his thumb in the scales or is slipping into his pan dross which he declares loudly to be the pure gold of truth. So, in the free world, justice is public.
3. Each party watches diligently what the opposing side is bringing to be weighed: they are entitled to test, through cross-examination, that only gold is put into the pans of the scales. They are entitled to ask, through submission, that irrelevant dross is removed from the scales before the exercise of weighing begins. They must watch with eager care to ensure that blindfold justice is not cheated by one or other party pressing down upon the scales with the naughty thumb of exaggeration.
4. What may Mr Newcombe's team fairly bring to be weighed? The undoubted benefit of the provision of a certain amount of energy won cleanly from the wind. What may Bridgend and the other objectors put into theirs? The equally undoubted adverse effects upon the visual and marine environment of the creation and 22 year presence of 30 massive, mobile, structures, their associated masts, cables and on-shore facilities.
5. If the applicant declares as gold benefits for which he has not applied, such as a visitor centre which forms no part of the application, I am entitled, on behalf of BCBC, to ask that it be taken out. If he exaggerates the benefit of this application to the UK obligation to contribute to a reduction in greenhouse gases, or urges a particular rather than a general urgency, or an unjustified local benefit from local generation, I am entitled to declare that he has his thumb in the scales. If he seeks to have excluded from the objectors' pan the true gold of the environment I am entitled to protect its quality.
6. Mr Newcombe has had great fun asking where in our Statement of Case came a right to ask questions on need and alternatives. My response is simple: where in his Statement of Case comes the startling assertion that *"If there is to be significant progress on delivering the UK White Paper objectives by 2020 all the Round 1 sites, including Scarweather, will*

need to come forward and significant input will be required from Round 2 proposals” set out in his opening. That Round 2 will need to come on stream is accepted. That all the proposed pilot projects must do so is not accepted and is a new assertion.

7. The Non-Technical Summary of the ES says that the site would significantly contribute to the Welsh targets⁶⁴. A fuller discussion is provided in the ES⁶⁵ which outlines the law and policy documents indicating the targets and the currently installed capacity. The UU statement of case again says it would *“significantly contribute to renewable energy”*. Not until Mr Clarke’s proof is the argument first advanced that Scarweather Sands *must* come forward to meet those targets.⁶⁶ What had been a statement of the government policy background for need, with which we argue only in respect the lack of emphasis on government policy regarding environmental acceptability, has become special pleading for the absolute necessity for this specific site to come forward.

Statement of Case and Alternatives

1. The Statement of Case of BCBC makes it clear that the basis of its case is that in several key respects the ES analysis is misleading and that consequently its conclusions are flawed. The ES sets out what UU consider to be the beneficial and adverse effects of the proposal. In so far as it deals with the need for providing renewable energy BCBC do not argue with its content. However, in its consideration of visual impact on landscape and seascape in all its aspects, on visual amenity, tourism, or impact on minerals safeguarding and the potential for harm to biodiversity, it failed to consider, or has significantly understated the level of, impact.
2. In respect of landscape and seascape, having identified the errors and omissions in the ES, BCBC point to the part of the ES which concludes this as *“one of the least sensitive stretches of coastal water suitable for the siting of an offshore windfarm off the coast of Wales⁶⁷”*. To say that it is one of the “least sensitive” implies an examination of the alternatives and the BCBC Statement of Case makes it clear that it disagrees⁶⁸.
3. On that basis alone BCBC are entitled to question what alternatives have been examined to reach that conclusion with which they have expressly disagreed. So much the more when the assertion is made that *this site must* go ahead if need is to be met. A statement that this site is in one of the least sensitive stretches of coastal water is not supported by a transparent and accurate description of the process used to form that conclusion in the ES. Simply providing a map showing designated areas of the Welsh coast is insufficient. A clear description of the process of site selection at macro and micro site level should have been provided.
4. What information is to be included in an Environmental Statement is set out in Schedule 1 of the Transport and Works (Applications and Objections Procedure) (England and Wales) Rules 2000. *“An outline of the main alternatives studied by the applicant and an indication of the main reasons for his choice, taking into account the environmental effects.”* Exactly the same words are used in Schedule 3 of the T.&C.P.(EIA)Regulations

⁶⁴ Non-tech summary ES page 1, para4, line 7

⁶⁵ ES pages2-1 to 2-8

⁶⁶ Clarke main proof page 20, para 2.14

⁶⁷ ES 5.2.8.5, last paragraph, page 5-46

⁶⁸ Statement of Case 1.14

1999. Guidance on what is meant by alternatives in the context of an EIA can be gathered from WO 11/99.
5. *“Where alternative approaches to development have been considered the developer must include an outline of the main ones and the main reasons for his choice.” “Ideally, EIA should start at the stage of site and process selection, so that the environmental merits of practicable alternatives can be properly considered. Where this is undertaken, the main alternatives considered must be outlined in the ES”.*
 6. There is no requirement to consider alternatives, although as the circular says, and Mr Clarke agreed, failure to consider alternatives is a material consideration, and the consideration of alternatives makes for a more robust application⁶⁹. This ES purports to consider alternatives: it is apparent that many of those claimed as alternatives at the macro-site level are not practicable. They are discarded not as a result of environmental demerit but because they were not practicable for reasons such as water depth, grid connection, or seabed unsuitability. Others do not appear to have been available for development.
 7. The North Wales Coast is discarded without assessment of its environmental merits: others were considering the area which could have caused cumulative environmental effects and difficulties in obtaining a lease⁷⁰. Could have: not would. No assessment of the environmental merits has, in fact, been carried out prior to discard. In the event two sites have been found acceptable in that general area.
 8. Mr Clarke excludes the English side of the Bristol Channel as, he says, the wind farm would become more and more visible from its English side, increasing significantly the potential zone of visual influence.⁷¹ If such a location was considered it is not reported in the ES in which the sole English site is excluded by reasons of poor founding, lower wind speeds and lack of grid connectivity.⁷²
 9. Mr Townend and Mr Lowther are of ABP Marine who were the contractors for the ETSU document CD 49. That document sets out the way in which macro sites were arrived at. From it one can see that agreements were issued for anemometer masts at North Hoyle and Scarweather by Crown Estates in 1999. It says that sites were announced in December 2000: these are described as the primary UK interest areas. One of those was the Bristol Channel⁷³. On 5 April 2001 the 18 developers who had pre-qualified were announced. The description of the Bristol Channel area is given as Penarth/Weston-super-Mare to the east to Mumbles/Hartland Point to the west. I ask you to note that Carmarthen Bay, Pembrokeshire Coast, Cardigan Bay are not within any of the primary interest areas identified in that document. Mr Clarke confirmed that he did not know the precise reasoning for the Crown Estates Round 1 site selection.
 10. At micro site level the ES says that a site nearer to Port Talbot would occasion navigational problems⁷⁴. Yet Captain Drennan told us that the site could have gone further North without occasioning difficulty. BCBC do not say that would be desirable: the site has not been assessed. They say simply that the sole reason given is not substantiated. It

⁶⁹ WO11/99 para 83

⁷⁰ ES page 2-9

⁷¹ Clarke main proof 3.14

⁷² ES page 2-10

⁷³ CD 49 page 5

⁷⁴ ES paragraph 2.4.4, page 2-10

would, arguably, have been nearer an existing industrial backdrop and, by being close in to the Port Talbot industrial complex have read as part of it rather than a wider extension of man's influence into an undeveloped area. It would also have been closer to other areas and may have had an unacceptable impact upon them. We do not know. It has not been assessed. It has, however, been discarded for a reason their own expert does not support.

11. It may be that it would have brought it within the 5km stand off which, we are now told, was imposed by CCW. No explanation was provided for that arbitrary limit: normally setting a limit would be based on the sensitivity of landscape to be affected rather than arbitrarily imposed. Mr Clarke thought that 5km was a pretty inviolate statement of CCW the statutory consultees of WAG. However, it appears not to have been imposed in the English context by the Countryside Agency judging by Teesside. Mr Clarke accepted that, contrary to his proof, the Local Planning Authorities had not been consulted in setting that limit.
12. Mr Clarke says that this site is at the maximum distance from land but Mr McLeay's evidence is that, even given the local tidal range, it could technically go out to a 16m contour. The ETSU document⁷⁵ sets the Scarweather site at 9.5 km from the shore; the consultation letter of the 12 February 2002 sets it 8-11 km⁷⁶ from the shore, that to the Kenfig Warden⁷⁷ at 6 miles off the coast: it appears to be 5.5km from the closest point of the shore. Either another site was considered which has not been described or there was an error in description of this site. The Rules⁷⁸ require the applicant to describe the alternatives he "*has studied*". It would seem that there is little evidence of *study* of alternatives prior to selection of this site and some doubt as to the precise site to be applied for until quite late in the day. Incidentally one consultation identified turbines of 90-100 metres⁷⁹ and the other 115m height⁸⁰ rather than the current 137m.
13. The EIA Scoping Document, prepared by Hyder, indicated that it would give details of sites involved in the first round of off-shore consents: the ES does not give that information. In the Welsh context it merely considers broadly that part of the Liverpool Bay which adjoins the North Wales coast. It promises the background to UU's review of alternative sites and the reasons for selecting Scarweather: instead we appear to have a somewhat cursory review of sites which were not available to bid for, lying neither in Liverpool Bay nor the Bristol Channel, many of which are discounted for constructional rather than environmental reasons, and differing or unsubstantiated explanations as to why the current site is being preferred.
14. The scoping opinion provided by the WAG⁸¹, under Rule 8(1) of the 2000 Rules, said "*a more detailed explanation and justification of the site selected will be necessary including identifying the original areas of search and alternative areas which were considered.*"
15. Future Offshore: A Strategic Framework for the Offshore Wind Industry, says that for Round 1 developers proposed their own sites. Whether the proposal had to fall within a primary UK interest area, or whether by declaring an interest the prospective developer

⁷⁵ CD49 page 7, Table 2.1

⁷⁶ UU/0/14

⁷⁷ 5 April 2001 addressed to Mr Steve Moon, Warden, Kenfig National Nature Reserve.

⁷⁸ Transport and Works (Applications and Procedure) Rules 2000

⁷⁹ Page 2 of the Questions and Answers annexed to the letter of 5 April 2001

⁸⁰ UU/0/14

⁸¹ letter6/12/02

created such an area, is not made clear in that document.⁸² Mr Clarke confirmed that UU had identified where the bid was to be. If I am wrong in supposing that the applicant was, at macro site level, constrained to the Bristol Channel or one of the other interests areas, doubtless Mr Newcombe will correct me. If I am right then alternatives are described which were not available and therefore not “practicable”. If I am wrong then I submit that the ES was less than transparent in its description of the site selection process.

16. None of those witnesses called for the Applicant were involved at site selection stage. If you wish to consider whether the details given regarding alternatives is sufficient to make the application robust, as the circular describes it, you will have to follow a paper chase. Environmental Statements are not meant to be a paper chase with details contained in a disparate number of documents produced by persons other than the applicant and traceable only by a person with a good deal of energy and persistence⁸³. They are meant to inform the public and decision makers “*of the main alternatives studied and the reasons for his choice, taking into account the environmental effects*”.
17. Failure to study and eliminate alternatives does not make a site unacceptable. It does, however, make it unsafe to conclude that this site has any particularly desirable characteristics or that nowhere else is available. It is a given that renewable energy provision must be made: advancing and knocking down alternatives implies that the provision can only be made here. If that process is either not undertaken or is flawed that argument cannot be advanced. Mr Clarke, in saying that this site *must* go ahead, advances it.
18. Others, notably the City and County of Swansea⁸⁴ and CPRW⁸⁵, raise the failure to properly assess the sensitivity of the Swansea Bay landscape accurately in the course of site selection and the consideration of alternatives. I note that, in the Statement of Matters which Planning Division of the WAG presented at the pre-inquiry meeting, “*the main alternative site locations considered and the reasoning for the choice of this site location against others*” was expressly included. Mr Clarke addresses a range of objections which raise the issues of alternative locations⁸⁶ and says that his evidence outlines the careful process gone through to identify Scarweather as a suitable site: for the reasons I shall rehearse later BCBC does not consider the site suitable. I ask that you compare his explanation of the process with the detail in the ES and submit that you will conclude, firstly, that they tell different stories and, secondly, that both versions are incomplete and opaque.
19. I note that the letter from the DTI says “*that the Environmental Statement is adequate to permit a proper evaluation of the projects environmental effects*” in the context of a public inquiry. It does not say that the Environmental Statement is itself a proper evaluation of those effects: that is a matter for you. A matter you noted at the pre-inquiry meeting.
20. The EU Directive⁸⁷ requires that the environmental statement “*includes a description of the measures envisaged in order to avoid...significant adverse effects on the environment*”

⁸² Section 3.2, third paragraph, page 32, CD 5

⁸³ R v Secretary of State for the Environment, Transport and the Regions, ex p. Berkeley, House of Lords, (July 6, 2000)

⁸⁴ Landscape Partnership Appendix 1, page 4, para 3.2

⁸⁵ Geoff Sinclair pages 14-15

⁸⁶ Clarke Appendix 1

⁸⁷ EU Directive 85/337 as amended by EU Directive 97/11, Article 5(3)

of the proposed works.” The UK rules repeat that requirement⁸⁸. When considering a development 137m high, and covering a potential area of 10 sq kilometres, a description of measures to avoid significant adverse effects, which even the ES accepts will occur within Bridgend, must of necessity include consideration of alternative sites within its environmental statement. That is a requirement additional to “an outline of the main alternatives to the proposed works studied by the applicant” to which I have already referred you.

21. In respect of biodiversity concerns also it is suggested that BCBC did not identify in their Statement of Case that further research was required before a decision could be reached on the development as well as the ES failing to include details of a monitoring package if it were to go ahead. Of the failure to carry out preliminary research BCBC said “*There is a danger that animals in a marginal situation would ...be permanently displaced from these water. The Authority contends that further research is required to establish the extent of the risk of displacement, and the possibility of habituation to the new situations*”⁸⁹. Monitoring is dealt with separately as a discrete topic⁹⁰.
22. A Statement of Case must “*indicate the full range of arguments that you wish to put ...in support of your case*”⁹¹. It does. It says the ES analysis is misleading and its conclusions flawed, and then points to those aspects of Bridgend’s environment which will be affected by the development if it proceeds in this location and which have been under-valued. There is no requirement to indicate which aspects of the Applicant’s case, then unknown, that may need to be diminished.
23. Nowhere in their Statement of Case did UU “flag up” that they would suggest that benefits of this site would include local consumption, including reduced losses through transmission, the disadvantages of the national grid, the security of supply and vulnerability to terrorism or the overall growth of consumption. They now advance those arguments through Mr Clarke, praying them in aid of this particular site. BCBC submits the Applicant having raised these late hares must expect them to be hunted down. Neither, judging by the amount of paper generated from the other side, have they taken much heed of Rule 7(5)⁹².

The real issues

1. There is, in one sense, only one issue: does the contribution to renewable energy provision which this proposal would make outweigh the harm to the environment and other interests which it would cause during its construction, existence and decommissioning? There are a number of other lesser matters which each side can claim may be added into or subtracted from the equation but in essence that is what we are here to debate.
2. I would like to address the question of need first before going onto the objections which BCBC and others have to the proposal. Public Inquiries make strange bedfellows. I shall therefore address “need” as put by the Applicant and “need” as addressed by the

⁸⁸ Transport and Works (Applications and Objections Procedure)(England and Wales) Rules 2000

⁸⁹ Statement of Case 3.1 second paragraph

⁹⁰ Statement of Case 3.2

⁹¹ DTI letter, 8 May 2002, para 6

⁹² TWA (A&P) Rules 2000

supporters of the scheme. I recognise that some of those supporters have put the case somewhat higher than UU.

3. Let me make it clear: BCBC accepts that renewable energy is required. No objector to the scheme, still less my client Council, denies that the need is there. No Welsh Authority requires reminding of the cascade of legal requirement to *encourage greater consumption of electricity from renewable energy sources*⁹³, *Member States shall adopt and publish indicative targets every 5 years, and publish...every two years a report which includes analysis of success in meeting the national indicative targets*. Nor does it need reminding of the Welsh Assembly's generous policy commitment to take 10% of the Welsh production figure, rather than its consumption figure, as its target. Nor that a large proportion of that energy must, in the short term at least, be won from the wind. Wales has 36% of the installed capacity of the UK on-shore, despite having only 8.5% of the land area. It has now the first UK off-shore wind farm commissioning. It has *"by far the highest concentration of wind farms in any part of the UK"*.⁹⁴
4. It is for the Member States to set the indicative targets. The UK has, and at the Welsh level, WAG has: 4TWh/annum by 2010, 7 by 2020. Andrew Davies, in giving the Cabinet Response to the EDC Review of Energy Policy in Wales, regarded that as *"a realistic target"*.⁹⁵ He is confident that this can be done in a way *"that protects environmentally sensitive areas and important tourist destinations."* That report indicated that the provision would be approximately 1/3rd from off-shore wind, 1/3rd on-shore wind, and the remainder from all other types of renewable providers. That is, approximately 1.33TWh/annum from off-shore wind by 2010. If it is a realistic target it must include a Round 2 site, for the 3 Round 1 sites, even if all are built, cannot achieve it. There appears to be no dispute that the joint production of the 3 sites would be about 975GWh/annum.
5. Mr Clarke appears to accept that position⁹⁶ early in his proof but then denies later the likelihood of any Round 2 coming on stream by 2010.⁹⁷ Yet the Minister was accepting the 2010 target as realistic. There are no other Round 1 sites in the Welsh pipeline: the Minister must have been anticipating a Round 2 coming on stream. Mr McLeay helpfully admits that he anticipates no greater delay than 2008 for that to occur. All the evidence regarding Round 2 sites anticipates that they will be 100-200 turbines of larger capacity than those currently under discussion. Mr Clarke agreed that one modest Round 2 site could replace Scarweather and make up the shortfall. Mr Sinclair puts it even higher than that.
6. In those circumstances there is no greater urgency for this site, no greater overriding need, than there is for any site coming for consideration. The benefit of the provision it would make should not be exaggerated by such arguments.
7. BCBC submits that all that UU can put into the balance, under the heading of fulfilment of need, is 314GWh for 22 years. It may also put in the fact that that provision will be made 3 years earlier than if provided through Round 2. Nobody denies that such a contribution is useful. The question is whether it is sufficient to outweigh the adverse effects occasioned by the development.

⁹³ Article 3, Directive 2001/77/EC – Clarke Appendix 7

⁹⁴ CD9 4.5.2 3rd paraa

⁹⁵ Clarke Appendix 8, second page, first paragraph

⁹⁶ Clarke main proof

⁹⁷ Clarke 2,25 and 2.32

8. Various other matters have been claimed as benefits by the applicant. Where they are agreed I shall indicate them as I go. There are some however which I can most conveniently deal with here.
9. Mr Clarke claims⁹⁸ significant benefits from increasing **embedded generation**. That is something which will come about as smaller generators take over from main power stations and the grid alters to accommodate that. It is a concomitant of the changing generation pattern not a desirable. There is no policy support for local generation as implied by Mr Clarke. Embedded local generation will not provide for local supply unless and until the grid is changed to make provision for local grids. There is no separating out the Welsh electrons: what goes into the grid will either be used locally or elsewhere as demand dictates. Wales has long been a net exporter of electricity. If the Scarweather power is used locally so much the more will be left from the Baglan and Aberthawe production to go elsewhere. Mr Clarke appeared to claim that it was ethereal to suggest that would not be consumed locally and has produced a late note⁹⁹ to support his view that South Wales imports electricity *from* England. Mr Sinclair's evidence does not support that and there is no explanation of how, if that is true, that Wales generally is a net exporter.
10. There is no true argument that it will help **local continuity or security of supply** in an emergency¹⁰⁰. Wind power is an intermittent not a continuous supply and other sources of back-up will be required. Mr Clarke agreed it was so. It will, of course, assist in providing electricity which is secure in the international power exchange context. The White Paper considers security of supply in an international context. It identifies intermittency of supply from wind energy as a problem, putting extra stress on the system and occasioning additional cost¹⁰¹. It says we need a resilient energy system, without significant weaknesses, which works well and recovers quickly if problems occur. It identifies in short-term contingency plans to deal with geo-political instability, terrorism, major technical problems and extreme weather conditions¹⁰². Certainly in the last instance a supply source which shuts down in bad weather can be of little use.
11. The White Paper identifies as long term strategies the need to secure diverse fuel sources, types and trading routes, over the next two decades: Mr Clarke considered wind would assist with this. So no doubt it will: however it is not an argument for urgency given the time scale. Regarding short term problems such as supply failure from storms the White Paper addresses the industries needs to carry out proper maintenance of the network¹⁰³ and a public consultation on the need for an administrative regime for networks to avoid difficulties arising through, for instance, insolvency.¹⁰⁴ It does not, at least to me, suggest that the grid should be broken up into local networks served by local generators so that embedded generation can overcome this problem.
12. With regard to the other matters we may be fiercely nationalistic on the rugby field but I doubted that the Free Wales Army is likely to go out with the wire cutters over the Severn.

⁹⁸ Clarke Main proof 1.11

⁹⁹ UU/0/44

¹⁰⁰ Clarke 1.15-1.16

¹⁰¹ Energy White paper CD6 4.41

¹⁰² Energy White Paper CD 6, Chapter 6. paras 6.1-6.4

¹⁰³ 6.11

¹⁰⁴ 6.52

I refer you to the White Paper which is looking at international instability and terrorism not UK.

13. Greenpeace advances the idea that the result of refusing this site will be to say “yes to nuclear power”, despite government indications, cited in their own evidence that it is neither environmentally attractive nor economic¹⁰⁵. They say that the industry and bankers will be put off by a refusal. This does not seem to accord with the views of Brian Wilson then Energy Minister, expressed in November 2002, when he spoke of “*the first phase showing indications of being a great success...the wind industry has shown a keen interest to go further*”¹⁰⁶ nor does the current Welsh Minister for Economic Development appear to share their fears when he speaks of “*future offshore is an exciting new area of development*”.¹⁰⁷
14. It is not an **educational resource**: there are a plenitude of such exemplars in a tiny country with the major part of the UK’s installed capacity. Those wishing to see a local wind turbine will be able to get somewhat closer to Taff-Ely without hiring a boat. There is even a long distance path, the Ogwr Ridgeway Walk, passing close by.
15. It is not a **tourist attraction**: there is no novelty or rarity value, no evidence of mass tourist visits, such evidence as there is suggests that either massive grant support is required as at Middelgrunden, or that the receivers will come in as at Delabole and Swaffham. As Ms Fletcher sadly pointed out “*the mass market finds sustainability rather dull*”. They have produced no evidence of any specific wind-farm generating tourist trade to an area or quantified the income which they suggest may result from the supposed attraction. Those “renewable” attractions, such as CAT, which appear to be thriving, as Ms Fletcher told you, make a very much wider offer than just the sight of some turbines turning in the wind. The suggested visitor centre and boat trips rely on another’s endeavours and expenditure if they are to come about: they are not part of the application.
16. I would submit that it is not an essential **test-bed** for Round 2 where the envelope of technology can be pushed in a useful direction. When test-beds are designed common parameters are established with the main project: one designs a test which has some similarity with the problem needing solving. Here we have a channel with an unusual tide velocity and a tidal range LAT to HAT only found in one other place in the world. UU’s witnesses pointed to nothing other than greater water depth: if there had been similarities no doubt they would have told us about them. Round 2 may, it is true, be in deeper water, but will it be exposed to the extreme action of the rising and falling tide or to the constant reversal of flows experienced here.
17. So what are they going to learn? It isn’t going to teach them how to keep station in a difficult position: Mr McLeay was quite clear that GIS and the currently available jacking of the rig to be used could manage that part with current knowledge even in the uniquely difficult circumstances of the Bristol Channel. Close study of foreign techniques is urged by the EDC Report.¹⁰⁸ Mr McLeay was asked whether other countries are already building in deeper water. “Yes”, he replied “*but they do not have the tide range*”: but neither will the Round 2 sites. There has been no explanation of what in fact they expect to learn.

¹⁰⁵ White Paper CD6, para 4.68

¹⁰⁶ Forward, paras 3-4, CD 5, Future Offshore

¹⁰⁷ Clarke Appendix 8

¹⁰⁸ CD9 page 24

18. If test-beds are required it appears that 11 have already been consented and another 2 are in the pipe-line. No evidence of their design and construction has been produced to show that they will not be sufficient to push the envelope. It may be that this is in the deepest water: where is the evidence that a) Round 2 will be in similar depths, b) that the industry, which is already investigating a site with a depth of 40 metres, will learn more from the extra few fluctuating metres at Scarweather than it can learn from foreign sites or the permitted 11?

Bridgend County Borough Council's position

1. The County Borough Council recognises the Welsh commitment to contribute to the UK's international obligations. It has in place policies which support renewable energy proposals in appropriate locations. It has defined by criteria those locations which it considers inappropriate. Given the historic damage to its landscape by heavy industry and coal extraction it sets high value on its remaining landscape asset as it attempts through public investment to regenerate the area and to support the tourist industry. Similarly the County Borough's seascape is a high value asset. The Council's commitment to contributing to renewable energy is demonstrated to a not inconsiderable degree by the biomass plant at Brynmenyn of which Councillor Jones and Mr Sumner told you.
2. The policies of the development plans, in force and emerging, guide the BCBC determinations of planning applications. The area which they influence in planning determinations stops at low water mark. However, they inform responses to consultation on matters outside the BCBC area for they identify those aspects of the environment, and the socio-economic interests of the area, which are valued and which require protection.
3. Mr Sumner and Councillor Jones told you about the BCBC position. It was suggested to the Councillor that undue pressure had been brought to bear on planning staff to find reasons to object to the application, contrary to the ethics of the R.T.P.I. I trust that you will treat that unjustified attack on the professional integrity of the planners with the disdain it deserves.
4. Mr Sumner considered the work done on the ES in the light of his knowledge of the special qualities of the area which he serves. He considered that many elements had been undervalued or unrecognised. He considered that the ES was flawed. His consultation response was ignored, by either the case officer recruited from Neath Port Talbot CBC or by Mr Hooker, whose expertise is in minerals. How that came about we do not know. Mr Clarke described the report as "very fair and balanced": Mr Sumner and Ms Fletcher do not agree. Neither it would appear do the planners and professionals working for Swansea City and County Council, Pyle and Kenfig, the Royal Porthcawl, and the many local objectors. I urge you to read it again. Is a report which repeats the ES conclusions on landscape holus-bolus, ignores all failures and inconsistencies, and gives a one line agreement to its content, balanced?¹⁰⁹
5. It appears that the Bridgend elected members did not find it so. They know their area, its intrinsic value, its designated landscapes, the importance of that landscape and seascape to their tourist industry and local amenity, and the public investment which has been made. They disagreed with the recommendation. They asked for a public inquiry. They would

¹⁰⁹ Clarke appendix 5, page 19

not have done so had they considered that the adverse effects were outweighed by the benefits.

6. Councillor Teesdale, the Cabinet Member, was authorised to present the Council's concerns to the Public Inquiry. He brought no pressure on the officers to find reasons to object: Mr Sumner had already formed his professional opinion on the landscape issues. I ask you to accord some weight to his opinion given his in-depth knowledge of the area as well as his experience. Ms Fletcher and Mr Moon also had concerns. I ask you to read again, in the light of your current knowledge, the content of the Committee Report on tourism. It fails to identify many of the attractions of the area, or the marketing thrust, or to consider what the financial implications may be. Is that a balanced report?¹¹⁰
7. In consultation with the Cabinet Member, as Mr Sumner told you, a Statement of Case was prepared. At some speed given the failure to notify BCBC of the due date. That Statement identified that the Environmental Statement's analysis was misleading in key respects, its conclusions flawed, and indicated the main areas of concern voiced by the elected Members. Their concerns were visual impact on seascape, landscape, landscape character and visual amenity; impact on tourism, running contrary to the aspirations and public investment of the Authority; concerns over biodiversity, regarding failure to identify the presence of and assess the effects on, cetaceans, and the effects on elasmobranchs, and the failure to describe the proposed monitoring package if the development were to proceed; inadequate information on noise arising during operation.
8. Whilst that work was in progress it came to light that the Caerphilly County Borough Council had received a direction regarding safeguarding mineral sites from sterilisation. As a result of that an additional reason for objection was added. Councillor Teesdale was consulted, as the authorised Member, and the Statement of Case was submitted. Subsequently there was a change of Member. The Statement of Case was taken back to Committee, approved, and the substitution of Councillor Jones, Leader to the Council, approved.
9. The suggestion that pressure was brought to bear on officers, or that they were so forgetful of their professional ethics as to accede to it, is unwarranted and unacceptable. It is also, I trust, thanks to Mr Sumner's habit of responding to consultations in writing disproved. That no such pressure has been brought to bear is made further manifest by Mr Hooker. Nobody has asked him to change his views but simply to present the evidence on minerals.
10. **Matters which are agreed.** In the course of preparation for this inquiry the Council's concerns that noise had been insufficiently addressed was resolved by the provision by the Applicant of additional information. BCBC are content that you take it into account at the level identified by the Applicant. Concerns regarding elasmobranchs have also been satisfied. Concerns regarding the effect on Honeycomb Worm, provided that you are satisfied they will not be inundated rapidly by fine matter, have also been addressed.

Elements harmed

1. The Council remains concerned that there will be adverse effects of greater significance than are identified in the ES on the following matters:

¹¹⁰ Clarke Appendix 5, page 22

- Landscape
- Seascape
- Visual amenity
- Tourism
- Future Minerals provision

and that there has been insufficient research to be sure of the effect of construction on cetaceans or consideration of post-development monitoring for a range of biodiversity elements.

2. The policies of the development plans were dealt with by Mr Sumner.¹¹¹ He pointed to the encouragement given to renewable energy by the plan subject to criteria which identify the sensitive areas of the landscape and what may harm them. The current plan, the draft deposit UDP and the Inspector's recommended amendments, identify essentially similar areas as being sensitive although they apply slightly different tests to the levels of harm which are regarded as significant and, in respect to the Glamorgan Heritage Coast, where development must be sited to occasion the harm.
3. Of the Heritage Coast the current plan speaks of "*unacceptable levels of visual intrusion upon its natural beauty*": clearly by referring to visual intrusion it is possible for the offending development to be out-with as well as within the Heritage Coast. The draft deposit UDP uses the phrase "*visually impinge*". To impinge, according to the Oxford Dictionary, is to have a noticeable effect on, particularly a bad one. It offers "encroach" as a synonym. Again I would submit that could be from without. Only the Inspector's recommended condition requires that development lie within the Heritage Coast: Ms Hawkins in preparing her part of the ES was wrong to disregard the policies.
4. The plans identify national and international sites, and their settings, of nature conservation, archaeological, architectural and historic importance. The current plan speaks of damage or disturbance. In the context of settings that harm must, I would submit, generally be to the visual environment, being incongruent with the sites' perception. The draft plan says developments which "*adversely effect or visually impinge on*" such sites will not be permitted. The Inspector has recommended that the policy be redrafted in positive terms so that development will be permitted where it does not have certain effects. For instance, *by virtue of its size, design and siting, the development would not be visually intrusive in a designated area, or a designated historic landscape*¹¹².
5. Mr Sumner took you through all of them in detail: I do not intend to replicate his efforts. However, I ask you to take into account that the policies of the deposit draft UDP do consider development which affects local landscape designations by visually impinging upon them¹¹³ and that there is not a requirement that the development be within the designated landscape as suggested by Ms Kay Hawkins.¹¹⁴ I would also ask you to note that the policies do not speak of the purposes of the Historic Landscape Register, which

¹¹¹ Neil Sumner Appendix BCBC/NS/1

¹¹² Recommended UDP policy U2(2)

¹¹³ Policy U3 (2)

¹¹⁴ Kay Hawkins main proof 4.13

has served its purpose in identifying and describing the Historic Landscapes, but of adverse effect or damage or visual impingement upon them.

The right to a fair assessment

1. Mr Clarke asserted that the great majority of objectors would be prepared to see the project developed if there existed satisfactory proof that it would not have adverse effects on the issue of concern for them¹¹⁵. I asked him *“are they not entitled to satisfactory proof that it will cause no harm or that the harm has been properly evaluated so that it can be balanced against any benefits?”* He agreed that was so.
2. Environmental Impact Assessment is intended to be independent, impartial and unbiased. The LI Guidelines lay down the general principles of good practice to be followed.¹¹⁶ I will consider the flaws in the ES under those general principles and also in accord with *“the primary responsibility of landscape professionals to first ensure that the approach and methodology adopted is appropriate for the particular development to be assessed.”* This being a Welsh off shore windfarm: I submit those should be the Guide to Best Practice in Seascape Assessment¹¹⁷ and Landmap¹¹⁸.
3. *Clearly describe the methodology and the specific techniques that have been used, so that the procedure is replicable and the results can be clearly understood by a lay person.*
4. Mr Sumner and Mr Sinclair found the ES unclear in respect to the methodology. Mr Sumner in particular pointed to the divergence from the declared methodologies. In paragraph 5.2.2.1 of the ES no less than 6 different guidelines are set out. However, there is no explanation of how they are inter-related, Mr Sumner called it *“harmonised and cross-referenced”*¹¹⁹ On being asked by myself and Mr Sinclair about how easy it would be to replicate the procedure Ms Hawkins replied *“The purpose is not for someone else to replicate it but whether a planning decision can be made on significance.”* That does not appear to be consistent with the guidance from her own professional institute.
5. There is no reason why a landscape assessor should not as a matter of professional judgement decide on a different methodology. However, I would submit that to comply with the guidance issued by their own professional institute they must clearly spell out what their reasons are for so doing and describe the method to be employed.
6. An illustration of this would be a need to justify departing from the Seascape guidance to establish, for regional units, a landward limit of 10 km¹²⁰ from the coast unless viewsheds dictate a shorter distance. It is clear from the ZVIs that potentially views are available far outside the arbitrary line defined in the ES. Swansea City and County Council pointed to their areas which were excluded. Mr Sumner also pointed to the need to include views from land to sea, from sea to land, along the coastline and the effect on landscape of the conjunction of sea and land. Save for the ferry viewpoint there is no sea to land view considered and there are no views along the coast considered. There may have been a good reason for this but it is not set down in the ES.

¹¹⁵ Calrke Main proof 1.33

¹¹⁶ CD40 2.35

¹¹⁷ CD38

¹¹⁸ CD10

¹¹⁹ Neil Sumner main proof 5.1.1

¹²⁰ CD38 page 23, para 5.4

7. In passing I recall that Mr Newcombe questioned Mr Sumner regarding his reliance on the failure to employ Landmap and not to mention it in the Statement of Case. I would point you to the document list, the fact that it is Welsh guidance, and that the methodology of the ES establishes it as one of the Guidelines followed. Had it been followed correctly perhaps Mr Sumner would have had less to find flawed.
8. *Use clearly defined and agreed terminology, particularly when defining the sensitivity of landscape and visual resources, the magnitude of predicted effects and in determining their significance.*
9. Mr Sumner identified that the terminology to be used was to be found in the ES at paragraph 1.5. He pointed out that the assessment carried out by Mr Brewster of the on-shore facilities used a different system to that employed by Ms Hawkins. Neither in fact used the terminology set out at the beginning of the ES. Mr Soltys gave a 6 degree range of significance from neutral to substantial. Ms Hawkins merely assessed effects as significant or insignificant. Mr Soltys carefully grades his sensitive receptors¹²¹: Ms Hawkins told Mr Sinclair that "*ranking can be dangerous, it does not allow for detail*". "*The first edition was too automated and the whole ethos of the second edition is for professional judgement and flexibility*". Mr Sumner referred you to the 2nd edition which does indeed rank receptor sensitivity¹²².
10. When considering the value of landscape as part of its sensitivity, Miss Hawkins refused to play the numbers game. She felt that a view could be significant even if only viewed by one person. So it can. However, again the LI Guidelines indicate that numbers are an indication of value. Consideration of the numbers who enjoy the view from the Promenade and Lock's Common might have informed her assessment of the value of those views. Both, in her terms, static and linear receptors, enjoy those views. More simply those who walk and sit there do so to enjoy the seascape. The ES records no numbers for the summer visitors who stroll the Prom or sit in its cafés or the many seats provided as belvederes in both locations.
11. As Mr Sumner and Mr Sinclair drew to your attention Ms Hawkins omitted mention of many types of visual receptor, which are numerous and important, from her analysis and omitted to consider their presence in many affected locations. In particular: she omitted local and resident walkers on the seafront promenade and Lock's Common; local cyclists; motorists on the road which crosses Lock's Common and Rest Bay, the nearest public highway to the turbines; the road train tourist facility designed to convey tourists along the full-length of the Porthcawl seafront from the Harbour to Rest Bay.
12. *Avoid generalisations about designated landscapes and their ability to accommodate change.*
13. Ms Hawkins fails to recognise the necessity to assess the locally designated landscapes¹²³. She ignores the Local Nature Reserves, designated for nature conservation, community enjoyment and education. She ignores the conservation area of Porthcawl and the Coastal Zone. In doing so she fails to properly assess the ability of them all to accommodate change.

¹²¹ ES Table 5.12 on page 5-49

¹²² CD40 7.31-7.34

¹²³ ES 5.2.4

14. WAG's scoping opinion required that the impact on the historic environment should be addressed in the ES and this would include the potential impact upon historic landscapes. UU's scoping document indicated that an appraisal of historic landscape would be included in the ES as would an archaeological assessment of the Bridgend area. Ms Hawkins conceded that neither had been done and that it was not part of her brief. Her general position is that the historic dimension does not form a constituent part of landscape character. In respect of the Registered Historic Landscapes she said in evidence that she had looked at the implications on historic landscape designations and would only have taken into account effects on those landscapes *"if views were key characteristics of these designations"*. Mr Sumner has demonstrated that they are, in proof and photographs, but more to the point, Ms Hawkins appears to ignore her own definition for significant effects on registered historic landscapes. These *"can occur when the changes to landscape character and/ or views significantly undermine...the purposes of these...registered landscapes."*¹²⁴
15. Although Ms Hawkins claimed not to have received relevant Landmap information she did say that she had read the Register. Therefore she, presumably, has some understanding of the multi-layered complexity of the Outstanding Historic Landscapes. She accepted that the sea and the connection between the sea and the historic landscape is part of the latter's character. However, her conclusion in respect of significant effects on historic landscapes focuses on views and does not consider landscape character. Is it likely that her conclusions are coloured by her opinion that registered Historic Landscapes carry *"very little weight in planning terms"*¹²⁵ despite the fact that in Wales their role is clearly stated in National Planning Guidance?¹²⁶
16. *Draw upon the advice and opinions of others, for example, in relation to special interests or values such as cultural and historic influences, ecology and the built environment.*
17. Cadw and CCW, in preparing the Register, identify the historic influences in the landscape: I have already told you about those.
18. Ms Hawkins made, she said in response to cross-examination, one phone-call, whilst on site, to Bridgend Council to obtain information regarding Landmap. She made no attempt to obtain the full document, to research the database, or to visit the officer responsible for its custodianship. On receiving a photocopied Table identifying the core aspect areas of the Bridgend Coast, it appeared under cross examination, that she mistook those for landscape character areas.
19. She disagreed with the necessity to incorporate the aspect layers within an assessment of landscape character although that is the essence of Landmap methodology. Within the ES¹²⁷ the relevance of cultural, historical and intellectual dimensions are dismissed from her assessment of landscape and seascape character, contrary to Landmap and Seascape methodology. Mr Sumner referred you to the relevant policy guidance for Wales regarding Landmap and its importance.¹²⁸ He also identified those aspects, such as historic and

¹²⁴ Kay Hawkins main 6.5

¹²⁵ Kay Hawkins main 7.18

¹²⁶ Neil Sumner supp 6.24

¹²⁷ Appendix 5.2 at 2.3.5.1

¹²⁸ Neil Sumner main proof 5.3.1 and 5.3.3

cultural identities of the seascape, which are required by the Seascape Guidance¹²⁹ and had been omitted by Ms Hawkins.

20. The ES did not investigate the way in which the landscape and seascape was being marketed for tourism. Ms Fletcher took you through a range of publications demonstrating the importance of the landscape and seascape in all its aspects to the Bridgend tourist offer. She made clear the reliance on the undeveloped landscape and seascape to attract visitors of all types: cyclists, walkers, golfers, surfers, bucket and spade, elderly out of season strollers, followers of history, myth, legend and wildlife.
21. Ms Hawkins did not consider the Porthcawl Conservation Area or the built environment: she said that it was not part of her brief. Yet the built environment of Porthcawl comprises a landscape unit she identifies. Mr Sumner dealt with the listed buildings at the harbour and Promenade and produced a description of the Conservation Area. He also addressed the importance of Sker House as the sole example of a Grade 1 listed domestic building within BCB.
22. Ms Hawkins did not consider the influence of ecology as an aspect layer of landscape despite the LNR/cSAC/SSSI status of Kenfig Burrows and Merthyr Mawr Warren. Her sole contact with the ecologist who deals with these matters for Bridgend CBC was the phonecall regarding Landmap. No element of earth science, despite the limestone pavement of Lock's Common and the ancient encroaching wind blown dunes of Kenfig and Merthyr Mawr, has informed her landscape character assessment.
23. Culture includes leisure activity: Ms Hawkins told us she had asked permission to enter the Royal Porthcawl golf course to take photographs. She had not discussed matters with any of the golf clubs to obtain their advice or opinion. Mr Sumner pointed out she ignores the cultural background to Sker House and the cultural dimension of the use of Porthcawl as a sea-side resort: the strolls along the Prom, the happy ice-cream eaten in the seaside café overlooking the bay, the golfer upon his healthful round, the surfer upon his board.
24. *Carry out consultations to identify, where possible, the value placed on a landscape and the effects resulting from a potential development by the local community and others.*
25. You have heard from SOS Porthcawl and the other residents how they regarded the paucity and the misleading nature of the consultations. You also heard from the Town Council and the Civic Trust. It would appear that the value they placed upon the landscape was not reported to their satisfaction.
26. *Organise and structure the assessment to focus upon the key issues of relevance to decision making*
27. The ES was not, as Mr Sumner told you, easy to follow. Essential information and the additional discussion of methodology are presented in the Appendices. As an instance only, I refer you to the discussion on Seascape, clearly a key issue of relevance. Ms Hawkins adopted a regional seascape unit, quite properly, but then broke it down into component units, although that term bears a different definition in the guidelines. In the text she referred to the same areas as local seascape units. She had characterised the regional unit as "mixed". She did not characterise the local units. However, she assessed the effect on the local uncharacterised units, concluded that only 2 were significantly

¹²⁹ CD38 at 5.9

affected, and therefore transposed that up to an assessment that the regional unit was not significantly affected.

28. I attempted to establish how she had determined that the west side of Swansea Bay, in the main built up, should be broken into two units when there appeared to be no coastal feature to justify it or change in character. I hope that you have a note of the exchange for I was unable to follow her justification. I would submit that this is just that "sleight of hand" complained of by Mr Sumner. Would leaving those two as one unit have resulted in 2 out of 4 being significantly affected and altered her score for Swansea Bay?
29. So far as Bridgend is concerned the two units admittedly significantly affected are the key issues upon which she should have focussed. These two units comprise the bulk of Bridgend's coastline, are highly valued and designated.
30. Mr Sinclair gave a clear picture of how CPRW viewed the rarity and importance of this sudden stop of the highly industrialised coastline and the commencement of the highly conserved and undeveloped coastline of Bridgend. He likened our coastline to a green belt which, even where the intrinsic value is not particularly high, assumes greater value. He acknowledged, however, that this coastline was of even greater importance for it was of high value "*essentially superb in its location*". We ask that you look at our coastline and consider whether that accurately describes it or whether Ms Hawkins description of Swansea Bay as relatively developed and industrialised can fairly be applied to this part?
31. If she had scored the significance of effect would the sensitivity of these units and the magnitude of change to them have raised the score for Swansea Bay? Using Mr Soltys' methodology would identifying the degree of significance have made that apparent?
32. *Openly acknowledge any deficiencies or limitations of data, techniques or resources that may have constrained the assessment.*
33. Ms Hawkins acknowledges the limitations of the photo and photomontage medium. She urges that it is only accurate as a siting tool. We agree with her and ask that when you visit North Hoyle that you take the photomontages of that site with you, as suggested by Mr Sinclair, to compare how they look. You will then be able to assess the impact here provided that you scale up by the agreed 50-60%.
34. *Consider the "worst case situation", where appropriate, in relation to seasonal or unknown effects or aspects of the proposal that are not fully developed.*
35. I would, however, ask that you form your own conclusion as to whether the worst case scenario is depicted in respect of visibility. Many of the witnesses, including Mr Sumner, pointed to the frequent visibility of the Devon Coast as an illustration that the turbines would be highly visible most of the time. That is about 26 km from Porthcawl: the turbines 8 km from the seafront¹³⁰.
36. It may be a brooding shadow or so clear you could touch it, said one witness, but they all agree it is more commonly visible than not. Mr Sumner asked, regarding the Met. Office figures: "*how clear is clear?*" Ms Hawkins, who admitted she had not been here this since June 2003, was unsurprised that the photographer at Baglan had failed to capture views of Devon from Porthcawl and described views of it as "*an extremely rare event*". Mr Sumner and Mr McComiskey seemed to have been more fortunate. They had no difficulty in

¹³⁰ VP13, ES vol 2

obtaining pictures. Mr Sumner and Mr Moon, both local residents, as well as officers, out and about in the area daily, reported that it was visible more often than not.

37. The WAG scoping opinion, as well as providing the delightful prospect of a 137m high full-scale mock up sited on a barge, doubtless plummeting like an inverted pendulum, more sensibly suggested that photographs be provided in a variety of tidal, weather and light conditions. A variety of tidal conditions would have allowed one to see how far the beach extends at low water and how close the paddling public will approach. Apparently 2.35km nearer at Swansea and 795metres at Kenfig Sands. That brings the nearest turbine to 5.255 km from the Bridgend visitor.
38. Although the UU team failed to obtain sunset views, despite that request, Mr Sumner has provided them. Some of those, such as across Kenfig Pool, show the anemometer mast. We ask that you envisage the effect of the 30 taller, denser, mobile, massive turbines against that spectacular sky, as many witnesses described it. You will have to bring your own knowledge of other wind farm sites to the assessment of changing light conditions on turbine prominence.

Site visit

1. When visiting Merthyr Mawr and Kenfig Burrows we ask that in appreciating the qualities of this unique landscape, in all its multilayered complexity, you bring an understanding of history, geomorphological changes, culture, and biodiversity to inform your appreciation. The Register, in informing you of the first three of those elements, will have served its purpose¹³¹. Human sight is dissimilar to that of a camera. Man does not merely see: he perceives. He brings his knowledge and imagination to understand what he sees. Walk the paths and put within the seascape the mental image of these towering man-made structures. Consider how that visual backdrop will affect the experience. In so doing BCBC believe that you will readily comprehend that Ms Kay Hawkins, in not following the Landmap methodology, has undervalued both the qualities of this landscape and the adverse effects upon it.
2. Take Mr Sumner's map¹³² and reflect upon the number, extent and importance of designations which apply to these areas.
3. That Landmap, rather than Ms Hawkins' approach is appropriate is made clear by the Schedule to the Rules: *"a description of the aspects of the environment likely to be significantly affected by the proposed project including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors"*. The Landmap system, I would submit, provides an excellent baseline for that.
4. Councillors are well qualified for cynical disbelief when faced with ES which does not describe a landscape and seascape that they know. I ask that you bring your own judgement to the qualities of this area and consider whether the ES does it justice.

¹³¹ BCBC/NS supp/3 page xxxi

¹³² Appendix BCBC/NS/3

The sole true mitigation to a windfarm

1. BCBC submits that the only true mitigation of a development of this size is appropriate site selection. Sensitive siting can minimise the impact of these enormous structures. It may be achieved by cleverly locating them so that the adjoining landscape operates as a screen or so that distance minimises their impact or so that there is a back-drop of development or so that they do not appear upon the horizon. There is no scope for planting or screening or disguise: the structures are as they are, huge, engineered, mobile structures requiring a clear wind fetch to function. Ms Hawkins appeared to agree although she wished to have other matters considered.
2. She agreed that the turbine design was standard and the colour similar to all modern turbines, albeit not white like at Taff-Ely. When asked how that was mitigation of this proposal she maintained that not painting them red counted as mitigation.
3. She preferred not to have a stacked array but claimed that here this was acceptable. I suggested to her that the array design was driven by the sea bottom contours. She did not agree with that. I ask simply that you compare the only alternatives presented and consider whether that is the case.
4. She advised that the yellow bases would be bleached out by distance. I ask that you look at low tide at North Hoyle, admittedly less will be showing, and see whether that is so.

The first to fight

1. This is the first off-shore wind farm to fight. At no other has there been substantial local objection. Mr Clarke and Mr Newcombe have tried to imply that it is easier to rally objection rather than support. Greenpeace claim to have acquired many signatures and e-postcards in support. May I suggest that the locality of the objectors might imply greater knowledge of the local environment, and its sensitivity to change, than those supporters resident in Australia or even Cardiff.
2. Some of the Objectors who have appeared:
 - a. Porthcawl Town Council – the concerns of local tourist businesses and risk to public investment already made in the resort regeneration strategy;
 - b. CPRW – rarity and quality of coastline;
 - c. SOS Porthcawl – committed local residents accepting need for renewable energy but objecting to insensitive siting and noting the differences between Middelgrunden seascape and that of Porthcawl;
 - d. Royal Porthcawl Golf Club – noting the attraction of the sea views from every hole and the commercial further benefit of the Open at this links course: the only chance in Wales.
3. Not present but with us in spirit: Swansea City and County Council – criticising the adequacy of the ES visual impact assessment and expressing similar concerns regarding their tourist industry.

Valency

1. We are told that people grow to love turbines: the surveys show that consumer acceptance increases with exposure. However, only one survey has been presented which deals with both the before and after position. All the others are single instance surveys conducted either before or after. The surveys are, in any event, flawed. It appears that UU found those which indicated objection as flawed as we found those cited in support. Mr Clarke appeared to agree that little attention should be paid to surveys.
2. The numbers consulted are statistically small: not one has interviewed as many people as those who have written in objection to this scheme. The questions were leading indicating the answers which would please the interviewer. "Are you aware of the benefits of renewable energy?" asks the nice university student. Then would you like to see an increase? Clearly the nice student will be pleased if you say "Yes". It is human nature to seek to please and to appear intelligent by answering "right": right being the answer sought and not necessarily the truth. Well designed surveys do not prejudice the interviewee in this way.
3. I submit that you should give no weight to such flawed surveys but consider the actual response of the local public to this proposal.

Tourism

1. I have dealt with the marketing of the landscape, seascape and questionability of surveys. I would, however, point to the WTB survey which is addressed specifically at assessing the effect of this site. Even if its figures are suspect it is the most appropriate to consider. The one thing which is unchallenged is the importance of tourism to the area even if the figures are disputed.
2. Mr Newcombe makes much of the withdrawal of Trecco Bay's objection. They are, he says, a major business. No doubt they are. However, Ms Fletcher told you about the type of caravan at the site, not let but owned, the encouragement for people to remain on site, the lack of earning for the local economy. Mr Sumner told you of the orientation of the Bay, with the Heritage Coast rocks of Newton Point at the eastern end of the beach, being the only area from which the turbines could be seen so as to affect this enterprise. You may think that an operator with his beach oriented away from the turbines, and having an on-site product where he benefits if the guests remain, with a large part of his earnings/occupants being 2nd homers, may be very much less concerned about the effect on a seascape, which is not seen from his beach, than those whose hotels, businesses and courses face the wind farm site.
3. Any harm to an industry which employs 18% of the local workforce, as compared to 7% nationally, is significant. Consider the marketing of the area: where else can Bridgend point the camera of publicity? If not the undeveloped seascape then at Neath Port Talbot or the M4? The tourist offer, of sandy beaches, dune landscape, superb golf courses, and green coastal rambles are all based on the glories of the undeveloped sea. Ms Fletcher has shown you the value of that undeveloped sea to the marketing of the area.
4. Tourism is a major contributor to the economy of the area, both in Bridgend, the Vale with whom they jointly market, and in the Swansea/Gower area as the City and County Council has told you. The smallest decrease will be significant. If it is the 9% indicated by Ms Fletcher's analysis of the survey figures it will be devastating to an expanding economy.

Minerals

1. The area upon which the proposal stands will be sterilised for the 22 years of its life. Those areas adjoining it and within the exclusion zone will either be completely sterilised or rendered much less readily able to be won. We were told by the technical witness, Mr McLeay, the wind farm needs to shelter behind the Scarweather Bank: that would rather imply that its removal would be unwelcome. Further, Mr Hooker says that approaching with a dredger between the wind turbines and the lee of the bank will require 500 metres stand off: the turbines are 400 metres from the bank. Mr McDonald, although pointing to dredgers operating in harbours, agreed that it would not be ideal on marine safety grounds to work between the bank and the turbines.
2. You have heard conflicting evidence about the need to win the Scarweather if the Nash Bank ceases, and regarding the commercial desirability of the material, as well as regarding the capacity of the dredger fleet to work further off-shore. The existing plan shows the area as one to be preserved from sterilisation. Mr Hooker was unable to tell you about future plans for reasons of confidentiality. In the absence of that I ask that you have regard to the existing draft MADP and to the emphasis currently being given by WAG to draft minerals guidance as instanced by the Caerphilly direction.

Biodiversity

1. I have already discussed Mr Moon's concerns regarding the lack of research regarding the effects of construction on harbour porpoises.
2. He was also concerned with the flaws in the ES which had failed to provide any original research on that topic or on the foraging path of birds. It appears that they hypothesis of the UU ornithologist remained untested. He had ascertained during his visits that birds were not using Scarweather at that time as a foraging route but he did not check to see whether they were indeed, as he supposed, using a closer coastal route.
3. He was concerned that the monitoring package had not been included within the ES so that its provisions could be properly assessed. In that absence he endorses the CCW package should the wind farm be permitted.

Conclusion

1. Round 1 is intended to be a pilot scheme. Pilot schemes are designed to test all aspects of a proposal. One of the aspects is the robustness of the mechanism for determining whether a particular scheme should go ahead. This is the first of the Round 1 wind-farms to fight. 11 have gone through without serious objection. That may be because their sites were, essentially unobjectionable. It may also be that the EIAs demonstrated clearly and fairly that the benefits outweighed the disadvantages. I submit that neither of those applies here.
2. If there is to be any credibility to the TWA process it must be that the determining authority has the option of refusing the order sought: if that were not so we have just spent a pleasant month in Port Talbot earning fees to no public good.

3. Local authorities and the general public are not fools. They know that global warming has to be tackled. It is a serious issue for us all. The lack of opposition to the other orders indicates that, where the proposal does not occasion unwarranted harm to the environment, statutory bodies, and the man in the street, accept that wind-farms are a tool which can help us in our endeavour to reverse the harms of our dirty industrial past. However, they also recognise that in solving one problem you may cause another.
4. The government also recognises that. It would have been easy to write a policy which said "thou shalt have wind farms wherever they can be built, for the issue of global warming is so serious that no other interests can be taken into account". No element of government, whether at EU level, at UK level or here in Wales, has made that law or policy. Instead they have said that they should *"be facilitated where they are environmentally and socially acceptable"* or that the necessary renewable energy provision can be achieved *"in a way that protects environmentally sensitive areas and important tourist destinations."*
5. I trust that I have shown you that into the pan of the objectors' scales goes just such a sensitive area and just such an important tourist area to Wales. I declare for weighing for Bridgend: harm to visual amenity; harm to the landscape and seascape in all its aspects; damage to the tourist industry; sterilisation of a mineral resource; potential for impact on biodiversity which requires further study.
6. Others may add to my gold: interference with the free navigation of the sea; interference with fishing; harm to the adjoining authorities' areas amenity, landscape and tourism; the concerns and objections of the public. They have told you about those in detail: I merely mark that they go into my pan of the scales. If I have done so then I ask that you report that the scales swing against the development. I ask you to recommend that the Order be not made.

APPENDIX C

CLOSING SUBMISSIONS ON BEHALF OF THE ROYAL YACHTING ASSOCIATION

Following proposed amendments to the proposed order, and assuming that those amendments are adopted, the RYA has two principal remaining objections to the order. Both objections concern the fundamental public right to freedom of navigation.

Recreational navigation, whose interests are represented through the RYA, enjoys this fundamental public right of navigation as much as all other shipping. Captain Drennan is wrong in considering that the right is not an absolute one and it is a right which has been properly recognised on behalf of the Applicant in opening submissions this Inquiry.

It is estimated that 2 million people take part in boating activities in Great Britain. The RYA has some 96,000 personal members and 1,600 affiliated clubs representing a further 440,000 individuals.

Recreational navigation and enjoyment of the public right of navigation and tourism are two inter-related and expanding sectors of economic activity in Wales. Both Swansea and Cardiff have well developed and currently expanding marina facilities. The expansion will increase leisure boating activity in the area. Reasons why the Applicant's survey do not provide a proper picture of recreational activity in the area have been given by Mr. Ramsden on behalf of the RYA and have not been challenged. The reasons include time of year and unfavourable tidal and weather conditions at the time of the survey. Indeed Mr. MacDonald recognises on behalf of the Applicants that "The Bristol Channel including Swansea Bay was identified to be a relatively busy area for recreational sailing and angling." (Paragraph 1.9 UU/AM/1). With recreational activity and associated tourism come considerable economic benefits and jobs.

It is essential that this fundamental public right of navigation, bringing with it economic benefits, is not improperly or wrongly interfered with and that any interference requires the consent of a public or quasi-public body in order to provide for the ability to challenge the basis of such orders. As such it is essential for United Utilities to prove that any interference with or removal of this fundamental right is properly substantiated, for acceptable reasons of safety, which cannot be met by a lesser interference with rights. Any interference must be no more than is absolutely necessary to meet a safety reason for which it is demonstrated to be acceptable to exclude the right. It is not for objectors to demonstrate why there is a need for the public right of navigation to be enjoyed within any given area, or to demonstrate any economic or other specific disadvantage by reason of loss of the right, or to demonstrate why the right cannot be adequately enjoyed elsewhere. Again, in this regard, Captain Drennan's approach to the whole question is wrong and misconceived. It is also essential that any interference requires consultation with interested parties and the consent of a public or quasi-public body to properly assess the safety reasons and provide a means of challenge if consent is unreasonably granted.

The RYA submit that the proposed filled up order wrongfully and unreasonably interferes with the public right to navigation in respect of its provisions on exclusion zones and its shortcomings in respect of decommissioning proposals. Both are raised within its Statement of Case which incorporates a list of documents as part of that case (RYA/ER/01).

Exclusion Zones

The RYA objects to the proposed use of exclusion zones as an improper interference with the public right to navigation. The objection is to both operational and construction exclusion zones. The RYA's position statement, included as part of its statement of objection, makes it clear at page 4 (RYA/ER/01) that "The RYA's opinion is that the creation of zones that exclude vessels on a wholesale basis is unnecessary, impracticable and disproportionate. In our view such an indiscriminate restriction on the right of navigation is not justifiable on terms of safety ... " The position statement, incorporated as part of the statement of objection, applies as a matter of principle to both operational and construction exclusion zones and both are objected to. The applicant's objection that the statement of objection only refers to operational exclusion zones is unfounded as a proper reading of all the submitted documents shows. In any event there is no prejudice claimed or identified. What is said below applies with equal force to both operational and construction exclusion zones unless it is an express reference to one or the other.

It is necessary to make it plain that the RYA's objection is not only to the term exclusion zone but also to the nature of what the zone proposes and is based upon. Simply changing the name to a safety zone without changing the substance, as United Utilities have done, will not meet the RYA's objection. The RYA consider that what is proposed here is in fact an exclusion zone despite the name change to a safety zone and shall continue to refer to it as such. The RYA are concerned that such zones, which prohibit the fundamental public right of navigation within them, both during construction and operation, must be justified by specific safety reasons arising from a proper safety/risk assessment following construction of the wind farm. Risk assessments carried out on a theoretical basis and prior to knowing construction methods to be used are not acceptable. Neither is it acceptable to provide a wholesale or blanket prohibition on all vessels in all circumstances in an attempt to meet any method of construction acceptable as it fails to address the specific safety concerns of any individual case. In addition the RYA should also make it plain that it is not the enforcement through criminal sanctions which is objectionable.

The RYA's stance and objection is entirely consistent with the MCA's approach to safety zones and indeed the position of the DTI in respect of the proposed legislation.

The position of the MCA on safety in establishment of offshore windfarms is set out in its document dated 8th July 2003 (RYA/ER/04). Section 4 deals with steps which developers are required to take including safety risk assessments which may show a need for a specific safety zone. Annex 2 to the document sets out what may be required or justified if a specific safety risk assessment carried out in respect of known construction identifies. One suggestion is safety zones up to 50 metres from the structures. Here of course, as Mr MacLeay accepted, it is not even known yet what foundations will be chosen for each of the turbines and dependent on these there will be different safety/risk implications for different types of vessels. Figure 1 of UU/AJM/03 shows the three possible foundation types. One or all methods may be adopted for different turbines. Each has different underwater obstructions to different depths and for different distances from the turbine tower itself. Depending on which type will enable vessels of differing draughts to navigate safely within differing distances of the turbine tower.

The position of the DTI in respect of safety zones is set out at paragraphs 29- 33 of RYA/ER/07. The RYA's approach and objection to this proposal is entirely consistent with this. Firstly it

is noted at paragraph 29 that article 60 of UNCLOS only allows safety zones where they are necessary and reasonable. It also recognises at paragraph 30, that such safety zones would be “tailor made” and “specify such matters as the extent of the zone, which vessels are to be excluded from the zone and which could regulate certain activities within the zone such as anchoring and trawling. It will also be possible to vary the size of the zone, for example during construction, maintenance or decommissioning.” The decision on such zones will be taken after full consultation and by the Secretary of State allowing a right to challenge any such decision through the Courts if it was unreasonable. Paragraph 30 also makes it clear that the legislation will apply to projects which have already received consent as well as new projects. Therefore, rejecting the exclusion zones proposed here will not leave the matter unregulated in the future if safety zones are necessary, and in no other round 1 case have operational exclusion zones been thought necessary.

What is clear and fundamental to safety zones is that:

They must be tailor made – one size fits all for all vessels and all purposes is not an acceptable safety zone but an exclusion zone. United Utilities have adopted general exclusions without considering the specific requirements of different vessels in different situations or whether different zones for different vessels could apply. It is also noted that the latest amendment to Article 28 provides for even further uncertainty and potentially greater exclusion. Operational safety zone is defined by reference to 5 metres from any part of the structure including scour protection. This could take it out a distance further than 50 metres but how does this sit with the reference to no greater than 50 metres? Moreover seabed scour protection can be at no risk from or pose no risk to a small flat bottom or shallow draught vessel. It also raises the question of 50m from what? In addition how is a mariner meant to know where the scour protection is on the seabed? The protection will undoubtedly not be laid to any regular shape as shown on plan and the reference is to the scour protection not a plan or chart showing where it ought to be;

They must be based on and justified by safety considerations following a safety risk assessment of known as opposed to hypothetical risks. This is impossible when not even precise construction methods are known as is the case here and considered above.

The public right of freedom of navigation can only be removed after public consultation and by a public body such that it is possible to challenge the reasonableness of the decision – The Applicant’s proposal provides for no requirement of consent by a public body, only the need to consult the MCA.

The proposals here for operational and construction zones, in whatever versions, fail in all regards.

The Applicant’s Justification

The purported justification for the zones sought is based upon the evidence of three witnesses, Mr. Macleay, Captain Drennan, and Mr. MacDonald. The first general point to be made regarding all three witness is that none have any material experience of recreational navigation to judge what may or may not be the safety considerations applicable to such vessels. In the case of Captain Drennan, he went as far as to say that he did not like recreational sailing and confessed to extremely limited experience. Perhaps his inexperience caused his confusion of assuming that Mr. Ramsden’s 8 mile additional sailing distance was a straight line measurement from the charts (paragraph 1.4 UU/TD/3), whereas Mr. Ramsden confirmed

that anyone with any experience of recreational sailing knew that in considering such distances straight line measurements were particularly inaccurate due to the impact of tidal, current and wind forces on sailing craft which would not have such consequences for larger shipping. His evidence must be accordingly judged against such inexperience and admissions of dislike for the activity.

That is in sharp contrast to the wealth of experience of Mr. Ramsden on such matters whose expertise and opinion on issues concerned with recreational sailing must be preferred as the appropriate expert evidence.

Mr. MacLeay

Mr. MacLeay did not advance any reasons or justifications for the proposed exclusion zones in his proof of evidence. However during examination in chief he stated that one of the reasons for the operational exclusion zone was because of structures below the surface – the iceberg effect. He referred to Figure 1 of UU/AJM/03 showing the three possible foundation types to illustrate the point. He confirmed that the developer had yet to decide which of the foundation types to use or whether all would be the same. He said “What is sought here is an appropriate basket of powers – we have sought to draw it appropriately wide and appropriately narrow- it is not possible to say precisely what form it will take”.

In cross examination, he confirmed the following as being the reasons for the exclusion zones sought:

Impact with foundations- the iceberg effect;

Protection of the cables;

People damaging the j tubes;

Impact with the structures.

However it was plain from his further cross examination and from simple common sense that none of these reasons provide justification for the proposed blanket exclusion clause in the circumstances here. Mr. MacLeay accepted that so far as (a) is concerned, none of foundations including scour protection would be out to the 50m limit sought. He also accepted that depending on which type was actually used and the type of vessel concerned, different proximities could be justified. Justification (b) could be achieved by a prohibition on anchoring rather than excluding the right to navigation. Justification (c) could be achieved by an offence of damaging the J tubes or by landing on the turbines. There was no need for a 50m exclusion to achieve this. As far as justification (d) is concerned this was dependent on many variables including vessel type, weather conditions and crew experience, excluding the vessel would not prevent the collision. In short there is nothing within Mr. MacLeay’s evidence justifying the proposed blanket exclusion removing the public right of navigation.

Captain Drennan

I have already highlighted above Captain Drennan’s inexperience of and dislike for recreational navigation. Moreover, there is nothing within his evidence justifying the exclusions sought.

His proof of evidence UU/TD/2 attempts to justify the exclusion zones for a number of reasons:

The Government is proposing the introduction of safety zones (paragraph 3.7). However, as noted above the proposed legislation is of a fundamentally different nature. What are proposed by legislation are properly justified safety zones with no pre-conceived blanket prohibitions, and with the opportunity for public consultation and ultimately judicial challenge. Therefore this is no valid reason.

A yachtsman is unlikely to want to sail his/her craft in the wind farm area anyway (paragraph 3.10). This provides no justification even if true. However whether or not it is true is unsupported by any real evidence and Captain Drennan's view on this is tainted by his inexperience and lack of appreciation of the activity.

The problems of the unregulated sector (paragraph 3.10). This shows fundamental prejudice on behalf of Captain Drennan. There is no evidence that people without formal qualifications are poor mariners. It is experience which is relevant to making judgment and an exclusion zone will not prevent the inexperienced mariner from hitting the turbine – nothing will.

Less responsible yachtsman may wish to sail very close to the turbines or even clamber aboard them (paragraph 3.12). There is no identification of who are "less responsible yachtsman" or how close is very close. In any event the key question is safety and provided that very close is safe then there is no justification for the exclusion zone. The critical factor is for vessels to keep a safe distance from the turbines including consideration of a number of factors rather than one size fits all. As for clambering aboard the structure this can be the subject of a specific offence and provides no justification for an exclusion zone.

50m exclusion zones will not affect the enjoyment of leisure users (paragraph 3.13). The first point is that given Captain Drennan's admission as to dislike and inexperience of recreational navigation it is impossible for him to make such an assertion. Furthermore, it is irrelevant as a basis for excluding the fundamental right of freedom of navigation.

The area around the wind farm is not highly utilised by leisure users (paragraph 3.10). This is not corroborated by the evidence of Mr. MacDonald who considers that the "area is relatively busy for recreational sailing and angling". In any event this is also irrelevant as a purported justification to exclude the fundamental public right to freedom of navigation.

There is significant sea room for leisure users immediately adjacent to the site (paragraph 3.13). This was his real reason for seeking to justify the exclusion zones. In re-examination he was specifically asked whether he understood that exclusion of the public right of navigation needed to be justified and on what basis he justified it. He confirmed that in his view "the justification was on the basis of alternative water space availability". This of course provides no justification whatsoever. His considerations are not genuine safety ones and his purported justification underlines the fact that what are sought are unacceptable exclusion zones and not reasonable and justifiable safety zones.

Mr. MacDonald

Mr. MacDonald has no recreational navigation experience. His assessment is purely theoretical. On his theoretical modelling he considers that operating within the wind farm area during the operational phase will lead to a small risk of collision of 1 in 31 to 161 years (paragraph 6.7 of UU/AM/2 on the basis of figures corrected from 150 years as confirmed in his oral evidence).

He also confirmed in cross examination that the view stated in the draft navigational risk assessment at paragraph 11.2.2.2 remained the case. This states;

“The main risk of collision is considered to be in bad weather, especially poor visibility, where a small craft could fail to see the wind farm and inadvertently end up closer than intended”.

He expressly confirmed that this accounted for the main risk of what was in any event realistically a 1 in 161 year collision risk. He also confirmed that an exclusion zone would do nothing to prevent this risk anyway and that in poor visibility a small craft would not know whether it was in an exclusion zone or not.

As to the construction safety zone he confirmed that it could not be related to a specific risk assessment as construction methods remained unknown.

He also confirmed in his evidence that he saw exclusion zones and safety zones as one and the same, an unfortunate misunderstanding that seems to have been common to the Applicant’s case, is plainly wrong, and perhaps provides an explanation as to why they seek to justify exclusion zones on a fundamentally flawed basis.

His purported justifications in his proof of evidence also demonstrated the same lack of understanding of the basis on which the fundamental right of public navigation could be validly excluded.

At paragraph 8.6 UU/AM/2 he makes the same mistake as Captain Drennan by considering a vessel sailing too close as discussed above;

Also in paragraph 8.6 he refers to malicious interference which he accepted that the exclusion zone would not prevent and could be the subject of a separate offence;

At paragraph 8.7 he, like Captain Drennan refers to the problem of people going onto the turbine structures but again confirmed that an exclusion zone was not necessary to provide an offence in an attempt to deter this nor would an exclusion zone stop it;

At paragraph 8.8 he confuses a general 50m zone with a “safe distance”. It can be perfectly safe for certain vessels in certain conditions to go within 50m and equally unsafe in other circumstances or for other vessels to come that close as Mr. Ramsden confirmed.

At paragraph 8.9 he referred to the provision of a buffer zone in the event of a vessel getting into difficulty. Mr. Ramsden provided his expert evidence that it would make no difference to whether collision occurred or not in the absence of a guard vessel and that all depended on the skill of the crew in such circumstances and not whether the vessel was nearer or further than 50 m away.

Perhaps most importantly, he could give no reasons or factors as to why this application was any different to other round 1 sites where operational exclusion or safety zones were not considered necessary and do not form part of the orders or consents.

RYA Evidence

By contrast with the evidence of the Applicant the RYA has called the expert evidence of Mr. Ramsden. He has confirmed that what is proposed are exclusion and not safety zones. He also referred by analogy to the concept of maintaining a safe speed under the Collision Regulations. Regulation 6 does not prescribe a fixed speed limit but rather a non exhaustive

list of factors and conditions to be taken account of to judge whether a speed is or is not safe in any situation. It provides an offence not to travel at a safe speed. It would be equally possible to provide an offence of failing to keep a safe distance from the turbines without reasonable excuse and taking account of a very similar list of example criteria to Regulation 6, rather than setting a fixed distance.

Mr. Ramsden also confirmed that the proposed zones were not based on proper risk assessment and that there was no justification to exclude all vessels from within 50m in all conditions and circumstances on grounds of safety.

In addition to this, he provided some real practical concerns as a result of the exclusion zones and not only the important consequence of the unjustified loss of the fundamental right to freedom of navigation:

Safety – Mr. Ramsden gave the example that an inexperienced mariner may view a stated 50m zone as being a safe distance whereas in some situations it may not be. Reliance for safety could be placed on it. In addition, a mariner, concerned with avoiding sailing into the zone and criminal liability may overcompensate and sail into other hazards. Mr. Ramsden gave evidence of the difficulties of judging distances on the water as well as the problems of judging whether part of the vessel including the mast may have entered the zone when the vessel was unlikely to be perpendicular to the water.

Sailing Time- Mr. Ramsden translated the practical time implications for the recreational sailor of the additional 8 miles to avoid the turbines and the exclusion zones. It translated into an additional 4 hours sailing time rather than risking criminal penalties and taking a tortuous and unnecessarily complicated route through imaginary exclusion zones.

In addition Mr. Ramsden highlighted the problem of the loss of the alternative route due to potential siltation problems either due to construction of the windfarm or otherwise. Mr. Townsend could not rule out such potential and the consequence of the windfarm with or without exclusion zones was to make it of fundamental importance that the alternative inshore channel remained open. It may also be practically necessary to keep this open for maintenance vessels for the windfarm, but it is perfectly feasible that without a legal requirement to keep the channel dredged if necessary, and subject to necessary consents, there could be commercial reasons to abandon the project rather than dredge. This is especially so if the wind farm was nearing the end of its life and decommissioning costs may be viewed as prohibitive. The temptation would be to liquidate a company, which need not be the same as the Applicant, and leave the public to pay not only for decommissioning but also to dredge the alternative channel pending decommissioning.

There is a real need to consider a requirement in the order to ensure any necessary dredging of the alternative channel subject of course to obtaining necessary consents.

In light of all the evidence the proposed exclusion zones are not justified and should be removed as with all of the other round 1 proposals at least as far as they concerned operational zones. If the Assembly consider a need for protection then a suitable offence of failing to keep a safe distance without reasonable excuse could be modelled along the lines of regulation 6 of the Collision Regulations.

Decommissioning

If not properly decommissioned, an abandoned or disused offshore wind farm will present an unjustified interference with and potential hazard to the public right to navigation. To avoid this future proper decommissioning must be ensured at this stage through the terms of the order and it is only right and proper that the owners, who have had the benefits, profits and public subsidies during the operation of the wind farm are also responsible for the decommissioning costs of the structures which provided them with that financial reward.

Offshore wind farms in the UK are major novel marine projects. In the case of this proposal, Mr. MacLeay on behalf of the applicants expressly recognises that:

“No wind turbines in the world have yet been built in water depths as deep as those that occur at the site at Scarweather and the proposed development at Scarweather is pushing existing foundation technologies and associated installation equipment to new depths.” (Paragraph 3.27 UU/AJM/02).

He continues at paragraph 4.10 as follows:

“These issues present new challenges to an industry that has to date very little experience of operating offshore. In order to progress towards larger, more commercial, offshore windfarm developments that do not require subsidies, developers need to take small steps forwards. Scarweather is one such step.”

At paragraph 4.11 - 12 he states that:

“...Compared with onshore wind farms there is relatively little cumulative operational experience offshore.

The first commercial sized offshore windfarm in the UK at North Hoyle off the coast of North Wales, is still under construction.”¹³³

These statements tell us a number of important issues about offshore wind farms in general and specifically in relation to this proposal:

The industry has very little experience of operating offshore in general;

Offshore windfarms are not currently self financing even at operational stage and require public subsidies to be operationally viable;

The current offshore wind farms are an experiment with the aim of gaining experience and technology to try and operate wind farms that do not require public subsidy;

In the case of Scarweather, this is the most experimental yet proposed which will require existing foundation and associated installation equipment to be pushed to new depths.

The proposals for Scarweather were conceived before the lessons from constructing and operating other windfarms in the UK have been learnt.

¹³³ My emphasis throughout

All of these factors raise serious question marks regarding the viability of current offshore wind farm proposals in the UK generally and specifically with regard to Scarweather. Perhaps Scarweather could be viewed as too experimental at this stage before the lessons from elsewhere have been fully considered.

Moreover, these uncertainties raise fundamental and real concerns and questions of how decommissioning will occur at the end of the very short life span of Scarweather and most importantly how will it be paid for? Such concerns are not simply theoretical or fanciful; take for example the problems of decommissioning in the atomic energy industry which were not or not fully appreciated at the birth of that technology.

These decommissioning uncertainties have now been recognised by the DTI in its planned legislation for offshore renewable energy as set out in RYA/ER/07. The following is proposed:

"VI Decommissioning of offshore renewable energy installations

Introduction

42. The purpose of this part of the draft legislation is to put into place a statutory decommissioning scheme for offshore renewable energy installations. Article 60(3) of UNCLOS places an obligation on coastal States to ensure that offshore renewable energy installations or structures within the EEZ which are abandoned or disused are removed to ensure the safety of navigation and with due regard to fishing, protection of the marine environment and the rights and duties of other States...

43. The statutory scheme for decommissioning of offshore renewable energy installations will be based loosely on the regime which applies to oil and gas installations under the Petroleum Act 1998. However there are certain key differences, the most important of which is that the owner of an offshore renewable energy installation will be required to submit a decommissioning programme prior to the construction of the installation. At the same time the owner must put in place such financial security or other financial comfort as is acceptable to the Secretary of State to ensure that funds will be available to carry out the decommissioning programme. This requirement is necessary to ensure that the risk to the Government of having to bear the cost of the decommissioning of an abandoned installation is minimised. The programme and the financial arrangements which support it will be updated from time to time during the life of the installation. When the time arrives to decommission the installation the owner must carry out the work in accordance with the agreed decommissioning programme.¹³⁴

The legislation proposes criminal sanctions against the owner for failure to submit details of financial security by a specified date, failing to update financial security as required from time to time, and failure to decommission in accordance with the approved programme and any revisions to it.

The DTI has therefore identified serious shortcomings with the current regime for allowing these experimental offshore windfarms which will ultimately leave a risk of public expense to cover the decommissioning costs, and has identified a means by which to deal with the problem as follows:

The programme for decommissioning must be set out prior to construction;

¹³⁴ My emphasis throughout.

Financial security must be provided to cover the cost of decommissioning;

The programme and security is subject to requirements to be updated;

The decommissioning must be carried out in accordance with the programme and revisions;

Criminal sanctions apply against the owner for failing to provide security to cover the decommissioning programme and any revisions and for failing to carry out decommissioning in accordance with the programme and any revisions.

Do these proposals meet these identified concerns including the risks to navigation and the risks to the public purse of bearing the costs of decommissioning?

The short answer is No. The proposals fail to meet not only the specific details of the proposed legislation but also the purpose of protecting the risk to the public purse. United Utilities have put forward a number of suggestions which they claim will deal with the problem but these simply do not stand up to scrutiny:

Decommissioning proposals in the Lease between United Utilities and Crown Estate

These have been set out in a written statement UU/UU/01. The statement refers at paragraph 7 as follows, "The lease contains obligations to decommission and remove any works and these requirements are detailed in clause 3.15 of the lease..."

The first point to note is that any obligations in the lease are subject only to civil regulation, it is a commercial agreement between the private interests of the landlord, the Crown, and the operator of the wind farm. The Crown is not and will not be responsible for picking up the costs of decommissioning if the owner fails to comply. These responsibilities will still fall on the public purse and the Welsh taxpayers. There may be many reasons why on a commercial basis, Crown Estates decide not to seek enforcement of decommissioning responsibilities for which it has no financial incentive to do so.

The second point is that the terms of the lease even if enforced do not meet the terms or the objectives of the proposed legislation for a number of reasons:

Clause 3.15.1 gives an option to the Crown for whatever reason to waive any requirement to remove the works;

The requirement even if complied with or enforced is to remove the Works and Supply Cables. The Works is defined as Specified Works which in turn is defined as "[x number] wind turbines.. and ancillary structures." Does this include the foundations and/or scour protection?

The lease requires the tenant to produce a decommissioning plan which will set out the extent of its decommissioning obligations (clause 3.15.4). However, under the lease, the proposed Plan only need be submitted 12 months before expiry of the 22-year lease. This is in sharp contrast with the proposed legislation which identifies the need for the programme prior to construction. Furthermore, with just a year left to run, whoever is the owner at that stage may decide that for economic reasons it is better to liquidate the company than continue for the final year and face decommissioning.

It is necessary to add that it should be noted that United Utilities have chosen not to provide details of any decommissioning programme together with costings to this Inquiry. Mr. MacLeay accepted in cross examination that such a scheme existed and had been costed. He confirmed in Re-examination that the developers already have estimates. However he could give no satisfactory reason or explanation as to why they had not been made public in order

that the proposals if considered could be properly tested. One can only speculate as to the reason why United Utilities has chosen to act in this way.

There is no publicly enforceable requirement to provide financial security for decommissioning.

Clause 3.10 of the lease contains clauses in respect of alienation. In effect, consent of Crown Estates is required which shall not be unreasonably withheld. Whilst 3.10.4.2 allows the financial standing of the proposed assignee to be considered, this of course provides no guaranteed bond. Moreover, if the proposed transfer is at a stage with more than a year of the lease to run, there will be no need for a decommissioning plan to be submitted, let alone agreed, against which to judge the financial standing.

There is no protection of the public purse and no powers for the public to enforce obligations through criminal sanctions or ultimately be protected by provisions for financial security.

Protection under the TWA Order

Paragraph 8 of the Applicant's written statement refers to the protection afforded by article 10 of the proposed order in the event that the owner abandons the works. However, a proper reading of article 10 again shows its shortcomings:

Article 10 requirements do not apply to any decommissioning required in accordance with a decommissioning plan under the lease with the Crown Estates. Therefore anything in that plan if and when agreed at the end of the life of the windfarm cannot be enforced under article 10 powers. It will be left to the Crown estates to take the enforcement action if desired.

It only applies to tidal works or works consisting of partly tidal and partly on land above the level of high water. It does not apply in non-tidal waters. In such cases the Secretary of State can serve notice requiring the removal of such works. There must be doubt about the extent to which this will apply to foundations and scour protection.

There is no criminal sanction or any other penalty for non-compliance.

Most importantly, there is nothing to provide for funding security to do the works in the event of non-compliance with the notice. The risk is there for the public to pick up the bill, which the proposed legislation is designed to avoid.

Protection under a section 5 Food and Environment Protection Act 1985 Licence

Paragraph 10 and 11 of the Applicant's written statement provides that:

"10. UUSSL recognises that the National Assembly for Wales will wish to secure decommissioning of the proposed windfarm in order to ensure compliance with the requirements of OSPAR. This can most appropriately be done through a condition which may be imposed on the concurrent application for a marine construction licence under section 5 Food and Environment Protection Act 1985.

11. No condition has yet been drafted but UUSSL envisage that a licence... should secure that prior to implementation of the development, a scheme relating to the decommissioning of the project should be submitted to and approved by the National Assembly for Wales."

However, notwithstanding that UUSL has submitted suggested conditions for the FEPA licence (section 5 CD87), they have completely failed to set out suggested conditions for decommissioning requirements in order to test their statement to this inquire or to provide re-assurance as to their intentions.

Moreover and in any event, they are not suggesting any provisions for financial security and therefore the fundamental problem of protecting the public purse if all goes wrong remains.

Amended Article 35 of the TWA Order

Paragraph 12 of the written statement suggests that the above 3 matters are sufficient to secure decommissioning and there is no need to go further. However for the reasons set out it is clearly established that this is incorrect. Even on a best case scenario it is plain that the suggested safeguards do not provide for a decommissioning programme prior to construction, or provide for protection of the public purse if decommissioning has to be carried out by the State. There is a clear failure to meet the identified concerns in respect of the proposed DTI legislation to be introduced for Round 2 wind farms.

However notwithstanding that United Utilities incorrectly believes it “need go no further to secure decommissioning”, they suggest an amended article 35 empowering the National Assembly to give consent to any transfer. However, such consent or refusal would of course be subject to judicial review. In the absence of a detailed decommissioning programme and costings which would not be required under the lease until a year before expiry of the term, it may be difficult to make fine judgements of financial standing. It would not provide criminal sanction for failing to carry out decommissioning in accordance with any plan. Moreover, it would not secure the all important protection of the public purse in the event that the State had to step in to secure adequate and proper decommissioning.

Despite being given ample opportunity to deal with the decommissioning problem, particularly protecting the risk to the public purse of carrying out decommissioning, United Utilities have failed to do so. They have given no proper justification for this stance and it is only possible to speculate as to why they would not provide financial security or comfort if they intended to do the decommissioning anyway. They have plainly failed to address the decommissioning shortcomings of their scheme, and which concerns have been highlighted by the DTI in respect of the proposed legislation. However, that proposed legislation will not apply to this scheme at least as far as financing protection for decommissioning is concerned. It leaves the National Assembly with a situation whereby if it approves the scheme, the public are left with not only subsidising the operation but the risk of financing as yet unknown decommissioning programmes and costs. This may well be the situation with the other round 1 consents, but mistakes there, which have now been identified by the DTI, do not justify repeating those mistakes here where an opportunity existed to deal with those now identified problems. By contrast, refusal of this experiment will leave the other schemes to be developed and learn lessons from, and will ensure that either through a revised proposal or the proposed legislation, the unacceptable risk to the public purse in respect of decommissioning future schemes will be protected.

The RYA accordingly respectfully submits that this proposal should be refused. However if granted, all references to construction and operational exclusion clauses (or safety clauses as the Applicant considers them) should be removed. If any safety requirements are deemed necessary these can be achieved through the inclusion of a Regulation 6 style offence of failing without reasonable excuse to keep a safe distance from the turbine structures taking

account of a variety of factors. However in no other Round 1 case was such protection included and there are no reasons provided as to why it should be different here.

Trevor Ward

APPENDIX D

Submissions for the Campaign for the Protection of Rural Wales and Coalition Partners

TWA ref: TWA/APP/03/02/OBJ/3164

1

This has been the first Public Inquiry into an offshore wind power station proposal. It comes to an end at a momentous stage in the evolution of renewable energy strategy in Wales, and the United Kingdom as a whole, which may only be fully understood by reference to the concluding decade of a conscious policy to combat global warming and various other polluting facets of what we must otherwise accept as an increasingly profligate century.

2

Apart from the historic development of hydro-power in Scotland, renewables policy in this last decade has been dominated by the development of one particular technology – wind power – which despite the many criticisms which may be levelled at it, has matured technically and financially during that period. This has been done through the application of a special financial and energy regime, which has overseen the progress from a heavily subsidised commodity to one which is now the cheapest renewable, though still operating in an artificially guaranteed market supported by a preferential price mechanism which to those who dare to speak its name is still a form of subsidy.

3

Intellectually, CPRW recognises this process as a necessary phase in the development of a novel technology, and only begins to be negative about it for two reasons. The first has been its concentration on the skylines of prominent and often cherished landscapes by increasingly large mechanical constructions at odds with the character and function of the host locations. The second has been the sheer numbers of machines necessary to make meaningful impact on the underlying environmental problem - which does concern CPRW as a responsible environmental organisation. We have a thousand turbines sprinkled over the landscapes of the UK and a disproportionately large number in Wales, yet to date they are generating much less than half of one per cent of UK electricity supply, and that in a fashion which is intermittent and unpredictable.

4

Perhaps I should have added a third concern – and that is the extremely high concentration on just one form of renewable technology, almost certainly at the expense of others. That is now changing, as I have tried to show in my evidence. Other renewables are emerging into economic viability, and their technical capabilities are becoming steadily more apparent. We

are here today because wind power is no longer confined to our hills and coasts, and as I have shown by mounting extracts from government and energy sources, offshore application is technically capable of taking over the mantle from its problematic country cousin; indeed much more than just capable as the impressive forecasts for deployment at sea reveal. Offshore wind can, and I am convinced will, transform this sector of the renewables agenda, leaving us soon to see the past ten years as an unfortunate experimental phase in the application of wind power. Perhaps it has been an inevitable, though painful, process.

5

However, the facts are that offshore wind has a hugely greater potential with relatively minor and more easily avoidable adverse effects. That is why CPRW's Offshore Policy is written in such generally welcoming terms. You should not be persuaded, Sir, by Mr Clarke [UU/0/40] that the government's and the industry's forecasts are no more than spin and hyperbole just because their press releases are cast in admen's language. The opportunities for reaching and transcending the Welsh or UK targets for 2010 are very real, as both these authoritative sources claim. I do not simply infer it, project it, or extrapolate it because it suits my case: I take my authority from the UK Energy Minister and the BWEA – the former, at least, a source you are bound to recognise.

6

I stress this because if you are persuaded – as I trust you will be – that there are debits associated with *this project on this site*, then the argument pressed upon you by the applicants and their supporters that there is an *urgent*, perhaps even an over-riding, need for *this particular proposal* falls into oblivion. There is not such a need. Without Scarweather, even just one 'Round 2' offshore project would take us beyond the EDC's offshore target for Wales - and if that is to be elasticated (as I suspect it may) than there is no evidence here to suggest that there may not be more than one Round 2 schemes. Ms Hawkins described how vast the Round 2 projects might be; Mr Crumpton accepted in cross examination that they could be deployed 'behind' the current Round 1 sites in the Strategic Area off the north Wales coast. I believe one or even two ultra large projects would be acceptable there at say 10-15km as they would be largely masked by the existing consented developments. Beyond 2010, as the Energy White Paper states, other – mainly marine - technologies would begin to supplement offshore wind and replace onshore wind.

7

In the case of Scarweather, Mr MacLeay made it plain that some movement away from the coast might be feasible, though he suggested that in doing so the overall size of the project would have to reduce, making it less economically attractive. Nonetheless, the developer's promotional leaflet produced by Mrs Chislett suggested that movement further offshore was primarily a matter of economics, rather than feasibility. Although such options were inadequately examined in the EIA, there must remain a grave doubt whether such flexibility as there might actually be would be sufficient to overcome the objections to the proposal which have been aired at the Inquiry.

8

CPRW is delighted to have been able to find such a sturdy common cause with Bridgend County Borough Council and to work closely with its team at this Inquiry. It is also no co-incidence that CPRW – which despite Mr Newcombe's attempt to suggest otherwise, is NOT a 'single-issue organisation' - has found common ground to assemble a Coalition. It is pleased to see

its concerns shared beyond its natural and common alliance with the Ramblers' Association and the Civic Trust. It speaks volumes for the co-incidence of landscape and recreation interests with the economic life of an area based on tourism that our other partners are the Porthcawl Town Council and Regeneration How? Their views merge with CPRW's and derive from the same litany of defects which force the conclusion that in today's context, this is the right technology in the wrong place, because its effects are significantly adverse, while the need to site here is not proven and not compelling. This is particularly so when most of the 18 Round One sites have consent, and not one has been refused. In almost all of these cases there has been very little opposition. Here, the position is entirely different for the simple reason that the location and the receptors are entirely different. Mr Crumpton at least accepted that, though his construction on the facts that this would somehow be a wonderful opportunity for the economy of this seaside town produced some wry smiles from his audience.

9

The question of adverse visual impact, and how 'significance' is measured, lies at the heart of your decision, Sir. Upon that, most of the receptor issues turn – certainly those covered by CPRW and its partners. My continuing dialogue with Ms Hawkins on how significant effects are recognised, sampled, depicted, and assessed has been played out yet again at this Inquiry. I will spare you the detail. But the question of the sensitivity of receptors needs emphasising, as does that of how significance is measured, and how nearly-significant individual effects are incorporated into your final balancing exercise. My submission is that Ms Hawkins' 'modern' method, deriving from the second edition of the GLVIA (landscape assessment guidelines) may have some things to commend it, but it is emphatically difficult to appraise as it relies at critical points on an amorphous ingredient called 'professional judgement'. A good old-fashioned significance matrix with a detailed and systematic indication of receptor sensitivity may tend to be 'mechanistic' as Ms Hawkins agreed, but it is at least overt and understandable. Moreover, the process of assessing and collating effects of varying degrees of significance is potentially clear and potentially arguable. My feeling is that, under criticism, the originally transparent methodology has retreated into a haze of obfuscation.

10

Criticism has been made of my own methodology (or at least two ingredients of it). I would stress, Sir, that the Sinclair-Thomas Matrix and the Index of Potential Visual Effect are no more than initial tools to establish indicative parameters for likely visual effect, and to rank the potential moving mass of different projects. Obviously other processes, other factors and an element of subjective judgement enter into the analytical process I have used – much of it utterly conventional and straightforward in terms readily recognisable from other Assessments and established practice. I am merely an experienced lay person, and it is intended to be easily understood by and appraised by others.

11

That being so, I would refer you to section 5.10 of my Summary Proof which sets out the problems associated with the analysis in the ES in a series of concentrated points. The ES asserts that "the predicted changes to seascape character and visual amenity should be acceptable". CPRW's conclusions are to the contrary. I submit that they are rooted in a more completely worked-out and systematic analysis of the same basic facts, but are carried through to a conclusion in line with the requirement to consider whether the proposal would

have significant effects as defined in the Environmental Impact Assessment Regulations. They are:

No justification by United Utilities for the choice of site in terms of the absence of less damaging alternatives, and no explanation of effect of siting further out to sea (3.2);

Turbines are of unprecedented size, 1.8 times higher than the largest in Wales (3.4);

Installation's Index of Potential Visibility is 6.6 x that of the largest in the UK (3.5) *[and double that of North Hoyle, now nearing completion]*

Impact of the 135m turbines will be 'Major' at 10km and 'Moderate' at 17km (4.1);

High quality of coastal landscapes (nearest 6km) (5.2);

High proportion of designated landscapes and intensive recreational usage (5.3);

High incidence of tourism, cited as sensitive to turbines (5.4);

Of 20 viewpoints 9 are significantly affected and 11 sub-significantly – with an overall conclusion of comprehensive adverse significant effect (5.5-7);

Effects on physical and human receptors all greater than stated in ES (5.8);

Potential for immense sequential and simultaneous cumulative effect (5.9).

12

All these factors lie to be considered in your balancing scales in addition to the unprecedented impact on landscape, seascape and the enjoyment of the coastline and sea by the various receptors described. The impacts involved are all detrimental to the landscape and visual amenity of the area, to the receptors concerned, and to the economy of the area. I would repeat the comparison I made with Green Belt yesterday. The coast from Kenfig to Porthcawl is striking and attractive in its own right. But its real importance – and its susceptibility to this development – lies in its juxtaposition with the industrial area to the north. Its value and vulnerability are all too apparent from the use made of it by the whole range of receptors represented here in this Inquiry.

13

It is clear that, once again, the inherent conflict between policies for renewable energy and those required to conserve the countryside, the coast, and its interests of acknowledged importance is endangering the qualities of one of Wales' prized natural assets. It polarises objectors to and protagonists of individual wind power proposals and distracts them from longer term aims which, underneath the short term skirmishes, they all share.

14

I refer you to the closing phrases of the Countryside Agency submissions to the House of Commons Environmental Audit Committee in January 2001 to express profound dismay that the quest for locating just one project in a whole portfolio of sustainable energy technologies has led interested parties into a destructive, expensive and confrontational foray.

"We must not risk losing the huge challenge for renewable energy development in the longer term by driving through insensitive development to meet the 2010 target".

15

The level of significant and adverse effects of this proposal is markedly greater than asserted by the applicant, especially when the project is assessed in conjunction with the potential for cumulative impact. It is by far more conspicuous and ill-sited than the two offshore proposals underway off North Wales. Accordingly the assertion in the ES that the conceded significant effects are 'acceptable' should be disregarded. There is every possibility that the Welsh offshore wind targets will be achieved and possibly exceeded by seeking sites progressively further from the shore and in less sensitive areas. There is moreover a steady progression towards other forms of renewable energy, both on land and offshore. There are thus no considerations which could justify a decision to issue consent for this project, which would create demonstrable harm to interests of acknowledged importance.

16

On behalf of CPRW and its partners I would therefore submit that there good solid grounds for you to recommend that the Assembly should refuse consent for the development of this intrusive and inessential proposal.

Geoffrey Sinclair

26th November 2003

APPENDIX E

Closing Statement

By

SOS PORTHCAWL

John Chislett (Chairman)

7 Pintail Close, Porthcawl, Bridgend. CF36 3QD

1. Introduction – SOS Porthcawl and reasons for objection

1.1 The Group was formed in August 2002, from residents of Porthcawl.

- Widespread concern at Plans for Scarweather Sands
- Lack of information about the proposal
- Need for information and to understand and communicate public concerns

1.2 The Group is;

- **not** anti renewable energy
- **not** anti wind farms
- **not** party political
- **not** pro nuclear and has **no connection** with the nuclear industry
- **is concerned** about global warming

- ***is in favour*** of renewable energy

1.3 The Group;

- believes that the ***scale, nature*** and ***siting*** of this ***particular*** windfarm is inappropriate
- believes it will do irreparable damage to the area and its economy
- considers that there has been inadequate consultation with the people most affected – ***the residents of and visitors to Porthcawl*** (in contrast to consultation with commerce and industry)
- sees that there has been no opportunity to moderate or amend the proposal
- feels that there has been inadequate impartial research carried out into the effects on the Town and local community
- does understand “the bigger picture” of the need to combat global warming
- considers that a modified proposal would help meet Government targets, without sacrificing the local environment
- ***does not*** wish to move the development further up the coast – there are better solutions

1.4 SOS Porthcawl has listened to the feelings, opinions and fears of thousands of residents and visitors to the Town. It has, within the capabilities of an amateur group of volunteers, tried to present those to the Inquiry.

1.5 The case put forward against the Proposed plan is on the following grounds;

- Site Selection
- Visual Intrusion
- Impact on Quality of Life
- Level of Objection
- Concerns with Developer
- Effect on Tourism

2. Site Selection.

2.1 The Windfarm will be very close to shore – 5.6 kms from one of Wales premier tourist beaches and its most famous and distinguished Championship Golf Course.

2.2 There seems to be no justification for this site. Had United Utilities (UU) appeared at this Inquiry, this might have gone some way to address this problem.

- The only argument for this site is on economic grounds
- No financial evidence is given – hence no judgement can be made

2.3 This Inquiry has shown that no other sites were investigated fully, particularly a site more distant from shore, but still within the same water depth limits.

- For example there is scope to double the distance from shore (to over 10kms) and still remain within the same water depths as turbines 1, 4 and 8. (Ref. Map UU/0/36 Drawing 66)
- Early literature from UU indicated that this was technically feasible

2.4 Bridgend County Borough Council (BCBC) is seeking to increase protection of this area of this coast and redevelop Porthcawl in its Unitary Development Plan. (UDP)

- This Development threatens the area and the objectives of the UDP
- The British Wind Energy Association are challenging aspects of the UDP
- BCBC are objecting to the Development

2.5 The proposed Development does not comply with the Government's latest thinking, (Round 2), in terms of distance from shore.

- The only reason seems to be the increased profitability from an inshore location.

3. Visual Intrusion

3.1 Most groups have objected on the grounds of Visual Intrusion.

3.2 The Environmental Statement (ES) itself describes the magnitude of change as substantial in four sites in Porthcawl - namely Sker Point, Royal Porthcawl Golf Club, Rest Bay and Hutchwn's Point. (Table 5.5 Page 5-19)

3.3 Lock's Common Porthcawl has now been designated a local nature reserve (June 2003) and views of the Windfarm could be seen as detrimental to its status.

3.4 Swansea City and County Council objects to its impact on Swansea Bay and the Gower.

3.5 The seascape will change from a tranquil to an industrial one.

The benefit of a seaside location is an open vista

Many come to Porthcawl to escape the urban and industrial environment

3.6 The scale of development is massive and it will dominate the town of Porthcawl. It will be one of the largest industrial developments of its kind in the world.

3.7 There has been constant debate and controversy over the visual effects/photo montages.

- Two of the Group's members recently viewed the NORTH HOYLE WIND FARM and were shocked by the reality compared to the photomontages
- Kay Hawkins, appearing for UU, in her evidence to the Inquiry, stated that the turbines on Scarweather Sands would appear to be 50-60% larger than those at North Hoyle, due to size and distance

3.8 A member visited Middelgrunden.

- The contrast to Porthcawl is marked, as Copenhagen is a busy urban area, with huge levels of activity around the turbines. Nowhere does the sea form the horizon.
- **4. Impact on Quality of Life**

4.1 Construction Noise will be a major problem.

- **This is affirmed by the experience of those near North Hoyle.**
- **The construction noise of the meteorological mast was heard by many in Porthcawl**
- **Undoubtedly it will spread over two summers, having a serious effect on Porthcawl's residents and visitors**

4.2 Property Prices will be adversely affected, if the tranquil nature of bay is changed.

- **Porthcawl is a prime retirement location**
- **Properties with sea views command a premium**

4.3 Shadow Flicker particularly given the westerly position of the windfarm could be a problem.

4.4 TV/FM Radio Reception could be a problem for Swansea/Gower and maritime FM users. There is evidence of this from other developments. (Supplied with SOS Porthcawl's Proof of Evidence)

4.5 Operational Noise is a complex issue and residents are not reassured. Noise from turbines has been the subject of complaint from many other sites. Some expert opinion has argued that mathematical models do not accurately predict problems from noise.

4.6 Noise from Foghorns could also be a problem.

5. Level of Objection

5.1 The strength and level of Public Opposition to this Proposal is said by many older residents to be the greatest to any issue affecting the Town in living memory.

5.2 The Petition - over 8000 signatures were received

- **This represents around 50% of Porthcawl's population**

- At a time of public apathy for politics and public life this is quite extraordinary (proportionately twice the number who voted for a Welsh Assembly)
- Most of the signatures came from unmanned stations, located in local businesses (there was no pressure exerted to sign)
- The petition was closed on 26/2/03, when it was presented to BCBC

5.3 Objection Letters – over 3,500 letters were sent.

- This was so many more than ever received by the Transport and Works Act (TWA) Office that it struggled to handle them and ran out of booklets to issue
- Submission of Objection letters ceased on 7/3/03 in accordance with the instructions from the TWA Office. (Press announcement 23/1/03) (Copy in UU/0/43 Public Consultation Report from Warwick Emanuel Pages 47 & 48)
- Around 80% came from unmanned stations

5.4 Public Protest

Wide scale public support for SOS Porthcawl's campaign was seen and recorded in the press, TV and radio. Events included: -

Rest Bay October 2002

Say No Meeting February 2003

BCBC Planning Meeting February 26th 2003

Welsh Assembly March 2003

5.5 Objectors include;

Swansea City and County Council

Bridgend County Borough Council and **Porthcawl Town Council**, as the elected representatives of the residents of Porthcawl have objected.

Porthcawl Civic Trust

Regeneration How?

Moor Lane Caravan Park

The Gower Society

Gower Watersports Association

The Kenfig Trustees

Rest Bay Lifeguards Association

Ripcurl UK

The British Surfing Association

The Royal Porthcawl Golf Club

Pyle and Kenfig Golf Club

Simon Tucker Surf Academy

Welsh Coast Surf Club

The Campaign for the Protection of Rural Wales

The Royal Yacht Association

The South and West Wales Fisheries Association

The Ramblers Association

Many local hotels, cafes etc.

6. Concern with the Conduct of Developer

6.1 Poor consultation.

- The Crown Estate granted the lease for Scarweather Sands on 5th April 2001. It was almost 18 months later that the residents of Porthcawl became aware of this – not from the Developer, but from a local councillor.
- The mast installation, which starts to convey some idea of the scale of the project was delayed, without good justification.
- UU has been reluctant to supply information and would not supply additional copies of the ES gratis for seven months.
- UU refused invitations to meet or to organise Public Meetings.
- UU refused to take part in live TV interviews.

6.2 Misleading and conflicting information has been supplied by the Developer.

There are many examples, but the following are two of the more obvious cases.

- Assurances made in earlier publications, on noise and visual intrusion, for example, were contradicted in later brochures.
- It was stated that this development was 11km south of Port Talbot.

6.3 Reluctance to admit negative response to Public Consultation

- *Specimens of the questionnaires were not included in the Public Consultation Report (UU/0/43)*
- *85% of the responses were negative in terms of the development*
- *Information came to light right at the end of the Inquiry in document UU/0/43*

6.4 The developers record on environmental issues.

- *The Developer has a poor record and this year was quoted as the worst offender in the UK, by the Department of Fisheries and Rural Affairs. Such actions have been publicly condemned by national newspapers and Friends of the Earth.*
- *The DTI has specifically stated that this is a key criterion on which to judge suitability of applicants along with experience. UU has the worst record in the UK and no experience in this type of development.*
- *The poor environmental record has continued for years and 2002 was its worst year.*

7. Effects on Tourism

The Welsh Assembly has a commitment to substantially increase tourism.

7.1. Income from tourism

In 2000 the income from tourism to Bridgend County borough was £119 million and Porthcawl is the main tourist destination in the Borough, with the town earning £18.4 million in '95/6.

Porthcawl has a Blue Flag Beach and one of the UK's prime surfing locations, just five minutes off a major motorway (M4) – a unique offering.

Any threat to tourism is a threat to the future of Porthcawl.

7.2 It has been argued by the developer that the Windfarm will be an attraction to tourists. It would not constitute a viable tourist attraction. On the contrary;

- **Delabole Wind Farm Cornwall** has recently been put into administrative receivership
- **The Taff Ely windfarm** has not attracted tourists
- **Arklow co.Wicklow Ireland** will have a 200 turbine windfarm. Tourism is not being promoted.

- **Swaffham Ecotricity Centre** attracted just over 50,000 visitors in two years. The Café next to Rest Bay car park attracted over 50,000 visitors in one year.

7.3 An objection has been lodged by the Wales Tourist Board against this development.

7.4 Concerns of those in the Tourist Industry in Porthcawl.

Local hoteliers, cafes and other businesses dependent on tourism have expressed concerns and objections. It is the many smaller businesses, which are vulnerable to even the slightest drop in visitor numbers.

8. Background to SOS Porthcawl

8.1 The Steering Group members of **SOS Porthcawl** are not the elected representatives of the people of Porthcawl, but have attempted to convey the views of the **thousands** of people, who have spoken to the Group. The Group wishes those views to be heard and considered.

8.2 The members are not experts in the many specialist fields, but have attempted to read and understand all the data supplied, so as to make an intelligent assessment of the project.

8.3 Members have taken the trouble to visit as many windfarms as possible and to talk to those involved and affected by them. All has been at their own expense. (Except Middelgrunden as guests of U U) These include Dellabole – Cornwall, Swaffham – Norfolk, Cumbria, North Hoyle & Rhyl Flats – North Wales, Dun Law – Scottish Borders, Blyth – Northumbria, Taff Ely – South Wales and Middelgrunden – Copenhagen.

8.4 Members of the Steering Group have attended virtually every session of the Public Inquiry.

9. Conclusions

- 9.1** The Group believes that the plans for the windfarm are flawed and assurances over the environmental safety of the Development are not to be trusted.
- 9.2** The Group believes that an overwhelming majority of the people of Porthcawl is opposed to the proposed windfarm.
- 9.3** The proposed development does not comply with the latest Government thinking on windfarm development. The Bristol Channel, with the second largest tidal range on the planet, is better suited to exploiting new tidal technology.
- 9.4** It is an attempt to make financial gain from the pressure to comply with government targets on reducing CO2 emissions.
- 9.5** If it proceeds, far from encouraging further developments, there will be such a public outcry that it will damage the future of windfarm development. This *is not* the intention of the Group.
- 9.6** A local environment should not be destroyed, in an attempt to make some contribution to tackling the global problem.
- 9.7** If it proceeds it will soon be seen in the same light as the coal mines and reservoirs, which exploited and despoiled Wales.
- 9.8** This Development has not been thought through properly and should not be permitted to proceed.

For the sake of the thousands of people, who will be adversely affected, SOS Porthcawl urges that the Scarweather Sands Windfarm Application should be rejected.

APPENDIX F

COMMERCIAL FISHING: CLOSING STATEMENT

IAN WISBY on behalf of South and West Wales Fishing Communities

1. Swansea Bay is fished by more than two dozen vessels based in Swansea, Port Talbot and Porthcawl, including a small number that work trailer boats off the beach. These vessels are worked by a mixture of part-time and fulltime fishermen.
2. All but three of the Swansea Bay-based vessels are under 10 m in length. The UK under 10 m fishing fleet is not subject to the full rigour of official recording of fishing activity and landings. This lack of rigour is reflected in acknowledgement by DEFRA Fishery Statistical Unit that under 10 m landing statistics must be treated with circumspection.
3. There is relatively little interest in potting for crabs or lobsters around Swansea Bay. Such activity as there is tends to be in the western part of, or to the west of Swansea Bay and would not be affected by a wind farm at Scarweather Sands.
4. The majority of the local fleet are trawlers that work lightly rigged 'clean-ground' gear. Three or four of the larger, more powerful trawlers, however, tow 'rock-hopper' trawls that are suitable for use on somewhat rougher grounds. Irrespective of the practicality of fishing within the boundary of a wind farm, it is anticipated that none of these vessels will be permitted to do so. What is unclear at present is whether the developers will have the statutory authority to implement an exclusion zone or whether implementation will fall to some other body (eg vessels' insurers) or government agency – Health and Safety Executive (HSE), Maritime and Coastguard Agency (MCA) or the International Maritime Organisation (IMO).

5. Even if some *de facto* exclusion regime did not prohibit netting within the wind farm, the activity of the netters that target the Scarweather Sands area would be constrained significantly. The proposed siting of turbines would reduce their established fishing practice not less than 50% in time and earnings by as much as 80%. These constraints would be exacerbated by the proposal to provide permanent moorings between turbines for the recreational angling fleet. The Association remains to be reassured that the siting of underwater power cables linking the turbines with shore-based infrastructure will not limit or prevent trawling activity within the zone between the Scarweather Sands and the mainland.
6. Swansea Bay supports a wide variety of fish during the course of each year and all are targeted to varying degrees by both the netting boats and the trawlers. During the summer months, the principal species of importance are the 'prime' species – bass and flatfish such as sole, turbot and plaice. During the winter roundfish such as cod and whiting are relatively more important while a variety of lower-value rays and dogfish, but principally roker – the thornback ray, make a welcome contribution to catches and earnings throughout the year.
7. The distribution of each fish species is patchy as each has its preferred habitat and environmental conditions. Bass are frequently associated with banks or other topographic anomalies. Scarweather Sands is the most significant of these within the normal working radius of Swansea Bay-based commercial fishing vessels. Nash Bank, Helwick Bank and smaller unnamed banks beyond Swansea Bay, however, all provide loci of bass aggregations that fall within the working radius of fast, planing craft favoured by bass anglers – both recreational and professional. It should be noted, however, that existing and proposed aggregate dredging activity within some of these areas will further restrict access and reduce activity to the detriment of the inshore fishing industry.
8. Flatfish are most commonly associated with finer substrates (ie mud through to fine gravel) but may also aggregate in the vicinity of Scarweather Sands to take advantage of food and

prey that become entrained within the bank's gyral current system. Roundfish and rays are attracted to Scarweather Sands for the same reason but they are also associated with rougher grounds such as those requiring rock-hopper gear or even grounds too rough to work with any gear, eg the White Oyster Ledge.

9. While the vicinity of Scarweather Sands tends to offer higher catch rates for fundamental reasons of fish biology (preferred habitat and environment), it is an area that offers other key advantages to the smaller class of vessels that characterise the Swansea Bay-based fleet. As shown in the United Utilities environmental statement (Figs 6.10, 6.11), the current system in the immediate vicinity of Scarweather Sands is moderated significantly compared to the high tidal flows recorded beyond the bank in the open Bristol Channel and Severn Estuary. Many of the local trawlers cannot tow safely – if at all – in the high current speeds beyond Scarweather Sands and bottom set nets tend to be knocked flat or swept away.
10. Of no less importance is the shelter that Scarweather Sands provide from the prevailing south-westerly wind-driven wave action. Only in the most inclement conditions are the fishing boats driven from the areas of 'clean ground' behind Scarweather Sands to pick their way through the multitude of 'hitches' and 'fasteners' that make inner Swansea Bay a less than ideal fishing area.
11. This combination of factors affecting the distribution of the fish and influencing the fishing opportunities of the Swansea Bay-based fishing fleet make the Scarweather Sands and the area immediately to the north of the bank of primary importance. Opportunities beyond Swansea Bay and the Scarweather Sands are extremely limited for the majority of the under 10 m Swansea Bay-based vessels. Only the three over 10 m vessels are sufficiently robust to fish in the stronger tides and more exposed conditions – and then only in benign sea states.

12. Much has been made of the potential benefits to be gained from the so-called 'reef effect' that might be associated with the construction of a wind farm, particularly one in which rock-rubble anti-scour material is deposited around the base of each turbine monopile. Both from a scientific and fishery perspective, the putative benefits have been over stated.
13. The scientific evidence that artificial reefs in temperate latitudes make a positive contribution to fish productivity is, at best, equivocal. It is universally accepted, however, that artificial reefs – whether wrecks, gas and oil installations or even offshore wind farms – do act as 'fish aggregation devices'. In this respect they draw existing fish resources from the local environs and concentrate them in a smaller area.
14. The consequences of such localised aggregation can be viewed both positively and negatively depending on perspective. If recreational angling is to be permitted within a wind farm site, a higher localised density of fish offers the prospect of higher catch rates. The same might be expected if commercial netting were both allowed and proved viable within the site. The antithesis of higher catch rates, however, is that there will be a tendency, albeit small, to confound current management efforts to conserve fish stocks.
15. If trawling within the wind farm site is prohibited, trawler catch rates outside the boundary of the 'reef effect' might be expected to fall as the local fish populations aggregate in close proximity to the wind farm. Logically, any putative management conservation benefit these lower catch rates might represent would balance, more or less, any negative effect due to fishing with higher catch rates within the wind farm. Realistically, however, these theoretical losses and benefits would be undetectable within the wider framework of Bristol Channel and Celtic Sea fish *stock* management.
16. It is highly improbable that any new crab or lobster-pot fishery would develop around turbines unless the anti-scour rock rubble were to extend the full 50 m radius of the vessel exclusion

zone. If the prospect of promoting new fisheries were high on the list of the developer's priorities, the rock rubble should extend beyond the limits necessary to minimise scour and be laid throughout the 50 m exclusion zone and beyond to form a matrix linking turbines both by row and column. This could increase the total 'reef effect', possibly to the point where it started to have a detectable effect beyond the immediate environs of Scarweather Sands.

17. Irrespective of any potential fishery benefits that might derive from a Scarweather Sands wind farm, either by default or by design, it is most probable that the construction and operation of a wind farm on this site will have a negative net effect on the total landings and annual income of the fishermen. For this reason, if no other, they would prefer not to see a wind farm built within Swansea Bay. On the assumption, however, that such a development will proceed, the fishermen believe that they should receive an appropriate level of financial compensation.

18. For their part, the fishermen recognise that such compensation must be related to income based on accounts. Indeed, they have already shown good faith by making available to United Utilities' agents accounts for a stratified sample of the Swansea Bay-based fleet. Whether compensation should be based on some factor of gross annual income (turnover), gross profit (eg turnover less vessel costs) or on some other means of calculation remains a matter for discussion.

19. In conclusion, the local fishing community regret that the proposers did not follow the consultation guidelines agreed between the British Wind Energy Association (BWEA) and the National Federation of Fishermen's Organisations (NFFO). In particular, they regret that United Utilities did not seek to prepare a statement of common ground. Such a statement would have helped to eliminate irrelevant topics such as the status and management of Celtic Sea stocks, clarified differences of interpretation such as those covering the 'reef effect', and thereby helped to highlight the key issues – the importance of the Scarweather Sands to local

fishermen and the basis for assessing compensation. Also, such a statement would undoubtedly have saved the inquiry a significant amount of time.

APPENDIX G

Closing Statement of Tom Anderson Welsh Coast Surf Club

- 1 *After having attended the sections of this inquiry relevant to my case, I maintain the conclusion that the issue of surf has not been dealt with by this developer.*

- 2 *I believe I have ably demonstrated in cross-examination that ABPMer it not a “surf knowledgeable” authority, as claimed in the Proof of Evidence of Ian Townend. Mr Townend struggled greatly to grasp surfing details, and failed to convince me that he was as capable as Plymouth University Coastal Processes Research Group’s Dr Paul Russell of making the necessary connections between scientific understanding of coastal processes and local surfing knowledge.*

- 3 *Nobody has competently contested the fact that this project would be the first of its kind and size to be located in an area where the relevant coastal processes have the direct ability to affect surfing conditions, and therefore carries with it an experimental aspect.*

- 4 *The Inspector has seen and understood for himself the unique characteristics that have made Rest Bay such an important surfing beach, and I have explained how slight changes in any one of many coastal process variables could alter this.*

- 5 *The Developer has not contested the fact that sand movement and currents in and around the area of the proposal have the direct ability to influence surfing conditions. Even if someone were to prove that no wave energy was to be lost as a result of the wind farm, they would still have to deal with the fact that wave shapes can be altered if the exact details of the current sea-bed are not maintained in their entirety. This is something ABPMer are not prepared to guarantee.*

- 6 *The British Surfing Association has stated its public backing of my organisation's stance on this proposal. They have expressed concern that a precedent will be set whereby offshore wind technology can proceed with no consideration of surfing – a growing sport which can only be practised at scenes of a unique set of naturally-occurring factors that man cannot replicate. Rest Bay, in its current state, is home to such factors.*
- 7 *Such naturally occurring leisure facilities are few and far between, and should not be taken for granted. I believe that the relationship of sport and leisure to health and culture are as significant as the environmental issues brought up by this inquiry. I therefore urge the Inspector not to recommend the approval of this proposal in the light of the reservations I have highlighted regarding its potential to adversely affect changes in coastal processes and therefore surfing conditions.*
- 8 *I have not touched upon the issues of visual impact brought to this inquiry's attention – with the one exception of having to respond to questions from Greenpeace (where I must stress I did not at any point cite my own opinion on the matter). However, that is not to say that surfers do not oppose this project on visual grounds. I can tell the inquiry that many surfers, and not all of them members of my organisation, have requested that I do advance visual arguments on their behalf. I chose to focus solely on the issue of waves though, leaving the responsibility of advancing the aesthetic debate to other witnesses.*
- 9 *I will freely admit that it would go against my agenda to highlight any errors I may have noticed in the Proofs of objectors advancing visual arguments, since I am myself objecting to this project, albeit for a different reason. I must, however, take the opportunity to briefly contest a comment made by one of the Developer's witnesses.*
- 10 *Having been present for most of Chris Clarke's evidence, I find myself forced to respond to his commenting that surfers and golfers do not greatly consider their surroundings when practising their activities. While I cannot speak for golfers, I can assure the Inspector that the aesthetic nature of one's surroundings are a significant contributor to a surfer's enjoyment of a particular session. Suggesting that surfers will not notice this wind farm is at best ridiculous. Part of the act of surfing involves looking out to sea for incoming waves. The positioning of this particular wind farm means that it will certainly*

be brought to the attention of surfers doing just that - along with the attention of anyone assessing surfing conditions from land. Its position in relation to the sunset (another source of aesthetic pleasure to surfers) will also insure that it will not go unnoticed by any of the people I represent.

- 11 *Whether or not the sight of a wind farm is or is not to one's fancy is another debate I will not contribute to. I merely wish to express my expert opinion, as a local surfer of twelve years, that this particular wind farm is in a position that will quickly draw it to the attention of surfers. In that respect I can confirm that at least one small portion of Chris Clarke's evidence is indeed erroneous.*
- 12 *As for my own evidence, I do not believe the Developer has succeeded in taking anything from it. My case is simple: This wind farm has the potential to adversely affect surf; My organisation is not satisfied that enough has been done to research these potential effects, or that existing research had been adequately scrutinized by anyone with local surfing knowledge; United Utilities are therefore unable to back up their assertions that this project will have no effects on surf.*
- 13 *Admissions by ABP Mer that mathematical modelling is not an exact science and that guaranteeing no effects would be unwise further undermine the Developer's case. It is simply untrue to suggest that any of the current scientists involved in the ES could accurately pinpoint the effects this project could have on surf (since they showed in cross-examination that they were not surf knowledgeable), as it is to state that thirty turbine-shafts of this size can be introduced to such an active area of sea without altering currents or sand movement.*
- 14 *The Developer has also tried to argue that an off-the-cuff email from Dr Russell, in which he expresses an unqualified hunch, could be a substitute for the detailed research paper we asked them to commission. I maintain that I believe the ES to be inadequate without such an addition, and suggest that the Developer's trying to resort to such tenuous measures as I have just detailed is further proof that they have failed to deal with my objection.*

- 15 *Avoiding coastal-processes and the surfing politics of this inquiry, the Developer chose when cross-examining me to question some of the more pernicky aspects of my Proof instead, such as my questioning of consultants' independence.*
- 16 *One section of my evidence the Developer has questioned is the paragraph of my Rebuttal Proof that refers to ABP Mer's Assessment of Impacts on Local Hydrodynamics, compiled in relation to Phase 2 of the Falmouth Sewage Treatment Scheme. The relevant sentences are a direct paraphrase of Dr Russell's own words. Ian Townend's response seemed to me to be more of an effort to tone down the significance of the error highlighted by Dr Russell, rather than to deny it. If the Developer goes on to say that Dr Russell's suggested amendments to this study were merely a matter of opinion, as opposed to being fact, they will only go further towards proving that coastal process modelling is not an operation free from human interpretation.*
- 17 *I must also add, from watching this inquiry and engaging in conversations with residents, surfers and other people with an interest in this area, that support for this specific project appears to me to be thin. The main supporters appearing in this inquiry are environmental groups with a "green energy at any cost" agenda. Greenpeace's Steven Tindale has personally stated in this inquiry that his organisation do not believe effects on surf to be an issue of great importance. Neither was he able to better the Developer in advancing a surf-knowledgeable scientist to allay the concerns of the people I represent. Such organisations would gladly urge the Inspector to negate the part of his remit that includes considering the interests of people in the region likely to be affected by this project. It therefore comes as no surprise to me that Greenpeace support the Developer's ES.*

In conclusion, I do not believe the issue of surf has been sufficiently dealt with in this inquiry. Surfing is a vital part of this region's economy and culture, and the potential of this sport/lifestyle for further growth here is enormous. It is a central characteristic of this area's community, and that has come about as a by-product of the specific virtues of Rest Bay as a surfing beach. It is these virtues that need to be preserved at all costs, rather than allowing them to be jeopardised as part of a proposal that is essentially merely an experiment. Mr Inspector, this is not the correct location for such a development, and I must strongly recommend that this is the outcome

APPENDIX H



CLOSING STATEMENT OF GREENPEACE UK

1. Greenpeace has welcomed the opportunity to participate in this Public Inquiry. Some important issues have been raised and we trust that the Inspector will consider them carefully in his decision.
2. Greenpeace maintains that of particular significance are the threat of climate change and the urgency of action to tackle it, and the strategic importance of this project to the longer term development of the offshore wind industry (especially round 2). In addition, the policy and regulatory framework exists from an international right down to a local level, which commits both the UK and Welsh Assembly Governments to reduce carbon emissions and promote and increase the development of renewable energy, such as wind power. The evidence of Stephen Tindale for Greenpeace, and Chris Clarke for United Utilities contain further details. We hope these factors will carry significant weight in the Inspector's report.
3. None of the evidence before this Inquiry has successfully shown that there exist any viable alternatives to wind power *at this moment in time* for generating the levels of carbon free electricity that are needed (and indeed obliged by law), nor that there exists a viable alternative site for this project.
4. The issue of noise has been raised as a concern in this Inquiry - notably by Peter Black AM and SOS Porthcawl. Both witnesses appear to have based their fears on experience of older onshore turbines, and neither offered any evidence to challenge that of Malcom Hayes, an experienced professional in this field, that the chances of the Scarweather turbines being heard from shore are in fact minimal.
5. The issue of visual impact has played a large part in the proceedings of the Inquiry, and has, it seems, been the cause of the majority of the opposition to the project. Greenpeace does not deny that it is an issue that must be considered by the Inspector, but maintains that it is highly subjective and should not therefore outweigh the wider environmental benefits that this project will deliver. It is clear that there is no consensus, even within the local community, that the turbines will necessarily be visually intrusive or have an adverse visual impact. While there is clearly some strongly felt local opposition, there exists also strong public support locally for the project - shown in nearly 3000 letters of support and an ICM opinion poll showing 3 times as much local support as opposition to the proposal (see appendix 2 of the evidence of Laura Yates for Greenpeace). Moreover, much of the demonstrations of local opposition were gathered at a time when the only publicly available information about the project came from the opponents themselves, as

confirmed by SOS Porthcawl (in relation to their petition) under cross examination. As Councillor Jean Barraclough demonstrated in her evidence, and Neil Crumpton of FoE Cymru revealed in his cross examination of SOS Porthcawl's witness, much of the SOS produced information was misleading and inaccurate (eg. claims about 90 turbines being planned for the bay) and much was also anti-wind in general, despite their claims to support wind power. The public opposition to the scheme must be seen in this light.

6. The two witnesses for BCBC who gave evidence on the issue of visual impact (Neil Sumner and Denise Fletcher), along with Mr Sinclair from CPRW, seem to Greenpeace to have let their personal and subjective opinions on the visual appearance of wind farms affect their professional judgement of this project, and hence their evidence. Ms Fletcher, for example, confirmed under cross examination that it was her opinion that the proposed wind farm would resemble "the industrial appearance of Port Talbot". It is hard to imagine that this personal opinion has not affected her analysis that tourists would also find the view offensive.
7. Tourism is clearly important to the economy of Porthcawl, and the possible effect of this project on visitor numbers should be considered. However, no witness has provided any evidence that tourist numbers have ever declined after the building of a wind farm, either on or offshore, in the UK or abroad. Furthermore the evidence presented that visitors would be put off visiting Porthcawl in particular if the windfarm were to go ahead was based essentially on one survey (the 2003 South East Wales Visitor Survey, see para 4.2 of Denise Fletcher's evidence) which Ms Fletcher confirmed under cross examination had not involved showing the respondents any photos or photomontages of what the wind farm would look like, and instead was based on agreement or disagreement with a number of more abstract statements about wind farms generally. Indeed there was no evidence that any of the respondents had ever seen an offshore wind farm - either in reality or in photos. On the other hand, a survey of a larger sample in Porthcawl which used montages of this actual project (the Greenpeace bank holiday survey - see paras 4.11-13 of the evidence of Laura Yates) found that 3 times as many people would be more likely to return as would stay away if the project went ahead. Thus we conclude that the contention that the wind farm would damage tourism in Porthcawl has not been proven. Indeed there is no reason why an imaginative approach to the marketing of the wind farm could not successfully integrate it into the package on offer to visitors to the region - as the evidence of Richard Thomas of Sustainable Wales suggested. This successful integration will depend on how positively the project is embraced and promoted by the local authority and the community if it does go ahead - a sense of pride in the project could enhance tourist perceptions of it.
8. It has been shown that golf is important to the area's tourist economy, and there is no doubt that if Royal Porthcawl Golf Club were to be successful in its bid to host the Open Championship that golf tourism would be likely to increase, with associated benefits to the local economy. However, no evidence has been presented to the inquiry, in the form of any confirmation from the R&A, that the view is in fact part of the criteria used when assessing a course for suitability for this event. Lyn Powell, representing Royal Porthcawl Golf Club, agreed under cross examination that some other courses on the Championship rota had what some

people might well consider to be unattractive views, but this clearly has not prevented them being considered good and appropriate courses to hold the Open. Appendix 1 of Mr Powell's evidence was an article from the Western Mail quoting Rhodri Morgan: "If there is going to be criticism of Porthcawl it would be ... the number of roads leading into the venue and the accommodation around it." The article also mentions the possibility of having to replace the "old wooden clubhouse", but makes no reference to the proposed wind farm presenting any obstacle to the club's chances. Of course the management of the club are entitled to dislike the proposed changes to the view (though there is no evidence that all the members of the club would necessarily agree with this) but to claim that it will materially affect their chances of attracting this event is simply misleading. Greenpeace's discussions with the R&A championship committee confirmed that the view will be of no consideration. Similarly, no evidence has been presented (other than conjecture) that any other competitions will be reluctant to come to Porthcawl, nor is there any evidence that golf playing visitors dislike wind farms or would be put off coming to the area to play. In fact it would be reasonable to assume that golfers are not so different from other tourists, and therefore that the vast majority of them would be unaffected either way.

9. Surfing, like golf, is clearly also important to Porthcawl, and Greenpeace accordingly noted the concerns of the surfing community when we first heard about the project. After further investigation and meetings with the authors of the coastal processes section of the ES, we concluded that the surf was extremely unlikely to be harmed by the wind farm. No evidence has been presented to this inquiry to convince us to the contrary, and while we welcome the Welsh Coast Surf Club's efforts to secure further research on this new issue, we remain sufficiently confident in the robustness of the original ES to believe that the lack of this extra research should not be allowed to hold up this project.
10. In conclusion we believe that there has been no compelling evidence offered to this inquiry that the wind farm would cause genuine, clear and overriding local environmental harm. Indeed there is a strong case that it would deliver environmental and even social benefits, and that its success will have an influence on the likely success of future projects which together have the potential to deliver substantial carbon reductions - reductions which are both urgently needed and part of government policy. In the light of all the evidence before him, we urge the Inspector to weigh the environmental need for this project above the subjective concerns by some bodies and individuals over the visual effect, and approve the Scarweather Sands offshore wind farm.

APPENDIX I

Friends of the Earth Cymru

Final Summary

After having attended about one third of this public inquiry and having read some of the large array of submitted evidence I would like to summarise our position as follows.

We have not heard anything at this inquiry which has changed our minds about supporting the windfarm though there still things to do and lessons to be learnt in a more general sense.

We remain of the opinion that technically the scheme could be built at the proposed location and that the local ecological damage would be low and acceptable considering the power output of the scheme. We are also of the opinion that operational noise from the windfarm would only be occasional and below the threshold of disturbance, and that construction noise could be kept within tolerable time frames. It is difficult for us not to bear in mind that nearly all forms of power generation have some ecological and construction impacts including all the various marine technologies mentioned favourably by some witnesses during the course of the inquiry.

Turning to the ongoing concerns about potential damage to the surf which is of high recreational value. We claim no specialist knowledge and, like the surfers, do not have spare funds to commission an independent study of the type acceptable to the surfing community. However, rather than only relying on the developers assessment we

caveated our TWA letter of support for the windfarm on the absence of objections from the CCW, the government's statutory advisory body. We had no reason to believe that the CCW would not investigate the coastal processes and surf effects to the best of their ability and they have raised no objection. Incidentally, we trust that the caveating of our support on CCW support goes a great distance in addressing the claim that we have been uncritical of the developers or the application. We in turn think that the surfing evidence is wrong in their economic criticism of United Utilities.

However, it is mainly the visual effects of the windfarm and the related issues of the tourist economy of the area that have raised most concerns at this Inquiry. Many if not most of the objectors have described the effect of the windfarm on the local economy as 'devastating'. We do not think this describes the likely reaction from tourists in any way. Indeed, what public and tourist evidence there is, to windfarms generally and to this proposal specifically, indicates a generally positive if not very positive attitude. And there are opportunities.

If built, we believe that many visitors on seeing this windfarm for this first time may think that it was bigger than they had imagined but then would carrying on with what they were doing. A minority may go elsewhere but we believe those numbers could be replaced by a greater number attracted by activities offered by the windfarm. An appropriately sized visitor center could easily attract regular educational visits as well as passing or interested tourists and the educational opportunity, which would bring many children to Porthcawl has been overlooked in this inquiry. It should also be remembered that the over ambitious visitor centre at the small Delabole windfarm

attracted 52,000 visitors last year. Interest in relatively huge UK offshore wind resource is high and future offshore windfarms are likely to be further out to sea and less accessible.

Cllr Moon claimed that the idea of boat trips to the windfarm is laughable if not unsafe. We beg to differ. An experienced local skipper who runs recreational fishing trips gave us every indication that boat trips would be both safe and interesting. Both the windfarm and the Scarweather Sands formations themselves and their history would be features of interest. There is an recreational fishing opportunities too, albeit unquantified as far as we know.

The need for the scheme has also been a major feature of this Inquiry. Regarding Welsh Assembly Government targets it may well be that other schemes, such as a large onshore windfarm in the Camddwr region of mid-Wales or a large tidal lagoon or sufficient number of marine current turbines in Welsh waters, could replace the absence of this relatively large 90-108 MW capacity windfarm. But the potential repercussions of its refusal at UK level could be much more damaging especially given the nature of the campaigning before this inquiry started. Whatever has been said and now probably genuinely accepted by most in this inquiry, many objectors have given wind energy technology a severe side swipe. It was not just about location. This had led supporters of the scheme to also dance around the boundary of the remit of the Inquiry

CPRW may not have claimed that wind technology is 'unreliable' in the Inquiry but they do generally and anyone logging on to the Porthcawl SOS website could be forgiven for thinking that the campaign was not just about 'location, location, location'. Although most 'round-one'

schemes have been approved the larger scale of 'round-two' offshore windfarms, even given the slightly further minimum distances, may cause potential developers to hesitate due to perceived public reaction to a windfarm off their coastline. The Inquiry has heard that the completion of round-two schemes is likely to straddle the year 2010 yet there is a proposed 'nuclear review' in 2008. With what is likely to be a wider public and political awareness and sense of urgency to address global warming by that time the public could be faced with the prospect of new nuclear power stations appearing along British coastlines. And there is probably no way that type of visual industrialisation could gradually move further offshore as foundation technology improves, investors gain confidence or developers acquire experience.

Although the developers agree that aspects of the consultation process could have been better we think that the objectors probably gave as good as they got in that regard from what we have seen. However the objectors have made a reasonable case about the limitations of the photomontages. Accordingly, given the proximity to coast of the scheme we would strongly recommend that the somewhat smaller and more slender 3 MW Vesta turbine is chosen in preference to the 3.6 MW GE turbine. Indeed, the GE machine is somewhat agricultural in appearance compared with the more sculptured lines of most manufacturer's turbines in our opinion. The Vesta machine is also little heavier than current 2 MW machines, due to carbon-fibre blades and other new features, and so may reduce foundation and construction impacts significantly.

Finally, it should be remembered that if this scheme does not go ahead then this real chance to save about five million tonnes of carbon dioxide emissions will be missed. Targets aside, such as saving may make that necessary difference somewhere to the prospects of some

community or species whose livelihoods are far more threatened than ours in our rich and comfortable nation.

Neil Crumpton

Campaigner

Friends of the Earth Cymru

26th November 2003

APPENDIX J

SCARWEATHER SAND OFFSHORE WINDFARM INQUIRY

LIST OF APPEARANCES

PARTY	WITNESS	ADVOCATE
United Utilities Scarweather Sands Ltd Alexandra Gate Rover Way Cardiff CF2 2SD	Alan Macleay, BSc, CEng, Ove Arup and Partners Ltd	Advocate Andrew Newcombe of Counsel Instructing solicitor Bond Pearce Bristol Bridge House Redcliff Street Bristol
	Christopher Clarke, BA(Hons), MA, MRTPI Terence O'Rourke	
	Ian Townend, BSc, CEng, MICE, MCIWEM ABP Marine Environmental Research Ltd	
	Stephen Hull, BSc. PhD, MBA, MIMgt ABP Marine Environmental Research Ltd	
	Stewart Lowther, BA(Hons), MSc, MIEEM Hyder consulting Ltd	
	Kay Hawkins, BSc, Landscape Architect, MLI E4environment Ltd	
	Malcolm Hayes, BSc, MIOA	

	Hayes Mackenzie Partnership	
	Ali MacDonald, BSc(Hons), MSc Anatec UK Ltd	
	Capt T M Drennan, MNI, AFRIN Eagle Lyon Pope	
	Stephen Appleby, BSc(Hons) Brown and May Ltd	
Bridgend County Borough Council, Civic Offices, Angel Street, Bridgend, CF31 4WB	Cllr J J Jones, BSc, PGCE Leader, Bridgend County Borough Council	Advocate Tina Douglas of Counsel Instructing solicitor Hywel Batten, Legal Services, Bridgend County Borough Council
	Neil Sumner, BArch(Hons), DipArch, DipArch Cons, MA, RIBA, MRTPI, IHBC Head of Conservation and Environmental Policy Section, Bridgend County Borough Council	
	Denise Fletcher, BSc Econ MCD, DipTP Head of Tourism, Bridgend County Borough Council	
	Steve Moon, BSc, MSc, MIEEM County Borough Ecologist, Bridgend County Borough Council	
	Martin Hooker, RD, MA, MSc, MRTPI, MCIT Assistant Director (Planning), Bridgend County Borough Council	

Porthcawl Town Council* 24 Victoria Avenue Porthcawl, CF36 3HG	Cllr D Richards, MBE	Advocate Geoffrey Sinclair, Environment Information Services
Peter Black, AM The National Assembly for Wales, Cardiff, CF99 1NA		
Alun Cairns, AM The National Assembly for Wales, Cardiff, CF99 1NA		
Cllr Mrs M Moon 36 Rest Bay Close, Porthcawl, CF36 3UN		
Campaign for the Protection of Rural Wales c/o Glebe House, Martletwy, Narberth, Pembrokeshire, SA67 8AS	Geoffrey Sinclair Environment Information Services	
Friends of the Earth, Cymru 13 Cefnfaes Street, Bethesda, Gwynedd, LL57 2DN	Neil Crumpton	
Greenpeace UK Canonbury Villas, London, N1 2PN	Stephen Tindale Executive Director, Greenpeace UK	
	Laura Yates Climate and Energy Campaigner, Greenpeace UK	
Porthcawl Civic Trust* 44 Danygraig Avenue, Porthcawl, CF36 5AA	W Harries Bakes	Advocate Geoffrey Sinclair Environment Information Services
Pyle & Kenfig Golf Club Waun-y-Mer, Kenfig, Bridgend, CF33 4PU	Michael Hynda	

Ramblers' Association* 40 Le Sor Hill, Peterson-super-Ely, Cardiff, CF5 6FW	David Field	Advocate Geoffrey Sinclair, Environment Information Services
Regeneration How? Ltd* 55 Longacre Drive, Nottage, Porthcawl, CF36 3SB	Gary Victor	Advocate Geoffrey Sinclair Environment Information Services
Royal Porthcawl Golf Club Rest Bay, Porthcawl, CF36 3UW	Lyn Powell, BSc(Hons) DipTP, MRTPI, FRSA Planning Director, RPS Planning, Transport and Environment	
Royal Yachting Association Royal Yachting Association RYA House, Ensign Way, Hamble, Southampton, SO31 4YA	Edward Ramsden, OBE Deputy Chairman, Royal Yachting Association	Advocate Trevor Ward of Counsel Instructing solicitor Neil Northmore, Royal Yachting Association
SOS Porthcawl c/o 7 Pintail Close, Porthcawl, CF36 3QD	John Chislett	
South and West Wales Fishing Communities 52 Druslyn Road, West Cross, Swansea, SA3 5QE	Ian Wisby	
	Stephen Lockwood, BSc, PhD, CBiol, FIBiol Coastal Fisheries Conservation and Management	
Surfing Academy	Simon Tucker	
	Tim Johnson BSc, PhD Senior Lecturer in Biology, University of Glamorgan	
	Stewart Strong	

Sustainable Wales First Floor , 41 John Street, Porthcawl, CF36 3AP	Margaret Minhinnick	
	Richard Thomas	
	Bethan Thomas	
Welsh Coast Surf Club 9 Kingshill, Porthcawl, CF36 5LD	Tom Anderson	
	Dave Reed	
Mrs J Barraclough 4 Suffolk Place, Porthcawl, CF36 3EA		
Mrs D Parker 28 Clos-y-Deri, Nottage, Porthcawl, CF36 3PR		
GW John 5 Rest Bay Close, Porthcawl, CF36 3UN		
Mrs H Ruddle 6 Curlew Close Rest Bay Porthcawl CF36 3QB		
B Saunders 1 Curlew Close, Porthcawl, CF36 3QB		
D Stephenson 5 Curlew Road, Rest Bay, Porthcawl, CF36 3QA		
Mrs J Symonds-Campbell Tranquility, Sutton Road, Ogmore-by-Sea, CF32 0PE		

R Wilks 4 Curlew Road, Porthcawl, CF36 3QA		
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* CPRW 'coalition'

APPENDIX K

Scarweather Sands Offshore Windfarm Inquiry		
	INQUIRY PROGRAMME	
Tues 4 Nov		
Venue: Aberafan Beach Hotel		
	Inspector's Opening Statements	
	Opening Statement	
	United Utilities	
	United Utilities	
	Alan MacLeay (Engineering & Construction)	
	Evidence-in-chief	
	Cross-examination	
	Chris Clarke (Planning, Policy, Need & Tourism)	
	Evidence-in-chief	
Wed 5 Nov		
	Chris Clarke (Planning, Policy, Need & Tourism)	
	Evidence-in-chief (cont)	
	Cross-examination	
Thurs 6 Nov		
	Chris Clarke - cross-examination (cont)	
	Ian Townend (Coastal Processes)	
	Evidence-in-chief	
	Cross-examination	
	Stephen Hull (Marine Ecology)	
	Evidence-in-chief	
	Cross-examination	

Fri 7 Nov		
	Stewart Lowther (Ornithology & Terrestrial Ecology)	
	Evidence-in-chief	
	Cross-examination	
	Tom Drennan (Navigation)	
	Evidence-in-chief	
	Cross-examination	
	Ali MacDonald (Risk to Shipping)	
	Evidence-in-chief	
	Cross-examination	
Tues 11 Nov		
	Stephen Appleby (Commercial Fisheries)	
	Evidence-in-chief	
	Cross-examination	
Wed 12 Nov		
	South & West Wales Fishing Communities Limited	Objector
	Ian Wisby	
	Evidence-in-chief	
	Cross-examination	
	Dr Stephen Lockwood (Coastal Fisheries Conservation & Management)	
	Evidence-in chief	
	Cross-examination	
	United Utilities (cont)	
	Kay Hawkins (Seascape, Landscape, Visual & Cumulative Effects)	
	Evidence-in-chief	
	Cross-examination	

Thurs 13 Nov		
	Cross-examination cont'd - Kay Hawkins (Seascape, Landscape, Visual & Cumulative Effects)	
	Peter Black, AM	Objector
	Evidence-in chief	
	Cross-examination	
	United Utilities (cont)	
	Malcolm Hayes (Noise & Vibration)	
	Evidence-in-chief	
	Inspector's questions	
Fri 14 Nov		
	Bridgend County Borough Council	Objector
	Cllr J J Jones (Public Opinion)	
	Evidence-in-chief	
	Cross-examination	
	Royal Yachting Association	
	Edward Ramsden, MBE	
	Evidence-in-chief	
	Cross-examination	
Tues 18 Nov		
Venue: Seabank Hotel, The Promenade, Porthcawl		
12.00 p.m.		
	Porthcawl Town Council	Objector
	Cllr D Richards	
	Evidence-in chief	
	Cross-examination	
	Porthcawl Civic Trust	Objector
	Mr W Harries Baker	
	Evidence-in-chief	

	Cross-examination	
	Regeneration How? Limited	Objector
	G Victor	
	Evidence-in-chief	
	Cross-examination	
	Royal Porthcawl Golf Club	Objector
	Lyn Powell	
	Evidence-in-chief	
	Cross-examination	
	Pyle & Kenfig Golf Club	Objector
	M Hynda	
	Evidence-in-chief	
	Cross-examination	
	B Saunders	Objector
	Evidence-in-chief	
	Cross-examination	
	G W John	Objector
	Evidence-in-chief	
	Cross-examination	
	Mrs J Symons-Campbell	Objector
	Evidence-in-chief	
	Cross-examination	
	Ramblers' Association*	Objector
	David Field	
	Evidence-in-chief	
	Cross-examination	
	Mrs J Barraclough	Supporter
	Evidence-in-chief	

	Cross-examination	
	R Wilks	Objector
	Evidence-in-chief	
	Cross-examination	
	D Stephenson	Objector
	Evidence-in-chief	
	Cross-examination	
	Mrs D Parker	Objector
	Evidence-in chief	
	Cross-examination	
	Sustainable Wales	Supporter
	Margaret Minhinnick	
	Evidence-in chief	
	Cross-examination	
	Richard Thomas	
	Evidence-in chief	
	Cross-examination	
	Bethan Thomas	
	Evidence-in chief	
	Cross-examination	
6.00 p.m.		
	CIlr M Moon	Objector
	Evidence-in chief	
	Cross-examination	
	SOS Porthcawl	Objector
	Mr J Chislett	
	Evidence-in chief	
	Cross-examination	

	Alun Cairns AM	Objector
	Evidence-in chief	
	Cross-examination	
	Welsh Coast Surf Club	Objector
	Tom Anderson	
	Evidence-in chief	
	Cross-examination	
	David Reed	
	Evidence-in chief	
	Cross-examination	
Wed 19 Nov	Venue: Aberafan Beach Hotel	
	Bridgend CBC (cont)	
	Neil Sumner (Visual Impact)	
	Evidence-in-chief	
	Cross-examination	
Thurs 20 Nov		
	Cross-examination cont - Neil Sumner	
	Ms Denise Fletcher (Tourism Impact)	
	Evidence-in-chief	
	Cross-examination	
	Greenpeace	
	Stephen Tindale	Supporter
	Evidence-in chief	
	Cross-examination	
	Laura Yates	Supporter
	Evidence-in chief	

	Cross-examination	
	Bridgend CBC (cont)	
	Steve Moon (Ecological Issues)	
	Evidence-in-chief	
Fri 21 Nov		
	Cross-examination - Steve Moon	
	United Utilities	
	Martin Hooker (Aggregate Sterilisation)	
	Evidence-in-chief	
	Cross-examination	
Tues 25 Nov		
	Campaign for the Protection of Rural Wales	
	Geoffrey Sinclair	Objector
	Evidence-in chief	
	Cross-examination	
	Mrs T Chislett	Objector
	Evidence-in chief	
	Cross-examination	
	Friends of the Earth, Cymru	
	Neil Crumpton	Supporter
	Evidence-in-chief	
	Cross-examination	
	Surfing Academy	
	Simon Tucker, Tim Johnson, Stewart Strong	Objector
	Evidence-in chief	
	Cross-examination	

Wed 26 Nov		
	Order, Conditions, etc	
	Closing Statements	
	SOS Porthcawl	
	South and West Wales Fishing Communities	
	FOE Cymru	
	RYA	
	Welsh Coast Surf Club	
	CPRW	
	Bridgend CBC	
Thurs 27 Nov		
	United Utilities	
	* CPRW, Ramblers' Association, Porthcawl Town Council, Regeneration How? and Porthcawl Civic Trust	

APPENDIX L

SCARWEATHER SANDS OFFSHORE WIND FARM INQUIRY	
CORE DOCUMENTS LIST	
Document Number	Title
CD1	AEA Technology (October 2001). Review of Strategic Study of Renewable Energy Resources in Wales
CD2	British Wind Energy Association (September 2000). Planning for Wind Energy – A guide for Regional Targets.
CD3	Campaign for the Protection of Rural Wales (2000). Renewable Energy Installations, Annex B: 2000. Policy on Offshore Wind Installations.
CD4	Countryside Council for Wales (2000). A Policy Statement. CCW Policy on Wind Turbines
CD5	Department for Trade and Industry (2002). Future Off-Shore: Strategic Framework for the Off-Shore Wind Industry
CD6	Department for Trade and Industry (2003). Energy White Paper: Our Energy Future – Creating a Low Carbon Economy
CD7	OXERA Environment & ARUP (February 2002). Report to the DTI and the DTLR – Regional Renewable Energy Assessments
CD8	Renewable Power Association. Renewables Yearbook 2003
CD9	Reports to, and reports by, the Economic Development Committee of the National Assembly of Wales relating to Energy Policy.
CD10	Countryside Council for Wales (2001b). The LANDMAP Information System- LANDMAP method. 1st Edition. Published October 2001.
CD11	Department of the Environment, Transport and the Regions (1999) Town and Country Planning (Environmental Impact Assessment) (England & Wales) Regulations. Statutory Instrument 1999 No 293.
CD12	Department of Trade and Industry (2000) Electricity Works (Environmental Impact Assessment) (England & Wales) Regulations. Statutory Instrument 2000 No 1927
CD13	Department of Trade and Industry (2001) Offshore Wind Farm Consents Process. Draft Guidance Notes

CD14	Department of the Environment/Welsh Office (1993) Planning Policy Guidance Note PPG22: Renewable Energy. Annex on Wind Energy. HMSO
CD15	Department of the Environment/Welsh Office (1992) Planning Policy Guidance Note PPG20: Coastal Planning. HMSO
CD16	Planning Guidance Wales, Technical Advice Note (Wales) 5: Nature Conservation and Planning (1996).
CD17	Planning Guidance Wales, Technical Advice Note (Wales) 8: Renewable Energy (1996).
CD18	Planning Guidance Wales, Technical Advice Note (Wales) 11: Noise (1997)
CD19	Planning Guidance Wales, Technical Advice Note (Wales) 13: Tourism (1997).
CD20	Planning Guidance Wales, Technical Advice Note (Wales) 14: Coastal Planning (1998).
CD21	Planning Guidance Wales, Technical Advice Note (Wales) 18: Transport (1998)
CD22	Welsh Assembly Government (2002): Planning Policy Wales
CD23	Wind Energy, Defence & Civil Aviation Interests Working Group (2002). Wind Energy and Aviation Interests – Interim Guidelines. ETSU W/14/00626/REP.
CD24	Bridgend County Borough Council Unitary Development Plan (Draft Deposit).
CD25	City & County of Swansea Authority (1999) Swansea Local Plan (Including Waste Policies). Review No 1: 1993 – 2003. Written Statement and Plans.
CD26	City & County of Swansea Authority, Unitary Development Plan Pre-Consultation Draft (2003).
CD27	Cwmafan, Bryn, Goyre Valley & Rural Margam Local Plan (Adopted August 1990).
CD28	Neath Borough Council Local Plan (Adopted July 1994).
CD29	Neath Port Talbot County Borough Unitary Development Plan (Deposit Draft, January 2003).
CD30	Ogwr Borough Local Plan (including waste policies), Written Statement (Adopted April 1995).
CD31	Port Talbot Borough Council (1996) Port Talbot Local Plan (Including Waste Disposal Policies). Deposit Draft, 1996 – 2006. Extracts from the written Statement and Inset Maps 2 and 3.

CD32	South East Wales Strategic Planning Group, South East Wales Strategic Guidance Volumes 1 (2000) and 2 (2001).
CD33	South West Wales Strategic Planning Group, Regional Planning Guidance, April 2000.
CD34	The National Assembly for Wales, Wales Spatial Plan – Pathway to Sustainable Development. Consultation (September 2001).
CD35	Vale of Glamorgan Unitary Development Plan (1996-2011) (Deposit Draft 1998).
CD36	Cadw: Welsh Historic Monuments (1998) Register of Landscapes of Outstanding Historic Interest. Part 2.1 of the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales. ISBN 1 85760 007 X.
CD37	Cadw: Welsh Historic Monuments (2001) Register of Landscapes of Special Historic Interest. Part 2.2 of the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales. ISBN 1 85760 187 4.
CD38	Countryside Council for Wales, Brady Shipman Martin, University College Dublin (2001a) Guide to Best Practice in Seascape Assessment. Maritime Ireland/Wales INTERREG Report No 5. Published March 2001. ISBN 1393 9025.
CD39	Landscape Design Associates (2000) A Guide to Assessing the Cumulative Effects of Wind Energy Development. A report carried out under contract as part of the New & Renewable Energy Programme, managed by ETSU on behalf of the DTI. ETSU W/14/00538/REP.
CD40	Landscape Institute/Institute of Environmental Management and Assessment (2002) Guidelines for Landscape and Visual Impact Assessment. 2nd Edition. Spon Press, London. ISBN 0 415 23185 X.
CD41	Metoc plc (2000) An Assessment of the Environmental Effects of Offshore Wind Farms. A report carried out under contract as part of the New & Renewable Energy Programme, managed by ETSU on behalf of the DTI. ETSU W/35/00543/REP.
CD42	Miller DR & Morrice JG (2001) A Geographical Analysis of the Intervisibility of the Coastal Areas of Wales. Macauley Land Use Research Institute, Aberdeen. Unpublished report to the Countryside Council for Wales.
CD43	Scottish Natural Heritage, The Countryside Agency, Landscape Character Assessment, Guidance for England and Scotland 2002
CD44	TACP (2000) Bridgend, Caerphilly and Rhondda Cynon Taff Landscape Strategy (extract).
CD45	Musters CJM, Noordervliet MAW and ter Keurs WJ (1995) Bird casualties and wind turbines near Kreekrak sluices of Zeeland. Milieubiologies R.U. Leiden

CD46	Percival SM (2001) Assessment of the effects of offshore wind farms on birds. ETSU Report W/13/00565/REP (internet version).
CD47	ABPmer 2002. Scarweather Sands Offshore Wind Farm: Coastal Process Investigations. R985a. A report to Hyder Consulting (for United Utilities). December 2002.
CD48	CEFAS November 2001. Offshore Wind Farms: Guidance note for the Environmental Impact Assessment in respect of FEPA and CPA requirements (internet version).
CD49	ETSU 2002. Potential effects of offshore wind development on coastal processes. A report produced under contract by ABPmer and Metoc. W/35/00596/00/REP. URN/02/1336 (internet version).
CD50	British Standard 7445: Part 1: 1991 'Description and measurement of environmental noise, Part 1. Guide to quantities and procedures', BSI.
CD51	British Standard 7445: Part 2: 1991 'Description and measurement of environmental noise, Part 2. Guide to the acquisition of data pertinent to land use', BSI.
CD52	British Standard 7445: Part 3: 1991 'Description and measurement of environmental noise, Part 3. Guide to application to noise limits', BSI.
CD53	British Standard 5228: Parts 1 to 5: 1997 'Noise and Vibration control on construction and open sites', BSI.
CD54	British Standard 7385: Part 1: 1993 'Evaluation and measurement for vibration in buildings, Part 1. Guide for measurement of vibration and evaluation of their effects on buildings', BSI.
CD55	British Standard 7385: Part 2: 1993 'Evaluation and measurement for vibration in buildings, Part 2. Guide to damage levels from groundborne vibration', BSI.
CD56	British Standard 6472: 1992 'Evaluation of human exposure to vibration in buildings (1 Hz to 80 Hz)', BSI.
CD57	British Standard 4142: 1997 'Method for rating industrial noise affecting mixed residential and industrial areas', BSI.
CD58	British Standard 8233: 1999 'Sound Insulation and noise reduction for buildings – Code of Practice', BSI.
CD59	British Standard 4142: 1997 Method for Rating industrial noise affecting mixed residential and industrial areas, BSI.
CD60	British Standard EN 61400-11: 1999: IEC 61400-11: 1998 Wind turbine generator systems- Part 11: Acoustic noise measurement techniques.
CD61	CIRIA (1993), Construction Industry Research and Information Association 'Sound Control for Homes'.

CD62	ETSU (1996), The Assessment and Rating of Noise from wind Farms: ETSU-R-97: September 1996.
CD63	ETSU (1996), Noise Measurements in Windy Conditions. ETSU W/13/00386/REP.
CD64	ETSU (1990), The Prediction of Propagation of Noise from Wind Turbines with regard to Community Disturbance: ETSU WN 5066.
CD65	ETSU (2000), A Critical Appraisal of Wind Farm Noise Propagation: ETSU W/13/00385/REP.
CD66	Marine Mammal Impact Assessment – Pile Installation Demonstration Project – San Francisco – Oakland Bridge East Span Seismic Safety Project: August 2001: PIDP EA 012081: Caltrans Contract 04A0148. Extract.
CD67	The Assessments of the effects of noise and vibration from offshore wind farms on marine wildlife. ETSU/W/13/00566/REP.
CD68	The Commission of the European Communities Report EUR 5398e (1975).
CD69	Environment and Quality of Life: Damage and Annoyance caused by Noise.
CD70	Welsh Affairs Committee (1994), Wind Energy, Volume 1, Second Report: 13th July 1994, HMSO.
CD71	World Health Organisation (2000), 'Guidelines for Community Noise', WHO, Geneva.
CD72	Department for the Environment, Transport and the Regions (1999 as amended). Quality of Life Counts. ISBN 1 851123 43 1.
CD73	NFO System Three report prepared for Visit Scotland (August 2002). Investigation into the Potential Impact of Wind Farms on Tourism in Scotland.
CD74	Wales Tourist Board (2001). Visits to Tourist Attractions.
CD75	Wales Tourist Board (May 2003). Tourism Trends Digest.
CD76	Scarweather Sands Offshore Wind Farm Environmental Statement - Volume 1 (Main Text and Appendices). January 2003
CD77	Scarweather Sands Offshore Wind Farm Environmental Statement - Volume 2 (Figures). January 2003
CD78	Scarweather Sands Offshore Wind Farm Environmental Statement - Non-technical Summary
CD79	Copy not obtained. Document not referred to during inquiry
CD80	Copy not obtained. Document not referred to during inquiry

CD81	Copy not obtained. Document not referred to during inquiry
CD82	Scarweather Sands Offshore Wind Farm Supplementary Environmental Statement
CD83	Department for Trade and Industry. Offshore Wind Farms Round 2: Designed to Provide a Framework for Rapid and Successful Expansion
CD84	Merchant Shipping Notice No. M.1642/COLREG1 - The Merchant Shipping (Distress Signals and Prevention of Collision Regulations 1996
CD85	Convention for the Protection of the Marine Environment of the North-East Atlantic (The 'OSPAR' Convention)
CD86	Scarweather Sands Offshore Wind Farm: Works Plans and Sections and Land Plans
CD87	Scarweather Sands Offshore Wind Farm: Order and Conditions Folder
CD88	Scarweather Inquirer
CD89	Superseded by UU/0/37

APPENDIX M

(Note – This list contains details and numbering of all individual proofs, documents etc as supplied by the parties before and during the inquiry)

SCARWEATHER SANDS OFFSHORE WINDFARM INQUIRY		
LIST OF PROOFS OF EVIDENCE AND OTHER DOCUMENTS		
Document Reference	Title	Organisation
ABPmer/SCH/3	See UU/4/SCH (App)	United Utilities
AC/1	Proof of Evidence - Alun Cairns, AM	
BCBC/0/1	Scarweather Sand Offshore Windfarm: Option 1	Bridgend County Borough Council
BCBC/0/2	Letter of 5 April 2001 from United Utilities to Warden, Kenfig National Reserve Centre	Bridgend County Borough Council
BCBC/0/3	Extract from Landscape Institute Guidelines	Bridgend County Borough Council
BCBC/0/4	Letter of 19 November 2002 from Hyder Consulting to Bridgend CBC	Bridgend County Borough Council
BCBC/0/5	Memorandum 13 February 2002 from Neil Sumner, Bridgend CBC	Bridgend County Borough Council
BCBC/0/6	Letter of 14 October 2002 from TACP to Bridgend CBC	Bridgend County Borough Council
BCBC/0/7	Extract: Natural Wales, Pure Golf	Bridgend County Borough Council
BCBC/0/8	Undated Bridgend CBC memorandum - LANDMAP	Bridgend County Borough Council
BCBC/0/9	Relevant Aggregates Chronology	Bridgend County Borough Council
BCBC/0/10	Direction to Caerphilly Council from NAW Minister for the Environment, Planning and Countryside in respect of Caerphilly Unitary Development Plan	Bridgend County Borough Council
BCBC/0/11	Letter of 6 December 2002 from NAW Planning Division, plus Annexes A & D, to Promoters about scoping opinion	Bridgend County Borough Council

		Council
BCBC/0/12	Closing Statement	Bridgend County Borough Council
BCBC/1/JJ	Proof of Evidence - Cllr J J Jones	Bridgend County Borough Council
BCBC/2/NS	Proof of Evidence - Neil Sumner	Bridgend County Borough Council
BCBC/2/NS (Sum)	Summary of Proof of Evidence - Neil Sumner	Bridgend County Borough Council
BCBC/2/NS/2	Supplementary Proof of Evidence - Neil Sumner	Bridgend County Borough Council
BCBC/2/NS/3	Margam Burrows	Bridgend County Borough Council
BCBC/2/NS/4	Note covering various points about CCW	Bridgend County Borough Council
BCBC/3/DF	Proof of Evidence - Denise Fletcher	Bridgend County Borough Council
BCBC/3/DF (Sum)	Summary of Proof of Evidence - Denise Fletcher	Bridgend County Borough Council
BCBC/3/DF/2	Supplementary Proof of Evidence - Denise Fletcher	Bridgend County Borough Council
BCBC/4/SM	Proof of Evidence - Steve Moon	Bridgend County Borough Council
BCBC/4/SM/2	Supplementary Proof of Evidence - Steve Moon	Bridgend County Borough Council
BCBC/5/MH	Proof of Evidence - Martin Hooker	Bridgend County Borough Council
BCBC/5/MH/2	Supplementary Proof of Evidence - Martin Hooker	Bridgend County Borough Council
BS/1	Proof of Evidence - Brian Saunders	
CPRW/0/1	Closing Statement	Campaign for the Protection of Rural Wales

CPRW/1/GS	Proof of Evidence - Geoffrey Sinclair	Campaign for the Protection of Rural Wales
CPRW/1/GS (Sum)	Summary of Proof of Evidence - Geoffrey Sinclair	Campaign for the Protection of Rural Wales
CPRW/1/GS (App)	Appendices to Proof of Evidence - Geoffrey Sinclair	Campaign for the Protection of Rural Wales
CPRW/1/GS/2	Supplementary Proof of Evidence - Geoffrey Sinclair	Campaign for the Protection of Rural Wales
CPRW/1/GS/3	Supplementary Proof of Evidence - Geoffrey Sinclair	Campaign for the Protection of Rural Wales
CPRW/1/GS/4	Supplementary Proof of Evidence - Geoffrey Sinclair	Campaign for the Protection of Rural Wales
CPRW/2/DF	Proof of Evidence - David Field	Ramblers' Association
CPRW/3/DR	Proof of Evidence - Cllr David Richards	Porthcawl Town Council
CPRW/4/GV	Proof of Evidence - Gary Victor	Regeneration How?
CPRW/4/GV(App)	Appendices to Proof of Evidence - Gary Victor	Regeneration How?
CPRW/5/WHB	Proof of Evidence - William Harries Baker	Porthcawl Civic Trust Society
CPRW/6/GS Supp	See CPRW/1/GS/2	Campaign for the Protection of Rural Wales
DP/1	Proof of Evidence - Ms Denise Parker	
DS/1	Proof of Evidence - David Stephenson	
DS/2	Supplementary Proof of Evidence - David Stephenson	
FOEC/0/1	Closing Statements	FOE Cymru
FOEC/1/NC	Proof of Evidence - Neil Crumpton	FOE Cymru
G/0/1	Closing Statement	Greenpeace
G/1/ST	Proof of Evidence - Stephen Tindale	Greenpeace
G/1/ST (App)	Appendices to Proof of Evidence - Stephen Tindale	Greenpeace
G/2/LY	Proof of Evidence - Laura Yates	Greenpeace
G/2/LY/2	Supplementary Proof of Evidence - Laura Yates	Greenpeace
G/2/LY/3	Supplementary Proof of Evidence - Laura Yates	Greenpeace
GWJ/1	Proof of Evidence - G.W. John	Greenpeace

JB/1	Proof of Evidence - Mrs J Barraclough	
JSC/1	Proof of Evidence - Mrs J Symons-Campbell	
MM/1	Proof of Evidence - Cllr Madeleine Moon	
PKGC/1/MH	Proof of Evidence - Michael Hnyda	Pyle & Kenfig Golf Club
PKGC/1/MH (Sum)	Summary of Proof of Evidence - Michael Hnyda	Pyle & Kenfig Golf Club
RPGC/1/LP	Proof of Evidence - Lyn Powell	
RW/1	Proof of Evidence - Robert Wilks	
RW/2	Supplementary Proof of Evidence - Robert Wilks	
RYA/0/1	Maps: Windfarm Areas and Boating Activity	Royal Yachting Association
RYA/0/2	Maritime and Coastguard Agency - Annual Report & Accounts 2002-03	Royal Yachting Association
RYA/0/3	Scarweather Sands Offshore Wind Farm - Navigation Risk Assessment (Draft)	Royal Yachting Association
RYA/0/4	Scottish Parliament Official Report: Robin Rigg Offshore Wind Farm (Navigation & Fishing) (Scotland) Bill Committee	Royal Yachting Association
RYA/0/5	Closing Statement	Royal Yachting Association
RYA/1/ER	Proof of Evidence - Edward Ramsden MBE	Royal Yachting Association
RYA/1/ER/2	Supplementary Proof of Evidence - Edward Ramsden MBE	Royal Yachting Association
SA/1/ST	Proof of Evidence - Simon Tucker	Surfing Academy
SA/2/TJ	Proof of Evidence - Tim Johnson	Surfing Academy
SA/3/SS	Proof of Evidence - Stewart Strong	Surfing Academy
SOSP/0/1	Closing Statement	SOS Porthcawl
SOSP/1/JC	Proof of evidence - John Chislett	SOS Porthcawl
SOSP/1/JC (Sum)	Summary of Proof of Evidence - John Chislett	SOS Porthcawl
SOSP/1/JC (App)	Folder: Appendices to Proof of Evidence - John Chislett	SOS Porthcawl
SW/1/MM	Proof of Evidence - Margaret Minhinnick	Sustainable Wales
SW/1/MM (Sum)	Summary of Proof of Evidence - Margaret Minhinnick	Sustainable Wales
SW/2/RT	Proof of Evidence - Richard Thomas	Sustainable Wales
SW/2/RT (Sum)	Summary of Proof of Evidence - Richard Thomas	Sustainable Wales
SW/3/BT	Proof of Evidence - Bethan Thomas	Sustainable Wales
SW/3/BT (Sum)	Summary of Proof of Evidence - Bethan Thomas	Sustainable Wales

SWWFC/0/1	Supplementary documents	South & West Wales Fishing Communities Ltd
SWWFC/0/2	Chart: Swansea Bay - with manuscript annotations	South & West Wales Fishing Communities Ltd
SWWFC/0/3	Closing Statement	South & West Wales Fishing Communities Ltd
SWWFC/1/IW	Proof of Evidence - Ian Wisby	South & West Wales Fishing Communities Ltd
SWWFC/1/IW/2	Supplementary Proof of Evidence - Ian Wisby	South & West Wales Fishing Communities Ltd
SWWFC/2/SL	Proof of Evidence - Stephen Lockwood	South & West Wales Fishing Communities Ltd
SWWFC/2/SL (Sum)	Summary of Proof of Evidence - Stephen Lockwood	South & West Wales Fishing Communities Ltd
SWWFC/2/SL/2	Supplementary of Proof of Evidence - Stephen Lockwood	South & West Wales Fishing Communities Ltd
SWWFC/2/SL/3	E-mail about how fish data is collected	South & West Wales Fishing Communities Ltd
SWWFC/2/SL/4	Extract from ICES Journal of Marine Science	South & West Wales Fishing Communities Ltd
TC/1	Proof of Evidence - Mrs T Chislett	
TC/1(App)	Appendices to Proof of Evidence - Mrs T Chislett	
UU/AJM/01	See UU/1/AJM (Sum)	United Utilities
UU/AJM/02	See UU/1/AJM	United Utilities
UU/AJM/03	See UU/1/AJM (App)	United Utilities
UU/AM/1	See UU/8/AM (Sum)	United Utilities
UU/AM/2	See UU/8/AM	United Utilities

UU/AM/3	See UU/8/AM (App)	United Utilities
UU/CC/1	See UU/2/CC (Sum)	United Utilities
UU/CC/2	See UU/2/CC	United Utilities
UU/CC/3-1	See UU/2/CC (App 1)	United Utilities
UU/CC/3-2	See UU/2/CC (App 2)	United Utilities
UU/CC/3-3	See UU/2/CC (App 3)	United Utilities
UU/CC/3-4	See UU/2/CC (App 4)	United Utilities
UU/CC/3-5	See UU/2/CC (App 5)	United Utilities
UU/CC/4	See UU/2/CC/2	United Utilities
UU/IHT/1	See UU/3/IT (Sum)	United Utilities
UU/IHT/2	See UU/3/IT	United Utilities
UU/IHT/3	See UU/3/IT (App)	United Utilities
UU/KFH/1	See UU/6/KFH (Sum)	United Utilities
UU/KFH/2	See UU/6/KFH	United Utilities
UU/KFH/3	See UU/6/KFH (App)	United Utilities
UU/MDH/01	See UU/7/MDH (Sum)	United Utilities
UU/MDH/02	See UU/7/MDH	United Utilities
UU/SA/01	See UU/10/SA (Sum)	United Utilities
UU/SA/02	See UU/10/SA	United Utilities
UU/SA/03	See UU/10/SA (App)	United Utilities
UU/SA/04	See UU/10/SA/2	United Utilities
UU/SCH/1	See UU/4/SCH (Sum)	United Utilities
UU/SCH/2	See UU/4/SCH	United Utilities
UU/SL/1	See UU/5/SL (Sum)	United Utilities
UU/SL/2	See UU/5/SL	United Utilities
UU/TD/1	See UU/9/TD (Sum)	United Utilities
UU/TD/2	See UU/9/TD	United Utilities
UU/UU/1	Written Statement on Decommissioning Proposals and Funding	United Utilities
UU/0/1	Secretary of State for Trade and Industry's Decision Letters dated 21 October 2003 for the proposed Gunfleet Sands Offshore Windfarm Order, the proposed Inner Dowsing Offshore Windfarm Order, the proposed Norfolk Offshore Windfarm Order and the proposed Lynn Offshore Windfarm Order	United Utilities
UU/0/2	Scarweather Sand Offshore Windfarm: Draft Article - Compensation for Fishermen	United Utilities
UU/0/3	Decommissioning Condition	United Utilities

UU/0/4	Opening Statement	United Utilities
UU/0/5	Vale of Glamorgan CBC: Planners Report	United Utilities
UU/0/6	Neath Port Talbot - Planning Report Ref: PLANDEV-040303-rep-EC and Addendum Ref: LANDEV-040303-REP-EC-UA	United Utilities
UU/0/7	Consultation Paper on Draft New Planning Policy. Statement 22 (PPS22): Renewable Energy	United Utilities
UU/0/8	Letter of 20 October to TWAU Unit, DFT summarising CCW's position re proposed Wind Farm	United Utilities
UU/0/8a	Reply dated 4 November from Bond Pearce to UU/0/8	United Utilities
UU/0/9	Letter of 6 August from DEFRA and UJSSL's reply dated 10 October 2003	United Utilities
UU/0/10	Briefing Note - United Utilities Green Energy Ltd (UUGE)	United Utilities
UU/0/11	Extracts from draft Marine Aggregate Dredging	United Utilities
UU/0/12	Bridgend CBC Statement of Case and covering letter	United Utilities
UU/0/13	Meetings held with Local Planning Authorities	United Utilities
UU/0/14	Hyder Consulting letter of 12 February 2002 to British Marine Aggregate Producers advising of the proposed development.	United Utilities
UU/0/15	Map: Turbine 25 Location - Amended Detail	United Utilities
UU/0/16	Revision to safety zones for navigation, trawling and anchoring	United Utilities
UU/0/17	MCA letter of 6 November (REP/10)	United Utilities
UU/0/18	DEFRA - Quality Status of the Marine and Coastal Areas of the Irish Sea and Bristol Channel 2000	United Utilities
UU/0/19	Plan: Hazards to Fishing - Drawing 64	United Utilities
UU/0/20	Photographs of Fishing Vessels	United Utilities
UU/0/21	Responses to Main Objection Categories	United Utilities
UU/0/22	Letter of 21 October 2003 from Bond Pearce to South & West Wales Fishing Communities	United Utilities
UU/0/23	Minutes of meeting 2 October 2003 between promoters and South & West Wales Fishing Communities.	United Utilities
UU/0/24	South & West Wales Fishing Communities - Newsletter December 2002	United Utilities
UU/0/25	Response to point raised by South & West Wales Fishing Communities in cross-examination of Stephen Appleby	United Utilities
UU/0/26	E-mail from South and West Wales Fishing Communities to Hyder Consulting about basis of compensation claims	United Utilities
UU/0/27	Letter of 30 July 2003 from Titan Environmental Surveys to Mr B Thomas re fishing claim	United Utilities
UU/0/28	Fax of 16 May 2002 from South & West Wales Fishing Communities to Hyder Consulting	United Utilities
UU/0/29	Table: trawl bridle angles	United Utilities

UU/0/30	Extracts from proof of evidence on commercial fisheries given by Tony Seymour to London Gateway inquiry	United Utilities
UU/0/31	Extract (p416) from document by A D Rijnsdorp et al - fishing intensity	United Utilities
UU/0/32	Graphs showing interpretation of Meteorological Office visibility data	United Utilities
UU/0/33	RTPI Practice Advice Note No.4	United Utilities
UU/0/34	Marine Enforcement Limited	United Utilities
UU/0/35	Plan showing distances of closest turbines from various points around Swansea Bay	United Utilities
UU/0/36	Statement - Domestic Consumption of Electricity	United Utilities
UU/0/37	Response to TWAO Submissions	United Utilities
UU/0/38	Agreement for Lease dated 8 April 2002	United Utilities
UU/0/39	Extract from ODPM document 'A Better Quality of Life'	United Utilities
UU/0/40	Note: the need for additional wind-generated capacity	United Utilities
UU/0/41	Photomontages from the University of Glamorgan study	United Utilities
UU/0/42	Safety Zones for Navigation, Trawling and Anchoring	United Utilities
UU/0/43	Public Consultation Report. Warwick Emanuel PR, March 2003.	United Utilities
UU/0/44	Note: the distribution of power from the proposal	United Utilities
UU/0/45	Exchange of correspondence between Winckworth Sherwood and the Marine and Coastguard Agency	United Utilities
UU/0/46	Letter of 25 November from United Utilities to Countryside Council for Wales	United Utilities
UU/0/47	Letter of 24 November 2003 from Bond Pearce to Countryside Council for Wales	United Utilities
UU/0/48	Briefing note: North Hoyle Wind Farm	United Utilities
UU/0/49	Letter of 26 November 2003 from Countryside Commission for Wales to United Utilities confirming their current position.	United Utilities
UU/0/50	Closing Statement	United Utilities
UU/1/AJM	Proof of Evidence - Alan MacLeay (originally numbered UU/AJM/02)	United Utilities
UU/1/AJM (Sum)	Summary of Proof of Evidence - Alan MacLeay (originally numbered UU/AJM/01)	United Utilities
UU/1/AJM (App)	Appendices to Proof of Evidence - Alan MacLeay (originally numbered UU/1/AJM/03)	United Utilities
UU/2/CC	Proof of Evidence - Chris Clarke (originally numbered UU/CC/2)	United Utilities
UU/2/CC (Sum)	Summary of Proof of Evidence - Chris Clarke (originally numbered UU/CC/1)	United Utilities
UU/2/CC (App 1)	Appendices to Proof of Evidence (Vol 1) - Chris Clarke (originally numbered UU/CC/3-1)	United Utilities
UU/2/CC (App 2)	Appendices to Proof of Evidence (Vol 2) - Chris Clarke (originally	United Utilities

	numbered UU/CC/3-2)	
UU/2/CC (App 3)	Appendices to Proof of Evidence (Vol 3) - Chris Clarke (originally numbered UU/CC/3-3)	United Utilities
UU/2/CC (App 4)	Appendices to Proof of Evidence (Vol 4) - Chris Clarke (originally numbered UU/CC/3-4)	United Utilities
UU/2/CC (App 5)	Appendices to Proof of Evidence (Vol 5) - Chris Clarke (originally numbered UU/CC/3-5)	United Utilities
UU/2/CC/2	Supplementary Proof of Evidence - Chris Clarke	
UU/2/CC/3	Note: Visitor Numbers at Delabole	
UU/3/IT	Proof of Evidence - Ian Townend (originally numbered UU/IHT/3)	United Utilities
UU/3/IT (Sum)	Summary of Proof of Evidence - Ian Townend (originally numbered UU/IHT/2)	United Utilities
UU/3/IT (App)	Appendices to Proof of Evidence - Ian Townend (originally numbered UU/IHT/3)	United Utilities
UU/3/IT/2	Supplementary Proof of Evidence - Ian Townend	United Utilities
UU/4/SCH	Proof of Evidence - Stephen Hull (originally numbered UU/SCH/2)	United Utilities
UU/4/SCH (Sum)	Summary of Proof of Evidence - Stephen Hull (originally numbered UU/SCH/1)	United Utilities
UU/4/SCH (App)	Appendices to Proof of Evidence - Stephen Hull (originally numbered ABPmer/SCH/3)	United Utilities
UU/5/SL	Proof of Evidence - Stewart Lowther (originally numbered UU/SL/2)	United Utilities
UU/5/SL (Sum)	Summary of Proof of Evidence - Stewart Lowther (originally numbered UU/SL/1)	
UU/6/KFH	Proof of Evidence - Kay Hawkins (originally numbered UU/KFH/2)	United Utilities
UU/6/KFH (Sum)	Summary of Proof of Evidence - Kay Hawkins (originally numbered UU/KFH/1)	United Utilities
UU/6/KFH (App)	Appendices to Proof of Evidence - Kay Hawkins (originally numbered UU/KFH/3)	United Utilities
UU/6/KFH/2	Supplementary Proof of Evidence - Kay Hawkins	United Utilities
UU/7/MDH	Proof of Evidence - Malcolm Hayes (originally numbered UU/MDH/02)	United Utilities
UU/7/MDH (Sum)	Summary of Proof of Evidence - Malcolm Hayes (originally numbered UU/MDH/01)	United Utilities
UU/7/MDH/2	Supplementary Proof of Evidence - Malcolm Hayes 2)	United Utilities
UU/8/AM	Proof of Evidence - Ali MacDonald (originally numbered UU/AM/2)	United Utilities
UU/8/AM (Sum)	Summary of Proof of Evidence - Ali MacDonald (originally numbered UU/AM/1)	United Utilities
UU/8/AM (App)	Appendices to Proof of Evidence - Ali MacDonald (originally numbered UU/AM/3)	United Utilities
UU/8/AM/2	Supplementary Proof of Evidence - Ali MacDonald	United Utilities

UU/9/TD	Proof of Evidence - Captain Tom Drennan (originally numbered UU/TD/2)	United Utilities
UU/9/TD (Sum)	Summary of Proof of Evidence - Captain Tom Drennan (originally numbered UU/TD/1)	United Utilities
UU/9/TD/2	Supplementary Proof of Evidence - Captain Tom Drennan	United Utilities
UU/10/SA	Proof of Evidence - Stephen Appleby (originally numbered UU/SA/02	United Utilities
UU/10/SA (Sum)	Summary of Proof of Evidence - Stephen Appleby (originally numbered UU/SA/01	United Utilities
UU/10/SA (App)	Appendices to Proof of Evidence - Stephen Appleby (originally numbered UU/SA/03	United Utilities
UU/10/SA/2	Supplementary Proof of Evidence - Stephen Appleby	United Utilities
WCSC/0/1	Closing Statement	Welsh Coast Surf Club
WCSC/1/TA	Proof of Evidence - Tom Anderson	Welsh Coast Surf Club
WCSC/1/TA (App)	Appendices to Proof of Evidence - Tom Anderson	Welsh Coast Surf Club
WCSC/1/TA/2	Supplementary Proof of Evidence - Tom Anderson	Welsh Coast Surf Club
WCSC/1/TA/3	Supplementary Proof of Evidence - Tom Anderson	Welsh Coast Surf Club
WCSC/2/DR	Proof of Evidence - David Reed	Welsh Coast Surf Club