

# Towards a coherent network of Marine Protected Areas conference



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Susan Gubbay<sup>1</sup>, Jen Ashworth<sup>2</sup>, Kate Bull<sup>2</sup> and Robert Earl<sup>3</sup>

<sup>1</sup> Independent consultant, <sup>2</sup> Natural England and <sup>3</sup> CMS



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# Project details

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This report results from a conference commissioned by Natural England in order to bring together a wide range of expertise on Marine Protected Areas including that of European Marine Site Officers, conservation agency staff, policy makers, marine scientists and sea user groups. The forward-looking theme of the conference was an opportunity to take stock as well as to pool ideas and expertise on building a coherent network of MPAs in the UK.

A summary of the findings covered by this report, as well as Natural England's views on this research, can be found with Natural England Research Information Note RIN006 – Towards a coherent network of Marine Protected Areas. Report of a conference held on the 2-4th October, 2007, Scarborough, UK.

## Project manager

Jen Ashworth and Kate Bull

Natural England

Northminster House

Peterborough

PE1 1UA

[jen.ashworth@naturalengland.org.uk](mailto:jen.ashworth@naturalengland.org.uk)

## Contractor

CMS Ltd

Candle Cottage

Kempley

Gloucs

GL18 2BU

[bob.earll@coastms.co.uk](mailto:bob.earll@coastms.co.uk)

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# Summary

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The conference 'Towards a Coherent network of Marine Protected Areas', organised on behalf of Natural England by CMS, was held on the 2-4th October, 2007 in Scarborough. One hundred and ninety delegates attended the event bringing together a wide range of expertise including that of European Marine Site Officers, conservation agency staff, policy makers, marine scientists and sea user groups. The forward-looking theme of the conference was an opportunity to take stock as well as to pool ideas and expertise on building a coherent network of MPAs in the UK.

The conference was opened by Andrew Wood, Natural England's Executive Director of Evidence & Policy, who highlighted the fact that this is a watershed moment for marine conservation. Progress is being made on a variety of fronts and central to this is the proposed Marine Bill which will be a vital instrument to help deliver many elements including Marine Protected Areas (MPAs).

The keynote presentation of Session 1 was given by Professor Steve Gaines from the University of California who described the findings of recent syntheses of scientific studies on the biological effects Highly Protected Marine Reserves (locations where all extractive activities are prohibited). Dr Jochen Krause of the German Federal Agency for Nature Conservation (BfN) introduced Session 2 with a keynote presentation on international progress toward the Natura 2000 network of MPAs and the work undertaken in Germany to identify, delineate and nominate areas for these networks with particular reference to the offshore area (from territorial limits to the limit of the German EEZ). The second part of Session 2 was made up of a series of short presentations illustrating good practice in managing European Marine Sites. Eight case studies were presented to the plenary sessions and this was followed by a 'market place' event when delegates could move around the hall to view posters and displays describing stands the different projects.

The objectives of Session 3 were to present possible approaches for establishing MPAs and to discuss how to integrate industry and environmental desires into the network. The keynote presentation was given by Dr John Pinnegar of Cefas on the PROTECT Project and its approach to selecting and positioning MPAs.

The objective of the final session was to discuss the actions that delegates believed were needed to establish an effective, coherent network of MPAs in the UK.

A recently published IUCN/WCPA checklist was used to structure feedback from delegates. The very clear, overwhelming, message was that stakeholder participation should be the top priority in building the MPA network. The need for clearly defined objectives was also a strong message from the meeting. Political will and leadership scored highly as did institutional and governance structures as priority areas for progress.

Overall there was some sense of frustration at the meeting about the pace of progress given the considerable evidence base which has been built up over the last two decades on the benefits of MPAs for biodiversity conservation. Nevertheless the positive and constructive mood of the meeting showed both the desire and potential to go forward, at the same time as giving some clear and constructive messages about where delegates see the priorities in the next steps towards building a coherent network of Marine Protected Areas.

The discussions and conclusions from the conference will help inform the proposed Marine Bill and will contribute to Natural England's target of establishing a coherent network of MPAs by 2012.

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# 1 Introduction

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- 1.1 Natural England and its predecessors have been providing scientific advice and recommending measures for safeguarding marine biodiversity in a variety of ways, including through Marine Protected Areas (MPAs), since the late 1960s<sup>1</sup>. Natural England views MPAs as one of a number of tools for the recovery and conservation of wildlife, habitats, and geodiversity of coasts and seas, their supporting ecological processes and overall resilience<sup>2</sup>. As part of the organisations work to conserve, recover and enhance the marine environment it has set a target of establishing a coherent network of MPAs by 2012<sup>3</sup>. In recent years much effort has been focused on the establishment, monitoring and assessment of marine Special Areas of Conservation (SAC) under the EU Habitats Directive and Special Protection Areas (SPA) under the EU Birds Directive. Together these sites contribute to the European Union network of protected areas known as Natura 2000.
- 1.2 English Nature (one of the founding bodies of Natural England) and the other conservation agencies organised a series of workshops in 2001-2004 and 2006 to inform and advance their work on European marine sites, part of the European Natura 2000 network. These events brought together UK Conservation Agency staff, SAC/SPA Project Officers and others working on the management of European marine sites to exchange ideas, develop best practice and identify gaps in research. The 2007 conference, reported here, was designed to build on the previous European marine sites work but to be broader in scope and scale by drawing together scientists, MPA managers and interested stakeholders to learn about, share, and discuss topical MPA issues. This report also presents the results of a survey, carried out during the conference, asking delegates to identify those aspects of MPA network development which they believed should be the focus of efforts to build the MPA network. The discussions and survey results are presented here to help inform current proposals for a Marine Bill as well as contributing to Natural England's target of establishing a coherent network of MPAs by 2012.

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<sup>1</sup>Laffoley, D.d'A (2000) Historical perspective and selective review of the literature on human impacts on the UK's marine environment. Prepared by English Nature for the DETR Working Group on the Review of Marine Nature Conservation. Peterborough, English Nature Research Report 391. 20pp

<sup>2</sup>English Nature (2005) Our coasts and seas – making space for people, industry and wildlife. Peterborough, EN.

<sup>3</sup>Natural England Strategic Direction 2006-2009

# 2 Background

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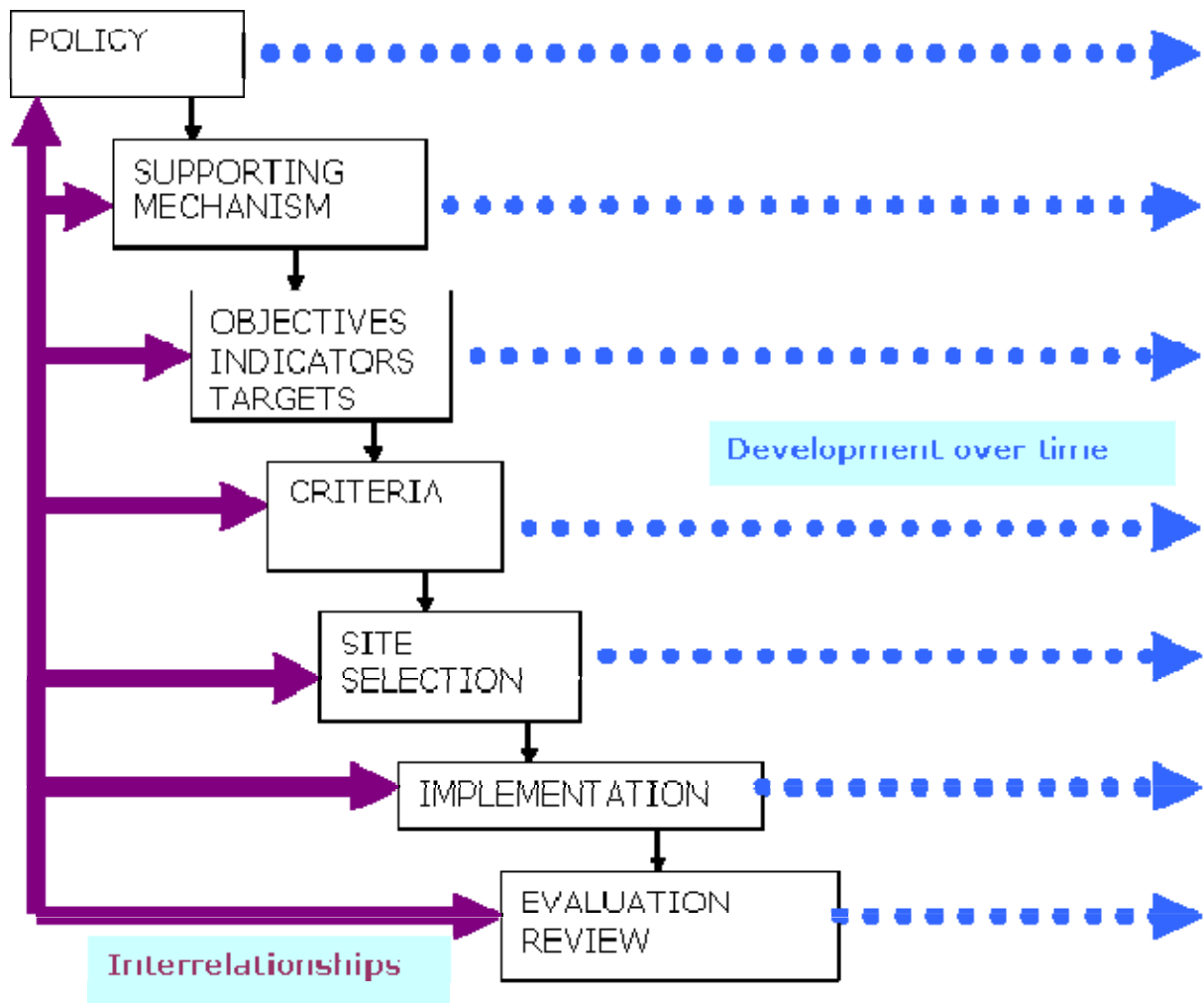
- 2.1 Site protection has long been an important management tool for nature conservation, leading to the designation of many protected areas on land and at sea. This effort is ongoing, especially in the marine environment, but with an added dimension in recent years. Today conservation efforts are not only focused on individual sites but are also seeking additional benefits through the establishment of networks of protected areas.
- 2.2 Bennett & Wit<sup>4</sup> attribute this shift to “growing awareness amongst those actively involved in the conservation of biodiversity that:
- The protection of individual biological elements – predominantly a limited number of exceptionally valuable natural areas and threatened species – was not succeeding in arresting the decline in the integrity of the protected areas and many species populations.
  - The viability of species populations is dependent on the existence of a particular complex of environmental elements and processes rather than on its simple isolation from human influences.
  - The increasing extent and intensity of human activities in the landscape and their impact on biodiversity cannot be compensated through site protection measures alone.”
- 2.3 A network of MPAs has been defined as “a collection of individual MPAs operating cooperatively and synergistically, at various spatial scales, and with a range of protection levels, in order to fulfil ecological aims more effectively and comprehensively than individual sites could alone. The network will also display social and economic benefits, though the latter may only become fully developed over long time frames as ecosystems recover”<sup>5</sup>. International, Regional and European commitments for MPA networks focus on the former through calls for the establishment of “ecologically coherent” networks of protected areas. A simplified diagram of the key stages in network design is shown in Figure 2.

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<sup>4</sup>Bennett, G & Wit, P. (2001) The development and application of ecological networks. A review of proposals plans and programmes. *AIDEnvironment/IUCN*. 137pp.

[URL://www.iucn.org/themes/wcpa/pubs/pdfs/DevelopmentandApplicationEcologicaNetworks.pdf](http://www.iucn.org/themes/wcpa/pubs/pdfs/DevelopmentandApplicationEcologicaNetworks.pdf)

<sup>5</sup>Day, J.C. & Laffoley, D.d'A (2006) Self-assessment checklist for building networks of MPAs. WCPA IUCN.

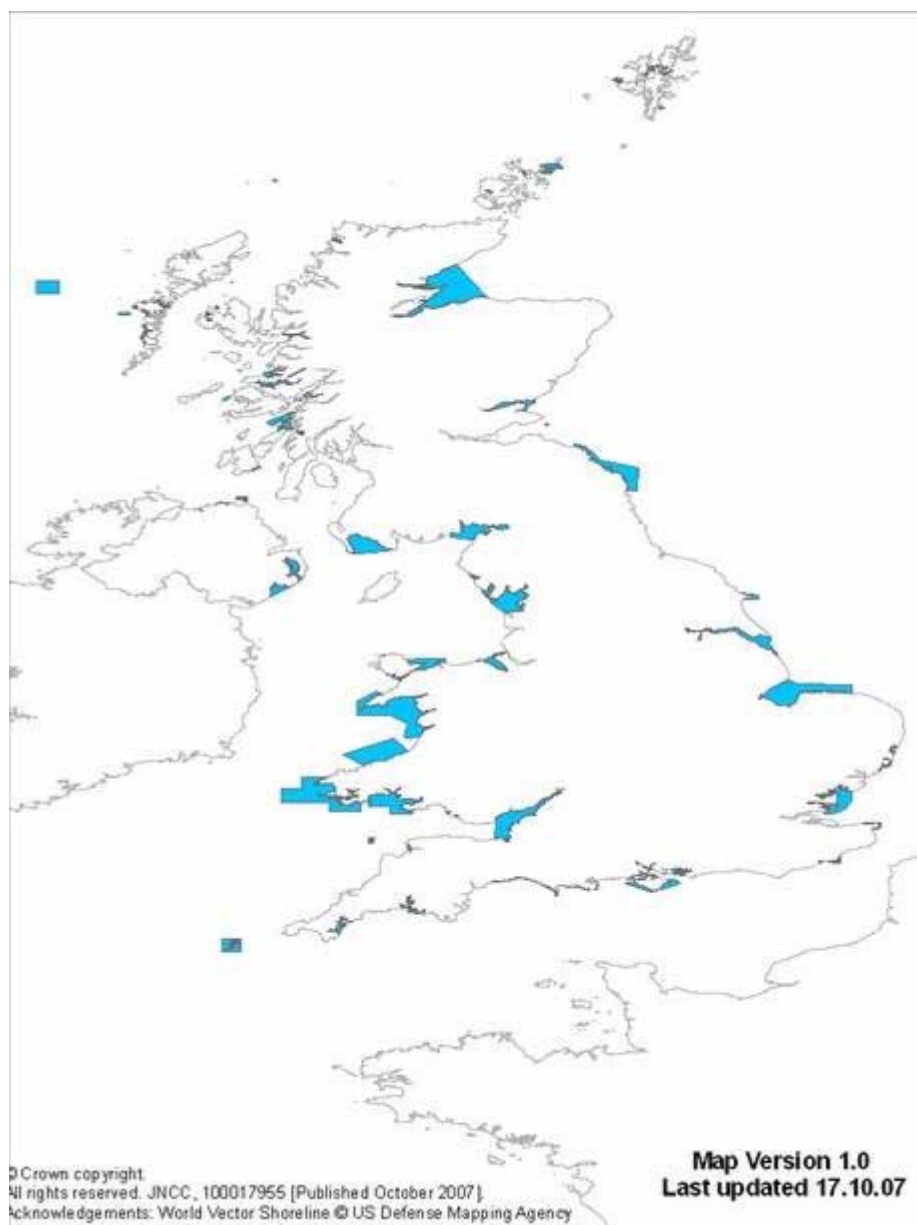


**Figure 1** Key stages in the development of MPA Networks

- 2.4 The need to establish networks of MPAs to conserve marine ecosystems and biodiversity is enshrined in a number of international conventions and agreements to which the UK is a signatory. They include the Convention on Biological Diversity, the World Summit on Sustainable Development, and Annex V of the OSPAR Convention.
- 2.5 The EU Habitats Directive is a key driver for establishing such networks in Europe as it sets out a statutory obligation for an ecologically coherent network protected areas (including marine protected areas). Article 3 requires the setting up of a “coherent European ecological network of SACs” which, together with SPAs classified under the EU Birds Directive, will make up the Natura 2000 network. Also, Article 10 refers to improving the ecological coherence of the Natura 2000 network through the management of features of the landscape such as those essential for migration (although with no specific reference to the marine environment).
- 2.6 The UK through commitments made at the 2002 World Summit on Sustainable Development, the Convention on Biological Diversity and OSPAR, is working on identifying and designating relevant areas of the UK’s seas as areas of marine protection belonging to a network of ecologically coherent network of well-managed sites by 2012. This network will undoubtedly include existing MPAs which are currently almost exclusively marine Natura 2000 sites. As of the 17th October 2007 there were 76 SACs with marine components in UK waters and 72 SPAs) covering a total marine area of 9,841km<sup>2</sup> (see Figure 2)<sup>6</sup>. In the future, the network is also likely

<sup>6</sup>[URL://www.jncc.gov.uk/page-1445](http://www.jncc.gov.uk/page-1445) and [URL://www.jncc.gov.uk/page-1414](http://www.jncc.gov.uk/page-1414)

to include sites established to protect species and habitats listed by OSPAR as requiring conservation action, and sites identified under national provisions, such as those envisaged in the proposed Marine Bill.



**Figure 2** UK Special Areas of Conservation with marine components<sup>7</sup>

<sup>7</sup>[URL://www.jncc.gov.uk/page-4180](http://www.jncc.gov.uk/page-4180)



# 3 Conference overview

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- 3.1 The conference 'Towards a Coherent network of Marine Protected Areas', organised on behalf of Natural England by CMS, was held on the 2-4th October, 2007 in Scarborough. One hundred and ninety delegates attended the event bringing together a wide range of expertise including that of European Marine Site Officers, conservation agency staff, policy makers, marine scientists and sea user groups (Appendix 1). The forward-looking theme of the conference was an opportunity to take stock as well as to pool ideas and expertise on building a coherent network of MPAs in the UK.
- 3.2 The two day conference was followed by an optional field trip to the Flamborough Head European Marine Site. This was an opportunity for delegates to be briefed on some of the issues of MPA management by local experts Leanne Stockdale, Project Officer for the Flamborough Head European Marine Site, Giles Bartlett from North Eastern Sea Fisheries Committee and Keith Clarkson from the Bempton Cliffs RSPB Reserve.



**Plate 1** Part of the Flamborough Head European Marine Site visited by conference delegates

## Conference aims & objectives

- 3.3 The aim of the conference was to bring together those involved in management, designation, monitoring and the science of Marine Protected Areas. The conference objectives were:
- To share the latest policies, science and best practice in management of MPAs within the UK.
  - To provide a forum for the exchange of information and experience including between those studying scientific aspects of MPAs and marine nature conservation and those managing sites and marine resource management.
  - To investigate new approaches for taking forwards MPAs in the UK.
- 3.4 There were four themed sessions (see Appendix 2 for programme) and all speakers were asked to identify three key steps which they believed were necessary to take the UK MPA network forward:
- **Session 1** - provided an overview of what MPAs can deliver for a variety of stakeholder interests.

- **Session 2** - described the current situation in building an MPA network both within the UK and the wider Natura 2000 and OSPAR context. This included cases studies of good practice in managing European Marine Sites.
- **Session 3** - described a variety of approaches for selecting MPAs.
- **Session 4** - focused on next steps and in particular what might be needed to achieve the variety of targets for MPAs set at national, European and wider international levels.

## Conference presentations

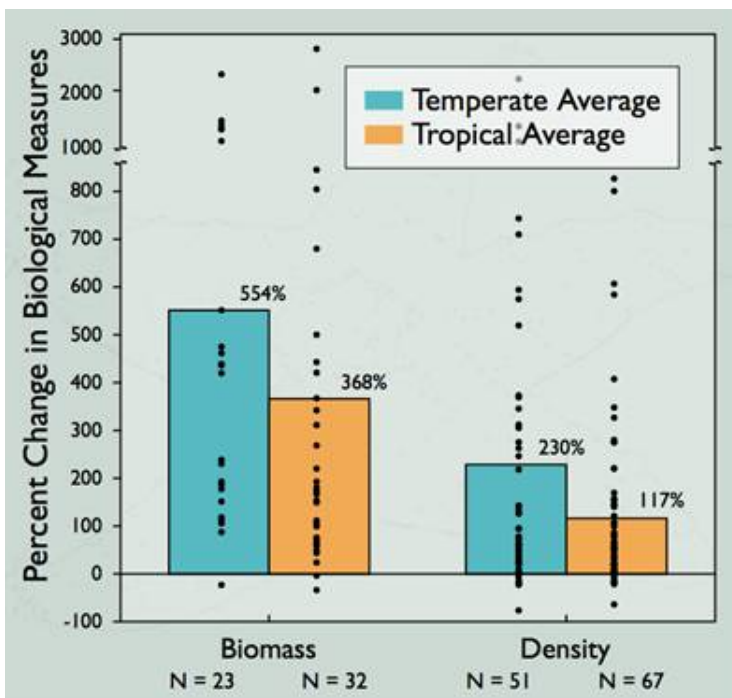
3.5 The conference was opened by Andrew Wood, Natural England's Executive Director of Evidence & Policy. Mr Wood highlighted the fact that this is a watershed moment for marine conservation. Progress is being made on a variety of fronts and central to this is the proposed Marine Bill. The Bill will be a vital instrument to help deliver many elements including Marine Protected Areas (MPAs), the subject of the conference. Another key aspect is the need for greater awareness in the public domain about the need for biodiversity conservation in the marine environment and how it can be achieved.

### Session 1: What can MPAs deliver?

3.6 The objective of the first session of the conference was to discuss evidence of the benefits (biodiversity and socio-economic) that MPAs can deliver in the UK.

3.7 The keynote presentation of Session 1 was given by Professor Steve Gaines from the University of California. He described the findings of recent syntheses of scientific studies on the biological effects Highly Protected Marine Reserves (locations where all extractive activities are prohibited). There were consistently positive effects on average biomass, density, animal size and species diversity. Such effects were independent of whether the reserves were in temperate or tropical habitats and, if anything, were slightly greater in temperate reserves (Figure 3). MPAs that allowed some forms of fishing generally had smaller effects than those in nearby marine reserves.

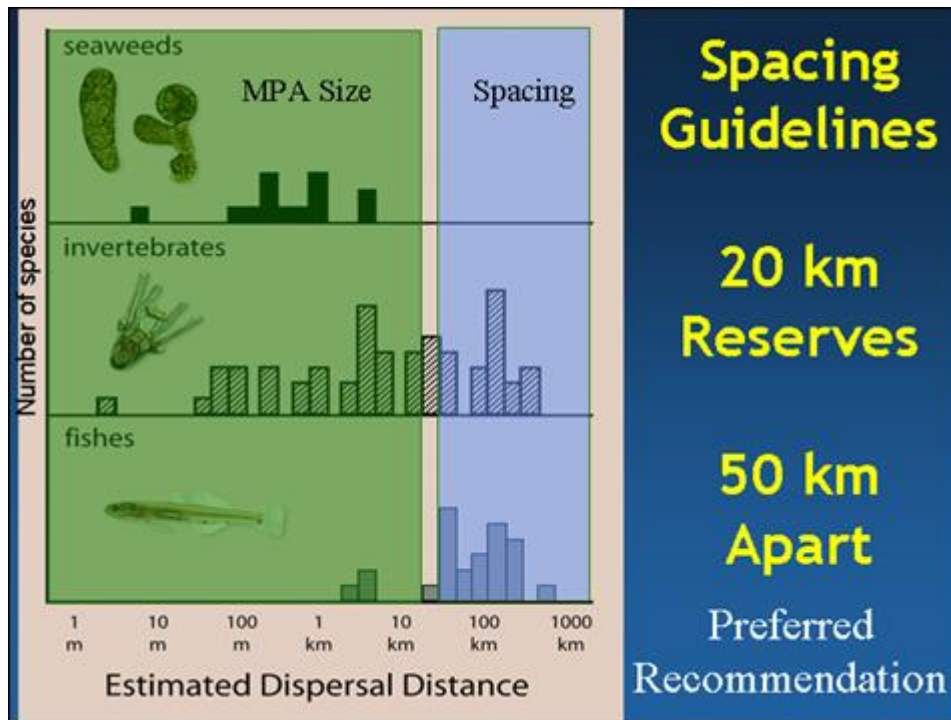
(PowerPoint slide from presentation by S.Gaines).



**Figure 3** Percentage changes in biomass and species density reported in the literature for Highly Protected Marine Reserves in temperate and tropical areas

3.8 Despite consistently large changes within reserve boundaries the overall benefits to the species protected in many highly protected marine reserves were generally perceived to be small, because existing reserves protect such a minute fraction of the range of most species. Efforts to scale up individual highly protected marine reserves to provide broader benefits to species persistence and a variety of ecosystem functions have focused on networks of MPAs. In building these networks key considerations are representation, size, and spacing, with different species benefiting depending on the detailed design such as spacing guidelines (Figure 4).

(Powerpoint slide from presentation by S.Gaines)



**Figure 4** Illustration of how decisions about the size and spacing of reserves will benefit different species in the Californian Channel Islands National Marine Sanctuary because of their different estimated dispersal distances.

3.9 Considerations surrounding network design were illustrated with reference to the recently established Channel Islands Marine Reserve network. Fundamental elements to the success of establishing this network were considered to be:

- the underpinning legislation which required designation for the protection of natural diversity and functioning of marine ecosystems;
- clear guidelines from the scientific community on key considerations such as the objectives, recommended size and spacing; and
- the extensive involvement of stakeholders who developed the proposals using these guidelines.

3.10 The presentations that followed set out what MPAs can deliver from a number of different perspectives. Dr Mark Duffy gave the Natural England view of what networks can deliver for biodiversity conservation. This ranges from protecting endangered species and habitats, to making a significant contribution to the health of the wider marine ecosystem. The network needs to be of sufficient scale, be connected, representative, replicated, permanent and, ultimately, coherent.

3.11 Dr Jean-Luc Solandt of the Marine Conservation Society described biodiversity benefits of MPAs and called on the UK Government, Scottish Government and Welsh Assembly to prioritise the implementation of a network of MPAs in order to protect EU, OSPAR, BAP and UK

representative features such that we can meet our international biodiversity and MPA commitments.

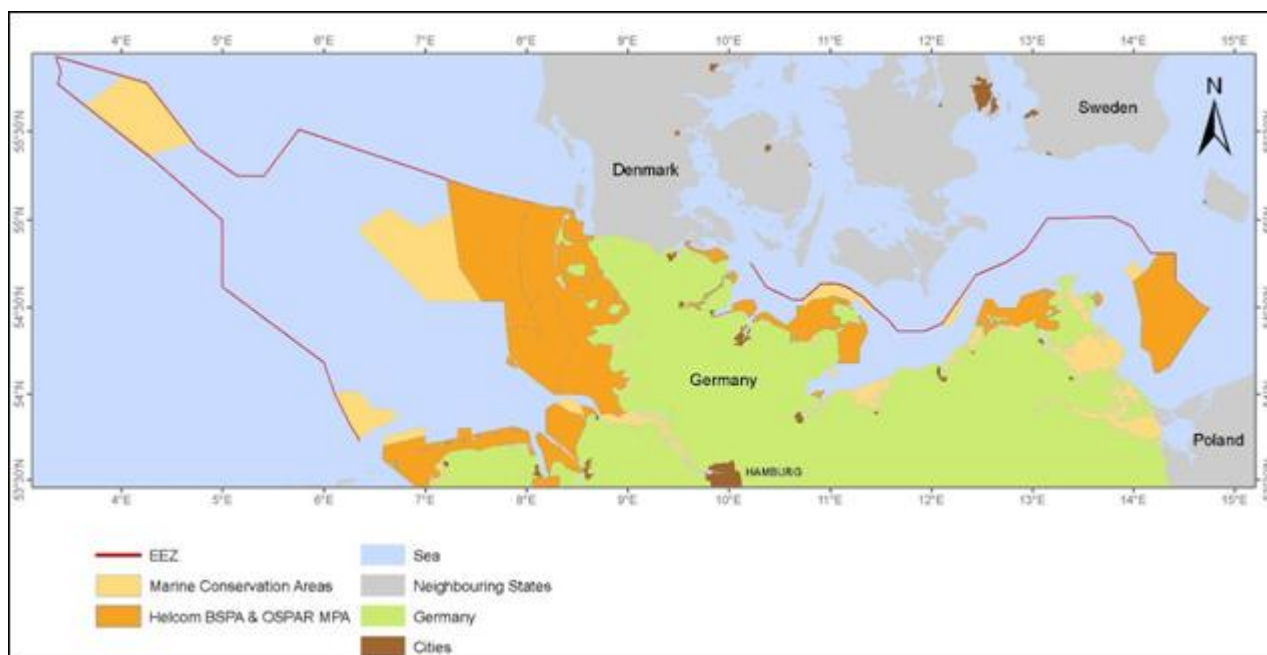
- 3.12 Barry Deas of the National Federation of Fishermen's Organisations covered what MPAs can deliver for fisheries. Key questions raised by the fishing sector relate to location, size, the need to make MPAs fit for purpose and to carefully consider the implications of establishing a network of MPAs on fishing activity. Major concerns were displacement from fishing grounds and loss of earnings.
- 3.13 Tony Child from the Thanet Coast Project considered what MPAs can do for people and local communities. He illustrated this by describing some of the activities enabling stakeholders to participate in the decision making process and to develop a shared vision and action in the Management Scheme for the North East Kent European marine sites. These include regular workshops, community events and activities, a Thanet Coastal warden scheme which trains local MPA 'champions' to help look after their own section of coastline; to monitor and record activities and wildlife, and to report incidents to the authorities.
- 3.14 Key next steps identified by the speakers at this session were:
- The need for statutory provisions to underpin the MPA network with a Marine Bill being able to provide this for some parts of the UK. Important elements would be to place a duty on the statutory nature conservation agencies to implement meaningful MPAs as well as to enable the designation of representative sites and highly protected marine reserves. A Marine Act for Scotland with similar provisions was also advocated.
  - Multi-stakeholder buy-in from the outset and throughout the process with dialogue at different levels. A national support mechanism for people and coastal partnerships to get them involved would help support this.
  - Cross-departmental funding commitments.
  - Mapping work to identify sites of representative features for protection for each biogeographic region of the UK as well as rare and threatened species and to use this to develop a network which protects 30% of representative marine species.
  - A rigorous approach to the selection process given that siting is critical to stakeholders as well as to delivering the desired objectives.

## **Session 2: The story so far: how are we doing in building our MPA network?**

- 3.15 The objectives of this session were to discuss progress in completing the MPA network, showcase good management practices within existing MPAs, and discuss management problems and solutions to solve these.
- 3.16 Dr Jochen Krause of the German Federal Agency for Nature Conservation (BfN) introduced Session 2 with a keynote presentation on international progress toward the Natura 2000 network of MPAs. After an introduction to the developing OSPAR network of MPAs, HELCOM Baltic Sea Protection Areas (BSPAs) and marine Natura 2000, Dr Krause described the work undertaken in Germany to identify, delineate and nominate areas for these networks with particular reference to the offshore area (from territorial limits to the limit of the German EEZ).
- 3.17 Germany has made the most progress of any EU Member States towards a network of offshore MPAs for the Natura 2000 network. Ten offshore sites have been nominated to the European Commission covering an area of more than 10,000 km<sup>2</sup> which is about 31% of German offshore waters. When combined with the area of coastal MPAs, more than 41% of German marine waters are under protection (Figure 5).
- 3.18 The German offshore sites were identified through a comprehensive research programme known as 'HabitatMareNatura 2000'. This collected new data, as well as incorporating data from existing marine assessments. It was supported by all levels of the German administration and developed through contributions from scientists from a variety of marine research institutions. The



results were sufficient for the identification and the legal protection of major parts of the German network.



**Figure 5** Map showing the extent of offshore MPAs in the German EEZ

- 3.19 The next stage is to develop management proposals so that the sites can meet their ecological goals. Key to this is fisheries management which will need joint European actions and measures alongside those which can be introduced by the German government. Dr Krause concluded that the scientific data and technical abilities required to nominate offshore sites for Natura 2000 network are largely available, that management plans should be developed at the next stage rather than with the nominations, and that the UK is well placed to make sound proposals for a coastal and offshore MPA network based on good science.
- 3.20 In the UK the Joint Nature Conservation Committee (JNCC) is charged with bringing together scientific information and identifying offshore areas that would be the UK contribution to the Natura 2000 network. Annabelle Aish described the progress to date, showing the 'Areas of Search' which should ensure that the UK SAC network incorporates minimum representation of habitat types and covers the full range of geographical variation of the habitat types listed in the Habitats Directive that occur within UK waters. Proposals for seven sites are nearing completion and a programme of offshore survey work is underway to inform proposals for an eighth site, the Dogger Bank. The current timetable envisaged by JNCC is to have these sites, together with the associated management proposals and Regulatory Impact Assessments ready for submission to the European Commission in 2008.
- 3.21 Representatives from Defra (Emily Musson) the Welsh Assembly Government (Wendy Twell) and the Scottish Government (David Mallon) summarised the current state of proposals and designation of Natura 2000 sites and OSPAR sites in different parts of the UK. Defra wishes to encourage the conservation agencies to identify and recommend sites as soon as possible. Priorities were confirmed as completing the Natura 2000 network, identifying gaps to deliver OSPAR MPAs, consider establishing MPAs for nationally important sites and the introduction of new legislative proposals to deliver them. In Wales the Welsh Environment Strategy is guiding work on MPAs whilst in Scotland, following the recommendations of a Scottish Parliamentary enquiry calling for a network of MPAs, the Scottish Government has made a commitment to introduce marine legislation. Ministers have said this is likely to include a simpler regulatory system and more action on conservation.
- 3.22 Dr Jen Ashworth from Natural England described current work within NE and SNH to assess and improve the effectiveness of current and future MPAs. These include setting clear goals and

objectives for each site with realistic targets, adaptive management and sharing of good practise between sites. Twelve sites in England and Scotland have been assessed using the World Bank scorecard. This revealed considerable variability across sites. At the present time the highest scoring elements were generally those concerned with planning and the lowest scoring elements were concerned with inputs and outcomes. Important next steps were to complete the effectiveness evaluation and use this to determine how effectiveness might be improved, to ensure adequate staffing and budgets to help deliver an effective MPA network, and to bring together and communicate MPA information more widely through the UK MPA centre website launched at the conference.

- 3.23 Lisa Chilton of The Wildlife Trusts gave a presentation on building public support for MPAs. An opinion poll commissioned by the Wildlife Trusts in 2007 revealed strong public support for the principle of MPAs but also a huge discrepancy between the public perception of how much of the UK's sea area lies within highly protected MPAs (26%) and the actual figure (0.001%). The Wildlife Trusts consider that public engagement from the earliest stages of building a MPA network is critical. There is a firm foundation on which to build this in the UK and many inspirational examples but it is still a huge challenge.
- 3.24 Session 2 concluded with a presentation by Don Macneish from the Community of Arran Seabed Trust. Mr Macneish described the process of community work to bring together proposals for a MPA which would be a "no-take zone" in Lamlash Bay on the east coast of the Isle of Arran. Key elements were gaining trust within the community, winning approval from all the relevant parties, and promoting a spirit of shared ownership. These are as relevant to building the UK network of MPAs as in the local case of Lamlash Bay.

(photo: Howard Wood)



**Plate 2** Juvenile cod feeding amongst maerl beds in Lamlash Bay

- 3.25 Key next steps identified by the speakers at this session include to:
- Consider nationally important sites for MPA status.
  - Complete the Natura 2000 network which will include designation of offshore SACs & SPAs.
  - Support the effective management of offshore Natura 2000 sites.
  - Identify additional UK MPAs to submit to the OSPAR Commission to deliver the OSPAR network.
  - Assist in the assessment of ecological coherence of the OPSAR MPA network in the NE Atlantic.

- Bring forward new legislative proposals.
- Increase communication between practitioners around the UK and give widespread promotion of examples of successful MPAs.
- Evaluate the effectiveness and cost/benefit of a representative selection of MPA engagement initiatives.

## Session 2: Case studies of good practice in managing European marine sites

- 3.26 The second part of Session 2 was made up of a series of short presentations illustrating good practice in managing European Marine Sites. Eight case studies were presented to the plenary sessions. Speakers at this session were also given time to explain their cases in more detail as part of a 'market place' event when delegates could move around the hall to view posters and displays describing the different projects. These were as follows:
- Bill Parker, Project Officer, Stour & Orwell European Marine Site – Findings of research on recreational disturbance in the Stour and Orwell.
  - Sue Burton, Project Officer Pembrokeshire Coast European marine site – Pembrokeshire Marine Code.
  - Leanne Stockdale, Project Officer Flamborough Head European Marine Site - Developing a shared vision for the Flamborough EMS.
  - Aisling Lannin, Project Officer Berwickshire & North Northumberland Coast European Marine Site – Bringing the Berwickshire and North Northumberland EMS and AONB closer together.
  - Peter Rushmer, Project Officer Wash & North Norfolk Coast European Marine Site – Incident recording/voluntary kites' initiative in the Wash and North Norfolk coast EMS.
  - Nicola Saunders, Lundy warden – Managing Lundy.
  - Tom Roberts, UCL – Partnership approaches to achieving strategic marine conservation objectives.
- 3.27 A strong theme from this session was the variety of ways in which stakeholder involvement in MPAs was taking place. This led to discussion in the subsequent plenary session of whether there was likely to be sufficient capacity to engage in stakeholder participation in a robust, genuine and well designed way, especially for an MPA network compared to individual sites.
- 3.28 The focus on establishing MPAs through the Habitats Directive, which is the current driving force for MPA networks in the UK, was also raised during discussion. Given that it was agreed at a time when there was far less information about marine habitat types and their classification, the view was expressed that it would also be useful to look at other criteria for building MPA network, especially at the national level.
- 3.29 Marine Spatial Planning and the value of mapping uses were identified as helpful in a number of the presentations. This led to some discussion about the practicality and value of having flexible boundaries for MPAs. Views expressed were that such an approach would have to be taken with caution given that accrued benefits will be diminished by opening sites after some time. Also that there was clearly a need to resolve the fisheries and biodiversity benefits if these were to take place in parallel. Critical to this was being clear about the conservation objectives and not promoting fisheries benefits where they were unlikely to be significant.

## Session 3: Approaches for selecting MPAs

- 3.30 The objectives of this session were to present possible approaches for establishing MPAs and to discuss how to integrate industry and environmental desires into the network.
- 3.31 The keynote presentation was given by Dr John Pinnegar of Cefas on the PROTECT Project and its approach to selecting and positioning MPAs. The project, involving 17 partner institutions throughout Europe, is evaluating the potential of MPAs as a tool in fisheries management and the protection of sensitive habitats and ecosystems. Another element is to develop a suite of



scientifically based monitoring, assessment and evaluation tools that might be used to assess or anticipate the impact and potential future success of MPAs.

- 3.32 Dr Pinnegar described three ecosystems and fisheries management scenarios investigated as project case studies. The Baltic Sea case study looked at effects of two “closures” to preserve cod stocks. A summer ban on targeted cod fishing, and a spawning closure for all fisheries in a small area east of the island of Bornholm. A key lesson was that these the fisheries closures do not reflect year to year and environmental variability and consequently do not adequately protect the Baltic cod stock, which is very sensitive to changing environmental conditions (especially the magnitude of the water inflow from the North Sea). The deep water coral case study involved the analyses of available fisheries data and socio-economic modelling of the effects of potential closures to protect European deep water coral reefs from trawling damage.
- 3.33 Most detail was provided on a multi- species ecosystem assessment of sandeels and seabirds in the North Sea. The Sandeel box was introduced (under the EU Common Fisheries Policy) to protect sandeels as a source of food for local predators, including seabirds. Since 2000 there has been a complete ban on industrial sandeel fishing in the Firth of Forth area, except for a small catch each year for monitoring purposes.
- 3.34 A Sandeel Population Availability Model (SPAM) was developed by scientists in Denmark in order to evaluate the complex spatial dynamics of sandeels on North Sea sand banks. This model has been used to predict the likely implications of seasonal and permanent MPAs in the North Sea and, together with a related model developed by scientists at Cefas, it attempts to follow the fate of individual fish and their predators. Ecosystem based modelling was also undertaken as part of an EU project called ‘Incofish’ using ‘Ecosim’ an approach which attempts to replicate all ecosystem components from plankton up to marine mammals and which can be used to carry out simulated fishing experiments. Similarly, ‘Ecospace’ which replicates Ecosim dynamics over a spatial grid of ‘homogeneous’ cells can be used to investigate the potential spatial impacts of MPAs for each ecosystem component. By way of example, predicted changes in distribution of fishing activity and commercial fish in the North Sea under four different MPA scenarios were shown. The predicted impact of closing proposed SACs in the southern North Sea (including the Dogger Bank) to all fishing were increases in sandeel biomass within the MPA, and increases in abundance of many sandeel predators and the total North Sea catch of all fish. The catch of sandeel vessels was however predicted to remain broadly unchanged as effort, if left unrestricted, is likely to be displaced to the fishing grounds near the Firth of Forth.
- 3.35 Conclusions from these studies were that the fisheries benefits of MPAs are not guaranteed, particularly if effort is not controlled as it is likely to simply be displaced elsewhere. Those MPAs which are set up to benefit commercial fisheries may therefore need to be very big, or numerous, and their boundaries may need to be ‘adaptive’ as the target species distributions change with time. Also that there can be complex ecosystem implications (trophic cascades) associated with implementing MPAs, and these are very difficult to predict.
- 3.36 A variety of approaches for selecting MPAs were described by other speakers in this session. Dr Tom Hooper of the Finding Sanctuary project described how community involvement supported by scientific data was the key to their project in the South West of England. The aim of the project is to plan a network of MPAs that is well thought through and has been designed to maximise the potential benefits to marine life and human uses. The five key components which will underpin the decision-making process are; design and delivery principles, an information base, data analysis primarily using a GIS, stakeholder review, and scientific review.
- 3.37 Professor Mike Kaiser of the University of Bangor illustrated how network design software might be used to assist decision making by revealing options for MPA networks and their various implications. The site selection algorithm MARXAN was used to select the best configuration of sites that would cumulatively meet targets for feature representation while minimising overall network ‘cost’ where the basic cost was defined as the area covered by the network. The work demonstrated that the same scenarios objectives could be achieved by a range of network configurations with a trade-off between minimising total network area and maximising spatial



compactness. Increasing the number of biodiversity features represented or their proportion had the effect of increasing overall network size. Requiring that targets were met across the JNCC Regional Sea Areas as opposed to the OPSAR Biogeographic Regions, generated slightly larger networks, and most scenarios generated MPA networks with similar spatial configurations.

- 3.38 Some of the scientific work underpinning site selection around the UK in the 0-200nm zone was described by Pete Gaches of Royal Haskoning and Viv Blyth-Skryme of JNCC. Royal Haskoning have been commissioned by Natural England to provide a summary report supported by survey data for the basis of SAC site selection in three 'Areas of Search'; Lyme Bay to Poole Bay; Salcombe, Eddystone & the Yealm; and Morecambe Bay. Using a manual setting out the selection criteria, data coverage reports have been produced for each site. A catalogue of new survey data required to meet the selection criteria has been developed and used to prepare site survey specifications. The field work is currently ongoing. In offshore areas, JNCC has run a limited programme of collaborative survey work to collect new survey data in Areas of Search identified primarily from British Geological Survey seabed geological map interpretations and bathymetry, supplemented by data from other sources. These should confirm the presence or absence of habitats listed in Annex 1 of the Habitats Directive as well as allowing site selection criteria to be applied, for boundaries of potential SACs to be proposed and to characterise the biological communities present within these areas.
- 3.39 Giles Bartlett described work being undertaken by the North Eastern Sea Fisheries Committee (NESFC) to help inform the design and management of MPAs, and to understand their effects on inshore fisheries. The starting point was mapping fishing activity in the Sea Fisheries District and these data now provide an unparalleled source of information on fishing activities off the coast of North East England. A project initiated in 2005 is learning more about the biological significance of three prohibited trawl areas within the District and, in 2007, work started on piloting how the Strategic Environmental Assessment (SEA) process might be applied in fisheries management. These projects have considerably increased the ability of the NESFC to understand how the District fisheries operate in a spatial context and to learn more about the impact such fisheries could have on the marine environment. The findings will be used by the NESFC to consider how fisheries impacts might be mitigated and where management can be improved.
- 3.40 Justine Saunders of ABPMer provided an overview of a new project which will be looking for "win-win" solutions in areas of overlap between wet renewable technologies (e.g. underwater turbines and wave energy devices) and Marine Conservation Zones (MCZ). The project will explore the circumstances in which benefits to both interests might be achievable as well as situations where this is unlikely to be possible. The aim is to inform; the development of proposals for wet renewable deployments and any accompanying strategic environmental assessments; the development of proposals for MCZs; and the allocation of marine space under a possible system of marine spatial planning being considered under the proposed Marine Bill.
- 3.41 The session concluded with a presentation from Ian Barrett of Defra describing the current role of statutory MPAs as a means of giving legal certainty of protection for important habitats, except in exceptional cases where development is in the overriding public interest. Many activities can go on in protected areas where they do not conflict with the objectives of the site. Other activities will however be incompatible with effective conservation so management measures will be needed to ensure that they are not causing damage. He set a challenge to Natural England to see if they are able to:
- publish an MPA network vision by October 2008;
  - identify possible sites by Easter 2009;
  - agree the network through stakeholder consultation;
  - recommend a network to ministers by Easter 2011;
  - formally consult on the final network from October 2011; and
  - make final recommendations to ministers by Easter 2012.

- 3.42 Provisions in the proposed Marine Bill will support this work and the timetable envisaged at present is for a draft Marine Bill to be published around April 2008 for pre-parliamentary scrutiny.
- 3.43 Key next steps identified by the speakers at this session were:
- Awareness raising campaigns and consultation with stakeholders and the wider population.
  - Stronger political support for MPAs.
  - A clearly defined legislative framework to support establishment of MPAs (Marine Bill).
  - Funding to support a national series of planning and site identification processes.
  - Use of MPA design algorithm tools but tempered with awareness that they will be constrained by the resolution and quality of the data used to inform them, that smaller planning units capture better habitat and species distributions inshore and that socio-economic parameters have an important influence on the outcome of the resulting design using the same conservation criteria.
  - Robust science to provide the ecological basis for an MPA network and for MPA designation to be underpinned by a rational and transparent approach.
  - Collaborative working to avoid duplication of survey effort and efficiently fill some of the data gaps in UK seas. Focusing data collection on selection criteria and management issues and maintaining effort to collect data in data-poor areas to support more strategic decision-making.
  - Pragmatic decision making using the best available information, whilst continuing to collect more information in data poor areas rather than constraining progress by waiting for same level of detailed information as some inshore areas.
  - More trial sites to understand effects of MPAs.
  - A clear vision of the aims of the MPA network.
  - Regular reports on progress and MPA site condition, to increase transparency and track progress against commitments.

#### Session 4: What else do we need to do to achieve our MPA targets?

- 3.44 The objective of this session was to discuss the actions that delegates believed were needed to establish an effective, coherent network of MPAs in the UK.
- 3.45 Dr Kate Tanner, set out the position of Wildlife & Countryside Link on how MPAs and MPA networks should be supported in the proposed Marine Bill. The recognition of the need for a new MPA mechanism and the commitment to setting up a network of effectively managed Marine Conservation Zones (MCZs) in the Marine Bill White Paper was welcomed. However Link also had a number of concerns including the apparent lack of ambition of the MPA proposals, the apparent weakness of the designation process outlined for MCZs, that balancing ecological, social and economic considerations is being promoted as the best way to achieve an ecosystem-based approach to management, and the piecemeal management framework suggested in the White Paper. Link believes that the nature conservation agencies should have a duty to designate MCZs, and that there should be a strong system of management for such areas. The MPA proposals in the Marine Bill should be strengthened and the legislation should be introduced as quickly as possible.
- 3.46 Tom Appleby described current obligations and mechanisms to establish MPAs in UK waters with particular reference to OSPAR, the Habitats Directive and the Common Fisheries Policy. Key legal concepts which set out what is possible are ultra vires whereby any regulatory body only has the powers and ambit delegated to it by Parliament and the jurisdiction, including specified geographical limits, of regulatory bodies. Their regulatory and ownership role is also key. The state acts as both regulator and in some cases owner of marine resource. It is therefore possible to have direct control of marine activities as well as the regulator.
- 3.47 Mary Lewis from the Countryside Council for Wales (CCW) described the contribution of Highly Protected Marine Reserves (HPMRs) in achieving MPA targets for Wales. CCW has advised the

Welsh Assembly that in order to deliver an ecosystem approach in Welsh waters, there is a need both to improve the management of the existing SAC series, and to incorporate some areas of very strict protection within Welsh waters to secure recovery and resilience of the maritime environment as a whole. In support of this, a project is underway to define ecological criteria to ensure HPMRs, combined with existing SACs, will fulfil MPA targets and that together they will provide an ecologically coherent, representative and well managed network of MPAs. At the same time the site identification process will be designed to secure as many mutual benefits with other interests as possible, both on and off site.

- 3.48 Independent consultant Dr Susan Gubbay presented the findings of a survey carried out during the conference to gauge the views of delegates on priority next steps. This is described below.

# 4 Delegate views on priorities for building the UK MPA network

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- 4.1 The World Commission on Protected Areas (WCPA) is developing a self-assessment checklist to enable those engaged in designing or managing MPAs networks to determine progress<sup>8</sup>. A supporting guide identifies a number of key aspects which are viewed as essential to developing successful MPA networks (Figure 2).
- 4.2 Twenty-one headings (principles) are identified and these are grouped into ecological criteria of network design; areas of best practice for establishing networks; broader considerations to help successfully embed MPA networks within a wider social context; and key elements to make MPA networks happen and achieve their goals (Table 1).
- 4.3 The checklist approach can be used to gauge progress against currently perceived 'best practice', to understand where the gaps or weaknesses are that should be addressed as future priorities and, if used regularly, to track progress towards an effectively established and lasting MPA network.

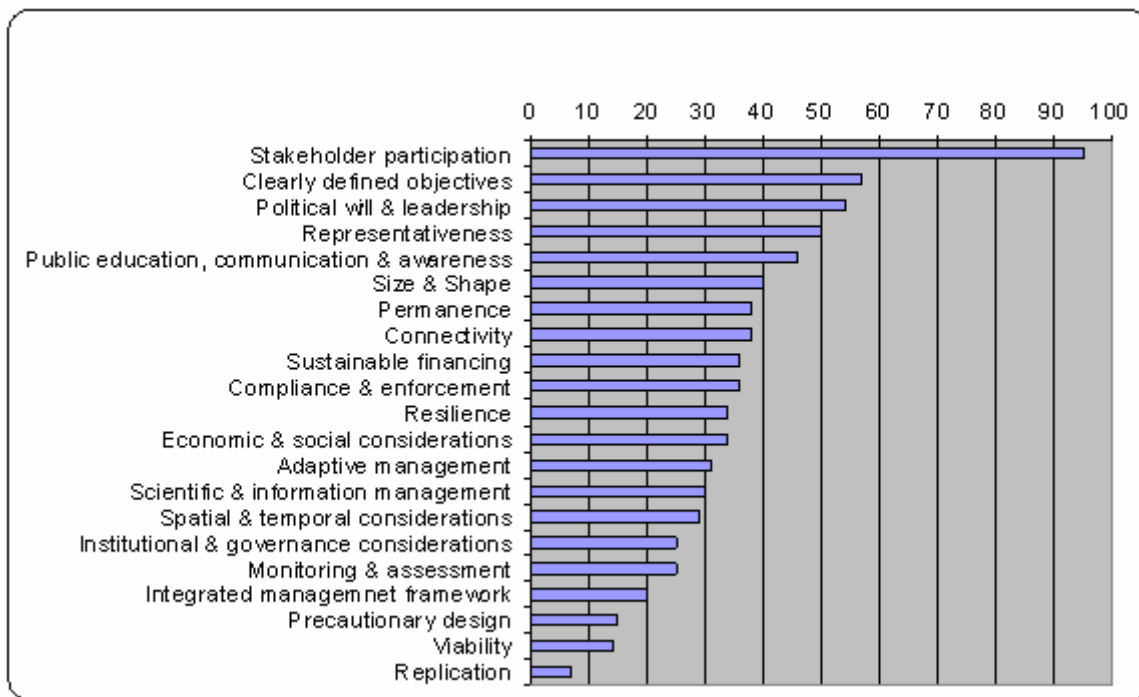
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<sup>8</sup>Day, J.C. & Laffoley, D.d'A (2006) Self-assessment checklist for building networks of MPAs. WCPA IUCN.

**Table 1** Key principles in self-assessment checklist for building networks of MPAs in IUCN/WCPA checklist (from Day & Laffoley, 2006)

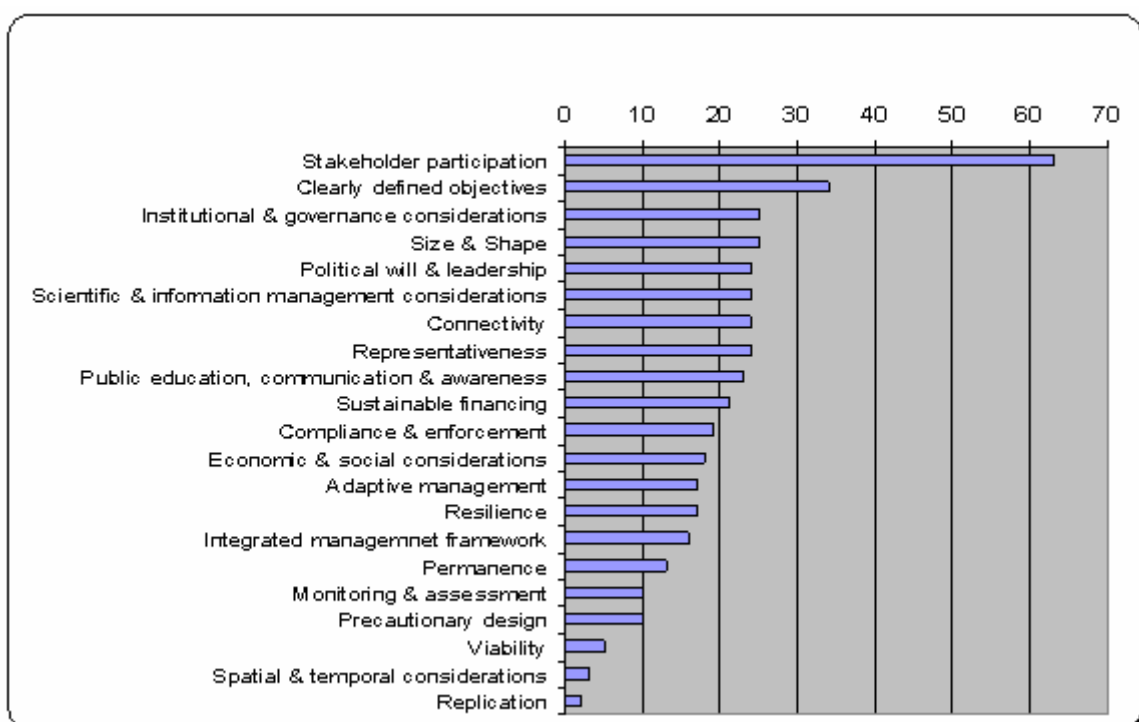
Topic	
Ecological Design	1 Representativeness (representative examples of known marine habitats and/or ecological processes)
	2 Replication (spatially separate replicates of no-take areas)
	3 Viability (includes self-sustaining viable no-take areas)
	4 Precautionary design
	5 Permanence (backing by efficient combination of legislative instruments which provide long-term protection)
	6 Connectivity (maximise known ecological processes)
	7 Resilience (% free from extractive or habitat altering activities or other significant human-induced stresses)
	8 Size & shape (design and implement to maximise effectiveness to achieve ecological objectives)
Best Practice	9 Clearly defined objectives
	10 Stakeholder participation
	11 Integrated management framework (planning & management at national to local scales)
	12 Adaptive management
Broader Considerations	13 Economic & social considerations
	14 Spatial & temporal considerations (design includes consideration of ecological processes, connectivity and external influences)
	15 Scientific & information management considerations
	16 Institutional & governance considerations (vertical and horizontal integration amongst agencies, regional and local groups)
Key Elements	17 Political will & leadership
	18 Public education, communication & awareness
	19 Monitoring & Assessment
	20 Sustainable financing
	21 Compliance & enforcement

4.4 The IUCN/WCPA checklist was used to structure feedback from delegates in two ways. Firstly, in order to get an overall impression, delegates were asked to choose up to five statements which most closely described what they believed should be the current focus of efforts to build a coherent network of MPAs in the UK. This was a rapid assessment process and it also enabled delegates to become familiar with the checklist terminology. One hundred and thirty five forms were returned with a total of 754 responses. The responses are summarised in Figure 6.



**Figure 6** Priorities identified by delegates using checklist

4.5 A second form was used to elicit more detail about the top three priorities identified by each delegate, asking them to explain why these were considered to be priorities. One hundred and twenty-eight forms were returned and 417 priorities were described in detail. Figure 7 shows the spread across the checklist categories. These have been formatted and are available as an Excel spreadsheet.



**Figure 7** Priorities identified by delegates in detailed feedback

4.6 The responses are influenced by many factors including the stage the UK is at in building a MPA network and the mix of delegates present at the meeting. There was a very clear message that stakeholder participation was critical and a high priority. This dominates the feedback even more

if responses on this are combined with the very similar objectives of ‘public education, communication and awareness’. Detailed responses give an indication of why this was so important. The other high scoring actions relate to clearly defined objectives, political will and leadership, design factors such as size and shape, representativeness and connectivity, and scientific and information management considerations. Delegate views on these highest priorities are summarised below including some direct quotes in italics.

## Stakeholder participation

- 4.7 The clearest and highest priority identified by delegates concerned the need for stakeholder participation in building the UK MPA network. This was seen as essential at all stages of the process. Without it, failure was considered to be a real possibility. Many reasons were given to explain why stakeholder participation should be a priority. They included ensuring equitability, compliance and pragmatic management arrangements and creating a sense of ownership of the process and the resulting MPAs. Stakeholder participation was also considered to be invaluable in ensuring that local knowledge informs the design and management of the network, as well as getting a good understanding of issues which may arise and seeking their early resolution. For example by *“using the knowledge, experience and skills of all stakeholder groups to better identify issues which may arise and appropriate mitigation whilst encouraging ownership at an early stage”*.
- 4.8 The inclusive approach that is at the heart of stakeholder participation was considered essential in building support for MPAs and for compliance of the measures proposed to manage them. Without the extensive discussions which are a feature of stakeholder participation, leading to a mutually beneficial agreed approach it was likely that enforcing protection within MPAs would be very difficult. Stakeholder participation is seen as key to success of MPAs, carrying users with you and seeking shared solutions wherever possible. It was seen as *“essential to create a sense of ownership also to educate on the importance of long term preservation of biodiversity and healthy natural ecosystems for long term economic and social sustainability”*.

## Clearly defined objectives

- 4.9 There was a great deal of support for clearly defined objectives of the MPA network as a prerequisite to making progress in building the MPA network *“then we all know what we are talking about”*. Given that such objectives have been stated in numerous policy documents and commitments, this feedback from delegates is sending a strong message that such objectives need greater clarity or perhaps need to be elaborated in more detail. One respondent, for example, expressed a view that the polarisation and stalemate over further implementation was linked in most cases to ‘fuzzy’ objectives. *“If MPA networks are going to work it is vital that objectives are understandable; they need structure and future visions otherwise they will not gain support either by funding or by the public”*.
- 4.10 The importance of clearly defined objectives was highlighted by referring to their role as providing constant reference points for benchmarking and adaptive management. MPAs under the Common Fisheries Policy were cited as an example where the absence of clear objectives or goals has made it difficult to establish monitoring indices and discrete “success criteria”.
- 4.11 Clear objectives were also seen as a means of focusing the minds of managers and stakeholders deciding on what are the clear and realistic benefits, what can be expected from MPA networks and the *“only way to enact a plan effectively and efficiently”*. Clear objectives were therefore seen as essential to identifying the necessary attributes of a network and making them clear to stakeholders. Without them there is no direction and consequently plenty of scope for confusion which creates tension and opposition to building a MPA network.



## Institutional and governance considerations

- 4.12 Comments on the need for priority action on institutional and governance issues ranged from wider-European considerations, such as dealing with the effects of any displacement of fishing activities from MPAs to local actions such as providing effective and representative structures which can ensure that management delivers objectives. Institutional and governance considerations were considered necessary to provide the capacity to manage MPAs and to provide coherence and compliance among the various agencies, groups and organisations that need to act to establish and manage a MPA network. A successful MPA network will only occur with co-ordination and communication. Comment was made that we *“need a joined up approach to make effective change because without coherence and compliance among the various agencies, groups and organisations it is futile to try and establish a network of MPAs. Gaps in knowledge, regulation and enforcement prevent effective management and wastes money. Successful MPAs (and a successful network) will only occur with co-ordination and communication”*.
- 4.13 The need to progress the proposed Marine Bill was raised under this heading. Reasons given included; providing a strong national level legislative framework for the MPA network; legally binding requirements for nationally important marine sites, for example by making it a statutory duty for MPAs to be designated; and an effective MPA mechanism. *“Without the statutory driver there will be no legal process for achieving the network that doesn’t just rely on the policy of the day”*. Comment was also made on the need for the legislation to set out a clear vision for the purpose of an MPA network, with conservation objectives clearly defined.
- 4.14 At a European level, delegate comments on priorities included views on the need to tackle aspects of the EU legislative Framework, specifically Annexes in the Habitats Directive and incorporate the need for MPAs into the developing Marine Strategy Framework Directive.
- 4.15 A related issue of adaptive management was prioritised by delegates as being crucial to retaining both the confidence of stakeholders and to protect biodiversity. This approach would enable action to be taken where there were uncertainties and keep improving performance by responding to outcomes from monitoring work. An adaptive management philosophy recognises the need to respond to new challenges as well as being an acknowledgement that circumstances change.

## Political will and leadership

- 4.16 Strong views were expressed in the delegate feedback highlighting the importance of political will and leadership as a priority for establishing the MPA network. It was recognised as a key driver but there was also considerable criticism of the current situation. For example the view was expressed that there had been *“years of talk and remarkably little government-led action, with major discrepancies between the supportive political line and political action”*. Also it was suggested that nothing meaningful of sufficient scale will happen without political will and leadership, and that in its absence *“a continued domination by misinformation, vested socio-economic interests and reluctance of managing authorities/departments to take appropriate action”*.
- 4.17 The importance of political will and leadership in relation to the Marine Bill was highlighted to get a strong statutory MPA mechanism and to demonstrate the importance of this to all stakeholders. Political backing was also seen as key to funding and delivering the MPA network and for long-term planning of MPAs.

## Design principles

- 4.18 A general comment on the design of any future MPA network was that there was a need to show consistency, for it to be designed on the basis of scientific principles, and that these need to be



explained clearly to minimise potential opposition. If the siting of MPAs could be comprehensively justified, their implementation was considered more likely to be accepted by the general public.

- 4.19 The most frequently scored design principles for priority action were concerned with the size and shape of the MPA network, connectivity and representativeness. An overall comment was that a network that is “*connected, large enough and representative is essential if we are to have seas for future generations that are productive*”. Size and shape considerations were identified by some delegates as being key to determining whether sites can achieve their objectives, for example by protecting the mandated species or excluding harmful impacts.
- 4.20 Protecting a representative network was seen as a fundamental part of a more holistic ecosystem based approach rather than what was described as “*the current piecemeal approach focusing on priority species and habitats*”. A similar point was that the real value of MPAs is in the efficiency of the network therefore size and proximity of MPAs is very important.
- 4.21 Connectivity in network design was seen as essential for maximising the ecological benefits of MPAs. This was considered to be a way of making best use of sites that are designated and allowing maximum protection of species that do not occur within MPAs. Other benefits were seen as increasing resilience by allowing movement of species beyond MPA boundaries and helping recovery of degraded adjacent areas.
- 4.22 Benefits envisaged from including representative areas within the network included providing the necessary basis for assessing the impacts of human activities, as well as being essential for maintenance of biodiversity otherwise what was not seen as being particularly special at the present time may become the rare and threatened species and habitats of the future. Other reasons given for the importance of representativeness in an MPA network were that “*most of the goods and services we derive from the sea are the product of ‘ordinary’ habitats not rare ones*” and that without representativeness, connectivity would not be fully effective. More generally the ecosystem approach demands that significant areas of all major habitat types are protected.

## Scientific and information management considerations

- 4.23 Having a strong evidence-based case for MPAs was seen as critical for gaining public support as well as being vital to the design of the MPA network and to “*build confidence in the decision making process*”. Underpinning the process with good science and information management would give it credibility whilst poor science was seen as likely to lead to inappropriate designation. Communicating the results of scientific studies was also important to build confidence in the decision making process and dispel myths about MPAs. Better communication between scientist and those who create laws and policy was also essential as only when science is properly understood and transposed into effective policies and legislation can there be a truly coherent network of MPAs, and one that is flexible to cope with changing ecological, economic, political and social systems.
- 4.24 Clear, objective, scientific evidence was also seen as essential to management decisions. “*We need clear, objective scientific evidence to present to stakeholders to demonstrate and convince them of the importance of no-take zones versus multiple use areas and to help in their design*”. A good evidence based is needed on both ecology and impacts and pressures. A related comment was to also have effective and robust monitoring methods and reporting procedures, with transparent, accessible outputs.

## Economic and social factors

- 4.25 The WCPA checklist categorises economic and social factor as broader considerations for network development. Taking account of economic and social factors was seen as important for gaining trust, and promoting the benefits of MPAs to all. “*People are inextricably linked to the*

*marine environment and consequently there is a need to factor this into reserve design alongside ecological factors*". This was not only seen as beneficial to subsequent compliance of management measures introduced for MPAs but also *"anchors the process in the real world"*. There were different views on the stage at which economic and social factors should be addressed but a general view that it was essential to stop what was seen as a social/economic versus environment/science divide.

## Other key elements

- 4.26 Public education, communication and awareness is listed as a key element in the WCPA checklist. Many of the comments on its importance were similar to those relating to the issue of stakeholder participation described above. Making people aware of their marine wildlife/environment, being proud of it, recognising it has value and feeling that they want to play a part in its protection was seen as extremely important. Benefits identified included fostering enthusiasm and support for MPAs, more rational debates with informed view points, pressure for change, ownership, easing the burden of enforcement, and helping to provide the political momentum for progress.
- 4.27 Monitoring and assessment is essential to check on the effectiveness of management strategies, whether the objectives of the MPA are being met, report on changes and help to learn why such changes are taking place. Monitoring and assessment is also fundamental to any management system which seeks to be adaptive.
- 4.28 The success of MPAs was viewed as dependant on appropriate resource use rules and subsequent compliance and enforcement. Without this they were likely to serve no useful function and confidence in the management arrangements would be undermined. *"It is vital that MPAs are permanent and representative of a range of habitats. They must also be fully protected from extractive activities to allow habitat regeneration and population rebuilding. Full protection also improves enforcement and compliance – makes it easier"*. Public awareness should ease this burden and if groups who use the sea a lot/ local uses were involved this should create a sense of ownership. Ultimately effective compliance and enforcement was seen as the difference between protecting sites from damage or creating 'paper parks'.
- 4.29 Delegates prioritising the need for sustainable financing commented that *"it underpins the effectiveness of the entire MPA process"*. It was necessary for consistency, supporting the continued management of MPAs, maintaining knowledge and expertise, and also providing resources for monitoring, management, education, interpretation and enforcement. Long term funding would be able to support industry buy out if needed, and research and monitoring on all sites to allow for a true and more accurate assessment of the value of MPAs for all objectives. High levels of stakeholder participation raise expectations therefore managers need to be clear about financing options in the long term. Without funding for a comprehensive, integrated progress, establishing an MPA network was seen as likely to remain an aspiration or have insufficient capacity to deliver long term benefits and goals. *"Without long-term funding and public backing, schemes will founder"*.

# 5 Concluding comments

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- 5.1 The meeting was timely and a valuable opportunity for MPA practitioners to take stock and consider priorities for the future in building a coherent network of MPAs in the UK. The meeting also catalysed the debate at a critical stage in the process given the opportunities presented by the Marine Bill and the rapidly approaching target timetable for establishing the MPA network.
- 5.2 The presentations illustrated that considerable progress has been made on a number of fronts. This is largely down to the requirements of the Habitats Directive which has driven the designation of marine Natura 2000 sites for selected species and habitats. Key issues now are not only how to broaden out the process to be more representative of marine biodiversity in UK waters but also to put more attention on building a coherent network of MPAs. The conference was an occasion to learn about the priorities which delegates believed should be addressed as next steps in building the MPA network.
- 5.3 The very clear, overwhelming, message from delegates was that stakeholder participation should be the top priority in building the MPA network. This is already an accepted part of the UK approach and there can be no doubt that MPA practitioners wish this continue, increase, and be an integral part of the process at all stages. It was seen as fundamental to the successful selection, establishment, management and delivery of the objectives of individual MPAs and of the MPA network.
- 5.4 The need for clearly defined objectives was also a strong message from the meeting. In some ways this is surprising given the fact that the objectives of MPA networks are stated in various commitments made by the UK or to which the UK is a signatory. However these objectives are, by their very nature, mostly described in very general terms. Feedback from the meeting reveals that practitioners and stakeholders require more than this. Clearly defined objectives are fundamental not only to gaining good understanding of what a network might be look like but also the implications of its establishment as well as whether or when it might be judged as being successful.
- 5.5 Political will and leadership scored highly as did institutional and governance structures as priority areas for progress. This was no doubt influenced by the current opportunity of introducing and improving provisions to support an MPA network in the proposed Marine Bill for which progress is very largely dependent on political will and leadership. However it was also seen as essential to delivering an effective MPA network in the long term.
- 5.6 Overall there was some sense of frustration at the meeting about the pace of progress given the considerable evidence base which has been built up over the last two decades on the benefits of MPAs for biodiversity conservation. Nevertheless the positive and constructive mood of the meeting showed both the desire and potential to go forward, at the same time as giving some clear and constructive messages about where delegates see the priorities in the next steps towards building a coherent network of Marine Protected Areas.

# Appendix 1 – Delegates list

**Table A** Delegates list

Name	Address	Email	Telephone
Annabelle Aish	JNCC Monkstone House City Road Peterborough PE1 1JY	<a href="mailto:annabelle.aish@jncc.gov.uk">annabelle.aish@jncc.gov.uk</a>	01733 866872
Phil Alcock	Scottish Government Area GH-93 Victoria Quay Edinburgh EH6 6QQ	<a href="mailto:phil.alcock@scotland.gsi.gov.uk">phil.alcock@scotland.gsi.gov.uk</a>	0131 2446602
John Anderson	Seafish 18 Logie Mill Logie Green Road Edinburgh EH7 4HS	<a href="mailto:john_anderson@seafish.co.uk">john_anderson@seafish.co.uk</a>	0131 5248662
Tom Appleby	University of Bristol 13 Salthrop Road Bishopston BS7 9DP	<a href="mailto:tps.appleby@bristol.ac.uk">tps.appleby@bristol.ac.uk</a>	0117 9429232
Jen Ashworth	Natural England Northminster House Peterborough PE1 1UA	<a href="mailto:jen.ashworth@naturalengland.org.uk">jen.ashworth@naturalengland.org.uk</a>	01733 455240
Geoff Audcent	Defra 1/05 Temple Quay House 2 The Square Bristol BS1 6EB	<a href="mailto:geoff.audcent@defra.gsi.gov.uk">geoff.audcent@defra.gsi.gov.uk</a>	0117 3728339
Dr Martin Bailey	Royal Haskoning Marlborough House Marlborough Crescent Newcastle-upon-Tyne NE1 4EE	<a href="mailto:m.bailey@royalhaskoning.com">m.bailey@royalhaskoning.com</a>	0191 2111314
Ian Barrett	Defra European Wildlife Division 1/07 Temple Quay House 2 The Square Bristol BS1 6EB	<a href="mailto:ian.barrett@defra.gsi.gov.uk">ian.barrett@defra.gsi.gov.uk</a>	
Giles Bartlett	North Eastern Sea Fisheries Committee Town Hall Bridlington YO16 4LP	<a href="mailto:giles.bartlett@eastriding.gov.uk">giles.bartlett@eastriding.gov.uk</a>	01482 393515
Elizabeth Bayer	University of Hull Law School Cottingham Road Hull HU6 7RX	<a href="mailto:e.bayer@2005.hull.ac.uk">e.bayer@2005.hull.ac.uk</a>	01482 466368
Fiona Becker	Scottish Power Environment and Consents Cathcart Business Park Spean Street Glasgow G44 4BE	<a href="mailto:fiona.becker@scottishpower.com">fiona.becker@scottishpower.com</a>	0141 5683399
John Beech	York Moors National Park The Moors Centre Danby Whitby North Yorkshire	<a href="mailto:j.beech@northyorkmoors-npa.gov.uk">j.beech@northyorkmoors-npa.gov.uk</a>	01439 770657 : 07968 391448
Christina Bech	CMS Candle Cottage Kempley Glos GL18 2BU	<a href="mailto:bob.earll@coastms.co.uk">bob.earll@coastms.co.uk</a>	01531 890415
Sarah Benfield	Argyll + Bute Council Marine Development Unit Lorn House Albany Street Oban PA34 4AW	<a href="mailto:sarah.benfield@argyll-bute.gov.uk">sarah.benfield@argyll-bute.gov.uk</a>	01546 604137
Niall Benson	Durham County Council County Hall Durham DH1 5UQ	<a href="mailto:niall.benson@durham.gov.uk">niall.benson@durham.gov.uk</a>	0191 3834640

Table continued...

Name	Address	Email	Telephone
Andrew Best	Natural England 25 St Paul's Rise Addingham Ilkley West Yorkshire LS29 0QD	<a href="mailto:andrew.best@naturalengland.org.uk">andrew.best@naturalengland.org.uk</a>	01943 839483
Doug Beveridge	National Federation of Fishermen's Organisations NFFO Office Marsden Road Grimsby N E Lincs DN31 3SG	<a href="mailto:dbeveridge@nffo.org.uk">dbeveridge@nffo.org.uk</a>	01472 352141
Naomi Biggs	Thanet Coast Project PO Box 9 Cecil Street Margate Kent CT9 1XZ	<a href="mailto:naomi.biggs@thanet.gov.uk">naomi.biggs@thanet.gov.uk</a>	01843 577409
Helen Bloomfield	Newcastle University School of Marine Science and Technology Ridley Building Claremont Road Newcastle NE1 7RU	<a href="mailto:h.j.bloomfield@ncl.ac.uk">h.j.bloomfield@ncl.ac.uk</a>	01912 225607
Viv Blyth-Skyrme	JNCC Monkstone House City Road Peterborough PE1 1JY	<a href="mailto:viv.blyth-skyrme@jncc.gov.uk">viv.blyth-skyrme@jncc.gov.uk</a>	
Rob Blyth-Skyrme	Natural England Northminster House Peterborough PE1 1UA	<a href="mailto:rob.blyth-skyrme@naturalengland.org.uk">rob.blyth-skyrme@naturalengland.org.uk</a>	01733 455274
Hannah Bodley	Newcastle University 421 Sutton Road Walsall West Midlands W55 3AS	<a href="mailto:bodleyhm@hotmail.com">bodleyhm@hotmail.com</a>	01922 642040 : 07811 769264
Natalie Bown	Newcastle University 133 Sidney Grove Fenham Newcastle upon Tyne NE4 5PE	<a href="mailto:n.k.bown@ncl.ac.uk">n.k.bown@ncl.ac.uk</a>	0191 2225607
Simon Brockington	Natural England Northminster House Peterborough PE1 1UA	<a href="mailto:simon.brockington@naturalengland.org.uk">simon.brockington@naturalengland.org.uk</a>	01733 455119
John Broughton	Environment Agency Coverdale House Aviator Court Amy Johnston Way York YO30 4GZ	<a href="mailto:john.broughton@environment-agency.gov.uk">john.broughton@environment-agency.gov.uk</a>	01904 822584
Rachel Brown	University of York 14 Nesfield Close Cayton Scarborough YO11 3UR	<a href="mailto:rib504@york.ac.uk">rib504@york.ac.uk</a>	01723 581204
Kate Bull	Natural England Phoenix House 32-33 North Street Lewes East Sussex BN7 2PH	<a href="mailto:kate.bull@naturalengland.org.uk">kate.bull@naturalengland.org.uk</a>	07766 440496
Blaise Bullimore	Carmarthen Bay & Estuaries EMS Fairhaven Tiers Cross Haverfordwest Pembrokeshire SA62 3DG	<a href="mailto:cbe.ems@virgin.net">cbe.ems@virgin.net</a>	01437 890984
Alan Bullivant	Natural England 69 Godfrey Way Great Dunmow Essex CM6 2SE	<a href="mailto:alan.bullivant@naturalengland.org.uk">alan.bullivant@naturalengland.org.uk</a>	01371 876451
Matthew Bunce	University of Plymouth Marine & Coastal Policy Unit 5th floor Portland Building Plymouth PL4 8AA	<a href="mailto:m.bunce_alumni@lse.ac.uk">m.bunce_alumni@lse.ac.uk</a>	01752 600600

Table continued...

Name	Address	Email	Telephone
Sue Burton	Pembrokeshire Marine SAC Captain Superintendants Building Admiralty Way The Royal Dockyard Pembroke Dock SA72 6TD	<a href="mailto:sue@pembrokeshiremarinesac.org.uk">sue@pembrokeshiremarinesac.org.uk</a>	01646 696108
Rory Campbell	Scottish Fishermens Federation 24 Rubislaw Terrace Aberdeen AB10 1XE	<a href="mailto:r.campbell@sff.co.uk">r.campbell@sff.co.uk</a>	01224 647058
Bryony Chapman	Kent Wildlife Trust Tyland Barn Sandling Maidstone Kent ME14 3BD	<a href="mailto:bryony.chapman@kentwildlife.org.uk">bryony.chapman@kentwildlife.org.uk</a>	01622 656464
Tony Child	Thanet Coast Project c/o Thanet District Council PO Box 9 Cecil Street Margate Kent CT9 1XZ	<a href="mailto:tony.child@thanet.gov.uk">tony.child@thanet.gov.uk</a>	01843 577000
Lisa Chilton	The Wildlife Trusts (SE Region) The Kiln Mather Road Newark NG24 1WT	<a href="mailto:lbrowning@wildlifetrusts.org">lbrowning@wildlifetrusts.org</a>	01489 774436
Ingrid Chudleigh	Natural England Countryside Management Centre Coldharbour Farm Wye, Ashford Kent TN25 5DB	<a href="mailto:ingrid.chudleigh@naturalengland.org.uk">ingrid.chudleigh@naturalengland.org.uk</a>	01233 811228
Rob Clark	Sussex Sea Fisheries District Committee Unit 6, Highdown House Shoreham Airport Shoreham-by-Sea West Sussex BN43 5PB	<a href="mailto:admin@sussex-sfc.gov.uk">admin@sussex-sfc.gov.uk</a>	01273 454407
Keith Clarkson	RSPB RSPB Old Moor Old Moor Lane Barnsley S73 0YF	<a href="mailto:keith.clarkson@rspb.org.uk">keith.clarkson@rspb.org.uk</a>	01226 273784
Roger Coggan	Cefas Remembrance Avenue Burnham-on-Crouch Essex CM0 8HA	<a href="mailto:roger.coggan@cefas.co.uk">roger.coggan@cefas.co.uk</a>	01621 787210
Kate Cole	East Sussex County Council Transport & Environment County Hall, St Anne's Crescent Lewes East Sussex BN7 1UE	<a href="mailto:kate.cole@eastsussex.gov.uk">kate.cole@eastsussex.gov.uk</a>	01273 481677
Liza Cole	St Abbs & Eyemouth Voluntary Marine Reserve Ranger's Office Northfield St Abbs Berwickshire TD14 5QF	<a href="mailto:lcole@nts.org.uk">lcole@nts.org.uk</a>	01890 771443
Mat Cork	Haskoning UK Ltd Rightwell House Bretton Peterborough PE3 8DW	<a href="mailto:m.cork@royalhaskoning.com">m.cork@royalhaskoning.com</a>	01733 334455
Roger Covey	Natural England Trevint House Strangways Villas Truro Cornwall TR1 2PA	<a href="mailto:roger.covey@naturalengland.org.uk">roger.covey@naturalengland.org.uk</a>	01872 265723
Joanna Crouch	Wildlife and Countryside Link 89 Albert Embankment London SE1 7TP	<a href="mailto:joanna@wcl.org.uk">joanna@wcl.org.uk</a>	02078 208600
Robin Crump	Chairman - Skomer Marine Nature Reserve Thrustle Mill Cottage Freshwater East Pembroke SA71 5LT	<a href="mailto:fsc.robincrump@ukonline.co.uk">fsc.robincrump@ukonline.co.uk</a>	01646 684832

Table continued...



Name	Address	Email	Telephone
Louise Cunningham	The Scottish Government 1-J88 Victoria Quay Leith Edinburgh EH6 6QQ	<a href="mailto:louise.cunningham@scotland.gsi.gov.uk">louise.cunningham@scotland.gsi.gov.uk</a>	01312 441447
Carol Daniels	Scottish Natural Heritage Great Glen House Leachkin Road Inverness Invernesshire IV3 8NW	<a href="mailto:carol.daniels@snh.gov.uk">carol.daniels@snh.gov.uk</a>	01463 725017
Jamie Davies	Higher Hannaford Farm Poundsgate Newton Abbot Devon TQ13 7NX	<a href="mailto:jamie_g_davies@yahoo.co.uk">jamie_g_davies@yahoo.co.uk</a>	07972 775096
Chris Davis	Natural England Level 2 Renslade House Bonhay Road Exeter Devon EX4 3AW	<a href="mailto:chris.davis@naturalengland.org.uk">chris.davis@naturalengland.org.uk</a>	01392 889774
Barrie Deas	National Federation of Fishermen's Organisations NFFO Office Marsden Road Grimsby N E Lincs DN31 3SG	<a href="mailto:bdeas@nffo.org.uk">bdeas@nffo.org.uk</a>	01472 352141
Conor Donnelly	Natural England The Maltings Wharf Road Grantham Lincs NG31 6BH	<a href="mailto:conor.donnelly@naturalengland.org.uk">conor.donnelly@naturalengland.org.uk</a>	01476 584800
Simon Drew	Entec UK Ltd fao Alex James, Northumbria House Regent Centre Gosforth Newcastle-upon-Tyne NE3 3PX	<a href="mailto:training@entecuk.co.uk">training@entecuk.co.uk</a>	01912 726350
Mark Duffy	Natural England Northminster House Peterborough PE1 1UA	<a href="mailto:mark.duffy@naturalengland.org.uk">mark.duffy@naturalengland.org.uk</a>	01733 455000
Calum Duncan	Marine Conservation Society 3 Coates Place Edinburgh EH3 7AA	<a href="mailto:scotland@mcsuk.org">scotland@mcsuk.org</a>	01312 666360
Phil Durrant	Gardline Environmental Ltd Admiralty Road Great Yarmouth Norfolk NR30 3NG	<a href="mailto:phil.durrant@gardline.co.uk">phil.durrant@gardline.co.uk</a>	01493 845600
Phil Dyke	The National Trust Pill Farm Trevilla Feock Truro Cornwall TR3 6QG	<a href="mailto:phil.dyke@nationaltrust.org.uk">phil.dyke@nationaltrust.org.uk</a>	01872 862945
Dr Bob Earll	CMS Candle Cottage Kempsey Glos GL18 2BU	<a href="mailto:bob.earll@coastms.co.uk">bob.earll@coastms.co.uk</a>	01531 890415
Daniel Edwards	Finding Sanctuary Dorset County Council Dorchester Dorset DT1 1XJ	<a href="mailto:daniel.edwards@southwestfoodanddrink.com">daniel.edwards@southwestfoodanddrink.com</a>	01305 224877
Hugh Edwards	Environment and Heritage Service Klondyke Building, Cromac Avenue Gasworks, Lower Ormeau Avenue Belfast Co Antrim BT7 2JA	<a href="mailto:hugh.edwards@doeni.gov.uk">hugh.edwards@doeni.gov.uk</a>	028 9069649
Denise Exton	Scottish Natural Heritage Carmont House The Crichton Bankend Road Dumfries DG1 4ZF	<a href="mailto:denise.exton@snh.gov.uk">denise.exton@snh.gov.uk</a>	01387 237010
Robbie Fisher	Natural England Genesis 1 University Road Heslington York YO10 5ZQ	<a href="mailto:robbie.fisher@naturalengland.org.uk">robbie.fisher@naturalengland.org.uk</a>	01904 435500
Liam Fisher	Natural England Pier House Wallgate Wigan WN3 4AL	<a href="mailto:liam.fisher@naturalengland.org.uk">liam.fisher@naturalengland.org.uk</a>	01942 614017

Table continued...

Name	Address	Email	Telephone
Bernie Fleming	Natural England 2nd Floor Bullring House Northgate Wakefield WF1 3BJ	<a href="mailto:bernard.fleming@naturalengland.org.uk">bernard.fleming@naturalengland.org.uk</a>	
Kay Foster	Cumbria Wildlife Trust Alaska Building Ullswater Road Penrith Cumbria CA11 7EH	<a href="mailto:kayf@cumbriawildlifetrust.org.uk">kayf@cumbriawildlifetrust.org.uk</a>	01768 212522
Pete Gaches	Royal Haskoning Stratus House Emperor Way Exeter EX1 3QS	<a href="mailto:p.gaches@royalhaskoning.com">p.gaches@royalhaskoning.com</a>	01392 447999
Prof Steve Gaines	Marine Science Institute UCSB Santa Barbara CA 93106-6150 USA	<a href="mailto:gaines@msi.ucsb.edu">gaines@msi.ucsb.edu</a>	001 805 893 3764
Fiona Gell	Isle of Man Government Knockaloe Farm Patrick Isle of Man IM5 3AJ	<a href="mailto:fiona.gell@gov.im">fiona.gell@gov.im</a>	01624 843109
Paul Gilliland	Natural England Northminster House Peterborough PE1 1UA	<a href="mailto:paul.gilliland@naturalengland.org.uk">paul.gilliland@naturalengland.org.uk</a>	07879 430319
Melanie Gomes	WWF NI and Ulster WT c/o Ulster Wildlife Trust 3 New Line Crossgar Co Down BT30 9EP	<a href="mailto:melanie.gomes@ulsterwildlifetrust.org">melanie.gomes@ulsterwildlifetrust.org</a>	028 44830282
Harry Goudge	Marine Ecological Solutions Ltd 17 Dale Street Menai Bridge Anglesey LL59 5AH	<a href="mailto:harry@marine-ecosol.com">harry@marine-ecosol.com</a>	07849 490064
Mark Gray	Seafish Industry Authority Seafish House St Andrew's Dock Hull E Yorks HU3 4QE	<a href="mailto:j_rimington@seafish.co.uk">j_rimington@seafish.co.uk</a>	01482 327837
John Green	Northumberland Sea Fisheries Committee Unit 60B South Nelson Industrial Estate South Nelson Road Cramlington NE23 1WF	<a href="mailto:nsfc@nsfc.org.uk">nsfc@nsfc.org.uk</a>	
Sue Gubbay	4 Bamford Cottages Upton Bishop Herefordshire HR9 7TT	<a href="mailto:sgubbay@mayhill.wyenet.co.uk">sgubbay@mayhill.wyenet.co.uk</a>	01989 780705
Hector M Guzman	Smithsonian Tropical Research Institute Naos Marine Laboratory PO Box 0843-03092 Amador Panama	<a href="mailto:guzmanh@si.edu">guzmanh@si.edu</a>	00507 212-8733
Nikki Hale	EEFPO Murray Street Fish Docks Grimsby DN31 3RD	<a href="mailto:enquiries@eefpo.co.uk">enquiries@eefpo.co.uk</a>	01472 268555
Michael H Hardy	Northumberland Sea Fisheries Committee Unit 60B South Nelson Industrial Estate South Nelson Road Cramlington NE23 1WF	<a href="mailto:nsfc@nsfc.org.uk">nsfc@nsfc.org.uk</a>	01670 731399
Sue Hawley	Isle of Wight Estuaries Project Enterprise House St Cross Business Park Marks Brook Newport PO30 5WB	<a href="mailto:susan.hawley@iow.gov.uk">susan.hawley@iow.gov.uk</a>	01983 823893
Emma Hawthorne	Natural England Bullring House Northgate Wakefield WF1 3BJ	<a href="mailto:emma.hawthorne@naturalengland.org.uk">emma.hawthorne@naturalengland.org.uk</a>	01924 334508

Table continued...



<b>Name</b>	<b>Address</b>	<b>Email</b>	<b>Telephone</b>
Ian Hay	The Macaulay Institute Craigiebuckler Aberdeen AB15 8QH	<a href="mailto:i.hay@macaulay.ac.uk">i.hay@macaulay.ac.uk</a>	01224 498200
Carolyn Heeps	The Crown Estate 16 New Burlington Place London W1S 2HX	<a href="mailto:carolyn.heeps@crownestate.co.uk">carolyn.heeps@crownestate.co.uk</a>	02078 515187
Gillian Hendry	Scottish Power Renewables Cathcart Business Park Spean Street Glasgow G44 4BE	<a href="mailto:gillian.hendry@scottishpower.com">gillian.hendry@scottishpower.com</a>	01415 683394
Keith Hiscock	Marine Biological Association Citadel Hill Plymouth PL1 2PB	<a href="mailto:khis@mba.ac.uk">khis@mba.ac.uk</a>	01752 633333
Matthew Hobbs	Baker Shepherd Gillespie Wyastone Business Park Wyastone Leys Monmouth NP25 3SR	<a href="mailto:m.hobbs@bsg-ecology.com">m.hobbs@bsg-ecology.com</a>	01600 891576
Edward Holdaway	Europarc Atlantic Isles PO Box 10 Fishguard Pembrokeshire SA65 9YW	<a href="mailto:edward.holdaway@btinternet.com">edward.holdaway@btinternet.com</a>	01348 875389
Tom Hooper	Finding Sanctuary South West Food and Drink Darts Farm Topsham EX3 0QH	<a href="mailto:tom.hooper@southwestfoodanddrink.com">tom.hooper@southwestfoodanddrink.com</a>	01392 878327
Ian Horsfall	Swansea University Biological Sciences Singleton Park Swansea SA2 8PP	<a href="mailto:i.m.horsfall@swansea.ac.uk">i.m.horsfall@swansea.ac.uk</a>	01792 295456
Sarah Horsfall	Sea Fish Industry Authority St Andrews Dock Hull East Yorkshire HU11 4NL	<a href="mailto:s_horsfall@seafish.co.uk">s_horsfall@seafish.co.uk</a>	07876 035721
Miles Hoskin	Coastal & Marine Environmental Research 2 Raleigh Place Falmouth Cornwall TR11 3QJ	<a href="mailto:miles.hoskin@cmer.co.uk">miles.hoskin@cmer.co.uk</a>	01326 219498
Bob Houghton	North Western & North Wales Sea Fisheries Committee Bailrigg Lancaster University Lancaster LA1 4YY	<a href="mailto:r.houghton@lancaster.ac.uk">r.houghton@lancaster.ac.uk</a>	01524 68745
Steve Hull	ABPmer Suite B Waterside House Town Quay Southampton SA14 2AQ	<a href="mailto:shull@abpmer.co.uk">shull@abpmer.co.uk</a>	02380 711840
Ceri James	British Geological Survey Keyworth Nottingham NG12 5GG	<a href="mailto:jwcj@bgs.ac.uk">jwcj@bgs.ac.uk</a>	01159 363467
Carl James	Yorkshire and Humber Seafood Group The Deep Business Centre Hull HU1 4BG	<a href="mailto:carl@yhsg.co.uk">carl@yhsg.co.uk</a>	01482 216222
Kate Jennings	Natural England Bullring House Northgate Wakefield WF1 3BJ	<a href="mailto:kate.jennings@naturalengland.org.uk">kate.jennings@naturalengland.org.uk</a>	01924 334529
Magnus Johnson	Centre for Environmental and Marine Sciences University of Hull Filey Road Scarborough YO11 3AZ	<a href="mailto:m.johnson@hull.ac.uk">m.johnson@hull.ac.uk</a>	01723 357255

Table continued...

Name	Address	Email	Telephone
Claire Jones	WWF-UK Panda House Weyside Park Catteshall Lane Godalming Surrey GU7 1XR	<a href="mailto:cjones@wwf.org.uk">cjones@wwf.org.uk</a>	01483 412522
Leigh Jones	Natural England Northminster House Peterborough PE1 1UA	<a href="mailto:leigh.jones@naturalengland.org.uk">leigh.jones@naturalengland.org.uk</a>	01733 455194
Audrey Jones	Natural England Phoenix House 32-33 North Street Lewes East Sussex BN7 2PH	<a href="mailto:audrey.jones@naturalengland.org.uk">audrey.jones@naturalengland.org.uk</a>	01273 407938
Jose Antonio Juanes de la Pena	Dpto de Ciencias y Tecnicas del Agua y del Medio Ambiente Grupo de Emisarios Submarinos e Hidraulica Ambiental Avda. Los Castros s/n 39005 Santander Spain	<a href="mailto:juanesj@unican.es">juanesj@unican.es</a>	0034 942 202 054 - 201 704
Prof Mike Kaiser	University of Bangor, School of Ocean Sciences Marine Biology Department Menai Bridge Bangor Gwynedd LL59 5EY	<a href="mailto:michel.kaiser@bangor.ac.uk">michel.kaiser@bangor.ac.uk</a>	01248 383751
Emma Kennedy	Darwin Initiative Heriot-Watt University School of Life Sciences Gate 1 John Muir Building Riccarton Campus Edinburgh EH14 4AS	<a href="mailto:puzzledpenguin@googlemail.com">puzzledpenguin@googlemail.com</a>	07727 634559
Janet Khan-Marnie	SEPA Clearwater House, Heriot Watt Research Park Avenue North Riccarton Edinburgh EH14 4AP	<a href="mailto:janet.khan@sepa.org.uk">janet.khan@sepa.org.uk</a>	01312 737376
Dr Renata Kowalik	Zoological Society of London Regent's Park London NW1 4RY	<a href="mailto:renata.kowalik@zsl.org">renata.kowalik@zsl.org</a>	02074 496249
Jochen Krause	Bundesamt fur Naturschutz Germany FG I 3.2 Meeres - und Kustennaturschutz Aussenstelle Insel Vilm 18581 Putbus Germany	<a href="mailto:jochen.krause@bfn-vilm.de">jochen.krause@bfn-vilm.de</a>	0049 38301 86 127
Gemma Langdon-Saunders	Institute of Ecology and Environmental Management 43 Southgate Street Winchester Hampshire SO23 9EH	<a href="mailto:gemma.langdon-saunders@ieem.net">gemma.langdon-saunders@ieem.net</a>	01962 868626
Robert Langman	Hanson Aggregates Marine Ltd Burnley Wharf Marine Parade Southampton Hants SO14 5JF	<a href="mailto:robert.langman@hanson.biz">robert.langman@hanson.biz</a>	02380 828256
Aisling Lannin	Berwickshire & North Northumberland Coast European Marine Site Northumberland County Council CES County Hall Morpeth Northumberland NE6 2EF	<a href="mailto:alannin@northumberland.gov.uk">alannin@northumberland.gov.uk</a>	01670 533780
Alice Lawrence	CCW Hafod Elfyn Ffordd Penrhos Bangor Gwynedd LL57 2BQ	<a href="mailto:a.lawrence@ccw.gov.uk">a.lawrence@ccw.gov.uk</a>	01248 385660
Will Le Quesne	School of Marine Science and Technology-Newcastle University Ridley Building Newcastle upon Tyne NE1 7RU	<a href="mailto:will.lequesne@ncl.ac.uk">will.lequesne@ncl.ac.uk</a>	01912 225091

Table continued...

Name	Address	Email	Telephone
Jonny Lewis	RPS Energy Goldsworth House Denton Way Goldsworth Park Woking GU21 3LG	<a href="mailto:westbrook@rpsgroup.com">westbrook@rpsgroup.com</a>	01483 746500
Mary Lewis	CCW Maes y Ffynnon Penrhos Road Bangor Gwynedd LL57 2DW	<a href="mailto:mary.lewis@ccw.gov.uk">mary.lewis@ccw.gov.uk</a>	01248 385432
Louise Lieberknecht	Finding Sanctuary	<a href="mailto:Louise.Lieberknecht@southwestfoodanddrink.com">Louise.Lieberknecht@southwestfoodanddrink.com</a>	
David Limpenny	Fisheries Laboratory Cefas Fisheries Lab Remembrance Ave Burnham-on-Crouch CM0 8HA	<a href="mailto:david.limpenny@cefas.co.uk">david.limpenny@cefas.co.uk</a>	01621 787240
Michelle Lindsay	RSPB 15 Priory Street York YO1 6ET	<a href="mailto:michelle.lindsay@rspb.org.uk">michelle.lindsay@rspb.org.uk</a>	01904 613121
Jim Linstead	EEFPO Murray Street Fish Docks Grimsby DN31 3RD		01472 268555
Arnold Locker	EEFPO Murray Street Fish Docks Grimsby DN31 3RD		01472 268555
Jennifer Lockett	Exe Estuary Management Partnership Lucombe House ABG County Hall Topsham Road Exeter EX2 4QW	<a href="mailto:jenny.lockett@devon.gov.uk">jenny.lockett@devon.gov.uk</a>	01392 382236
Chris Lumb	Natural England Juniper House Murley Moss, Oxenholme Road Kendal Cumbria LA9 4PH	<a href="mailto:chris.lumb@naturalengland.org.uk">chris.lumb@naturalengland.org.uk</a>	01539 792818
Indrani Lutchman	IEEP 28 Queen Anne Gate London SW1H 9AB	<a href="mailto:ilutchman@ieep.eu">ilutchman@ieep.eu</a>	02077 992244
Willie MacKenzie	Greenpeace UK Canonbury Villas London N1 2PN	<a href="mailto:willie.mackenzie@uk.greenpeace.org">willie.mackenzie@uk.greenpeace.org</a>	02078 658253
Philip MacMullen	Seafish Industry Authority Seafish House St Andrew's Dock Hull HU3 4QE	<a href="mailto:j_rimington@seafish.co.uk">j_rimington@seafish.co.uk</a>	01482 327837
Don Macneish	Community of Arran Seabed Trust Shipfield Lamlash Isle of Arran KA27 8NB	<a href="mailto:donmacneish@tiscali.co.uk">donmacneish@tiscali.co.uk</a>	01770 600538
David Mallon	Scottish Executive Protected Areas Team Area 1-H Victoria Quay Edinburgh EH6 6QQ	<a href="mailto:david.mallon@scotland.gsi.gov.uk">david.mallon@scotland.gsi.gov.uk</a>	
Kate Mars	Institute of Estuarine and Coastal Studies Flat 4 114 Copandale Road Beverley East Riding of Yorkshire HU17 7BW	<a href="mailto:k.mars@hull.ac.uk">k.mars@hull.ac.uk</a>	01482 871137
Charlotte Marshall	UK Marine Protected Areas Centre 15 St Hilary Terrace St Judes Plymouth PL4 8SA	<a href="mailto:cema@mba.ac.uk">cema@mba.ac.uk</a>	07740 090777
Julian May	Bangor University 46 Brownlow Street The Groves York YO31 8LW	<a href="mailto:jumay50@hotmail.com">jumay50@hotmail.com</a>	07837 935067

Table continued...

Name	Address	Email	Telephone
Rachel McCall	Metoc plc Exchange House Liphook Hants GU30 7DW	<a href="mailto:rachelm@metoc.co.uk">rachelm@metoc.co.uk</a>	01428 727800
David McCandless	NESFC County Hall Beverley North Humberside HU17 9BA	<a href="mailto:david.mccandless@eastriding.gov.uk">david.mccandless@eastriding.gov.uk</a>	01482 393515/690
Geoff Meaden	Canterbury Christ Church University North Holmes Road Canterbury Kent CT1 1QU	<a href="mailto:geoff.meaden@canterbury.ac.uk">geoff.meaden@canterbury.ac.uk</a>	01227 767700
Karen Mitchell	Natural England Juniper House Murley Moss, Oxenholme Road Kendal Cumbria LA9 7RL	<a href="mailto:karen.mitchell@naturalengland.org.uk">karen.mitchell@naturalengland.org.uk</a>	01539 792826
Angela Moffat	Natural England Policy Team Northminster House Peterborough PE1 1UA	<a href="mailto:angela.moffat@naturalengland.org.uk">angela.moffat@naturalengland.org.uk</a>	01733 455126
Eamon Murphy	The Scottish Executive Room 506 Pentland House 47 Robb's Loan Edinburgh EH14 1TY	<a href="mailto:eamon.murphy@scotland.gsi.gov.uk">eamon.murphy@scotland.gsi.gov.uk</a>	0131 244 4976
Emily Musson	Defra European Wildlife Division Zone 1/08 Temple Quay House 2 The Square Bristol BS1 6EB	<a href="mailto:emily.musson@defra.gsi.gov.uk">emily.musson@defra.gsi.gov.uk</a>	
Phil Newman	CCW Skomer Marine Nature Reserve Fisherman's Cottage Martins Haven Marloes, Pembs SA62 3BJ	<a href="mailto:p.newman@ccw.gov.uk">p.newman@ccw.gov.uk</a>	01646 636736
Caroline Nolan	Strangford Lough Management Advisory Committee 13 The Strand Portaferry Newtownards BT22 1PF	<a href="mailto:caroline.nolan@strangfordlough.org">caroline.nolan@strangfordlough.org</a>	028 42728886
Fred Normandale	Chairman NFFO 30 Castlegate Scarborough YO11 1QY	<a href="mailto:fred.normandale@virgin.net">fred.normandale@virgin.net</a>	07802 940666
Nick O'Brien	Halcrow Arndale House Otley Road Headingley Leeds LS6 2UL	<a href="mailto:obrienn@halcrow.com">obrienn@halcrow.com</a>	0113 2208235
Bill Parker	Suffolk Coast and Heaths Unit Dock Lane Melton Suffolk IP12 1PE	<a href="mailto:bill.parker@et.suffolkcc.gov.uk">bill.parker@et.suffolkcc.gov.uk</a>	01394 384948
Chris Pater	English Heritage Fort Cumberland Road Eastney Portsmouth Hampshire PO4 9LD	<a href="mailto:chris.pater@english-heritage.org.uk">chris.pater@english-heritage.org.uk</a>	02392 856735
Sylvette Peplowski	WWF-UK Panda House, Weyside Park Catteshall Lane Godalming Surrey GU7 1XR	<a href="mailto:speplowski@wwf.org.uk">speplowski@wwf.org.uk</a>	01483 412521
Jeremy Percy	WFFA Ltd 6 Hill Street Haverfordwest Pembrokeshire	<a href="mailto:jerry@wffa.org.uk">jerry@wffa.org.uk</a>	01437 779271
Jeremy Pickles	East Riding of Yorkshire Council Room JF89 County Hall Beverley East Riding of Yorkshire YO12 7EG	<a href="mailto:jeremy.pickles@eastriding.gov.uk">jeremy.pickles@eastriding.gov.uk</a>	01482 391727
Carla Pike	Defra Legal A1 Zone 4A 3-8 Whitehall Place London SW1A 2HH	<a href="mailto:carla.pike@defra.gsi.gov.uk">carla.pike@defra.gsi.gov.uk</a>	02030 143015

Table continued...

Name	Address	Email	Telephone
Kate Pike	Southampton Solent University East Park Terrace Southampton XO14 0RX	<a href="mailto:kate.pike@solent.ac.uk">kate.pike@solent.ac.uk</a>	07810 358596
John Pinnegar	Cefas Lowestoft Laboratory Pakefield Road Lowestoft Suffolk NR33 OHT	<a href="mailto:john.pinnegar@cefas.co.uk">john.pinnegar@cefas.co.uk</a>	01502 562244
Chris Pirie	Natural England 1 Southampton Road Lyndhurst Hants SO43 7BU	<a href="mailto:chris.pirie@natural_english.org">chris.pirie@natural_english.org</a>	02380 286410
Cristina Pita	University of Aberdeen Business School Edward Wright Building Dunbar Street Aberdeen AB24 3QY	<a href="mailto:c.pita@abdn.ac.uk">c.pita@abdn.ac.uk</a>	07704 509125
Paolo Pizzolla	JNCC Monkstone House City Road Peterborough PE1 1JY	<a href="mailto:paolo.pizzolla@jncc.gov.uk">paolo.pizzolla@jncc.gov.uk</a>	01733 866838
Diana Pound	dialogue matters 55 Scotton Street Wye Kent TN25 5BU	<a href="mailto:diana.pound@dialoguematters.co.uk">diana.pound@dialoguematters.co.uk</a>	01233 813875
Virginia Prieto	Bangor University 6 Cambria Road Menai Bridge Anglesey LL59 5HF	<a href="mailto:vp_greentc@terra.es">vp_greentc@terra.es</a>	07800 872204/01248 712796
Mike Quigley	Natural England The Quadrant North East Newburn Riverside Newcastle NE15 8NZ	<a href="mailto:mike.quigley@naturalengland.org.uk">mike.quigley@naturalengland.org.uk</a>	
Ian Reach	Natural England Northminster House Peterborough PE1 1UA	<a href="mailto:ian.reach@naturalengland.org.uk">ian.reach@naturalengland.org.uk</a>	01733 455576
Maria Recio Espinosa	Dpto de Ciencias y Tecnicas del Agua y del Medio Ambiente Grupo de Emisarios Submarinos e Hidraulica Ambiental Avda. Los Castros s/n 39005 Santander Spain	<a href="mailto:reciom@unican.es">reciom@unican.es</a>	
Johnny Reker	The Danish Forest and Nature Agency Haraldsgade 53 Copenhagen 2100 KBH Ø Denmark	<a href="mailto:jyr@sns.dk">jyr@sns.dk</a>	0045 72542915
Bill Rigby	MARINET 3 Norwood Beverley East Yorkshire HU17 9ET	<a href="mailto:bill@voice-international.net">bill@voice-international.net</a>	01482 862085
Tom Roberts	UCL Pearson Building Gower Street London WC1E 6BT	<a href="mailto:t.roberts.ucl.ac.uk">t.roberts.ucl.ac.uk</a>	07713 455048
James Robinson	Natural England Agricola House Unit 5 Gilwilly Industrial Estate Penrith CA11 9BN	<a href="mailto:jim.e.robinson@naturalengland.org.uk">jim.e.robinson@naturalengland.org.uk</a>	01768 860741
Dale Rodmell	Yorkshire and Humber Seafood Group The Deep Business Centre Tower Street Hull HU1 4BG	<a href="mailto:dale@yhsg.co.uk">dale@yhsg.co.uk</a>	01482 216222
Tom Rossiter	Seafish Industry Authority Seafish House St Andrew's Dock Hull E Yorks HU3 4QE	<a href="mailto:j_rimington@seafish.co.uk">j_rimington@seafish.co.uk</a>	01482 327837
Tamara Rowson	RPS 4 George Street Redfield Bristol BS5 9DJ	<a href="mailto:tamararowson@yahoo.co.uk">tamararowson@yahoo.co.uk</a>	07811 958206

Table continued...

Name	Address	Email	Telephone
Peter Rushmer	Wash & North Norfolk Coast European Marine Site Eastern Sea Fisheries JC 6, North Lynn Business Village Bergen Way King's Lynn Norfolk PE30 2JG	<a href="mailto:peterrushmer@esfjc.co.uk">peterrushmer@esfjc.co.uk</a>	01553 775321
Keith Sadler	E.ON-UK Technology Centre Ratcliffe-on-Soar Nottingham NG11 0EC	<a href="mailto:keith.sadler@eon-uk.com">keith.sadler@eon-uk.com</a>	02476 192707
Rocio Salado	Risk & Policy Analysts Ltd Farthing Green House 1 Beccles Road Loddon Norfolk NR14 6LT	<a href="mailto:rocio@rpaltd.co.uk">rocio@rpaltd.co.uk</a>	01508 528465
Jane Sandell	Scottish Fishermens Federation 24 Rubislaw Terrace Aberdeen AB10 1XE	<a href="mailto:j.sandell@sff.co.uk">j.sandell@sff.co.uk</a>	
Kate Sanders	Waters' Edge Visitor Centre Maltkiln Road Barton upon Humber DN18 5JR	<a href="mailto:kat.sanders@humberinca.co.uk">kat.sanders@humberinca.co.uk</a>	01652 631520
Nicola Saunders	Lundy Warden 2 Millcombe Cottages Lundy Bristol Channel EX39 2LY	<a href="mailto:warden@lundyisland.co.uk">warden@lundyisland.co.uk</a>	
Justine Saunders	ABPmer Suite B Waterside House Town Quay Southampton SO14 2AQ	<a href="mailto:jsaunders@abpmer.co.uk">jsaunders@abpmer.co.uk</a>	02380 711840
Antonia Scarr	Environment Agency 13 St Hildas Close London SW17 7UL	<a href="mailto:antonia.scarr@environment-agency.gov.uk">antonia.scarr@environment-agency.gov.uk</a>	07867 905126
Michael Scott	Marine Biodiversity Working Group (Scotland) Strome House, North Strome Lochcarron Strathcarron Ross-shire IV54 8YJ	<a href="mailto:msstrome@aol.com">msstrome@aol.com</a>	01520 722901
Rowland Sharp	CCW Maes y Ffynnon Ffordd Penrhos Bangor Gwynedd LL57 2DW	<a href="mailto:r.sharp@ccw.gov.uk">r.sharp@ccw.gov.uk</a>	
Alex Simpson	Orkney Islands Council Dept of Harbours Harbour Authority Buildings Scapa Orkney KW15 1SD	<a href="mailto:alex.simpson@orkney.gov.uk">alex.simpson@orkney.gov.uk</a>	01856 876070
Annie Smith	RSPB Cymru Sutherland House Castlebridge Cowbridge Road East Cardiff CF119AB	<a href="mailto:annie.smith@rspb.org.uk">annie.smith@rspb.org.uk</a>	029 20353000
Jean-Luc Solandt	Marine Conservation Society Unit 3 Wolf Business Park Alton Road Ross-on-Wye HR9 5NB	<a href="mailto:jls@mcsuk.org">jls@mcsuk.org</a>	01989 561594
Sandie Sowler	Baker Shepherd Gillespie Mill Cottage 5 Ampney Curcis Ampney Curcis Glos GL7 5RR	<a href="mailto:s.sowler@bsg-ecology.com">s.sowler@bsg-ecology.com</a>	01285 851522
Clare Sterling	The Lincolnshire Wildlife Trust Banoallum House Manor House Street Horncastle Lincs LN9 5HF	<a href="mailto:csterling@lincstrust.co.uk">csterling@lincstrust.co.uk</a>	01507 526667

Table continued...



Name	Address	Email	Telephone
Helen Stevens	Natural England 1 Southampton Road Lyndhurst Hampshire SO43 7BU	<a href="mailto:helen.stevens@naturalengland.org.uk">helen.stevens@naturalengland.org.uk</a>	07970 302358
Andrew Stevenson	Scottish Natural Heritage Stilligarry South Uist Western Isles HS8 5SA	<a href="mailto:andrew.stevenson@snh.gov.uk">andrew.stevenson@snh.gov.uk</a>	01870 620238
Dr Doug Stewart	Gardline Environmental Ltd Admiralty Road Great Yarmouth Norfolk NR30 3NG	<a href="mailto:doug.stewart@gardline.co.uk">doug.stewart@gardline.co.uk</a>	01493 845600
Leanne Stockdale	Fisheries Office Bridlington Town Hall Bridlington East Riding of Yorkshire YO16 4LP	<a href="mailto:leanne.stockdale@eastriding.gov.uk">leanne.stockdale@eastriding.gov.uk</a>	01482 393694
Judith Stoutt	Eastern Sea Fisheries Joint Committee 6 North Lynn Business Village Bergen Way King's Lynn Norfolk PE30 2JG	<a href="mailto:stouttj@esfjc.co.uk">stouttj@esfjc.co.uk</a>	01553 775321
Vicky Swales	Hampshire & IOW Wildlife Trust Beechcroft House Vicarage Lane Curdridge Botley, Hants SO32 2DP	<a href="mailto:vickys@hwt.org.uk">vickys@hwt.org.uk</a>	01489 774423
Kate Tanner	Wildlife and Countryside Link & RSPB The Lodge Sandy Bedfordshire SG19 2DL	<a href="mailto:kate.tanner@rspb.org.uk">kate.tanner@rspb.org.uk</a>	01767 680551
Pam Taylor	Solway Firth Partnership Campbell House The Crichton Bankend Road Dumfries DG1 4ZF	<a href="mailto:ptaylor@solwayheritage.co.uk">ptaylor@solwayheritage.co.uk</a>	01387 247543
Ruth Thurstan	University of York 23 Becksides Gardens York YO10 3TX	<a href="mailto:rht500@york.ac.uk">rht500@york.ac.uk</a>	01904 870774
Cathy Tilbrook	Scottish Natural Heritage Battleby 2 Redgorton Perth PH1 3EW	<a href="mailto:cathy.tilbrook@snh.gov.uk">cathy.tilbrook@snh.gov.uk</a>	01738 458634
Peter Tinsley	Dorset Wildlife Trust Brooklands Farm Forston Dorchester DT2 7AA	<a href="mailto:ptinsley@dorsetwildlife.co.uk">ptinsley@dorsetwildlife.co.uk</a>	01305 217979
George Traves	Chair ASFC 20 George Street Bridlington YO15 3PN		01262 675105
Wendy Twell	Welsh Assembly Government Crown Buildings Cathays Park Cardiff CF10 3NQ	<a href="mailto:wendy.twell@wales.gsi.gov.uk">wendy.twell@wales.gsi.gov.uk</a>	
Rachel Waldock	Natural England Slepe Farm Arne Wareham Dorset BH20 5BN	<a href="mailto:rachel.waldock@naturalengland.org.uk">rachel.waldock@naturalengland.org.uk</a>	
Prof Lynda Warren	Ynys Einon Eglwys Fach Machynlleth SY20 8SX	<a href="mailto:lm.warren@btopenworld.com">lm.warren@btopenworld.com</a>	01654 781344
Andy Webb	Joint Nature Conservation Committee Dunnet House 7 Thistle Place Aberdeen AB10 1UZ	<a href="mailto:andy.webb@jncc.gov.uk">andy.webb@jncc.gov.uk</a>	01224 655705
Alan Wells	Scottish Environment Link c/o WWF Scotland Little Dunkeld Dunkeld Perthshire PH8 0AD	<a href="mailto:hmclachlan@wwfscotland.org.uk">hmclachlan@wwfscotland.org.uk</a>	01350 728247

Table continued...



<b>Name</b>	<b>Address</b>	<b>Email</b>	<b>Telephone</b>
Sophie Wheatley	Lundy Island Bristol Channel North Devon EX39 2LY	<a href="mailto:warden@lundyisland.co.uk">warden@lundyisland.co.uk</a>	01237 431831
Jo Wilkes	Natural England The Quadrant Newburn Riverside Newcastle NE15 8NZ	<a href="mailto:jo.wilkes@naturalengland.org.uk">jo.wilkes@naturalengland.org.uk</a>	0191 2293335
David Wilkinson	Guernsey Sea Fisheries Dept Raymond Falla House PO Box 459 Longue Rue St Martins Guernsey GY1 6AF	<a href="mailto:david.wilkinson@commerce.gov.gg">david.wilkinson@commerce.gov.gg</a>	01481 234567
Mark Wills	Natural England Riverside Chambers Castle Street Taunton Somerset TA1 4AP	<a href="mailto:mark.wills@naturalengland.org.uk">mark.wills@naturalengland.org.uk</a>	01823 285500
Aidan Winder	Devon County Council Environment Economy and Culture Directorate County Hall Exeter EX2 4QW	<a href="mailto:aidan.winder@devon.gov.uk">aidan.winder@devon.gov.uk</a>	01392 383019
Andrew Wood	Natural England John Dower House Crescent Place Cheltenham Glos GL50 3RA	<a href="mailto:andrew.wood@naturalengland.org.uk">andrew.wood@naturalengland.org.uk</a>	01242 521381
Howard Wood	Arran Coast Allt-na-ceirde Whiting Bay Isle of Arran KA27 8QT	<a href="mailto:hlwood@tiscali.co.uk">hlwood@tiscali.co.uk</a>	
Fiona Wynne	The Crown Estate 16 New Burlington Place London W1S 2HX	<a href="mailto:fiona.wynne@thecrownestate.co.uk">fiona.wynne@thecrownestate.co.uk</a>	020 7851 6268

# Appendix 2 – Conference programme

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## Tuesday 2nd October

0930 **Introduction to the conference – Andrew Wood, Executive Director of Evidence & Policy, Natural England.**

**Session 1: What can MPAs deliver? Chair: Andrew Wood**

0940 **Keynote speaker: 'What MPAs can deliver' – Prof Steve Gaines, University of California**

1015 What Natural England believes a network of MPAs can deliver – Mark Duffy, Natural England

1035 MPAs - benefits to biodiversity: from rare to representative - Jean-Luc Solandt, Marine Conservation Society

1055 What can MPAs deliver for fisheries? – National Federation of Fishermen's Organisations

1115 What can MPAs do for people and local communities? – Tony Child, Project Officer, Thanet Coast Project

1135 Group discussion on what else MPAs can deliver

1155 Refreshment break 1

**Session 2: The story so far: how are we doing in building our MPA network?  
Chair: Lynda Warren**

1240 **Keynote speaker: International progress towards a the Natura 2000 network of MPAs – Jochen Kause, Bundesamt für Naturschutz, Germany**

1310 Progress in completing the Natura 2000 and OSPAR networks – Annabelle Aish and Andy Webb, JNCC

1330 How the UK Governments will develop a MPA policy following the Marine Act: Emily Muson, Defra, Wendy Twell, Welsh Assembly Government and David Mallon, Scottish Executive,

1350 Achieving effective MPAs – Jen Ashworth, Natural England & Carol Daniels SNH

1410 Building public support for MPAs – Lisa Chilton, Wildlife Trusts

1430 Establishing local community support for a MPA – Don Macneish, Community of Arran Seabed Trust

1450 Refreshment break 2

1530 **Case studies of good practice in managing European marine sites**

5 minute presentations followed by a market place session

Including:

- Bill Parker, Project Officer Stour & Orwell European marine site – Findings of research on recreational disturbance in the Stour and Orwell

- Sue Burton, Project Officer Pembrokeshire Coast European marine site – Pembrokeshire Marine Code
- Leanne Stockdale, Project Officer Flamborough Head European marine site – Developing a shared vision for the Flamborough EMS
- Aisling Lannin, Project Officer Berwickshire & North Northumberland Coast European marine site – Bringing the Berwickshire and N Northumberland EMS and AONB closer together.
- Peter Rushmer, Project Officer Wash & North Norfolk Coast European marine site – Incident recording /Voluntary kites' initiative in the Wash & North Norfolk Coast EMS
- Nicola Saunders, Lundy warden – Managing Lundy
- Tom Roberts, UCL - Partnership approaches to achieving strategic marine conservation objectives
- Toward a coherent networks of MPAs – Priorities and Next Steps

1715 Close

1930 Conference dinner

## Wednesday 3rd October

### **Session 3: Approaches for selecting MPAs. Chair – Philip McMullen, SeaFish**

- 0930 **Keynote speaker – The PROTECT Project and its approach to selecting MPAs – John Pinnegar Cefas**
- 1000 Designing regional MPA networks - the Finding Sanctuary approach – Tom Hooper, Finding Sanctuary
- 1020 Applying network design software to the UK – Prof Mike Kaiser, University of Bangor
- 1040 Investigating new marine SACs - current Natura 2000 survey work – Mat Cork & Pete Gaches, Royal Haskoning & Viv Blythe-Skryme JNCC
- 1100 Mapping fishing effort and its applicability to MPAs – Giles Bartlett, North Eastern Sea Fisheries Committee
- 1120 Investigating win-wins for conservation and renewable energy – Justine Saunders, ABPmer
- 1140 Reconciling conservation objectives and other commercial interests within MPAs – Ian Barrett, Defra
- 1200 Discussion
- 1230 Refreshment break 1
- 1330 **Session 4 – What else do we need to do to achieve our MPA targets? Chair Mark Duffy, Natural England**
- 1340 MPA provisions in the Marine Bill: perspectives from LINK – Kate Tanner, Wildlife & Countryside Link
- 1400 The effectiveness of legislation for MPAs – Tom Appleby, University of Bristol
- 1420 Highly Protected Marine Reserves: their contribution to achieving MPA targets for Wales – Mary Lewis, CCW
- 1440 Priority actions needed to achieve our MPAs targets: next steps - Sue Gubbay followed by discussion
- 1530 Thanks and conference close
- 1545 End and refreshments

## Thursday 4th October

### **Field Trip**

- 9:30 Depart Scarborough SPA
- 10:00- Arrive Flamborough North Landing  
10:10
- Talk by Giles Bartlett – Local fishing methods, lobster research project – MSC (10-15min)
  - Walk from North Landing to Thornwick Bay
  - Coach to the lighthouse
- 12:00 Arrive at the lighthouse

- Trip to the top of the lighthouse – 2 groups – Each group will take 30 minutes, £2.75pp.
- Packed Lunch at the Lighthouse

13:15 Coach to RSPB Bempton Reserve

13:30 Arrive RSPB

- Talk from the RSPB Reserves Area Manager – Yorkshire Northern England Region, Keith Clarkson
- Time to explore the site

14:30 Depart

15.00 Arrive Scarborough



**Natural England works for people, places and nature to conserve and enhance biodiversity, landscapes and wildlife in rural, urban, coastal and marine areas.**

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