Independent review of the evidence process for selecting marine special areas of conservation

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July 2011

Table of Contents

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PB13598

Executive Summary

We were commissioned in March 2011 by Defra's Chief Scientific Adviser to review the evidence and process which Natural England and Defra used to select inshore marine sites for designation as Special Areas of Conservation (SACs) under the EU Habitats Directive. This followed concerns expressed by stakeholders about the robustness and integrity of the work. We explored three case study marine SACs in south west England containing reef habitats.

The Habitats Directive requires Member States to identify sites containing certain habitat types, including reefs, to contribute to an overall network of protected areas. The Directive and associated guidance set out the scientific criteria which must be followed and indicate the amount of habitat which must be designated. In practice therefore, Member States have little discretion. Economic and social factors cannot be considered when selecting sites.

The Environment Secretary of State is required to propose SACs in England. Natural England (and prior to 2006, its predecessor English Nature), in its role as statutory nature conservation adviser, advises the Secretary of State on the selection of inshore marine SACs in England.

English Nature was asked in 2002 to identify reef habitat between three and 12 miles from the coast, as the UK had not met the Directive's requirements for this type of habitat. The process began with a broad scale, desk-based study using existing information for English inshore waters to prioritise areas of search. This allowed English Nature, and later Natural England, to identify smaller areas of interest, and to gather existing information on habitat types and species present and commission new, specific surveys for those areas. Using this information, Natural England selected possible SACs, which were put forward for public consultation. Following refinement of the proposals, two of the case study sites were submitted to the European Commission and the third is currently with the Secretary of State following a second consultation.

We approached our review by having detailed discussions with Defra, Natural England and the JNCC, and with a concerned stakeholder and an external scientist who had been involved in the work. We also invited views from other stakeholders. We examined Natural England's records, and a sample of the data on the case study sites. We also commissioned an in-depth review of the tendering and consultation processes used by English Nature and Natural England.

We have concluded that the approach which English Nature and Natural England used, starting with a broad-scale desk study and focussing in on specific areas, was appropriate in the light of the requirements of the Directive and the objective which they were asked to pursue. We conclude that Natural England built up a substantial body of evidence,

which is sufficient in both quality and quantity to support the proposed designation of the three case study sites. We have seen no evidence of bias in the way in which the evidence was gathered and interpreted. We therefore are confident that the case study sites represent reef habitat which requires protection.

We conclude however that the process used by Natural England and Defra fell short of best practice in many respects. It was clear from the outset that the process would take several years and potentially be subject to changes in organisation and personnel. Natural England and Defra should have had in place more robust project management, better able to cope with change. Natural England's record keeping in some instances should also have been better.

At the initiation of the process, there was no discussion with stakeholders about the requirements and the approach to be used. Consultation at this stage would have ensured a common understanding of how the process was to be conducted. Natural England made genuine and substantial efforts during the 2009/10 public consultation exercise to engage stakeholders and to seek views and new evidence. However, they should have adopted a more open and transparent approach to demonstrate how evidence had been gathered and synthesised. Natural England did not commission a fully independent expert review of the evidence, and should consider appropriate use of such scrutiny in future. This is particularly important where the amount of evidence is substantial and complex, and expert judgment is needed to select and interpret it. Independent, expert review would provide lay stakeholders, who may not themselves be in a position to scrutinise the work, with greater confidence in the robustness of the conclusions.

The Government's Chief Scientific Adviser has issued guidelines on the use of scientific and engineering advice in policy-making. We recommend that Natural England and Defra embed these guidelines. This will require them to clarify roles and responsibilities. Natural England should develop policies that prevent a perceived potential conflict of interest between its roles as provider of objective scientific advice and as advocate for biodiversity conservation. If Defra and Natural England are to ensure that the evidence base for policy decisions is robust and are to maintain the confidence of stakeholders, they need to put in place principles and guidelines which will promote greater transparency, accountability, openness, and assurance.

List of conclusions and recommendations

The following lists the specific conclusions and recommendations discussed in chapter 3 of the report. Chapter 4 discusses some more general points.

Roles and responsibilities

1. We recommend that Natural England should adopt and embed the good practice principles set out in the Government Chief Scientific Adviser's (GCSA) Guidelines on the use of scientific and engineering advice in policy-making.

2. We recommend that Defra's Chief Scientific Adviser (CSA) should ensure that policy makers in Defra, specifically Senior Responsible Owners (SROs), are aware of and apply the GCSA's Guidelines on the use of scientific and engineering advice in policy-making. We further recommend that the CSA provides SROs with guidance on their responsibilities in circumstances where Defra relies on Natural England (or other arm's length bodies) to provide evidence-based advice.

3. We recommend that Defra's CSA should adopt a proactive and risk-based approach to identifying and intervening on specific policy issues. We also recommend that the CSA should clarify his remit with regard to the work of the Department's arm's length bodies.

4. We recommend that Natural England should put in place and publish formal guidelines and principles to ensure that the gathering, selection, analysis, and use of evidence are not compromised by its commitment to its statutory purpose to ensure conservation, and that greater transparency and opportunities for independent, expert review and scrutiny are incorporated in order to maintain public confidence in the integrity of complex, science-based projects.

The approach adopted by English Nature and Natural England

5. We conclude that the approach adopted by English Nature, relying on initial broad-scale desk studies and then focusing detailed investigation on areas of interest where reefs were most likely to be present, was appropriate given the remit it had been given by Defra.

The management of the process by Defra and Natural England

6. We recommend that in future for evidence-based projects of this scale and length, Natural England and Defra should put in place clearer and more robust project management, better able to manage risks and cope with change, and they should ensure that accountabilities are clear and recorded.

7. We recommend that Defra and Natural England should ensure that independent, expert review is built into processes which rely significantly on the gathering, synthesis and interpretation of evidence. Reviews should be transparent: the reviewers' comments and Natural England's response to them should be recorded and published.

Science and the use of evidence

8. We recommend that for major evidence-based projects, Natural England should establish and publish at the outset protocols setting out the key evidence needs, the principles against which evidence will be evaluated, and indicating the quality and quantity of evidence which is likely to be required to make robust decisions at different stages of the process. There should normally be consultation on the protocols before they are finalised.

9. We recommend that when independent, expert review is used, Natural England should be clear, and make clear to reviewers, the purpose of the review and its expectations.

10. We conclude that Natural England has built up a substantial body of evidence which supports the presence of reef habitats, as defined by the Habitats Directive, in each of the three case studies.

Engagement, public scrutiny and access to information

11. We conclude that Natural England went to considerable lengths to offer a genuine opportunity for stakeholders and interested members of the public to comment on the proposals and to provide new or better evidence during the public consultation stage, and that the comments received were taken seriously and appropriately, without bias.

12. We recommend that Natural England should routinely publish background material and consultants reports, to show how evidence has been gathered and synthesised.

Can there be confidence in the decisions in the case studies?

13. In summary, we therefore conclude that the evidence we have seen is sufficient, in both quantity and quality, to support the proposed designation of the three case study sites as SACs, in the light of the requirements of the Habitats Directive. However, we have concerns about aspects of the processes which Natural England and Defra followed.

Chapter 1: Introduction

Background

1. We were invited in March 2011 by Professor Robert Watson FRS, Chief Scientific Adviser to the Department for Environment, Food and Rural Affairs (Defra), to undertake an independent review of the process by which English Nature and subsequently Natural England[a], and Defra had selected marine areas for designation as Special Areas for Conservation (SACs) under the EU Habitats Directive. Our names and affiliations are listed in Annex A, together with declarations regarding potential conflicts of interest.

2. Our terms of reference were:

    - To explore the robustness of evidence and advice provided by Natural England, and the use of that evidence and advice by Defra, in decisions regarding the identification of three candidate/possible candidate SACs, in the light of requirements of the Habitats Directive;

    - To explore the robustness of quality assurance processes applied to evidence and advice provided by Natural England regarding the identification of three candidate/possible candidate SACs.

    These issues were to be considered in relation to whether the evidence and advice were reasonable and fit for purpose given the timescales and requirements of the Habitats Directive. We were asked in particular to consider the comprehensiveness of the evidence, the robustness of evidence used in formulating advice, how evidence was used and communicated, the application of relevant good practice guidelines, the use of peer review, record keeping, openness and transparency, objectivity and rigour, and handling and communicating uncertainty.

3. The three case studies we were asked to examine were:

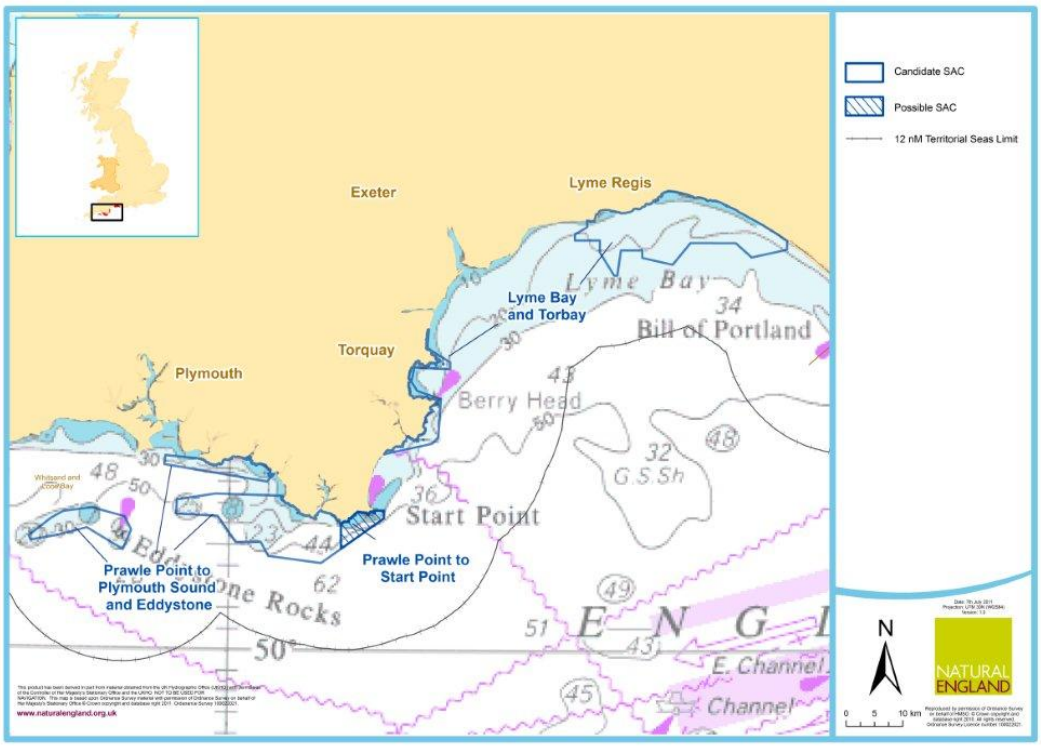
    - Lyme Bay and Torbay (candidate SAC submitted to the European Commission on 20 August 2010);

    - Prawle Point to Plymouth Sound and Eddystone (candidate SAC submitted to the European Commission on 20 August 2010); and

[a] Natural England was vested on 1 October 2006: prior to that English Nature was responsible for nature conservation, and references to Natural England should be taken to refer to English Nature if the context requires this.

- Prawle Point to Start Point (possible SAC subject to consultation which closed on 12 November 2010[b]).

Figure 1 shows the location of these sites:



4. Defra explained to us that these three sites, of the nine[c] marine sites in English inshore waters which are in the process of designation, had been selected by Professor Watson as case studies because it appeared that there had been greater concern raised by stakeholders who might be adversely affected by designation than for other sites, and the selected sites had been more controversial. They are all examples of 'reef' habitats, as defined by the classification used in the Habitats Directive. We outline this definition in chapter 2. The process used by Natural England covered other habitats (ie sandbank habitats and sea caves), and sites in other parts of England, though obviously the work to gather evidence about habitat features was specific to each site. We understand that there was probably more evidence for the Lyme Bay and Torbay case study site than for many of the others.

5. We were asked to complete our review by June if possible, since Defra wanted to be able to take account of our conclusions before further decisions were taken by Defra and by the European

[b] Since our review started, this possible SAC has been recommended by Natural England to Defra for selection (on 1 June 2011).

[c] This includes eight candidate SACs submitted to the European Commission in August 2010 plus Studland to Portland. Lune Deep and Prawle Point to Plymouth Sound and Eddystone are regarded by Natural England as extensions rather than separate sites.

Commission on the selection of the case study sites and other sites in autumn 2011.

Reason for undertaking the review

6. In an article in *Fishing News* in July 2010, Ms Teresa Portmann criticised Natural England's work which had led to a decision to close areas of Lyme Bay to fishing (an issue which is not within our remit) and on the designation of SACs.[d,i] In relation to SACs, she claimed that Natural England had been highly selective in using information in the reports it had commissioned, and that it had ignored recommendations and evidence which did not suit its own preset ideas. She added that in her view Natural England had been prepared to take short cuts and had not conducted the necessary surveys of the right type, and that it had been prepared to go to determined lengths to prevent people finding this out. Later the same month, in an open letter to the Minister (Richard Benyon MP) published in Fishing News, representatives of fishing organisations expressed their shock and concern at the nature of the allegations about Natural England which Ms Portmann had made, and an editorial contended that, if the allegations proved to be correct, Natural England could not be trusted to be impartial and objective and had been working to its own agenda.[ii]

7. A debate continued in the pages of *Fishing News* through the summer of 2010, with letters from the Marine Director of Natural England (James Marsden) and the Minister, and responses from Ms Portmann and organisations representing fishermen. In an editorial comment in August, *Fishing News* asserted that following the closure of Lyme Bay, Natural England had lost credibility as an impartial operator, and that the Marine Protected Areas project (again, an issue not directly within our remit) had been rushed through in a couple of years on the basis of extremely dubious information and with an inbuilt bias against the fishing industry.

8. There was also extensive correspondence between Ms Portmann and Natural England, and latterly also with Defra and with Professor Watson, much of which we have seen.

9. In the light of the concerns which had been expressed, and after consulting Natural England, Professor Watson commissioned us to undertake our review. He made clear to us that, within the terms of reference, we had full independence to make our own enquiries, speak to whomever we felt appropriate and to reach our own

[d] Ms Portmann is associated with Scott Trawlers, a scallop fishing company. She explained to us that their trawlers operate outside the 12 mile zone, and therefore would not be directly affected by the proposed designation of SACs within the 12 mile territorial sea. She had raised issues about the selection process, and Natural England's work more generally, as a concerned member of the public.

conclusions. He also made it clear that the key issues the review needed to address were whether: the evidence and advice provided by Natural England (and relied on by Defra) in selecting sites was robust; the quality assurance processes underpinning the gathering of evidence were robust; and, ultimately whether the scientific case in support of selecting the sites that Natural England identified was reasonable given the requirements of the Habitats Directive.

10. Our terms of reference related to the process for identifying SACs, and we were not asked to examine Natural England's or Defra's work relating to the decision to close part of Lyme Bay to fishing in 2008, or that on Marine Conservation Zones which is due to be completed next year. Ms Portmann expressed regret that Professor Watson had limited our work in this way, as in her view, the requirements of the Habitats Directive meant that the evidential 'standard of proof' needed for identification of SACs was low and deficiency in the use of evidence might therefore not have as significant an impact as in other areas (Natural England do not share this view). It is, however, likely that many of our recommendations may be relevant to any evidence-based project which Natural England, or indeed other Defra bodies, undertake in future.

11. Natural England had already recognised that improvements are required to its processes in order to reflect good practice. Indeed, we saw a 'lessons learnt' analysis, which had identified a large number of points where the process for identifying SACs could have been better managed, and in a letter to stakeholders dated 25 February 2011, the Marine Director had said:

> "In recent months, we have, with Defra, been addressing these stakeholder concerns. We are very aware that we need to be absolutely transparent about the primary sources of evidence informing our advice and the ways in which we have interpreted it. We need to be equally clear about identifying where there are areas of uncertainty in the evidence we work with. If there are areas of weakness in any of our processes we are determined to address them. We have identified scope for improvements in our processes in the following areas:
>
> - higher levels of transparency in communicating our use of evidence in decision making;
> - better record keeping;
> - a more consistent approach to peer review of our evidence.
>
> We have commissioned an internal project to establish whether there are any other areas we should consider; and to put processes in place to ensure that we are consistent with all relevant government guidelines and codes of practice."

Natural England's internal project ran in parallel with and was distinct from our work.

How the review was conducted

12. We received initial background briefings from Natural England, Defra and the Joint Nature Conservation Committee (JNCC) which explained the requirements of the Habitats Directive and the process which had been followed between 2002 and 2010 to identify candidate sites for designation, and were given copies of the relevant consultants' reports, reviews and consultation documents. We also wrote to a number of stakeholders to invite them to make any representation they wished – the list of those invited is at Annex B, together with a list of those who responded.

13. We held further meetings with Natural England and Defra (from both the Marine Programme and the Chief Scientific Adviser's staff), and with Dr Keith Hiscock (Associate Fellow, Marine Biological Association of the UK), and Ms Portmann to explore the issues. We visited the Natural England office in Peterborough, where we were given access to their paper files and data archive. We also held a meeting in Plymouth. We thank all those who provided help, and in particular Natural England who supplied extensive information in response to our requests. No information was denied to us by Natural England. There were a number of instances where no records had been made or where they were no longer available.

14. Dr Ann Davies, a civil servant working in the In-House Policy Resource[e] reviewed in detail the tendering processes used by English Nature and Natural England to select external contractors, and the consultation process used by Natural England. A report of this work is being submitted alongside this report. We draw on this detailed review in our analysis in the following chapters.

15. In chapter 2 we describe the requirements of the Habitats Directive and the process followed by Natural England and Defra to select marine sites for submission to the European Commission as candidate SACs. In chapter 3 we set out the relevant issues which have been raised by stakeholders, and the issues which we identified ourselves in the course of our work, together with our views and conclusions about those issues. Chapter 4 sets out our concluding remarks.

16. We have taken as given the Habitats Directive and the European guidance and case law. These impose requirements and constraints within which Defra and Natural England have to work. There are

[e] The In-House Policy Resource is a team of consultants that carries out projects for Defra, the Department of Energy and Climate Change, the Department for Communities and Local Government, and the Department for Transport.

many issues about these which could be debated, but we have not regarded as part of our remit to review them or to make recommendations.

17. The process to select these marine SACs began in 2002, and the designation process is not yet complete. The full resource needs for identifying and selecting sites were not perhaps sufficiently appreciated at the start (it was originally thought that the process could be completed by 2006 with the right level of resource and funding, but by then Defra had already recognised that the process would extend beyond 2010). The challenge of identifying and selecting sites has been complex. During that time, there have been organisational changes within both Natural England and Defra, and many people involved have come and gone. This was inevitable (and indeed, should have been foreseen and measures taken to ensure that the project was robust enough to cope), but it has occasionally made it difficult for us to follow the line of Natural England's strategy or decision-making at each stage of the process.

18. Finally, we should acknowledge that the task which Defra and Natural England face in implementing the Habitats Directive in the marine environment is challenging. The marine environment is less well characterised than the terrestrial environment, and it is often difficult and expensive to gather information – particularly for large areas. In the light of this lack of knowledge about the character and state of the marine environment, Natural England therefore had to make decisions about how to structure its process, about what new survey work to commission, and how to incorporate new and better information which came to light from other sources as time progressed – and knowledge has increased considerably since 2002, albeit from a low base.

Acknowledgements

19. We are grateful to all those who have spent time providing us with information, and in particular to Mrs Eleanor Hill who was our first point of contact at Natural England. We are also grateful to staff of Natural England and Defra, who checked chapters 1 and 2 of our report for factual accuracy, and of the Government Office for Science who checked parts of chapter 2.[f] We thank Professors Maria Lee (University College London), Graham Shimmield FRSE (Bigelow Laboratory for Marine Sciences, Maine, USA), and Joanne Scott (University College London) who read our report in draft and gave us many useful comments. Finally, we thank Dr John Roberts and Ms Lucy Barnard of Defra who gave us excellent support in our work.

[f] They did not see chapters 3 and 4 in draft.

Chapter 2: The process for identifying marine sites

Introduction

1. Our remit was to examine three case studies of sites located in the south western English Channel, on which Natural England had given Defra site selection advice in accordance with the requirements of the Habitats Directive. It is necessary first to understand the requirements of that Directive and the context within which Natural England and Defra were working. In this chapter we therefore outline these requirements, and the responsibilities of Defra and Natural England for implementing the Directive. We then describe the process which Natural England, and its predecessor English Nature, followed between 2002 and 2010 to select marine sites for designation under the Directive and how Defra engaged with the process.

The Habitats Directive

2. The Habitats Directive was adopted in 1992, and is one of the cornerstones of the EU nature conservation policy.[3] It is built around two pillars – the Natura 2000 (N2K) Network of protected sites, and a strict system of species conservation. The Natura Network consists of Special Areas of Conservation (SACs) to protect habitats and species listed under the Habitats Directive, and also Special Protection Areas (SPAs) to protect wild birds as set out in the Birds Directive.

3. The Habitats Directive requires each Member State to contribute to the Natura Network "in proportion to the representation within its territory of the natural habitat types and the habitats of species" specified in Annexes I and II of the Directive. They must select and propose sites ('candidate SACs') to the European Commission in line with the criteria set out in the Directive.

4. The Directive requires Member States to notify the European Commission of their proposed list of sites within three years of the Directive being adopted, ie by 1995, on the basis of which the Commission would agree a list of "sites of community interest" which would form the Network. After adoption of those sites at European level by the Commission, Member States are required to designate them formally as SACs. In practice, while many sites were notified within this timescale, the UK (and many other Member States) did not complete the process – particularly for marine sites – as it was the European Commission's view that more sites needed to be identified.

5. Annex I of the Directive sets out a list of the natural habitat types, the conservation of which requires the designation of SACs, where these can be identified in accordance with the criteria set out in the Directive. This list is comprehensive, and includes eight types of habitat found in open sea and tidal areas, including 'reefs' (which include stony reefs, flat rock platforms and cobbles). [a] The objective set out in Article 3.1 of the Directive is the establishment of a network of SACs which is sufficient to enable the natural habitat types to be maintained at, or restored to, a favourable conservation status within their natural range.

6. The process for identifying marine SACs is governed by the provisions of the Directive, and guidance outlined in the Interpretation Manual of European Union Habitats[4], and European Commission Guidelines for the establishment of the Natura 2000 network in the marine environment.[5]

7. This latter document provides guidance on what proportion of each habitat type nationally might need to be designated to be considered sufficient.[b] This guidance suggests that designation of less than 20% of the national resource of a particular habitat would be likely to be insufficient, and that more than 60% would be likely to be more than sufficient. It provides additional guidance for proposals between 20% and 60%, which indicates that expert judgement is needed to assess what is sufficient. These proportions apply to the UK as a whole – it is an internal matter as to the contribution which different parts of the UK make, though the 'geographical range' of a species, i.e. the distribution of a species has to be taken into account.

8. Based on information provided to the European Commission by Member States in 2007, 98% of the reefs within the Atlantic biogeographic region are in UK waters (although the Joint Nature Conservation Committee (JNCC) considers this is probably an overestimate).[c] According to the principle of proportionality, the UK could thus be expected to contribute possibly more than 50% of all SACs designated for reef habitat within the region.[6]

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[a] The Interpretation Manual of European Habitats (European Commission 1999) defines 'Reef' as "submarine, or exposed at low tide, rocky substrates and biogenic concretions, which arise from the sea floor in the sublittoral zone but may extend into the littoral zone where there is uninterrupted zonation of plant and animal communities. These reefs generally support a zonation of benthic communities of algae and animal species including concretions, encrustations and corallogenic concretions". The Handbook goes on to describe the typical fauna, flora and topography in more detail.

[b] This raises the question of how, in the absence of full information, the total stock of a particular habitat can be estimated to determine what constitutes 100%. We did not receive a clear explanation of how this is determined.

[c] The Atlantic biogeographic region covers the north-eastern Atlantic, the Irish Sea, the English Channel and the North Sea. The whole of the UK's continental shelf falls within this zone.

9. The criteria for selecting sites for Annex I habitats are set out in Article 4(1) and Annex III to the Directive. These criteria are, in the words of the Directive:

    i. degree of representativity of the natural habitat type on the site;
    ii. area of the site covered by the natural habitat type in relation to the total area covered by that natural habitat type within the national territory;
    iii. degree of conservation of the structure and functions of the natural habitat type concerned and restoration possibilities;
    iv. global (overall) assessment of the value of the site for conservation of the natural habitat concerned.

    A key point is that the criteria are scientific – social and economic factors are not included. The Court of Justice of the European Union has explicitly ruled that a Member State may not take account of economic, social and cultural requirements or regional and local characteristics when selecting and defining the boundaries of the sites to be proposed to the Commission.[7]

10. Once a site has been designated, Member States are required to establish necessary conservation measures and, if appropriate, a management plan for the site. They must take appropriate steps to avoid the deterioration of habitats, and to ensure that any plan or project not directly connected with or necessary for the management of the site, but likely to have a significant effect on the site, is subject to an 'appropriate assessment' and can only be allowed if it will not adversely affect the integrity of the site (except in specific circumstances outlined in Article 6 of the Directive).

11. We note that this Directive is quite prescriptive: it defines the objectives and the types of habitats to be protected, the mechanism by which that objective is to be achieved through the designation of sites, and the criteria to be used to select sites. In addition, there is a considerable volume of European guidance and case law which Member States should follow in implementing the Directive. Member States therefore have limited discretion in implementation – essentially, to determine within quite tight parameters how many and which particular sites they will designate: it is not an option to fail to make designations.

Implementation in England

12. The Directive has been transposed into UK law in England and Wales by regulations, which define the responsibilities of the Secretary of State and of Natural England. The selection of sites in the inshore marine areas (that is, between 0 and 12 nautical miles from the coast) is currently addressed by the Conservation

and Habitats Regulations 2010 (as amended)[8], but the earlier 1994 regulations which applied for most of the period of our review are similar.[d]

13. The regulations require the Secretary of State to select and propose SACs in England, and formally to designate them once they have been included in the European network by the Commission. Natural England, in its role as statutory nature conservation adviser, advises the Secretary of State on the identification of inshore marine SACs in England. Natural England conducts public consultation on potential sites on behalf of Defra and advises Defra on the final proposals. The Secretary of State then takes a decision on the selection of each site and whether to transmit it to the Commission (after obtaining agreement from other Government Departments where appropriate). The Secretary of State, Natural England and other bodies such as the Marine Management Organisation have responsibilities for the management of SACs once they have been designated.

14. Natural England is a Non-Departmental Public Body (NDPB), often also referred to as an 'arm's length body', and its statutory purpose is to ensure that the natural environment (which includes the marine environment) is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development.[9] It is governed by a Board, appointed by the Secretary of State, which is responsible for the work of the organisation. Natural England is financed primarily by grant in aid from Defra.[e] It thus provides independent advice to Government in relation to the natural environment.[f]

15. The JNCC is also a NDPB, and advises the UK Government and devolved administrations on UK-wide and international nature conservation. The JNCC ensures broad consistency in the application of the Directive at UK level by setting common standards for the delivery activities of Natural England and the other nature conservation agencies.[g] The JNCC and the Secretary of State are responsible for ensuring that, taken together, the designations made by the four national conservation agencies meet the requirements of the Directive for the UK as a whole.

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[d] The regulations apply to land and to the territorial sea, i.e. generally from the coast out to 12 nautical miles. There are different regulations in place for the area of national jurisdiction beyond 12 miles. JNCC rather than Natural England is the relevant advisory body for designations in this area.

[e] It also receives £400m European Union funding for delivery of the Rural Development Programme for England

[f] Natural England's predecessor English Nature was also a NDPB, whose purpose was nature conservation (Environmental Protection Act 1990, and Nature Conservancy Council Act 1973). On its web-site, now available at the National Archive, English Nature described itself as "the Government Agency that champions the conservation of wildlife and geology throughout England".

[g] Scottish Natural Heritage, the Countryside Council for Wales, and the Northern Ireland Environment Agency.

16. There are currently 94 SACs in the UK for marine habitats and species, covering 3.4% of the sea area (from the coast to the limit of national jurisdiction).[10] Most of these are in the coastal or near-shore area – that is, within 3 nautical miles of the coast.

17. The European Commission convenes a biogeographic seminar roughly every ten years, at which it reviews with Member States the progress in completing the Natura network. At the 1999 meeting, the Commission entered a scientific reserve on the basis that for the Atlantic biogeographic region, more SACs might be required for the protection of four marine habitat types - sandbanks, reefs, sea caves, and submarine structures made by leaking gases. The first three features occur in UK waters, and the Commission's view was that the UK therefore needed to identify more areas for designation in order to comply with the Directive obligations – in other words, the UK was 'insufficient' in terms of the number of reef sites designated. In part this meant finding sites in offshore waters (ie beyond 12 nautical miles), but English Nature advised Defra that more sites were also needed in the zone 3 -12 nautical miles from the coast.[h] Defra therefore subsequently asked English Nature to identify new candidate SACs. In 2009, the European Commission's conclusion at the most recent seminar for the Atlantic regions was that the UK remained 'moderately insufficient' in respect of the designation of reef habitats. (Denmark, Spain, France, Portugal and Sweden were in the same position).[i]

The JNCC guidance

18. As well as its own specific responsibilities for identifying and recommending to the Secretary of State sites for Marine Protected Areas[j] (MPAs) in UK offshore waters, the JNCC provides guidance to and sets common standards for the activities of individual national nature conservation agencies in the identification of inshore marine SACs. In assessing the UK's contribution to the N2K Network, the JNCC considers principles of sufficiency, natural range and proportionality (see paragraphs 6-9). The JNCC has also developed guidance documents to help ensure common interpretation of the requirements by the national conservation agencies.

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[h] Defra had asked JNCC to identify areas beyond the 12 nautical mile limit, following a ruling in 1999 by the High Court that the UK must apply the Habitats Directive in the area of national jurisdiction beyond the territorial sea (R v Secretary of State for Trade and Industry, ex parte Greenpeace - [1999] All ER (D) 1232).

[i] Marine Atlantic Seminar, Galway, March 2009, Draft Conclusions.

[j] Marine Protected Areas is a generic description for areas such as SACs, Special Protection Areas (SPAs) and Marine Conservation Zones (MCZs) as defined under the Marine and Coastal Access Act 2009.

19. In 2002, the JNCC produced a report containing advice to support implementation of the Habitats and Birds Directive in UK offshore waters.[11] This report provided information relating to the identification of SACs in UK offshore waters and covered issues such as habitat definitions and interpretations, site assessment criteria, and additional principles to consider in selecting sites for habitats and species. The report did not address inshore marine sites explicitly, but indicated that "the report presents some information relevant to the selection of inshore SACs and SPAs".[k]

20. In 2004, the JNCC developed guidance on defining boundaries for marine SACs fully detached from the coast. This guidance was expanded in 2008[12] and outlined at a high level a general procedure for setting site boundaries, e.g. identifying and mapping the habitat area of interest and defining the minimum area necessary to ensure the essential level of protection for the habitat type.

21. In 2008, the JNCC produced a paper summarising progress towards completing the UK network of marine SACs. This was updated in February 2009[13] and summarised the overall process for identifying marine SACs (including a summary of selection criteria and guiding principles) and described progress on identifying specific sites across the UK. The report indicated that, for reefs, it would probably be necessary to include all the sites currently designated and being considered (including candidate and possible SACs and areas of search) to meet the EU criteria and guidelines on sufficiency.

22. In 2009, the JNCC developed a UK interpretation of the EU selection criteria and guiding principles for identification of marine SACs. The JNCC paper set out in more detail how to apply the criteria and principles for selection of SACs for marine habitats and species specified in the Directive.[14] The paper did not specify evidence requirements for identification of sites. We were informed by the JNCC that the amount of evidence required would depend on the nature of the site being explored and national nature conservation agencies would need to make a judgement on how much evidence would be likely to be sufficient.

23. We note that the JNCC documents outlined above were developed during the course of the work to identify inshore marine SACs. They were not available at the onset of the work in 2002. We were told however, that there was communication between the JNCC and the national nature conservation agencies during this time to ensure awareness of the guidance as it developed, and adoption

[k] In 1997, the JNCC produced detailed guidelines on the application of selection criteria for the identification of special areas of conservation on land and coastal areas. This was updated in 2005 - http://jncc.defra.gov.uk/page-1460.

and application of common standards in the identification of marine SACs.

Guidance regarding the provision of scientific and engineering advice

24. A key part of our review is to explore the processes underpinning the identification of marine SACs. We therefore need to consider the extent to which Natural England and Defra applied good practice in the use of evidence to inform the process.

25. There are several published documents addressing good practice. The Government Chief Scientific Adviser (GCSA) has developed guidance on quality assurance, use and communication of science and engineering in policy-making. The following paragraphs describe some of these key guidance documents.

26. In 1997, the Government Chief Scientific Adviser (GCSA) developed guidelines on scientific analysis in policy making. The GCSA Guidelines are aimed at Government Departments and policy makers within them, in managing the use of scientific and engineering advice. It is not clear how these apply to NDPBs such as Natural England. Defra told us that the guidelines do not apply explicitly to NDPBs, since these bodies have statutory independence. However the guidelines set out codified good practice and common sense principles that are relevant to all organisations. The GCSA Guidelines were updated in 2000, 2005 and most recently in 2010.[15] These most recent Guidelines were broadened to cover both scientific and engineering advice in policy making. The key messages are that Departments and policy-makers should
    - "identify early the issues which need scientific and engineering advice and where public engagement is appropriate;
    - draw on a wide range of expert advice sources, particularly when there is uncertainty;
    - adopt an open and transparent approach to the scientific advisory process and publish the evidence and analysis as soon as possible;
    - explain publicly the reasons for policy decisions, particularly when the decision appears to be inconsistent with scientific advice;
    - and work collectively to ensure a joined-up approach throughout government to integrating scientific and engineering evidence and advice into policy making".

    These Guidelines also reference a number of other guidance documents. We note that, for the majority of work being considered in this review, the 2000 and 2005 versions of the GCSA Guidelines were in place; however these contained similar good practice principles.

27. In 2010, the Government published the Principles of Scientific Advice to Government.[16] The Principles set out the "rules of engagement between Government and those who provide independent scientific and engineering advice", including clarity of roles and responsibilities, independence and transparency and openness. These Principles do not apply to employed advisers, Chief Scientific Advisers or other civil servants providing scientific advice to Government and so do not formally apply to Natural England.

28. In 2001, the GCSA published a Code of Practice for Scientific Advisory Committees.[17] It was reviewed and revised most recently in late 2007 following a public consultation. This code translated the GCSA guidelines on the use of scientific advice in policy making and provided detailed guidance for Scientific Advisory Committees. As with the guidance mentioned previously, this code of practice is for Scientific Advisory Committees and their sponsoring departments. It is unclear how this code of practice applies to Scientific Advisory Committees reporting to executive NDPBs such as Natural England. Defra's view is that, as this code was developed with Scientific Advisory Committees reporting directly to Government Departments in mind, it will not reflect the circumstances of those reporting to executive NDPBs, such as Natural England; however the principles within the code can be considered by such committees.

29. In 2004, Defra, the Food Standards Agency, the Biotechnology and Biological Sciences Research Council (BBSRC) and the Natural Environment Research Council (NERC) developed a Joint Code of Practice for Research (JCoPR).[18] The JCoPR applies to contractors who carry out research on behalf of these funding bodies and sets out requirements for the quality of the research process and the quality of science which contractors are expected to meet. The JCoPR does not formally apply to contractors funded by bodies that are not signatories to the JCoPR, but again the principles within it can be considered by such organisations. In addition, many contractors (including those employed by Natural England throughout its work on site selection) operate their own quality management systems in line with requirements of quality assurance standards, such as ISO 9001:2000.

30. As we have mentioned, the guidance we have summarised is for Ministers and Government Departments, Scientific Advisory Committees, those providing independent scientific and engineering advice to Government, and contractors undertaking scientific research on behalf of certain sponsors. NDPBs would be expected to have in place their own processes and "will operate with the degree of independence specified by their governance arrangements"[19]. Nevertheless, the principles underlying the GCSA Guidelines provide a benchmark for good practice. We consider this further in chapters 3 and 4.

The process for identifying areas for further designations

31. In 2001, English Nature and Defra exchanged letters about the need to identify more marine SACs, given that the UK would be found 'insufficient' for reef and sandbank habitats, and how to approach the task. As far as we can determine, Defra asked English Nature to advise on the identification of possible SACs that would ensure there was sufficient coverage to meet the requirements of the Directive with respect to English territorial waters – by implication, it was not a requirement to find the 'best' sites, ie those of highest conservation value of all possible sites. English Nature developed a process which it considered appropriate for this task.

32. The process can be described in four phases:

- Broad-scale screening of existing evidence, covering initially English inshore waters, to identify prioritised areas of search. This phase ran from 2002 to 2006;
- Detailed survey work within the areas prioritised, to prepare recommendations in respect of specific sites. This phase ran from 2006 to 2009;
- First formal consultation, which ran from November 2009 to February 2010, and submission of advice to Defra on a number of sites;
- Further formal consultation on some sites, which ran from August to November 2010, followed by a submission to Defra.[l]

33. After considering the advice from Natural England, the Secretary of State submitted eight candidate SACs to the European Commission on 20 August 2010, including two of the three case study sites. The proposal for the third case-study site was held back for a second formal consultation, with another site, as there had been significant changes to the proposed boundary (in the light of information which became available during the consultation) which made it necessary to give stakeholders a further chance to comment.

34. Natural England has helpfully prepared a detailed chronology for the project, which we reproduce in Annex C. We describe the main phases, indicating the approach used and what was done in each phase in the following paragraphs. We also describe, so far as is necessary, the organisational and project management arrangements which English Nature and then Natural England put in place.

35. In order to avoid unnecessary detail, which would obscure the main account, we do not describe every report, survey, or piece of work,

[l] We did not consider the process for this further consultation stage during our review.

which was commissioned. Nor do we describe in detail the organisational and governance arrangements, and all the points at which reports were made or approvals sought from within the Natural England structure. But we give sufficient detail to follow the main progression of the project through each phase.

Phase I: Broad-scale screening (2002 - 2004)

36. This phase of the project was managed by English Nature's Maritime team. The team gave regular progress reports to the relevant Directors, and to the Designated Sites Programme Board, a sub-group of English Nature's Executive Committee which was responsible for providing strategic direction on the identification of designated sites.

37. English Nature commissioned the British Geological Survey (BGS) in November 2001 to prepare a Geographical Information System (GIS)[m] database of selected seabed habitats in the English territorial sea. The first task was to use existing map-based interpretations and BGS data to identify and map primary and secondary features. It was based largely on the BGS 1:250,000 seabed sediment maps. The second part was a closer examination of parts of the BGS data sets to refine the features and habitats identified in the first part. BGS submitted their report in July 2002. This was a broad-scale, desk-based report on seabed habitat types, based on existing data – in other words, no new survey work was commissioned at this stage.

38. The work by BGS enabled English Nature to identify potentially important areas for reef and sandbank habitats, and in September 2003 the Chief Executive wrote to Defra, other Government Departments, conservation agencies, and NGOs giving a first indication of these areas and asking for diligence in licensing developments in them.[20] Information was sent to a wider community of seabed users later the same month, but the circulation list cannot be found.

39. English Nature also did further project planning, although Natural England have informed us that it was difficult to estimate costs, the amount of survey work required, and the resources needed until a full data gathering exercise had been carried out to assess gaps in knowledge and understanding of the distribution of features in each area of search.

40. In order to progress site identification further, English Nature commissioned BMT Cordah to refine and complete the maps derived from data provided by BGS. (Dr Davies has described the process for letting this contract in her report). The purpose was to

[m] Geographical Information System, ie a system designed to capture, store, manipulate, analyse, manage and present geographically referenced data.

show the distribution of relevant habitats, provide a summary description of relevant biological information, and also to provide an accompanying GIS and collated dataset of geological and biological information. The specific aims and objectives were to:[21]

- validate the distribution of habitats derived from BGS data, amend and augment these with new information, at an appropriate scale(s);
- add information on relevant habitats not identified from the BGS data in the course of the data collation exercise;
- fill in significant spatial gaps not covered in the BGS data;
- produce a revised map showing known areas of Annex I habitat, including relevant target notes and text;
- collate biological information relevant to the habitats being covered, and summarise this in brief descriptions of specific geographical areas or locations of habitat; and
- provide the findings of the study as a stand-alone report and a useable GIS workspace with acquired data.

Contractors were asked to refer to the 2002 JNCC publication (see paragraph 19) as a guide to the approach and the methods to be used.

41. This work continued to cover the whole of the territorial sea of England, but began to look at each sub-area in more detail – for example, for the south west peninsula the sub-areas were the Bristol Channel, North Devon, North Cornwall, South Cornwall, and South Devon and West Dorset. It was again a desk-based study, but BMT Cordah sought out datasets from agencies and seabed users (though they note that a number of potential data sources were identified, but were not accessed due to the high cost of acquiring the data or the long timescales for other agencies to collate the data appropriately). The report by BMT Cordah[22] lists 77 organisations they had approached seeking data (appendix 2 of their report) and 111 sources of data which they had used (appendix 3 of their report).

42. In summary, the BMT Cordah report generally confirmed the findings of the BGS work, but filled some data gaps and clarified a number of locations with particular seabed characteristics, even though data gaps remained.

43. BMT Cordah submitted their draft report in March 2004, and this was reviewed and commented on by English Nature and JNCC staff. The report was finalised in June 2004. English Nature consulted Government Departments, conservation agencies, and seabed users in October 2004, to check the accuracy of the maps and to request any data held by them to fill some of the remaining gaps.

Phase II: Focus on specific areas, and characterising potential sites (2005 – 2008)

44. Following the consultation on BMT Cordah's work, and taking account also of previous work by English Nature to identify Sensitive Marine Areas[n], English Nature developed a list of 21 potential areas which they thought had potential for SAC sites. English Nature held a workshop in October 2005 with 28 people from a range of organisations, with the aim of identifying and securing their data and seeking views on the list of proposed areas.[23]

45. English Nature had identified nine 'areas of search' for reef SACs in the southwest peninsula, all but two on the south coast. The workshop identified relatively few potential sources of new information specific to this area. Following the workshop, English Nature refined the list, with four areas of search remaining in the South West, out of seven in total.

46. In parallel, English Nature prepared a business case for conducting further survey work and data gathering in the 'areas of search', and secured Defra's agreement. They updated the project plan, aiming to submit recommended SAC sites to Defra in September 2008.

47. English Nature commissioned pilot survey work in 2005-6 in two areas - Eddystone, and Outer Thames (which is not among our case studies) – to test methodologies before commissioning survey work in each of the seven remaining areas of search. Dr Davies' report analyses the process for letting the contract to SeaStar Survey for the work around the Eddystone Reef. The specific aims were, first, to characterise the physical extent of the reef and surrounding habitats using a broad scale overview of the reef area by means of sidescan sonar and second, to characterise the richness and diversity of the biotopes and species which were supported by the reef feature using techniques such as drop down video, high resolution drop down photography, and grab sampling.

48. In April 2006 English Nature invited tenders for the main survey contracts. There were some delays in awarding the main contract, due to a moratorium on letting contracts and committing funds as English Nature became Natural England, but in November 2006 Natural England commissioned Royal Haskoning to undertake data collection and survey work for the Poole Bay to Lyme Bay and the Salcombe to Yealm areas.[o,p] Dr Davies has also reviewed this commissioning process. Royal Haskoning's role was "to prepare

[n] 'Sensitive Marine Areas' are nationally important areas that are notable for their marine or plant communities or which provide ecological support to an adjacent statutory site (http://www.wwf.org.uk/filelibrary/pdf/ma_mpadsgntns1.pdf).
[o] Other contractors were commissioned for other areas.
[p] At this point, Natural England assumed the responsibilities of English Nature.

comprehensive site specific briefing statements for three of the areas to be considered for new possible SACs. Each briefing statement [would] form the basis of Natural England and JNCC recommendations to Defra on new SACs and will contain detailed information on the location and character of Habitats Directive Annex I features within the proposed sites".[24]

49. Before the award of the contract to Royal Haskoning, Natural England asked potential contractors to describe the measures they had taken to ensure quality. In their response, Royal Haskoning indicated that they operated a Quality Management System and Environmental Management System in line with certain ISO standards. The specification for the work undertaken by Royal Haskoning also indicated that the habitat mapping data acquired should be assessed for compliance with the site selection criteria and additional principles for selection set out in JNCC guidance.

50. Royal Haskoning focused on specific areas within the two bays, and they acquired habitat mapping data to fill gaps in the existing data coverage of the study areas and to enhance the quality of the existing data, to enable assessment of areas of conservation interest against the site selection criteria and additional principles for SAC site selection, as set out by the JNCC (see paragraphs 18-23). The type of survey conducted covered a wide variety of techniques, including acoustic methods and intrusive and non-intrusive ground-truthing methods, according to the specific requirements for the different areas.

51. During the main phase of the work, Royal Haskoning were providing project reports to Natural England every two weeks. There were some delays to the work due to delays appointing sub-contractors (see Annex C for further information). There were a number of meetings with Natural England and the JNCC, which sometimes included contractors working on other areas, to discuss progress and to ensure consistent application of site selection criteria. Natural England also established its own organisational structure and project management arrangements.

52. During 2006-07 and 2007-08 Royal Haskoning worked to characterise the areas, gather survey data, and to identify the specific proposals for SACs, including defining their boundaries. They prepared site selection reports, and refined these following internal reviews by Natural England staff and by a Technical Advisory Panel. The role of the Panel was to assure quality and provide a high level review of the site selection reports. There were also a number of reviews – for example, papers were submitted to the inter agency Marine Natura Project Board in May 2008 for approval of the final site boundary proposals, and to the Natural England Evidence Steering Group in June 2008 for endorsement to continue work. The role of the Evidence Steering Group was to provide strategic direction on Natural England's evidence base and membership comprised Natural England's Chief

Scientific Adviser, Chief Executive, and senior officials.[q] Final site selection reports were submitted by Royal Haskoning in summer 2008, and Natural England used these as the basis for Selection Assessment Documents (SADs).

53. Royal Haskoning produced a series of reports in 2007, describing their general approach, survey requirement specifications, and the data coverage for each of the areas. These set out in some detail the evidence sources which were available, and include a table showing for each data source a confidence rating based on their professional judgement, and a confidence score using a Natural England guidance spreadsheet with a standard method used by the Mapping European Seabed Habitats (MESH) project (although Royal Haskoning do note that this has limitations).[25,26]

54. As part of their work, Royal Haskoning scored each reef on a scale of A to C against the criteria set out in the Habitats Directive (listed in paragraph 9 above), i.e. for representativity, relative surface area, conservation status (structure and function), and overall assessment of the value of the site for conservation, following the European Commission's guidance.

55. At the end of this phase, Natural England decided to ask Dr Keith Hiscock, of the Marine Biological Association based in Plymouth, to review four SADs before the SACs were formally proposed for consultation. The sites Dr Hiscock reviewed included Lands End and Cape Bank, Lizard Point, Salcombe to Yealm and Eddystone (subsequently renamed Prawle Point to Plymouth Sound and Eddystone), and Poole Bay and Lyme Bay (therefore, only two of the case study sites we are considering were included in Dr Hiscock's review). We have been told, based on the current recollection of those involved, that the intention was to review Royal Haskoning's work and to fill any gaps. Correspondence from Natural England suggests the intent was not to review the methodology, but rather to provide access to additional data sets. Dr Hiscock had ready access to relevant information and data, and was a recognised expert in reef habitats of the region (not least because of his long experience of diving in the region).[27]

56. Although later described as a peer review (and Dr Hiscock told us that this is what he thought he was undertaking), the commissioning letter at the time thanked Dr Hiscock for "agreeing to look through" the reports, and asked him to concentrate on "the scientific rationale in support of the boundary we have selected" , and continued:

> "I am particularly concerned that we have made the strongest possible case for proposing these sites based on the best available evidence for the selection of the sites. I

[q] This Steering Group was distinct from Natural England's internal Evidence Panel – see chapter 2, paragraphs 73-76.

would value your expertise in providing a critique of the case for the selection of the sites and the supporting evidence and whether you are aware of any survey data relevant to reefs that has not been included in the assessments."[28]

57. Dr Hiscock submitted his report in October 2008. He provided general comments on the approach used and a detailed critique for each of the sites he was asked to assess. In his general comments he stated that "the reports accurately reflect the requirements of Annex III of the Directive and the advice on interpretation by JNCC etc. However, the case for an MPA designation is very unconvincing because of shortcomings of the Directive. Those shortcomings need to be acknowledged and overcome, within the requirements of the Directive, by a more scientific approach to site selection". Dr Hiscock's views on these shortcomings were set out in his report.

58. For Dr Hiscock's critique of each site, he described the approach he took to review the information, provided detailed comments on the case for selecting the sites (including the supporting evidence), commented on the SADs, and where relevant provided some additional information that he felt had not been taken into account in the reports. For Salcombe to Yealm and Eddystone, Dr Hiscock's main conclusion was that the boundary for the site needed to be examined as there were difficulties due to the area being widely dispersed and separated. In terms of Poole Bay and Lyme Bay, Dr Hiscock commented on the different areas within the SAC and the need to highlight the features within each area.

59. Following receipt of Dr Hiscock's report, Natural England staff met to discuss his comments and agree what amendments to the SADs were needed before submission to Natural England's Executive Board. This meeting was informed by an annotated version of Dr Hiscock's report that contained comments from a member of Natural England staff. Natural England told us that a note was made of this meeting at the time, but that it cannot now be found.[r] Dr Hiscock told us that he had not received any feedback on his report.

60. Following a request from Defra Marine Programme in 2010, Natural England produced a retrospective document which summarised how they had considered and addressed each of Dr Hiscock's comments. The project officer coordinating the assessment of Dr Hiscock's report at the time had since left Natural England so this summary was produced by other staff who were present at the discussions in 2008 and was based on their recollections. This document set out where Natural England agreed with Dr Hiscock's

[r] The subsequent note written by Natural England in June 2010 recorded that "We do not have a note of the meeting which took place on 16 October 2008, as the project officer involved at the time has since left Natural England, and did not submit any hand-written notes before departure. Nor have any of the other officers whom were present at the time retained notes of that meeting".

comments and where amendments had been made, where they disagreed and why, and which comments they felt they could not consider due to limitations of the Habitats Directive, e.g. in considering socio-economic factors.

61. By the end of this phase, Natural England had a set of documents which set out the evidence base for selecting each proposed site, including an assessment of costs and benefits for 'doing nothing' and for designating the site. These were signed off by Natural England's Executive Board in December 2008, which also provided confirmation to proceed towards public consultation.

Phase III – Public Consultation (2009 – 2010)

62. In 2009 Natural England prepared for public consultation. This involved securing Defra's agreement, and, through Defra, that of other Government Departments for the proposals to serve as the basis of the consultation, and then undertaking first an informal consultation and subsequently a formal consultation exercise. The consultation covered all the proposed SACs for England and Wales, and also included proposals for SPAs under the Birds Directive. It was therefore undertaken jointly by Natural England, the JNCC, and the Countryside Council for Wales (CCW), as there was one cross-border SPA (Liverpool Bay), two SACs which extended beyond territorial waters and two SACs wholly in offshore waters. Dr Davies undertook a detailed review of the conduct of the consultation, with a detailed description of the process. The following paragraphs give a summary of the key points.

63. It took longer than had been planned to secure agreement from Government to start the consultation process, and in order to keep to the final deadline for submitting advice to Defra and to maintain the time required for the formal consultation stage, the time between the end of the informal consultation and the start of the formal consultation was reduced, so Natural England possibly had less time than anticipated to refine the proposal before formal consultation.

64. Natural England prepared a list of stakeholders which formed the basis of stakeholder engagement plans developed nationally and regionally for both the informal and formal consultations, based on an initial list which had been prepared by Eftec, the contractor that prepared the impact assessments (see paragraphs 67-68). A National Stakeholder Action Plan was developed as a basis for informal dialogue with a range of sectors, and a more detailed Stakeholder Engagement Plan for south west SAC sites was prepared for the formal consultation. This identified the key organisations that should be targeted in the region, the initial method of engagement (letter, email, phone or meeting) and the staff involved, and includes over 150 stakeholders in seven sectors

(including fisheries, statutory bodies, MPs and MEPs, conservation groups, landowners, sea users and academic groups).

The informal consultation stage

65. Natural England carried out an informal dialogue between July and October 2009, as recommended in the Government's Consultation Code of Practice. The purpose was to share relevant information about the proposals and the designation process; to help Natural England start to understand how the proposals might impact on socio-economic activities, and begin discussions over possible future management measures. Natural England consulted 35 national stakeholders representing the aggregate industry, renewable energy, environment, Government, fisheries, oil and gas, ports and shipping, and recreation. It also consulted around 280 regional stakeholders, local authorities and coastal management groups. There were meetings with sectors and in particular regions, including local fishermen.

66. A summary of the issues raised is set out in the document for the formal consultation stage.[29] In particular, some fishing groups were keen to learn about the types of scientific information that Natural England would accept as providing admissible evidence to consider changes to the sites. More widely, fishing groups and communities were very concerned at the possible impact of the designations on their activities and livelihoods. However, as work to identify management measures had not been started, these potential impacts were not yet known.

Preparation of Impact Assessments

67. Government rules require an impact assessment to be prepared and published as part of the consultation on any proposal with regulatory impact. The impact assessments set out the economic, social, and environmental implications of the option being recommended or consulted upon, often compared with 'do-nothing' and any other options – though in this case Natural England did not consider alternative options arguing that designation was necessary to comply with European law, and that known alternative sites had been considered but had been rejected on scientific grounds.[30] Under European law, economic and social factors cannot be taken into account in site selection (paragraph 9), though information on the type and amount of activity taking place could be relevant when drawing up proposals for management measures.

68. Defra asked Natural England to prepare the impact assessments. Natural England had not previously been involved in developing impact assessments and the requirement in this case was novel.

This additional requirement had time and resource implications for Natural England and therefore delayed the start of public consultation for 11 months.

The formal consultation stage

69. The formal consultation ran from 27 November 2009 to 26 February 2010. The aim was to seek the view of all interested parties on the scientific case for the selection of SACs and SPAs in 12 areas, and on the assessment of the likely economic and social impact of the designation of each site. Natural England, the JNNC and the Countryside Council for Wales published a 34 page document, giving the context, explaining the process and asking a number of questions.[31] For each of the proposed SACs, there was the SAD and the impact assessment, giving the scientific case and site specific information.

70. Natural England wrote to stakeholders, posted information on its website, held meetings with key stakeholders, and attended some public events to discuss the proposals with anybody interested.

71. Some stakeholders were keen to provide information, and asked Natural England about what types of evidence would be likely to be accepted. In response, Natural England produced a short note for staff to advise stakeholders about the form in which data could be received during the formal consultation. Further guidance for stakeholders was also added to a general Frequently Asked Questions (FAQ) document on the Natural England and the JNCC website.

Following the consultation

72. A total of 677 responses were received to the consultation, including 58 specific responses on the Poole Bay to Lyme Bay SAC and 31 specific responses on the Prawle Point to Plymouth Sound and Eddystone SAC.

73. A considerable amount of new data was acquired, including the outputs of a major project called the DORset Integrated Seabed Study (DORIS) which had mapped the seabed in the Portland to Studland area (a significant area of the Lyme Bay to Poole Bay SAC).[32] Dr Davies' report explains Natural England's procedures for handling the consultation responses and new evidence. In particular, new 'hard evidence' was referred to Natural England's internal Evidence Panel for evaluation, and evidence of a 'more general nature which better contributed to [Natural England's] wider knowledge of the site and stakeholder views' was reviewed by Natural England's regional staff before recommendations were submitted to Natural England's Executive Board in May 2010.

74. The Evidence Panel comprised marine and evidence experts from Natural England and the JNCC. The Panel largely established its own mode of operation, and was not given any guidance on the approach it should use. In particular, there were no *a priori* principles about the criteria for accepting or rejecting new evidence – these were developed *ad hoc* in response to the evidence actually received. Natural England's view is that, as this was a new and complex process, it would have been difficult to prepare relevant protocols.

75. Following a preliminary assessment of the new evidence, the Panel organised meetings with external partners to provide a view on initial deliberations. A meeting was organised with Royal Haskoning on 10 March 2010 to outline the scope and nature of the new scientific information, and to seek views on the proposed changes to their original recommendations. Royal Haskoning acknowledged that the new data were of a higher quality than those available to make initial proposals, and supported the revisions that the Evidence Panel proposed.

76. Representatives of Natural England's Evidence Panel also met with the DORIS project team, on 20 May 2010. The aim was for the project team to review Natural England's analysis of the new data, including a new map of reef in the Studland to Portland area. The DORIS project team agreed with the Evidence Panel's interpretation of the data and identification of reef, and that more time should be taken in order to utilise properly all relevant data to map accurately the reef features. Using additional datasets provided through the formal consultation and additional data provided by the Dorset Wildlife Trust from Seasearch[s], the reef map was further refined and a draft SAC boundary was drawn up for the Studland to Portland area.

77. In total, there were revisions and updates to site features and boundaries for six of the eight marine SACs originally proposed and subjected to consultation, including all three of the sites subject to this review. Revised SADs were drafted by the Natural England Evidence Team with input from regional lead advisers.

78. Recommended changes to Poole Bay to Lyme Bay, and Prawle Point to Plymouth Sound and Eddystone, were provided to Natural England's Executive Board in May 2010. A sub-group of the Board and executive directors approved these final recommendations for submission to Defra in June 2010.

79. Natural England published a high level summary of the consultation responses and changes which had been made as a result of the new information.[33] This was however a summary, and the information

[s] Seasearch is a project which facilitates the collection of environmental information (species and habitat recording) by volunteer divers around the UK.

about how each individual response had been dealt with was not clear, nor was there any specific feedback beyond a standard letter given to those who did provide new evidence about how it had been assessed and used.

80. Final SADs for Lyme Bay and Torbay and Prawle Point to Plymouth Sound and Eddystone were submitted to Defra on 21 June 2010 and published on the Natural England website on 20 August 2010. The draft SAC boundary for Studland to Portland was presented to the Executive Board in August 2010, and approved for submission to Defra for formal consultation.

Consideration of the advice by Defra

81. Defra officials explained to us that they had considered two main issues when reviewing the advice. First, they had considered whether the proposals were sound from a procedural point of view – in other words, had the formal requirements of the Directive been met, and were there any procedural improprieties. For example, where a proposal for a SAC had been modified following public consultation – e.g. by changing the site boundaries – they had considered whether it had changed so much that re-consultation would be required. A failure on procedural grounds could open the Department to the risk of judicial challenge by an aggrieved stakeholder.

82. Second, they consulted other Government Departments, as part of the process of securing collective agreement to a UK position. The Departments with the greatest interest were the Ministry of Defence, the Department for Transport (in respect of port development, for example), and the Department of Energy and Climate Change (offshore oil and gas production, and offshore renewable energy installations).[t] Social and economic considerations are of course not relevant and cannot be taken into account, so the potential impact of a designation on the scope for developing offshore energy, for example, would not be a factor. But we were told that scientists from those departments did scrutinise and in some cases challenge the scientific cases, and in particular the proposed boundaries of the proposed SACs – particularly those relating to sandbanks. These issues were resolved following discussions between the scientists of the departments concerned.

83. Defra officials confirmed that they had not considered in depth the robustness of the evidence supporting Natural England's recommendations. They took the view that Natural England was their statutory adviser in this field, and had a far greater breadth and depth of expertise in marine science that a policy team in the

[t] The other significant use of the sea potentially affected by designation is fishing but since Defra is responsible for that sector these issues were internal to the Department's considerations.

core department could ever hope to have. Defra did consider the process used by Natural England and took comfort from the fact that the process had been comprehensive, and that there had been a public consultation which exposed the proposals to public scrutiny. We discuss this further in chapter 3.

84. Following Defra's consideration of Natural England's advice and obtaining Government clearance for the proposals, the Secretary of State formally submitted the candidate SACs to the European Commission on 20 August 2010. The European Commission is expected to propose the sites to be adopted as Sites of Community Interest in autumn 2011. If they are adopted, the Secretary of State will be required to make the formal designation as SACs within six years. Necessary conservation measures and, if appropriate, management plans for the sites will then be established.

85. We have summarised in this chapter the numerous stages in the process for identifying marine SACs which took place over a long timescale. In the next chapter, we discuss our conclusions and recommendations.

Chapter 3: Evaluation of the Process

1. In this chapter we describe the concerns which have been raised or which we ourselves identified during our review, and give our views, conclusions, and recommendations. We make some more general points in chapter 4.

2. The concerns fall into several broad themes:

   - **Roles and Responsibilities**: Were the respective roles and responsibilities of Natural England and Defra clear, and was Natural England's advocacy function for conservation compatible with that of providing objective, science-based advice to Government?

   - **Approach**: Was the general approach - based on broad-scale desk studies initially, focusing down on more limited areas of search, and finally specific survey work on potential sites – appropriate?

   - **Process**: Was the project executed in an efficient way? Was the project adequately planned and resourced? Were the management processes in Natural England and in Defra adequate? And was there adequate external professional scrutiny of the process, the quality of the evidence, and the way in which it was used?

   - **Science**: Did Natural England use all the relevant scientific evidence and did it evaluate it correctly? Was there any selection bias, either systematic or accidental, in terms of evidence used to support decisions?

   - **Engagement and public scrutiny**: Were there adequate opportunities for stakeholder input and challenge? Was the process sufficiently transparent, so that stakeholders could understand and comment on the approach, the process, the evidence, and the way in which it was used?

3. The following paragraphs set out our views and conclusions on each of these issues. In the light of these conclusions we then address the central question of whether there is serious doubt about the site selection recommendations which Natural England has made (and which the Secretary of State has accepted) on the two case study candidate sites which have been submitted to the European Commission, and about the strength of the third case (which is yet to be formally submitted).

Roles and Responsibilities

4. Natural England is an 'arm's length body' – in other words, it has been given a number of operational and delivery functions and operates with a degree of independence from central Government and its sponsor Department Defra. The relationship between Natural England and Defra has changed during the time the process we are reviewing has been running. In the last decade, there was a strong emphasis on the separation between policy development and delivery, with arm's length bodies having considerable independence. Since the last election, the Government has demanded much closer working between arm's length bodies and central Departments.

5. We outlined in chapter 2 the guidance relating to the use of science in policy making (see chapter 2, paragraphs 24-30) and specifically, how the Government Chief Scientific Adviser's (GCSA) Guidelines on the use of scientific and engineering advice in policy-making are targeted at core Government Departments, and policy makers within them, rather than at arm's length bodies specifically. However, in our view these Guidelines set out good practice principles which should be followed by all organisations involved in the use of evidence in the policy-making process.

6. In the light of our findings that Natural England has no formal guidelines in place for use of evidence in policy-making, **we recommend that Natural England should adopt and embed the good practice principles set out in the GCSA's Guidelines on the use of scientific and engineering advice in policy-making.** This recommendation will no doubt be equally applicable to other arm's length bodies, and we suggest that the Defra Chief Scientific Adviser (CSA) should consider this.

7. Within Defra, Senior Responsible Owners (SROs) for each programme are responsible for the policy advice submitted to Ministers and should also ensure the robustness of the evidence underpinning the advice. In this case, the staff in the Defra Marine Programme were aware of the scientific process Natural England had followed, had seen the various reports setting out the evidence, and took comfort from the fact that there had been consultation to provide an opportunity for public scrutiny. (We address in paragraphs 59-69 whether the consultation did in fact provide this opportunity). But Defra did not review the evidence and advice from Natural England against the principles set out in the GCSA's Guidelines, or take steps to assure themselves in any formal sense that the evidence was fit for purpose.

8. Defra should of course be able to have confidence in the evidence provided by its arm's length bodies. The prime responsibility for ensuring that evidence is robust should lie with the organisation responsible for gathering and synthesising it, and it would be inappropriate and inefficient to have extensive double checking.

9. We recommend that the Defra Chief Scientific Adviser should ensure that policy makers in Defra, specifically Senior Responsible Owners, are aware of and embed the GCSA's Guidelines on the use of scientific and engineering advice in the policy-making. We further recommend that the CSA provides SROs with guidance on their responsibilities in circumstances where Defra relies on Natural England (or other arm's length bodies) to provide evidence-based advice.

10. The role of the CSA is to provide independent advice and challenge to the Department's evidence activities and the robustness of evidence underpinning policy decisions. For core Defra, the CSA also determines resources for evidence gathering to ensure these reflect the strategic needs of the Department.

11. The CSA has in practice focused primarily on the activities of the core Department. Defra's expectation has been that the chief scientists or heads of evidence within each arm's length body are responsible for ensuring appropriate processes are in place within their organisation. In the past, the CSA has carried out quinquennial reviews of the science carried out by Defra's laboratory agencies[a], but Defra has not undertaken any equivalent scientific assessments of its NDPB delivery agencies. With regard to the CSA's advisory role in core Defra, on occasion, policy teams have proactively sought advice from the CSA on particular policy decisions, eg in order to mitigate risks. More often, the CSA provides advice in a reactive sense in response to specific issues. There are no criteria or guidelines which determine when the CSA may intervene in particular policy decisions.

12. **We recommend that Defra's Chief Scientific Adviser should adopt a proactive and risk-based approach to identifying and intervening on specific policy issues. We also recommend that the CSA should clarify his remit with regard to the work of the Department's arm's length bodies.**

Natural England's role as an advocate for conservation

13. Natural England has a specific duty to promote conservation, and indeed staff have been trained to be 'advocates' for conservation.

[a] Centre for Environment, Fisheries and Aquaculture Science (Cefas), Veterinary Laboratories Agency (VLA) and Food and Environment Research Agency (Fera).

At the same time, Natural England is responsible for providing objective, science-based advice to Ministers on issues such as the selection of sites as Special Areas of Conservation (SACs). Some stakeholders perceive a risk that Natural England staff may consciously or unconsciously allow their advocacy function to influence their work, for example in deciding whether to select one piece of evidence over another, or deciding on whether the evidence is sufficient to justify a conclusion.

14. We have not seen evidence in the course of our study that Natural England's work on marine SACs has been influenced by such bias. Natural England recognises the issue and assured us that staff are aware of the dangers. But there are no formal arrangements or guidelines in place, and we believe that there is more that Natural England should do to guard against this risk, and to demonstrate to stakeholders that any risk of bias has been addressed. It is difficult to maintain a clear separation between science and policy, and between facts and values, and being more transparent and providing opportunities for independent scrutiny are crucial in helping to maintain both objectivity and public confidence. **We recommend that Natural England should put in place and publish formal guidelines and principles to ensure that the gathering, selection, analysis, and use of evidence are not compromised by its commitment to its statutory purpose to ensure conservation, and that greater transparency and opportunities for independent, expert review and scrutiny are incorporated in order to maintain public confidence in the integrity of complex, science-based projects**. We deal with these issues in more detail below. It will be important for Natural England to ensure that staff receive training in these issues, and that the guidelines and principles are drawn to the attention of new project managers as staff change.

The approach adopted by English Nature and Natural England

15. As we explained in chapter 2, English Nature started with a broad-scale, desk-based study of the whole of the English territorial sea using existing data-sets. The area of search then became narrower, focusing on areas in which initial evidence suggested the greatest likelihood of identifying significant areas of reef. More existing evidence was assembled for these areas, and survey work was specifically commissioned to obtain new information about the extent of seabed reef habitats and the species they contained in order to fill gaps. Also, with the passage of time, new information became available from other sources. Possible SACs were identified, and the boundaries refined.[b] This is the same approach as that which has been followed by the JNCC in searching for SACs in offshore areas.[34]

[b] In legal terms, the sites were either proposed or candidate SACs at different stages of the process. For convenience, we simply refer to SACs.

16. The decision to adopt this approach reflects the nature of the commission which English Nature was given, and also cost and practicality. The aim was to find sufficient reefs meeting the definition and criteria set out in the Habitats Directive, to ensure that the UK could designate them and satisfy the European Commission's test of 'sufficiency'. By implication therefore the aim was not to be able to say for certain that the 'best' examples reef habitats in UK waters had been selected, ie those of highest conservation value of all possible sites. That would have required a more comprehensive approach from the outset.

17. It would have been very expensive to characterise all areas of the English territorial sea to the same detail as was used in the more specific areas of search during the later stages. The Marine and Coastguard Agency estimated in 2010 that high resolution sonar mapping of the whole of the English part of the UK continental shelf would have cost £210 million (at 2010 prices) and would have taken seven years.[c,35] In the event, Natural England has spent about £2 million on external consultancy and survey work for the three case study sites.[36]

18. There have been criticisms of the approach adopted by English Nature and subsequently, Natural England. For example, the National Federation of Fishermen's Organisations (NFFO), in their response to the consultation exercise in 2010, argued that a process driven by existing knowledge introduced a bias towards coastal [which we take to mean inshore] areas due to the comparatively greater information for these areas. They argued (in respect of areas being designated under the Birds Directive) that the process of undertaking regional level survey work resulted in larger estimations of species present against a background of national surveys of poorer quality, so that the areas selected for survey became 'self-selecting' for designation – a similar argument could be made for designation under the Habitats Directive. In their submission to us, they argued that when sites are being selected incrementally, there is no way of knowing at the point of selection, in the absence of a full set of evidence across all possible sites, that by the end of the process the best set of sites would in fact have been selected.[d,37]

19. Ms Portmann suggested to us that at the time English Nature decided to focus on the south coast of Devon and Dorset, the evidence for the presence of reefs was no greater than that for their presence to the north of Devon and Cornwall. We recognise

[c] The Northern Ireland executive did however find £70 million for a survey of their territorial sea.

[d] It is of course possible that if additional sites had been found they would have been selected in addition to rather than in place of some of those which have been selected, since even with the current sites the UK will be on the lower limit of 'sufficiency'.

however that the south coast had been more extensively studied, and at the time of the broad-scale survey there was little verified evidence for reefs which would merit designation off the north coast (and indeed this remains so now).

20. In addition, given that the UK will be close to the lower limit of sufficiency even with the SAC sites now in the process of being designated, it is likely that the case study sites would have been selected even if a more comprehensive approach had identified some additional sites. It does appear that in the initial stages English Nature did focus on the areas where there was the highest prospect of finding reef habitats based on the evidence available at the time.

21. For these reasons, **we conclude that the approach adopted by English Nature, relying on initial broad-scale desk studies and then focusing detailed investigation on areas of interest where reefs were most likely to be present, was appropriate given the remit it had been given by Defra**.

The management of the process by Defra and Natural England

Project management

22. When English Nature started the process, it was expected that it would take about seven years – in the event, it will have taken ten years by the time the designation process is complete. During that period there have been significant organisational changes which affected the delivery of the process. Most importantly, English Nature became part of Natural England, which had major organisational and staffing impacts.

23. Even within English Nature and Natural England there were internal reorganisations. At times responsibility was split between a team dealing with marine policy on the one hand and a team dealing with evidence (across all sectors) on the other, and at other times responsibility was almost wholly within a marine team. At one point, there was a split between a marine team and one dealing with both terrestrial and marine designated sites. It was not always clear to us where responsibility lay at each stage for assuring the quality of the evidence which was being assembled. In addition, there have naturally been significant staff changes over ten years – many staff who were involved in the early stages are no longer with Natural England. There have also been organisational and staff changes in Defra.

24. Such changes are inevitable. But it would have been better if Natural England had addressed this at the outset through more robust project planning arrangements, and, for example, in terms of knowledge management and record keeping – the records for

this process are split across several different paper and electronic series.

25. There were also changes in the requirements during the process: as Natural England approached the consultation phase, Defra asked them to prepare an 'Impact Assessment' setting out among other things the economic and social costs and benefits of the proposed designations.[e] Natural England had not previously prepared such assessments, and it took some time to discuss with Defra what work was required (and how it should be paid for) which delayed the project as a whole. We also note that the JNCC guidance was evolving even while Natural England was doing its work.

26. There were also other causes of delay. In the early stages there were resource constraints – for example, a moratorium on new spending delayed the start of the Royal Haskoning contract by several months. And there were delays in gaining agreement from Government to begin the informal consultation process in 2009, which reduced the opportunity to acquire additional data from stakeholders during this stage.

27. There has been a noticeable improvement in recent years, with clearer and more formal project management processes, and more robust processes for engagement between Defra and Natural England about priorities and resources. For example, following the delay to the Royal Haskoning contract, Defra provided an extra £185,000 in 2006/07 and £1.5 million in 2007/08 to fund Natural England's marine survey work.[38] And in 2008, Natural England negotiated a more realistic timetable with Defra, so that the target date for the submission of candidate sites to the European Commission was put back from August 2009 to August 2010, to allow more time for informal consultation, and because there were not enough staff to prepare the formal consultation process adequately.[39]

28. The UK was at risk of infraction proceedings for failing to implement the Habitats Directive in respect of marine sites even before this process started. The possibility of condemnation was a factor in seeking to make progress, and the environmental Non-Government Organisations were pressing for sites to be designated. But we have not formed the impression that generally the infraction risk was seen as a significant time pressure – even at the start, the project was planned to take seven years, and so long as progress was seen to be happening it was unlikely that the European Commission would launch formal action. Indeed, when the target date for submission of the candidate sites was put back from 2009

[e] This economic and social information was not needed as part of the decision making process under the Habitats Directive, since such factors are not relevant (see chapter 2, paragraph 9), but was a central Government requirement for all regulatory proposals.

to 2010, the risk of infraction was judged by Natural England to be low.

29. We comment later on the quality of the evidence which was assembled, and about our confidence in the recommendations which have been made, but we believe that Natural England and Defra should have established clear management arrangements at the outset, better able to cope with change, and should have put in place clearer lines of accountability both between Natural England and Defra and within Natural England.

30. **We recommend that in future for evidence-based projects of this scale and length, Natural England and Defra should put in place clearer and more robust project management, better able to manage risks and cope with change, and they should ensure that accountabilities are clear and recorded.** There are a number of recognised, formalised tools for project management which could be used, of which PRINCE2 is an example.[f] Adopting such a tool would also address the need for systematic record keeping.

The process for appointing consultants

31. Dr Davies investigated in detail the processes by which Natural England let contracts to BMT Cordah in 2003, to SeaStar Survey in 2005 and to Royal Haskoning in 2006, and her report is being published in parallel with this report. It is clear that Natural England had defined objectives for each of these contracts, and procurement processes were in place, including formal evaluations of the bids, as would be expected. There are some gaps however– for example , there are no clear audit trails of how decisions were made. But we conclude that the contractors were selected fairly, on the basis of their capability to undertake the work and on the merits of their proposals. We also note that the companies selected are well established and respected organisations, with a range of clients. There is no evidence that, for example, contractors were chosen for their views on conservation policy.

Integrity of the process, and peer review and scrutiny

32. One of the main criticisms of Natural England's work made by Ms Portmann concerns the lack of formal guidance on the use of evidence and on quality assurance, and indeed the lack of any proper procedures. She claimed that Natural England had not maintained records showing all the sources of evidence it had used, nor had it recorded each iteration of the SAC documents. In her view, this meant that it was not possible for Natural England to

[f] http://www.prince2.com/

know, for example, how to use new information or data as they became available during the process.

33. Natural England has admitted that they have no formal guidance in place (and Defra had not required them to introduce arrangements), but it has argued in the past that the professionalism of its staff and the processes for review and assurance had been sufficient to give confidence in the outcome of its process and in the recommendations which had been made.

34. It is clear that there are points in the process at which it is not transparent exactly how evidence was dealt with – the lack of any record of how the comments made by Dr Hiscock were handled is one example, and the lack of formal record keeping by the Evidence Panel another. The lack of procedures did increase the risk that the integrity of the process could have been compromised. We have made a recommendation about the GCSA's Guidelines above which should address these issues in future, and we review the robustness of the science itself later.

35. One of the key principles in the GCSA's Guidelines relates to external scrutiny and peer review. Independent, expert scrutiny would have been potentially helpful both to Natural England in assuring itself that the evidence had been used appropriately, and – if the scrutiny process was transparent – also to stakeholders to give them confidence that the process had been fair. Independent, expert scrutiny is particularly important when the evidence is complex and requires interpretation and thus lay stakeholders cannot themselves form a judgement about it. We have already noted the perceived conflict between Natural England's role as an advocate and as an objective provider of science-based advice, and the risk that this could undermine the confidence of some stakeholders in the work of Natural England. Regular independent review is one safeguard against this risk.

36. We were struck that in this process there were relatively few opportunities created for independent, expert review – the majority of the work was dealt with in-house by Natural England and its consultants, without routine engagement with external scientists or stakeholders. There were workshops at certain points at which external experts were engaged, often held to seek to gain access to further data sets (which was commendable). The review by Dr Hiscock, though valuable, was not itself an independent review in the true sense. We explain below why we consider that the public consultation did not serve as equivalent to a formal external review either.

37. **We recommend that Defra and Natural England should ensure that independent, expert review is built into processes which rely significantly on the gathering, synthesis and interpretation of evidence. Reviews should**

be transparent: the reviewers' comments and Natural England's response to them should be recorded and published.

Science and the use of Evidence

38. In its submission, the NFFO expressed concern that the incremental approach used by Natural England to select SACs amounted to a systematic failure in applying a scientific process. Ms Portmann has also raised extensive concerns that Natural England has not used all the evidence that was available, and – with no formal protocols in place about the handling of evidence and with inadequate record keeping – it was impossible to be sure how they had used the evidence which had been included.

39. We therefore reviewed the scientific evidence used to support the identification of reef habitats in three areas of interest within the case study sites (Lyme Bay and Torbay, Plymouth Sound to Prawle Point, Eddystone). For each area of interest, Dr Widdicombe viewed and assessed samples of the broad-scale geophysical data used to identify potential reefs; the quantity and quality of video, photographic and survey data used to ground-truth the geophysical data; and the geophysical data acquired in 2009 and 2010 to determine whether initial conclusions regarding the type and extent of habitats were supported by higher resolution data.

Quality and organisation of the data

40. During the course of the project, Natural England had access to a great deal of spatially referenced data from different sources, about the seabed habitat and biotypes found. These included for example data from divers, evidence from the analysis of 'grab samples', high and low resolution photography, video recordings, and sonar data ranging from echo sounding data from fishermen to high resolution side-scan sonar.

41. These data were generated for different purposes, at different times – only some under the direct control of Natural England or its contractors and commissioned specifically for this process. The data therefore vary in quality, because some sources are inherently more definitive than others – for example, multi-beam sonar provides much more certain information about the type and extent of seabed features than does an echo sounder designed primarily for other purposes. (It also costs much more). The quality of the data also varies according to how, when and why the data were collected – evidence from a well designed, documented survey carried out to clear quality control standards is likely to be better than more anecdotal evidence of less certain provenance.

42. Natural England and its contractors therefore had to make decisions at each stage of the process about what evidence to take into account, and whether the evidence they did have was sufficient to enable them to reach conclusions.

43. In order to integrate, display and interrogate these different types of data, Natural England constructed a Geographical Information System (GIS). Though the quality of data in the GIS varies (but is generally good), in our view such a system was well suited for using multiple data sources to assess the extent and quality of seabed habitats. On the basis of Dr Widdicombe's enquiries, it appears that all the supporting data behind the GIS have been archived by Natural England and are readily available.

44. The report by Royal Haskoning shows how different data sources were 'scored' according to the type and source of the data and the confidence which could be placed on each. (As we noted in chapter 2, Royal Haskoning had in place a Quality Management System conforming to ISO 9001, and they were following the framework of the JNCC guidance.) During the public consultation, Natural England produced a note to enable them to respond to questions from stakeholders about what new evidence was likely to be acceptable. The Evidence Panel set up to review the new evidence which was submitted did not have formal guidelines, but instead relied on the professional judgement of the members to assess each case.

45. We have found no evidence that at any point during the process the wrong decisions were made about the selection or adequacy of evidence, or that relevant data had been overlooked or ignored. But it would have been preferable if the issue had been addressed in a more consistently formal way, from the outset. **We recommend that for major evidence based projects, Natural England should establish and publish at the outset protocols setting out the key evidence needs, the principles against which evidence will be evaluated, and indicating the quality and quantity of evidence which is likely to be required to make robust decisions at different stages of the process. There should normally be consultation on the protocols before they are finalised.** We recognise that protocols would need to be flexible, and might need to change in the light of developments during the course of a project.

Review of the evidence for case study sites

46. We conclude that, for the Eddystone site, Natural England used the available data appropriately and adequately mapped the presence and extent of reef habitat. There was no subsequent evidence to suggest that areas of reef had been wrongly identified.

47. For the Plymouth Sound to Prawle Point SAC, there was reasonable confidence that the proposed boundaries contained appropriate reef habitats. Subsequent higher resolution multi-beam sonar data reinforced this view. With the later data, one area originally identified as sediment was subsequently identified as flat reef.

48. For the Lyme Bay and Torbay SAC, the evidence suggested that the majority of the area within the proposed boundaries qualified as reef habitat. Natural England originally used biotope maps to supplement the limited geophysical data to define the extent of potential reef in the Lyme Bay and Torbay area and areas have subsequently been redefined as more detailed data have become available.

49. The most recently collated evidence confirms the presence of reef habitats in the area proposed for the Lyme Bay and Torbay SAC. Figure 2, at the end of this chapter, is taken from a recent Cefas report published on 8th April 2011. It shows the result of desk-based study using recently collected multi-beam echosounder data (2010 and 2011) and all previous evidence to create a refined map of Annex 1 reef features . The map shows that there is generally high confidence that the vast majority of the seabed in this area consists of Annex 1 reef habitat and that this newly refined map supports the boundaries proposed by Natural England.

50. We note that significant new data on one area became available during the consultation process from the DORIS project organised by Dorset Wildlife Trust (and funded principally from the Landfill Tax Communities Fund). Indeed, DORIS revealed, for the first time, "the fascinating physical and biological complexity of the seabed in exquisite detail".[40] Natural England did use this better data set to refine their proposal, although we were surprised that Natural England had not developed closer relationships with a major project of this type to anticipate its impact and to plan how to integrate the data.

The review by Keith Hiscock

51. The review undertaken by Dr Hiscock of the Marine Biological Association in September 2008, although not a fully independent peer review (since Dr Hiscock had been involved to some degree in the earlier work), was a useful external check on the quality for the evidence contained in the SAC Selection Assessment Documents (SADs). Dr Hiscock is an acknowledged expert on marine habitats in south west England.

52. Ms Portmann has been critical of the way in which Natural England responded to the issues raised by Dr Hiscock. For example, in her article in *Fishing News,* she cites this as a clear case where Natural

England had been selective in how it used its own commissioned reports – and she quotes a number of Dr Hiscock's critical comments. She also drew our attention to internal Natural England documents (to which she obtained access only later, following requests under freedom of information legislation), which contained annotations by Natural England staff on Dr Hiscock's report indicating those parts which they thought needed to be incorporated, and those on which they disagreed or thought irrelevant. In her view, Natural England 'cherry picked', taking up only those comments which supported their case, and ignoring those which did not.

53. We have seen a *post hoc* account produced by Natural England explaining the rationale for its decisions on which parts of Dr Hiscock's report to take into account and which to disregard, written in June 2010 based on the recollections of those involved.

54. In May 2011, we met Dr Hiscock to explore his understanding of what Natural England requested in terms of his review, his comments on the SADs he assessed, and how he felt his comments had been dealt with by Natural England. Dr Hiscock's understanding was that he had carried out a peer review, involving assessing whether conclusions were soundly based in relation to the evidence, but also looking more widely at whether the best evidence had been used and whether there were any evidence gaps. Two of the sites Dr Hiscock reviewed were case study sites for our review (Salcombe to Yealm and Eddystone (subsequently renamed Prawle Point to Plymouth Sound and Eddystone), and Poole Bay and Lyme Bay). Dr Hiscock's overall view was that there was a sufficiently made case for designating these sites.

55. Dr Hiscock did make a number of additional points during our discussion with him. He had not received any feedback from Natural England on how his comments had been dealt with and remained unclear whether or how some of his comments had been addressed. In his view, Natural England could have made more systematic use of a key reference he had identified to achieve greater representativity from the sites selected. He also felt there was an instance where Natural England had not made use of some old data despite them being available and Natural England being made aware of them. In his view, the level of survey data used was adequate to meet the requirements of the Habitats Directive, though other methods could have been considered which would have added value over and above that required by the Directive.

56. We conclude that Dr Hiscock's review, though not a formal peer review, provided useful comments that resulted in improvements being made to the SADs. We have made an earlier recommendation regarding the use of peer review. **We recommend that when independent, expert review is used, Natural England should be clear, and make clear to reviewers, the purpose of the review and its expectations.**

Our recommendation above about external review addressed the need for transparent record keeping.

Conclusion on science and the use of evidence

57. In the course of our review we have not only had access to the various consultants' reports produced during the process (which are available to the public), but we have also been able to examine at first hand Natural England's GIS database and examples of the data held within it. We have also had the benefit of reading Dr Hiscock's review of the SADs (which was not made public at the time), and have been able to discuss his review comments with him. We have also seen recent high resolution sonar, video and photographic images, such as those shown in Figure 2.

58. **We conclude that Natural England has built up a substantial body of evidence which supports the presence of reef habitats, as defined by the Habitats Directive, in each of the three case studies.** Natural England and its contractors have assembled the evidence in a coherent way, and have made judgements about the confidence to be placed in different data sets. We have suggested that more formal, *a priori* protocols should be used in future. But on the basis of our enquiries we have not seen any evidence of selection bias in the use of evidence.

Engagement, public scrutiny, and access to information

59. It is remarkable that there had been no public engagement about this process until the public consultation stage in 2010 – previously the work had been dealt with largely within Natural England and its contractors, with some engagement of external experts and closely involved stakeholders at key points. For example, we are not aware of any effort to engage stakeholders when the initial approach to gathering evidence and identifying potential areas of interest was decided on in 2002, so that stakeholders could have an influence on the framing of the questions at the outset. At the point of the public consultation, Natural England was seeking comments on fully formed proposals. This was however an important part of the process at which Natural England exposed their evidence and proposals for comments by interested stakeholders and the public, and we therefore examined the consultation in detail.

The process of public consultation

60. There have been complaints that Natural England has not been open and transparent during the public consultation stage. Ms Portmann, for example, has argued that Natural England did not offer all the evidence it held during the consultation process.[41] We were concerned to investigate whether the consultation was fairly

conducted, and the extent to which it provided an opportunity for informed comment and to gather new evidence.

61. Dr Davies reviewed Natural England's records relating to the consultation process in detail. She concluded that Natural England went to significant lengths to seek and allow input from stakeholders. There does not appear to have been any bias in the choice of stakeholders to be consulted. The lists of national and regional contacts were drawn up systematically and the consultation document and associated material was placed on the Natural England website, with significant publicity being undertaken nationally and regionally to ensure that all those who wanted to respond could do so. Natural England put significant effort into publicising and holding various open meetings, workshops and drop-in sessions where the background to the site selection could be explained fully.

62. It is clear that Natural England made efforts to list the underpinning evidence in the SADs to allow stakeholders to understand the basis for decisions and to make informed comments. However, for most consultees, it would have been difficult to access and use this information to comment on the validity of the scientific basis – much of the background material was not easily available, and they did not have access to Natural England's GIS system (see paragraph 72-73 below). For stakeholders attending open meetings, workshops and drop-in sessions, where there was an opportunity to view the supporting data, it would have been easier (but not necessarily easy) to understand the rationale and to comment appropriately. However, not all consultees were able to attend these events. Background documents, such as the Royal Haskoning report, were available to those who requested them, but it would have been preferable had they been proactively available - for example on the website.

63. A number of stakeholders submitted new evidence during the consultation process, in response to the invitation to do so. In due course, Natural England provided helpful guidance to stakeholders on the provision of additional data in the Frequently Asked Questions. However, it would have been more transparent and helpful to those who were considering offering information if the guidance had been provided at the start.

64. It is noticeable that stakeholders who answered the consultation question about the scientific basis for the proposals were divided between those who accepted the basis, those who partially accepted it, and those who rejected it. For the Poole to Lyme Bay SAC they were divided 12:17:15, and for the Prawle Point to Plymouth Sound and Eddystone SAC they were divided 10:5:7. As we have said however, we doubt that it was entirely realistic to expect consultees to answer this question unless they had particular knowledge or expertise.

65. Dr Davies examined whether the responses were properly taken into account – without bias – and whether the process was sufficiently transparent to stakeholders. As well as reviewing the process in general, she audited several examples of specific responses to examine how they had been handled. She concluded that the responses were properly taken into account, without any bias. Natural England set up a process to route responses to the appropriate part of the organisation, and substantive new evidence was referred to an Evidence Panel. Summary documents prepared for the Executive Board record how each comment was dealt with.

66. The Evidence Panel appears to us to have made the right decisions regarding the acceptance of new data. However, the Panel had no written protocol for deciding whether or not to accept new data, and it did not systematically assess the quality of the data received (eg using the MESH data confidence assessment methodology) but relied instead on expert judgement.[g] There were also no detailed minutes recording how decisions were made (including the exclusion of any new data). It therefore appears to us that the process lacked transparency and repeatability.

Public consultation as peer review?

67. Dr Davies commented that Natural England staff felt that the consultation process, if not a formal peer review, did provide an important audit of the process, with consultees having an opportunity to challenge decisions on site boundaries and provide new data that resulted in changes. Evidence Panel members, who were not involved in the earlier work, also provided a useful quality assurance function and instigated reviews of some of the boundaries.

68. Dr Davies concluded that while it is true that the consultation process did provide a mechanism for external challenge, it did not – and could not – take the place of independent, expert review as most consultees were not in a position to be able to judge the validity of the scientific basis for selecting the sites. Similarly, while the Evidence Panel was able to carry out a thorough review of the data using the considerable expertise of Panel members, this process was not a substitute for an external validation by independent experts.

69. It was therefore inappropriate for Defra, for example, to rely on the fact that there had been public consultation as giving confidence in the strength of the scientific case.

[g] The Mapping European Seabed Habitats project has developed standards for assessing spatial data confidence – see http://www.searchmesh.net/confidence/confidenceAssessment.html

Access to information

70. Ms Portmann made formal requests to Natural England in March 2010 'to see the science and evidence they used to choose the south west marine SACs'. She said she wished to be able to gain an independent scientific opinion on the data used, and to be able to decide whether to seek judicial review if the sites were to go forward .[h,42,43] This led to a prolonged correspondence between Ms Portmann and Natural England, during which Natural England logged 49 requests for information under the freedom of information legislation which contained close to 100 questions. Ms Portmann has complained about delays and incompleteness in Natural England's response and the need to ask the same question repeatedly given Natural England's failure to answer her requests. In some cases Natural England declined to provide the information Ms Portmann requested, citing the provisions of the legislation relating to manifestly unreasonable requests and the significant burden they would place on Natural England (in terms of expense and distraction), among other reasons.[44] She told us she thought Natural England had been 'playing games'. A number of cases have been referred to the internal review process within Natural England[45], and Ms Portmann told us she is in the process of lodging a complaint with the Information Commissioner's Office. [46]

71. Natural England gave us access to this correspondence, which was helpful in understanding the full range of issues of concern.[i] Given that there are formal processes for handling complaints set out in the legislation, including internal reviews and appeal to the Commissioner, we have not considered and form no conclusions specifically about how Natural England handled the freedom of information requests.

72. There are however two important points, which we have already touched on. First, there are often genuine difficulties in stakeholders gaining access to information. Many of the best sources quoted in reports or consultation processes are papers published in academic journals, and these are not easily found by members of the public, and when they are found may require subscriptions for access. And where information is taken from 'grey' literature (ie it has not been published in a peer reviewed journal), it may not be accessible at all.

73. Second, the volume of data is significant. The 'raw' data occupy 208 GB (ie equivalent to about 80 DVDs).[47] There are obvious difficulties in making this generally available, in a form that could

[h] Natural England concluded that the requests fell to be considered under the Environmental Information Regulations 2004 and dealt with them under that regime, rather than the Freedom of Information Act. The distinction is not significant for our purposes, and we refer to 'freedom of information legislation' as a generic description covering both regimes.

[i] Ms Portmann wished us to have access to this correspondence.

be used by stakeholders. As we have explained, Natural England organise its evidence in a GIS, which makes it possible to structure the data or evidence so that material relating to a particular location can be brought together. It is therefore easy for it to find the latest data set for a particular site. However, if the data are supplied to a third party it will not be possible to make sense of them in the same way without the underpinning GIS system. In other words, what appears organised and coherent on a computer in Natural England's office may be inaccessible or appear chaotic when viewed elsewhere (and may convey a false impression about the quality of Natural England's work). It would not be practical, and would breach copyright licenses, for the GIS system itself to be provided to individuals.

74. These two factors mean there is an imbalance in access to information, which makes it difficult for stakeholders to see all the data and evidence on which Natural England have relied. This can make it hard to understand the basis on which conclusions have been reached, or to know whether new information is in fact new or would make a difference. Also, the data are complex, and not easy for lay people to interpret. Natural England did organise events at which its staff were available to help explain the proposals and the evidence, and these are an important way to help improve accessibility.

Conclusions on engagement, scrutiny, and access to information

75. **We conclude that Natural England went to considerable lengths to offer a genuine opportunity for stakeholders and interested members of the public to comment on the proposals and to provide new or better evidence during the public consultation stage, and that the comments received were taken seriously and appropriately, without bias.**

76. We do however have concerns. Despite the efforts of Natural England, more could have been done to ensure accessibility and to make the process more transparent. **We recommend that Natural England should routinely publish background material and consultants reports, to show how evidence has been gathered and synthesised.** And, as we have previously stated, *a priori* protocols on evidence would have helped stakeholders both understand the process and judge how to respond, particularly when offering new evidence. Natural England should also consider responding specifically to stakeholders who provide significant new evidence, to explain how that evidence has been taken into account.

77. But even with more openness, some academic papers cannot be reproduced, and there are inherent difficulties in making complex data sets available to the public in a useful way. Natural England and Defra should therefore not rely on public consultation alone to

provide independent scrutiny of evidence and thus to provide them, and the public more generally, with assurance. We stress that public consultation is important, but that independent, expert, transparent review is necessary also, as we have recommended above.

Can there be confidence in the decisions in the case studies?

78. In the light of the criticisms we have made about the management of the process in Natural England and Defra and the lessons to be learnt for the future, a key question is whether there can be confidence in the outcome – that is, the decision by the Secretary of State to submit two case studies to the European Commission for designation as SACs, and the continued work on the third case study with a view to submission later this year.

79. As a starting point, although we have not sought to make a legal judgement (and indeed we are not qualified to do so), we accept the argument that, without these designations, the UK will continue to be deficient in the amount of reef habitat identified for protection and therefore in breach of its obligations under the Habitats Directive. The issue is therefore not whether the UK should have designated reef habitats, but were these among the right sites to choose?

80. We have no doubt that the three case study sites contain reefs, according to the definition in the Habitats Directive and the European guidance. The evidence available at the time of the consultation process was sufficient to support this view (although the boundaries of the proposed sites were capable of being refined as the evidence base improved). The further evidence which was supplied during the consultation process reinforced this, particularly the DORIS data generated through a project run by the Devon Wildlife Trust. We have also seen recent high resolution multi-beam side scan sonar images for the Lyme Bay to Torbay and Plymouth to Prawle Point areas – data which were not generally available during the early stages of the project. These images confirm very clearly that the sites are reef habitats, and dispel any lingering doubts. Any failings by Natural England in the management of the processes do not cast any doubt on this conclusion.

81. The issue therefore is whether these were among the right reefs to designate. It is clear to us that there are no sites of higher conservation value which were identified during the project. If the project had been structured differently, it is theoretically possible that other reefs of higher conservation value might have been found in other areas which could or should have been selected in preference to the case study sites.

82. Given the evidence available at the outset and the resources available to Natural England to generate more evidence, we conclude that the approach to narrow the area of search after the first stage was reasonable, as we have explained earlier (paragraphs 15-21). And even with the new reef habitats, the number of sites designated remains close to the minimum requirement for sufficiency under the Habitats Directive (see chapter 2, paragraph 7); it does not necessary follow that if new sites had been found, the case study sites would not have been recommended for designation.

83. Ms Portmann has pointed out that given the criteria set out in the Habitat's Directive and the need to use a precautionary approach, the 'burden of proof' to designate a site is quite low. There is some truth in that remark. Had the legal framework or the policy objective been different, the approach adopted might have needed to be different – and indeed, the approach being used currently to select Marine Conservation Zones is markedly so.

84. **In summary, we therefore conclude that the evidence we have seen is sufficient, in both quantity and quality, to support the proposed designation of the three case study sites as SACs, in the light of the requirements of the Habitats Directive**.

85. As we have made clear however, **we have concerns about aspects of the processes which Natural England and Defra followed**. We have made a number of specific comments and recommendations in this chapter. In the next chapter we set out a number of principles which we have drawn from our work on the case studies and which we commend to Natural England and Defra in order to strengthen their evidence processes – and public confidence in them – for the future.

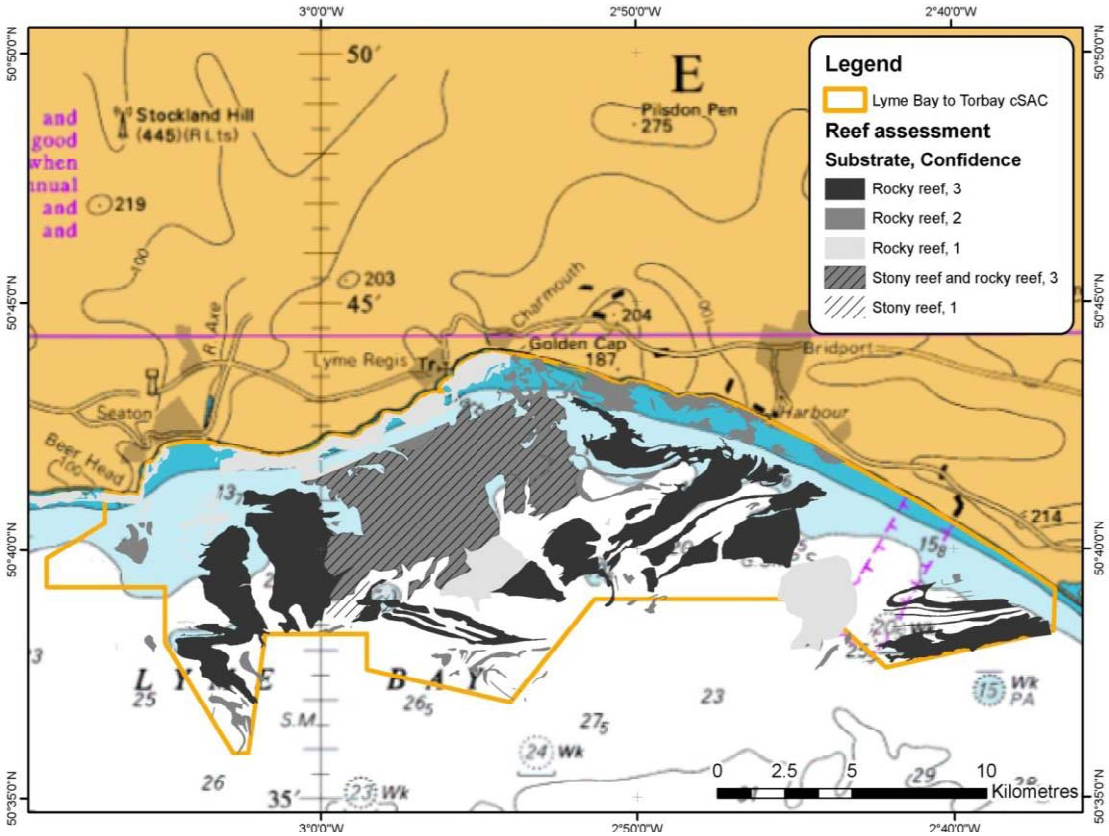

Figure 2. The figure shows two sub-types of reef habitat identified as being present in the area; rocky reef (also described in the report as "exposed bedrock") and stony reef, as well as an area that contains a mixture of the two. These habitat sub-types have been further divided based on how confident the authors could be that the data are accurately predicting the seabed type, with 3 indicating high, 2 moderate and 1 low confidence. This confidence is based on the clarity of reef expression from acoustic data combined with evidence from available ground-truthing samples. (Taken from Vanstaen K, Eggleton J (2011) Mapping Annex 1 reef habitat present in specific areas within the Lyme Bay and Torbay cSAC. 26pp).

Chapter 4: Final Remarks

1. The Government Chief Scientific Adviser's (GCSA) guidelines on the use of scientific and engineering advice set out a number of key messages.[j] Departments, and policy makers within them, should "identify early the issues which need scientific and engineering advice and where public engagement is appropriate; draw on a wide range of expert advice sources, particularly when there is uncertainty; adopt an open and transparent approach to the scientific advisory process and publish the evidence and analysis as soon as possible; explain publicly the reasons for policy decisions, particularly when the decision appears to be inconsistent with scientific advice; and work collectively to ensure a joined-up approach throughout government to integrating scientific and engineering evidence and advice into policy making". In our view these principles are equally relevant to arm's length bodies.

2. Judged against these principles, the process adopted by Natural England and Defra to select marine Special Areas of Conservation (SACs) fell short of best practice in a number respects. This has not caused the outcome to be unsound, though there has been some cost in terms of lost confidence in the work of the organisations among some stakeholders.

3. To be confident that similar evidence-based processes in future will also produce sound results, and to maintain and restore public confidence, we recommend that Natural England and Defra should fully implement the principles in the GCSA Guidelines. We acknowledge that, even while our review was underway, Natural England started a project to address these issues.

4. As a general point, we recommend that the Defra Chief Scientific Adviser (CSA) should make sure that principles in the Guidelines are better disseminated, and understood by policy staff in Defra, and by Defra's arm's length bodies such as Natural England.

Framing the issue

5. The Guidelines make it clear that early engagement is key to framing issues in an appropriate and relevant way, and that effective public dialogue should begin as early as possible. There were two, fundamental inter-related decisions taken at the start of the marine SAC process – to identify sufficient reefs to bring the UK into compliance with the Directive rather than, for example,

[j] These are described in chapter 2, paragraph 26.

ensuring that the reefs with the highest conservation value were designated; and to begin with broad-scale desk studies with field work only for a limited number of areas of interest. We have seen no evidence that there was any engagement with stakeholders before the die was cast, yet these two strategic decisions determined the course of work over the next decade.

6. We are not suggesting that the decisions were wrong – there may well have been no practical alternative. But they should not have been seen purely as internal decisions for Defra and Natural England to make on a technical or pragmatic basis, given the consequences which would follow years later for stakeholders when particular areas were designated. A genuine dialogue at the outset that achieved and recorded common understanding of the decisions to be made, the evidence needed, and the methodology to be used to collect and evaluate it, would have given greater legitimacy to the process.

An open and transparent approach

7. The Guidelines make clear that openness is vital to ensure that all relevant streams of evidence are considered, and that processes have the confidence of experts and the public.

8. Natural England and their contractors made strenuous efforts to gather evidence from a wide range of sources. Different sources were evaluated – for example, by the scoring process used by Royal Haskoning or by the Evidence Panel following the formal consultation stage. As we have commented, we have seen no bias in the way the evidence was used in practice. It would however have been better if there had been *a priori* protocols setting out the comparative value of different forms of evidence. Natural England or the JNCC might have begun the process with a clearer indication, and a debate at least with expert stakeholders, about its expectations for evidence gathering, and the requirements for evidence in terms of quantity and quality. The Evidence Panel, for example could have been given, or could have developed for itself, clear, formal guidelines for its operation.

9. The use of appropriate protocols and guidelines would have provided a surer basis for exercising expert professional judgment, which will always be an important part of the process, so helping to minimise the risk of bias. It would also have been helpful to stakeholders, both to increase their confidence in the fairness of the process and to help them understand what types of evidence would be valuable and whether therefore it was worth submitting their evidence – everybody would have shared the same expectations. And it would have helped Natural England to explain the decisions which were made.

10. Transparency requires that stakeholders should have access to the evidence that has been used, so that others should be able to repeat the analysis – at least in principle. This is a key requirement of any scientific endeavour. Natural England should have made greater efforts to ensure that the information and analysis which had been used was made available and was accessible to stakeholders – for example, by arranging for the various consultants' reports to be readily available, as they were produced. There should also have been better record keeping within Natural England, and greater efforts to explain decisions to stakeholders to aid transparency.

11. We accept however that the volume of data, and the challenge of synthesising it, would have made it impractical for most lay people to check the entire process for themselves, however open Natural England had been in making data available. It is therefore crucially important that there should be opportunities for independent, expert review, similar to that conducted during the course of this review, done in a transparent way, so that stakeholders can draw reassurance. For an evidence process of this size and complexity, independent review at key stages should have been built in from the outset.

12. There was no clear differentiation between internal and external peer review processes, nor was there a clear policy about the points at which an external check would be appropriate. The decision to invite Dr Hiscock to undertake a review, for example, appears to have been an *ad hoc,* last minute idea. No clear records were maintained showing how his comments were addressed, and there was no opportunity for stakeholders to scrutinise how the review had been handled.

Roles and Responsibilities

13. We have made a number of points about the management of the process, and in particular about the need for stronger project management in the light of the inevitable organisational and staff changes. More fundamentally, however, we believe there needs to be a clearer understanding of the relationship and responsibilities of Defra and its arm's length bodies for the provision of evidence.

14. Those Defra officials responsible for policy development need to have greater clarity about their part in ensuring that the principles set out in the Guidelines are applied – and in particular, the extent to which they should assure themselves about the quality and robustness of the evidence which is supplied to them. The CSA's role needs to be clarified as to how far it applies to evidence provided by, and processes organised within, arm's length bodies, and we see scope for a more systematic system for the CSA to engage with and challenge the evidence used to make policy.

15. Natural England has already recognised there is scope to increase transparency, to improve record keeping, and to follow consistent approaches to independent, expert review, and also to put in place processes to ensure consistency with relevant Government guidelines. We would encourage Natural England to continue these efforts, to promote a culture of evidence-based decision making, founded in objective, transparent and critical processes for evaluating evidence.

Conclusion

16. We have been impressed by much of the science we have seen. The evidence which has been assembled for the three case study sites demonstrates how marine science has been developing rapidly over the last decade. Indeed, the pace of change makes it even more necessary to have in place protocols as to how new evidence should be taken into account. But despite the rapid progress, the marine environment is still much less well understood than the terrestrial, and we must not underestimate the scale of the challenge which Natural England faces in selecting sites for designation. We are clear that, as a result of the work which Natural England has done, it will be possible to protect at least three examples of a marine habitat which are rich in biodiversity and which could otherwise be under threat from damaging human activities.

17. But equally we have found areas in which the management and execution of the process could have been better. We recognise that attitudes to public participation and engagement, and to handling uncertainty in evidence, have been developing, and will have changed even during the life of the process we have reviewed. It is no longer possible, even if it ever was, to regard a challenge such as finding sufficient reef habitat to meet the requirements of the Directive as a matter only for the scientific experts and one capable of being handled within the statutory agency (and its consultants) - even though the decision ultimately is made on scientific grounds and the agency has undoubted and leading expertise in the field. More inclusive and transparent approaches are necessary if there is to be confidence in the conclusions.

18. If Defra and Natural England are to ensure that the evidence base for policy decisions is robust and are to maintain the confidence of stakeholders, they need to put in place principles and guidelines which will promote greater transparency, accountability, openness, and assurance. We hope our recommendations will help them to do this.

Annex A: Membership of the Review Team

Chair	**Dr Ian Graham-Bryce CBE FRSE** Emeritus Principal and Vice Chancellor, University of Dundee
Members	**Professor Andrew Pullin** Professor of Evidence-Based Conservation, Bangor University; Director of the Centre for Evidence-Based Conservation
	Dr Steve Widdicombe Head of Science, Marine Life Support Systems. Plymouth Marine Laboratory
	Dr Ann Davies In-House Policy Resource, a cross-departmental consultancy Unit
Secretariat	**Dr John Roberts** **Ms Lucy Barnard** Strategic Evidence Programme, Defra

Declaration of Interests

The members of the review team served in individual capacity, and Professor Pullin and Dr Widdicombe were not acting on behalf of the institutions by which they are employed.

Dr Graham-Bryce, Professor Pullin and Dr Widdicombe have each confirmed that they have no financial or professional involvement in the work which they are reviewing, nor any vested interest in the outcome of the review or the final decisions which may be made about SAC designations. None currently has a financial relationship with Natural England.

Dr Widdicombe declared that an associate company of Plymouth Marine Laboratory acted as a sub-contractor to Royal Haskoning for some of the marine survey work, though he had no interest in, or previous knowledge of this work. This was made clear to those who met the review team, and they were given the opportunity to comment directly to the chairman about this work.

Annex B: List of those whom the review team met

Natural England

Joe Horwood
Andrew Wood
James Marsden
Eleanor Hill
Joanna Redgwell

JNCC

Charlotte Johnston

Defra

Bob Watson
Miles Parker
Nigel Gooding
John Clorley
Cathy Garretty

Others

Keith Hiscock
Teresa Portmann
Lynda Warren

Written contributions were received from

National Federation of Fishermen's Organisations (NFFO)
Seabed User and Developer Group

Invitations to contribute were also sent to

New Under Ten Fishermen's Association
UK Association of Fish Producer Organisations
Wildlife and Countryside Link

Annex C: Chronology

Inshore SAC designations project chronology February 2001 – April 2011
Prepared by Natural England May 2011

Summary for FY 2001-2002. Defra had commissioned JNCC to start considering sites for designation in 12-200nm zone following Greenpeace judgement securing implementation of the Habitats Directive in international waters. English Nature urged Defra to consider further designations in territorial waters to complete the series as well as concerns over marine developments on sandbanks (windfarms, aggregates). No definitive response from Defra. Seabed mapping contract was let to BGS to further identify areas for reef sandbank as well as provide a basis for English Nature's Marine Natural Areas initiative.

Date	Action	Document available
5 February 2001	Letter from CEO to Defra asking that English Nature look into more marine SAC designations in territorial waters following their direction to JNCC to designate SACs in international waters.	Paper copy on registered file
4 July 2001	Letter from Head of Marine to Defra on 'Completing implementation of the Habitats Directive in territorial waters around England: an urgent task' outline approach and costs scoping the work to be done.	Paper copy on registered file
16 October 2001	Letter from CEO to Defra offering to develop areas of search for further investigation by early 2002.	Paper copy on registered file
19 November 2001	e-mail from Head of Marine to CEO outlining concerns from Defra that UK will be found insufficient for reef and sandbank designations, which will mean further designations are required.	Paper copy on registered file
November 2001	Contract let to BGS to complete mapping seabed features in English territorial waters.	Electronic copy on file

Summary for FY 2002-2003. Defra commissioned English Nature to identify further sites in territorial waters, followed up by a formal ask in the grant-in-aid letter early 2003. English Nature began planning designations project in March 2003, with intended completion by submission of site recommendations to Defra by late 2006.

Date	Action	Document reference
3 July 2002	Internal memo indicating text to add to 2003-2006 corporate plan as well as the need to work closely with JNCC and the need for additional resources to implement the work to designate further SACs in marine territorial waters.	Electronic copy on file
31 July 2002	BGS report and data submitted to English Nature	Electronic copy on file
6 August 2002	Internal memo outlining corporate plan text to develop a suite of sites to recommend to Defra by 2006 in conjunction with other conservation agencies	Electronic copy on file
early 2003	Grant in aid letter to English Nature from Defra asking English Nature to undertake the work to designate more sites in the marine environment	No record of letter, but referenced in future documents
24 March 2003	Project lead identified and a first draft of the project plan prepared.	Electronic copy on file

Summary for FY 2003-2004: First indicative maps of potential areas of reef and sandbank were prepared using BGS maps. These were shared with Defra, government and industry colleagues and English Nature local staff as a first consultation to verify maps and solicit more data. A data gathering and further mapping contract was let to BMT Cordah, but was facing massive delays in acquiring data, and there was considerable correspondence around this (not included in this chronology). The full scale of the work was assessed and due to the amount of anticipated survey work (and associated spending review bid) put the deadline for submission of sites to Defra back to 2008.

Date	Action	Document reference
14 July 2003	English Nature Area staff were consulted on emerging locations of potentially	Electronic copy on

Date	Action	Document reference
	important areas for reef and sandbank features using BGS maps and asked for further local information and known data sources.	file
22 July 2003	Designated Sites Programme Board business plan drafted to include 0-12nm SAC designations work	Electronic copy on file
13 August 2003	E-mail from Marine N2k project lead to Defra indicating that English Nature will use JNCC methodology to select new sites – referenced in Johnston et al. 2002	Paper copy on registered file Reference: Johnston, C.M., Turnbull, C.G. & Tasker, M.L., (2002), Natura 2000 in UK Offshore Waters, JNCC Report 325, ISSN 0963 8091
12 September 2003	Letter from CEO to Defra, other govt. departments, conservation agencies and NGOs updating on progress of 0-12nm work including first indication of potentially important areas for reef and sandbank features using BGS maps. The letter asks for diligence in licensing developments in the areas identified.	Electronic copy on file
September 2003	Paper to Designated Sites Programme Board (DSPB) stating revised timetable for identification of a 'scoping list of sites' by late 2004 and difficulty to estimate costs and survey required dependent on the quality of information needed to underpin designation.	Electronic copy on file
September 2003	Tender process begins for contract to undertake data collation and mapping to inform the identification of marine habitats relevant to Special Areas of Conservation.	Electronic copy on file
30 September 2003	Maps indicating potentially important areas for reef and sandbank features using BGS maps sent to a wider community of seabed users (*no circulation list found*	Electronic copy on file

Date	Action	Document reference
	yet).	
3 November 2003	Contract to undertake data collation and mapping to inform the identification of marine habitats relevant to Special Areas of Conservation let to BMT Cordah.	Electronic copy on file
12 January 2004	Spending Review submission to Defra outlining continuing work on SAC designations to continue from 2005-2008	Electronic copy on file
22 March 2004	BMT Cordah produce draft report for comment.	Electronic copy on file

Summary for FY 2004-2005: BMT Cordah seabed mapping report was completed and further consultation with government departments and industry to acquire further data as well as a further push for other agencies to release data to English Nature. Scoping work for survey areas completed and 2 pilot sites were identified to develop approach on how to map and assess quality of reef and sandbank features.

Date	Action	Document reference
6 April 2004	Draft BMT Cordah report quality assured (QA'd) by internal staff and JNCC. Comments sent back.	Electronic copy on file
27 May 2004	Further internal QA and comments sent back to BMT Cordah.	Electronic copy on file
7 June 2004	Internal memo detailing progress and delays to completion of BMT Cordah work. This was due to not being able to secure or licence important data sources. The memo sought endorsement for the proposal to undertake more data collation throughout the rest of 2004.	Electronic copy on file
8 June 2004	Final BMT Cordah report produced for English Nature.	Electronic copy on file
10 June 2004	Project plan for 2004-05 and beyond updated incorporating slippages to provide the scoping list of sites by March 2005	Electronic copy on file

Date	Action	Document reference
23 June 2004	Proposal to consult on BMT Cordah report and contact Defra to 'unblock' data provision approved by Operations Director (on behalf of DSPB).	Paper copy on registered file
29 July 2004	Update paper to Designated Sites Programme Board on problems encountered in acquiring data and cost of licensing seabed base maps, and next steps including consultation.	Electronic copy on file
7 October 2004	Formal consultation with government departments, conservation agencies and seabed industries on BMT Cordah report to check accuracy of maps and request data to fill gaps. Closing date 12 November (chased again in January).	Electronic copy on file
15 November 2004	Letter from marine N2k project manager to Defra detailing timetable to identify a 'scoping list' of proposed areas for potential SACs by May 2005.	Electronic copy on file
16 November 2004	Internal memo outlining resource requirements for 05/06 work as well as warning of insufficient staffing levels in maritime team to deliver.	Paper copy on registered file
7 February 2005	Update to DSPB outlining a proposal to run 2 'pilot' surveys in 05/06. Decision was made not to undertake survey in all areas of search in 05/06 due to low staffing levels.	Electronic copy on file

Summary for FY 2005-2006: English Nature continued to consult on the results of the BMT Cordah report with internal staff and, in conjunction with previous Sensitive Marine Areas work came up with a scoping list of 21 potential areas important for SAC designation work. These 21 areas were further scrutinised by a wide range of seabed data holders through a 'data workshop' held in October 2005. This led to the further refinement of the scoping list into 7 areas of search by January 2006. Parallel to this process, two surveys were commissioned and undertaken in the Outer Thames Estuary and Eddystone reefs to further refine methods of filling gaps in knowledge through survey and further data acquisition to inform completion of survey in the 7 areas of search.

Date	Action	Document reference
21 April 2005	English Nature local staff asked for suggested areas to put forward for	Electronic copy on

Date	Action	Document reference
	designation referencing the BMT Cordah report.	file
6 May 2005	Tender for survey work to map extent & quality of SAC habitat in 2 'pilot' sites at the Eddystone and Outer Thames Estuary.	Electronic copy on file
13 May 2005	Meeting with Defra to agree timetable for submission of recommended sites to Defra in 2008	Electronic copy on file
26 May 2005	Update paper discussed and endorsed by the Marine Natura Project Board.	Electronic copy on file
5 July 2005	Outer Thames survey work let to EMU ltd. and initial contract start up meeting held.	Electronic copy on file
5 July 2005	Eddystone survey work let to Seastar ltd. and initial contract start up meeting held.	Electronic copy on file
2 August 2005	Update paper to Protected Areas Programme Board (formerly DSPB) outlining funding requirements for 06/07 & 07/08.	Electronic copy on file
8 August 2005	English Nature compiled the 'scoping list' of proposed areas for potential SACs using a combination of the Sensitive Marine Areas, BMT Cordah report maps and area team consultations.	Electronic copy on file
17 August 2005	BMT Cordah report published on internet as English Nature Research Report (incorporating some additional data).	Electronic copy on file
2 September 2005	Invitations to tender for data workshop sent out. The workshops aims were to invite representatives from a wide range of organisations, with the aim of identifying and obtaining their data. The workshop will also be an opportunity to discuss English Nature's current work on inshore SACs, and to discuss the list of proposed sites in detail.	Electronic copy on file
20 October 2005	Business case for further survey work to underpin SAC designation submitted to Defra from head of finance.	Electronic copy on file
28 October 2005	Data workshop held, with attendees from a wide range of sectors. A series of presentations were given by EN staff on the process for identifying and designating SACs.	Electronic copy on file

Date	Action	Document reference
8 November 2005	Business case approved by Defra	Electronic copy on file
8 November 2005	Project plan updated indicating submission of sites to Defra in Sept 2008	Electronic copy on file
17 January 2006	Data workshop outputs used to further refine scoping list into 7 'Areas of Search' for further detailed investigation by survey.	Electronic copy on file
2 March 2006	Draft reports received for Outer Thames from EMU ltd.	Electronic copy on file
17 March 2006	Final meeting with Seastar to discuss reporting timetable for Eddystone survey.	Electronic copy on file

Summary for FY 2006-2007: Reporting of the Eddystone Reef and Outer Thames pilot studies were completed. Tender work for data acquisition and survey to complete investigation of the 7 areas of search commenced. A spending moratorium was introduced for multi-year contracts before Natural England came into being therefore contracts could not proceed. Immediately after vesting, Natural England received a letter from Defra to confirm further funding and to proceed with SAC designation work. Contracts to survey the 7 areas were let in December 2006 and data acquisition and survey plans completed by March 2007. New project governance was established and high level sign off processes were under consideration.

Date	Action	Document reference
3 April 2006	Advert placed for contractors to undertake further survey in 7 areas of search. European tendering process commenced.	Electronic copy on file
24 April 2006	Internal QA of Draft Eddystone reef survey report	Electronic copy on file
24 May 2006	Invitation to tender sent out to 8 contractors to undertake further survey in 7 areas of search.	Electronic copy on file

Date	Action	Document reference
16 June 2006	Internal QA of draft EMU Outer Thames survey reports	Electronic copy on file
16 July 2006	Final QA and sign off of Eddystone reef survey report	Electronic copy on file
28 July 2006	Internal Memo to CEO on decision to commit funds to survey work and potential risks for further delays.	Electronic copy on file
14 August 2006	Further memo to seek endorsement to commit funds to survey work and potential risks for further delays.	Electronic copy on file
13 September 2006	Final internal QA and sign off of Outer Thames survey reports	Electronic copy on file
1 October 2006	Natural England begins.	
10 October 2006	Letter from Defra to CEO granting funding for marine SAC work, but acknowledging loss of 1 year's survey work.	Electronic copy on file
16 October 2006	Letter sent to 8 contractors detailing amendments to timescales for further survey in 7 areas of search, and request for revised costing to inform tender evaluation.	Electronic copy on file
November 2006	Project plan and timetables updated.	Electronic copy on file
13 November 2006	Contract to acquire further data and survey gaps in Poole Bay to Lyme Bay and Salcombe to Yealm awarded to Royal Haskoning. This included a 10 day standstill period to 28th November to allow unsuccessful contractors to challenge. The standstill period was further extended to 4th December.	Paper copy on registered file
5 December 2006	Initial start-up meeting with Royal Haskoning to agree work programme and submit full costings. Fortnightly project reporting commenced.	Electronic copy on file
7 December 2006	Briefing paper sent to NE Executive Board on the process of SAC designation and progress to date.	Electronic copy on file
22 December 2006	Final contract award sent to Royal Haskoning confirming programme of work and timescales.	Electronic copy on file

Date	Action	Document reference
5 February 2007	Internal project governance group set up and terms of reference agreed.	Electronic copy on file
6 March 2007	Meeting to discuss progress on data acquisition with contractors, including Royal Haskoning and tackle issues encountered.	Electronic copy on file
26 March 2007	Draft evaluation of data coverage and initial proposals of survey work to be undertaken submitted. Approved to work up quotations for survey component.	Electronic copy on file
4 April 2007	Draft data coverage reports submitted for QA and sign off.	Electronic copy on file

Summary for FY 2007-2008: Haskoning undertook fieldwork planning in Q1, but failed to agree terms with their appointed subcontractors. In September 2007 they appointed new subcontractors who fortunately delivered all aspects of the required work to a high standard and on time. Haskoning were communicating setbacks to NE every 2 weeks in their project reports, therefore NE were very aware of the situation. Haskoning submitted the first set of selection reports which were scrutinised by the NE project group and preferred boundary options selected.

Date	Action	Document reference
31 August 2007	After 2 months of negotiation, Haskoning failed to reach agreement with subcontractor on cost and conditions and had to find other subcontractors to undertake field work.	Electronic copy on file
10 September 2007	Quotes for fieldwork submitted to NE and approved for mobilisation.	Electronic copy on file
16 November 2007	First site selection report submitted to NE for Lyme Bay.	Electronic copy on file
21 November 2007	Meeting with JNCC to discuss the SAC designations progress.	Electronic copy on file
10 December	Meeting with all contractors to discuss consistent application of site selection	Electronic copy on

Date	Action	Document reference
2007	criteria to all proposed sites.	file
5 February 2008	Draft site selection report submitted to NE for Salcombe.	Electronic copy on file
11 Feb 2008	Boundary selection meeting held between Haskoning and NE project group staff. Boundary options discussed and recommended options selected for both sites.	No formal record exists for this meeting, however recommended options were approved.
18 February 2008	Distribution of the draft Site Selection Reports for Lyme Bay and Salcombe to Royal Haskoning Technical Advisory Panel members for QA and high-level reviews. February 2008. Specific questions highlighted on connectivity and rarity issues. Comments/advice received in February 2008 from Techincal Advisory Panel (TAP) members.	Haskoning internal documentation only
25 March 2008	Haskoning incorporated internal comments from TAP member (comments mainly dealt with technical interpretation) and TAP member (mainly on other technical points). Quality based comments were received from Haskoning internal reviewer (principal marine scientist).	Haskoning internal documentation only

Summary for FY 2008-2009: Final boundaries were defined for all sites, and shared with the Inter-agency Marine Natura Project Group and NE Evidence steering group for sign off and approval to proceed. Once approved, the Selection Assessment Documents were drafted and reviewed internally by staff and externally by K Hiscock. NE Executive Board approved the documents in December 2008 to release to Defra. All documents sent to Defra in December 2008. Due to pressures from within government and the need for more comprehensive impact assessments, a case was made to Defra to delay the formal consultation for 1 year.

Date	Action	Document reference
24 April 2008	Final draft of Lyme Bay site selection report submitted to NE.	Electronic copy on file
27 April 2008	Final draft of Salcombe site selection report submitted to NE.	Electronic copy on file
8 May 2008	Paper presented to the Marine Natura Project Group on final site boundary selection for approval.	Electronic copy on file
30 June 2008	Paper on site recommendations sent to Evidence Steering Group for endorsement to continue working up selection assessment documents.	Electronic copy on file
10 July 2008	Haskoning asked to convert selection reports to selection assessment dossiers	Electronic copy on file
12 September 2008	Keith Hiscock asked to undertake technical review of SAC selection assessment documents for reef features	Electronic copy on file
16 September 2008	Internal QA comments sent back to Haskoning on Lyme Bay selection assessment document.	Electronic copy on file
8 October 2008	New project plan and project initiation document for consultation management developed.	Electronic copy on file
13 October 2008	Keith Hiscock submit his review of Reef SAC documents	Electronic copy on file
14 October 2008	Final selection assessment documents submitted to NE by Haskoning	Electronic copy on file
17 October 2008	Keith Hiscock comments reviewed by internal staff and actions agreed.	Electronic copy on file (retrospective)
11 December 2008	NE Executive Board sign off site documents and confirm that we can proceed to the next stages towards consultation.	Electronic copy on file
19 December 2008	Natural England submits draft SACs to Defra requesting a date for approval to commence informal consultation .	Electronic copy on file
19 November 2008	Due to pressure from other government departments, the timetable for formal consultation is slipped by 1 year to allow more full dialogue with key stakeholders	Electronic copy on file

Date	Action	Document reference
	and further thinking on fisheries management measures.	
14 January 2009	New project manager appointed and project initiation document and plan updated to cover full project co-ordination	Electronic copy on file

Summary for FY 2009-2010: Most of the activity at the beginning of this year related to the preparation of Impact Assessments and Conservation objectives, which would form part of the consultation process. There were further negotiations with Defra and other government departments to allow NE to start the informal consultation on at least some of the sites. The SW reef sites were eventually released for informal consultation in July, with formal consultation commencing in November. Post consultation, the project team reviewed all consultation responses and an Evidence panel of internal and JNCC staff was convened to evaluate all additional evidence and make recommendations on amendments to site boundaries and selection assessments. Their findings and recommendations were further reviewed by a team from Haskoning.

Date	Action	Document reference
July – October 2009	Informal dialogue on South West Reef SACs begin	Electronic copy on file
November 2009-February 2010	Formal consultation on Poole Bay to Lyme Bay pSAC and on Prawle Point to Plymouth Sound pSAC.	Electronic copy on file
22/ 26 March 2010	Natural England/JNCC Evidence Panel assessed scientific information arising from the consultation.	Electronic copy on file
March 2010	Meeting with Royal Haskoning to outline the scope and nature of the new scientific information and seek views on proposed changes to new recommendations.	Electronic copy on file

Summary for FY 2010-2011: The Evidence Panel recommendations were signed off and final site selection documents drafted, including the proposal to add the area from Prawle Point to Start Point as an extension of the Prawle to Plymouth site. Sites and consultation findings were signed off internally and the UK marine biodiversity steering group. NE executive board and some board members signed off the sites and submitted them as Natural England's final advice by June 2010. Defra submitted Prawle to Plymouth and Lyme Bay and Torbay sites to the EC in August. Formal consultation on the Prawle Point to Start Point site was undertaken and consultation responses incorporated, with final recommendations signed off by UK marine biodiversity steering group and NE Executive Board.

Date	Action	Document reference
April 2010	The Evidence Panel made recommendations initially to N2K project Manager, Marine Major Project Manager and JNCC for changes to the site. Recommendations were then passed to the marine Director and discussed with Defra.	Electronic copy on file
April 2010	UK Marine Biodiversity Policy Steering Group – presentation on final recommendations.	Electronic copy on file
May 2010	Presentation to Natural England Executive Board of final recommendations. They approved Plymouth to Prawle and Lyme Bay & Torbay, but concluded that further consultation was needed for the newly proposed Prawle Point to Start Point dSAC.	Electronic copy on file
June 2010	Further discussion at a specially convened meeting of Natural England Executive Board, Natural England Chair and Natural England Board member (marine).	Electronic copy on file
26 June 2010	Submission of final recommendations to Defra .	Electronic copy on file
August 2010	Defra undertakes submission to EC on Prawle Point to Plymouth Sound and Eddystone cSAC, and Lyme Bay and Torbay cSAC.	Electronic copy on file
August - November 2010	Formal consultation on Prawle Point to Start Point pSAC.	Electronic copy on file
November 2010 – January 2011	Consultation responses analysed by N2k Project Manager, lead adviser SW team and Evidence team. Consultation reports drafted by N2k Project Manager and checked by lead adviser SW team, SADs finalised by Evidence team and QA'd by	Electronic copy on file

Date	Action	Document reference
	N2k Project Manager.	
18 January 2011	Consultation reports and SAD for Prawle Point to Start Point pSAC approved by marine Director.	Electronic copy on file
February 2011	SAD submitted to Defra which in turn circulated to UK Marine Biodiversity Policy Steering Group, and to JNCC which circulated to MPA Technical Advisory Group.	Electronic copy on file
28 March 2011	Approval of Executive Board paper and annexes, including final consultation reports and SADs, by marine Director followed by Executive Director.	Electronic copy on file

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