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Analysis of Options for Delivering Highly Protected Marine Reserves in Wales

J. W. Andrews

CCW Policy Research Report No: 06/42

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CRYNODEB GWEITHREDOL

1. Mae Ardaloedd Morol Gwarchodaeth Uchel yn ardaloedd lle mae gweithgareddau dynol wedi eu cyfyngu fel bod bywyd gwyllt yn y môr yn gallu ffynnu. Sefydlwyd yr Ardaloedd hyn mewn nifer o wledydd, lle cawsant effaith lesol ar ecosystemau morol ac ar yr economïau arfordirol. Maen nhw'n cryfhau adferiad ecosystemau morol ac yn cael eu cydnabod yn eang fel elfen hanfodol o raglenni cadwraeth forol llwyddiannus.

2. Ar hyn o bryd, nid oes unrhyw Ardaloedd Morol Gwarchodaeth Uchel yn y Deyrnas Unedig. Mae'r adroddiad hwn yn edrych ar y posibiliadau ar gyfer eu creu, naill ai drwy'r drefn gyfreithiol bresennol neu drwy ddeddfwriaeth newydd a allai fod yn rhan o'r Mesur Morol arfaethedig. Asesir yr opsiynau hyn drwy adolygu'r profiadau ymarferol o ddynodi a rheoli Ardaloedd Amddiffyn y Môr yn y DU; a thrwy asesu'r drefn gyfreithiol sy'n bodoli ar hyn o bryd ar gyfer gwarchod safleoedd bywyd gwyllt a rheoli gweithgareddau dynol.

3. Defnyddir tair astudiaeth achos i edrych ar y materion ymarferol sy'n berthnasol i gyfyngu gweithgareddau dynol er mwyn gwarchod bywyd gwyllt yn y môr. Mae pob astudiaeth achos yn ymwneud â chynnig i sefydlu 'Parth Dim Dal' lle byddai pysgota'n cael ei wahardd i warchod bywyd gwyllt yn y môr. Er i un o'r cynigion lwyddo, methodd y lleill, er iddynt dderbyn cefnogaeth gref gan y cyhoedd. Y casgliad y deuir iddo ynghylch yr astudiaethau achos hyn yw er bod y drefn gyfreithiol bresennol yn gallu darparu lefelau uwch o gadwraeth natur forol (sy'n dal i syrthio'n brin o'r lefel warchodaeth a ddarperir gan Ardal Forol Gwarchodaeth Uchel) mae'n brin o'r cyfeiriad polisi a'r dyletswyddau clir a ddylai fod gan gyrff rheoleiddio i'w galluogi i droi hyn yn realiti ymarferol yn y rhan fwyaf o amgylchiadau.

4. Mae'r drefn gyfreithiol ar gyfer gwarchod yr amgylchedd morol yn y DU yn seiliedig ar gyfuniad o ddynodi safleoedd bywyd gwyllt a rheoli gweithgareddau dynol ar sail sector. Ystyrir y ddau ddull drwy ddefnyddio meini prawf gwrthrychol i benderfynu a fyddent yn gallu darparu lefel warchodaeth Ardal Forol Gwarchodaeth Uchel ar gyfer bywyd gwyllt, naill ai ar wahân neu gyda'i gilydd. Mae'r problemau a gyflwynir gan weithgareddau didrwydded a heb eu rheoleiddio hefyd yn cael eu hystyried yn fyr. Casgliadau'r asesiad yw:

    - Ni ellir creu Ardaloedd Morol Gwarchodaeth Uchel yn y DU ar hyn o bryd, er bod nifer o'r rheolau sy'n angenrheidiol i'w creu eisoes yn y cyfreithiau presennol sy'n gwarchod safleoedd bywyd gwyllt ac yn cyfyngu ar weithgareddau dynol;

    - Gellir ond sefydlu Ardaloedd Morol Gwarchodaeth Uchel drwy greu dynodiad safle newydd i warchod bywyd gwyllt yn rhagweithiol rhag pob math o weithgareddau dynol, o fewn fframwaith a fyddai'n caniatáu rhywfaint o weithgareddau dynol, fel bo'n briodol, o dan drefn reoleiddio sector berthnasol.

5. Mae'r opsiynau ar gyfer gwarchod yr amgylchedd morol i'r dyfodol a gynigiwyd fel rhan o ymgynghoriad y Llywodraeth ar y Mesur Morol arfaethedig hefyd yn cael eu hystyried yma, drwy ddefnyddio yr un meini prawf gwrthrychol ag a ddefnyddir i asesu'r drefn reoli bresennol. Casgliad y dadansoddiad hwn yw:

    - Gallai dynodi ardal yn benodol fel **Ardal Forol Gwarchodaeth Uchel** gynnig y drefn symlaf a chryfaf ar gyfer creu Ardaloedd Morol Gwarchodaeth Uchel yng Nghymru.

    - Gallai **'Ardaloedd Amddiffyn y Môr Hyblyg'**, a allai sefydlu lefel o reolaeth wedi'i theilwrio i ofynion cadwraeth lleol, gynnig opsiwn deniadol arall, ar yr amod y gallent

gyfyngu pob math o weithgareddau dynol i greu Ardaloedd Morol Gwarchodaeth Uchel lle bo angen yn ymarferol; a

- Gallai **rheolaeth sector** gynnig trefn ar gyfer mireinio'r rheolaeth unwaith y byddai Ardal Forol Gwarchodaeth Uchel wedi'i sefydlu (naill ai fel dynodiad penodol neu fel rhan o 'Ardal Amddiffyn y Môr Hyblyg'), ond ni allai gynnig y warchodaeth safle ragweithiol a chynhwysfawr sydd ei hangen ar Ardal Forol Gwarchodaeth Uchel i ddiogelu bywyd gwyllt morol yn effeithiol rhag gweithgareddau dynol.

6. I gloi, nid yw'n bosibl creu Ardaloedd Morol Gwarchodaeth Uchel drwy ddefnyddio'r ddeddfwriaeth bresennol. Mae'r cyfuniad o ddynodiadau safle a rheolaeth sector sydd ar gael heddiw yn cyfrannu rhywfaint tuag at ddarparu gwarchodaeth ar yr un lefel ag Ardal Forol Gwarchodaeth Uchel. Er mwyn creu Ardaloedd Morol Gwarchodaeth Uchel yng Nghymru, bydd angen trefn newydd ar gyfer dynodi safleoedd, ynghyd â dyletswyddau statudol cliriach a phwerau diwygiedig ar gyfer cyrff rheoleiddio.

EXECUTIVE SUMMARY

1. Highly Protected Marine Reserves (HPMRs) are areas where human activities are restricted so that marine wildlife can flourish. HPMRs have been established in many countries, where they have had beneficial effects on both marine ecosystems and the coastal economy. They underpin recovery of maritime ecosystems and are widely recognised as a vital component of successful marine conservation programmes.

2. There are presently no HPMRs in the United Kingdom. This report examines the prospects for creating them, either through existing legal mechanisms or through new legislation that could form part of the proposed Marine Bill. These options are assessed by reviewing practical experiences of MPA designation and management; and the present legal regime for protecting wildlife sites and managing human activities.

3. Three case studies are used to explore the practical issues associated with restricting human activities to protect marine wildlife. Each case study concerns a proposal to establish a 'No Take Zone' where fishing activity would be suspended in order to protect marine wildlife. Whilst one of these proposals succeeded, the others failed, despite strong public support. The conclusion drawn from these case studies is that while the existing legal regime is capable of delivering higher levels of marine nature conservation (which still fall short of the level of protection associated with a HPMR) it lacks both the policy direction and the clear duties for regulatory bodies to make this a practical reality in most circumstances.

4. The legal regime for protecting the marine environment in the UK is based upon a combination of wildlife site designations and the sectoral management of human activities. Both approaches are examined using objective criteria to determine whether they are capable of creating HPMR levels of protection for wildlife, either separately or together. The problems posed by unlicensed and unregulated activities are also considered briefly. The conclusions of the assessment are that:

    - HPMRs cannot be created in the UK at present, although many of the controls necessary for creating them can be found within the present laws that protect wildlife sites and govern human activities;

    - HPMRs can only be established if a new site designation is created to provide proactive protection of wildlife from all human activities, within a framework allowing limited human activity, as appropriate, under relevant sectoral regulation.

5. The options for future marine environmental protection that have been put forward as part of the Government consultation on the proposed Marine Bill are also considered here, using the same objective criteria that are used to assess the current management regime. This analysis concludes that:

    - A specific **Highly Protected Marine Reserve** designation may offer the simplest and most robust mechanism for creating HPMRs in Wales.

    - **'Flexible MPAs'** which could establish a level of control tailored to local conservation requirements offer an attractive alternative option, providing these are capable of restricting all human activities to create HPMRs where necessary in practice; and

    - **Sectoral management** can provide a mechanism for refining management once an HPMR has been established (either under a specific designation or as part of a 'Flexible

MPA'), but can't provide the proactive and comprehensive site protection that an HPMR needs to effectively protect marine wildlife from human activities.

6. In conclusion, it is not possible to create HPMRs using existing legislation. The combination of site designations and sectoral controls available today come some way to delivering HPMR levels of protection. The creation of HPMRs in Wales will require a new site designation mechanism, alongside clearer statutory duties and revised powers for regulatory bodies.

1 INTRODUCTION

1.1 Background

In May 2006, the Countryside Council for Wales (CCW) presented a report to the Welsh Assembly Government (WAG), advising on how to develop the 'Ecosystem Approach' in the maritime environment (Dernie *et al.,* 2006).

CCW has advocated an approach based on focussed action in five key areas:

- Marine Spatial Planning
- Marine Ecosystem Objectives
- Improved management of European Marine Sites
- Highly Protected Marine Areas
- Managed Realignment

In response to these proposals, CCW were asked to provide further advice on Highly Protected Marine Areas[1]. In particular, WAG requested further evidence about the likely effects of these areas; and also whether they could be created with existing legislation or would require new legislation, as part of the proposed Marine Bill.

This report examines the legislative and practical issues associated with the possible creation of HPMRs in Wales. A sister publication has been commissioned by CCW to summarise the likely effects such reserves might be expected to have on the maritime environment of Wales based upon current scientific knowledge. (Gubbay, 2006(a)).

1.2 Scope

The objectives of this report are to consider the prospects for creating HPMRs in Wales by:

- Summarising existing mechanisms that could be used to prohibit potentially damaging activities in the marine environment;
- Assessing levels of protection available through current mechanisms;
- Summarising those activities which could cause damage and for which there are presently no adequate mechanisms for regulation or prohibition;
- Reviewing practical experience of establishing Highly Protected Marine Reserves (HPMRs), or similar, in the UK;
- Identifying options for providing powers to establish HPMRs in Wales via the Marine Bill; and
- Advising on the practicability of options that could be established through the Marine Bill.

[1] For the purposes of this report these 'Highly Protected Marine Areas' will be referred to as 'Highly Protected Marine Reserves' (HPMRs) since this is the terminology that has been adopted within the Governments' Marine Bill documents. A definition of the concept is set out in Section 2.2

The analysis presented here is approached from two perspectives:

- **case studies**, examining the success of HPMRs, or similar sites, in the UK from the perspective of the statutory bodies involved in their management; and

- **a critical review** of the law relating to the conservation of marine wildlife sites and the management of human activities at sea.

2 HIGHLY PROTECTED MARINE RESERVES

This section sets the context for this report, by briefly defining what is meant by a Highly Protected Marine Reserve (HPMR); summarising their effects; and outlining why they are seen as a vital tool for marine nature conservation in Wales.

2.1 What is an HPMR?

Highly Protected Marine Reserves are a type of Marine Protected Area (MPA). There is often confusion about the relationship between these two terms, and it is useful to define their differences.

A Marine Protected Area (MPA) is an area where certain restrictions apply to human activities in order to protect marine wildlife. The nature of these restrictions may vary, depending upon the level of protection that the MPA sets out to provide. The term 'MPA' is broad, and can apply to a range of management measures, varying from minor restrictions of just one type of activity through to a total prohibition of all human activity in an area.

CCW have defined Highly Protected Marine Reserves as a type of MPA where there is a presumption against all human activities, unless they can be shown to be harmless (Dernie *et al.*, 2006). A similar view was set out by DEFRA in its recent Marine Bill consultation document, defining HPMRs as areas where there could be a "*complete restriction of activities on a site*"[2] (DEFRA, 2006). The World Conservation Union has defined them as "*Protected areas managed mainly for science or wilderness protection*" (IUCN, 1999). In short, Highly Protected Marine Reserves are areas where the marine environment benefits from the highest level of legal protection available.

Based upon these definitions, there are no true HPMRs in the UK. The closest thing to an HPMR that has been created for marine wildlife conservation purposes in the UK is the Lundy 'No Take Zone' described in section 3.2 below. However, there are many examples of HPMRs abroad that illustrate both a wide range of practical benefits (ecological and economic), and a variety of different approaches to HPMR management (Lubchenco, *et al.*, 2000).

Although the definition of an HPMR may vary from place to place, certain key characteristics common to all HPMRs can be identified from the classification of protected areas set out by the IUCN (IUCN, 1994); and from practical experience of wildlife site protection both in the UK and abroad in marine and terrestrial environments. There are five key characteristics shared by all successful HPMRs, and they are listed below:

- **Purpose**: the principal purpose of HPMRs should be the conservation and recovery of biodiversity, habitats and ecosystem function;

- **Extent**: HPMRs should be able to apply throughout the marine realm, from the High Water Mark on the shore to the limits of national jurisdiction, and could include areas of coastal land important for site conservation;

- **Influence**: HPMRs should have the legal power to influence the management of the site in order to achieve its objectives, either by creating duties and responsibilities for statutory bodies, or by directly regulating harmful activities;

[2] At para 10.65.

- **Scope**: HPMRs should protect habitats, species and other natural features that are rare, threatened, vulnerable, and representative of the UK's marine biodiversity and ecosystem function; and

- **Practicality**: the process for creating and managing HPMRs should be practical, enabling them to be designated and protected effectively and efficiently.

These fundamental characteristics of successful HPMRs are used later in this report in the assessment of existing and possible future legal mechanisms for creating them.

2.2 Benefits of HPMRs

There is a considerable and growing body of scientific literature on HPMRs that provides overwhelming evidence that HPMRs have a beneficial effect on the marine environment by protecting habitats, conserving biodiversity, and enabling the recovery of ecosystems (see, for instance, Dugan & Davis 1993; Roberts & Hawkins 2000; Roberts & Polunin 1991; Halpern 2003).

The effects of HPMRs are not limited to biodiversity – they affect people as well. While some negative impacts on people have been recorded (such as the loss of the opportunity to fish within an HPMR), numerous positive effects have also been reported, which often outweigh the negative impacts (Badalamenti, *et al.*, 2000). The benefits of HPMRs to people include income generation through better protection of fish stocks and opportunities for alternative economic activities, such as tourism (Dixon, 1993; Tuck & Possingham, 2000).

A full account of the ecological effects of HPMRs has been prepared as a sister document to this publication, which sets out a convincing argument in favour of their creation for the protection and recovery of the maritime environment (Gubbay, 2006(a)).

2.3 HPMRs in Wales

CCW consider that HPMRs are needed in Wales in order to promote the recovery of Welsh maritime ecosystems; ensure protection of certain very sensitive habitats and species; and improve understanding of marine ecosystems.

The underlying objective of Welsh HPMRs would be to enable the long-term recovery of marine ecosystems. Specific benefits that would arise having HPMRs in Wales could include:

- Protection and recovery of long-lived species

- Protection and recovery of sensitive habitats

- Protection and recovery of ecosystem processes and functioning

- Increased resilience of European Marine Sites

- Better understanding of marine ecosystems

2.4 Assessing prospects for creating HPMRs

This report examines the prospects for creating HPMRs in Wales by exploring several case studies and through a critical review of the present legal regime for both wildlife conservation and the management of human activities. The cases studies are set out in the next section as a means of introducing some of the key issues associated with delivering higher levels of marine nature conservation in the UK today. These issues are then investigated further through an objective analysis of the legal regime and an appraisal of options available to modify this through the proposed 'Marine Bill'.

3 CASE STUDIES: NO TAKE ZONES

3.1 Introduction

This section provides a practical perspective of the issues associated with the creation of areas of strict protection, to complement the legal analysis set out in the rest of the report. Three case studies are presented, each representing an attempt by different statutory bodies to use the existing regulatory regime to deliver higher levels of marine nature conservation than would be delivered by either wildlife site designations or sectoral controls alone. These case studies all involve efforts to create 'No Take Zones' to prohibit fishing activity.

No Take Zones (NTZs) are the closest thing to Highly Protected Marine Reserves (HPMRs) that can be found in the UK. Although they are not HPMRs in the strictest sense (they only restrict fishing, and not other human activities), NTZs are similar enough to illustrate the practical issues that may face attempts to create HPMRs, either using the present regulatory regime or with new legislation arising from the proposed Marine Bill.

Three case studies are briefly considered: Lundy, the only NTZ that has been established in the UK for nature conservation purposes[3]; and two cases where NTZ proposals ultimately foundered – Whitsand Bay in Cornwall and Skomer in South Wales. The information presented here is derived from published documents and telephone interviews conducted for the purposes of this study.

3.2 Lundy

Lundy is a small island located in the Bristol Channel (see Figure 1 overleaf). A variety of statutory designations protect the wildlife on Lundy and in the seas around the island. The shores of Lundy and nearby waters form the only Marine Nature Reserve (MNR) in England, which was designated in 1986 and covers around 14km^2. The island itself, above the LW mark, is a Site of Special Scientific Interest (SSSI); and the MNR boundary is also shared by a Special Area of Conservation (SAC).

The statutory bodies responsible for Lundy have adopted a proactive approach to the management of the area that overcomes the shortcomings of MNR legislation outlined in section 6.2 above. They have formed a 'Management Committee', which considers all environmental issues relating to Lundy including how best to manage the MNR, taking into account the views of an 'Advisory Committee' which provides stakeholders with an opportunity to comment on site management.

The outcome of this close collaboration is a management regime for the sea around Lundy created by 3 mechanisms:

- **Natural England Byelaw** – which makes it an offence to kill, destroy, molest, or disturb wildlife within the MNR, subject to certain very limiting constraints[4];
- **Protected wrecks** – several wrecks within the MNR are designated under the Protection of Wrecks Act 1973[5] which restricts access to them; and

[3] Other areas, such as military sites and protection zones around oil and gas works are also NTZs, but are established for different purposes (see section 6.5 for a brief appraisal of these controls).
[4] The full text of the byelaw is reproduced at Appendix 1 of this report.
[5] Protection of Wrecks Act 1973 c.33

- **Fisheries byelaws** made by the Devon Sea Fisheries Committee that establish a series of restrictions on fishing activity within the MNR area, including a 'No Take Zone' on the eastern side of the island[6].

The No Take Zone byelaw introduced by the Devon SFC is unique in the UK and is the product of close cooperation between regulatory bodies and stakeholders. It is the most recent of the suite of fisheries byelaws introduced by the SFC for the specific purpose of protecting the Marine Nature Reserve.

The Lundy NTZ was originally proposed by English Nature (now Natural England), and developed into a formal proposal through a partnership between English Nature, Devon SFC and local commercial fishermen, anglers and charter boat skippers over several years. The SFC formally 'made' the No Take Zone byelaw in 2002, and when it was subsequently advertised as part of the formal consultation process, it attracted 12 letters of support and just a single objection. This low level of opposition reflected the opportunity that existed at Lundy to create a NTZ area with minimal impact on local fishermen relative to its potential conservation benefits. DEFRA subsequently confirmed the byelaw, and the UK's first purpose-made NTZ came into force on 11th February 2003.

The No Take Zone together with the other management measures in force establishes a series of zones within the Lundy MNR within which human activities are subject to different levels of control (see Figure 1). Although it was only established in 2003, there are already signs that the NTZ may be having some beneficial effects on lobster populations (Hoskin *et al.* 2005).

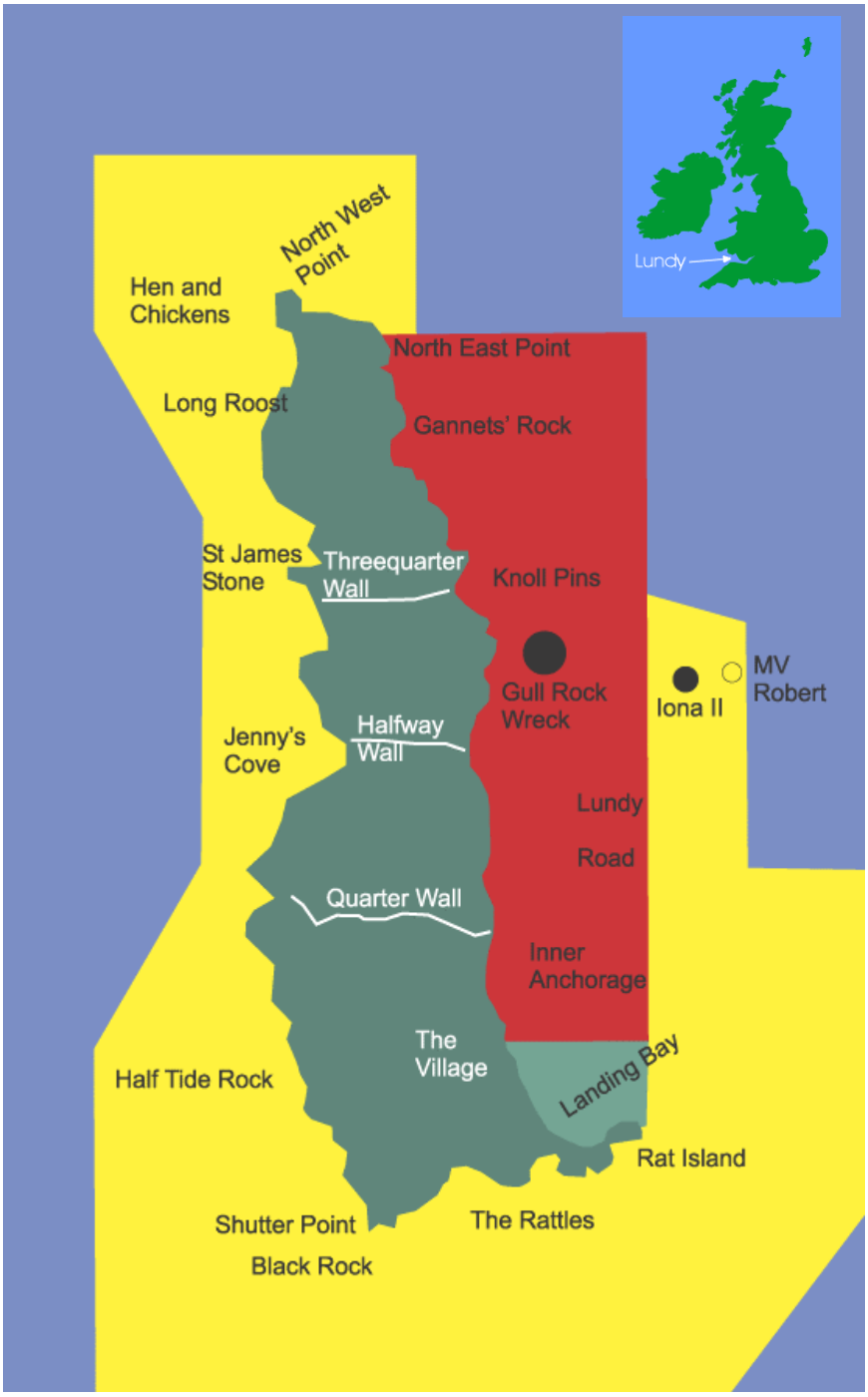
The Lundy NTZ and the management of the MNR is one of the recent success stories of UK marine conservation. The statutory authorities responsible for the site have created the most coherent, integrated management framework possible through the innovative use of a variety of controls founded in separate bodies of legislation. Their success also owes much to the support of stakeholders, which has allowed this proactive approach to management to develop.

Although Lundy is a great success, it also serves to illustrate some shortcomings in the present regulatory regime. The first is evident in the wording of the MNR byelaw – it is tempered by so many constraints that it provides virtually no protection for the MNR by itself. A second problem is demonstrated by the NTZ byelaw itself – the procedure for agreeing and making it took several years, and its application is narrowly confined by its own wording and the Fisheries Acts[7] Finally, the area of the NTZ was chosen to minimise objections, rather than to maximise marine conservation benefits.

These shortcomings should not diminish the importance of Lundy as the UK's only purpose-made No Take Zone. Lundy is not, however, the only place where statutory authorities have attempted to create NTZs. The next two case studies illustrate the problems that have hindered efforts to replicate Lundy's success elsewhere.

[6] The full text of these byelaws are reproduced at Appendix 2 of this report.
[7] For example, it is only an offence under the byelaw to take fish from the NTZ – the act of fishing within the NTZ is not prohibited, providing no fish are subsequently removed from the area.

Figure 1: Location of Lundy Marine Nature Reserve and illustration of the zoning scheme for human activities, including the No Take Zone.



Key:

Blue: General Use Zone – no spearfishing (Devon SFC Byelaw 13); all other activities allowed.

Yellow: Refuge Zone – no trawling or fishing with fixed nets (Devon SFC Byelaw 14); all other activities allowed.

Green: Recreational Zone – same restrictions as Refuge Zone, but swimming and snorkelling are encouraged here.

Red: No Take Zone – no person shall remove any fish or shellfish (Devon SFC Byelaw 28) or store seafish or shellfish within 100m of LW mark around the Knoll Pins (DSFC Byelaw 15).

Black: Archaeological Protection Zone – no diving or fishing allowed without a licence (wrecks protected under the Protection of Wrecks Act 1973)

3.3 Skomer

The Skomer Marine Nature Reserve covers an area of 15 km^2, and includes the coast and seas around the islands of Skomer and Middleholm as well as part of the Pembroke coastline on the mainland (see Figure 2). The MNR was designated in 1990, and is managed by a team of two full time and two part-time conservation officers employed by the Countryside Council for Wales (CCW). An Advisory Committee meets annually to oversee the management of the MNR.

The management regime for the MNR is similar to Lundy: CCW have a byelaw in place to protect wildlife from harm[8]; and the South Wales SFC made fisheries byelaws shortly after the MNR was designated that prohibit beam trawling, dredging and all fishing for scallops and queens within the MNR area[9].

The Skomer Advisory Committee proposed the idea of a No Take Zone for the MNR in 2002. This proposal was a response to increases in the amount of fishing, particularly potting, within the MNR. Over the preceding 5 years, the number of pots being fished in the MNR had more than doubled.

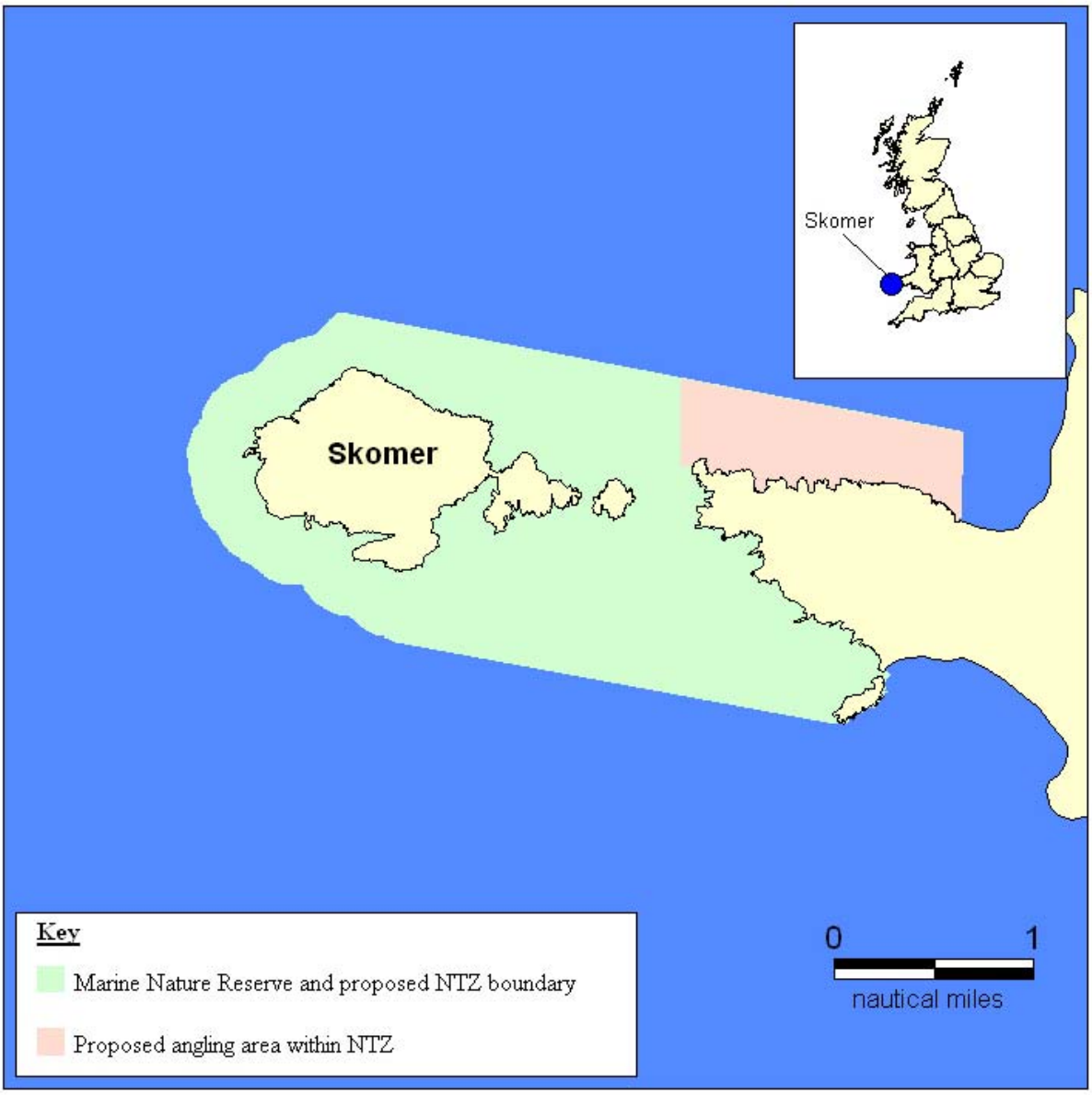
CCW and the South Wales Sea Fisheries Committee worked closely with local stakeholders for 2 years to develop a proposal for a NTZ byelaw. A final version of the byelaw was approved for introduction by a meeting of the Sea Fisheries Committee in early 2005. The proposed byelaw would prevent all fishing other than potting throughout the MNR, and would limit fishing with hook and line to an area of approximately 1.9km^2 (see Figure 2). The byelaw would establish a permit scheme for pot fishing that would limit the number of pots used in the MNR, and would result in pot fishing ceasing after a period of 10 years.

The proposed byelaw was publicly advertised in April 2005 as part of the formal SFC byelaw consultation process. The public consultation revealed both strong opposition and support for the proposed NTZ. After considering the responses to the consultation, the Sea Fisheries Committee convened an Extraordinary Meeting to consider whether to confirm the byelaw, and at which the main opponents and proponents were invited to set out their views for the Committee to consider.

Clear and well-argued cases were presented to this Extraordinary Meeting of the SFC. Opponents of the NTZ were certain of the immediate socio-economic impact it would have on commercial fishermen and anglers, and cast doubt upon the impacts of potting on marine wildlife as well as the likely benefits of NTZs. Supporters of the proposal were sure that it would be beneficial, but were unable to counter concerns about socio-economic impacts with certain proof of these benefits, as there was no evidence from similar areas in the UK to demonstrate them. At the end of a full discussion, the Committee held a ballot. The outcome was a vote (narrowly) against any further restriction of fishing activity within the MNR beyond the existing byelaws, a decision that reflected the finely balanced debate over the likely costs and benefits of introducing the byelaw.[10]

[8] The byelaw is reproduced at Appendix 3 of this report.
[9] These byelaws are reproduced at Appendix 4 of this report.
[10] A full account of this meeting and the discussions at it are available at www.swsfc.org.uk under the 'consultations' link.

Figure 2: Showing the boundary of the Skomer Marine Nature Reserve, and the extent of the 'No Take Zone' byelaw proposed by the South Wales Sea Fisheries Committee in April 2005.



The Skomer NTZ proposal illustrates the controversy surrounding stricter levels of marine wildlife conservation: an argument about socio-economic costs versus conservation benefits. It also shows how such controversy can prevent the introduction of new conservation measures. Faced with vocal opposition to the NTZ from fishing and angling interests, and in the absence of any clear policy direction or legal obligation to favour the support from marine nature conservation interests over such opposition, the SWSFC had little option but to abandon the NTZ proposal. The final case study provides a further demonstration of this issue.

3.4 Whitsand Bay

Whitsand Bay lies to the south of Cornwall, close to the county boundary with Devon. A No Take Zone (NTZ) was proposed for the eastern part of the Bay during 2004 (Figure 3). This proposal was catalysed by two events. The first was the promotion of the NTZ concept by Cornwall County Council; and the second was the sinking of an old naval vessel within Whitsand Bay.

The County Council's enthusiasm for the NTZ arose from the early success of a voluntary NTZ that was temporarily established near to St Agnes in 1997. Following on from this, a series of public meetings about NTZs were organised within the county. These revealed general support for the NTZ concept and for the creation of a statutory NTZ in Cornwall. An area around Looe Island several miles west of Whitsand Bay was initially proposed as a NTZ but this proposal met with considerable local opposition. As a result, other nearby areas were considered, including Whitsand Bay, which was ultimately selected as the most favoured location for a NTZ.

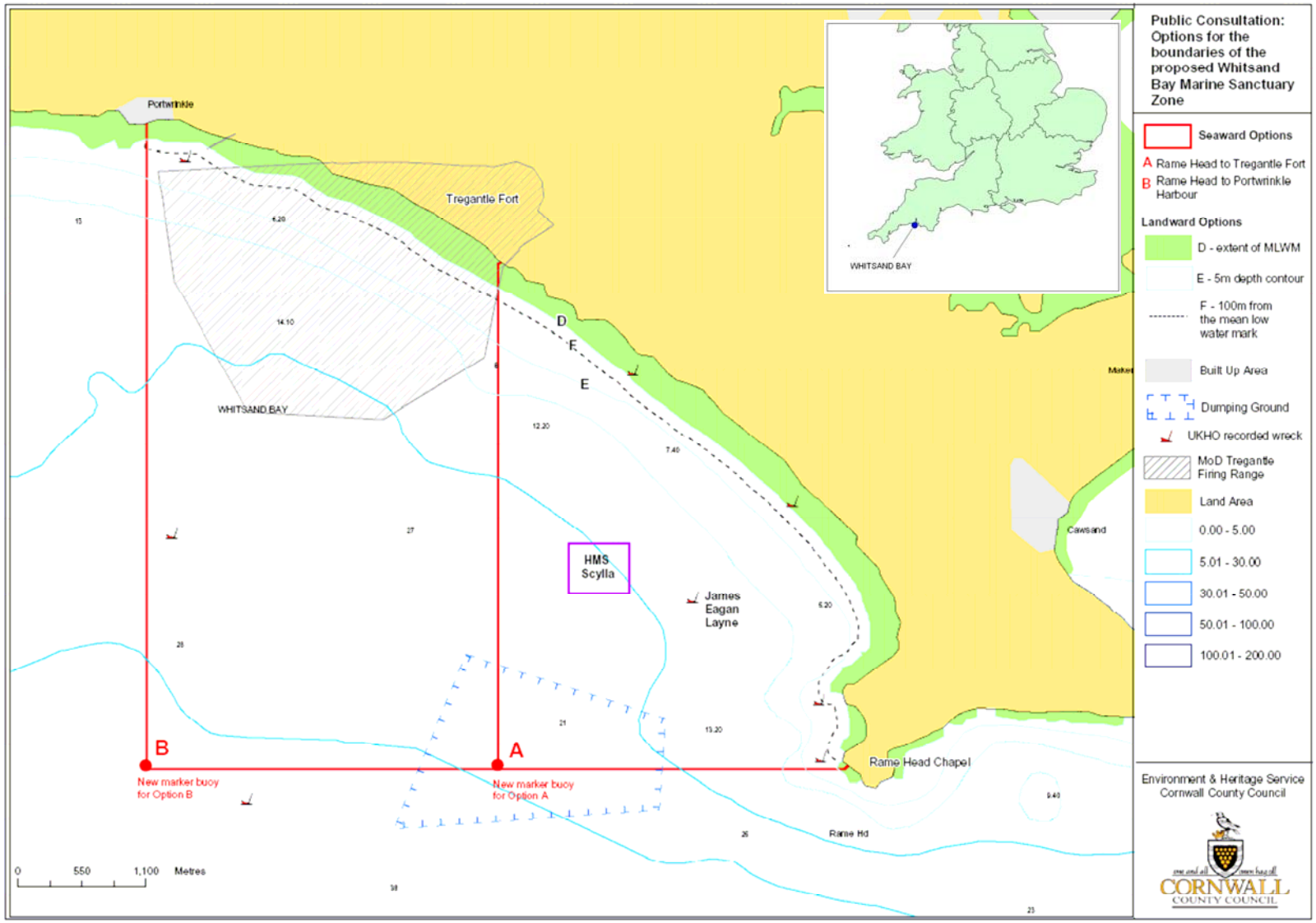
At the time that these meetings were being held, the National Marine Aquarium was involved in creating Europe's first artificial diving reef by sinking an old frigate, the former HMS *Scylla*, in Whitsand Bay. While the main purpose of this project was to create a diving reef, the *Scylla* also presented opportunities for promoting marine biodiversity and carrying out scientific research. A NTZ in the Bay would complement these opportunities. Interest in creating a NTZ grew more intense with the *Scylla* was eventually sunk (deliberately) in the Bay in March 2004.

The statutory bodies in the area responded proactively to the interest in creating a NTZ at Whitsand Bay. A formal proposal for the area was agreed following a series of meetings between interested parties, and in September 2004 Cornwall County Council published a consultation document and questionnaire for the proposed NTZ. This consultation generated massive interest: around 900 copies of the consultation document were sent out to individuals and organisations; and responses were received from 994 people and 35 organisations in the form of questionnaires, petitions, letters, and e-mails (Cornwall County Council, 2005).

The results of this formal consultation were that 58% of respondents opposed the creation of an NTZ in Whitsand Bay. Faced with this opposition, the County Council concluded that it should not proceed any further with promoting the Whitsand Bay NTZ.

Although the Whitsand Bay NTZ proposal failed as a marine conservation measure, the response to the public consultation yielded a wealth of quantitative information. It is interesting to note that only 8% of the respondents were commercial fishermen; the largest sectoral response was from recreational anglers (28%), followed by the General Public (17%) and then wildlife interests (15%). Concerns about socio-economic impacts are prominent in the consultation responses, as are doubts about environmental benefits. The consultation demonstrated that certain groups, notably anglers and local residents, have grave doubts about the costs and benefits of NTZs, a result that echoes the conclusions of the South Wales SFC at Skomer.

Figure 3: Showing the location of Whitsand Bay in Cornwall, and boundary proposals for the No Take Zone (or 'Marine Sanctuary Zone') proposed in Cornwall County Council's consultation during 2004.



3.5 Summary

These three case studies represent the 'cutting edge' of marine wildlife conservation in the UK. They demonstrate how the present regulatory regime performs when it is used to try to prohibit an activity within areas that are important for marine wildlife, and they also highlight the divergence between the views of the general public and statutory bodies on the need for improved marine wildlife protection. Both observations can usefully inform the future direction of marine nature conservation in the UK.

The success of the Lundy NTZ demonstrates both the strengths and the weaknesses of the present regulatory regime. The strength of this regime is that it enables several different statutory bodies to work together to successfully create the NTZ and manage the MNR. However this success exposed a number of severe weaknesses: the Marine Nature Reserve designation by itself provided few proactive restrictions on human activity within the site; the SFC byelaw that ultimately created the NTZ took several years to introduce; and the byelaw was only successfully made following the careful selection of a site that would minimise public objections rather than maximise marine conservation benefits.

The Skomer and Whitsand Bays attempted to build upon the success of Lundy by emulating the procedure for creating an NTZ byelaw. In each case study, the NTZ proposal was preceded by early and sustained dialogue between stakeholders and regulators. In each case, this resulted in a compromise proposal being developed that appeared to meet both wildlife conservation and socio-economic interests. This was a resource-intensive process that took a considerable time, but which ultimately achieved nothing at Skomer or in Whitsand Bay.

The case studies demonstrate a significant and genuine commitment on the part of both the conservation agencies and other statutory bodies to use the existing management regime in an innovative way to promote marine nature conservation. They also demonstrate an equally vigorous concern on the part of stakeholders and the general public about the need for further restriction of commercial and recreational activity at sea in order to protect marine wildlife.

This gap between the desire of regulatory bodies to protect marine wildlife and the resistance of stakeholders to stricter regulation is a significant and major concern. It could be overcome simply by imposing a duty on regulators to designate sites and impose regulations despite local opposition – but this would create an unpopular regime undermined by non-compliance that would both incur significant management costs and reduce conservation benefits (Jones, 2001; Kritzer, 2004).

The case studies reveal that improving marine nature conservation in the UK will require two complementary strategies: a new body of wildlife conservation legislation that is robust and proactive, linking the protection of sites with the management of human activities in a way that provides an overall balance between wildlife conservation and socio-economic interests; and a communication strategy that will bridge the gap in understanding between regulators and stakeholders

3.6 Conclusions

The main conclusions that can be drawn from these case studies are:

- There is a gap between the desire of statutory bodies to promote marine nature conservation and the opposition of many stakeholders to such measures;

- Marine Nature Reserve site protection legislation and byelaws seem to be inadequate 'stand alone' mechanisms to prevent harm to the wildlife within an MNR;

- Sectoral controls (in this case fisheries byelaws) are necessary to provide practical protection for marine wildlife sites, but these controls are constrained by their parent legislation and consultation procedures that are time consuming and resource intensive and that can delay or prevent their introduction, and the ability or willingness of sectoral managers to establish such controls.;

- The creation of HPMRs as an element of improved marine nature conservation that meets the UK's international commitments and the Government's own vision for the marine environment will require a new approach that provides a robust, proactive management regime that integrates the protection of marine sites with the management of human activities.

4 ASSESSING THE OPTIONS FOR CREATING HPMRS

4.1 Introduction

The previous section considered several case studies that demonstrated some of the practical and legal issues associated with implementing new marine nature conservation measures in the UK. Such case studies do not, however, provide a consistent, systematic or objective assessment of the options available for creating HPMRs. This section of the report defines the options that are available for creating HPMRs, and then sets out a rationale for assessing them consistently and objectively.

There are two broad options available for creating HPMRs: the innovative use of existing laws, or the making of new legislation that would create an entirely new approach to marine wildlife conservation. Each is considered here.

4.1.1 Use of existing laws

The law already protects marine wildlife by creating rules that protect important species and sites; and by imposing controls on certain human activities to prevent them from having adverse effects. The innovative and co-ordinated use of these existing laws might be able to provide the level of protection that would be associated with an HPMR; just as the co-ordinated use of wildlife conservation and fisheries byelaws have created the management regime around Lundy Island (Figure 1).

For the purpose of assessing the options for creating HPMRs with existing legislation, it is useful to separate the conservation measures created by the wildlife conservation regime from the sectoral management of human activities, so that current management options can be examined from two perspectives by considering two key questions:

- **Wildlife site protection** – can existing wildlife site protection measures be used to create HPMRs, either as 'stand alone' HPMRs or by influencing sectoral management to restrict activities; and

- **Coordinated sectoral management** – can the restrictions associated with an HPMR be created by synchronising the use of regulations for different sectoral activities, either within existing designated sites or in the wider marine environment?

4.1.2 New legislation

The UK Government's recent consultation document on proposals for a new Marine Bill raised the possibility that new legislation could be made to enable the creation of new Marine Protected Areas, and also to modernise existing sectoral management regimes. Such legislative changes might provide an opportunity for the creation of Highly Protected Marine Reserves.

Again, are two broad options for creating HPMRs with new legislation:

- **Wildlife site designation** – the creation of a new type of wildlife site that would be able to create HPMRs; and

- **Coordinated sectoral management** – an overhaul of the existing sectoral management regime that to ensure integration with either existing or new wildlife protection measures so that HPMRs could be created.

Table 1: Criteria used to assess whether legal measures to protect wildlife sites and to regulate human activities could be used to deliver the level of protection expected for a Highly Protected Marine Reserve (HPMR). Effective HPMRs could only be created by measures that satisfy all of the criteria in the relevant column.

HPMR Characteristic	Assessment Criteria	
	Wildlife Site Designations	**Regulating Human Activities**
Purpose	The principal purpose of the designation is the conservation and recovery of biodiversity, habitats and ecosystem function.	Restriction of activity is possible for the purpose of conservation and recovery of biodiversity, habitats and ecosystem function.
Extent	Site can extend from high water mark to limits of jurisdiction* (and ideally should include areas above the HW mark if these are likely to affect the site).	Capacity to regulate activity extends from high water mark to limits of jurisdiction* (and ideally should include areas above the HW mark if these are likely to affect the site).
Influence	Site has legal power to influence site management by: • Creating duties and responsibilities for all statutory bodies; and / or • Directly regulating activities.	Management regime can directly regulate activity.
Scope	Site protects habitats, species, and other natural features that are rare, threatened, vulnerable, and representative of the UK's marine biodiversity.	Management can protect habitats, species, and other natural features that are rare, threatened, vulnerable, and representative of the UK's marine biodiversity.
Practicality	Process for creating and managing sites enables effective and efficient protection to allows protected areas to be created.	Process for establishing and enforcing management controls allows management regime to be tailored to wildlife conservation requirements and implemented effectively.

Notes

* For the purposes of this report, these limits are the boundary of Welsh Territorial Waters, lying within a line drawn 12 nautical miles offshore of baselines.

4.2 Assessing the options

Certain fundamental characteristics that are important for creating successful HPMRs were identified and summarised in section 2.1. These characteristics can be used here to create a set of assessment criteria for the current and potential future options for creating HPMRs.

The assessment criteria that will be used in this report are set out in Table 1 overleaf. They create an analytical framework that is relatively simple and transparent as well as rigorous, consistent and objective. It enables any existing or proposed regulation to be assessed quickly, and the results of the assessment can be communicated clearly and concisely by indicating whether or not the relevant criteria have been satisfied. Similar approaches have been used to assess MPAs elsewhere (for instance, Pomeroy, *et al.,* 2004).

The rest of this report critically assesses the different options for creating HPMRs using these criteria as a basis for discussion.

5 THE LAW AND THE MARINE ENVIRONMENT

5.1 The Law

This section very briefly outlines the way that the Law regulates human activities, and how it can protect the marine environment from harm. Three areas of Law are relevant there: legislation; the Common Law; and the interpretation of legislation by the Courts.

For the purposes of this report, legislation means the Acts and Statutory Instruments that are made by the Houses of Parliament and by the Welsh Assembly Government; it also includes Directives and Regulations made by the European Community.

'Common Law' is a term used to describe legal rules that have evolved over centuries in the Courts of England and Wales from basic legal principles. The Common Law and the Judiciary that determines and upholds it is independent of Government. The rulings of the Courts of England and Wales establish legal precedent that can govern activities as rigidly as legislation.

The Courts often rule on cases where the interpretation that should be applied to a piece of legislation is brought into question. In such instances, the ruling arrived at by the Court establishes a legal precedent in much the same way as rulings on matters of Common Law.

These three sources of law create the overarching regulatory regime that is assessed now in relation to the creation of HPMRs.

5.2 Protecting marine wildlife

There are two ways that the Law protects marine wildlife from harm. The first is by creating legal rules to protect certain species of wildlife or designated sites from all human activities; and the second is by imposing restrictions on specific human activities that may be harmful to wildlife. Both approaches are outlined briefly below.

5.2.1 Wildlife conservation

The law conserves marine wildlife by protecting some species of flora and fauna wherever they occur, such as basking sharks and marine turtles; and also by protecting areas of sea and seabed that are important for wildlife. Only these latter, site based protection mechanisms are relevant to the creation of HPMRs, so species protection measures are not considered further here.

The UK's statutory wildlife conservation regime is based primarily upon three pieces of legislation that enable the creation of a suite of protected areas on land and at sea:

- **The National Parks and Access to the Countryside Act 1949**[11] – which established the network of Sites of Special Scientific Interest (SSSIs) and is still important for the protection and management of Local Nature Reserves (LNRs).

[11] National Parks and Access to the Countryside Act 1949 c.97

Table 2: Summary of the principal legal mechanisms available to conserve marine wildlife sites in Wales.

Name	Acronym	Summary
Wildlife & Countryside Act 1981		
Areas of Special Protection[a] (s3)	-	Birds only. Secretary of State makes an Order to establish AoSP. Order sets out site-specific bird protection measures. May prohibit access to all or part of site for all or part of year. Can cover areas of land, seashore, and water up to 3nm from baselines.[b].
Site of Special Scientific Interest (s28)[c]	SSSI	The most common type of site. Places duty on land owners and occupiers; consultation requirements for statutory bodies; and restrictions on 3rd party activities. Typically d not extend below LW / LAT (nb some of our boundaries do you see).
National Nature Reserve (s35)	NNR	Land managed for nature conservation & research. May be owned / leased by nature conservation agency. Do not extend beyond LW. Reserve may be protected by byelaws.[d]
Marine Nature Reserve (s36)	MNR	Can extend from HW mark seawards to limit of Territorial Waters. Nature conservation agency able to make byelaws to protect wildlife in MNR.[d] Complicated consultation process has limited the number designated to 3 (Skomer, Lundy, Strangford Lough). MNRs impose no obligations on statutory bodies; limited regulation of 3rd party activities.
National Parks and Access to the Countryside Act 1949		
Local Nature Reserve	LNR	Declared by local authorities. Area of local nature conservation importance. Extend to MLW
Protection of Birds Act 1954 (repealed by Wildlife & Countryside Act 1981)		
Sanctuary Order (s3)	-	Birds only. Order made by Secretary of State. See notes on Areas of Special Protection under W&CA 1981 above. Orders made under the 1954 Act still stand[b].
Conservation (Natural Habitats &C.) Regulations 1994		
Special Protection Area[e]	SPA	Birds only. May extend beyond LW. Place requirements on regulatory bodies to protect site integrity; nature conservation agency can act where powers are lacking. No direct penalties or controls for 3rd party activity.[f]
	pSPA	proposed SPA; not subject to same statutory protection as designated SPAs, but Govt. Policy is to treat as if designated..
Special Area of Conservation[e]	SAC	For many different habitats and species and can extend throughout territorial sea. Place requirements on regulatory bodies to protect site integrity; nature conservation agency can act where powers are lacking. No direct penalties or controls for 3rd party activity.[f]
	cSAC	candidate SAC - subject to same statutory protection as SACs (England) but only protected by Govt Policy (Wales).

Notes

[a] Areas of Special Protection made under the Wildlife & Countryside Act are not the same as Special Protection Areas (SPAs) made under the Wild Birds Directive.

[b] Examples of Sanctuary Orders include: Burry Estuary, Ynys Enlli, Humber, Southport, Wyre-Lune, Poole Harbour, Farne Islands, Foulney Island.

[c] This section has been repealed & amended by Schedule 9 of the Countryside & Rights of Way Act 2000.

[d] Byelaws made by a nature conservation agency cannot interfere with the powers of other statutory bodies.

[e] To qualify for these designations, sites must first be designated as SSSI (for areas above LW).

[f] 3rd party activity can be controlled within SAC and SPA areas that lie within SSSI boundaries (i.e. above LW) under s28P of the Wildlife & Countryside Act (reproduced as a consolidated version at Appendix 5)

- **The Wildlife & Countryside Act 1981**[12] – which strengthened the protection given to SSSIs, and established Marine Nature Reserves (MNRs). SSSI protection was strengthened by the Countryside & Rights of Way Act 2000[13], which repealed and amended key sections of the Wildlife & Countryside Act, which have been subsequently strengthened further by the Natural Environment and Rural Communities Act 2006[14].

- **The Conservation (Natural Habitats &c) Regulations 1994**[15] – known as the 'Habitats Regulations', these created an entirely new suite of protected areas in response to the requirements of the EC 'Habitats Directive'[16] and to fully implement the earlier EC 'Birds Directive'[17]. The 'Habitats Regulations' allowed for the protection of key habitats and species in areas of sea known as 'European Marine Sites', which included both Special Areas of Conservation (SAC) and Special Protection Areas (SPA). In England, amendments have been made to these Regulations since 1994 to bolster the protection afforded to both SACs and SPAs[18].

A thorough review of marine nature conservation legislation is set out in Boyes, Warren & Elliott (2003(a)).

5.2.2 Regulating human activities

The laws that govern activities at sea have evolved over the centuries to create the management regime that currently regulates human activity within Welsh Territorial Waters. Today, dozens of laws are enforced by numerous statutory bodies to manage the many diverse activities taking place on and around the Welsh coastline. In some cases, these regulations have the potential to protect nature conservation interests, even if this is not what the legislation was originally developed for.

An example of the complexity of the management regime for human activities is provided by fisheries legislation. Within this body of legislation there are two clear themes: the conservation of fish stocks and the protection of the wider marine environment:

- **Fisheries conservation** is determined by 4 tiers of legislation that regulate fishing activity: the EC Regulations establishing the Common Fisheries Policy[19]; the UK Fishery Acts that create a domestic regime[20]; Statutory Instruments made by the Welsh Assembly Government[21]; and byelaws made by Sea Fisheries Committees[22].

[12] Wildlife & Countryside Act 1981 c.69
[13] The Countryside & Rights of Way Act 2000 c.37
[14] Natural Environment and Rural Communities Act 2006 (2006 c.16) at s55
[15] The Conservation (Natural Habitats &c) Regulations 1994 **(**SI 1994 No. 2716)
[16] Council Directive 92/43/EEC *on the conservation of natural habitats and of wild fauna and flora.* OJ 1992 L 206/7
[17] Council Directive 79/409/EEC *on the conservation of wild birds.* OJ 1979 L 103/1
[18] See, for instance, The Conservation (Natural Habitats, &c.) (Amendment) Regulations 1997 (SI 1997 No.3055) and The Conservation (Natural Habitats, &c.) (Amendment) (England) Regulations 2000 (SI 2000 No.192)
[19] Council Regulation 2371/2002 *on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy* OJ L 358/59
[20] The principal statutes are the Sea Fisheries Regulation Act 1966; Sea Fish (Conservation) Act 1967; Sea Fisheries (Shellfish) Act 1967; Sea Fisheries (Shellfish) Act 1973; Sea Fisheries Act 1968; Sea Fish Industry Act 1970; Sea Fish Industry Act 1973.
[21] Such as the Sea Fishing (Northern Hake Stock) Order 2006 (SI 2006 No.1796, W.191)
[22] These establish local controls not provided by EC and national legislation – for instance setting minimum sizes at which species of shellfish can be taken from intertidal fisheries.

- **Environmental protection** measures mirror this regime, ranging from provisions in the EC Common Fisheries Policy[23]; duties set out in UK Acts relating to wildlife sites[24] and a general requirement for fisheries managers to 'have regard for' the environment[25]; additional duties in respect of wildlife sites established by Statutory Instruments[26]; and restrictions imposed on fishing for environmental purposes by Sea Fisheries Committee byelaws[27].

Fishing is not alone. Most other commercial activities taking place in Welsh Territorial Waters have a similar regulatory regime based on several tiers of legislation to regulate the activity, with additional duties to protect wildlife. For instance, there is now a general duty for all statutory bodies to 'have regard for' the conservation of biodiversity, whilst exercising their statutory functions.[28] This low level of protection applies to all regulated activities wherever they occur, and is strengthened by additional levels of protection that apply to the management and regulation of activities taking place within designated wildlife sites.

It is beyond the scope of this report to review the regulatory regime for every human activity that takes place in the marine environment and this would also duplicate a recent review that provides a comprehensive reference on this subject (Boyes, Warren & Elliott 2003(b)). Broadly speaking, human activities in marine areas are managed and regulated in two ways:

- **Permissive management** – many activities are prohibited unless a permit is obtained to allow them to take place. This approach underpins the regulation of pollution and many commercial activities, such as the construction of new oil and gas developments, windfarms and coastal defences. Permissive regulation offers many advantages from a nature conservation perspective, since it enables the assessment of impacts to take place before the activity is permitted – it is a 'proactive' approach.

- **Restrictive management** – certain marine activities can take place in any area at any time unless they are restricted by regulations. The right of innocent passage by vessels illustrates this – commercial and recreational vessels can navigate wherever they please except in areas where statutory controls have been introduced to restrict the exercise of this right. This approach to management is 'reactive', in that such restrictions are usually introduced after problems are identified, which is a disadvantage in situations where the proactive conservation of marine wildlife is a priority.

Inevitably, this distinction is not hard and fast. Some activities are regulated by a mixture of both permissive and restrictive regulations. For instance, commercial fishing vessels must obtain a permissive fishing licence before they can start to fish, and then have to comply with EC, national and local fisheries management measures, most of which are restrictive.

The difficulties of protecting marine wildlife by managing human activities that may impact upon it are further complicated by the fact that the sectoral management regime does not apply to all human activities – some are unregulated and unlicensed. This issue is considered further in section 6.4 of this report.

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[23] Note 16 *supra* at Articles 1 and 6

[24] Under s28 *et seq* of the Wildlife & Countryside Act 1981 (1981 c.69) (as amended by the Countryside & Rights of Way Act 2000 (2000 c. 37) at Schedule 9.

[25] Under the Sea Fisheries (Wildlife Conservation) Act 1992 (1992 c.36) and the Natural Environment and Rural Communities Act 2006 (2006 c.16) at s40 *et seq*.

[26] Such as the 'Habitats Regulations' (note 15 *supra*)

[27] Such as Cornwall SFCs St Ives Bay Gillnet Fishery Byelaw (http://www.cornwall.gov.uk/index.cfm?articleid=31151); and Devon SFCs Lundy "No Take Zone" Byelaw (Byelaw 28) (attached at Appendix 2).

[28] Natural Environment and Rural Communities Act 2006 at s40.

An indication of the complexity of the management regime for human activities can be gained from Figures 4 and 5, which illustrate the geographic extent of the controls for certain activities and the jurisdiction of the statutory bodies responsible for enforcing them.

Figure 4: The geographic extent of key development controls in the coasts and seas of England and Wales (source: Marine Consents & Environment Unit, 2005)

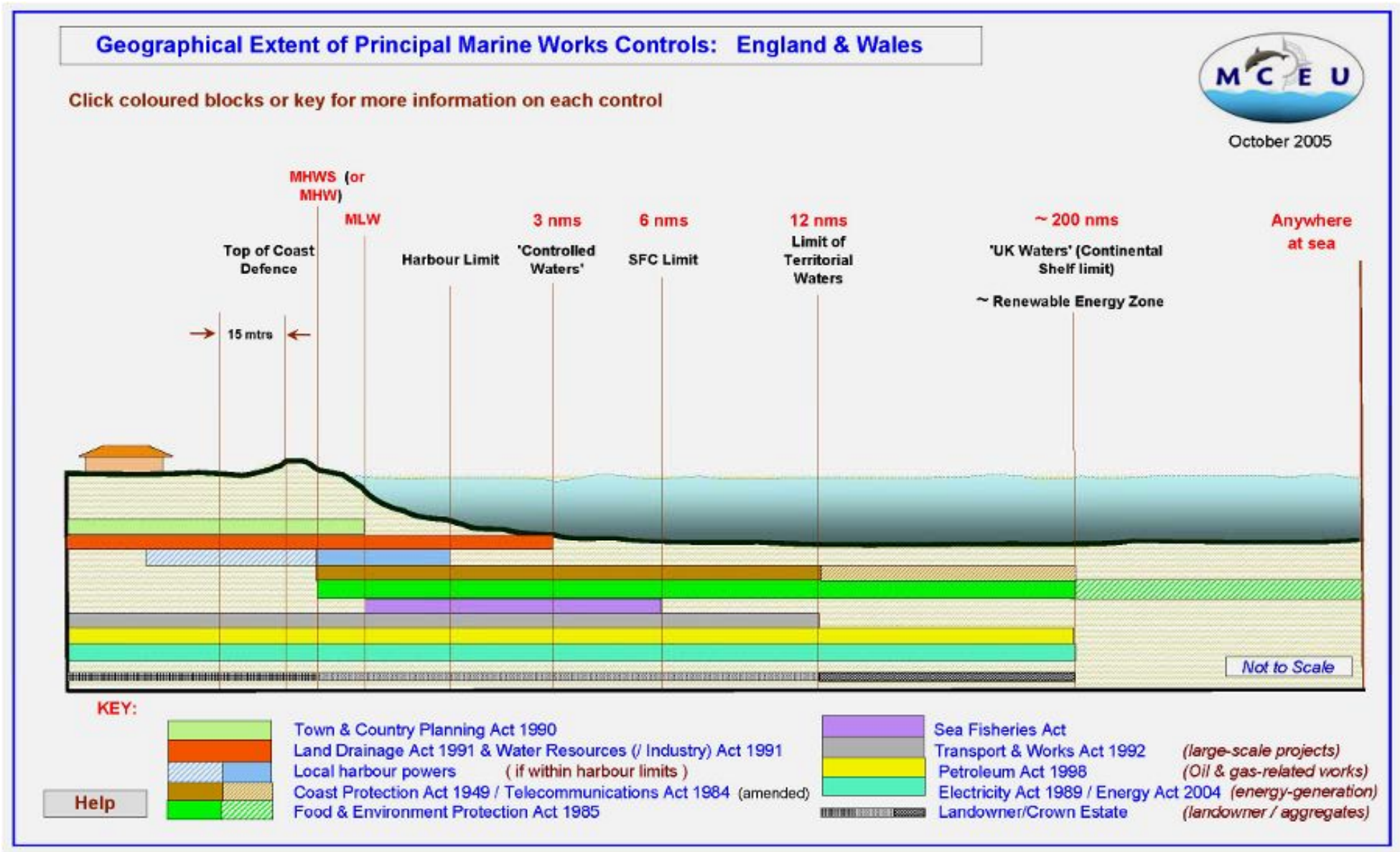
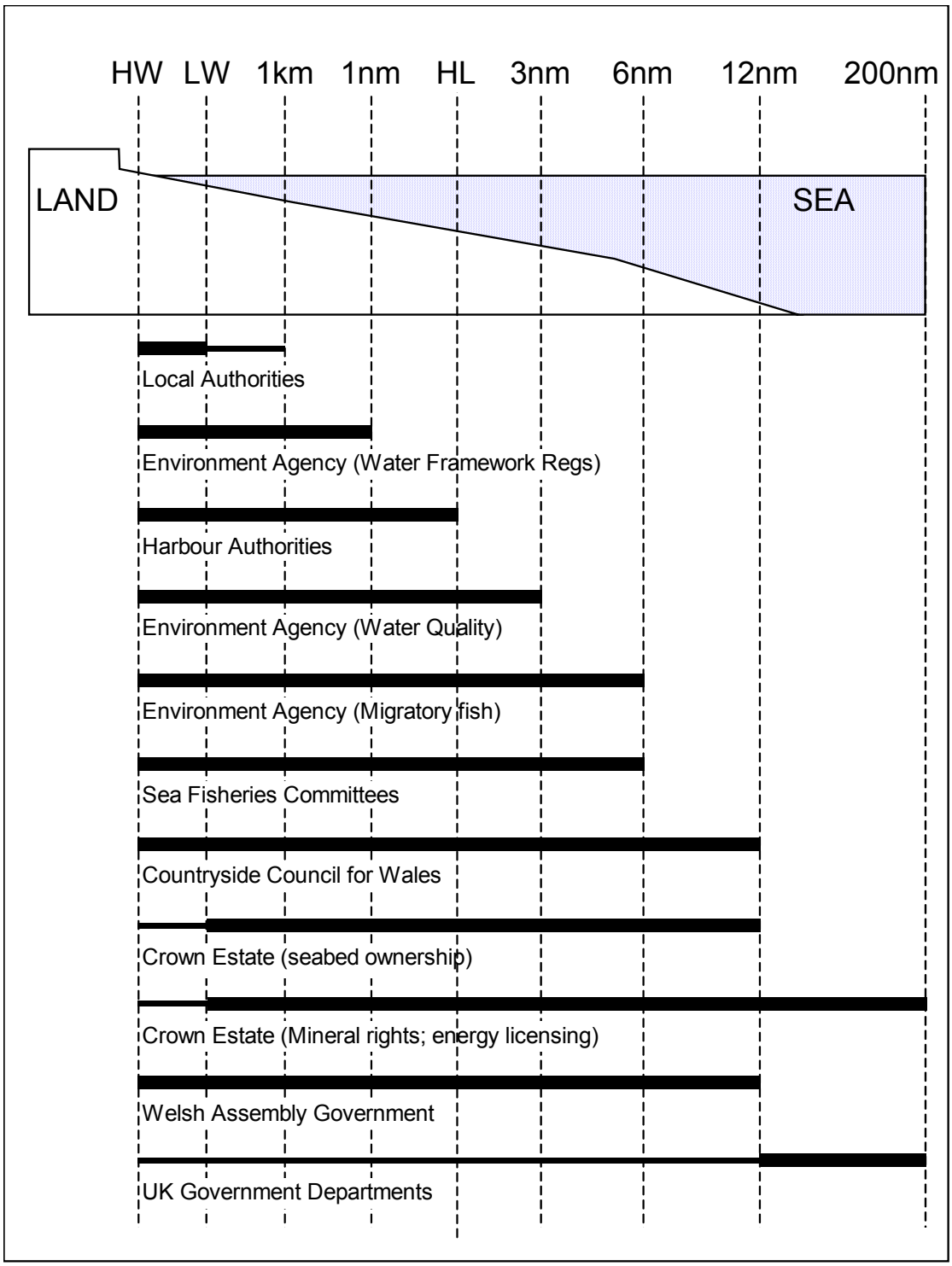


Figure 5: Key zones of jurisdiction in the Welsh marine environment (redrawn from Boyes, Warren & Elliott (2003(b)), modified from Gubbay (1990)).



Key: HW = High Water Mark
LW = Low Water Mark
HL = Harbour Limit (up to 3nm)
nm = nautical mile
km = kilometre

Extent of jurisdiction

Limited jurisdiction

6 USING EXISTING LAWS TO CREATE HPMRS

6.1 Introduction

This section uses the approach set out in section 4 to assess the prospects for creating HPMRs in Wales using existing legislation. It considers in turn whether HPMRs can be created by using existing wildlife site protection measures as their basis; and whether sectoral management of activities is capable of restricting human activities at sea for marine conservation purposes, either within wildlife sites or in the wider environment.

6.2 HPMRs compared to existing wildlife designations

No existing wildlife site mechanism has been designed specifically to allow the creation of HPMRs. Nevertheless, an exploration of existing mechanisms raises some useful and relevant issues. An assessment of the capacity of the current site conservation mechanisms to deliver HPMR requirements is set out in Table 3 and discussed briefly below.

6.2.1 Marine Nature Reserves

Marine Nature Reserves (MNRs) match the HPMR ideal in respect of their scope and purpose, since they are sites that are designated with the principal intention of conserving marine wildlife. Sadly, MNRs are dogged by problems that have prevented them from delivering their 'purpose' in all but a few limited areas.

In terms of site management, MNRs have very little influence over the activities of site users and other regulatory bodies. The MNR designation places no duty on regulators to consult with nature conservation agencies before they permit any activities that would affect the site; and MNRs do not impose any direct constraints on human activities. Although the nature conservation agencies are able to make MNR byelaws for site management purposes, these byelaws are severely limited in their application, and cannot regulate activities that could be managed by another authority[29] - hence the need for Devon Sea Fisheries Committee to make the byelaw that created the 'No Take Zone' within the Lundy MNR. However, there are no legal or policy requirements for other statutory bodies to introduce such conservation measures and, as was seen in the case study for Skomer MNR, there is no presumption in favour of nature conservation measures within MNRs. In short, the MNR designation lacks teeth – it has very little 'influence' over site management.

The lack of influence prevents MNRs from actually delivering the 'purpose' of an HPMR. In addition, MNRs can only extend up to 6 nautical miles offshore, and not to the 12 nautical mile limit of Territorial Waters which would be needed satisfy the 'extent' requirement for effective HPMR legislation.

However, the most significant failing of MNRs is that they are impractical. Although MNRs have been proposed for many sites around the UK over the past 25 years, only 3 MNRs have been created. The main obstacle to designation has been the statutory consultation process for MNRs[30], which effectively makes them impossible to designate if there are any public objections to them.

[29] Note 12 *supra*, s37
[30] Note 12 *supra*, Schedule 12

Table 3: Assessment of existing wildlife site protection designations against the key characteristics of Highly Protected Marine Reserves (HPMRs).

Designation	HPMR Characteristics					
	Purpose	Extent	Influence		Scope	Practical
			Regulators	Users		
Ideal HPMR	✓	✓	✓	✓	✓	✓
Domestic (UK) Designations						
MNR	✓	✓[a]	×	×	✓	×
SSSI	✓	×	✓	✓	✓	✓
LNR	✓	×	×	✓	✓	✓
NNR	✓	×	×	✓	✓	✓
AoSP	✓	×[b]	×	✓	×	×
EC Designations						
SAC	✓	✓	✓	×[c]	×	✓
SPA	✓	✓	✓	×[c]	×	✓

Key:

Purpose: the principal purpose of the designation should be the conservation and recovery of biodiversity, habitats and ecosystem function;

Extent: the designation should extend throughout the marine realm, from the High Water Mark on the shore to the limits of national jurisdiction, and include areas of coastal land important for site conservation;

Influence: the designation should have the legal power to influence the management of the site in order to achieve its conservation goals, either by creating duties and responsibilities for regulators, or by directly regulating the activities of users how may cause harm to the site;

Scope: the site should protect habitats, species and other natural features that are rare, threatened, vulnerable, and representative of the UK's marine biodiversity; and

Practicality: the process for creating and managing the site should be practical, enabling it to be designated and protected effectively and efficiently so that a network of protected areas can be created.

Notes:

[a] Marine Nature Reserves can only extend from the HW mark up to 12 nautical miles offshore. They cannot include areas of land above the HW mark.

[b] Areas of Special Protection can only extend up to 3 miles offshore of baselines.

[c] The activities of 3rd parties in SAC and SPA areas can be directly regulated via SSSI legislation for areas above the LW mark, but 3rd party activity cannot be readily regulated by the SAC / SPA legislation for areas seawards of LW .

6.2.2 Sites of Special Scientific Interest

SSSIs are also a domestic designation, protecting wildlife that is of national importance. They impose very strict and clear controls on the users and regulators of a site.[31] For instance, statutory bodies have to consult the nature conservation agency before they can issue permits for activities, and they have a duty to follow nature conservation advice in respect of site management. Statutory bodies that don't conform to these procedures are liable to a fine of up to £20,000. Similar controls apply to people carrying out activities on a SSSI – for instance, it is a criminal offence intentionally or recklessly disturb, damage or destroy SSSI site features[32].

SSSIs are a successful, practical wildlife protection measure. There are over 1000 SSSIs in Wales, including 127 that extend into intertidal areas around the Welsh coast. Each of these SSSIs has been created on the basis of a scientific judgement of the value of the site features. The procedure for creating a SSSI is robust - local objections, even from landowners, cannot halt their creation.

Despite these strengths, SSSIs have a number of major weaknesses that prevent them from making the grade as HPMRs. The most significant of these is their extent. SSSIs are a terrestrial site protection mechanisms that cannot generally extend beyond the Low Water mark, which prevents them from supporting the management of Special Areas of Conservation and Special Protection Areas at sea in the same way that they do on land. SSSIs also fail in terms of their purpose: they are areas where human activity is managed for nature conservation benefit, rather than areas where all human activities are prohibited.

6.2.3 Local Nature Reserves

Local Nature Reserves (LNRs) share many of the same problems as SSSIs. They cannot extend beyond the Low Water mark, and they are very much 'multiple use' sites that are unable to deliver the complete restriction of human activities expected of an HPMR.

6.2.4 National Nature Reserves

National Nature Reserves (NNRs) offer the possibility of a greater level of restriction of human activities than LNRs, but again have a major shortcoming in that they can only extend to the Low Water mark.

6.2.5 Areas of Special Protection

Areas of Special Protection (AoSP) are the only site designation in the UK capable of creating 'no-go' areas where all human activity is restricted. They can also extend beyond the LW mark, but only up to 3 nautical miles offshore.

In most other respects however, AoSPs fail to meet HPMR criteria. Their main shortcoming is that they can only be established for areas used by birds; and they also have no direct influence on the actions of regulatory bodies. The process for designating AoSPs is also complicated, requiring a Statutory Instrument to be made – they are not a very practical designation.

[31] Note 12 *supra* at s28
[32] Note 12 *supra*, at s28P.

6.2.6 Special Areas of Conservation

Special Areas of Conservation cover some 70% of the Welsh coastline and 30% of Welsh Territorial Waters, and as such are clearly more 'practical' than MNRs for example. Their success in this regard is largely due to a robust site selection and designation procedure is governed by objective criteria set out in EC legislation.

SACs have considerable influence over the management roles of relevant statutory bodies. The SAC designation places a general conservation duty on regulatory bodies[33] and creates duties to consult the nature conservation agencies before permitting human activities to take place.[34] A statutory body cannot issue a permit for an activity that is likely to adversely affect the integrity of an SAC, a legal requirement that was recently bolstered by a European Court of Justice ruling on cockle dredging.[35] Despite this ruling, the consultation requirements associated with SACs are much weaker than those for SSSIs – for instance, there is no mechanism for prosecuting a statutory body that fails to comply with SAC consultation requirements.

The regulations governing licensed activities within SACs is not matched by similar controls over unlicensed or unregulated activities. Unlike SSSIs, there is no '3rd party' offence of harm to the features of an SAC (unless, of course, this harm takes place within a SSSI that is part of an SAC, which is only the case for around 6% of marine SAC areas). The only ways that unlicensed or unregulated activities can be directly managed within a SAC in marine areas is via a 'Special Nature Conservation Order' made by the Minister to prohibit a particular activity[36]; or through byelaws made by a nature conservation agency, using the powers available for making Marine Nature Reserve byelaws[37]. Both mechanisms have serious practical shortcomings: Special Nature Conservation Orders are very much an 'emergency' management measure that is rarely used; and MNR byelaws are severely constrained in their application, limiting their influence on site management. Perhaps most importantly, both of these measures are 'reactive' – they respond to harm once it has happened, rather than preventing it in the first place. Because of these, SACs fail to fully meet the level of 'influence' required within an HPMR.

SACs also have shortcomings in respect of their 'purpose' that prevent them from meeting HPMR criteria. Rather than being sites where there is a presumption against human activities, SACs are intended to deliver the aims of the EC 'Habitats Directive', which are "*to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements*"[38]; SACs are intended to be sites where human activities are managed in order to protect wildlife, rather than sanctuaries where human activity is minimal.

Despite these weaknesses, SACs do have some positive attributes in relation to HPMR criteria. Most importantly they can extend throughout the marine realm (even to 200nm offshore), and they bridge the gap between land and sea. They can also be managed through 'Management Schemes' agreed between the statutory bodies responsible for a site, and which provide the option of creating a statutory approach to site management that is tailored to local circumstances[39].

[33] Note 15 *supra* at s3(3)
[34] Note 15 *supra* at s48
[35] Case C-127/02, *Landelijke Vereniging tot Behoud van de Waddenzee, Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw, Natuurbeheer en Visserij*, 7th September 2004, www.curia.europa.eu
[36] Note 15 *supra* at s22
[37] Note 15 *supra at* s36
[38] Note 16 *supra*, 7th recital.
[39] Note 15 *supra* at s35

In many respects, SACs are the most important marine site protection mechanism in force in Wales. They provide a level of protection to most of the coastline and much of Welsh territorial waters by placing duties on the statutory bodies responsible for site management. Nevertheless, they have major shortcomings that prevent them providing the level of protection associated with an HPMR: SACs do not provide an effective mechanism for managing 3rd party activities; they can only be designated to protect specific nature conservation features that are considered important at the European level; and most importantly they are multiple use sites rather than wildlife sanctuaries. SACs cannot deliver HPMR levels of marine wildlife protection in practice.

6.2.7 Special Protection Areas

Special Protection Areas (SPAs) share the strengths and weaknesses of SACs, since they have a similar legal basis. SPAs have an additional shortcoming as well: they can only be created in order to protect birds or bird habitat. SPAs do not, therefore, meet the HPMR requirements in respect of their scope.

6.2.8 Summary

Existing wildlife site protection mechanisms have significant shortcomings that prevent them from providing marine areas in Wales with the level of protection associated with Highly Protected Marine Reserves.

Nevertheless, this analysis has revealed that each of the 'ideal' HPMR characteristics identified from HPMRs abroad can be found in existing UK wildlife designations. This shows that UK Law would be capable of creating HPMRs if the best parts of existing site protection measures were brought together in a new designation. For instance:

- Areas of Special Protection can restrict all human activity for the **purpose** of nature conservation;
- Special Areas of Conservation can **extend** to cover the entire marine realm;
- Sites of Special Scientific Interest create legal duties and offences that **influence** both regulators and site users, and address both regulated and unregulated activities;
- Marine Nature Reserves have a **scope** that can protect marine wildlife of purely domestic importance; and
- both Special Areas of Conservation and Sites of Special Scientific Interest are **practical** designations that provide protection for many sites on the basis of objective scientific information.

This assessment shows that while there is no way to create HPMRs using existing site designations today, there is no legal obstacle to creating a new HPMR designation in the future.

6.3 Coordinated sectoral management

This section considers whether the regulatory regimes applying to the management of human activities could be used to provide the level of protection for marine wildlife and habitats demanded by an HPMR.

The method used to assess site protection mechanisms in section 6.2 is applied again here: the fundamental characteristics of HPMRs (Table 1) are used as a benchmark against which the effectiveness of the regulations for managing sectoral activities can be measured.

The results of this assessment are set out in Table 4. For the purposes of brevity in this report, and to enable easy cross-referencing, the categories of activity used in Table 4 have been taken from the summary of the legal regime set out in Boyes, Warren & Elliott (2003(b)). Activities that are currently unlicensed or unregulated are considered separately in section 6.4.

6.3.1 Purpose

The 'purpose' criterion of HPMRs used in this assessment is that a management measure should ensure the conservation and recovery of biodiversity, habitats and ecosystem function. To meet this criterion, today's management regime should be capable of restricting or prohibiting an activity for these purposes wherever necessary.

It might be expected that many regulatory regimes should meet this criterion, since they have all been developed in order to manage the activities that they govern. However, none of them are felt to fully meet this standard, for two principal reasons:

- Firstly, there is no binding and unifying obligation for regulators to use their powers to restrict or permit activities solely for nature conservation purposes, either in the wider marine environment or within areas designated for wildlife conservation; and

- Secondly, sectoral management controls are often reactive rather than proactive – they respond to the harm caused by an activity rather than preventing it in the first place, and thus fail to provide the level of protection that would be expected of an HPMR.

In the wider marine environment, outside designated wildlife sites, statutory bodies share a general requirement to '*have regard to the conservation of biodiversity*[40]'. This requirement creates the facility to take wildlife interests into account when determining management, but creates no binding duties to take action either to remedy or prevent harm to wildlife. There is thus no duty for statutory bodies to create HPMRs by restricting one or more human activities in order to protect marine wildlife in the seas in general.

Within wildlife conservation sites such as SACs and SSSIs the general requirement to have regard for the conservation of biodiversity is strengthened by specific statutory duties and responsibilities that were outlined and assessed in the previous section. In brief, the purpose of these site designations is to minimise human impacts on wildlife, rather than restrict activities for the purpose of wildlife conservation and recovery. They are, as noted above, multiple-use conservation areas rather than sanctuaries, and thus cannot deliver the level of protection expected within an HPMR, either in isolation or by influencing the sectoral management regime.

Although the consultation requirements associated with permitting regulated activities within SACs and SSSIs have certain shortcomings, they do at least provide a proactive approach to management that is based upon the assessment of impacts before they occur. This is not the case

[40] See note 28 *supra*.

for those human activities managed by 'restrictive' management measures that are introduced to constrain activities that would otherwise take place unhindered. Restrictive management measures are generally reactive, being imposed on an activity after problems have been identified, rather than as part of the proactive, precautionary framework that is needed for effective HPMR protection.

In summary, although the sectoral management regimes have great potential to protect marine wildlife, generally they lack the 'purpose' and appropriate coordinating framework that would allow them to deliver the proactive protection that would be expected of an HPMR either within designated sites or in the wider marine environment. This 'purpose' is absent both from the sectoral regimes and from the duties imposed upon sectoral managers by existing marine wildlife site protection mechanisms.

6.3.2 Extent

Many of the management regimes considered here are able to match the 'Extent' criterion of HPMRs, since they apply throughout Welsh Territorial Waters. There are, however, some notable exceptions to this, such as the Environment Agency's powers, which are limited to 1 nautical mile offshore (for the Water Framework Regulations[41]) or 3 nautical miles (for regulating water quality[42]); and the power of local authorities to regulate leisure craft extends only 1000m offshore[43]. These and other anomalies would need to be addressed if sectoral controls were to be used to create HPMRs within the full extent of Territorial Waters.

While the extent of powers to regulate human activities is generally satisfactory, the extent of the duties to use these powers for marine nature conservation purposes is not. These duties are limited in their extent by the wildlife site designations associated with them: hence the requirements of SSSIs don't extend to open areas of sea; SACs only protect certain habitats and species; and MNRs place no duties whatsoever on statutory bodies.

In this respect, the limiting factor that hinders the use of the sectoral management regimes to protect marine wildlife to the level associated with an HPMR lies in the lack of a statutory duty to protect marine wildlife throughout the marine realm.

6.3.3 Influence, Scope and Practicality

The assessment of these criteria can be grouped together because they share the same strengths and weaknesses.

The strength of all of the sectoral management regimes is that they have 'influence' and are 'practical': they already deliver management through statutory mechanisms that are tailored to suit the activity concerned, and the regulators have the appropriate experience and understanding of their regulatory remit. A variety of mechanisms are used for this, ranging from areas and seasons closed to fishing through to consenting procedures for regulating coastal engineering works. While they may differ in character, each regime has a track record of directly and effectively influencing human activities. The management regimes all offer practical and influential ways of imposing restrictions on the activities that they apply to that could be able to create the level of protection associated with an HPMR.

The weakness that all of the regimes share is in their 'scope'. Once again, the absence of a clear legal or policy direction prevents the effective use these controls for the purpose of protecting the

[41] The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003
[42] Control of Pollution Act 1974; Water Resources Act 1991.
[43] Public Health Act 1961 at s76.

UK's marine biodiversity, either proactively or reactively. Without such direction, sectoral controls cannot create HPMRs either within existing wildlife sites or in the wider marine environment. Given such direction, sectoral controls have the influence to deliver practical protection for marine biodiversity.

6.3.4 Summary

Today's sectoral management regime allows the effective regulation of a wide range of human activities, but cannot currently be used to create the levels of protection associated with Highly Protected Marine Reserves, either in conjunction with site based conservation measures or in the wider marine environment. There are a three main reasons for this, which emerge as themes from this analysis:

- There is no clear and consistent policy direction that requires regulatory bodies to manage sectoral activities for the purposes of marine biodiversity conservation and recovery in the long term either within designated sites or in the wider marine environment;

- Sectoral management measures are often reactive rather than proactive, and lack the precautionary, proactive, and long term approach required to protect marine wildlife from harm; and

- The marine conservation duties that apply to sectoral managers are limited in their geographic extent and the level of site protection they create.

These shortcomings must be addressed by new legislation if HPMRs are to be created in the UK.

Table 4: Assessment of the key regulations for human activities in the marine environment against the fundamental characteristics of the ideal regulatory regime for Highly Protected Marine Reserves.

Activity	Principal Regulations	Regulator(s)	HPMR Characteristics				
			Purpose	Extent	Influence	Scope	Practical
Coastal Engineering							
	Environment Act 1995; Land Drainage Act 1991; Water Resources Act 1991; Environmental Impact Assessment (Land Drainage Improvement Works) Regulations 1999; Coast Protection Act 1949; Food & Environment Protection Act 1985.	Government, Environment Agency & Local Authorities	❖	×	✓	❖	❖
Development in the Coastal Zone							
Landward	Town & Country Planning Act 1990; Town & Country Planning (Environmental Impact Assessment) (England & Wales) Regulations 1999; Planning Policy Guidance; Local & Structure Plans	Local Authorities	❖	×	✓	❖	❖
Seaward	Planning controls (above); Food & Environment Protection Act 1985	Local Authorities; Government	❖	×	✓	❖	❖
Inputs of Contaminants							
From land	Control of Pollution Act 1974; Water Resources Act 1991; The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003	Environment Agency	❖	×	✓	❖	❖

Activity	Principal Regulations	Regulator(s)	HPMR Characteristics				
			Purpose	Extent	Influence	Scope	Practical
Disposal at Sea	Food & Environment Protection Act 1985; Pollution Prevention & Control Regulations 2000; Water Resources Act 1991; Environmental Protection Act 1990	Government & Environment Agency	❖	×	✓	❖	❖
Coastal & Marine Litter	Environmental Protection Act 1990; Merchant Shipping (Prevention of Pollution by Shipping) Regulations 1998		❖	✓	✓	❖	❖
Mariculture							
Fin fish	EIA (Fish Farming in Marine Waters) Regulations 1999; Consent from seabed owner (Crown Estate)	Government & Crown Estate	❖	✓	✓	❖	❖
Shellfish	Sea Fisheries (Shellfish) Act 1967	DEFRA	❖	×	✓	❖	❖
Military Activities							
Creation of military exercise areas	Defence Acts 1842 to 1935; Military Lands Acts 1892 to 1903;	Government	❖	✓	✓	❖	❖
Protection of areas	Protection of Military Remains Act 1986	Government	❖	✓	✓	❖	❖
Offshore Oil & Gas							
	Petroleum Act 1998; Petroleum (Production) (Seaward Areas) Regulations 1988; Prevention of Oil Pollution Act 1971; Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001	Government	❖	✓	✓	❖	❖

Activity	Principal Regulations	Regulator(s)	HPMR Characteristics				
			Purpose	Extent	Influence	Scope	Practical
Sand & Gravel Extraction							
	Coast Protection Act 1949; Marine Minerals Guidance Notes; Government View Procedure	Government	❖	✓	✓	❖	❖
Sea Fisheries							
EC law	EC CFP	EC / Government	❖	✓	✓	❖	❖
UK law	UK Fishery Acts & Statutory Instruments	MFA / SFC	❖	✓	✓	❖	❖
Welsh law	Welsh Assembly Government Statutory Instruments	MFA / SFCs	❖	✓	✓	❖	❖
Local laws	Sea Fisheries Committee Byelaws	SFC	❖	×	✓	❖	❖
Shipping & Navigation							
Shipping	Merchant Shipping and Maritime Security Act 1997	Government; various statutory bodies	❖	✓	✓	❖	❖
Harbour development	Coast Protection Act 1949; Harbour Works (Environmental Impact Assessment) Regulations 1999	Government	❖	✓	✓	❖	❖
Harbour management	Harbours Act 1964; Harbours, Docks and Piers Clauses Act 1847	Harbour Authorities	❖	×	✓	❖	❖
Submarine Cables & Pipelines							
	Coast Protection Act 1949; Crown Estate Act 1961; Pipelines Act 1962; Transport & Works Act 1992; Petroleum Act 1998; Food & Environment Protection Act 1985; Telecommunications Act 1984; Offshore Petroleum Production & Pipe-lines	Government	❖	✓	✓	❖	❖

Activity	Principal Regulations	Regulator(s)	HPMR Characteristics				
			Purpose	Extent	Influence	Scope	Practical
	(Assessment of Environmental Effects) Regulations 1999.						
Tourism & Recreation							
Commercial leisure craft	Merchant Shipping (Vessels in Commercial Use for Sport or Pleasure) Regulations 1998	Government	❖	✓	✓	❖	❖
Bathing & near-shore recreation	Countryside & Rights of Way Act 2000; Countryside Act 1968; Public Health (Amendments) Act 1907; Public Health Act 1936; Public Health Act 1961; Local Government (Miscellaneous Provisions) Act 1976	Government; Local authorities	❖	×	✓	❖	❖
Wind Power Generation							
	Electricity Act 1989; Transport & Works Act 1992; Food & Environmental Protection Act 1985; Electricity Works (Environmental Impact Assessment) Regulations 2000	Government; Crown Estate	❖	✓	✓	❖	❖

Key:

✓ Yes, the regulatory regime enables management of this activity in accordance with HPMR criteria.

× No, the regime is unable to provide the level of regulation associated with HPMRs.

❖ Opportunity may exist to use the law to meet HPMR criteria, but there is no legal obligation to act in this way.

6.4 Unregulated and unlicensed activities

While the management regimes considered in section 6.3 above addresses most of the major activities that take place in the marine environment, there are some human activities that escape the statutory management regime and which may have adverse effects on the marine environment.

A review of such activities has recently been published by DEFRA as part of the process of gathering information to inform the Marine Bill (Boyes, Burdon & Elliot (2006)). Table 5 below is reproduced from that report, and summarises the unlicensed activities that were judged to give rise to concern.

Table 5: Prioritisation of unlicensed activities in the marine environment (reproduced from Boyes, Burdon & Elliot (2006))

High Concern	Medium Concern	Low Concern
Bait digging/collection	Unlicensed dredging activities	Diving
Motorised water-based recreation	Wildlife watching (ecotourism)	Military activities (Low Frequency Sonar & explosives testing)
Unlicensed commercial fishing activities	Non-motorised water-based recreation	Hovercraft
	Land-based recreation	Education and research
	Sea angling	Low flying aircraft

It is worth noting here that the absence of a licensing regime does not mean that an activity is not regulated or capable of being regulated, either through sectoral controls or via wildlife site designations. For instance, sea anglers are required to observe many (though not all) of the fisheries regulations that apply to commercial fishermen – such as the Lundy No Take Zone considered in section 3.2 of this report, as well as many other SFC byelaws, national and EC regulations.

The DEFRA report does, however, draw attention to the problems that can be caused by activities that lie outside the formal regulatory regime. It also highlights the problems inherent with using controls such as byelaws to regulate such activities – they are retrospective and often take a long time to introduce, by which time the damage to wildlife habitats may already be done. In areas where marine conservation is a top priority, the reactive and sluggish response of certain aspects of the sectoral regime is considered unlikely to prove adequate, where a swift and proactive response is needed in order to protect wildlife.

Some broad conclusions can be drawn from the problems posed by unlicensed and unregulated activities that have wider relevance for the management of HPMRs:

- **wildlife site designations** provide a mechanism for delivering the comprehensive and proactive protection that is a vital first line of defence for marine wildlife; and

- **sectoral management measures** cannot consistently provide proactive, comprehensive controls – they provide a piecemeal, reactive management response.

These conclusions echo those of the 'No Take Zone' case studies documented in section 3 of this report.

6.5 Alternative mechanisms for site protection

This analysis has focussed on site protection & sectoral management for marine nature conservation purposes. Wildlife conservation is not, however, the only reason for regulating or prohibiting human activities in particular areas of sea or on the coast. For instance, all of the harbours in England and Wales are managed by 'harbour authorities' that have extensive powers to regulate human activities within harbour limits[44].

Among the wide range of management measures summarised in Table 4, two areas stand out as being particularly relevant to the debate about marine nature conservation. The first is the regime for protecting sites that are important in terms of their cultural and archaeological heritage; and the second is the regime for regulating human activities within areas that have military importance. The former regime provides an interesting contrast to the marine nature conservation measures currently in force; and the latter illustrates the outer limits of legal controls in the marine realm. Both are considered briefly below.

6.5.1 Archaeological & heritage sites

UK legislation protects areas that have national importance as archaeological and heritage sites. Two aspects of this regime are relevant to the marine environment: Scheduled Ancient Monuments and Protected Wrecks. Both are considered briefly here.

Scheduled Ancient Monuments (SAMs) can be designated to protect buildings, burial mounds, or other human artefacts of archaeological importance, on land and in the sea (to the limit of territorial waters). The supporting legislation for SAMs creates a summary offence of causing any harm to them, and provides for the Secretary of State to assign the power of 'guardianship' of an SAM to specified persons (usually local authorities), giving them full management control of the SAM. The SAM legislation is clearly well tailored to its purpose of protecting heritage sites, and the designation process is clearly robust – over 3,400 SAMs have been created in Wales[45].

Historically important wrecks around the UK are also well protected by the law. The Protection of Wrecks Act allows the Secretary of State to make Orders that protect wrecks from damage caused by any person, and allows the designation of an area around the wreck to provide further protection. This Act is also interesting in that it allows precautionary action to be taken – the Secretary of State can designate areas that "*may prove to be the site of a vessel lying wrecked on or in the seabed*".

Over 50 wrecks are protected around the UK coast[46]. One wreck off the north Welsh coast provides illustrates the effectiveness of the Protection of Wrecks Act. In October 1995, divers discovered the wreck of the UK Navy's first submarine, the *Resurgam*, which had sunk in 1880. By July 1996, this wreck had been designated as a protected wreck, with a 300m exclusion zone around it. The location of the wreck and its protected status are now clearly marked on

[44] Under the Harbours, Docks and Piers Clauses Act 1847.
[45] Data obtained from Cadw website (www.cadw.wales.gov.uk), November 2006
[46] Data obtained from Maritime & Coastguard Agency website (www.mcga.gov.uk), November 2006.

Admiralty charts of the area. This example also illustrates the relatively short period of time in which the designation can take place given a practical legislative approach.

6.5.2 Military sites

Various sites around the UK are subject to restrictions for military purposes, either as training areas for military exercises, or to protect military remains. The restrictions applying to such areas extend to all people, and are supported by generous powers that allow the military to acquire land, divert footpaths and prohibit public access to areas of land and sea.

The Protection of Military Remains Act is similar in many ways to the Protection of Wrecks Act considered above, but provides even more generous powers of site protection to the Secretary of State. It allows areas to be protected irrespective of whether the last known location of the vessel is known (although there is a requirement that the remains should be less than 200 years old in certain circumstances). Sites can be granted different levels of protection – '*controlled sites*' are strict exclusion zones, but '*protected places*' can be visited by recreational divers on a 'look but don't touch' basis. HM Submarine *H5* is a '*controlled site'* located in Welsh waters off Anglesey.

Although the Protection of Military Remains Act offers generous powers of site protection, it is fettered itself by the UN Convention on the Law of the Sea.[47] Thus the powers of the Secretary of State to protect military remains are constrained outside Territorial Waters, and subject to agreement with other nations in areas further offshore.

It is interesting to note that the strict controls applying to military areas have been found to have nature conservation benefits. On land, military areas are recognised as being amongst the most pristine areas of wildlife habitats (Davidson *et al.*, 1991), and the tank over-fire area at Purbeck in Dorset is has protected the marine wildlife in a voluntary Marine Nature Reserve area[48].

6.5.3 Summary

The clear, comprehensive and practical legislation that protects important wrecks and creates military sites contrasts starkly with the marine nature conservation regime considered earlier. The level of statutory protection afforded to the wreck of the Navy's first submarine cannot be matched by the protection the law gives our rarest or most fragile marine wildlife.

The site protection measures in force for conserving our archaeological heritage demonstrate the potential that UK legislation has to create Highly Protected Marine Reserves to protect our natural heritage. If human activities can be prohibited in an area to protect a historic wreck, then there can be no legal obstacle to prohibiting activities in order to protect marine wildlife.

[47] *United Nations Convention on the Law of the Sea* (Montego Bay, 10 December 1982) accessible at http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm

[48] Rendell Geotechnics (1993) at para 5.57

6.6 Conclusions

This assessment of the ability of the present legal regime to deliver the basic requirements of Highly Protected Marine Reserves leads to several clear conclusions:

- **Existing wildlife conservation designations** are unable to deliver the level of protection associated with Highly Protected Marine Reserves for Welsh Territorial Waters either alone or in combination with existing sectoral measures.

- **Sectoral management regimes** are unable to deliver the HPMR level of wildlife protection either in conjunction with designated wildlife sites or in the wider marine environment.

- **The ideal features of HPMRs** can be found in existing wildlife site protection measures in force today, but not in the form of a single, practical designation. Protection measures for other sites – such as military areas and wrecks – demonstrate that UK law is capable of creating 'no-go' areas that provide strict site protection where necessary. There is clearly no fundamental legal obstacle to creating HPMRs in the UK.

- **Only site-based protection mechanisms** can provide the vital first line of defence that an HPMR needs to prevent marine wildlife from being harmed by any activity from any sector, whether regulated or unregulated.

- **New legislation will be required** to enable the creation and management of Highly Protected Marine Reserves. This is considered further in the next section of the report.

7 OPTIONS FOR NEW LEGISLATION

7.1 Introduction

The analysis presented in the preceding sections of this report lead to the conclusion that new legislation will be needed if Highly Protected Marine Reserves are to be created in Wales. This section considers what this new legislation might be, and critically assesses the practical implications associated with the different options for creating HPMRs.

New legislation might support the creation of HPMRs in Wales in three ways:

- **Highly Protected Marine Reserves** – these would be a new bespoke wildlife site designation specifically and solely used to create areas where human activity is prohibited in order to protect marine wildlife;

- **Flexible Marine Protected Areas** – these would match the DEFRA proposal for a single designation that could be adjusted to provide varying levels of protection depending on local management issues; and

- **Improved Sectoral Management** – which would provide an additional level of management to underpin the controls established by new or existing conservation designations so that HPMRs can be created.

Whilst a bespoke HPMR designation could be effective on its own, the other options are mutually dependent. For instance, the 'Flexible MPA' option would have to be accompanied by improvements to the sectoral management regime in order to succeed, and improvements to the sectoral management regime alone are unlikely to be successful without a new site designation to provide a proactive first line of site defence. However, the options are treated separately here in order to simplify their assessment.

Each option is assessed using the HPMR benchmarks that were identified earlier, which enables a rapid comparison of their relative strengths and weaknesses. The practical and legal issues associated with delivering each option are then briefly considered before concluding which option (or combination of options) might provide the best mechanism for enabling the creation of HPMRs in Wales.

7.2 Assessment of options

Table 5 summarises the results of this assessment. Three main points are immediately apparent:

- **Bespoke HPMR legislation** is the option most likely to provide rigorous protection for marine biodiversity for the long term and offers the simplest approach to site designation and management; however, it is also the option that is likely to provoke the most opposition from stakeholders and could therefore be the most difficult to implement.

- **Flexible MPAs** might not provide the same strict protection for marine biodiversity as a bespoke HPMR mechanism, and are likely to pose greater challenges for site designation and management. However, their flexibility may offer a pragmatic approach to management that would be more acceptable to stakeholders.

Table 6: Assessment of possible delivery options for Highly Protected Marine Reserves using new legislation. HPMRs could only be created by measures that satisfy all of the criteria in the relevant column (characteristics are summarised here, full definitions are set out in section 4 of this report.)

HPMR Characteristic	**HPMR Delivery Option**		
	Highly Protected Marine Reserve	**Flexible Marine Protected Area**	**Improved Sectoral Management**
Purpose: Conservation of Biodiversity.	✓ This would be the sole purpose of site designation	❖ HPMR status would not be conferred on all MPAs	❖ Sector managers may have to balance conservation of biodiversity against other socio-economic factors.
Extent: The entire marine realm* (plus adjacent land if necessary)	✓ Purpose made HPMR legislation could include the appropriate extent.	✓ Purpose made MPA legislation could include the appropriate extent.	❖ Administrative boundaries of sectoral managers would have to be altered (see section 6.3.2)
Influence: Legal power to influence management for biodiversity conservation.	✓ Purpose made legislation could create appropriate legal obligations for managers.	❖ Purpose made legislation could create appropriate legal obligations, but these may be tempered by wider requirements of MPA.	❖ Purpose made legislation could create appropriate obligations for sector managers, but these may have to be balanced against other socio-economic factors.
Scope: Protect species and habitats important to UK's marine biodiversity.	✓ Purpose made legislation could embrace all important habitats and species.	✓ Purpose made legislation could embrace all important habitats and species.	✓ Purpose made legislation could embrace all important habitats and species.
Practicality Effective and efficient protection for a network of sites.	❖ Simple approach – but opposition to strict protection may create problems with non-compliance.	❖ Flexible approach might not provide adequate protection in some areas – but versatility may enable creation of a network of MPAs broader than just strict HPMRs.	❖ Legal and administrative harmonisation issues could make this the most complex option to legislate for and implement.

Key

✓ Yes, HPMR option can meet this criterion.

× No, HPMR option cannot meet this criterion.

❖ Possible for the option to meet the criterion, providing that legislation is worded appropriately.

* For the purposes of this report, these limits are the boundary of Welsh Territorial Waters, lying within a line drawn 12 nautical miles offshore of baselines.

- **The sectoral approach** cannot guarantee proactive protection for marine wildlife, and it relies heavily on the coordination of different statutory bodies with different powers and remits. This approach cannot create HPMRs by itself, but could be updated to provide better support to marine conservation designations and integration with new initiatives such as Marine Spatial Planning.

A more detailed assessment of each delivery option is set out below.

7.2.1 Highly Protected Marine Reserves

New legislation that created 'bespoke HPMRs' that embrace all of the ideal characteristics (Purpose, Extent, Scope, Influence and Practicality) identified in this report is the most straightforward way to deliver the highest level of site protection for marine wildlife. This option is administratively and legally simpler than the alternatives, and offers the guarantee of strict, proactive, protection for marine wildlife within designated sites.

The potential conservation benefits of 'bespoke HPMRs' would only be fully realised if they could be selected and designated on objective scientific grounds, independent of socio-economic interests and local opposition. An objective site selection process like this has been the key to the success of the EC 'Habitats' and 'Birds' Directives,[49] and would also be vital for HPMRs.

The main disadvantage of this option lies in the possibility of difficulties in gaining support from key stakeholders whose compliance would be necessary for the HPMR to work in practice. The creation of HPMRs is likely to generate a great deal of concern among certain stakeholders, demonstrated in the 'No Take Zone' case studies considered in section 3 of this report (and reported in other cases (Jones, 2001; Kritzer, 2004)). This option would need to be supported with a strong policy to designate sites despite local opposition, or a situation could arise that mirrored that of Marine Nature Reserves in the UK.

Taking these factors into account, this option could be favoured if marine conservation in Wales required the strict protection of just a few sites; and if the supporting legislation and policy framework allowed these sites to be designated and managed in spite of a level of stakeholder resistance.

7.2.2 Flexible Marine Protected Areas

The recent Government consultation document on the Marine Bill proposed a new 'flexible MPA system' as an option for protecting marine wildlife[50]. The flexibility of this option and the lack of detail currently available complicates its assessment. Nevertheless, the 'Flexible MPA' concept could, in certain circumstances, create areas with objectives for long term ecosystem recovery and thus require a very strict level of protection akin to that associated with a Highly Protected Marine Reserve.

If the 'Flexible MPA' was supported with the necessary legal and policy framework to allow the complete restriction of harmful human activities within certain areas according to objective scientific criteria, then these sites could meet the HPMR benchmarks. Agreeing on HPMR areas within Flexible MPAs is likely to pose problems similar to those encountered when creating 'No Take Zones', and would therefore require clear policy direction and the provision of additional resources to allow for liaison between regulators and stakeholders if it is to succeed. If the legal, policy and financial support are lacking, then this 'flexible MPA' system might not deliver significant improvements to the present nature conservation regime.

[49] See notes 16 and 17 *supra*.
[50] DEFRA Marine Bill consultation document at para 10.66

Apart from uncertainty about the level of protection it would provide, the Flexible MPA option offers two significant advantages over the other options considered here. The first advantage is that it remains a simpler option than improved sectoral management, both legally and administratively. The second advantage is that the flexibility of the approach is may generate less stakeholder opposition than the 'bespoke HPMR' option.

7.2.3 Improved sectoral management

The shortcomings of the present sectoral management regime as a mechanism for supporting improved marine nature conservation were considered in section 6.3 and summarised in Table 5 above.

Sectoral management measures have inherent weaknesses when assessed against HPMR criteria. They generally have to take socio-economic factors into account, and cannot provide the comprehensive and proactive prohibition of human activities required by HPMRs. The sectoral regime is also administratively complicated and piecemeal.

Some of these shortcomings could be addressed by new legislation that harmonised regulations, gave a priority to marine wildlife conservation, and simplified administrative arrangements, as well as addressing recognised gaps in regulations and licensing. However, the reactive nature of parts of the sectoral management regime will remain a fundamental problem for marine conservation, unless marine activities are all managed through 'permissive' management regimes that would prohibit an activity unless it is permitted by a regulatory body. This approach already applies to many commercial activities taking place at sea (such as oil and gas licensing and windfarm construction), but does not apply to many leisure activities or to certain public rights, such as the right of innocent passage. In areas that require the strict protection associated with HPMRs, this style of sectoral management is essential.

Given its fundamental shortcoming, sectoral management is likely to have a supporting rather than a leading role to play in HPMR management. Nevertheless, changes could be made to the sectoral regime to ensure it is integrated closely with both new and existing site conservation mechanisms, for instance by creating new statutory duties for regulators to protect such sites. In addition, Marine Spatial Planning has the potential to influence the way the sectoral regime is used within specified areas.

7.3 Summary

Each delivery option considered here has certain strengths and weaknesses:

- **'Bespoke' Highly Protected Marine Reserves** are the simplest option for protecting marine wildlife, but their effectiveness could be compromised by opposition from stakeholders.

- **Flexible Marine Protected Areas** offer a compromise solution that could minimise stakeholder opposition while improving marine nature conservation, and which could provide HPMR levels of protection where needed provided there was adequate political support for these.

- **Improved Sectoral Management** will be vital for ensuring the success of either 'bespoke HPMRs' or 'Flexible MPAs'. The site designation could provide a proactive first line of defence for wildlife, with the sectoral regime acting to underpin and refine this protection.

8 CONCLUSIONS

Three main conclusions that can be drawn from this assessment of practical experiences, existing legislation and future management options are:

- **The present legal regime** for managing human activities and protecting marine wildlife is not capable of delivering the level of marine nature conservation associated with Highly Protected Marine Reserves (HPMRs). This conclusion is supported by the analysis of current legislation in section 6 of the report and the case studies examined in section 3.

- **New legislation** will be required to create HPMRs, either through 'Flexible Marine Protected Areas' which could be adjusted to provide varying levels of site protection; or a 'Highly Protected Marine Reserve' that would create sites where all human activities would be restricted. The sectoral management regime should be harmonised, simplified, and integrated with these new site designations.

- **Wildlife site designations** are the only practical mechanism available for providing proactive marine conservation, and they should form a comprehensive first line of defence, with the sectoral regime providing a mechanism to underpin and refine this protection.

- **The ideal solution for Wales**, where most of the coast and much of the territorial waters are already subject to lower levels of wildlife site protection, may be to identify and protect a limited number of nationally important marine areas using a new, 'bespoke' HPMR wildlife site designation, allied to an improved sectoral management regime.

- **In reaching a conclusion about the most appropriate option, Government will need to take into account the various practical issues including costs, likely time scales and effectiveness of these different options for the creation of HPMRs in Welsh waters.**

9 ACKNOWLEDGEMENTS

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Dr Kirsty Dernie and Dr John Hamer from CCW have provided valuable input into the drafting and structure of this report, as has Mr Dave Crowley.

Any errors concerning the accurate interpretation of the law or the faithful reporting of case studies are the fault of the author.

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APPENDIX 1: NATURAL ENGLAND BYELAW FOR LUNDY MARINE NATURE RESERVE

The following byelaws, authorised by The Lundy (Bristol Channel) Marine Nature Reserve Order 1986, have been made by the Nature Conservancy Council under section 37 of the Wildlife and Countryside Act 1981 and all other powers enabling it in that behalf in relation to Lundy Marine Nature Reserve and they have effect by virtue of section 36 (3) (b) of the said Act as from their making.

1. In these byelaws

"the Council" means the Nature Conservancy Council:

"the reserve" means the area comprising the land and waters covering it known as Lundy Marine Nature Reserve which is described in Schedule 1 to these byelaws.

2. Subject to the provisions of byelaw 3, in relation to any part of the reserve no person shall, without the written permission of the Council issued for that purpose or without a reasonable excuse, intentionally or recklessly -

(a) kill, take, destroy, molest or disturb any animal or plant in that part;

(b) do anything which interferes with the sea bed in, that part;

(c) damage or disturb any object in that part;

(d) deposit rubbish in that part.

3. (1) Nothing in these byelaws shall prohibit or restrict the exercise of any right of passage by a vessel.

(2) Nothing in these byelaws shall interfere with the exercise of any functions of a relevant authority, any functions conferred by or under any enactment, (whenever passed) or any right of any person (whenever vested) including in particular but without prejudice to the generality of the foregoing any estate, right, power, privilege, authority, or exemption of the Crown, or any right of fishery.

(3) Nothing in these byelaws shall make unlawful -

(a) anything done for the purpose of securing the safety of any vessel, or of preventing damage to any vessel or cargo, or of saving life;

(b) the discharge of any substance from a vessel; or

(c) anything done more than 30 metres below the sea bed.

4. A written permission issued by the Council for the purposes of these byelaws may -

(a) contain such terms and conditions as the Council think fit;

(b) be varied or revoked by the Council after not less, than seven days written notice which shall, in the case of notice varying the permission, specify the variation or variations.

5. No person acting in pursuance of a written permission issued for the purposes of these byelaws shall, without, reasonable excuse, refuse or fail to produce that permission when requested to do so by an officer or other employee of the Council, or by any other person authorised by the Council in that behalf.

6. Any person who contravenes byelaws 2 or 5 shall be guilty of an offence and liable on summary conviction to a fine not exceeding £1,000.

SCHEDULE: DESCRIPTION OF THE RESERVE

The reserve is the area designated as a marine nature reserve under S36 of the Wildlife and Countryside Act 1981 by The Lundy (Bristol Channel) Marine Nature Reserve Order 1986. Its description is as follows:

The Reserve includes that volume of sea and area of sea bed around the island of Lundy fully contained within a rectangle with co-ordinates 51° 09'N, 4° 38'W; 51° 13'N, 4° 38'W; 51° 13'N, 4° 42'W; and 51° 09'N, 4° 42'W and extends shoreward to include all land covered continuously or intermittently by tidal waters or parts of the sea as delineated by Highest Astronomical Tide (HAT).

Note: For the guidance of the public and for identification purposes only, the extent of the Reserve is shown on the map deposited with these byelaws.

Given under the Common Seal of the Nature Conservancy Council this twenty-fifth day of March one thousand nine hundred and eighty seven.

APPENDIX 2: DEVON SEA FISHERIES COMMITTEE BYELAWS APPLYING SPECIFICALLY TO LUNDY MARINE NATURE RESERVE

The text of the byelaws made by the Devon Sea Fisheries Committee to regulate fishing within the Lundy Marine Nature Reserve is reproduced below (Byelaws 13, 14, 15 and 28). Other SFC byelaws also apply within this area, and within the rest of the SFC's District. The full text of all of these byelaws can be obtained from Devon Sea Fisheries Committee (Office No. 9, Fish Market, The Quay, Brixham, Devon, TQ5 8AW, 01803-854648).

Byelaw 13: Prohibition of spear Fishing in Lundy Marine Nature Reserve

No person shall use in fishing for sea fish or shellfish any harpoon spear or like instrument within the area designated by the Secretary of State for the Environment, by Order under Section 36 of the Wildlife and Countryside act 1981, as the Lundy Island Marine Nature Reserve, that is, the area enclosed by the following limits:-

From a point	51° 09'N	004° 42'W	thence due North
to a point	51° 13'N	004° 42'W	thence due East
to a point	51° 13'N	004° 38'W	thence due South
to a point	51° 09'N	004° 38'W	thence due West
to a point	51° 09'N	004° 42'W.	

Byelaw 14: Trawling and Netting Prohibition – part of Lundy Island Marine Nature Reserve

Within an area shown on the map annexed hereto and enclosed by the following limits marked thereon:-

From a point A	51°09'00"N	004°41'30"W	thence a line due North
To point B	51°10'00"N	004°41'30"W	thence a line in a North/Easterly direction
To point C	51°10'30"N	004°41'00"W	thence a line due North
To point D	51°11'30"N	004°41'00"W	thence a line in a North/Westerly direction
To point E	51°12'00"N	004°41'30"W	thence a line due North
To point F	51°12'30"N	004°41'30"W	thence a line due East
To point G	51°12'30"N	004°39'48"W	thence a line due South
To point H	51°11'48"N	004°39'48"W	thence a line in a South/South Easterly direction
To point J	51°11'18"N	004°39'18"W	thence a line in a East/South Easterly direction
To point K	51°11'12"N	004°38'30"W	thence a line due South
To point L	51°10'30"N	004°38'30"W	thence a line due East
To point M	51°10'30"N	004°38'00"W	thence a line due South
To point N	51°09'30"N	004°38'00"W	thence a line in a South Westerly direction
To point P	51°09'00"N	004°39'00"W	thence a line due West
To point A			

No person shall fish for sea fish or shellfish:-

a) by trawling

b) by using any kind of tangle net or moored or fixed net except in accordance with the written authority of the Sea Fisheries Committee signed by their Clerk and in accordance with the conditions contained in that authority.

Byelaw 15: Potting Restrictions – Lundy Island Marine Nature Reserve

No person shall use pots or traps or other like instruments for the purpose of capturing or storing sea fish or shellfish within 100 metres of low water mark around the Knoll Pins as defined by mean low water spring tides.

Byelaw 28: Lundy No Take Zone

The Devon Sea Fisheries Committee by virtue of the powers vested in them by Section 5(a) of the Sea Fisheries Regulation Act 1966 hereby make the following byelaw:-

For marine environmental purposes no person shall remove any sea fish from within the following area:-

From North East Point	Lat:- 51° 12.04N	Long 004° 40.12W thence due east
to a point	Lat:- 51° 12.04N	Long 004° 39.00W thence due south
to a point	Lat:- 51° 10.07N	Long 004° 39.00W thence due west
to a point	Lat:- 51° 10.07N	Long 004° 39.60W known as Sugar Loaf

Thence in a northerly direction along the east coast of Lundy Island following the contour of the highest astronomical tide to the North East Point.

This area shall be known as the Lundy Island "No Take Zone".

APPENDIX 3: CCW BYELAWS FOR SKOMER MARINE NATURE RESERVE

The Countryside Council for Wales with the consent of the Secretary of State for Wales, in exercise of the powers conferred by section 37 of the Wildlife and Countryside Act 1981 and of all other powers enabling it in that behalf hereby makes the following byelaws in relation to Skomer Marine Nature Reserve.

The Skomer Marine Nature Reserve boundaries:

The **shoreward boundary** is a line defined by the Highest Astronomical Tide, except within Martin's Haven, from the eastern headland of the small bay (marked Hopgang on larger Ordnance Survey maps) at Longitude 5°13' West (SM77920891) on the north coast of the Marloes Peninsula; around the peninsula to the southeast extremity of Horse Neck (SM77230750), and around the coasts of the islands of Skomer, Middleholm and Gateholm. Within Martin's Haven the shore boundary descends from Highest Astronomical Tide to Mid Tide Level between the east side of the Haven at SM76090917 and the "Landing Place" at SM76030917.

The **seaward boundary** is defined by a line from Highest Astronomical Tide at the southeast extremity of Horse Neck (SM77230750) on a true bearing of 135° to Mean Low Water of Ordinary tides (MLWOT),thence at MLWOT along the eastern shore, and to the southern extremity of Gateholm Island (SM767607000),thence on a true bearing of 278° for a distance of 2.25 nautical miles (4.17 km) to a position in Latitude 51°43.32' North, 5°17.51' West, 0.275 nautical miles (500m) due south (true) of MLWOT at the southwestern extremity of the Mewstone, thence 0.275 nautical miles (500m) offshore from MLWOT around the western shores of Skomer to a position in Latitude 51°44.96' North, 5°18.08' West, 0.2 nautical miles (366m) due north (true) of the northwest extremity of the Garland Stone, thence on a true bearing of 098° for a distance of 3.18 nautical miles (5.89 km) to a position in Latitude 51°44.5' North, 5°13' West, thence due south (true) for a distance of 0.3 nautical miles (550m) to the point of commencement of the shoreward boundary at Highest Astronomical Tide on the mainland coast.

Part 1

1. In these byelaws -

"the Council" means the CCW,

"the reserve" means the area comprising the land and waters covering it known as Skomer Marine Nature Reserve which is described above to these byelaws.

"special area" means any part of the reserve specified as a special area in Part 2 of these byelaws during such period as may be so specified.

2. Subject to the provisions of byelaw 4 in relation to any part of the reserve no person shall, without a permit from the Council issued for that purpose under byelaw 5 or without a reasonable excuse, intentionally or recklessly -

(a) kill, take, destroy, molest or disturb any animal or plant in that part,

(b) do anything which interferes with the sea bed in that part, or damage or disturb any object in that part,

(d) deposit rubbish in that part.

3. Subject to the provisions of byelaw 4, in relation to Special Area A described in Part 2 attached hereto no person shall without a permit from the Council issued for that purpose under byelaw 5 or without a reasonable excuse intentionally or recklessly cause or permit any boat to move at a speed in excess of 5 knots within that area during the period from 1st March to 31st November in any year, both dates inclusive.

4.(i) Nothing in these byelaws shall interfere with the exercise of any functions of a relevant authority, any functions conferred by or under an enactment (whenever passed) or any right of any person (whenever vested) including in particular but without prejudice to the generality of the foregoing, any estate, right, power, privilege, authority or exemption of the Crown, or any right of fishery.

(ii) Nothing in these byelaws shall make unlawful -

a) anything done for the purpose of securing the safety of any vessel or person, or of preventing damage to any vessel or person, or preventing damage to any vessel of cargo, or saving life;

b) the discharge of any substance from a vessel; or anything done more than 30 metres below the seabed.

5. The Council may issue permits authorising the doing of anything which would otherwise be unlawful under the bylaws on the terms and subject to the conditions specified in Part 3.

6. No person acting in pursuance of a permit from the Council issued for that purpose under byelaw 5 shall without reasonable excuse refuse or fail to produce that permission when requested to do so by an officer or other employee of the Council, or by any other person authorised by the Council in that behalf.

7. Any person who contravened any of these byelaws shall by guilty of an offence and liable on summary convictions to a fine not exceeding £1,000.

Part 2 Special Area A

Within 100 metres of the shore as defined by Highest Astronomical Tide except adjacent to the shore of Jack Sound [defined as between the Anvil (SM 75440883) and Wooltack Point (SM 75530948) on the Deer Park and Between SM 74700890 and SM 74700928 on the east side of Middleholm (Midland Isle)] and Little Sound [as defined between SM 74700890 and SM 74700928 on the west side of Middleholm (Midland Isle) and between SM 74330903 and SM 74390915 on the eastern tip of Skomer Island)] and in Martin's Haven. A Preseli Pembrokeshire District Council byelaw limits speed to 8 knots in Martin's Haven.

Part 3 Terms and conditions for permits

1. This permit is not transferable and may be revoked by the CCW after 7 days' notice if they have reasonable grounds for considering that the terms and conditions of this permit have not been complied with.

2. This permit should be carried whenever the permitted activities are being pursued.

3. The holder of the permit shall comply with the byelaws of Skomer Marine Nature Reserve.

4. Subject to the conditions of paragraph 7 the holder of this permit shall act in such a manner as to minimise disturbance to the wildlife in the reserve.

5. Subject to the provisions of paragraph 7 the holder of this permit is given authorization to carry out the activities specified in the permit.

6. The holder of this permit shall comply with all requests of the Warden of the reserve or his assistants to comply with the terms and conditions of this permit.

7. Permit holders who are so authorised may only carry out essential sampling and cause only such disturbance to such animals and plants and cause only such disturbance and damage to the sea bed and objects in that part as is necessary for the purpose of scientific research or for the purposes of an education project.

8. The holder of this permit shall forward a report of the activities approved by this permit as soon as possible after the expiry of the permit to the CCW at the address shown on the permit.

9. The CCW accept no responsibility for any loss, injury, accident or damage to any persons or property however caused in exercise of this permit.

APPENDIX 4: SOUTH WALES SEA FISHERIES COMMITTEE BYELAWS APPLYING SPECIFICALLY TO SKOMER MARINE NATURE RESERVE

The text of two byelaws made by the South Wales Sea Fisheries Committee is reproduced below. These byelaws are limited in their extent to the boundary of the Skomer Marine Nature Reserve. Other SWSFC byelaws also apply within this area, and within the rest of the SFC's District. The full text of all of these byelaws can be found at www.swsfc.org.uk.

Byelaw 30: Prohibited area for use of dredges and beam trawls.

No person shall use in fishing for sea fish any fishing dredge or any beam trawl within the area detailed below:-

from the northern point of Gateholm due north to the mainland,

from the southern point of Gateholm a straight line in a direction of 278° (T) to position 2¾ cables due south (T) of the western extremity of the Mewstone,

thence 2¾ cables off the mainland shore of Skomer around the west coast of the Island to a position 2 cables due north (T) of the Garland Stone,

thence a straight line in a direction of 098° (T) to a position 51°44.50'N, 05° 13.00'W,

thence due south (T) to the mainland coast.

Byelaw 30A: Prohibited area for scallop fishing - Skomer Island

No person shall fish for take or land any scallop of the species *Pecten maximus* or of the species *Chlamys opercularis* from the area detailed below:-

from the northern point of Gateholm due north to the mainland from the southern point of Gateholm a straight line in a direction 278° (T) to a position 2¾ cables due south (T) of the western extremity of the Mewstone, thence 2¾ cables off the mainland shore of Skomer around the west coast of the Island to position 2 cables due north (T) of the Garland Stone, thence a straight line in a direction of 098° (T) to a position 51°44.50N, 05° 13.00'W, thence due south (T) to the mainland coast.

APPENDIX 5: SECTION 28P, WILDLIFE & COUNTRYSIDE ACT 1981

The text below is a consolidated version of section 28P of the Wildlife & Countryside Act 1981, incorporating the amendments made by the Natural Environment & Rural Communities Act 2006 (in italics).

Offences. 28P. - (1) A person who, without reasonable excuse, contravenes section 28E(1) is guilty of an offence and is liable on summary conviction to a fine not exceeding £20,000 or on conviction on indictment to a fine.

(2) A section 28G authority which, in the exercise of its functions, carries out an operation which damages any of the flora, fauna or geological or physiographical features by reason of which a site of special scientific interest is of special interest-

(a) without first complying with section 28H(1), or

(b) (if it has complied with section 28H(1)) without first complying with section 28H(4)(a),

is, unless there was a reasonable excuse for carrying out the operation without complying, guilty of an offence and is liable on summary conviction to a fine not exceeding £20,000 or on conviction on indictment to a fine.

(3) A section 28G authority acting in the exercise of its functions which, having complied with section 28H(1), fails without reasonable excuse to comply with section 28H(4)(b) is guilty of an offence and is liable on summary conviction to a fine not exceeding £20,000 or on conviction on indictment to a fine.

(4) For the purposes of subsections (1), (2) and (3), it is a reasonable excuse in any event for a person to carry out an operation (or to fail to comply with a requirement to send a notice about it) if-

(a) subject to subsection (5), the operation in question was authorised by a planning permission granted on an application under Part III of the Town and Country Planning Act 1990 or permitted by a section 28G authority which has acted in accordance with section 28I; or

(b) the operation in question was an emergency operation particulars of which (including details of the emergency) were notified to the Nature Conservancy Council as soon as practicable after the commencement of the operation.

(5) If an operation needs both a planning permission and the permission of a section 28G authority, subsection (4)(a) does not provide reasonable excuse unless both have been obtained.

(5A) A section 28G authority which, in the exercise of its functions, permits the carrying out of an operation which damages any of the flora, fauna or geological or physiographical features by reason of which a site of special scientific interest is of special interest—

(a) without first complying with section 28I(2), or

(b) where relevant, without first complying with section 28I(4) or(6),

is, unless there was a reasonable excuse for permitting the carrying out of the operation without complying, guilty of an offence and is liable on summary conviction to a fine not exceeding £20,000 or on conviction on indictment to a fine.

(5B) For the purposes of subsection (5A), it is a reasonable excuse in any event for a section 28G authority to permit the carrying out of an operation without first complying with section 28I(2), (4) or (6) if the operation in question was an emergency operation particulars of which (including details of the emergency) were notified to Natural England as soon as practicable after the permission was given.

(6) A person (other than a section 28G authority acting in the exercise of its functions) who without reasonable excuse-

(a) intentionally or recklessly destroys or damages any of the flora, fauna, or geological or physiographical features by reason of which land is of special interest, or intentionally or recklessly disturbs any of those fauna, and

(b) knew that what he destroyed, damaged or disturbed was within a site of special scientific interest,

is guilty of an offence and is liable on summary conviction to a fine not exceeding £20,000 or on conviction on indictment to a fine.

(6A) A person (other than a section 28G authority acting in the exercise of its functions) who without reasonable excuse—

(a) intentionally or recklessly destroys or damages any of the flora, fauna, or geological or physiographical features by reason of which a site of special scientific interest is of special interest, or

(b) intentionally or recklessly disturbs any of those fauna,

is guilty of an offence and is liable on summary conviction to a fine not exceeding level 4 on the standard scale.

(7) It is a reasonable excuse in any event for a person to do what is mentioned in subsection (6) *or (6A)* if-

(a) paragraph (a) or (b) of subsection (4) is satisfied in relation to what was done (reading references there to an operation as references to the destruction, damage or disturbance referred to in subsection (6) *or (6A)*), and

(b) where appropriate, subsection (5) is also satisfied, reading the reference there to an operation in the same way.

(8) A person who without reasonable excuse fails to comply with a requirement of a management notice is guilty of an offence and is liable on summary conviction to a fine not exceeding the statutory maximum or on conviction on indictment to a fine.

(9) In determining the amount of any fine to be imposed on a person convicted of an offence under this section, the court shall in particular have regard to any financial benefit which has accrued or appears likely to accrue to him in consequence of the offence.

(10) Proceedings in England and Wales for an offence under this section shall not, without the consent of the Director of Public Prosecutions, be taken by a person other than the Council.

(11) In this section, "a section 28G authority" means an authority to which section 28G applies.