

MPA Management in Wales 1:

Overview of current MPA management in Wales and a summary of new MPA management tools.

M. Hatton-Ellis, L. Kay, K. Lindenbaum, G. Wyn, M. Lewis, M. Camplin, A. Bunker, A. Winterton, S. Howard, G. Barter & J. Jones.

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GLOSSARY

AD	Actions Database
CCW	Countryside Council for Wales
Defra	Department for the Environment, Fisheries & Rural Affairs
EMS	European Marine Site
EU	European Union
GEMS	Group of Welsh European Marine Site Officers
GES	Good Environmental Status
JNCC	Joint Nature Conservation Committee
LDP	Local Development Plan
MA	Management Authority ¹
MACA	Marine and Coastal Access Act (2009)
MCZ	Marine Conservation Zone
MMO	Marine Management Organisation
MNR	Marine Nature Reserve
MPA	Marine Protected Area
MS	Management Scheme
MPS	Marine Policy Statement
MSP	Marine Spatial Planning
MSFD	Marine Strategy Framework Directive
NCO	Nature Conservation Orders
N2K	Natura 2000 site (European Special Areas of Conservation and Special Protection Areas)
NE	Natural England
NNR	National Nature Reserve
OSPAR	Oslo and Paris Convention for the protection of the maritime environment of the North-East Atlantic
PAF	Priority Action Framework
PCNPA	Pembrokeshire Coast National Park Authority
PDO	Potentially Damaging Operation
PLAS	Pen Llyn a'r Sarnau (SAC)
PMC	Pembrokeshire Marine Code
RA	Relevant Authority
RAG	Relevant Authority Group
Ramsar	Wetlands of international importance designated under the Ramsar Convention
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation (EU Habitats and Species Directive)
SMS	Site Management Statement
SNCB	Statutory Nature Conservation Bodies (e.g. CCW or NE)
SPA	Special Protection Area (EU Birds Directive)
SSSI	Site of Special Scientific Interest
UK	United Kingdom
VMNR	Voluntary Marine Nature Reserve
VMCA	Voluntary Marine Conservation Area
WEL	Wales Environment Link
WG	Welsh Government

¹ Within this document the term Management Authorities (MAs) is used to refer collectively to all organisations with statutory responsibilities in relation to any type of MPA, or who are significant seabed or coastal land owners. This includes: Relevant and Competent Authorities under the Habitats Regulations 2010 and Public authorities under the Marine Strategy Regulations 2010, Marine and Coastal Access Act 2009 and Natural Environment and Rural Communities Act 2006 (CROW Act).

CRYNODEB GWEITHREDOL

Mae amgylchedd y môr yn cyfateb i fwy na hanner arwynebedd Cymru. Dyma adnodd amgylcheddol, cymdeithasol ac economaidd hollbwysig. Mae Ardaloedd Morol dan Warchodaeth yn cyfrannu llawer at sicrhau cydnerthedd a chynaliadwyedd ecosystemau'r môr yn yr hirdymor.

Yng Nghymru ac o amgylch y DU mae llawer o waith ar y gweill i greu rhwydwaith cydlynol o Ardaloedd Morol dan Warchodaeth. Er mwyn sicrhau y gall y rhwydwaith hwn o safleoedd fod o fudd i amgylchedd y môr yn y modd y bwriadwyd, rhaid i'r safleoedd gael eu rheoli'n dda a'u rheoli gyda'i gilydd mewn modd cydlynol yn hytrach nag fel casgliad o safleoedd unigol.

Nod cyffredinol yr adroddiad yw adolygu'r trefniadau presennol sydd ar waith ar gyfer rheoli Ardaloedd Morol dan Warchodaeth yng Nghymru – ble maent i'w cael, faint ohonynt sydd i'w cael, a phwy sy'n eu rheoli. Astudiaeth ddesg ffeithiol sy'n crynhoi'r hyn a ddigwyddir yng Nghymru heddiw yw hon, a chynhwysir peth gwybodaeth am oblygiadau Deddf y Môr i reoli Ardaloedd Morol dan Warchodaeth. Yr arolwg hwn yw'r cyntaf o blith dau adroddiad a luniwyd gan Gyngor Cefn Gwlad Cymru parthed rheoli Ardaloedd Morol dan Warchodaeth. Mae'r ail adroddiad yn pwysu a mesur y dulliau a ddefnyddir ar hyn o bryd i reoli Ardaloedd Morol dan Warchodaeth yng Nghymru trwy gyfrwng tri asesiad a gwerthusiad mewnol. Mae'r gwaith gwerthuso hwn yn tynnu sylw at nifer o faterion yn ymwneud â rheoli Ardaloedd Morol dan Warchodaeth yng Nghymru ac yn cynnig ffyrdd posibl o ymdrin â nhw.

Nod y ddau adroddiad yw darganfod i ba raddau y mae'r trefniadau presennol ar gyfer rheoli Ardaloedd Morol dan Warchodaeth yng Nghymru yn gweithio. Nod arall yw dod o hyd i ffyrdd o wella'r dulliau rheoli hyn a darganfod sut y gellir rheoli'r holl Ardaloedd Morol dan Warchodaeth yng Nghymru – fel rhan o rwydwaith ehangach y DU – mewn modd cydlynol, addas i'r diben a chost-effeithiol.

EXECUTIVE SUMMARY

The marine environment makes up over half of the area of Wales, and provides a vital environmental, social and economic resource. Marine Protected Areas (MPAs) make a valuable contribution to ensuring the long term sustainability and resilience of marine ecosystems.

There is a great deal of work underway in Wales and around the UK to secure a coherent network of MPAs. For this network of sites to deliver the intended benefits to the marine environment, they must be well managed and managed together in a coherent way rather than as a collection of individual sites.

The overall aim of this report is to review the current arrangements for MPA management in Wales, where, how many and who manages them. This is a factual desktop study which summarises what is happening in Wales today with some information on the implication of the Marine Act for future management. This review is the first of two reports produced by CCW on MPA management. The second report evaluates the current management of Welsh MPAs through three assessments and an internal evaluation. This evaluation highlights a number of issues in MPA management in Wales and gives a series of possible ways forward for tackling them².

The aim of both these reports is to determine how well the current arrangements for MPA management in Wales are working and to identify ways in which MPA management can be improved, and how all Welsh MPAs, as part of a wider UK MPA network, could be managed in a coherent, fit for purpose and cost effective way.

² Hatton-Ellis *et al.*, (2012)

1. INTRODUCTION

1.1 Purpose of this report

The marine environment makes up over half of the area of Wales, and provides a vital environmental, social and economic resource. Welsh seas support a wide array of habitats that sustain a wealth of marine life, creating rich and varied marine ecosystems. Society is dependent upon a range of services provided by Welsh marine ecosystems and this dependence on the natural environment is being increasingly recognised and used to inform marine management. Equally it is also recognised that the sea is not a limitless resource and that it is in the interests of society as a whole to take responsibility to ensure that Welsh seas do not become impoverished and degraded.

Management of Welsh seas requires a variety of different approaches. Marine Protected Areas (MPAs) have been shown to make a valuable contribution to ensure the long term sustainability and resilience of marine ecosystems. In Wales, just over 35% of waters are already designated as MPAs.

There is currently a great deal of work underway in Wales, the UK and beyond to secure an ecologically coherent network of well-managed MPAs. In autumn 2009, the Welsh Government (WG) published a draft MPA Strategy³ that aims to “contribute to the development of an ecologically coherent UK network of well managed MPAs. The network will conserve rare, threatened, and representative species and habitats to enhance biodiversity and ecosystems.” The strategy acknowledges the importance of MPA management as well as the need to improve management:

“In order to develop a coherent and well managed network of MPAs in Wales that contributes to the wider UK network, we consider that the following are required:

- Improved coordination of management of MPAs to deliver site-level and network-level objectives as well as broader biodiversity targets.
- Better use of existing and new tools to deliver effective management of MPAs.”

Welsh Government asked CCW for advice on what is required to ensure effective management of Welsh MPAs. To inform this advice, CCW undertook a review of MPA management in Wales which resulted in the production of two reports as the main outputs as well as separate advice to WG in the form of high level recommendations. This report, the first of the two reports, is an overview of current MPA management in Wales with consideration of new tools which could be used to manage sites in the future. These include new tools created under the Marine and Coastal Access Act⁴, including Nature Conservation Orders (NCOs) and the new marine planning system. The report is a desktop study which collated information from many sources and covers in detail the:

- current suite of MPAs in Wales
- development of MPAs in Wales
- current condition of Welsh MPAs
- current management arrangements for MPAs in Wales

³ Welsh Assembly Government (2009).

⁴ Marine and Coastal Access Act (2009). (<http://www.legislation.gov.uk/ukpga/2009/23/contents>)

- new tools and systems available for MPA management

The second report is an assessment of current management in Wales which highlights the issues identified through an assessment process and makes suggestions for possible ways forward.

1.2 Policy context for designation and management of MPAs

A number of policy drivers and statutory commitments exist for the development, and effective management of MPA networks. These are summarised in Table 1.

Table 1: International, European and UK commitments to develop a network of marine protected areas

Source	Commitment / target
Marine and Coastal Access Act (2009)	Designate Marine Conservation Zones (MCZs) to contribute to the formation of a network together with SACs, SPAs, Ramsar sites and SSSIs; report on progress by December 2012 . (<u>statutory duty</u>)
Convention on Biological Diversity (CBD) and World Summit on Sustainable Development (2002)	Establish, by 2012 , an effectively managed, representative, global system of marine protected areas ... comprising both multiple use areas and strictly protected areas. EU Habitats and Species Directive 1992 introduced in response to CBD to establish a European network of protected areas of which marine protected areas are a part
Oslo & Paris Commission (OSPAR) (1992)	Establish an ecologically coherent network of well-managed Marine Protected Areas by 2010 (now amended) ⁵ .
EU Marine Strategy Directive (2008)	Establish spatial protection measures that contribute to a coherent and representative network of marine protected areas, adequately covering the diversity of the constituent ecosystems. Report on progress by 2013 . (<u>statutory duty</u>). EU Habitats and Species Directive seen as a key delivery mechanism for this.
UK Marine Stewardship Report (2002)	Identify and designate relevant areas of the UK's seas as areas of marine protection belonging to a network of well-managed sites by 2010 .

Whilst existing policy drivers refer to the creation of an ecologically coherent network, MPAs throughout UK waters have not been designated as part of a single policy to create a coherent network within the UK, but rather as individual designations in response to the aims of the relevant enabling legislation. Most recently, the Marine and Coastal Access Act places a duty on appropriate authorities to designate Marine Conservation Zones (MCZs) in order to create a network together with other MPAs (marine Special Areas of Conservation (SACs), marine Special Protection Areas (SPAs), and marine and inter-tidal components of Ramsar sites and Sites of Special Scientific Interest (SSSIs).

⁵ OSPAR Commission Recommendation 2012/2 2.1 : “ The purpose of this Recommendation is to continue the establishment of the OSPAR Network of Marine Protected Areas and to ensure that:

a. by 2012 it is ecologically coherent, includes sites representative of all biogeographic regions in the OSPAR maritime area, and is consistent with the CBD target for effectively conserved marine and coastal ecological regions;
b. by 2016 it is well managed (i.e. coherent management measures have been set up and are being implemented for such MPAs that have been designated up to 2010).”

The network must fulfil the following conditions:

- It must contribute to the conservation and improvement of the marine environment in the UK.
- It must represent the range of features present in the UK marine environment.
- Where considered necessary, more than one site should be designated for the conservation of certain features.

Under this Act, Welsh ministers are under a duty to report to the National Assembly on the extent to which the objective of creating a network has been achieved, and any further steps needed to contribute to the achievement of that objective. The first report is due before, on or by the 31st December 2012, and then at 6 yearly intervals following the first report. Amongst other specific requirements, the report must contain information on the extent to which conservation objectives for each MCZ have been achieved and any further steps needed to achieve conservation objectives. This creates a statutory driver that links directly to ensuring effective management (to achieve conservation objectives) of sites as part of an MPA network.

1.3 The wider context for designation and management of MPAs

MPAs are one of many possible approaches to deliver environmental protection and sustainable use of the marine environment and so decisions regarding the management of the suite of Welsh MPAs should take into account the wider context of marine management, in particular marine planning and licensing. The development of marine planning and new licensing systems in Wales are likely to result in the development of new structures and approaches; MPA management needs to be integrated and aligned with any such framework.

1.4 Ecosystem based management and the Living Wales Programme.

In recent years there has been increasing interest in and emphasis on an ecosystem-based approach to management of the marine environment. This is in response to the increasing diversity and intensity of ocean uses and associated impacts, and the recognition that we need to more carefully and explicitly include human dimensions in our efforts to understand and manage the marine environment.

Ecosystem-based management focuses on integrating the management of natural resources and human activities in a way that promotes sustainable use in an equitable way. The focus is, therefore, both on ecosystem health and human well-being⁶.

In Wales, the new Living Wales Programme has at its heart an ecosystem-based approach to management of the marine environment, and supporting the delivery of ecosystem services⁷.

At a European level, the benefits of and need for an ecosystem-based approach to management is recognised explicitly in the Marine Strategy Framework Directive. The Directive requires member states to take an ecosystem-based approach to marine management and delivery of the Directive and this requirement has been followed through in the UK Marine Strategy Regulations (2010)⁸. In the UK the new marine planning system (established by the Marine and Coastal Access Act, 2009), together with the Marine Strategies required under the EU Marine Strategy Framework Directive, provide the framework for addressing ecosystem-based management.

⁶ Halpern *et al.*, 2010

⁷ <http://wales.gov.uk/topics/environmentcountryside/consmanagement/nef/?lang=en>

⁸ <http://www.legislation.gov.uk/ukxi/2010/1627/contents/made>

Marine protected areas can play a key role in achieving the broader goals of ecosystem-based management. Although MPA management is not synonymous with ecosystem-based management it is important to note that a well-planned and well-managed suite of MPAs can make important contributions to this approach, for example, MPAs can:

- Contribute to reducing negative impacts to marine ecosystems.
- Improve the provision of key supporting and regulating services (including productivity, flood defence and nutrient cycling), as well as provisioning and cultural services.
- Conserve and potentially enhance marine biodiversity.
- Protect sensitive species and habitats, including larval sources and genetic diversity.
- Contribute to improving the resilience of the marine environment to absorb and respond to current and future pressures – enabling sustainable use of marine resources.
- Contain different levels of MPA protection, which in management terms could be translated as different levels of stringency of management, which should help integrate MPA management with other human use and human well-being considerations, i.e. contribute to ecosystem-based management.

As MPA planning processes move towards better inclusion of socio-economic concerns and focus on larger scales (such as the inclusion of socio-economic considerations in the selection of highly protected MCZs in Welsh waters) they are contributing more directly to an ecosystem-based management approach.

Any new legislation needs to enable effective MPA management, as new legislation is written (e.g. Sustainable Development Bill (Autumn 2013), Environment Bill (2015), Planning Bill (2016)) it is important that our suite of MPAs in Wales are taken into consideration. This will only happen if MPAs are seen as important, valued and an important part of the wider ecosystem.

The benefits and effectiveness of MPAs and MPA management should therefore be evaluated in the context of delivery of ecosystem services and contribution to ecosystem-based management, rather than being only seen as a separate conservation and/or fisheries management tool.

1.5 Future opportunities for MPA management

Under an EU initiative, member states are expected to prepare Prioritised Action Frameworks (PAF), which will identify the objectives and management priorities for Natura 2000 sites (N2K) and identify which EU funding measures could be used to address the management. Integration of funding of Natura 2000 with other funding streams is central to the PAFs, which will identify the potential role of each EU fund to the national Natura 2000 network for the next EU Financial Perspective. Prioritisation of actions across the Welsh suite of MPAs is essential and something that is needs to happen across all designations not just Natura sites. Better coordination of management across the Welsh suite of MPAs will enable prioritisation of issues that are important on a cross-Wales basis rather than dealing with them on a site by site basis.

CCW is working on a project to develop a Wales-wide N2K management and restoration programme (funding applied for under LIFE⁺), which will include actions, implementation and financing elements. There are considerable opportunities for synergy between the Welsh Living Wales Programme (see Section 6), the potential LIFE⁺ project and the PAFs (e.g. the role of N2K in delivery of ecosystem services, ecological connectivity, resilience against climate change) and considerable loss of opportunity if appropriate links are not made.

Viewed in this way, it is clear that a well-managed suite of MPAs is critical to, and should be seen as an integral part of, an effective marine planning system in Wales and the UK, aiming to deliver an ecosystem-based approach to management. Furthermore, delivery of a well-managed suite of MPAs in Wales is also central to supporting delivery of the Living Wales Programme approach in the marine environment.

2. MPAS IN WALES – MPA DESIGNATIONS AND THEIR DEVELOPMENT

The aim of this section is to provide a brief overview of the existing suite of Welsh marine protected areas (MPAs). The suite of MPAs in Wales is currently made up of 125 separate MPAs comprising differing numbers of sites under the following designations:

- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Site of Special Scientific Interest (SSSI)
- Ramsar (Wetlands of international importance designated under the Ramsar Convention)
- Marine Nature Reserve (MNR)

The number and coverage of our Welsh MPAs is given in Section 3.

2.1 MPAs in territorial waters.

Voluntary protection

Prior to 1981 the nature conservation interests of fully marine areas could only be protected in the UK on a voluntary basis. Intertidal areas could be included within Sites of Special Scientific Interest although there was not much use of the SSSI designation to protect seashore habitats and species prior to the late 1990's. Although Skomer Island became a National Nature Reserve (NNR) in 1959, the seas around Skomer only became protected by a voluntary agreement in 1976 with the formation of a Management Group and the formulation of a Management Plan. The limitations of the voluntary approach were soon realised as there were no statutory powers available to prevent damaging activities and developments. There are currently no voluntary Marine Conservation Areas (VMCA) or voluntary Marine Nature Reserves (VMNR) in Wales although there are some in English waters (5 VMCA and 3 VMNR⁹).

Marine Nature Reserves

The Wildlife & Countryside Act (1981)¹⁰ included provisions to designate statutory marine nature reserves (MNRs) out to 12 nautical miles for the purposes of conserving marine flora and fauna, and providing opportunities for study and research. Their designation required the agreement of statutory and voluntary bodies and interest groups and none of the byelaws imposed to protect MNRs could interfere with the functions of any other relevant authorities or any right of any person (section 36(6)). Skomer was put forward as a MNR in 1987 and was designated in 1990. Another site in Wales, the Menai Strait was also proposed as an MNR but this was not designated due to local objections.

The 1981 Wildlife and Countryside Act gave the Statutory Nature Conservation Agency (originally NCC in Act, later changed to CCW in Wales), with the consent of the Secretary of State, powers to make byelaws for the “protection of any area designated as a marine nature reserve” (Section 37(1)). However, as noted above, these powers were very limited. Only three sites have been designated in the UK as MNRs under this Act: Lundy (designated in 1986), Skomer (designated in 1990) and Strangford Lough (designated in 1995). A further seven sites were pursued but these were unsuccessful as they were blocked by stakeholders maintaining

⁹ <http://www.ukmpas.org/mapper.php>

¹⁰ Wildlife and Countryside Act (1981) as amended.

objections to them. Following the introduction of the Marine and Coastal Access Act (2009) MNRs in England and Wales were replaced by Marine Conservation Zones. Therefore, Strangford Lough remains the only Marine Nature Reserve in UK waters, although the official designation of Skomer as an MCZ is awaiting the outcome of the MCZ Project Wales¹¹.

Sites of Special Scientific Interest

Sites of Special Scientific Interest (SSSI) are a national conservation designation also established under the Wildlife and Countryside Act (1981) and designed to safeguard the variety of the UK's fauna, flora, geology and physiographical features. Many SSSIs in Wales are home to internationally important habitats, species and geological features, and many overlap with European and international designations (SAC, SPA and Ramsar). There are more than 1,000 SSSIs in Wales, and of these there are 103 SSSI that contain marine features and form part of the suite of MPAs in Wales. They cover an area of 421 km² (2.64% of the Welsh sea area). The majority of these are in the intertidal zone on shores and estuaries but also included are some sub-tidal channels within estuaries. The landward boundaries of intertidal SSSI frequently extend above mean high water mark and many include terrestrial components as part of the designated site, but seawards SSSIs are not normally notified beyond lowest astronomical tide. SSSIs are essentially a terrestrial designation that can be used in the intertidal environment. The coastal and intertidal nature of SSSIs is illustrated by the fact that over 75% of the Welsh coastline is protected under SSSI, although many of these sites were originally selected for their terrestrial or bird features rather than their marine features. Guidance from the Joint Nature Conservation Committee (JNCC) on marine SSSI features was only published in 1996, after many of Wales' SSSI were designated.

In 1996 to 2005 a full survey of the Welsh intertidal area was carried out¹², this survey was the first of its kind to map a whole country's entire intertidal zone in a consistent manner, thus providing a single coherent dataset. This survey also identified many new marine features worthy of protection as part of the suite of Welsh SSSIs.

The Natura 2000 series

Legislation from the EU, in the form of two legal instruments, requires countries to designate sites that will ultimately lead to a coherent European ecological network of protected areas known as Natura 2000:

1. The Wild Birds Directive¹³ allows for the establishment of Special Protected Areas (SPAs) for listed bird species (29 of which are seabirds) and for significant populations of migratory birds (many of which are marine and coastal).
2. The Habitats Directive¹⁴ allows for the establishment of Sites of Community Importance (SCIs) that were subsequently designated as Special Areas of Conservation (SACs). These provide protection for listed habitat types (9 of which are marine) and species (including 18 marine species). Habitat types are listed in Annex I of the Directive, and species are listed in Annex II.

¹¹<http://wales.gov.uk/topics/environmentcountryside/consmanagement/marinefisheries/conservation/protected/conservationzones/project/?lang=en>

¹² Brazier *et al.*, 2007

¹³ Council Directive 2009/147/EEC formerly 79/409/EEC on the conservation of wild birds

¹⁴ Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora,

Natura 2000 sites are selected on the basis of their importance for species and habitats according to criteria in both Directives. Article 3 of the Habitats Directive requires the setting up of coherent ecological networks of SACs and this, with the SPAs classified under the Birds Directive, will form the Natura 2000 network.

The term 'European Marine Site' (EMS) includes both SACs and SPAs that are predominantly marine.

Marine Special Protection Areas

Special Protection Areas (SPAs) were introduced in 1979 under the Wild Bird Directive; this was transposed into UK law under the Conservation Regulations 1994¹⁵.

The UK currently has 107 SPAs with marine components, but only three of these are entirely marine, two of which occur in Welsh waters; Bae Caerfyrddin/Carmarthen Bay SPA was classified in 2003 for its non-breeding aggregations of common scoter, and Liverpool Bay SPA was classified in 2010 for common scoter and red throated diver. Liverpool Bay is the largest SPA in Wales; it is a cross-border site with 753.4km² of the site in Welsh waters. In Wales there are six marine SPAs which cover 8.1% of Welsh territorial waters. These SPAs were designated at various dates between 1985 and 2010. See Annex 1.1 for a list of Welsh SPAs and their corresponding features.

Work is currently underway by the JNCC and the four country nature conservation agencies to identify further SPAs with marine components.

Marine Special Areas of Conservation

Special Areas of Conservation (SACs) are required under the Habitats Directive. This Directive requires EC Member States to introduce a range of measures for the protection of habitats and species listed in its Annexes. SACs with marine components are defined as those that contain qualifying marine habitats or species.

The UK has 96 marine SACs covering 4.8% of the UK territorial seas, 84 of these SACs are in inshore waters, 12 in offshore waters.

There are currently 11 SACs with marine components in Wales covering 31.4% of the Welsh sea area. Nine of the 11 Welsh SACs were designated on the 13th December 2004, the last two (Dee & Severn SACs) were designated on the 10th September 2009. See Annex 1.1 for a list of Welsh SACs and their corresponding features.

On the land and in the sea out to 12 nautical miles the identification of SACs is the responsibility of the country conservation agencies (CCW, NE, SNH and NIEA). Beyond 12 nautical miles JNCC is responsible for the identification of SACs.

There are four marine habitats and four marine species present in UK waters away from the coast for which the European Commission has stated that additional SACs must be designated. JNCC and the country conservation agencies are currently working to identify additional sites¹⁶.

¹⁵ The Conservation (Natural Habitats, &c) Regulations 1994 (as amended), now replaced by the Conservation of Habitats & Species Regulation 2010.

¹⁶ Taken from JNCC websites (<http://jncc.defra.gov.uk/page-1445>), accessed 15/12/2011.

Ramsar Sites

Ramsar sites are designated under the Convention on Wetlands of International Importance, called the Ramsar Convention. The Ramsar Convention is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.

Sites proposed for selection are advised by the UK statutory nature conservation agencies, or the relevant administration in the case of Overseas Territories and Crown Dependencies, coordinated through JNCC¹⁷. In selecting sites, the relevant authorities are guided by the site selection criteria set out in the Convention. The UK also has a national Ramsar Committee composed of experts who provide further advice.

In the UK, the first Ramsar sites were designated in 1976. The initial emphasis was on selecting sites of importance to waterbirds within the UK, and consequently many Ramsar sites are also Special Protection Areas (SPAs) classified under the Birds Directive. Both within the UK and overseas, non-bird features are increasingly taken into account, both in the selection of new sites and when reviewing existing sites. In Wales there are four Ramsar sites that are included as MPAs in Wales, all are contained within other EMS, details can be found in Annex 1.1.

Marine Conservation Zones

Marine Conservation Zones (MCZs) are a type of MPA designation created by the Marine and Coastal Access Act (2009). MCZs protect nationally important marine wildlife, habitats, geology and geomorphology. In English inshore waters and English, Welsh and Northern Irish offshore waters they have been identified by four regional Marine Conservation Zone Projects. These sites are being considered by NE and Defra and they hope to consult on the sites by the end of 2012 with a first tranche of sites being designated in 2013. The Marine Conservation Zone Project Wales was set up with the intention to designate a small number of highly protected MCZs¹⁸ in order to contribute to ecosystem recovery, resilience and understanding of a more naturally functioning marine environment. The first consultation exercise on potential sites commenced in April 2012 and closed in July 2012. Following the close of this consultation Welsh Government will be considering all the responses received before deciding on the next steps, including views on whether the highly protected approach, as currently proposed, is appropriate. More information on the MCZ designation is provided in chapter 6.

2.2 Offshore UK MPAs

Although not part of the Welsh MPA site series, offshore MPAs do form part of the wider UK MPA network to which Welsh MPAs contribute.

Offshore SACs and SPAs

The Offshore Marine Conservation Regulations 2007 apply to the offshore area beyond 12 nautical miles from the UK coast. These Regulations enable the designation and protection, as SACs and SPAs, of areas that host certain important habitats and species in the offshore marine

¹⁷ Taken from the JNCC website (<http://jncc.defra.gov.uk/page-161>) accessed 16/03/2012.

¹⁸ A highly protected site is where all depositional and extractive activity is excluded, as is any other damaging or disturbing activity

area. JNCC are the statutory conservation body with responsibility for designating offshore SACs and SPAs. The number of offshore SACs is currently twelve however there is an ongoing process of SAC identification in the UK offshore region. JNCC has identified Areas of Search where additional SACs may be sited, following further survey work or analysis of data gathered through survey already conducted.

Offshore MCZs and Scottish MPAs

Identification of MCZs in English, Welsh and Northern Irish offshore waters (beyond 12 nautical miles) was co-ordinated by the four regional MCZ projects in order to contribute to regional and UK MCZ networks.

Two projects were adjacent to Welsh waters:

- The Irish Sea Conservation Zones Project - this covered 40% of the Irish Sea, including waters beyond the Welsh 12 nm territorial limit to the north of Wales, and to the West of Wales between Welsh and Irish territorial waters. It did not include any of Welsh territorial waters.
- Finding Sanctuary - this covered the south east of English waters, including the Bristol Channel and western approaches adjacent to the 12 nm limit of Welsh territorial waters.

Both of the above projects identified sites adjacent to Welsh waters.

Scotland has a Marine (Scotland) Act giving Scottish ministers the power to designate Marine Protected Areas in Scottish inshore waters (out to 12 nm), and the Marine and Coastal Access Act can be used to designate MPAs for Scottish offshore waters (beyond 12 nm). Marine Scotland, SNH and JNCC therefore work together to identify MPAs for Scottish offshore and inshore waters.

Northern Ireland also has a Marine Bill currently going through their legislature which will allow Northern Ireland ministers to designate marine protected areas in Northern Ireland territorial waters.

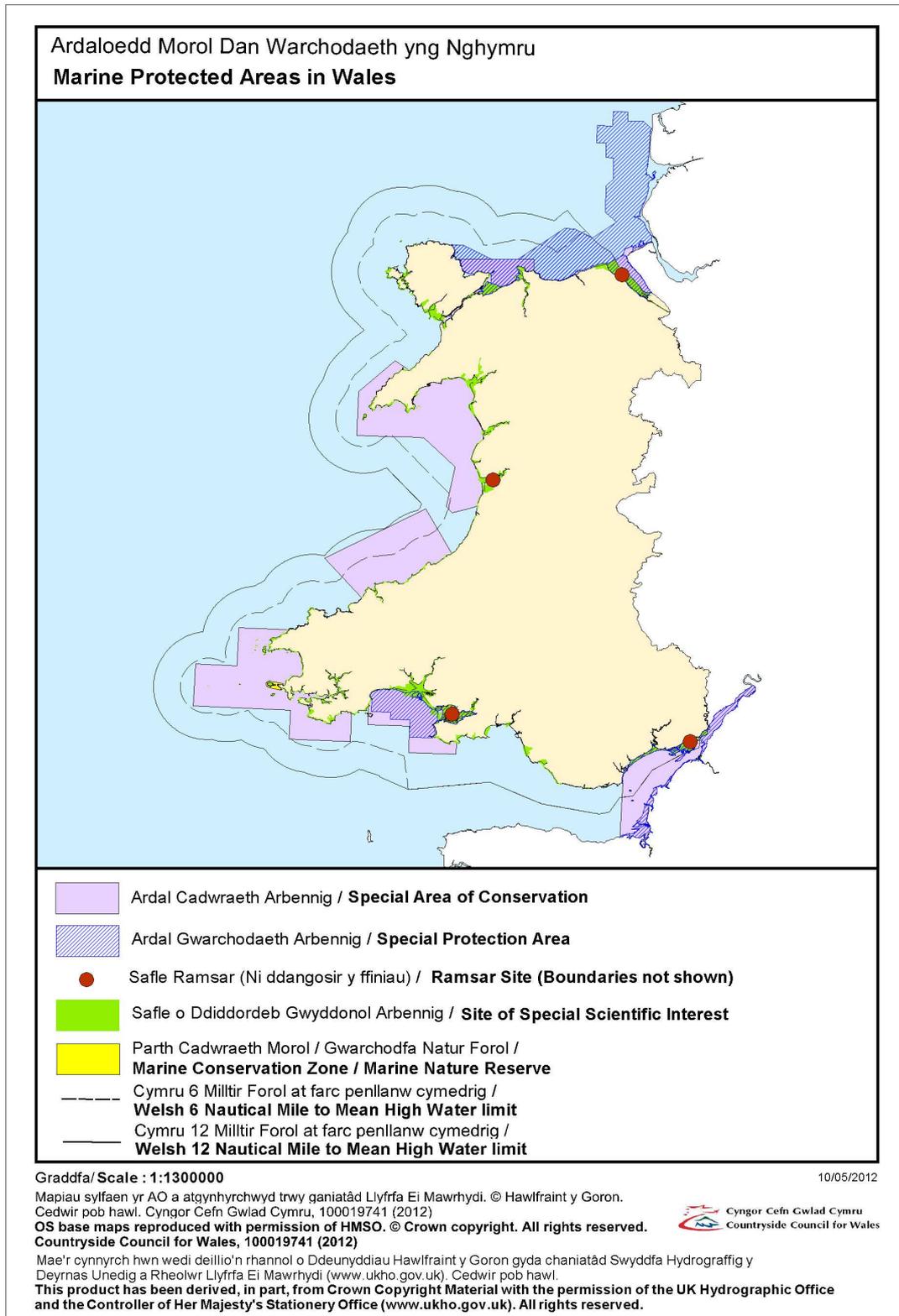
3. THE CURRENT SUITE OF WELSH MPAs

Summary information on Welsh MPAs is detailed in Box 1 and a map of Welsh MPAs is provided in Figure 1. Information on how summary statistics have been derived is supplied in Annex 1 (Box 1.1). Although each MPA exists as an independently qualifying site, in practice many of the sites are overlapping¹⁹ reflecting the differing objectives and frameworks governing the site selection processes for the different designations. A list of all EMS in Wales, their area and features is supplied in Annex 1.1. A list of all SSSIs considered to be MPAs in Wales is supplied in Annex 1.2 and a list of SSSI marine features currently found on Welsh sites is supplied in Annex 1.3.

Box 1: Summary of coverage by MPAs in Welsh Seas (MHW to 12 nm)	
Number of sites	
SAC	= 11
SPA	= 6
SSSI	= 103
Ramsar	= 4
MNR	= 1*
Total number of MPAs	= 125
Area of Welsh seas under designation	
Welsh seas (MHW – 12nm limit)	=15,942 km ²
SAC	= 5,007 km ²
SPA	= 1,314 km ²
SSSI	= 421 km ²
Ramsar	= 240 km ²
MNR	= 13 km ²
Total MPA network	= 5,592 km²
Percentage of Welsh seas under designation	
SAC	= 31.41%
SPA	= 8.08%
SSSI	= 2.64%
Ramsar	= 1.21%
MNR	= 0.08%
Total MPA network	= 35.08%
*MNR will become an MCZ as part of the MCZ Project Wales	

¹⁹ The figures in Box 1 have taken these overlapping sites into account.

Figure 1: Map of Marine Protected Areas in Wales²⁰.



²⁰ Summary statistics and maps are based on Cartesian measurements, full details in Jones *et al.*, (in prep).

4. THE CURRENT CONDITION OF WELSH MPAs

The aim of this section is to provide an overview of the current condition of the existing suite of MPAs in Wales.

The different types of MPA in Wales have been selected in response to the aims of the legislation under which they have been established. Collectively these sites contain a wide variety of differing marine habitats and species. Although designated under varying pieces of legislation, the overall intention is to maintain, restore and/or enhance the biological/ecological interests of each site including the supporting biological, chemical and physical structures and processes.

The condition and future prospects of any MPA can be described (i) in terms of the condition of the habitats and species it supports and whether these are as they should be; and (ii) in terms of the security of management of a site, i.e. whether those habitats and species are under threat from poorly managed or unregulated activities or whether they are considered to be adequately safeguarded and therefore under secure management.

Monitoring, surveillance and surveys, as well as other non-systematic methods (e.g. observations during site visits) are used to gather information about the state of habitats and species on MPAs as well as on the activities that may affect them. The different data-collecting activities often referred to collectively as “monitoring” are detailed in Box 2.

Box 2: Definitions of monitoring activities

Monitoring is a focused activity that aims to collect just enough information to draw conclusions about feature condition and to inform management.

Surveillance is concerned with the detection of change and the description of trends, and generally involves collection of more data at repeated intervals. It is a less focused activity than monitoring.

Survey is a one-off exercise to describe the quantity and distribution of a resource, and has a lesser requirement for repeatability than the two preceding activities.

In addition to these, we could add other activities such as experimental management and research.

4.1 Favourable Conservation Status

The aim of the Habitats Directive is the maintenance, or, where appropriate the restoration of the ‘favourable conservation status’ of habitats and species features for which SACs and SPAs are designated (see Annex 1.1 for a list of N2K sites and their features).

In the broadest terms, ‘favourable conservation status’ (FCS) means a feature is in a favourable condition and all the things needed to keep it in favourable condition (e.g. management measures and legislation) are in place for the foreseeable future. CCW considers that the concept of favourable conservation status provides a practical and legally robust basis for conservation objectives for Natura 2000 and Ramsar sites. The definition of FCS from the Habitats Regulations (2010) for habitats and species are as follows:

Habitats

“The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when:

- its natural range and areas it covers, within that range, are stable or increasing
- the specific structure and functions that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future
- the conservation status of its typical species is favourable

Species

The conservation status of a species is the sum of the influences acting on the species that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as ‘favourable’ when:

- population dynamics data on the species indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis”

4.2 Monitoring of MPAs

Monitoring, surveillance and survey are used to proactively gather information about the state of habitats and species on MPAs and also on the activities that may affect them. Without this work we are unable to determine whether important habitats and species are in favourable condition and whether management is working.

Monitoring is also required by CCW to deliver information against a number of drivers/obligations under:

- the Habitats Directive, the Birds Directive and the Ramsar Convention
- the UK Biodiversity Action Plan
- the Water Framework Directive (e.g. reporting on ‘protected areas’)
- the Common Standards Monitoring Agreement between UK agencies and JNCC
- reporting against the Wales Environment Strategy and other State of the Environment reporting such as the 2010 ‘Charting Progress2’ under the UK Marine Monitoring & Assessment Strategy

Changes to the Habitats Regulations (England & Wales) in 2010 imposed a new duty on CCW to, among other things, assess how and to what extent surveillance of the conservation status of each relevant habitat and species needs to be carried out, having regard to:

- (i) whether a habitat or species is a priority natural habitat type or priority species
- (ii) the conservation status of the habitat or species

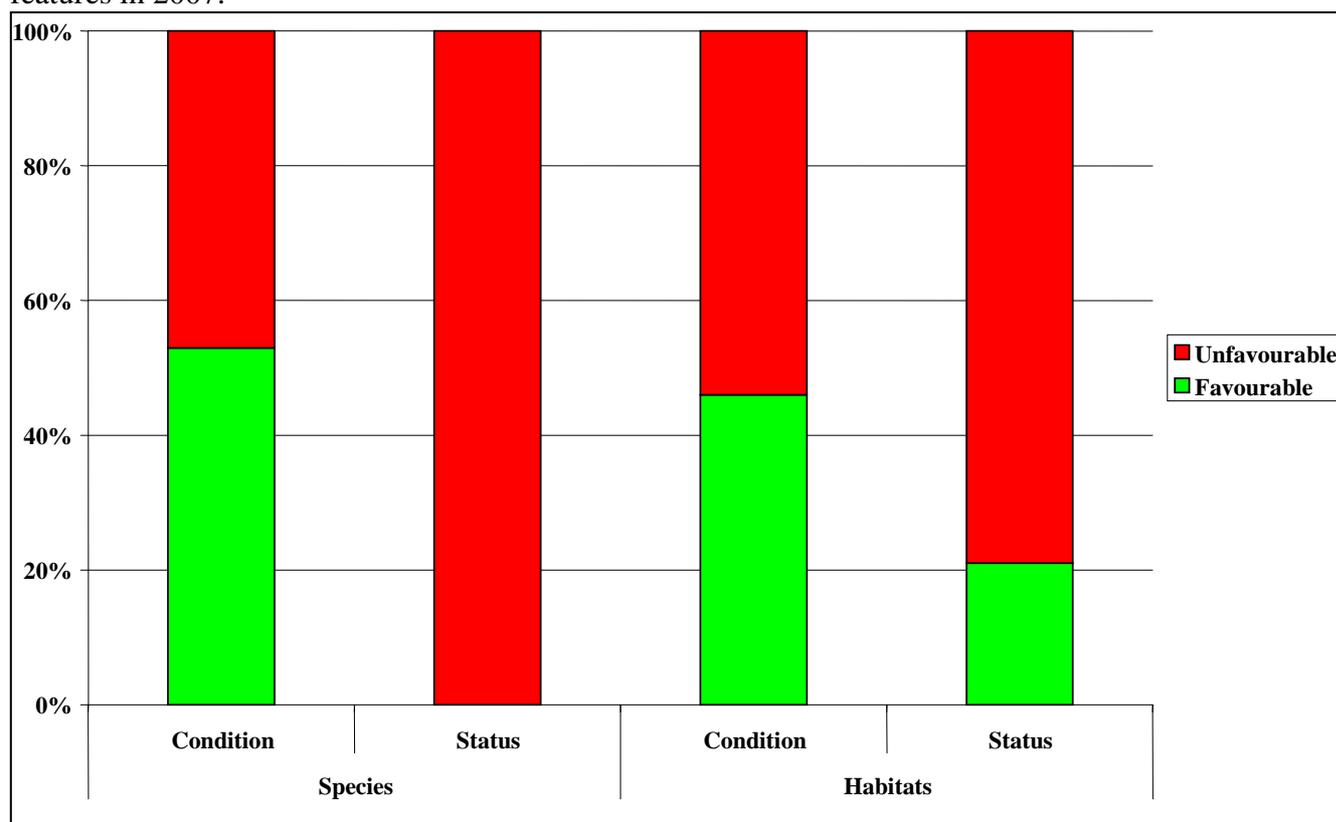
CCW would then need to advise the Welsh Ministers as to the need for such surveillance. The impact of this change to marine work in CCW is being assessed.

Unless monitoring is conducted to an appropriate scientific standard there is little credibility in assertions about site condition and our ability to affect the management actions of partners is compromised. CCW employs Common Standards Monitoring (CSM) techniques across the EMS series in Wales in order to ensure inter-comparability of monitoring results and to facilitate condition reporting. CSM is a nationally accepted approach that employs standardised methods to assess the condition of habitat, species and geological features using a set of agreed criteria.

4.2.1 European Marine Sites

Member states are required to report to Europe every 6 years on the conservation status of features on all EMSs; the most recent reporting round was in 2007. Information about the conservation status of Welsh EMS features is provided to JNCC who report to Europe on behalf of the UK. Figure 2 details the situation regarding the condition and conservation status of marine site features (habitats and species) on marine SACs and SPAs in Wales in 2007. Overall, of the marine species and habitats that were assessed 53% of species features and 46% of habitat features were reported as being in favourable condition. Of the habitats and species that were assessed for status 100% of species and 79% of habitats were reported as being in unfavourable status (meaning there were not under secure management to maintain or improve their condition).

Figure 2: Condition and conservation status of Marine SAC and SPAs habitat and species features in 2007.



4.2.2 Skomer Marine Nature Reserve (MNR)

The conservation status of MNR features is assessed according to performance indicators set out in the site management plan. MNR features differ from those in EMS in that they are selected and assessed in a similar way to those on National Nature Reserves and they are at a different

scale (except for species such as the Atlantic grey seal). MNR monitoring data and conservation status assessments are also used to help determine the condition and conservation status of EMS features for the surrounding Pembrokeshire Marine SAC of which the Skomer MNR forms part. See Table 2 for a list of MNR features and their current condition, overall 35% of features are in favourable condition, 10% in unfavourable condition (declining) and 55% unknown.

Table 2: List of features of Skomer MNR and their condition.

Favourable	Unfavourable	Unknown
1. Infaunal sediment communities	1. <i>Pentapora foliacea</i> populations	1. Rocky reef faunal communities
2. Epifaunal mixed sediment communities	2. <i>Lusitanian anthozoan</i> populations	2. Algal communities associated with major sublittoral habitat
3. <i>Zostera marina</i> population		3. Littoral communities on bedrock shores
4. Atlantic grey seal population		4. Littoral communities on boulder shores
5. Sponge species at or near limit of distribution and/or nationally rare or scarce Sponge assemblages		5. Rock-pool communities
6. Nudibranch species assemblages		6. Nationally rare and scarce hydroid populations
7. <i>Pecten maximus</i> population		7. <i>Echinus esculentus</i> population
		8. Algal species of recognised importance
		9. Territorial fish assemblages
		10. Harbour porpoise population
		11. Algal and invertebrate communities associated with <i>Zostera marina</i> population

4.2.3 Sites of Special Scientific Interest (SSSI)

Where SSSIs overlap with EMSs and the same marine habitats and/or species are encompassed by both designations, information about the marine features is collected through a single programme of monitoring. However, there are many SSSI with marine features out-with EMS and monitoring the condition and conservation status of all of these in Wales is a challenge. Currently CCW monitors marine SSSI features as far as resourcing allows, employing a risk based approach in prioritising monitoring activities and working collaboratively with other organisations undertaking marine monitoring work (such as the Environment Agency) in order to maximise monitoring capacity.

In 2006 a ‘Rapid Review’ was undertaken to assess the condition of Welsh SSSIs. This process used the best available information for features, combined with CCW officers’ professional judgement. The review data has not been broken down for all marine SSSI features, however intertidal habitat was reported on. Overall, 47% of SSSIs in Wales (marine and terrestrial) have been assessed to a high level of confidence and of these 32% are judged to be in favourable condition and 68% in unfavourable condition. In the review, 73% of the intertidal habitat was in favourable condition. It should be noted that the most recent information used for assessing some of the sites dated as far back as 2000.

5. CURRENT MANAGEMENT OF WELSH MPAs

The aim of this section is to provide an overview of the current management of the existing suite of MPAs in Wales.

In general the aim of site management is to maintain, restore and/or enhance the biological/ecological interests of the site and this includes the supporting biological, chemical and physical structures and processes. How this is achieved with different designations is directly influenced by the legislative framework relevant to each type of designation.

Many factors have an influence on the management of the MPAs raising ongoing challenges that site management needs to address. These include:

- the strong influence of factors external to sites
- limited knowledge of the natural state of marine ecosystems and of species dynamics
- limited awareness of MPAs and the role they play in protecting the marine environment
- practical and physical constraints of working on and under the sea, including health and safety considerations,
- specialist expertise and resources required to gather information in the marine environment
- resources to delivery effective management
- varied and widespread activities, the aspirations of which may be in conflict to the objectives of an MPA
- limitations and gaps in the existing legislative framework

Regulation and management of the marine environment is based on an historic principle of recognising the rights and opportunities of ‘third parties’ to exploit marine resources and use marine space, rather than being based on a system of land/resource ownership. This means that the constituency of potential stakeholders in any given MPA is typically broad, hard to define and extends well beyond the local area.

Legislation, government policy and customary practices that apply to the open sea and the intertidal zone can be quite different from those on land above the limit of tidal influence. For example, there is often open access across the shore together with the public right to fish and collect bait, as well as a public right of navigation at sea. Land, including the seabed is generally owned/occupied by large public bodies such as Local Authorities or Crown Estate, but ‘third party’ activities in these areas are frequently not under the control of these bodies.

Management of MPAs also has to address overlapping legislative requirements for activities in adjacent terrestrial areas that may affect MPAs. For example, the development control process on land and terrestrial land use policies such as Local Development Plans (LDPs) and the Wales Spatial Plan (WSP), agricultural land use controls and legislation specific to the wide range of different activities that may occur within or adjacent to a MPA, all of which have a variety of specific legislative controls.

5.1 European Marine Sites - Management structures and processes

EMS – General provisions of the Habitats Regulations

EMSs include both SACs and SPAs that are predominantly marine. There are 17 EMS in Wales comprising 11 SACs and 6 SPAs (Annex 1.1). These designations overlap in a number of areas, and adjacent or overlapping EMS are usually managed together. The Habitats Regulations 2010²¹ transpose the EU Habitats Directive into UK law and this is the principal legislation under which European sites are managed. Under WG policy, Ramsar sites are managed in the same way as SACs and SPAs.

A European Marine Site as defined by the Habitats Regulations is a ‘European site which consists of, or so far as it consists of, marine areas’. The Regulations define a ‘marine area’ as any land covered (continuously or intermittently) by tidal waters or any part of the sea in or adjacent to Great Britain up to the seaward limit of territorial waters (see also DETR, 1998). The landward boundary is not defined precisely in the Regulations but should be considered the limit of intermittent cover by tides at the extreme top of the shore.

Coastal areas of EMSs above the low water mark and/or within local planning authority boundaries are also notified as SSSIs. In these areas both SSSI legislation and the Habitats Regulations apply, together with development control legislation under the town and country planning system. Subtidal areas of EMSs in Welsh waters are managed primarily through measures under the Habitats Regulations.

The Habitats Regulations set out the legal duties of statutory bodies in relation to EMSs; specific provisions for management of EMS are provided in Regulations 35-38. There is a legal duty (Regulation 9) on all statutory authorities (competent authorities) to exercise their functions so as to secure compliance with the requirements of the Habitats Directive i.e. they have to work so as to achieve favourable conservation status for features covered under the Directive. Competent Authorities are defined under Regulation 7 with their function and duties detailed under Regulation 9. In relation to EMS a sub-set of competent authorities with specific roles in relation to the marine environment are identified (Regulation 6) with specific responsibilities in relation to EMS, these bodies are termed relevant authorities (RA) (Box 3). All relevant authorities are competent authorities, but there are other competent authorities with responsibilities for carrying out or regulating activities within EMS, that are not relevant authorities (e.g. WG, UK government departments).

One of the key measures in the Habitats Regulations for safeguarding EMSs is the requirement for competent authorities to undertake an assessment of any activity or operation (plan or project) that may adversely affect the European site. This is a legal requirement that applies to all EMSs. The assessment is made in view of the conservation objectives for each EMS. Conservation objectives are set out in ‘Regulation 35 advice’ given by CCW, along with advice as to operations which may damage or disturb the features for which the EMS is designated.

The conservation objectives and advice on operations are also relevant to the development of Management Schemes for EMSs and the assessment of ongoing activities within and outside of the site.

²¹ The Conservation (Natural Habitats, &c) Regulations 1994 (as amended), now replaced by the Conservation of Habitats & Species Regulation 2010.

Box 3: Competent authorities and relevant authorities:

The term **competent authorities** includes any statutory body or public office exercising legislative powers – whether on land or sea.

The term **relevant authorities** is intended to identify certain of the competent authorities with local powers or functions which have, or could have, an impact on the marine area within or adjacent to a European marine site.

EMS – Assessment of plans and projects

There is a requirement under the Habitats Regulations that any activity or operation that may damage or degrade a European site undergoes assessment by the competent authority to determine whether or not it can proceed. This requirement is addressed through Regulations 61 – 67 ('General provisions for protection of European sites and European offshore marine sites').

Under Regulation 61 of the Habitats Regulations, an appropriate assessment must be undertaken by competent authorities in respect of any plan or project which:

- a. either alone or in combination with other plans or projects is likely to have a significant effect²² on a European site, and
- b. is not directly connected with or necessary to the management of the site for nature conservation.

This assessment is made in view of that site's conservation objectives.

EMS – Conservation Objectives

CCW has a duty to provide advice on the conservation objectives for EMS and on what activities and operations may cause deterioration or disturbance to the features of interest of the MPA. This advice is provided in what are referred to in Wales as 'Reg 35 packages' because the advice is provided in accordance with Regulation 35 of the Habitats Regulations. These documents provide information about the site and its features, together with the conservation objectives and advice on activities and operations. This provides competent authorities with the framework against which they can initiate an assessment of the 'significance' of any plans or projects (and ongoing operations or activities) proposed for the site. This is a starting point for assessing impacts, a process that generally involves further discussion and consultation between the competent authorities and the Countryside Agency for specific plans and projects, or within the context of management scheme development for ongoing activities. The Reg 35 documents for the five of the seven largest EMS in Wales were standardised and re-released in 2009²³.

EMS Management schemes

Management schemes may be established under Regulation 36 of the Habitats Directive which states "The relevant authorities, or any of them, may establish for a European marine site a management scheme under which their functions (including any power to make byelaws) are to be exercised so as to secure in relation to that site compliance with the requirements of the Habitats Directive." There is no set structure or process for the establishment of management

²² In this context, the word 'significant' refers to whether or not there is a likelihood of the plan or project having an affect on the European site.

²³ <http://www.ccw.gov.uk/landscape--wildlife/protecting-our-landscape/special-sites-project/regulation-35-advice.aspx>

schemes within the UK, although guidance was produced on the establishment of management schemes in England and Wales²⁴. Subsequently, the UK Marine SACs Project (1997-2001) trialled management schemes on several of the new SACs in the UK (including two sites in Wales) and prepared best practice guidance for the establishment of management schemes (EN *et. al.* 2001²⁵). The sites in Wales with management schemes in progress or underway are encouraged to use this best practice guidance.

Establishing management schemes is optional for relevant and competent authorities under the Habitats Regulations and Offshore Habitats Regulations. The Regulations place a general duty on all statutory authorities exercising legislative powers to perform these in accordance with the Habitats Directive. Management schemes set the framework for managing activities to achieve the site's objectives. Management schemes are informed by the conservation objectives and aim to establish measures that correspond to the ecological requirements of the site. An EMS management scheme should be the best means to achieve this through providing a framework for management and promoting cooperative working with other relevant/competent authorities, especially on large or complex sites. However, it is optional and this approach has not been adopted on the Dee Estuary or Menai Strait EMS.

In general, where management schemes have been developed for EMS in Wales, the process involved reviewing the status and extent of existing activities, assessing if and how these may affect the site features and determining whether existing management of those activities is sufficient to safeguard the EMS. Management actions are then identified as appropriate. The management scheme should also consider the requirements for monitoring, participation of stakeholders and requirements for awareness raising and interpretation at a site level. Actions identified in management schemes may fall to one or more of the RAs, or other competent authorities and sometimes to non-statutory bodies (e.g. voluntary agreements with recreational users). Where a management scheme exists RAs are obliged under Reg 36(1) to exercise their functions under the scheme to secure the requirements of the Habitat Directive. There can be only one statutory management scheme for each EMS. If a management scheme is established it provides the legal framework for the actions of RAs insofar as they affect the conservation objectives of EMS, it should therefore be endorsed by all RAs as well as competent authorities that are not also RAs but who have responsibilities in the marine environment. It should also be endorsed, as far as possible, by all parties involved in the process of developing the scheme.

The management of the EMS is the joint responsibility of all RAs - there is no onus on any one authority to take a lead role. It is not a statutory requirement for RAs to participate in a management scheme, although in practice in Wales the RAs for a site have become involved where relevant authority groups (RAGs) have been formed and management schemes developed. Some RAs participate only as corresponding members. It is in the interests of an RA to participate in the management scheme process in that it helps to demonstrate fulfilment of the requirement on them to exercise their functions in such a way as to secure compliance with the Habitats Regulations 2010 (Regulation 9).

The EMS in Wales with management schemes are identified in Table 3. Each management scheme is in varying stages of completion or review.

On the cross-border sites of the Dee SPA/SAC, Severn SPA/SAC and Liverpool Bay SPA, site management has developed to address the potentially differing requirements of Welsh and

²⁴ DETR (1998).

²⁵ EN, SNH, CCW, EHS (DoE(NI)), JNCC & SAMS (2001).

English administrations. With the Severn, for example, there is already a structure and existing groups in place that provide an appropriate management structure for this large and complex site.

Regulation 37²⁶ provides a mechanism to set up a management scheme on a site that does not have one: “The appropriate authority (Welsh ministers in Wales) may give directions to the relevant authorities or any of them, as to the establishment of a management scheme for a European marine site”. To date this has never happened in Wales.

The existing EMS RAGs have been in place for a number of years and were established to assist communication between the relevant authorities for a site, and to agree how these authorities wanted to work together to implement their statutory duties under the Habitats Regulations and involve others in the management of the site. Where management schemes are in place, the RAG has been the body responsible for establishing them. A summary of the current management for the Welsh EMSs is provided in Table 3 which summarises which of the EMS in Wales have Reg 35 packages and Reg 36 management schemes as well as European Marine Site (EMS) officers. EMSs contain overlapping sites therefore the 17 EMS in Wales combine into the eight sites detailed in Table 3 (See Annex 1.1 for details). All Ramsar sites with marine features are contained within the EMSs listed in Table 3.

Liverpool Bay SPA has only recently been designated and no decision has been made on whether a management scheme and the supporting RAG is needed for this site. Four of the eight sites have management schemes in place at least to a draft stage; the management scheme for the Severn is being updated to include the SAC features. The management scheme for Pen Llyn a’r Sarnau SAC is being updated to include new features. Carmarthen Bay has not yet published their management scheme although it is out to public consultation and should be published soon.

Table 3: Current management on Welsh EMS sites

Site Name	Reg 35 ¹	Reg 36 ²	RAG ³	Date RAG formed	EMS officer ⁴	1 st EMS officer in post	Current EMS officer in post	FT/PT ⁵
Dee Estuary	Yes	No	No	N/A	No	N/A	N/A	N/A
Menai Strait & Conwy Bay	Yes	No	No ⁶	2002 – 2005	No	N/A	N/A	N/A
Pen Llyn a’r Sarnau	Yes	Yes ⁷	Yes	1996	Yes	2003	2003	FT
Cardigan Bay	Yes	Yes	Yes	1996	Yes	2003	2011	PT
Pembrokeshire Marine	Yes	Yes	Yes	1999	Yes	2000	2000	PT
Carmarthen Bay & Estuaries	Yes	No ⁸	Yes	1999	Yes	2000	2006	PT
Severn Estuary	Yes	Yes ⁷	Yes	1996	Yes	1996	2009	PT
Liverpool Bay ⁹	Draft	No	No	N/A	N/A	N/A	N/A	N/A

¹ Conservation Objectives ² Management scheme ³ Relevant Authority Group

⁴ European Marine Site Officer ⁵ Full Time/Part Time EMS office ⁶ There was a RAG but it is no longer active

⁷ Under review ⁸ In draft and under consultation ⁹ Site designated on the 20th of August 2010, draft conservation guidance available.

In practice within a management scheme, any management action has to be agreed to by the relevant authority which would undertake it, giving each authority a power of veto on any actions attributed to it by the RAG. There is currently no independent mediation process if there

²⁶ The Conservation of Habitats and Species Regulation 2010

is disagreement about the need for specific actions and actions may be removed from a management scheme or diluted in order for the relevant authority concerned to agree to it. The requirements for monitoring (including compliance monitoring), participation of stakeholders and for awareness raising and interpretation at a site level are also included within the management scheme. Management schemes provide a mechanism (and clear documentation) for statutory bodies to identify what needs to be done to implement their statutory duties under the Habitats Regulations.

Advisory and Liaison Groups

In addition to the establishment of RAGs, several of the EMS in Wales also have some sort of advisory/liaison group structure to facilitate the involvement of non governmental organisations, user groups and the public in EMS management. The arrangements vary from site to site and may include general public meetings at key stages.

CCW's role in relevant authority groups and management schemes

CCW played a lead role in the development of management schemes for Pen Llŷn a'r Sarnau SAC and Cardigan Bay SAC (pilot sites under the UK Marine SACs Project 1997-2001). These pilot management schemes and the supporting structures of relevant authority groups and advisory/liaison groups became part of the established management structures and have continued to the present time. CCW regional officers also played major roles in helping set up other RAGs and still sit on all RAGs and Liaison Groups.

Role of EMS Officers in EMS management

The EMSs with RAGs and management schemes have also had a funded EMS officer in post to facilitate the work of the RAG, any advisory or liaison groups that have been established, and to develop the management scheme and assist implementation of site management. The current situation regarding EMS officers on the 8 large EMS in Wales is summarised in Table 3 above.

EMS officers are funded by contributions from one or more of the relevant authorities for a site, sometimes with additional external funding. The EMS officer posts have been recruited by the RAGs to support and facilitate development and implementation of management schemes. CCW has been part-funding these posts to a varying extent for more than 10 years and a separate review²⁷ brings together information on CCW's involvement. The EMS officers have been instrumental in taking forward specific projects in support of site management with greatest progress on sites with full-time EMS officers (Cardigan Bay & Pen Llŷn A'r Sarnau). Although due to funding constraints Cardigan Bay no longer has a full time EMS officer.

Experience from managing EMS across the UK indicates that it is very difficult, if not impossible to maintain management groups such as the RAGs and advisory/liaison groups, or undertake development of a management scheme without proper support and funding (see example from the Blackwater Estuary EMS in Box 4²⁸).

²⁷ CCW (2010).

²⁸ Example taken from SQW consulting (2009).

Box 4: Blackwater Estuary Management Plan

The Blackwater Project ran between 1992 and 2005. Its aim was to promote the sustainable use of the estuary and the surrounding landscape. One of the main outputs of the project was the Blackwater Estuary Management Plan and Action Plan. It was published in 1996 and signed up to by 70 stakeholder organisations with an interest in and a responsibility for management of the estuary.

It was regarded as an extremely successful endeavour and although it was not a statutory document it had sufficient local engagement and ownership to drive action.

However the end of the project funding by the local authority meant that the implementation phase of the plan was never taken forward as intended which has been frustrating for many of the local stakeholders who put so much into the project.

Funding of EMS Officers

EMS officers are funded by contributions from one or more of the relevant authorities for a site, sometimes with additional external funding (e.g. Objective 1 funding was secured for initial employment of the Pembrokeshire Marine EMS officer). As the statutory nature conservation body in Wales, CCW has contributed to the funding of all the EMS officers in Wales, with the relative proportion varying between sites depending on the contributions from other relevant authorities.

In financial year 2009/10, CCW's contribution towards EMS officer funding was £72,500 dropping to approximately £55,000 in 2010/11. Other significant funders of the EMS officer posts include the Environment Agency Wales (EAW) and the relevant local authorities. The EMS Officers are usually hosted by one of the site's relevant authorities other than CCW.

Various local authorities have indicated to the officers that funding for financial year 2012/2013 is not secure. It is anticipated that in kind contributions (e.g. hosting an EMS officer) will remain static but will not be sufficient to retain the EMS officers in post. If it falls to CCW to fund the majority of these posts it may reduce the perception of independence of the posts. Currently the EMS officers are not involved in any management of other MPAs e.g. SSSIs or Ramsars. Funding of EMS officers from 2010 to 2012 is detailed in Table 4 & 5.

In England there are 30 SACs and 38 SPAs (with marine components). There are nine EMS officer posts in England based at some of the larger sites. Natural England (NE) have 34 internal staff²⁹, which they call EMS staff, to give management advice on EMS and do some work on SSSI consents and Habitat Regulations Appropriate Assessments. CCW currently has 6 regionally based staff whose work is primarily focussed on the management of one or more EMS (including casework).

Natural England (NE) fund RAG EMS officers to a maximum of £5K per year per site. The average time for EMS officers to produce the management plan for the site is 18 months²⁹. The North East Kent EMS management scheme did take five years to complete³⁰ this was related to issues from when the site was designated.

²⁹ Sarah Wiggins, MPA Management Advisor, NE, *pers. comm.*

³⁰ Roberts, T. (2011).

Previously CCW carried out a SWOT³¹ analysis of EMS officers³². This found that EMS officers have had a lot of success in awareness raising for their sites with relevant/competent authorities, user groups and the general public and that they have been key in co-ordinating and facilitating their RAGs and any advisory/liason groups for the site. In summary, their main strengths were local knowledge, independence and co-ordinating role with the main weaknesses including lack of security of funding and management plans being too long and taking too long to prepare. Main opportunities of the posts included independence, saving CCW staff time and facilitating coordination of management across the EMS network. While threats included (besides funding) a lack of clear accountability in terms of prioritisation of work programmes and focus on work as well as a potential to complicate the picture if different approaches were taken between different EMS officers. Although this SWOT analysis was carried out for EMS officers some of the issues highlighted may be more an issue for RAGs to address rather than the individual EMS officer.

Table 4: Funding of EMS officers in financial year 2010/11.

Based on figures supplied by the EMS officer or RAG.

Site Name	Total cash funding ¹ (2009-10)	Paid by CCW	% of total cash paid by CCW
Dee Estuary	N/A	N/A	N/A
Menai Strait & Conwy Bay	N/A	N/A	N/A
Pen Llŷn a'r Sarnau	£48,485	£24,000	49.5% ²
Cardigan Bay	£30,500	£13,500	44%
Pembrokeshire Marine	£26,350 ³	£15,000	57%
Carmarthen Bay & Estuaries	£12,500 ⁴	£7,000	56%
Severn Estuary	£21,132	£1,000	4%
Liverpool Bay	N/A	N/A	N/A

¹ There are reserves at some sites from when the EMS officer post was not filled or worked part-time. These reserves are running out at most sites although it varies from site to site.

² £24,000 or 49.5% funding from CCW, as part of grant in aid to Gwynedd Council. This round of grant funding runs out in March 2011.

³ Plus in kind contributions from Milford Haven Port Authority

⁴ Plus in-kind contributions from the City and County of Swansea – hosting EMS Officer

Table 5: Funding of EMS officers in financial year 2011/12.

Based on figures supplied by the EMS officer or RAG.

Site Name	Total cash funding ¹ (2009-10)	Paid by CCW	% of total cash paid by CCW
Dee Estuary	N/A	N/A	N/A
Menai Strait & Conwy Bay	N/A	N/A	N/A
Pen Llŷn a'r Sarnau	£48,485	£24,000	49.5% ²
Cardigan Bay	£13,250 ³	£8,750	66%
Pembrokeshire Marine	£20,000 ⁴	£5,000	25%
Carmarthen Bay & Estuaries	£9,500 ⁵	£7,000	74%
Severn Estuary	£21,132	£1,000	4%
Liverpool Bay	N/A	N/A	N/A

¹ There are reserves at some sites from when the SAC officer post was not filled or worked part-time. These reserves are running out at most sites although it varies from site to site.

² £24,000 or 49.5% funding from CCW, as part of grant in aid to Gwynedd Council. This round of grant funding runs out in March 2012, it is unlikely if the grant is taken forward that the other RA funding will be enough to draw down the full CCW grant.

³ Cardigan Bay has run out of reserves and the funds available are not enough to hire an EMS officer, a temporary member of staff based with CCW has been hired from September 2011 until March 2012.

⁴ Plus in kind contributions from Milford Haven Port Authority

⁵ Plus in-kind contributions from the City and County of Swansea – hosting EMS officer

³¹ Strategic planning method used to evaluate the Strengths, Weaknesses/Limitations, Opportunities, and Threats

³² EMS officer Review, CCW internal report January 2010.

Welsh Group of European Marine Sites

In the absence of any Wales-level coordination of EMS management, the Welsh EMS officers established a working group in October 2006 which they called the Welsh Group of European Marine Sites or GEMS. CCW marine staff directly involved in EMS management were invited to join the group. GEMS provides a forum for discussion of EMS issues and joint working between sites, where appropriate.

Whilst the group has provided a forum for exchange of ideas and information between EMS officers and CCW that does not exist through any other mechanism, it has not been able to address the issue of improving consistency of dealing with common management issues on sites. The major exception to this is the role that GEMS played in instigating the Marine Education Framework Project to try and establish a Wales-wide framework for the development of future educational material to share existing resources and make them widely available to teachers at all levels. This work was led by CCW's Marine Biodiversity Officer, Aethne Cooke, as part of CCW's education work.

5.2 Sites of Special Scientific Interest – Management Structures & Processes

All SSSIs in Wales are designated (notified) by CCW under the Wildlife and Countryside Act (1981) as amended. Each SSSI is protected by law³³ from damage through development, unsuitable management or activities. They are also protected through working partnerships and agreements with owners and others who use the sites. The land within intertidal SSSIs in Wales is mainly owned by the Crown Estate but it is often leased out to other individuals and organisations, and in some areas is under private ownership. Public access is generally permitted in the intertidal zone (that is, the area exposed between high and low tide) where it is owned by the Crown Estate. The land above mean high water mark in intertidal SSSIs is generally under private land ownership.

Sympathetic conservation management is essential if the value of the site is to be maintained in the long-term. CCW must inform landowners exactly where every SSSI is, explain why it is protected and provide information about the potentially damaging operations (PDOs) for the site. Each site has a Site Management Statement (SMS), prepared by CCW that is sent to the owner/occupier and sets out the management aspirations for the site. Landowners and occupiers are legally required to consult CCW if they wish to undertake activities or operations that are potentially damaging to the special interest of the site, and there is a legal system in place relating to the consenting of these activities. CCW staff will discuss any application with owners and occupiers, and give guidance that allows them to achieve their goals whilst avoiding damage to the site. The majority of applications are approved, either because no actual harm will be caused by the proposal in question, or because effective mitigation has been agreed. If harm cannot be avoided a consent may have to be refused. However, the requirement on land owners / occupiers in relation to PDOs does not cover third party activities. In order to stop third party damage CCW would have to prove reckless or intentional damage to the feature and this is very difficult if there are a number of people undertaking the damaging operation.

Statutory authorities also have legal duties towards the protection of SSSIs if they are undertaking activities or operations that may affect the features of the site. The Countryside and Rights of Way Act 2000 placed a duty on all public bodies to take reasonable steps consistent with the proper exercise of their functions, to further the conservation and enhancement of the features for which an SSSI has been notified. This duty applies to government departments, local

³³ 1981 Wildlife and Countryside Act (as amended) (<http://www.legislation.gov.uk/ukpga/1981/69>).

authorities, statutory undertakers (that is, utilities such as privatised water or electricity companies) as well as other organisations undertaking a public role such as port authorities, the Crown Estate and the Environment Agency – collectively they are known as Section 28G Authorities. This duty also applies where statutory authorities are authorising others to undertake activities or operations that may affect an SSSI.

CCW is formally consulted on a wide range of planning applications and other proposed developments and activities that may affect SSSIs. CCW will recommend ways in which the development may be altered to ensure that there is no harm to the site's special features. In extreme cases, if harm is unavoidable, CCW may lodge an objection to the proposal. Bodies such as the Sea Fisheries section of WG, can license commercial shellfish collection within SSSI but due to the complex nature of legislation, permissions and licenses covering the shore, preventing or stopping damage to features is not a straightforward process. Therefore, it is frequently necessary to take a different approach to the protection and management of intertidal SSSIs. Positive conservation management on these sites is a big challenge and can only be achieved using a multi-agency approach to issues such as sustainable harvesting, engaging stakeholders and raising public awareness.

The system of consultation and consents laid out in law to ensure that SSSIs are protected from damage by inappropriate operations and developments relies on co-operation and strong working partnerships with owners, occupiers, planning authorities, utility companies and other users.

5.3 Management of Skomer Marine Nature Reserve

Skomer, as Wales only MNR, has a long-term vision for the site and a management plan. Management of the MNR is undertaken by a team of two full-time, one part-time and one seasonal member of staff (six months of the year) based at the site. This team is responsible for MNR management planning, carrying out or commissioning all monitoring work for the MNR, including biological and compliance monitoring, and maintaining a high visibility presence at the reserve through weekend patrols as well as during the course of routine fieldwork. The long-term research and monitoring underway at Skomer MNR is a key focus of the site management. The data that is collected is helping inform our understanding not only of the MNR habitats and species, but also of those in the wider MPA series in Wales and elsewhere in the UK.

A number of positive management measures have been implemented to help protect some of the special features of the reserve. Specific fisheries byelaws prohibiting beam trawling, dredging or the taking of scallops by any means have resulted in an increase in scallops and possibly links to very high quality sediment communities found in the MNR.

As part of the zoning around the island visitor moorings have been provided to encourage no anchoring in North Haven (*Zostera marina* bed) and there is a code of conduct prohibiting anchoring in the rest of the MNR other than South Haven. There has been an increase in *Zostera* extent and density since designation, which is believed to be linked to the anchoring zonation.

The Skomer MNR team are also involved in public awareness with an exhibition about the MNR next to the MNR office, regular contact with local users and through giving talks and presentations. The Skomer team members are member of the Pembrokeshire Marine Code Group (Box 5).

An important part of the management structure for the MNR is the Skomer MNR Advisory Committee which has members drawn from 29 different marine organisations, relevant

authorities, competent authorities, wildlife trusts, yachting organisations, the Crown Estate and universities. The Advisory Committee role is³⁴:

- To provide CCW with advice and information on all aspects of the MNR.
- To discuss with CCW, and advise on, the management of the MNR.
- To provide a forum whereby any concerns, anxieties or opinions about the MNR may be brought to the attention of the CCW.

Box 5: The Pembrokeshire Marine Code

The Pembrokeshire Marine Code Group was developed by local operators and other organisations in Pembrokeshire working closely with the Pembrokeshire Coast National Park Authority and the National Trust. These organisations were all concerned about the long-term management of the area and the development of high standards of practice. They recognised that sustainable use must be a key theme in marine recreational activities and education. All those who sign up to the Marine Code agree to conform to appropriate safety legislation. The Pembrokeshire Marine Code exists in addition to legislation as a voluntary agreement. The code has been agreed on by all major local wildlife tour boat operators, sub aqua diving organisations, jet ski organisations, sailors and sea kayakers working and enjoying the Pembrokeshire coast.

In Pembrokeshire, there are wildlife habitats which are particularly sensitive to disturbance. The code has a system of zones and restrictions which are aimed at protecting marine life especially dolphins, porpoise, seals and seabirds around the Pembrokeshire coast. The specific areas and times are clearly marked on maps available on the Pembrokeshire Marine Code Website (<http://www.pembrokeshiremarinecode.org.uk>), they also have an Activities Liaison Officer to co-ordinate their ongoing work.

The Key message of the Marine Code Group is to raise awareness of the importance of the natural environmental and to encourage others to protect it. They aim to minimise disturbance and encourage users to leave the site in a better state than when they first arrived (where possible).

5.4 Management of Marine Conservation Zones

The MCZ Project Wales commenced in 2009 with a view to identifying and designating a small number of highly protected sites within Welsh waters. No MCZs have been designated in Wales to date, although Skomer will become an MCZ following the repeal of MNR legislation through the Marine and Coastal Access Act (2009).

Public Authorities are under a duty in the Act to exercise their functions in a way that furthers the conservation objectives of MCZs. The Act provides additional management powers, for example the use of Nature Conservation Orders to manage otherwise unregulated activities within sites. More information on specific tools to manage MCZs is provided in section 6 (New tools and systems). CCW will be providing further separate advice on the management of MCZs as the MCZ Project Wales progresses. However it is worth mentioning that the responsibilities of relevant authorities and competent authorities (named public authorities in the Act) under the Marine Act are laid out under section 125 “General duties of public authorities in relation to MCZs”, and section 126 “Duties of public authorities in relation to certain decisions.” Specific duties for CCW are covered under section 127 “Advice and guidance by conservation bodies”.

³⁴ CCW (1993).

5.5 Biodiversity Duty

In addition to specific duties and responsibilities under the legislation pertaining to the different MPA designations, under Section 40 of the Natural Environment and Rural Communities (NERC) Act (2006), there is a further duty on public bodies to have regard to conserving biodiversity. In relation to this a number of habitats and species of principle conservation importance have been identified for which statutory bodies must have specific regard. These habitats and species are listed (referred to as the Section 42 list) and include a number of marine habitats and species that may also be designated features of MPAs. The biodiversity duty under the NERC Act applies generally to the territorial waters and land area of Wales.

5.6 Current MPA Management Tools

Managing all protected sites in Wales is a difficult task, it is a complex area of work and various systems and tools are needed to help deliver effective site management. CCW has number of systems that it uses to manage sites, particularly SSSI where CCW has direct management responsibilities, including contacts, casework and consents databases. This section, however, focuses on two approaches used to tackle management issues on marine sites: the Special Sites Project and the Natural England EMS Risk Review.

The Special Sites Project

The overall aim of the Special Sites Project is to develop CCW and partner organisations' capacity to manage an efficient and effective programme of works and policy change that will deliver Outcome 21 of the Wales Environment Strategy³⁵. This is a long term programme of work, with implementation extending over some 20 years.

Action to achieve these targets is led jointly by CCW and WG, with partnership input expected from a wide range of other organisations in the public, voluntary and private sectors as well as individual landowners / managers.

To help achieve the Outcome 21 targets CCW has developed an "Actions Database" to record CCW's recommendations about the management needs of protected areas in Wales. For the purpose of management each site has been sub-divided into a set of "management units". These detailed unit-by-unit proposals include actions for CCW and partner organisations to deliver favourable or recovering condition of features. In this context an organisation's "actions" can be a mix of regulatory mechanisms (e.g. putting conditions on consents) or direct action on the ground.

Input of data for marine sites into the actions database is ongoing following some delays to adapt the database for marine site requirements. This included the addition of a marine management risk category specifically for use with marine sites to identify when there is a high risk of something occurring on the site (e.g. due to insufficient existing regulatory mechanisms) and the potential for damage to a feature of the site if the activity occurred.

³⁵ Environment Strategy for Wales; Outcome 21: Sites of international, Welsh and local importance are in favourable condition to support the species and habitats for which they have been identified.

There is work still to be done to ensure consistency of actions to address issues common across the suite of marine sites in Wales; this will be addressed through a programme of work over the next 18 months to two years.

European Marine Sites and their underpinning SSSIs form the largest part, by area, of the existing suite of MPAs in Wales. The summary of actions for the EMS³⁶ therefore provides a useful indication of key issues that need to be addressed across a large proportion of the Welsh MPAs in order to bring these sites into appropriate conservation management (Box 6).

It is important that links are made between the Actions Database and any EMS management scheme (MS) action plans. There are some differences such as the fact that MS action plans also include actions for awareness raising which the Actions Database does not. However, any immediate actions impacting features on the site for a relevant or competent authority should, if possible, be entered in the database. However, the Actions Database reflects the priorities set by CCW while the MS action plans reflect the view of the RA involved in the scripting of the action plan.

Box 6: Current cross-Wales problems/issues on sites (taken from the actions database)

There are a number of generic issues that have been identified as being common to many of the EMS in Wales. These issues relate to the following categories of activity:

1. Sea fish industries
2. Pollution and waste including litter.
3. Coastal and flood defence
4. Non-native species
5. New development and activities
6. Climate change

Natural England Risk Review

At the end of November 2010 Natural England released their EMS Risk Review³⁷. This review was commissioned by Defra to provide a strategic review of risks from all ongoing activities within European marine sites, in order to identify and prioritise action required to ensure site features are maintained or restored to favourable condition. The activities considered in the review ranged from commercial (e.g. fishing, dredging, aggregate extraction, land based effluents etc) to recreational (e.g. bait digging, angling, walking etc). The purpose of the risk review was to provide Defra with evidence of where appropriate steps needed to be taken to avoid deterioration of natural habitats and species, and avoid significant disturbance of the species for which the sites had been designated.

The main findings of the risk assessment were as follows:

- There are a large number of ongoing activities that have potential to pose a risk to EMS, but the vast majority do not cause a high level of risk to site features.
- The level of the risk relates to an activity's potential to damage the site, the frequency or intensity of the activity, and the extent to which management controls are in place.
- From reviewing 957 site-based activities in England, only 18 (2%) were identified that

³⁶ Adapted from a paper to CCW's internal MPA Working Group 2010

³⁷ Coyle & Wiggins (2010)

could pose a high risk to sites, and therefore may require additional measures to mitigate the risk.

- Most activities (66%) were recorded as posing a low risk suggesting that either the activity had a low harm potential, was not taking place, or was well managed.

CCW has considered the option of completing a similar review for Welsh EMS but has concerns over the Natural England review (e.g. management options had to be available before activities could be identified as high risk and in-combination effects of activities were not considered) and the static nature of such a report. Consequently CCW is focussing its limited resources on improving the Actions Database to support delivery of effective MPA management, and to address issues of action prioritisation and consistency through this route. CCW also feels that the Actions Database approach will be more useful in the future for addressing measures identified through the Water Framework Directive and Marine Strategy Framework Directive. The Actions Database is a live system that can be added to as new issues arise and can show when actions to improve management on the sites have been completed.

5.7 Awareness and understanding of MPAs

Numerous studies have shown that positive conservation management of a protected area (marine or terrestrial) can be assisted by improving awareness and understanding about the area, the reasons for protecting it and its management needs.

To achieve this, information has to be supplied to a broad range of interests that may encompass casually interested parties at one end of the scale, and those involved in delivering site management (who require highly detailed technical information) at the other. Information about what wildlife lives within the area will be useful for the former, whilst the latter will need a more detailed understanding of the site together with a working knowledge of the relevant legislation and its implementation.

The key to achieving positive conservation through awareness and understanding depends on having the appropriate information and being able to deliver it effectively to those who need it. MPAs often have extensive underwater areas that are neither readily viewed nor visited by most of the Welsh population. This creates a unique challenge requiring ongoing and innovative approaches in order to maintain a useful level of awareness and understanding.

Several statutory and non-statutory organisations and groups are involved to some degree in awareness raising in relation to the marine environment in Wales, both in a general sense but also specifically in relation to individual MPAs. This may be at a national level, e.g. Wales-wide campaigns or at a very local level, e.g. rock pooling events run by local authorities in relation to a specific MPA. Whilst any communication between parties involved with MPAs provides an ongoing opportunity for raising awareness and understanding, the majority of more organised activity has focussed mostly on the larger EMS.

The RAGs, advisory/liaison groups and work of the EMS officers currently provide particular opportunities for raising awareness and understanding about individual MPAs and wider issues relating to the Welsh marine environment. Where EMS officers are in place there has generally been some proportion of their work focussed on raising awareness and understanding about all aspects of MPA management such as the wildlife of the site, the role and statutory responsibilities of different organisations and the impact of different activities on the site.

In addition, individual management authorities are often involved in awareness raising activities as part of a regional or national corporate interpretation programme. The focus of this is often quite generic and not necessarily focussed on addressing understanding of specific MPA issues. Awareness and understanding is also promoted through some marine-related industries, such as wildlife watching trips and tours, and other sea-based activities.

The main focus of the MPA awareness raising and understanding work to date has tended to be raising awareness with the general public, user groups and others about the marine wildlife that exists and is protected by the EMS and, to some extent, about the value of this wildlife and the marine environment to Wales, Welsh businesses and society in general. The experience of management authority staff, advisory/liason groups, EMS officers, and others involved in EMS management has been that most people have very little understanding of Welsh marine wildlife and are often astonished to learn that there is something there that is interesting, colourful and worth looking after. Whilst the hidden nature of the marine environment can act as a barrier to raising awareness and understanding, it is also one of the things that can engage people – the lure of the hidden undersea and the secrets therein.

A European report on the public perceptions of Europe’s seas found that there needs to be a wider social engagement beyond the limited “stakeholder” approach. It also found a big difference between the perceived threats on the seas by the general public and the actual threats as highlighted by scientists³⁸. This shows that there needs to be more strongly focussed campaigns highlighting the most serious threats to the marine environment.

Currently, there is no strategic programme for raising awareness and understanding about MPAs in Wales, and no general consensus on the importance that this work has in delivering effective site management at all levels. Nevertheless, a number of successful projects aimed at raising awareness and understanding amongst different groups have been undertaken on specific MPAs. Examples of these include:

- The Code of Conduct for Recreational Boating produced for Cardigan Bay EMS (supported with funding through the Crown Estate’s Marine Stewardship Programme).
- The Pen Llŷn a’r Sarnau ‘Living Coasts - Living Seas Project’, funded through Interreg IIIa which implemented a variety of awareness raising projects and investigated the effectiveness of the different approaches used.
- Biodiversity training run day within Gwynedd Council to raise awareness about environmental legislation and responsibilities of management authorities such as the Council for, amongst other things, EMSs and SSSIs.
- The Pen Llŷn a’r Sarnau SAC’s ‘Turning Tide’ project aimed at raising awareness about the impact of litter in the marine environment and on SAC features, and encouraging positive action by local groups. Project run in conjunction with Keep Wales Tidy, Tidy Towns initiative, Marine Conservation Society and local action groups.
- Marine education framework project: initiated by the Group of European Marine Sites (GEMS) to establish a central resource of marine-related educational material for teachers. Initial engagement with teachers is complete. Work is ongoing to establish an easily accessible web-based repository for curriculum-linked marine educational resources.

³⁸ Potts *et al.*, (2011)

6. NEW TOOLS & SYSTEMS

It is currently a time of rapid evolution in the means and approaches to management of the wider marine environment. Four key new systems / approaches are discussed below that will affect, and be affected by, the way in which we plan for and execute MPA network management, these include:

- Marine spatial planning
- The Living Wales Programme
- The design and implementation of Marine Strategies to deliver the Marine Strategy Framework Directive
- Marine and Coastal Access Act new MPA management tools

All the above, either overtly, or implicitly, are moving towards a more ecosystem based approach to marine environment/resource/activity management. Well-managed MPA networks can play an important role in contributing to delivery of an ecosystem based approach to management of our seas.

Marine spatial planning

Section 44 of the Marine and Coastal Access Act (2009) introduces a system of marine planning for England, Wales and UK offshore waters. The purpose of the marine planning system is to contribute to achieving sustainable development in the UK marine area. Marine planning is considered a key part of delivering the vision shared by the UK administrations of having ‘clean, healthy, safe, productive and biologically diverse oceans and seas’.

The main components of the marine planning system are:

1. The UK Marine Policy Statement, which sets the framework for
2. Marine Plans.

In Wales, the Welsh Assembly Government is responsible for the development of marine plans both in the Welsh inshore region (out to 12 nautical miles) and offshore region (beyond 12 nm).

The UK Marine Policy Statement (MPS) was published in March 2011 by the UK Government and devolved administrations. The MPS will facilitate and support the formulation of Marine Plans, ensuring that marine resources are used in a sustainable way in line with the high level marine objectives (Box 7) and thereby³⁹:

- Promote sustainable economic development.
- Enable the UK’s move towards a low-carbon economy, in order to mitigate the causes of climate change and ocean acidification and adapt to their effects.
- Ensure a sustainable marine environment which promotes healthy, functioning marine ecosystems and protects marine habitats, species and our heritage assets.
- Contribute to the societal benefits of the marine area, including the sustainable use of marine resources to address local social and economic issues.

³⁹ HM Government *et al.*, (2011).

The UK Marine Policy Statement is intended to also deliver the UK high level marine objectives. Securing a well-managed MPA network links to the delivery of a number of the high level objectives, as illustrated in Box 7.

Publication of the UK Marine Policy Statement is followed by the development of the first round of Marine Plans from April 2011. This process is being led in England by the Marine Management Organisation (MMO). In Wales guidance is being developed that will indicate how Welsh Government intends to deliver marine planning in the waters under its jurisdiction.

The marine area is extremely crowded in terms of existing activities and the pressure and competition for space is only going to increase. Marine planning will enable organisations to balance and integrate the vast range of competing activities and aspirations. We can then take informed decisions about the development of our sea area and our priorities, based on shared understanding, a common baseline and sound evidence⁴⁰.

Box 7: UK High level marine objectives: objectives that link to MPA network management

Ensuring a strong, healthy and just society

- People appreciate the diversity of the marine environment, its seascapes, its natural and cultural heritage and its resources and act responsibly.
- The marine environment plays an important role in mitigating climate change.

Living within environmental limits

- Biodiversity is protected, conserved and where appropriate recovered and loss has been halted.
- Healthy marine and coastal habitats occur across their natural range and are able to support strong, biodiverse biological communities and the functioning of healthy, resilient and adaptable marine ecosystems.
- Our oceans support viable populations of representative, rare, vulnerable, and valued species.

Promoting good governance

- The use of the marine environment is spatially planned where appropriate and based on an ecosystems approach which takes account of climate change and recognises the protection and management needs of marine cultural heritage according to its significance.

Using sound science responsibly

- Our understanding of the marine environment continues to develop through new scientific and socio-economic research and data collection.
- Sound evidence and monitoring underpins effective marine management and policy development.
- The precautionary principle is applied consistently in accordance with the UK Government and devolved administrations' sustainable development policy.

Marine planning and links to MPA management

The UK Marine Policy statement states that “a healthy marine ecosystem is fundamental to supporting sustainable development, thus ensuring wide social and economic benefits”. The statement also advises marine planners to take account of the UK commitment to securing an

⁴⁰ MMO website: <http://marinemanagement.org.uk/news/press/101028.htm> accessed 19/12/11

ecologically coherent MPA network in developing marine plans, and to take account of MPA features in designing sustainable development policies that in turn inform location of activities. Clearly, MPAs and the commitment to securing a UK network are seen to be an integral part of the marine planning process and the one can benefit the other if designed and implemented correctly.

To ensure the process of managing our Welsh MPAs is fully integrated into the Welsh marine planning process it will be important that:

1. MPA management takes account of the principles for marine planning and engages with all relevant sectors in designing management measures.
2. Designing MPA management measures is done at a national scale where possible rather than on a site by site basis as this approach will integrate more readily with a strategic marine planning system and the setting of marine planning policies.
3. The suite of Welsh MPAs have clear objectives that can proactively inform the marine planning process, rather than mainly reacting to marine planning policies.

The Living Wales Programme

The Living Wales Programme is intended to provide a framework for sustainable land and marine management in Wales based on an ecosystem approach. The principles of the new framework, set out in the consultation document⁴¹, are:

- to secure sustainable and integrated management of land and water by making the long-term health of ecosystems and the services they provide central to decision making; and, by doing this
- to make optimum use of our finite land and water resources and ensure Wales' natural and cultural capital assets are maintained and enhanced

The Living Wales Programme further identifies five areas of work needed to deliver the principles of the programme, which are covered by five work streams as follows:

1. **Evidence base:** Developing a stronger evidence base for our ecosystems so that we have a better basis for decisions that fully reflect risks, opportunities and limits.
2. **Value of ecosystems and services:** Ensuring that our dependence on the natural environment and the value of ecosystems, and their services, are fully reflected in the decisions that we make as government and society.
3. **Refreshing regulatory and management approaches:** updating our regulatory and management approaches to deliver the new approach.
4. **Refreshing partnership mechanisms:** Redesigning our partnership mechanisms around the new approach.
5. **Refreshing institutional arrangements:** Refreshing our institutional arrangements for regulating the environment and delivering improvements to ensure that they support an integrated, sustainable approach.

As already stated, strategic management of Welsh MPAs at the national level, considering wider ecosystem health and ecosystem services provided by well-managed sites, feeds directly into the delivery of an ecosystem-based approach to management. There is therefore a direct link between securing an ecologically coherent and well-managed UK network of MPAs and delivery

⁴¹ WAG (2010)

of the Living Wales Programme. This link creates an opportunity to embed an MPA network management framework within the Living Wales Programme delivery structures.

Marine Strategy Framework Directive - Marine Strategies

The aim of the Marine Strategy Framework Directive is to secure “Good Environmental Status” (GES) of the European marine environment by 2020. Achievement of GES will be assessed against eleven wide ranging high level descriptors of GES, which are described in broad terms in the Directive.

The Directive sets out eleven high level descriptors of GES⁴². These include:

- Making sure populations of fish and shellfish are within safe biological limits.
- Maintaining the biological diversity of marine habitats and species .
- Limiting contaminants to the marine environment to levels which do not cause pollution.

The Directive is seen as a ‘sister’ directive to the Water Framework Directive which seeks to secure Good Ecological Status for inland and coastal waters. However, the two Directives apply at very different scales: the Water Framework Directive requires Good Ecological Status to be secured on individual water bodies, the Marine Strategy Framework Directive requires member states to take necessary steps to secure Good Environmental Status across all member state marine waters as one area.

A Statutory Instrument⁴³ transposing the Marine Strategy Framework Directive into UK law came into force on 15 July 2010 and puts in place a clear legal framework to enable the Marine Strategy Framework Directive to be implemented in the UK.

The key requirements of the Directive are as follows:

- An initial assessment of the UK’s marine waters – by July 2012.
- A determination of the characteristics of GES in UK waters – by July 2012.
- Targets and indicators setting for GES – by July 2012.
- Monitoring programmes established – by July 2014.
- Programmes of measures to deliver GES – designed by Dec 2015 and implemented by Dec 2016.

The assessment, targets, indicators and programme of measures are to be developed as part of a requirement to prepare **marine strategies** in order to deliver the aims of the Directive. In the UK, there will be one marine strategy for UK marine waters and the Secretary of State has responsibility for creation of the UK strategy.

The Directive places a strong emphasis on regional co-operation and requires Member States sharing a marine region to cooperate to ensure that the measures required to achieve the objectives of the Directive are coherent and coordinated across the marine region.

MSFD links to MPA management

Establishing a network of MPAs is specifically identified in the Directive as one of the spatial measures necessary as part of the programme of measures in member states marine strategies to

⁴² <http://archive.defra.gov.uk/environment/marine/documents/legislation/msfd-descriptors.pdf>

⁴³ Marine Strategy Regulations (2010).

deliver GES. Securing an ecologically coherent well-managed UK MPA network is therefore central to the UK making good progress towards achieving GES.

Given the overt link described above, the Directive presents a clear opportunity to embed strategic MPA network management requirements in key aspects of the UK MSFD marine strategy, including objectives and targets for GES, and the programme of measures. It is also clear that making the best use of available tools to improve MPA management will also assist in achieving GES for UK waters.

Delivery of the Directive and the UK Marine Strategy will also have direct implications at a Welsh level as the UK Marine Strategy Regulations (2010) specify that devolved administrations must provide the Secretary of State with

- proposals for:
 - (i) the establishment of the monitoring programmes for the devolved marine area
 - (ii) the determination of a programme of measures for the devolved marine area
 - (iii) the review or update of such monitoring programmes or programme of measures
- information, including information for any review or update, to support:
 - (i) the assessment of marine waters for the devolved marine area
 - (ii) the determination of the characteristics of good environmental status for any area within the devolved marine area which is distinct as regards its hydrological, oceanographic and biogeographic features
 - (iii) the development of environmental targets and indicators for any area within the devolved marine area which is distinct as regards its hydrological, oceanographic and biogeographic features

It should therefore be possible to feed national Welsh MPA management objectives directly into key elements of the UK marine strategy for delivery of the Marine Strategy Framework Directive; in particular the targets, monitoring programme and the programme of measures relevant to Welsh waters.

Marine and Coastal Access Act (2009) – new tools

The Marine and Coastal Access Act (2009) (MACA) provides new tools that should help secure an ecologically coherent and well-managed network of the MPAs in the UK. The most relevant new tools include:

- the new Marine Conservation Zone designation
- orders for the protection of MCZs (and European Marine Sites)
- the new byelaw / order powers for fisheries managers which are also relevant to MPA management

These three new tools are considered in more detail below.

Marine Conservation Zones

MCZs are a new designation applicable throughout UK inshore and offshore waters, apart from Northern Irish and Scottish inshore waters. In Wales, the power to designate MCZs rests with the Welsh Ministers via orders that set out the protected features and conservation objectives for the MCZ. The application of MCZs is very broad. MCZs can be designated for the purpose of conserving flora or fauna, marine habitat, or types of habitat and features of geological and geomorphological interest. Designation can be for a variety of purposes, including conserving rare or threatened flora, or more broadly to conserve diversity of flora and fauna, and this may be for conservation and / or recovery purposes.

MCZs therefore provide a new opportunity to conserve and assist the recovery of any elements of biodiversity considered worthy of protection. The designation is not limited by the types of species or habitats it can protect (as with SACs or SPAs), nor is it geographically confined in the marine area (as with SSSIs which do not generally extend seawards of low water, unless previously designated to a lower boundary).

The process of designating MCZs differs from other marine designations in that the designating authority has the power to take account of social and economic issues when deciding whether to designate an MCZ.

Due to the broad application of MCZs, described above, they potentially provide an opportunity to fill any gaps in the MPA network that other sites cannot cover. At present it is Welsh Government policy to use the MCZ designation to designate a small number of highly protected MCZs only. Highly protected MCZs offer a significant opportunity to learn more about the impact of removing / preventing extractive, depositional and other damaging activities from sites. In turn, this should help inform appropriate management measures on others types of MPAs.

Network creation and reporting duty

MCZ provisions also bring together, for the first time in UK legislation, the various marine designations for the purpose of creating a network of conservation site (i.e. Marine Protection Areas), including MCZs, marine SACs, marine SPAs and the marine component of any Ramsar sites and SSSIs (MACA section 123). Authorities with the power to designate MCZs are required to do so to contribute to the creation of a network, that:

- Contributes to the conservation and improvement of the marine environment in the UK marine area.
- Protects the range of features present in the UK marine area.
- Reflects that fact that the conservation of a feature within the network may require the designation of more than one site for that feature.

Associated with this duty to create the network, the MACA also requires designating authorities to report every 6 years (starting with a first report no later than December 2012) on the degree to which they have met the objectives for the network (MACA section 124). The reporting duty also requires a report on the MCZs that have been designated, the extent to which their conservation objectives have been met, and what further work may be needed to meet those objectives.

This new approach, integrating MCZs with other designations, illustrates the policy shift towards considering individual marine designations as component parts of a wider UK MPA network. The network creation and reporting duty provide a new opportunity to consider management of the whole MPA network alongside consideration of ecological coherence in terms of designations.

Duties of public authorities in relation to MCZs

Protection of MCZs shares some similarities with other designations. Protection is primarily through the adherence to conservation objectives which are to be set out in the designating order. Public authorities are required to exercise their functions (including determining decisions on the activities of others e.g. issuing permits, licences etc) in a way that furthers or, where this is not possible, least hinders the conservation objectives of any MCZ. This is similar, although not

identical to the process for SACs and SPAs. Where an impact is anticipated, the authority must inform the conservation body (CCW).

Conservation bodies have the power to issue any advice on a variety of matters including those that affect achievement of the conservation objectives, how conservation objectives may be furthered, and affects mitigated. This provides CCW with the valuable opportunity to provide formal pro-active management advice rather than advising reactively on activities as they occur. Currently unlicensed activities can be managed via Conservation Orders, which are discussed later.

Orders for the protection of MCZs

Associated with the provisions in the MACA for MCZ designations are provisions for orders for the protection of MCZs (byelaws outside Wales). Welsh Ministers have the power to put orders in place (section 138). CCW has the power to advise on the use of orders by virtue of its power to advise on how conservation objectives may be furthered and matters capable of damaging or otherwise affecting MCZ features (Section 127).

The MACA also revokes CCW's byelaw powers in relation to European sites, and instead extends WG's MACA conservation order powers to marine SACs and SPAs as well. MACA conservation orders cannot, however, be used in relation to SSSIs.

The intention is that the main mechanism for the protecting of MCZs will be via the duties on public authorities in carrying out their functions⁴⁴ and in authorising the actions of others through licensing and consenting regimes. As these types of activities are considered the most likely to be capable of significantly hindering a site's ability to meet its objectives. However, it is recognised that unregulated activities can also impact on biodiversity and may hinder the achievement of conservation objectives for MCZs. The purpose of conservation orders is therefore to be able to control or prohibit those activities which are potentially harmful and which would otherwise be left unregulated.

Conservation orders allow regulators to control potentially harmful unregulated activities, including:

- Anchoring and speed of all vessels.
- Access of recreational vessels.
- Entry and movement of people, vehicles and animals.
- Any activities undertaken by people in the water and on the sea-shore.
- Taking of living and non-living natural resources.

The provisions also allow for the use of permits to lawfully undertake any of the activities that conservation orders are able to regulate. The order can also limit the number of permits.

Welsh Ministers can use the standard order-making procedures to bring in orders quickly in an emergency. The MACA also allows for interim orders to allow management of activities on site being considered for designation, but not yet designated as an MCZ (section 136). Conservation orders can apply to one site, or a group of sites.

Enforcement of conservation orders is the responsibility of the Welsh Government.

⁴⁴ Defra (2010).

Benefits of MACA conservation orders

The scope of the conservation order powers allows for regulation of a wide variety of otherwise unregulated activities that can have a significant impact on particular site features.

Government guidance on using conservation orders⁴⁵ (and byelaws in England) advises that they should clearly state as far as possible what is being controlled and the manner in which they are being controlled. This specific nature of the orders relates to one of the improvements conservation orders offer over previous similar byelaw powers for other types of sites, in that an offence is committed if the activity prohibited in the order is committed, rather than having to prove the features of the site have been damaged or disturbed. This makes activity management more straightforward and offences easier to define.

The fact that conservation orders can be used for marine SACs and SPAs as well as MCZs means that there is one key tool for the management of unregulated activities on many (but not all) of the sites in the suite of Welsh MPAs. This could allow for the development of a far more consistent approach to site management issues.

Using conservation orders

CCW commissioned advice on the use of conservation orders to achieve appropriate conservation management of MPAs⁴⁶. This work illustrates that whilst conservation orders offer a useful new management tool, there are a variety of non-regulatory options that should still be considered, such as voluntary agreements, codes of conduct etc. Nevertheless, voluntary mechanisms will not always be appropriate. One of the next steps for CCW should be to lead development of advice to WG on where conservation orders could be used strategically across Welsh MPAs to address currently unregulated activities causing consistent management issues.

Marine Act fisheries orders

The final new tool in the MACA that is directly relevant to the management of MPAs is the new fisheries byelaw power created for Inshore Fisheries and Conservation Authorities (IFCAs) in England. Welsh Ministers also have the power to pass orders for any of the purpose for which IFCAs can pass these new byelaws (sections 189 and 155 - 156).

Of critical importance is the fact that these byelaw powers are applicable to the “prohibition or restriction of exploitation of sea fisheries resources”, and sea fisheries resources means any animals or plants that habitually live in the sea (other than certain specified fish species). The power is therefore very broad and in theory enables Welsh Ministers to control any activity seeking to exploit the sea fisheries’ resource, whether it be in a designated site or not. The true scope of this power will need careful investigation, but in theory it offers a useful and wide ranging tool in the management of activities seeking to exploit features within the MPA network.

Other regulatory mechanism that the byelaw power applies to include permits, vessels, methods and gear, protection of fisheries and shellfish, monitoring of exploitation of resources and information (section 156).

⁴⁵ Defra (2009)

⁴⁶ Gubbay, 2010.

7. SUMMARY & NEXT STEPS

The overall aim of this report is to give an overview of the current arrangements for MPA management in Wales, the number and location of Welsh MPAs and who manages them. This is a factual desktop study to summarise what is happening in relation to MPA management in Wales today with some information on the implications of the Marine Act and wider national and European initiatives for future management.

This overview is the first of two reports produced by CCW on MPA management. The second report provides an evaluation of how Welsh MPAs are current managed together with a list of possible ways forward for how that management could be improved in the future⁴⁷.

Both of these reports inform advice to Welsh Government on how CCW considers management of MPAs in Wales could be improved and how all Welsh MPAs, as part of a wider UK MPA network, could be managed in a coherent, fit for purpose and cost effective way.

⁴⁷ Hatton-Ellis *et al.*, (2012)

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ANNEXES

Box 1.1: Derivation of summary statistics

The suite of EMS in Wales encompasses 125 individual sites comprising SACs, SPAs and Ramsar sites with marine components and SSSIs with marine or intertidal features. Saltmarsh as a feature of SSSIs has led to the inclusion of nine SSSI sites within the suite of MPAs that would otherwise be classified as terrestrial. Saltmarsh sites are noted in Annex 1.2. Calculations of summary statistics on page 15 of this report have not included saltmarsh SSSIs or any areas of marine SACs and SSSIs that extend shoreward above Mean High Water. Where designated sites overlap, only non-overlapping portions of SPAs and SSSIs that lie outside of SACs have been used in calculations to avoid double-counting.

Welsh waters, for the purpose of this report, have included both the intertidal region, i.e. Mean High Water to Mean Low Water, and the Welsh territorial sea region below Mean Low Water out to 12 nautical mile boundary. Cartesian areas (calculated using MapInfo GIS) rather than registered areas as shown in Annex 1.1 have been used to produce summary statistics

Further details can be found in Jones *et al.*, (in prep).

Annex 1.1: European marine site designations, area and features.

Name	Designation	Area (km ²) ¹	Key Features ²
Bae Cemlyn / Cemlyn Bay	SAC	0.43	<ul style="list-style-type: none"> • Coastal lagoons
Bae Ceredigion / Cardigan Bay	SAC	958.60	<ul style="list-style-type: none"> • Submerged or partially submerged sea caves • Sandbanks which are slightly covered by sea water all the time • Reefs • <i>Tursiops truncatus</i> • <i>Halichoerus grypus</i> • <i>Petromyzon marinus</i>
Bae Caerfyrddin ac Aberoedd / Carmarthen Bay and Estuaries (Contained within boundary of SAC:	SAC	661.01	<ul style="list-style-type: none"> • Salicornia and other annuals colonising mud and sand • Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>)
Bae Caerfyrddin / Carmarthen Bay SPA	SPA	334.10	<ul style="list-style-type: none"> • Mudflats and sandflats not covered by seawater at low tide • Large shallow inlets and bays
Burry Inlet SPA & Ramsar) (Burry Inlet SPA & Ramsar have the same area)	SPA/Ramsar	66.23	<ul style="list-style-type: none"> • Estuaries • Sandbanks which are slightly covered by sea water all the time • <i>Petromyzon marinus</i> • <i>Alosa alosa</i> • <i>Alosa fallax</i> • <i>Lutra lutra</i> <p>Features of SPAs:</p> <ul style="list-style-type: none"> • <i>Melanitta nigra</i> • <i>Tadorna tadorna</i> • <i>Anas penelope</i> • <i>Anas crecca</i> • <i>Anas acuta</i>

¹ Registered area of each SAC, SPA or SSSI (including area above MHW) taken from Natura 2000 data form: http://jncc.defra.gov.uk/ProtectedSites/SACselection/SAC_list.asp?Country=W

² Features taken from the JNCC downloadable features lists

Name	Designation	Area (km ²) ¹	Key Features ²
			<ul style="list-style-type: none"> • <i>Anas clypeata</i> • <i>Haematopus ostralegus</i> • <i>Pluvialis squatarola</i> • <i>Calidris canutus</i> • <i>Calidris alpina alpina</i> • <i>Numenius arquata</i> • <i>Tringa totanus</i> • <i>Waterfowl assemblage</i> <p>Extra features in RAMSAR:</p> <ul style="list-style-type: none"> • <i>Tringa nebularia</i> • <i>Tringa erythropus</i> • <i>Numenius phaeopus</i> • <i>Branta bernicla bernicla</i> • <i>Egretta garzetta</i>
Aber Dyfrdwy / Dee Estuary (Total area of SAC in England and Wales = 158.06 km ²) (Total area of SPA in England and Wales = 142.91 km ²) (Total area of Ramsar in England and Wales = 143.02 km ²)	SAC	74.98 ³	<ul style="list-style-type: none"> • Mudflats and sandflats not covered by seawater at low tide • Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) • Salicornia and other annuals colonising mud and sand • Annual vegetation of drift lines • Estuaries • <i>Petromyzon marinus</i> • <i>Tadorna tadorna</i> • <i>Anas acuta</i> • <i>Haematopus ostralegus</i> • <i>Calidris canutus</i> • <i>Limosa lapponica</i> • <i>Tringa totanus</i> • <i>Waterfowl assemblage</i> <p>Extra features of RAMSAR:</p> <ul style="list-style-type: none"> • <i>Numenius phaeopus</i> • <i>Haematopus ostralegus</i> • <i>Numenius arquata</i> • <i>Arenaria interpres</i> • <i>Tringa nebularia</i> • <i>Tringa erythropus</i> • <i>Limosa limosa islandica</i> • <i>Philomachus pugnax</i> • <i>Calidris alpina alpina</i> • <i>Phalacrocorax carbo</i> • <i>Anas crecca</i> • <i>Pluvialis squatarola</i>
	SPA	79.17 ⁴	
	Ramsar	79.44 ⁵	
Glannau Môn: Cors heli / Anglesey Coast: Saltmarsh	SAC	10.58	<ul style="list-style-type: none"> • Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) • Mudflats and sandflats not covered by seawater at low tide • Estuaries • Salicornia and other annuals colonising mud and sand
Cynffig / Kenfig	SAC	11.92	<ul style="list-style-type: none"> • Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>)

³ Welsh portion of site only

⁴ Welsh portion of site only

⁵ Welsh portion of site only

Name	Designation	Area (km ²) ¹	Key Features ²
			<i>Puccinellietalia maritimae</i>
Arfordir Calchfaen de Orllewin Cymru / Limestone Coast of South West Wales	SAC	15.94	<ul style="list-style-type: none"> Submerged or partially submerged sea caves
Sir Benfro Forol / Pembrokeshire Marine (Contained within boundary of SAC: Skomer (<i>list of features - table 2 main report</i>))	SAC MNR	1,380.69 13.24	<ul style="list-style-type: none"> Large shallow inlets and bays Reefs Estuaries Sandbanks which are slightly covered by sea water all the time Mudflats and sandflats not covered by seawater at low tide Coastal lagoons Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) Submerged or partially submerged sea caves <i>Halichoerus grypus</i> <i>Petromyzon marinus</i> <i>Lutra lutra</i> <i>Alosa fallax</i> <i>Alosa alosa</i>
Pen Llŷn a'r Sarnau / Lley Peninsula and the Sarnau (Contained within boundary of SAC: Cors Fochno and Dyfi)	SAC SPA/Ramsar	1,460.23 24.92	<ul style="list-style-type: none"> Sandbanks which are slightly covered by sea water all the time Mudflats and sandflats not covered by seawater at low tide Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) Submerged or partially submerged sea caves Coastal lagoons Salicornia and other annuals colonising mud and sand Large shallow inlets and bays Reefs Estuaries <i>Halichoerus grypus</i> <i>Lutra lutra</i> <i>Tursiops truncatus</i> <i>Anser albifrons flavirostris</i> (SPA) <i>Tringa nebularia</i> (RAMSAR)
Môr Hafren / Severn Estuary (Total area of SAC in England and Wales = 737.15 km ²) (Total area of SPA and Ramsar in England and Wales = 246.63 km ²)	SAC SPA/Ramsar	266.93 ⁶ 68.89 ⁷	<ul style="list-style-type: none"> Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) Estuaries Mudflats and sandflats not covered by seawater at low tide Reefs Sandbanks which are slightly covered by sea water all the time River lamprey (<i>Lampetra fluviatilis</i>) Sea lamprey (<i>Petromyzon marinus</i>) Twaite shad (<i>Alosa fallax</i>)

⁶ Welsh portion of site only

⁷ Welsh portion of site only

Name	Designation	Area (km ²) ¹	Key Features ²
			<p>SPA Features:</p> <ul style="list-style-type: none"> • <i>Cygnus columbianus bewickii</i> • <i>Tadorna tadorna</i> • <i>Anas strepera</i> • <i>Calidris alpina alpina</i> • <i>Tringa totanus</i> • <i>Anser albifrons albifrons</i> • Waterfowl assemblage <p>Extra features of RAMSAR:</p> <ul style="list-style-type: none"> • <i>Larus argentatus</i> • <i>Egretta garzetta</i> • <i>Cygnus columbianus bewickii</i> • <i>Larus fuscus</i> • <i>Anas clypeata</i> • <i>Numenius phaeopus</i> • <i>Tringa nebularia</i> • <i>Tringa erythropus</i> • <i>Philomachus pugnax</i> • <i>Calidris alpina alpina</i> • <i>Charadrius hiaticula</i> • <i>Rallus aquaticus</i> • <i>Numenius arquata</i> • <i>Aythya ferina</i> • <i>Anas acuta</i> • <i>Anas strepera</i> • <i>Anas penelope</i> • <i>Anas crecca</i>
Y Fenai a Bae Conwy / Menai Strait and Conwy Bay (Contained within boundary of SAC: Traeth Lafan / Lavan Sands, Conway Bay)	SAC SPA	264.83 26.43	<ul style="list-style-type: none"> • Submerged or partially submerged sea caves • Mudflats and sandflats not covered by seawater at low tide • Reefs • Sandbanks which are slightly covered by sea water all the time • Large shallow inlets and bays • <i>Podiceps cristatus</i> • <i>Haematopus ostralegus</i> • <i>Numenius arquata</i>
Liverpool Bay (Total area of SPA in England and Wales = 1,702.93 km ²)	SPA	753.43 ⁸	<ul style="list-style-type: none"> • <i>Gavia stellata</i> • <i>Melanitta nigra</i> • >20,000 waterfowl in any one season
SSSIs with intertidal and marine features ⁹	SSSI	650.40	<ul style="list-style-type: none"> • See Annex 1.2

Annex 1.2: SSSI with notified or qualifying intertidal or marine features and/or notified or qualifying saltmarsh (S)

⁸ Welsh portion of site only

⁹ Includes nine SSSI with saltmarsh feature with an area of 56.21 km²

SSSI Name	SSSI Name
Aber Afon Conwy	Glanllynau a Glannau Pen-Ychain i Gricieth
Aber Mawddach/Mawddach Estuary	Glannau Aberdaron
Aber Taf / Taf Estuary (S)	Glannau Penmon - Biwmares
Aberarth-carreg Wylan	Glannau Porthaethwy
Afon Dyfrdwy / River Dee (S)	Glannau Rhoscolyn
Afon Teifi (S)	Glannau Tonfanau i Friog
Afon Tywi (S)	Glannau Ynys Gybi: Holy Island Coast
Allt Wen a Traeth Tanybwlech	Glaslyn (S)
Arfordir Abereiddi	Go wer Coast: Rhossili to Porteynon
Arfordir Gogleddol Penmon	Grassholm / Ynys Gwales
Arfordir Marros-Pentywyn / Marros-Pendine Coast	Gronant Dunes and Talacre Warren
Arfordir Niwglwl - Aber bach / Newgale to Little Haven Coast	Gwydir Bay
Arfordir Pen-bre / Pembrey Coast	Hook Wood (S)
Arfordir Penrhyn Angle / Angle Peninsula Coast	Horton, Eastern and Western Slade
Arfordir Saundersfoot - Telpyn / Saundersfoot - Telpyn Coast	Lydstep Head to Tenby Burrows
Beddmanarch - Cymyran	Merthyr Mawr
Blackpill, Swansea	Milford Haven Waterway
Borth - Clarach	Monknash Coast
Bracelet Bay	Morfa Dyffryn
Broadwater	Morfa Harlech
Burry Inlet and Loughor Estuary	Morfa Uchaf Dyffryn Conwy (S)
Castlemartin Cliffs and Dunes	Mynydd Penarfynnydd
Caswell Bay	Mynydd Tir Y Cwmwd a'r Glannau at Garreg Yr Imbill
Cemlyn Bay	Newborough Warren - Ynys Llanddwyn
Coedydd Afon Menai	Newport Cliffs
Craigyfulfran & Clarach	Oxwich Bay (S)
Creigiau Aberarth-Morfa	Pen y Gogarth / Great Ormes Head
Creigiau Cwm-Ceriw a Ffos-Las (Morfa Bychan)	Penard Valley (S)
Creigiau Pen y graig	Penarth Coast
Creigiau Rhiwledyn / Little Ormes Head	Penrhynoedd Llangadwaladr
Crymlyn Burrows (S)	Porth Ceiriad Porth Neigwl ac Ynysoedd Sant Tudwal
Cynffig / Kenfig	Porth Dinllaen i Borth Pistyll
Dale and South Marloes Coast	Porth Towyn i Borth Wen
De Porth Sain Ffraid / St Bride's Bay South	Puffin Island / Ynys Seiriol
Dee Estuary / Aber Afon Dyfrdwy	Pwll-Du Head and Bishopston Valley
Dyfi	Ramsey / Ynys Dewi
East Aberthaw Coast	Rhosneigr Reefs
Flat Holm	Severn Estuary
Freshwater East Cliffs to Skrinkle Haven	Skokholm
Skomer Island and Middleholm	Traeth Llanon

Southerndown Coast	Traeth Lligwy
St. David's Peninsula Coast	Twyni Chwitffordd Morfa Landimor a Bae Brychdwn / Whiteford Burrows etc
St. Margaret's Island	Twyni Lacharn - Pentywyn / Laugharne – Pendine Burrows
Stackpole	Ty Croes
Stackpole Quay - Trewent Point	Tywyn Aberffraw (S)
Strumble Head - Llechdafad Cliffs	Waterwynch Bay to Saundersfoot Harbour
Sully Island	Wig Bach a'r Glannau i Borth Alwm
Tenby Cliffs and St. Catherine's Island	Y Foryd
The Offshore Islets of Pembrokeshire / Ynysoedd Glannau Penfro	Ynys Enlli
The Skerries	Ynys Feurig
Tiroedd a Glannau Rhwng Cricieth ac Afon Glaslyn	Ynysoedd Y Gwylanod, Gwylan Islands
Traeth Lafan	

Annex 1.3: Features currently notified in Welsh SSSIs.

<i>Latin Name</i>	<i>Common Name</i>
<i>Alkmaria romijni</i>	Tentacled Lagoon Worm
<i>Alosa alosa</i>	Allis shad
<i>Alosa fallax</i>	Twaite shad
<i>Anguilla anguilla</i>	European Eel
<i>Gigartina pistillata</i>	A red seaweed
<i>Halichoerus grypus</i>	Grey seal
<i>Ophelia bicornis</i>	A Polychaete worm
<i>Osmerus esperanus</i>	Smelt
<i>Paludinella littorina</i>	Lagoon snail
<i>Pectenogammarus planicrurus</i>	A gammarus
<i>Petromyzon marinus</i>	Sea lamprey
<i>Salmo salar</i>	Atlantic salmon
<i>Stelletta grubii</i>	A sponge
<i>Thia scutellata</i>	Thumbnail crab
<i>Thymosia guernei</i>	A sponge
<i>Truncatella subcylindrica</i>	Looping snail
<i>Tursiops truncatus</i>	Bottlenose dolphin
Assemblages	
<i>Saltmarsh invertebrate assemblage</i>	
<i>Coastal invertebrate assemblage</i>	
Birds: Latin Name	Common Name
<i>Alca torda</i>	Razorbill
<i>Anas acuta</i>	Northern pintail
<i>Anas clypeata</i>	Northern shoveler
<i>Anas crecca</i>	Common teal
<i>Anas penelope</i>	Eurasian wigeon
<i>Anser albifrons flavirostris</i>	Greenland white fronted goose
<i>Arenceria interpres</i>	Ruddy turnstone
<i>Calidris alba</i>	Sanderling
<i>Calidris alpina alpina</i>	Dunelin
<i>Calidris canutus</i>	Red knot
<i>Charadrius hiaticula</i>	Little ringed plover
<i>Charadrius dubius</i>	Ringed plover
<i>Fratercula arctica</i>	Arctic puffin
<i>Gallinago gallinago</i>	Snipe
<i>Haematopus ostalegus</i>	Oyster catcher
<i>Hydrobates pelagicus</i>	Storm petrel
<i>Larus fuscus</i>	Lesser black backed gull
<i>Limosa lapponica</i>	Bar-tailed Godwit
<i>Limosa limosa islandica</i>	Black-tailed Godwit
<i>Mergus serrator</i>	Red breasted Merganser
<i>Numerius arquata</i>	Curlew
<i>Phalacrocorax carbo</i>	Cormorant
<i>Pluvialis squatarola</i>	Grey plover

<i>Pluvialis apricaria</i>	Golden plover
<i>Podiceps cristatus</i>	Great crested grebe
<i>Puffinus puffinus</i>	Manx Shearwater
<i>Rissa tridactyla</i>	Kittiwake
<i>Sterna albifrons</i>	Little tern
<i>Sterna dougallii</i>	Roseate tern
<i>Sterna hirundo</i>	Common tern
<i>Sterna paradisaea</i>	Arctic tern
<i>Sterna sandvicensis</i>	Sandwich tern
<i>Tachybaptus ruficollis</i>	Little grebe
<i>Tadora tadorna</i>	Shelduck
<i>Tringa nubularia</i>	Greenshank
<i>Tringa totanus</i>	Redshank
<i>Uria aalge</i>	Guillemot
<i>Vanellus vanellus</i>	Lapwing
Bird Assemblages	
<i>Breeding bird assemblages of sandunes and saltmarshes</i>	
<i>Breeding Seabird Colony</i>	
Habitats	
Caves and overhangs	
Chalk and very soft rock	
Eel grass	
Estuaries	
Exposed rock	
Exposed sand	
Isolated saline lagoon	
Mixed substrata	
Moderately exposed rock	
Moderately exposed sand	
Muddy gravel	
Percolation saline lagoon	
Rockpools	
Saltmarsh	
Sand influenced biogenic reefs	
Sheltered mud	
Sheltered rock	
Silled saline lagoon	
Soft piddock bored substrate	
Surge gullies	
Tide swept algae	
Underboulders	