



CARMARTHEN BAY AND ESTUARIES EUROPEAN MARINE SITE

comprising

Carmarthen Bay and Estuaries Special Area of Conservation

Burry Inlet Special Protection Area and Ramsar Site

Carmarthen Bay Special Protection Area

WORKING DRAFT

MANAGEMENT SCHEME

Produced by Blaise Bullimore, Carmarthen Bay & Estuaries European Marine Site Officer,
on behalf of the Carmarthen Bay & Estuaries EMS Relevant Authorities Group

January 2013

*(with revision to accommodate creation of Natural Resources Wales and dissolution of Countryside Council
for Wales and Environment Agency Wales April 2013)*

www.cbeems.org.uk

Purpose of this management scheme

- 1 The Carmarthen Bay and Estuaries European Marine Site (EMS) is part of a series of conservation areas extending across Europe, the *Natura 2000* network, designated under the European Union Habitats and Birds Directives¹. These designations bring statutory responsibilities for public bodies to safeguard the nature conservation interests of the site and for the UK Government to ensure that the requirements of the Directives are met and that suitable site management is delivered.
- 2 The relevant authorities for this site have produced this management scheme collectively to contribute to fulfilling their statutory obligations.

The vision for the Carmarthen Bay and Estuaries European Marine Site is one of a quality marine environment, where the habitats and species of the site are in a condition as good as or better than when the site was selected, where human activities co-exist in harmony with the site's habitats and species and where use of the marine environment within the EMS is undertaken sustainably.

- 3 This management scheme sets the framework within which activities affecting the Carmarthen Bay and Estuaries EMS needs to be managed; it contributes to meeting the obligations arising from the Habitats and Birds Directives and to fulfilling the requirements of the UK Habitats Regulations. Management of this EMS also contributes to meeting other UK obligations such as the OSPAR Convention and other EU directives, such as the Marine Strategy Framework Directive².
- 4 The scheme has been developed to:
 - improve existing management, better co-ordinate work between management bodies and aid decision-making;
 - explore and assess pressures and threats likely to affect the designated features;
 - identify where further information is needed and / or action is required to manage activities to minimise their impact;
 - monitor management of the site;
 - collect and collate information on activities occurring within the site;
 - raise awareness about the site and encourage support for its conservation management.

- 5 The establishment and implementation of the scheme is the responsibility of the relevant authorities as defined in the Habitats Regulations, who are committed to working collaboratively as the Relevant Authorities Group (RAG). This scheme is an expression of their commitment to working together to fulfil their collective responsibility for realising the vision for the site.
- 6 The scheme describes the EMS, the pressures on it and the responsibilities for its management. It identifies the approach to its management and the courses of action necessary for relevant authorities. It also identifies pressure-causing activities subject to regulation and management by competent authorities that are judged by the RAG to require improved management to enable the Site to meet the aims of the Habitats and Birds Directives. It is a long-term framework that will be reviewed regularly and revised as required.
- 7 In addition to meeting the conservation requirements of the site, management must also give due regard to the conservation requirements of other nearby *Natura 2000* sites and protection of *Natura 2000* listed species whether or not they are within designated protection areas.
- 8 The success of this scheme is not only dependent on the statutory authorities and their management measures, but also all stakeholders in the site; all have a part to play in giving due consideration to the conservation needs of the EMS in all that they do.

RAG collaboration added value:

- shared overview of the EMS's management and management needs
- shared solutions to cross-sectoral issues
- efficient integrated public awareness raising and understanding of the EMS's conservation value and management
- integrated liaison with stakeholders and the public
- shared information resources, open and informed communication
- efficient monitoring and reporting on site management outcomes in the context of the EMS's conservation objectives

Further detail on the legislative background is detailed in Technical Annex 1: *Background*.

Management responsibilities

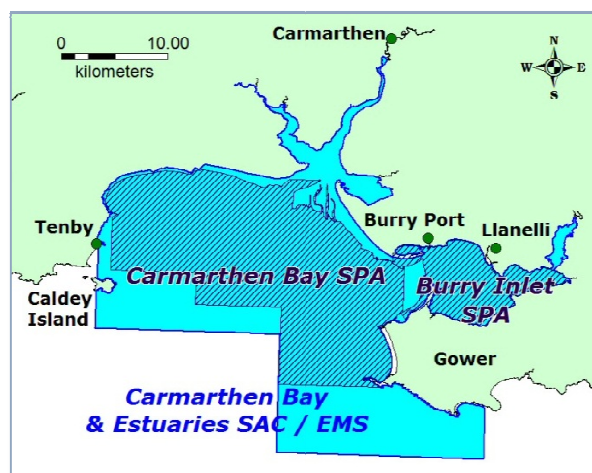
- 9 Responsibility for ensuring compliance with the Habitats and Birds Directives lies with the UK and Wales governments, but the task of securing the conservation management of individual sites is in part delegated to relevant authorities. Relevant authorities are both individually accountable for meeting their own specific obligations and jointly responsible for the management scheme.
- 10 The relevant authorities for this site agree that they are able to more effectively achieve the aims of the Habitats Directive working together collaboratively as the RAG rather than acting alone. This Group has no independent statutory authority or powers but serves to ensure that all responsible authorities contribute to the scheme.
- 11 The relevant authorities comprising the Carmarthen Bay and Estuaries EMS RAG are:
 - Carmarthenshire County Council
 - City and County of Swansea
 - Dŵr Cymru Welsh Water
 - Natural Resources Wales ¹
 - Pembrokeshire Coast National Park Authority
 - Pembrokeshire County Council
 - Saundersfoot Harbour Commissioners
 - Trinity House Lighthouse Service
- 12 Each is an equal member of the RAG, though Trinity House is a corresponding member and Saundersfoot Harbour Commissioners are silent partners.
- 13 Some key statutory responsibilities relevant to EMS conservation management in Wales, such as fisheries management, are vested in government rather than relevant authorities. Several other competent authorities also have important roles in delivery of essential site management, including:
 - Ministry of Defence
 - Maritime and Coastguard Agency
 - National Trust
 - Crown Estate
- 14 The involvement and contribution of these competent authorities is critical to the scheme's success.
- 15 Natural Resources Wales (NRW) is additionally responsible for providing advice, known as *Regulation 35 advice*, on the conservation objectives for the site and on operations that may cause damage or disturbance.

¹ NRW replaced Countryside Council for Wales and Environment Agency Wales on 1 April 2013.

- 16 The RAG agree that their objectives will be best met by employing an officer to coordinate management scheme work on their behalf and consider that the long term role of this EMS Officer is crucial to maintaining ongoing implementation of the scheme.

Carmarthen Bay and Estuaries EMS

- 17 The EMS encompasses three *Natura 2000* sites: Carmarthen Bay & Estuaries Special Area of Conservation (SAC), Burry Inlet Special Protection Area (SPA) and Ramsar site and Carmarthen Bay SPA. The EMS and SAC share a common boundary.



Carmarthen Bay and Estuaries European Marine Site

- 18 The whole of the intertidal area within the site is designated as Sites of Special Scientific Interest (SSSI).

Carmarthen Bay and Estuaries Special Area of Conservation (2004)

- 19 The SAC is designated for six Habitats Directive Annex 1 habitat and five Annex 2 species features:
 - **Sandbanks which are slightly covered by seawater all the time:** Helwick Bank and associated sediments.
 - **Estuaries:** Burry Inlet / Loughor Estuary and the Three Rivers, Taf, Tywi and Gwendraeth, system.
 - **Large shallow inlets and bays:** Carmarthen Bay.
 - **Mudflats and sandflats not covered by seawater at low tide:** a highly variable habitat characterising a range of different environmental conditions; they are distributed throughout the large shallow inlets and bays and estuaries.
 - **Salicornia and other annuals colonising mud and sand:** distributed sporadically in areas of suitable estuary habitat.

- **Atlantic salt-meadow:** distributed widely within the estuaries; Burry Inlet encompasses the largest expanse of salt-marsh in Wales.
 - **Twaite shad** (*Alosa fallax*), **allis shad** (*Alosa alosa*), **sea lamprey** (*Petromyzon marinus*) and **river lamprey** (*Lampetra fluviatilis*).
 - **Eurasian otter** (*Lutra lutra*).
- 20 The habitat features are distributed discontinuously throughout the site and several overlap in places. Further information and indicative distribution maps of the habitat features are provided in CCW's *Regulation 35 advice* document. Formal summary information provided to the European Commission by the UK is available from the Joint Nature Conservation Committee website ³.

Burry Inlet Special Protection Area and Ramsar site (1992)

- 21 Burry Inlet is the most important wholly Welsh estuary for overwintering wetland birds and is classified as an SPA for a range of waders and wildfowl.
- 22 Ramsar sites are wetlands of international importance designated under the 1971 Ramsar Convention. The Ramsar designation is for the same birds as the SPA plus plants, invertebrates, other birds and mammals, most of which are also included within the SAC.
- 23 The habitat of the SPA features comprises the SAC features *estuaries, mudflats and sandflats not covered by seawater at low tide*, and *Atlantic salt-meadows*.

Carmarthen Bay Special Protection Area (2003)

- 24 Carmarthen Bay is of particular UK importance for migratory and overwintering sea duck, common scoter (*Melanitta nigra*). The scoter's habitat comprises the SAC feature *large shallow inlets and bays*.
- 25 Formal summary SPA information provided to the European Commission is available from the Joint Nature Conservation Committee website and the SPA site maps are available from CCW's website.

Current condition of designated features

- 26 The most contemporary formal assessment of the site's features is provided by the UK's second Habitats Directive report to the European Commission in 2007; this comprised the first assessment of conservation status of habitats and species of Community interest ⁴.
- 27 The assessment acknowledged that there were gaps in information for some habitats and species and that the assessment of current condition was necessarily in part based upon pre-existing knowledge of the site. Nevertheless, some of the site's features, including *Estuaries* and *Atlantic salt-meadow*, were reported as unfavourable, and recent evidence suggests that some

of the positive feature assessments reported for the site may have been over-optimistic.

- 28 The assessment did not include SPA bird features but recent evidence, such as downward trends in oystercatcher population size and falls in overwintering scoter numbers over several years, suggests that some SPA features are at risk of being reported as unfavourable at the next reporting round.

Socio economic importance

- 29 The site is used by a wide range of stakeholders for many diverse activities. For example, tourism generates considerable revenue for the local economy, the site is of considerable recreational and leisure importance to surrounding communities and it is a local fisheries resource. It also has a vital role in contributing to a wide range of ecosystem services which together provide global life support systems essential to humanity.



A more detailed description of the site is provided in Technical Annex 1: *Background*.

Management aims and principles

- 30 The strategic aim of the management scheme (Regulation 36, Habitats Regulations) is the establishment and implementation of conservation measures necessary to secure compliance with the Habitats Directive; specifically by:
- meeting the requirements of the EU Habitats and Birds Directives by securing long-term maintenance of the site's features in *favourable conservation status* (FCS), as defined in the Habitats Directive ⁵, safeguarding them and their natural habitat structures and functions from damage or significant disturbance;
 - meeting the obligations of UK Habitats Regulations;
 - setting the framework within which consented and unconsented activities in the site will be managed by relevant authorities;
 - assisting relevant authorities to review, and maintain under review, the management of the site, identifying changes to current management that

may be required to meet the conservation objectives;

- maintain under review pressures and threats from activities managed by competent authorities which require management to deliver FCS;
 - integrating management activities, securing collaboration in cross-cutting activities and positively influencing the environmental sustainability of relevant sectoral, spatial and regional plans and strategies insofar as they relate to the site;
 - providing a compilation of the undertakings of each relevant authority;
 - integrating with other relevant strategies;
 - raising public awareness of the site's biodiversity and conservation importance.
- 31 The scheme is designed as a long-term, rolling programme with a time-scale of 25 years, as recommended by government guidance. It will be substantially reviewed and revised at six yearly intervals in line with the EU reporting cycle.
- 32 The scheme acknowledges the vital importance of Carmarthen Bay and its tributary estuaries' to the local economies of Carmarthenshire, Pembrokeshire and Swansea-Gower and the area's long history of diverse human activity and use. Management of the site to ensure that the conservation objectives are met must also strive to accommodate this wide range of activities with minimal interruption.
- 33 The scheme is founded on the principles of:
- **Favourable conservation status** - informed by CCW's *Regulation 35 advice*.
 - **Focus on designated features** - taking account of the scope of favourable conservation status defined in the Habitats Directive.
 - **Using the best available information** - the scheme encourages the exchange and sharing of all information relevant to effective collaborative working between relevant and competent authorities and stakeholders.
 - **Implementing the precautionary principle** - where there is doubt or lack of knowledge ⁶.
 - **Sustainability** - providing a framework to enable activities to be undertaken in environmentally sustainable ways, integrating social and economic objectives with the site's conservation objectives.
 - **Appropriate and fit-for-purpose management** - management based on threat or risk, proportionate, integrated with existing measures without duplication where possible, and collective and collaborative where responsibility for management measures is not clear-cut or cannot be identified.

- **Objective determination of management requirements and solutions by consensus** - derived from objective assessment of threats and risks, taking account of cumulative and in-combination effects, and historical and global influences.
- **Regular monitoring, review and evaluation** - of achievement of objectives and compliance with management measures and commitments.
- **Adaptive management** - revision of management informed by feedback from monitoring.
- **Minimal possible additional regulation** - identifying management solutions that use existing regulatory powers wherever possible and voluntary solutions where likely to be effective.
- **Public support** - willing participation of everyone in any way concerned with the site is important to the success of the management scheme.

Conservation objectives

- 34 The conservation objectives for this site are set out in CCW's *Regulation 35 advice* document ⁷. This scheme acknowledges that, because the marine environment is very dynamic and since knowledge of the site and its features will develop continuously, this advice will always be subject to review and revision in order to remain valid and contemporary.
- 35 The Habitats Directive requires that measures be designed to maintain or restore habitats and species of European Community importance at *favourable conservation status* (FCS). Conservation objectives are a site-specific expression of FCS and set the standards which must be met if the designated features are to be at FCS; they enable proactive determination of the management needs of the site in order to conserve the features and set the standard against which the appropriateness of management can be judged in retrospect.
- 36 The "advice on operations which may cause deterioration or disturbance" detailed in the *Regulation 35 advice* identifies those activities which CCW considers may have potential adverse effects and could degrade the features of the site, with accompanying information on the factors through which they may affect the feature and which aspects of the feature may be affected. It contributes to the identification of management measures necessary to secure features at FCS by outlining in broad terms the likely actions required to minimise such effects, and to identifying plans or projects that would be likely to have a significant effect and require appropriate assessment.

Water quality environmental outcome

- 37 Further to the conservation objectives, a Water Quality Environmental Outcome has been developed to:

“Ensure that the Carmarthen Bay & Estuaries EMS is not at risk of eutrophication through elevated nutrient levels to achieve the long-term objective that the Carmarthen Bay & Estuaries EMS will be in mesotrophic status in line with the sites conservation objectives.”

Pressures and threats

- 38 The RAG’s agreed strategy for the development of this scheme was to objectively assess all possible pressures and threats to features, using the best available information, and to identify a full inventory of management requirements necessary to secure and maintain the features in FCS.
- 39 Current and foreseeable activities, their current management, the pressures they have the potential to exert and the threats and potential risks they pose to the site’s features have been systematically assessed, informed by the CCW Regulation 35 advice and the Habitats Directive list of *Impacts and Activities Influencing the Conservation Status of the Site*, and the need for their additional management identified. These assessments are detailed in Technical Annex 2: *Assessment of pressures and threats*, and form the rationale for the long term management requirements identified as necessary to maintain the site in FCS in Technical Annex 3: *Long term management objectives and actions*.
- 40 The implementation of plans and projects may generate direct pressures on the site or influence current or future activities and their management. Although there are distinct statutory processes for assessment and authorisation of plans and projects, in many cases their effects may be inextricably linked to the effects of everyday activities. This scheme therefore takes into account developments and plans which could directly or indirectly undermine the conservation objectives.
- 41 Marine ecosystems are naturally dynamic and subject to natural influences and random events. It is not possible to manage marine ecosystems to achieve desired outcomes, but only to manage human activities which risk degrading or inhibiting natural states or processes. However, the detailed information necessary to make wholly objective decisions about management may be lacking; for example, information on the distribution and intensity of many human activities and exactly how much human pressure the marine environment can tolerate. Since degradation of the marine environment has occurred, and is ongoing, decisions on reduction of risks or mitigation of consequences must be taken despite these knowledge limitations.
- 42 Pressure on the site’s features leading to either the threat of or actual degradation of conservation status may be caused, alone or in combination, by:
 - activities and operations in or near the site which have a direct or indirect negative influence;
 - exogenous broad-scale, possibly global, human influences;
 - developments and plans;
 - management initiatives unrelated to site requirements;
 - long-term changes resulting from historical human impacts and recovery from them.
- 43 The significance of detrimental effects depends on the longevity and scale of pressures and the sensitivity of what is affected. Environmental pressures that do not represent potential threats to the site’s features fall outside the scope of this scheme and are not considered.
- 44 A wide range of other management plans, strategies and schemes may contribute to, or at least should not compromise, achievement of FCS for the site and its features. Some of these are complementary environmental initiatives; others include statutory and non-statutory plans for different purposes altogether, but which must take account of or contribute to achieving the conservation objectives for the site.
- 45 The conservation management of the EMS features is underpinned by other conservation legislation, designations and management, particularly SSSI, and contributes to the delivery of other nature conservation objectives, or objectives of related conservation plans & schemes; for example, OSPAR Marine Protected Areas and Water Framework Directive and Marine Framework Strategy Directive goals. EMS management is also considered a key means for delivering UK, Wales and local Biodiversity Action Plan objectives.

Further detail of the management planning process is provided in Technical Annex 1: Background.

Key issues

- 46 Current pressures or threats requiring appropriate management, and also further investigation, include:
 - levels of exploitation of ecologically important shellfish species such as cockles, mussels and mussel seed, whelks;
 - effects of hard engineered coastal defence works;
 - nutrient enrichment and water quality in estuaries;
 - bait collection pressures, particularly digging for marine worms;
 - disposal of wastes and debris;

- diffuse, catchment scale pollution and agricultural run-off;
- coastal development and consequential pressures on the site;
- over-grazing on saltmarshes;
- high speed power craft;
- poor public awareness, understanding or interest.

47 The site is at potential risk from activities that either do not occur at the present time or occur at low intensity, but which have the potential to be introduced or expanded, such as:

- molluscan shellfish culture;
- aggregate extraction;
- land claim, particularly of saltmarshes, and unregulated foreshore development;
- toothed and hydraulic shellfish dredging and other mechanical shellfish collection;
- renewable energy generation.

48 Some activities may be adversely affecting features but there is insufficient information to make confident assessments. More information is needed on the distribution, timing and intensity of many activities and pressures, but issues considered to require priority action to expand the knowledge base include:

- all forms of commercial fishing activity and commercial intertidal species collection;
- military activity;
- recreational sea angling;
- shellfish processing;
- bait collection of all kinds;
- the effect of localised pressures arising from coastal settlements;
- recreational high speed boating and water-sports;
- wildfowling;
- unregulated rubbish disposal, particularly of inorganic wastes and debris;
- vessel maintenance;
- unregulated coastal protection and land claim;
- marine wildlife watching and 'eco-tourism'.

49 In addition to activities that directly exert pressure or pose threats, many other local and global human pressures are relevant to the condition of the site's features and need to be taken into account in strategic planning and consenting, such as:

- coastal squeeze, for example from protected coastal railway tracks acting as coastal defences and preventing the inland migration of coastal habitats;
- fisheries management capacity;

- mass mollusc (cockle) mortality events;
- residual legacy heavy metals from industry and redundant coalmines in estuary catchments;
- climate change effects, (temperature, acidification, sea level rise, storminess).

The assessment process and assessments of effects of activities on features are detailed in Technical Annex 2. These 'risk assessments' also identify where management action is likely to be required and, where appropriate, the nature of that action. The list of activities and operations considered was not necessarily exhaustive nor definitive; some may have been overlooked and others may well arise in the future and need to be considered. The list and assessment of potential effects will be regularly reviewed to reflect current use of the site and new information as it becomes available.

Monitoring, review and reporting

50 Management of the EMS is a dynamic, long-term task and its efficacy will be improved by an adaptive approach – learning from success and failure, and adjusting management accordingly. An essential prerequisite for adaptive management is collection of relevant information and its critical assessment. This will require effective monitoring or surveillance of:

- feature condition and causes of degradation or threat;
- the distribution and intensity of pressure-causing activities;
- whether agreed management measures are in place, being implemented, working as planned and being effective;
- the effectiveness of management by competent authorities;
- compliance with management measures, consent conditions and other relevant legislation;
- activities or measures that fall outside the remit of the relevant authorities;
- the effectiveness of this scheme.

51 The management scheme will be fully reviewed every six years, in line with the European Union's six year *Natura 2000* reporting cycle, to assess the overall effectiveness of the scheme in adequately addressing the issues and activities which impact on the conservation status of the EMS features. The long term management measures and actions will be reviewed annually. These reviews will be informed by determination of how well the conservation objectives are being achieved and from other sources of information which indicate whether and how the identified management requirements need amendment.

- 52 The relevant authorities, as the bodies with the statutory responsibility for preparing and implementing the scheme, share the responsibility for its review and revision and have individual responsibility for reviewing their contributory measures.
- 53 Reporting on management implementation is an integral part of the monitoring process. To demonstrate compliance with the requirements of the Habitats Directive, annual reports on progress will be produced by the RAG for presentation to parent authorities, Welsh Government, competent authorities, stakeholders and local communities. These reports will also inform the UK's required six yearly reporting to the European Commission on the measures taken under the Directive and on the conservation status of the EMS features.
- 54 Whilst each of the statutory authorities are responsible for undertaking the necessary monitoring, review and reporting of the management and issues under their jurisdiction, the RAG, through their EMS Officer, will coordinate collaborative tasks. These will include collating information on compliance monitoring of the scheme from each of the responsible authorities and including this information in annual progress reports.

Management overview

- 55 The assessment of pressures and threats described above enabled identification of long term management objectives which describe the outcomes considered necessary to contribute to meeting the conservation objectives for the site and a range of high level actions to deliver them.
- 56 These detailed long term objectives and strategic actions are described in Technical Annex 3. They are not prescriptive but identify where individual specific actions by responsible authorities are necessary and where conservation management advice needs to be provided by NRW.
- 57 Management action is required to:
- eliminate or reduce pressures on site features;
 - further gather and assess information on known and potential pressures and threats;
 - raise awareness of the environmental importance of the site and its management needs with the public, stakeholders, policy makers and managers, to encourage a sustainable approach to the use of the site.
- 58 Many actions need to be cross-sectoral or involve more than one responsible authority and will benefit from being implemented in partnership; for example integrated collaborative action will be essential to best raise and maintain a high level of awareness of the site and its management amongst policy makers, coastal managers and stakeholders.
- 59 Although the processes for authorisation of plans and projects differ from management of current and future activity, consented operations may both directly affect the site and enable consequential activities that require new or additional management. Whilst assessment of plans and projects (*Habitats Regulations Assessment – HRA*) needs to take account of both existing activities and activities that are likely to result as a outcome of permitting projects or implementing plans, this scheme also takes account of developments and plans and their likely consequential activities and the resultant need for subsequent management.
- 60 Many existing management strategies, plans and initiatives contribute to protecting the site's features. Where appropriate, these are identified to highlight the relevant connections, embed them into this scheme, avoid duplication and to identify the need for them to specifically take the site into account.
- 61 This scheme makes no attempt to dictate to individual responsible authorities the specific actions necessary to deliver long term objectives, or how to deliver those actions. Each authority is responsible for identification of specific measures, and for reporting on the implementation and efficacy of those measures.
- 62 The identification of management measures to secure the site in FCS does not imply that it will be straightforward to deliver the necessary actions or that there will be adequate resources, legal mechanisms or mandates for taking action.



European otter *Lutra lutra*

- 63 Minimizing or eliminating the pressures and threats to the site's features and securing the site at FCS will be best achieved by the following management:

STRATEGIC

- taking the site's conservation objectives into account in all relevant strategic development and spatial plans and policies and management plans and initiatives;
- maintaining under review all such plans, policies and initiatives to take account of emerging issues, new or improved information on gaps or shortcomings in management and additional necessary measures, and feedback from monitoring;
- ensuring development and spatial plans, policies and strategies protect estuarine floodplains and undeveloped coastal fringes from development so that natural change and estuary evolution may occur unimpeded;
- ensuring applicable best environmental practices are embedded in all relevant management plans and that responses to environmental pressures are strategically planned so as not to further intensify pressures or threats to the site's features;
- contributing to other management initiatives supportive of securing the site at FCS, *eg* Biodiversity Action Plans and Marine Spatial Planning;
- ensuring that collaboration between relevant and competent authorities integrates cross-sectoral management and sharing of resources, and secures the infrastructure and resources necessary for the long term maintenance of the collaborative forum of the RAG and the implementation of this scheme;

AWARENESS RAISING, ENGAGEMENT AND INFLUENCING

- securing high level of awareness of the site and its management requirements amongst strategy and policy decision makers, planners, operational managers and tourism and leisure promoters;
- securing public and stakeholder awareness and understanding of the EMS and its management appropriate to encourage engagement and positively influence public behaviour;
- routinely sharing and reporting management and monitoring information between responsible authorities to inform management planning and review, HRAs and FCS assessment, regularly reporting and placing monitoring and assessment information in the public domain to maximise transparency;

CONSENTING (all consents, permissions or permits)

- undertaking appropriate HRA of all consent applications, taking account of the site's conservation objectives and potential operational and maintenance consequences of developments and plans, and following best practice for HRA consultation, including early and appropriate liaison with CCW to ensure appropriate consideration of the site's conservation objectives;
- ensuring that, when plans or projects are consented, conditions on consents include, as appropriate:
 - enforceable management plans,
 - provisions to ensure compliance monitoring of such plans,
 - management feedback provisions linked to monitoring to enable adaptive management,
 - appropriate environmental monitoring of consented and consequential operations;

SECTOR SPECIFIC MANAGEMENT

- fully taking the site's conservation objectives into account in the management of all sectoral activities:
 - management and maintenance of civil engineered coastal, foreshore and marine structures; for example coastal defences,
 - effluent and waste disposal operations and activities, including disposal of wastes from vessel maintenance and vessel operations,
 - surface water capture and disposal,
 - diffuse pollution and nutrient inputs,
 - living and non-living resource exploitation, both their direct and indirect effects, including: fisheries and shellfisheries, bait collection, aggregate extraction and renewable energy generation,
 - aquaculture operations within and adjacent to the site and aquaculture management,
 - military operations,
 - recreation, tourism and informal leisure;
- ensuring tourism promotion both takes account of the conservation objectives and contributes to raising awareness of the site and its conservation management;
- management of access over the foreshore in pursuit of sectoral activities takes account of the conservation objectives;

INFORMATION ACQUISITION AND SHARING

- timely acquisition and sharing of good quality, relevant data and information on:
 - operations and activities,
 - qualitative and quantitative distribution and condition of site features,
 - relevant environmental processes and conditions,
 - compliance with management measures;
- sharing relevant information on developments, plans and projects requiring HRA amongst responsible authorities to best inform decision making and maximise resource use efficiency;
- timely sharing of monitoring and survey data related to consented activities, and information on compliance with consent conditions and relevant mitigation measures with the RAG and placing it in the public domain to ensure transparency;
- continuous development of knowledge about the interaction between activities and site features to improve understanding of the potential pressures and threats to the features, including ensuring the best possible understanding of favourable condition for water quality and nutrient status in the site's estuaries;
- ensuring the information and evidence base for the site's features is both widely disseminated and fully taken into account in management decision making and HRAs;

MONITORING AND SURVEILLANCE

- monitoring the condition of the site's features and ecosystem functioning sufficient to both detect trends and inform assessment of pressures;
 - surveillance of activities, including unregulated activities, and their interaction with site features sufficient to detect adverse effects and inform adaptive management;
 - ensuring that monitoring of consented operations is fit for purpose in respect of the site's conservation objectives and is linked to enforcement of consent conditions;
 - monitoring the implementation and efficacy of the site's management scheme, including the application, compliance with and efficacy of management measures;
-

COMPLIANCE AND ENFORCEMENT

- rigorously enforcing sectoral management measures and compliance with consent conditions and mitigation measures, including maintaining thorough overview of self-monitoring by consent holders;
 - monitoring coastal waters and margins and catchments for unauthorized or unregulated operations creating risk or threat to the site's features, and enforcing or introducing management measures as appropriate;
 - promptly reporting non-compliance with management measures, consent conditions or breaches of legislation to the appropriate responsible authority and the RAG;
-

REVIEW AND REPORTING

- routine, timely review of:
 - the implementation and efficacy of this scheme, taking account of the condition of the site's features, evolving pressures and threats on the features and the availability of new information, and revision of the scheme as appropriate,
 - management measures that contribute to the scheme, both self-review of implementation and review of compliance, and amendment of procedures or measures as required,
 - environmental and operational monitoring and surveillance programmes to ensure they provide data appropriate to inform site management;
 - regular, timely and appropriate reporting to government, Welsh Government, statutory authorities, stakeholders and the public:
 - on the condition and conservation status of the site's features to responsible authorities, stakeholders and the public,
 - of the implementation and efficacy of this scheme and measures.
-

Detailed management objectives and actions are described in Technical Annex 3: Long term management objectives and actions.



Further information – the technical annexes

Technical Annex 1	Background: legislative context; site description; conservation objectives; management planning process; monitoring, review and reporting.
Technical Annex 2	Assessment of pressures and threats
Technical Annex 3	Long term management objectives and actions
Technical Annex 4	Bibliography

Notes

¹ Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (the Habitats Directive).

Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive), provides for the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex I of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance.

The Habitats Directive is transposed into UK law by the Conservation (Natural Habitats, &c.) Regulations 2010 (the Habitats Regulations)

Further detail on the legislative background is detailed in Technical Annex 1: *Background*

² The 1972 OSPAR Convention is the current legal instrument guiding international cooperation on the protection of the marine environment of the North-East Atlantic. Contracting parties are committed to the establishment and management of an ecologically coherent series of Marine Protected Areas by 2010. The aim of the 2008 Marine Strategy Framework Directive (MSFD) is to achieve or maintain 'good environmental status' (GES) of Europe's seas by 2020 at the latest. It makes special reference to marine protected area mechanisms as a tool to contribute to the delivery of GES.

³ Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd formal site description:
<http://www.jncc.gov.uk/protectedsites/sacselection/sac.asp?eucode=uk0020020>

⁴ Second UK Report on Implementation of the Habitats Directive; available from JNCC website:
<http://jncc.defra.gov.uk/article17/>

⁵ Favourable conservation status (FCS) is defined in Article 1 of the Habitats Directive and encompasses the stability of the range, area, structure and function of habitats and the long term viability of their typical species; for species, their range, population sizes and long term viability of their habitat; and for both habitats and species, the long term future prospects for all of these measures, including threats.

⁶ *Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/CEE* European Commission, Brussels, 2000; *European Marine Sites in England & Wales. A Guide to the Conservation (Natural Habitats &c) Regulations 1994 and to the Preparation and Application of Management Scheme*; DETR / Welsh Office, HMSO, 1998; *Nature and biodiversity cases ruling of the European Court of Justice*. European Commission, 2006.

⁷ Regulation 35 advice can be downloaded from NRW's website here: <http://tinyurl.com/3tq5vzz>

