



# **Poole Harbour Aquatic Management Plan 2006**

Coordinated and written by  
Project Officer, William Drake

## **Amended 2011**

Luke Bennett, Borough of Poole







## **Produced by the Poole Harbour Steering Group**

***Dorset County Council***

***Environment Agency***

***Borough of Poole***

***Natural England***

***Poole Harbour Commissioners***

***Purbeck District Council***

***Southern Sea Fisheries District Committee***

***Wessex Water Services Ltd***

## **Acknowledgements**

The preparation of this Aquatic Management Plan was overseen by the Poole Harbour Steering Group; their support and constructive comments have been invaluable. Considerable thanks go to Mr Richard Appleton who, as Chairman, oversaw the process and to Miss Sally Porter, Poole Harbour Commissioners' Environmental Adviser for her help and guidance. The Poole Harbour Commissioners are also acknowledged for providing the meeting venues and administration support and the Borough of Poole are thanked for providing cartographic assistance.

Photographs courtesy of Borough of Poole, Kevin Cook, Kitchenham Ltd and Wessex Archaeology

The financial assistance of the following organisations is also recognised:

**Dorset County Council**

**Borough of Poole**

**Natural England**

**Environment Agency**

**Poole Harbour Commissioners**

**Purbeck District Council**

**Southern Sea Fisheries District Committee**

**The Crown Estate**

**Wessex Water Services Ltd**



## Issue Control

This Management Plan will be updated to reflect changing conditions, management and information known about the Harbour. To ensure the content of this document remains up-to-date additional pages will be produced as required. Amendments will be issued as complete page(s) and will include the date and amendment number on each page.

Amendment /Revision Number	Date	Description	Pages Affected	Authorised By:
1	Feb 2011	Section 1.1 updated legislation	p. 9	
2	Feb 2011	Objective 4 updated	p. 9	
3	Feb 2011	Section 3.1 updated legislation	p. 11	
4	Feb 2011	Section 5.2 Poole Core Strategy reference	p. 15	
5	Feb 2011	Sections 5.6 and 5.7 updated legislation	p. 18 – 20	
6	Feb 2011	Section 5.8.4 Includes monitoring strategy	p. 21 – 22	
7	Feb 2011	Section 5.8.5 Bird Sensitive Areas	p. 22	
8	Feb 2011	Section 5.9 Controlled grazing conservation benefits	p. 23	
9	Feb 2011	Figure 2 updated Bird Sensitive Areas	p. 24	
10	Feb 2011	New Section 5.15 Lagoon habitat and threats	p. 28	
11	Feb 2011	New Section 5.16 EMS risk review reference	p. 28	
12	Feb 2011	Chapter 7 Managing the Shoreline rewritten	p. 34 – 37	
13	Feb 2011	Section 8.2.1 Fishery within the Harbour updated	p. 39	
14	Feb 2011	Section 9.5.1 updated legislation	p. 45	
15	Feb 2011	Section 9.5.2 Sediment Management Plan dredging	p. 45	
16	Feb 2011	Sections 11.1.1/2/3 updated	p. 55 – 56	
17	Feb 2011	Section 12.4 Poole Core Strategy reference	p. 58	
18	Feb 2011	Section 14.2 Swash Channel Wreck rewritten	p. 62	
19	Feb 2011	Management Matrix rewritten	p. 64 – 78	
20	Feb 2011	Updated legislation	Appendix 1	
21	Feb 2011	Updated Environment Agency Information	Appendix 2	
22	Feb 2011	Updated Relevant National Body (MMO was MCEU)	Appendix 2	
23	Feb 2011	Updated charts	Appendix 5	
24	Feb 2011	Poole Harbour Monitoring Strategy added	Appendix 10	
25	Feb 2011	New Matrix Lead Authority Websites	Appendix 12	
26	Feb 2011	Draft Site Plan for the Poole Harbour EMS	Appendix 13	

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# Executive Summary



## Management

The need to manage Poole Harbour with its multitude of activities has long been recognised and this plan aims to do just that, by promoting its safe and sustainable use, whilst balancing the demands on its natural resources, minimising risk and resolving conflicts of interest. As a non-statutory plan it seeks to guide the current and future management of the Harbour and act as a vehicle for communication between the key statutory organisations that make up the Poole Harbour Steering Group, as well as other stakeholders. The Steering Group is a voluntary partnership and its members work under a Memorandum of Agreement to promote the sustainable use of the Harbour whilst securing the long-term nature conservation importance of this site. The plan itself, consolidates and updates the previous versions of the Poole Harbour Aquatic Management Plan (1994 and 2006), and the 1998 Poole Harbour Management Policies, as well as drawing on many other current planning and guidance documents.

## Assets and Activities

The ecological importance of Poole Harbour is internationally recognised with its designation as a Ramsar wetland site, whilst nationally it was designated as a Site of Special Scientific Interest (SSSI) in 1991 to protect its valuable intertidal and coastal habitats. In 1999 it was also classified as a Special Protection Area (SPA) under the European Birds Directive due to its internationally important assemblages of waterfowl and populations of certain regularly occurring resident and migratory species. Under UK legislation the Habitat Regulations form the basis for protecting and managing the SPA. The part of the SPA which covers the intertidal zone of the Harbour is referred to as a European Marine Site (EMS). The revised Aquatic Management Plan will serve as a management scheme for the European Marine Site to provide a framework for relevant authorities to ensure their functions have regard to the nature conservation interests of this part of the site. Much of the Harbour also lies within the Dorset Area of Outstanding Natural Beauty (AONB), which was designated under the National Parks and Access to the Countryside Act (1949) to conserve and enhance the natural beauty of the site. The archaeological importance of the Harbour was also recognised in 2003 when, it was identified as a Wetland of National Importance by English Heritage.

Whilst recognising the environmental importance of the Harbour, management initiatives also need to balance the requirements of many other commercial and recreational activities.

Poole is a busy commercial trust port, which makes a significant contribution to the economy of the local area. As well as handling bulk cargo imports and roll on, roll off freight, some 600,000 passengers also pass through the port each year. Luxury motor yachts are built in the area whilst other marine industries include boatyards, marinas and chanderies. The Harbour is home to Europe's largest onshore oil field and Poole is the National Headquarters for the RNLI.

In order to ensure the commercial viability of the Port and the local economy as a whole, there needs to be a robust supporting transport network. Local plans acknowledge and address the need to renew and develop the road and rail links of the region whilst channel deepening works have safeguarded the short-term future of sea transportation, supporting local and Government policies.

Responsibility for maintaining the Harbour for safe navigation for commercial and recreational users lies with Poole Harbour Commissioners. As well as continually surveying the Harbour and maintaining navigation aids, the Commissioners monitor and control shipping movement and arrange pilotage for larger vessels. They also work with other marine agencies to police the Harbour and prosecutions are regularly brought against offenders who break speed limits and other local byelaws.

Management of many recreational activities is done through a zoning scheme, which was introduced by the first Aquatic Management Plan. The use of these zones assists in the reduction of disturbance to environmentally sensitive areas and in the dangers associated with the mixing of powered and non-powered craft. Zones were identified for water-skiing, personal watercraft and windsurfing, with the south of the Harbour being designated as a quiet zone. As well as zoning, the use of personal watercraft and water-ski boats are also regulated through a permit scheme and access is restricted to specific launch points around the Harbour. Motor boating and sailing however are by far the most popular recreational activities in the Harbour with many owners keeping their boats in marinas or on swinging moorings. All moorings within the Harbour are managed and regulated by Poole Harbour Commissioners, with the Environment Agency being responsible for a small number in the Wareham Channel.

Along with the commercial and recreational activities that take place, Poole Harbour also sustains a significant fisheries resource. Many different species of finfish, shellfish and crustacean are harvested from its waters, while the extensive mudflats are home to several bait species. The fishery of the Harbour is primarily regulated by the Southern Sea Fisheries District Committee who work to keep all stocks at sustainable levels through the use of byelaws and enforcement. However management for eels and migratory species is overseen by the Environment Agency who also have enforcement powers.

All activities have the capacity to impact the natural environment. The water quality of the Harbour is regularly monitored by the Environment Agency who are responsible for ensuring standards set by EU Directives are met. Initiatives to reduce nutrient inputs to the Harbour focus on the improvement of sewage treatment works and changes to farming practices, while new legislation has helped to regulate the input of chemicals from antifouling paints and industry into the marine environment. As well as ongoing monitoring there is also a contingency plan in place for the Harbour, which provides the management, control and communication structure for dealing with pollution incidents.

The extensive marine historic assets found at this site need to be taken account of as part of the management of the Harbour. The plan also needs to consider the future impact of climate change and sea level rise. A Shoreline Management Plan details the coastal defence options for the management of different sections of the Harbour shoreline and an update of the plan will set out a strategy for the next 100 years.

## **Structure of the Plan**

This plan is split into two main sections; The Base Plan (Section 1) discusses in detail the activities and issues associated with the Harbour. It contains the strategic aims and objectives of the plan and lists the guiding principles that underpin the management of the Harbour. Where appropriate each chapter ends with a list of management objectives relevant to that activity or issue and these feed into the Matrix that makes up Section 2.

The management Matrix in Section 2 lists the various activities that need to be considered when developing a sustainable management strategy for Poole Harbour and its hinterland. It details the potential impacts of specific activities, current and proposed management initiatives, and relevant lead authorities. A summary of some of the more immediate management actions can be found listed in Table 1.

**Table 1:** This table lists some of the activities and management actions identified in the Matrix in Section 2.

Activity	Management Action
Unauthorised landing on shorelines	Develop codes of practice to raise awareness of potential impacts
Low flying aircraft & helicopters	Initiate discussions with relevant authorities regarding setting up no fly zones
Illegal egg collecting	Monitor gull colonies
Shoreline & intertidal based developments	Write guidance on how small developments could be designed to minimise adverse impacts
Anchoring	Identify anchorage sensitive areas & promote awareness of them
Use of antifouling paints	Education of boatyards, yacht clubs and owners on best practice
Use of sacrificial anodes	Continue review of existing research into the environmental effects of sacrificial anodes
Marine & terrestrial littering	Look to organise annual beach cleans around the Harbour
Shellfish dredging	Promote awareness of Bird Sensitive Areas
Bait digging	Commission further research into the impacts and extent of bait digging
Illegal fishing	Increase policing effort to catch & prosecute illegal fishermen
Maintenance dredging	Develop Sediment Management Plan including alternative dredging techniques
Capital dredging	Commission further research into potential impacts
All recreational activity	Evaluate effectiveness & adequacy of existing launch sites
Yachting	Continue with existing liaison and safety meetings
Motor boating	Investigate setting up workshops & presentations with user groups
Moorings	Review moorings policy to ensure adequate facilities for users and minimise impact on EMS
Water-skiing and Personal Watercraft	Review effectiveness of current recreational zoning

**For a full list of all the management actions identified by this Plan please see Section 2.**

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## Section 1 Base Document

# Poole Harbour Aquatic Management Plan



# Chapter 1 Introduction

## 1.1 The Poole Harbour Aquatic Management Plan

The Plan provides a framework for the effective, co-ordinated management of the Harbour and the Poole Harbour Special Protection Area (SPA) and serves as a Management Scheme for the European Marine Site as set out in Regulation 36 of The Conservation of Habitats and Species Regulations 2010. It also covers the present and future needs of nature conservation, recreation and commercial use and other legitimate interests of the Harbour. The focus of the plan is the Harbour's aquatic environment, however in following the principles of a more integrated approach to coastal management, it takes a holistic view, which considers the impact of shore based activities and those of the surrounding areas. It therefore supports the Government's vision for the marine environment, which is for clean, healthy, safe, productive and biologically diverse oceans and seas. The Government are moving towards this goal through the introduction of the Marine Management Organisation (MMO) under the Marine and Coastal Access Act 2009, which aims to put in place a better system for delivering sustainable development of the marine and coastal environment by addressing both the use and protection of our marine resources. It intends to introduce a better system for managing marine resources, so that the process by which developers obtain consents is made simpler, while ensuring that potential conflicts between uses of the sea are managed and objectives of sustainability are delivered.

The Plan looks at ways of delivering the aims of the Marine and Coastal Access Act 2009 at a local level, in allowing sustainable levels of economic and social activity within the Harbour and its hinterland, while protecting the coastal environment. It considers the activities of all those involved in the development, management and use of the Harbour within a framework that facilitates the integration of their interests and responsibilities.

The Plan contains guidelines, policies and principles designed to inform, advise and guide current and future management. It is not a statutory plan for the Harbour and adjoining area, and is not designed to dictate detailed management actions or set complex new working arrangements. It does however draw its principles from many of the statutory and non-statutory policies applying to the Harbour. It aims to build on established partnerships and be a vehicle for communication, providing a framework within which decisions can be made and appropriate action taken.

## 1.2 Mission Statement

### Strategic Aim

**To promote the safe and sustainable use of Poole Harbour, balancing the demands on its natural resources, minimising risk and resolving conflicts of interest.**

### Objectives

**To provide a framework for the co-ordinated management of the Harbour and continue to improve communications between Harbour users and regulators.**

**To promote the safe use of the Harbour for all.**

**To fulfil the requirements of a Management Scheme for the European Marine Site.**

**To educate and promote amongst Harbour users the sustainable and wise use of the Harbour for commerce, recreation and amenity.**

**To protect and maintain the special natural features of the Harbour.**

**To create a culture of openness and communication and an awareness of other users.**

## Chapter 2 Background

The expansion of the Port of Poole during the 1980s drew attention to the number of different interest groups that use the Harbour and highlighted the need for an overall management strategy. In 1988 a steering group of officers from the County and relevant District Councils, the Poole Harbour Commissioners, English Nature and other statutory bodies produced the Poole Harbour Management Policies (PHMP).

This series of agreed guidelines for the Harbour and its environs recognised, and as far as possible, protected local interests by providing advice for the planning and management of the area. The document set out policies to be implemented through local plans and other statutory mechanisms and was last amended in 1998, following the need for integrated management of the whole harbour, including the water body and the areas below the low water mark.

The first Poole Harbour Aquatic Management Plan was published in 1994, with an updated version then published in 2006. It was designed to be a strategy for the water area itself and was an attempt to provide uniformity of approach to the entire harbour, including the regulation of activities on and in the water column. It provided a framework for the coordinated management of the Harbour, having regard to the present and future needs of nature conservation, recreation, commercial use and other legitimate interests.

This revised Plan consolidates the work of the Aquatic Management Plan and the Harbour Policies to provide a new vehicle to guide the management of operational matters on the water and planning matters on the shore.



## **Chapter 3      Management Framework**

The Aquatic Management Plan is a non-statutory document. There are no legal powers to ensure that all the guidance in the Plan is implemented or adhered to. However when appropriate the Plan highlights relevant legislation such as national directives and the existence of byelaws. This document can itself give no permission for any development or activity to be carried out. Where permission, licence or permits are required they must be sought from the appropriate authority who will deal with them in the normal way. As members of the Poole Harbour Steering Group, these authorities in reaching their decisions will do so against the background of the guidance, principles and policies contained in this document.

### **3.1      Management Structure for the Poole Harbour Aquatic Management Plan**

#### **Poole Harbour Steering Group**

The Poole Harbour Steering Group is a voluntary partnership that provides a framework for coordination between statutory bodies with responsibilities in the Harbour. Its members work together to review, prepare and implement common plans and policies, with a view to promoting the sustainable use of Poole Harbour, securing the long-term conservation of its internationally important wildlife and natural habitats.

Its main roles are:

- To co-operate and consult in the exercising of statutory powers and functions
- To oversee and facilitate the implementation of this management plan.
- To improve co-ordination between users and information flow between users with different interests in the Harbour
- To ensure that users' points of view on issues that arise and solutions raised, are circulated
- To act as an advisory group for the Poole Harbour Special Protection Area (SPA)
- To improve access to high quality, up to date and relevant data for decision making.

The Poole Harbour Steering Group members, listed below, have all signed up to a Memorandum of Agreement (MoA) (Appendix 1). It acknowledges the importance of working together for the management of the Poole Harbour SPA and implementing best practice through the implementation of The Conservation of Habitats and Species Regulations 2010. It also demonstrates their support to the principles laid out in this Aquatic Management Plan. Appendix 2 outlines the responsibilities of the Steering Group members as well as some other local and national bodies involved in the management of the Harbour and who were involved in the consultation for this plan.

- **Borough of Poole**
- **Dorset County Council**
- **Environment Agency**
- **Natural England (English Nature)**
- **Poole Harbour Commissioners**
- **Purbeck District Council**
- **Southern Sea Fisheries District Committee**
- **Wessex Water Services Ltd**

### **3.2      Background Documents & Plans**

This Plan updates and consolidates the relevant information and policies contained within the 1994 and 2006 publications of the Poole Harbour Aquatic Management Plan and the 1998 Poole Harbour Management Policies, as well as drawing from current planning and guidance documents. All these documents are relevant to the management of Poole Harbour and apply the principles of sustainable development and focus on their particular areas of interest. A list of some of the more significant background documents can be found in Appendix 3.

### **3.3 Plan Revision / Review**

In order to verify the validity and relevance of this plan the Steering Group recognises the need for current data on which to base a management strategy for Poole Harbour. There is also a need to:

- Introduce effective monitoring.
- Re-assess management as external factors change.
- Address long-term issues of planning and landscape.

The Poole Harbour Aquatic Management Plan addresses a variety of issues, but recognises that the level of control and policies required will probably need to change in the face of changing recreational and commercial demands and as our understanding of the environmental resource becomes clearer.

#### **The European Marine Site Monitoring Review**

To comply with the monitoring requirements for the European Marine Site, the Poole Harbour Steering Group will review the Plan on an annual basis and make an assessment of how the specific management actions identified in Section 2 are being progressed. Updates on actions and projects will be disseminated to the general public through the individual Steering Group members as well as via the project website and an annual newsletter. The Plan will also be subject to an in depth evaluation one year prior to the end of the six yearly reporting cycle for the European Marine Site, which is next due in 2012. In this way the Aquatic Management Plan can act as a focus point for actions to ensure the ongoing sustainable management of the European Marine Site. As new management actions are agreed and projects put in place, additional pages will be produced in order to keep the Plan up dated. Amendments will be issued as complete page(s) and will include the date and amendment number on each page.

Those who use Poole Harbour for recreation, commerce or who have an interest in the area's environmental resources are encouraged to discuss and provide input into the implementation of the Aquatic Management Plan. The Poole Harbour Steering Group meet every six months to discuss the ongoing management of the Harbour and its members can present issues raised with them by the general public or other interested parties. In this way areas of concern or forthcoming initiatives can be communicated and topics for future research identified. It is anticipated that as major plans or projects arise that may have a significant impact on the Harbour, additional focus meetings will be set up to engage the thoughts of all stakeholders.

## **Chapter 4      Guiding Principles**

This chapter lists the overriding guiding principles that the plan promotes. Whilst many are generic and apply to the management of the whole Harbour, some are more specific and relate to certain activities. Each chapter starts with a list of the number of the guiding principles that most apply to the topic discussed within it.

- 1. To support initiatives that encourage the responsible and sustainable use of the Harbour and which seek to educate and raise awareness amongst users.**
- 2. To support the protection and enhancement of the nature conservation interests of Poole Harbour and the coastal zone.**
- 3. To encourage the development of policies, strategies and plans in accordance with the aims of the conservation objectives for the European Marine Site.**
- 4. To support projects and initiatives that aim to enhance public understanding of the habitats and wildlife of the Harbour.**
- 5. To ensure that all development activities, plans and projects comply with relevant legislation requirements and that the nature conservation interest of the SPA, Ramsar and SSSI sites are maintained or restored to favourable condition.**
- 6. To support initiatives that are necessary to maintain and improve water quality for all appropriate uses.**
- 7. To support initiatives that are necessary to improve air quality and the reduction of noise levels at source within the Harbour.**
- 8. To support the establishment of a co-ordinated environmental monitoring programme to investigate sediment movements in Poole Harbour.**
- 9. To support initiatives that raise awareness of climate change and coastal processes and address their implication for the Harbour and coastal zone.**
- 10. To support the provision of sustainable coastal management works that take account of potential environmental impacts and effects on natural processes.**
- 11. To support the protection and enhancement of the high quality fisheries associated with Poole Harbour, now and for future generations, (with due regard to Guiding Principle 5).**
- 12. To support initiatives aimed at maintaining and improving appropriate facilities for the fishing industry, (with due regard to Guiding Principle 5).**
- 13. To support initiatives to improve the marine safety management of Poole Harbour to the benefit of its stakeholders, (with due regard to Guiding Principle 5).**
- 14. To support initiatives to maintain Nationally agreed standards for safe marine operations.**

15. To support the safe and enjoyable use of the Harbour for recreational activity, which will be managed in accordance with the Marine Safety Management Plan, Poole Harbour Byelaws and the Poole Harbour Aquatic Management Plan, (with due regard to Guiding Principle 5).
16. To support and encourage sustainable development for tourism and recreation which will contribute to regeneration and / or the extension of the tourist season, (with due regard to Guiding Principle 5).
17. To support measures that maintain or improve public access to the water's edge, and facilities and services for marine recreation, (with due regard to Guiding Principle 5).
18. To support the needs of the commercial port and marine related industries to the benefit of the local, regional and national economies, (with due regard to Guiding Principle 5).
19. To support port related development proposals within the commercial port and maintain the port's ability to provide sites with deepwater frontage, (with due regard to Guiding Principle 5).
20. To support improvements to the transport network to mitigate any adverse impact of road traffic without unnecessary constraint, (with due regard to Guiding Principle 5).
21. To support a range of transportation modes for the movement of people and goods, (with due regard to Guiding Principle 5).
22. To support the provision, exercising and development of contingency plans for emergencies and pollution incidents in and around the Harbour.
23. To support the protection, promotion and understanding of the historic environment and assets of Poole Harbour.
24. To encourage best practice to protect archaeological material in situ and if investigation is required in support of any proposed development, that appropriate professional standards are adopted, (with due regard to Guiding Principle 5).

## Chapter 5 Nature Conservation and Landscape

### Guiding Principles:

**Chapter 4 details all the guiding principles relevant to the overall management of the Harbour. Whilst all should be given some consideration the following are of particular relevance to nature conservation and landscape.**

**Key Guiding Principle numbers: 1, 2, 3, 4, 5, 6 and 7.**

### 5.1 Overview

Poole Harbour and its environs has long been recognised both nationally and internationally as being of high biological importance and is one of the largest examples of an estuary with an enclosed lagoonal character in Britain. The Harbour is mostly shallow and contains a high proportion of intertidal saltmarshes and mudflats. These give way to freshwater marshes, reed beds and wet grasslands on low, poorly drained land above the tidal level, and also transitions to heathland on higher sandy ground and heathland mires in small tributary valleys. Figure 1 shows the approximate extent of and the location of these aquatic habitats within the Harbour.

The wetland habitats fringing the Harbour support large numbers of wintering, migrating and breeding birds along with many rare and uncommon plants and invertebrates. The Harbour bed is important for marine invertebrates such as sponges, tube worms, sea squirts and sea mats, including some that are rare around Britain's shoreline. Areas of heathland support further rare and uncommon birds, invertebrates and reptiles, while pine woodland on some of the Harbour's islands are of national importance for some of England's last surviving populations of red squirrel.

This range of estuarine, wetland and heathland habitats, their large extent and the rare plants and animals they support, together with the large variety and number of birds, means Poole Harbour is recognised as being of national and international importance and the area holds a number of statutory designations which serve to protect the natural environment. Poole Harbour is designated a Site of Special Scientific Interest (SSSI) a Special Protected Area (SPA) and a Ramsar site. The heathlands surrounding the Harbour have been designated a Special Area of Conservation (SAC). SPAs along with SACs make up what are termed Natura 2000 sites, which represent a network of protected sites established under the EU Birds and Habitats Directives. The Harbour also contains a few small Sites of Nature Conservation Interest (SNCI) which although non-statutory do enjoy some planning protection. In addition it is recognised as part of the Poole Bay and Isle of Purbeck Sensitive Marine Area (SMA). Some areas of the Harbour have also been declared Local and National Nature Reserves. There are three Regionally Important Geological Sites within the Harbour: two on Brownsea Island and the third at Shipstal Point. The Harbour is also within an area recognised for its landscape value and part of the Purbeck Heritage Coast and part of an Area of Outstanding Natural Beauty (AONB). The AONB boundary follows that of Purbeck District Councils and includes all the islands of the Harbour as well as much of the water area. The AONB has a statutory management plan and it is hoped that future initiatives will draw on objectives from both this and the Aquatic Management Plan to promote a more integrated approach to the management of the Harbour and its hinterland. Definitions for the various designations are given in Appendix 4, but details of the principal designations of SSSI, Ramsar site and SPA are given below.

### 5.2 Local Plans and Policies

The Central Government's Planning Policy Statement 9: Biodiversity and Geological Conservation, states that local plans should identify relevant international, national and local nature conservation interests and ensure that the protection and enhancement of those interests is properly provided for in development and land-use policies. These should place particular attention on the strength of protection afforded to international designations. The Poole Core Strategy, which was adopted in February 2009, follows these principles with the implementation of policy PCS 29 – Poole Harbour SPA and Ramsar Site, which states that development in Poole will not be permitted where it would lead to a direct or indirect adverse affect upon the integrity of the Poole Harbour SPA AND Ramsar sites. From this policy a number of key initiatives have been implemented to ensure these sites are not harmed. Local planning authorities are also required to consult with Natural England over applications in consultation areas defined by Natural England around sites of national or international importance.



**Figure 1:** Map showing the approximate extent and location of the intertidal habitats of Poole Harbour.

### 5.3 Site of Special Scientific Interest, (SSSI)

Poole Harbour was notified on 6th September 1991 under the Wildlife & Countryside Act 1981 as a Site of Special Scientific Interest (SSSI) and is now protected by the provisions of Part II of the Wildlife and Countryside Act 1981 as substituted by Schedule 9 to the Countryside & Rights of Way Act 2000.

The site is of importance for its range of estuarine habitats, which include intertidal mudflats, saltmarsh, swamp and fen habitats. Coastal grazing marsh and lowland heathland also form part of the suite of habitats for which the site is notified.

Protecting and managing the species and habitats for which a SSSI was designated is a shared responsibility and Natural England work closely with landowners and other statutory and non-statutory organizations to ensure they are maintained or restored to a favourable condition.

All public bodies are required 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. The legislation also places legal obligations on owners and occupiers of land within the SSSI and on any person in relation to activities that may cause damage to the special interest features of the SSSI, or recklessly disturb any animal which is notified as being of special interest. Section 28 of the Countryside and Rights of Way Act 2000 outlines the responsibilities and obligations of public and statutory bodies when carrying out activities or authorizing works within an SSSI. There is a list of operations and activities likely to damage the features of special interest of Poole Harbour SSSI, which can be obtained from Natural England. The owner or occupier of a SSSI can only allow these activities to occur on their land with the consent of Natural England.

### 5.4 Ramsar site

Under the Convention on Wetlands of International Importance, (signed at Ramsar in Iran, in 1971) the UK Government is committed to the conservation and wise use of wetlands of international importance. The UK ratified the Convention in 1976 and has generally chosen to underpin the designation of its Ramsar sites through prior notification of these areas as Sites of Special Scientific Interest (SSSIs) which receive statutory protection as discussed above.

Poole Harbour was designated as a Ramsar site because it:

- regularly supports 20,000 waterfowl
- regularly supports over 1% of the Great Britain population of avocet, black tailed godwit, common tern, Mediterranean gull and shelduck
- supports an appreciable assemblage of rare, vulnerable or endangered species including a nationally scarce hydroid species *Hartlaubella gelatinosa* and nationally rare sponge *Suberites massa*
- is of special value for maintaining the genetic and ecological diversity of a region because of the quality and peculiarities of its flora and fauna including supporting the nationally scarce plants, narrow leaved eelgrass *Zostera augustifolia* and dwarf eelgrass *Zostera noltii*.

### 5.5 Special Protection Area, (SPA)

The European Birds Directive requires member states to designate SPAs where an area supports significant numbers of wild birds and their habitats. Poole Harbour was designated a SPA in 1999 due to the nationally and internationally important numbers of waterfowl and waders that its habitats support.

Poole Harbour SPA includes both marine areas and land which is not subject to tidal influence. The marine part of the SPA, the intertidal zone, between mean low water and highest astronomical tide, is termed the European Marine Site (EMS).

Poole Harbour was designated a SPA as it supports:

- Internationally important populations of regularly occurring species classified as Annex 1 under the Birds Directive. These are birds that are in danger of extinction, rare or vulnerable and are the subject of special conservation measures concerning their habitat. Annex 1 species in Poole Harbour are the Avocet (*Recurvirostra avosetta*), Mediterranean Gull (*Larus melanocephalus*) and the Common Tern (*Sterna hirundo*).
- Internationally important populations of regularly occurring migratory Black-tailed Godwit (*Limosa limosa*), and Shelduck (*Tadorna tadorna*).
- An internationally important assemblage of waterfowl. The Harbour regularly supports over 20,000 birds.

## **5.6 Management of SPAs and Ramsar sites – Habitat Regulations**

On 1 April 2010 The Conservation of Habitats and Species Regulations 2010 replaced The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). The Conservation of Habitats and Species Regulations 2010 apply in the terrestrial environment and in territorial waters out to 12 nautical miles. The Conservation of Habitats and Species Regulations 2010 is the principal means by which the Habitats Directive is transposed in England and Wales.

Many Ramsar sites in the UK, including Poole Harbour, are also SPAs and are therefore afforded protection under The Conservation of Habitats and Species Regulations 2010. These are the Regulations which translate The European Union Habitats and Birds Directives into law in Great Britain, (hereafter also referred to as the Habitats Regulations in this plan). However, for the purposes of considering development proposals or other uses of land affecting them, the Government applies the same procedures to Ramsar sites as it does to SPAs, even if the Ramsar site was not also a designated Natura 2000 site.

Under UK legislation the Habitats Regulations form the basis for establishing, protecting and managing SPAs.

Relevant authorities (i.e. those with powers or functions that have or could have an impact on a SPA) must, within their jurisdiction, have regard to both direct and indirect effects of their statutory functions on the nature conservation interests of Poole Harbour SPA as well as cumulative effects. They may need to modify the way in which they exercise their functions so as to maintain the favourable condition of interest features concerned in the long term. There is no requirement for relevant authorities to take any actions outside their statutory functions.

### **Regulation 61 – Appropriate Assessment**

Under Regulation 61 of the Habitat Regulations a competent authority must make an Appropriate Assessment before proceeding with, or give any consent, permission or other authorisation for, a plan or project which:

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

## **5.7 Management of the European Marine Site (EMS)**

In terms of Poole Harbour, Regulation 35 and 36 of the Habitats Regulations are important as they relate specifically to European Marine Sites. The term 'European Marine Site' (EMS) refers to those marine areas of both Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), which are protected under the EC Habitats and Birds Directives.

## Regulation 35(3) – Natural England's Advice

Under Regulation 35(3) of The Habitats Regulations 2010, Natural England has a duty to advise other relevant authorities as to:

- a) the conservation objectives for the European Marine Site, and
- b) any operations which may cause deterioration of natural habitats, the habitats of the species, or disturbance of species, for which the site has been designated.

## SPA Nature Conservation Objectives

- Subject to natural change, maintain in favourable condition the habitats for the **internationally important populations of regularly occurring Annex 1 bird species**, under the European Birds Directive, in particular:
  - Shallow inshore waters
  - Intertidal sediment communities
  - Saltmarsh
- Subject to natural change, maintain in favourable condition the habitats for the **Internationally important populations of regularly occurring migratory bird species**, under the European Birds Directive, in particular:
  - Shallow inshore waters
  - Intertidal sediment communities
  - Saltmarsh
  - Reedbed
- Subject to natural change, maintain in favourable condition the habitats for the **internationally important assemblage of waterfowl**, under the European Birds Directive, in particular:
  - Shallow inshore waters
  - Intertidal sediment communities
  - Saltmarsh
  - Reedbed

The SPA conservation objectives focus on habitat condition in recognition that bird populations may change as a reflection of national or international trends or events. The conservation objectives refer to maintaining habitats in a favourable condition and the Regulation 35(3) advice document, issued by Natural England, contains a table providing information on how to recognise favourable condition for the features and acts as a basis for the development of a monitoring programme.

## Advice on Operations

In pursuit of the conservation objective for the 'habitats supporting internationally important populations of regularly occurring Annex 1 species', the relevant and competent authorities for the Poole Harbour European Marine Site are advised to manage their remit such that they do not result in the deterioration of the habitat of species or significant disturbance to habitats or species for which the site has been selected, through any of the following:

- Physical loss resulting from the removal and smothering of habitats.
- Physical damage resulting from the siltation or abrasion of habitats
- Non physical visual disturbance
- Non physical noise disturbance
- Toxic contamination caused by the introduction of synthetic compounds (e.g. pesticides, TBT etc)
- Toxic contamination caused by the introduction of non - synthetic compounds (e.g. heavy metals)
- Non toxic contamination caused by changes in nutrient loading
- Non toxic contamination caused by changes in organic loading
- Non toxic contamination caused by changes in salinity
- Non toxic contamination caused by changes in turbidity
- Biological disturbance resulting from the selective extraction of species

The Regulation 35 advice package issued by Natural England provides examples of the activities that may result in this type of damage or disturbance to the Poole Harbour European Marine Site.

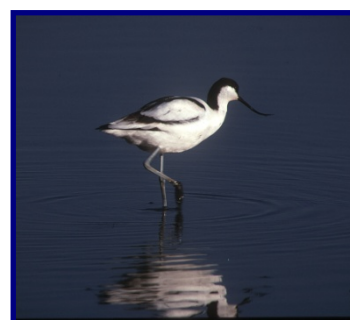
## Regulation 36 – Management Scheme

Regulation 36 provides for the establishment of an agreed management scheme for the **European Marine Site** component of Poole Harbour SPA. The management scheme needs to provide the framework through which relevant authorities exercise their functions so as to secure compliance with the Habitats Directive and must be based on Natural England's advice given under Regulation 35(3) of the Habitats Regulations 2010. It should provide a mechanism for resolving management issues and to set a framework in which activities that occur within a site are managed either voluntarily or through regulation, in order to achieve the conservation objectives of the European Marine Site. Section 2 of this plan contains a matrix, which identifies the interest features of the EMS, issues concerning them and ongoing or proposed management initiatives. As such the Poole Harbour Aquatic Management Plan fulfils the requirements of a Management Plan for the European Marine Site under Regulation 36.

### 5.8 Birds of the Harbour

#### 5.8.1 Importance of the Harbour

The Harbour supports a very large number of wintering birds, including many individual species of duck, grebe and wading bird which occur in numbers of national or international importance. The site is also important as a feeding stop for birds on migration in spring and autumn. Additionally, there is a large assemblage of breeding birds, and these include some with small breeding populations in Britain and some which breed in large colonies. The designation of the Harbour as a Ramsar site and SPA demonstrates its importance as a site for wildfowl and wading birds.



#### 5.8.2 Some Notable Species

Annually the Harbour supports over 20,000 wildfowl and waders of around 60 different species, 17 of which are considered to be of national or international importance. The Avocet, Mediterranean Gull and the Common Tern along with the Black-tailed Godwit and Shelduck were recognised as important through the SPA designation.

Numbers of Black-tailed Godwit have steadily increased in recent years with annual peaks of over 2000 being recorded representing around 14% of the UK wintering population. Avocet numbers have also dramatically increased over the last decade reaching a peak of 1862 birds during the winter of 2001/2002, which represents the largest ever gathering at one site in the UK. Populations of the Mediterranean Gull and also the Black-headed gull are thought to be stable or slightly increasing, as are populations of Common and Sandwich Terns. The Dorset Wildlife Trust in partnership with wildfowling members of the Dorset Wildfowling Association for Shooting and Conservation, have attracted terns to the Brownsea Island Lagoon by the construction of special breeding islands and continue to manage the Brownsea reserve for the benefit of birds and other wildlife. One relative newcomer to the Harbour is the Little Egret, which has an increasing wintering population and over 40 pairs also now breed on the Brownsea Island reserve.

Shelduck populations however have declined significantly since the late 1990s to a point where the Harbour no longer holds internationally important numbers. Reasons for the decline are not known but follow a national trend. A decline in the numbers of Redshank however, is thought to be linked to habitat change and disturbance during nesting, due to grazing and trampling by Sika Deer.

#### 5.8.3 Monitoring

Populations of birds species within the harbour are closely monitored and good historical records are available which allow trends over several decades to be established. Every month from September to March, Wetland Birds Survey (WeBS) counts are carried out at several locations around the Harbour. These are supported by the RSPB and the Dorset Wildlife Trust, who closely monitor bird numbers on their reserves at Arne and Brownsea Island respectively. Overall trends in all bird populations need to be monitored and reasons for changes understood.

Further information on populations is detailed in various reports published by the Poole Harbour Study Group.



#### 5.8.4 Potential Threats

Populations of some bird species vary significantly over time and have even been seen to fluctuate dramatically from year to year. Variations in abundance are likely to be mainly attributed to changes in habitat, prey availability, or disturbance.

Recreational activities such as windsurfing, water-skiing, wildfowling, the use of personal watercraft and wider access to the foreshore from the land may cause disturbance especially when carried out during the winter months. During the breeding season disturbance to nesting common terns and Mediterranean gulls increases the risk of eggs or chicks to be abandoned and increases the risk of predation. It is possible that the use of the personal watercraft zone to the north of Brownsea Island may be disturbing birds feeding and nesting on the lagoon and beach, as may the illegal landing of craft on the island. Watercraft going close to the breeding gull colony at to the west of Rockley may also cause significant disturbance. Windsurfing at Whitley Lake in the winter may also displace some bird species to other feeding grounds to the south of the Harbour. There is also potential disturbance caused by the use of hovercraft and the overflying of military, coastguard and private helicopters but the latter's flight paths are controlled for safety reasons and to minimise noise pollution over populated urban areas. Proposals for increasing coastal access to Poole Harbour from the landward side are also of concern as increased access to important bird roosting and breeding sites could result in significant disturbance. Recreation and tourism are discussed further in Chapter 10.

The activities of shellfishermen and bait collectors may also affect birds, by resulting in a reduction in prey items, a physical change to the substrate that interferes with the foraging behaviour of birds and through direct noise and visual disturbance. A particular concern is when these activities occur in areas of the Harbour that are in or adjacent to prime feeding and roosting sites for overwintering wildfowl and waders. Such activities reduce the available feeding time for birds, which could be critical during periods of severe winter weather. Fisheries and bait collecting is discussed further in Chapter 8.

Both seabirds and wildfowl have the potential to become entangled in litter or fishing gear and a fuller assessment of the significance of this threat is required.

Another concern is the impact of unlawful egg collecting on all species but especially on Black-headed and Mediterranean Gull colonies.

Another potential threat to the bird life in the Harbour is the gradual encroachment of the foreshore by small developments such as jetties and slipways. Small developments not only cause a direct habitat loss where they have been placed, but the area close to these structures also becomes unavailable for bird feeding because birds usually only feed where they have clear viewlines.

There is concern that people and dogs could cause significant disturbance to birds (such as brent geese and oystercatchers) roosting at high tide in urban greenspaces.

Milder winters due to climate change may have the effect of attracting different species to the Harbour and may also affect the numbers and types of prey species. Rising sea levels can result in changes or loss of the habitat that the birds use to feed and roost. Managing the shoreline in the face of sea level rise is discussed further in Chapter 7.

In February 2009, Footprint Ecology, produced the Poole Harbour Monitoring Strategy where the inevitability of more housing in Poole was discussed as a potential threat to Poole Harbour as an increase in housing would clearly result in more people living in closer proximity to Poole Harbour. In all likelihood this increased number of people living in Poole is likely to cause a rise in the frequency, intensity, duration and extent of recreational activities taking place in and around the Harbour. It was summarised that this possible increase in recreational activity could result in a direct disturbance to nesting birds, feeding waders, roost sites, and waterfowl, and may cause indirect damage to substrates.



There is a concern over the current and rising inorganic nitrogen levels in Poole Harbour. Algal mats can spread and be more persistent where there is an increase in organic or nutrient loading and may be expected to increase with warmer water temperatures. Algal mats are a concern as they can result in a depletion of prey items and interfere with bird foraging behaviour.

Toxic contaminants such as heavy metals could also affect palatability and the abundance of prey items while seabirds are subject to the accumulation of toxins through the food chain.

Overall more research needs to be carried out to help better establish the impacts of human activities, sea level rise and climate change on the bird populations and their habitats and prey. Through better understanding it will be possible to regulate and manage potentially detrimental activities and balance human interests with the need to protect the ornithology of the Harbour.

#### **5.8.5 Bird Sensitive Areas and Anchorage Sensitive Zones**

The first Aquatic Management Plan focussed on conflicts between users and birds over the summer, however there is concern that some of these activities are now occurring all year. There is the potential for cumulative impacts on overwintering birds from disturbance from recreational and commercial activities of the Harbour. For example, there is nothing to prevent potentially disturbing activities such as bait digging, wildfowling and sailing occurring in all of the southern bays at the same time. The Quiet Zone to the south of Brownsea Island is already seen as an important area for birds who feed and roost in and around the secluded bays and inlets where speed limits are restricted.

Although the whole of the Harbour should be recognised as important for its overwintering and breeding bird populations, Figure 2 shows the Bird Sensitive Areas which have been identified as being of particular importance to overwintering and breeding birds. During the winter, principally between 1<sup>st</sup> November and 31<sup>st</sup> March, it is essential that disturbance in the 'Overwintering Bird Sensitive Areas' are kept to a minimum to ensure these migratory birds have every opportunity to feed and rest. During the spring, between mid April and the end of June Mediterranean gulls and common terns breed at 'Gull Island' and 'Brownsea Lagoon' respectively and disturbance at these 'Breeding Bird Sensitive Areas' needs to be kept to a minimum to ensure the successful hatching of eggs and rearing of chicks of these rare bird species.

By highlighting these Bird Sensitive Areas it is hoped Harbour users will modify their activities in the overwintering bird sensitive areas between 1<sup>st</sup> November and 31<sup>st</sup> March and in the breeding bird sensitive areas between 15 April and 30 June and where possible avoid these areas to help alleviate disturbance pressure on the birds. Appendix 5 gives more information as to why these areas are considered as Bird Sensitive Areas.

The recognition of these areas as Bird Sensitive Areas is a positive and proactive step to further protecting the important bird life of the Harbour against increasing levels of human activities. There are however still other potential conflicts between users and the birdlife at other times of the year and in other parts of the Harbour which will need to be addressed through other measures e.g. codes of conduct and other management initiatives.

Figure 2 also shows the shellfish lease beds and Anchorage Sensitive Zones which correspond to known areas of eelgrass. There is a public right of navigation within these areas and initiatives need to focus on raising awareness of the importance and location of them and the potential to cause damage by anchoring within them. Shellfish lease beds are areas where mussels and oysters are commercially farmed, while the ecological importance of eel grass beds is discussed below.

### **5.9 Saltmarsh**

#### **5.9.1 The Habitat**

Saltmarsh currently covers around 300ha within the Harbour but the extent of this habitat has been in decline for several years. The enclosed nature of the Harbour and its low tidal range, have led in the past to rapid colonisation by *Spartina anglica*. Saltmarsh is generally considered to be a species poor habitat, being dominated by one or two specialised halophytic species. It is also generally split into three distinct zones of differing species, depending on their tolerance to inundation, but these zones are less apparent within the Harbour due to the low tidal regime. The lower zone, which is made up of mainly *Spartina anglica* and a few other locally dominant species, makes up around 84% of saltmarsh within the Harbour. Saltmarsh acts as a sediment trap and in the past has been used to stabilise mudflats and halt erosion of the foreshore but its current decline has seen the release of substantial quantities of sediment back into the aquatic system.

Natural gullies and creeks enable the marsh to maintain wet, saline conditions and also provide preferred nesting and feeding sites for breeding waders and wildfowl. The creek systems also play an important role in absorbing tidal energy and reducing pressure on sea defences and any management needs to ensure the natural drainage system of the marsh is maintained.

### 5.9.2 Potential Threats

The decline of saltmarsh within the Harbour is not unique and follows a national trend. Colonisation of mudflats by *Spartina anglica* generally reached its peak in the early part of the 20th century and it is possible that die-back of *Spartina anglica* is simply a result of the plant reaching the end of its natural life. Many plants within the Harbour are also infected by the ergot fungus which may also be affecting its spread. However retreat has also been linked to sea level rise causing excessive inundation of the marsh and loss may be further exacerbated by invasion of other species from the land. Rates of natural decline may also be accelerated by increased wash from passing vessels, eroding the substrate. More recently the impact of Sika deer on saltmarsh habitat has been investigated. Studies have shown that over grazing and trampling can have a severe detrimental effect on the marsh habitat and the other fauna and flora it supports. However controlled grazing may in fact have some conservation benefits by modifying marsh vegetation to attract different species and there is evidence that bare mud exposed through over grazing supports increased numbers of some snail species, which in turn attract higher numbers of birds such as Shelduck.



Overall saltmarsh is a valuable habitat both in its own right and also as a habitat for roosting and nesting birds, invertebrates and rare flora. Management initiatives need to protect this declining habitat and further work needs to be carried out to investigate reasons for its decline.



**Figure 2:** Map showing the intertidal habitats and Bird Sensitive Areas of Poole Harbour.

## 5.10 Reedbed

### 5.10.1 The Habitat

The reedbeds of the Harbour cover around 174ha, which is about 30% of the total reedbed coverage for the south-west of England. All are designated as SSSIs and are noted for their importance to a range of specialised species, several limited solely to reedbeds. The Harbour reedbeds are used by Marsh Harrier, Cetti's Warbler and the Bearded Tit, while other threatened species such as the Bittern and Water Vole are also occasionally seen and the habitat is important for several species of Wainscot Moth. The reedbed habitat is dominated by the common reed *Phragmites australis* which can exist on freshwater or tidal land which is either permanently wet or frequently inundated.

In 2000 a survey of the most significant reedbeds in the Harbour was commissioned by the Purbeck Biodiversity Reedbed Working Group. The study concluded that for the most part they were in good condition and maintained a high biodiversity, however some potential threats to their long-term existence were identified.

### 5.10.2 Potential Threats

As with saltmarsh, increasing damage due to overgrazing and trampling by deer is seen as a major concern and was evident throughout most of the Harbour. Locally uncontrolled grazing by cattle has also been shown to have a detrimental effect on the habitat. Sea level rise is also expected to change the size and quality of the beds and it is important that reedbeds are given space to migrate landwards as the existing habitat becomes inundated.

Other potential threats include the general drying out of reedbeds and scrub encroachment in freshwater beds.



While some of the reedbed areas, such as at Brownsea Island and Holtons Heath, have management and wildlife monitoring plans in place, many do not. The work for the Purbeck Biodiversity Reedbed Working Group recommends that management plans be drawn up for all reedbeds within the Harbour with more detailed surveying and ongoing monitoring to take place. Future work should seek to increase area of reedbed whilst gaining a better understanding of activities likely to cause it to decline. Initiatives by the RSPB have already seen the expansion of reedbeds in some areas and other landowners need to be made aware of and encouraged to protect this valuable habitat.

## 5.11 Inter & Subtidal Mudflats

### 5.11.1 Habitat

The intertidal and subtidal mudflats of the Harbour support rich populations of invertebrate species, which in turn provide a food source for the abundant waders and wildfowl. The different shellfish and bait species are discussed in Chapter 8, while associated with subtidal fine sands of the central Harbour are species-rich communities dominated by beds of the tube worm *Sabella pavonina*. While species diversity is generally low across the whole Harbour it is notable in supporting several rare and restricted marine invertebrates. The sponge *Suberites massa* which is rarely recorded in British waters is locally abundant on suitable substrates, together with an interesting community of Sea Squirrels, Ascidians and Sea Mats. Historically the Starlet Sea Anemone, has been recorded in the Blue Lagoon and is a rare species found only in a few similar lagoonal situations, while the mollusc *Aeolidiella sanguinea* is otherwise only recorded in western Ireland.

### 5.11.2 Potential Threats

The fauna and flora of mudflats within the Harbour are likely to be influenced by environmental change, such as variations in water temperature and salinity. Pollution incidents and turbidity from dredging would also have a direct impact on resident species, while physical disturbance and loss due to shellfish dredging and bait collecting are currently seen as the greatest threat to this habitat.

## 5.12 Shallow Inshore Water

### 5.12.1 Habitats

Deepwater channels and open water only comprise approximately 20% of the Harbour area and are generally given less environmental importance than the surrounding bed, intertidal and fringe habitats. However they do support some important fish and crustacean species which play a vital role in maintaining the balanced ecosystem of the Harbour. Many bird species such as ducks, grebes and cormorants also rely on open water as roosting and feeding areas.

### 5.12.2 Potential Threats

Overwintering wildfowl such as mergansers and grebes feed and roost over the water column in Poole Harbour, while breeding terns hunt over the water column for fish species and there is potential for these birds to be disturbed by human activities (eg watercraft, wind powered craft etc). Brownsea lagoon supports the majority of the Poole Harbour avocet population in the winter and breeding terns in the summer, however the location of the lagoon is unsustainable and is likely to be lost with predicted rises in sea level.

## 5.13 Eel Grass Beds

### 5.13.1 The Habitat

The extent of Eel Grass beds within the Harbour is restricted to two main swaths in the Whitley Lake area, although anecdotal evidence suggests that other areas may have been colonised in the past. The beds are made up of *Zostera marina*, which in itself is recognised as being nationally scarce, while the habitat it creates is of international importance and is listed as a UKBAP Priority Habitat. Eel Grass beds are an important resource for a variety of marine, aquatic and bird species. They are used as nursery areas for spawning and juvenile fish, providing protection for these and a large number of invertebrates. They also provide a valuable food resource for grazing invertebrates and wildfowl such as Brent Geese which overwinter in the Harbour. Eel Grass is also an important habitat for seahorses which have recently been recorded at several sites around the Harbour. Both the Spiny Seahorse (*Hippocampus guttulatus*) and the Short Snouted Seahorse (*Hippocampus hippocampus*) have been identified and evidence suggests that the populations are stable and possibly breeding.

### 5.13.2 Potential Threats

Eel Grass beds are fragile habitats and are susceptible to environmental change. Factors such as increasing water temperatures as a result of climate change and fluctuations in salinity may act to alter growth patterns. Change in water chemistry from pollution and increased turbidity from dredging activity and storm events may also have a detrimental effect on the beds, as could smothering by macro-algal blooms as a result of eutrophication. Currently the main threat is from physical disturbance, with potential damage occurring from anchoring by vessels and by shellfish fishermen running their dredgers through the beds.

The existence and importance of these beds is little known by those outside the conservation community and future management needs to focus on education of Harbour users. Marking their boundary may lead to greater awareness of beds by recreational users and fishermen and may help to protect this valuable habitat. Overall an in depth survey of the Eel Grass within the Harbour is required to better understand the extent and health of this important habitat and to ensure that it is appropriately managed in the future.

## 5.14 Mammals of the Harbour

The Harbour is considered as an ideal habitat for otters, which were once a common sight. Today however sightings are rare and although there is some evidence to suggest that numbers are once again increasing more work needs to be done to establish the extent of the population in the Harbour. Potential problems for otters include pollution, loss of reedbed habitat and disturbance from increased boat traffic. Otters have also been killed recently in the Harbour, after being caught in illegal fyke nets used to trap eels. Overall more regular surveys need to be carried out and habitat needs to be managed to restore the otters to a viable breeding population in Poole Harbour.

The impact of Sika Deer (*Cervus nippon*) on the saltmarsh habitat has already been discussed and despite culling initiatives to control their numbers, populations have increased significantly over the past few years. It is thought that the deer, which are native to Japan and East Asia, were first released on Brownsea Island around 1900 and further animals escaped from private estates around Wareham. The Isle of Purbeck is now

believed to have the largest population of wild Sika Deer in England and it is important that an effective deer management strategy is established in order to protect the delicate intertidal habitats of the Harbour.

Grey Seals are occasionally observed in the Harbour and cetaceans such as Bottle Nosed Dolphins and Harbour Porpoises are also seen infrequently in or just outside the Harbour.

## **5.15 Lagoon**

### **5.15.1 The Habitat**

The lagoon at Brownsea Island is of considerable nature conservation interest. The densities of invertebrate species in the lagoon were found to be considerably higher than large areas of Poole Harbour, and the lagoon is therefore an important food resource for waterfowl including the black-tailed godwit and avocet. The abundance of the lagoon amphipod *Corophium insidiosum* may be of particular importance to avocets, as this bird species is known to feed in areas of Poole Harbour where *Corophium volutator* is common.

The site has very high abundances of typical lagoonal species, that are either of international importance, nationally scarce or uncommon such as the Starlet Sea Anemone *Nematostella vectensis*. As a typical saline lagoon assemblage it is at least of equal conservation status to other similar lagoons within the Solent Saline Lagoons Special Area of Conservation, and should be recognised more widely.

### **5.15.2 Potential Threats**

The location of the lagoon is unsustainable and is likely to be lost with predicted rises in sea level. An initial change as the lagoon becomes more saline is that the rare lagoonal species will disappear while over time an important bird feeding and roosting site and breeding site for terns may be lost. An understanding of the function that the lagoon serves to the waterfowl of the Harbour and where appropriate replacement habitat could be recreated is required in order to safeguard the Special Protection Area.

## **5.16 EMS Risk Review**

Natural England (NE) was commissioned by Defra to undertake a strategic review of the risks from all ongoing activities within European Marine Sites (EMS), in order to identify future management required to ensure site features are maintained or restored to favourable condition (Appendix 13). A report card has been produced for each site which identifies the level of risk from specific ongoing activities. This is the first national audit of risks on EMS and will help focus management effort on EMS that are under threat or potential to become under threat. Further audits will be undertaken in the future and Defra will work with competent authorities to begin implementation of appropriate management measures.

## Management Objectives:

The following is a list of the principle management objectives identified. Whilst some are specific to the management of nature conservation and landscape, others may relate to activities and issues discussed in other chapters of this plan. All management objectives can be found in the matrix contained within Section 2, which also lists proposed management actions.

- To ensure that any development can demonstrate no adverse impact on the designated site and fully complies with the Habitat Regulations.
- To investigate appropriate measures to ensure that harvesting activities e.g. baitcollecting and shellfishing, do not adversely effect the nature conservation interests of the Harbour.
- To continue deer management initiatives to alleviate damage to saltmarsh and reedbed habitats.
- To ensure appropriate controls are in place that prevent illegal egg collection.
- To ensure litter does not affect the bird interest features of the Harbour.
- To improve communication with all user groups & organisations to explain their potential impacts on the interest features of the EMS.
- To understand the extent and health of eel grass beds within the Harbour and raise awareness of them.
- To monitor the habitats in Poole Harbour and implement management initiatives to ensure their protection and enhancement.
- To promote more research into the impact of human activity and climate change on the bird populations and habitats of Poole Harbour.

## Chapter 6 Water Quality and Pollution

### Guiding Principles:

**Chapter 4 details all the guiding principles relevant to the overall management of the Harbour. Whilst all should be given some consideration the following are of particular relevance to water quality and pollution.**

**Key Guiding Principle numbers: 1, 5, 6 and 7.**

### 6.1 Current Overview

Poole Harbour's poor flushing characteristics make it very vulnerable to pollution. A particular concern is the level of nitrates in the Harbour. Pollution of water, sediment and air can come from many sources and as a result of a range of activities such as agriculture, industry and recreation. Many different EU Directives set standards for environmental quality and requirements for monitoring, while local plans recognise the need to address pollution from existing sources as well as proposed developments.

Appendix 6 details much of the relevant guidance, legislation and monitoring that relates to the environmental quality of the Harbour.

### 6.2 Agriculture

Diffuse pollution refers to contamination of watercourses by surface water runoff and leaching of nutrients and chemicals from soil. The rivers Frome, Piddle, Corfe and Sherford which discharge into the Harbour are subject to hypereutrophication from nitrates and phosphates from agricultural sources. Increased nutrient levels from fertilisers and slurry can result in algal blooms in the rivers and macroalgal (seaweed) blooms in the marine environment. This anthropogenic eutrophication can lead to deoxygenation of the water, which can result in fish and shellfish mortality while macroalgal blooms can result in a depletion of prey items and interfere with bird foraging behaviour. Soil loss from agricultural fields is also of concern as it can increase sediment levels in rivers and the Harbour hampering fish spawning grounds and shellfish beds.

In order to address the issues of pollution from agriculture DEFRA are funding a Catchment Sensitive Farming initiative, which will encourage the use of best practice farm operations to reduce water pollution. The catchments of the Frome, Piddle, Sherford and Corfe Rivers are designated Nitrate Vulnerable Zones (since 2002). This means that farmers in the catchment are restricted in their management of and application of organic manure and inorganic fertilizer. These controls have been introduced to reduce inputs of nitrogen to the Harbour. Natural England, the Environment Agency and Wessex Water are developing a management plan to focus on what measures are required to reduce nitrate inputs into the Harbour.

### 6.3 Urban Development

The Government's Planning Policy Guidance Note 12 identifies pollution and water quality as issues for development plans, whilst Planning Policy Statement 23 on planning and pollution control, contains guidance on pollution matters, including the relationship between controls over development under planning law and under pollution control legislation.

Urban developments create diffuse pollution through increased surface run-off, which has the potential to contaminate watercourses with oil, silt and chemicals. Sustainable drainage is the practice of controlling surface water runoff as close to its origin as possible before it is discharged to a watercourse. The Borough of Poole has produced Supplementary Planning Guidance on Sustainable Drainage Systems to give further guidance on the appropriate use of sustainable drainage in new developments. Local plans however recognise that surface water flows should not be allowed to be discharged into the public foul sewers since this would cause overloading and premature operation of storm overflows to the detriment of the water quality of Poole Harbour.

New urban developments also put pressure on existing sewage treatment works and associated water service facilities. Local plans encourage the responsible use of existing facilities when capacity allows, but under the Water Industry Act 1991, developers are required to contribute towards providing the necessary infrastructure to meet the increased demands imposed by development.

The Planning Policy Guidance Note 24 on Planning and Noise recognises housing as a noise sensitive development. Within the Harbour urban development is primarily centred around the north shore and disturbance from noise is not considered as a major environmental concern, however any future development in more sensitive areas would need to take into account the impact of noise pollution on both human and bird populations.

## **6.4 Industrial and Commercial Activities**

Industrial activities during the twentieth century have led to significant contamination of some of the north shore. Toxic discharges of industrial waste have left much of Holes Bay contaminated with heavy metals which have accumulated in the bed sediment. These metals can then accumulate in the organisms that live within the sediment and may be passed up the food chain, a process known as bioaccumulation. Many different metals have been identified but those of particular concern are: cadmium, mercury, copper and zinc. Discharges of these metals have largely been eliminated but they persist in the environment and their natural breakdown is slow. As well as bioaccumulation there is also the concern that heavy metals could remobilise when disturbed by activities such as dredging and this is given due consideration by regulatory authorities when work and disposal licences are applied for. However heavy metals can also be remobilised as a result of natural erosion of saltmarsh and this is an area that requires further research especially in light of rising sea levels.

Local councils continuously monitor air quality around the Harbour with particular focus placed on levels of Nitrogen Dioxide (NO<sub>2</sub>) and Carbon Monoxide (CO). Information on air quality in the area is sent to DEFRA annually, with a comprehensive report submitted every three years. There is currently no monitoring of emissions from ships, but some port based industries require permits which regulate air pollution by such things as dust and solvent emissions. Another possible source of pollution is the discharge of waste water from shellfish transshipping vehicles which may introduce pathogens and alien species into the aquatic environment.

One significant industry located in the south of the Harbour is the onshore oil field. However there are no effluent outputs from the operation as discharges from the site are collected and returned to the oil bearing strata to aid extraction.

## **6.5 Sewage Treatment Works (STWs)**

In 2002 Poole Harbour was designated as a Sensitive Area (Eutrophic) and Polluted Waters (Eutrophic) under the Urban Wastewater and Nitrate Directives respectively. This was due to elevated levels of nitrates and phosphates leading to problems of eutrophication in certain areas. Some nutrients were derived from agricultural sources and STWs were identified as a source.

Poole Harbour receives treated sewage discharges from three main STWs which serve the communities of Poole, Lytchett Minster and Wareham. These sites have all provided secondary treatment for many years and treat sewage to a high standard before discharge. Wessex Water Services Ltd run these STWs and are also responsible for maintaining sewers and outfalls. They have a statutory duty to treat and discharge sewage, under consent from the Environment Agency, and to ensure that discharges do not adversely affect the waters of the Harbour in complying with EC Directive standards, such as those for Bathing and Shellfish Waters.

Recent improvements have seen all three STWs fitted with Ultra Violet (UV) disinfection to reduce the bacteriological impact of the discharges to receiving waters. Improvement schemes will also provide additional storm storage and settlement tank capacity to significantly reduce any discharges of storm sewage at times of heavy rainfall. Wessex Water have a programme of improvements known as AMP 4 which details work from 2005 – 2010 and includes the building of a nitrogen removal plant at the Poole STW site to reduce nitrate discharges to the Harbour. Natural England, the Environment Agency and Wessex Water are developing a management plan to focus on what other measures are required to reduce nitrate inputs into the Harbour.

## 6.6 Port and Shipping

Port operations and commercial shipping, including fishing, all have the potential to impact the Harbour in terms of disturbance, contamination from surface water runoff and diffuse pollution such as from antifouling paints, sacrificial anodes and oil. Sediment of the north shore contains elevated levels of Tributyltin (TBT) which was heavily used in antifouling paints up until 1987 when it was banned for use on vessels under 25 metres. TBT was found to be having a severely damaging effect on marine organisms, particularly some shellfish and although it is now rarely used even on larger vessels, it still persists in the environment. The use of TBT antifouling on any ship in an EU port is to be banned from 2008. Contemporary alternatives often contain copper which itself has some detrimental effects, but not in the magnitude of older tin based products.



Sacrificial zinc anodes are used on sheet piling and commercial and recreational craft to counter the effects of electrolysis. Their true environmental effects are currently not fully understood but their use may be linked to occasional elevated levels of zinc contamination at points around the Harbour.

Disposal of sewage, garbage and contaminated bilge water from ships within the Harbour also has a detrimental effect on the environment. There is a complete ban imposed on the dumping into the sea of all forms of plastic, while contaminated ballast water discharged from commercial ships can cause chemical pollution as well as having the potential to introduce alien species and pathogens into the Harbour. Port facilities provide appropriate disposal routes for all forms of waste that legislation requires commercial cargo vessels and ferries to land; details of which are contained in the Port Waste Management Plan.

## 6.7 Recreation

Pollution as a result of recreational activities may not have the potential to be as great as from other sources but the number of recreational users in the Harbour mean that cumulative effects may be significant.

Diffuse pollution from antifouling paint and sacrificial anodes on yachts is similar to commercial operations as discussed above and although TBT based paints are no longer used by recreational craft the effects of copper based alternatives needs further investigation. Discharge of untreated sewage from marine toilets within the Harbour has the potential to cause problems both in terms of meeting water quality standards and the dangers it presents to public health and to marine species including shellfish. Sewage introduces harmful microbial pathogens to the water as well as lowering the amount of oxygen available to marine life. There are currently no national regulations concerning such discharges although a local byelaw prohibits the emptying of marine toilets and holding tanks into Harbour waters. Also best practice recommends that marine toilets should not be discharged where doing so would affect the water quality or harm the amenity value of local waters. The fitting of holding tanks is encouraged and these should be discharged at least three miles offshore or ideally through pump out facilities onshore. It is important that local marina and boatyard operators provide facilities for sewage disposal in order to discourage discharge within or just outside the Harbour. They also need to provide adequate facilities for the disposal of other waste such as oil and garbage.

Marine litter not only reduces the amenity value of the Harbour but can also be potentially harmful to sea life such as birds, mammals and fish. Each year the Marine Conservation Society carries out a national survey of litter, which includes the shores of Poole Harbour. The litter is collected and the quantities and categories noted. In 2005 the survey indicated that over 33% of all litter found along our coastline was from beach visitors, with fishing accounting for 15% and commercial shipping just over 2%.



Under Harbour byelaws it is an offence to deposit any form of waste or garbage into Harbour waters.

Powered recreational craft particularly powerboats and personal watercraft also have the capacity to cause considerable noise pollution. This can be a nuisance to other Harbour users and local residents but can also cause considerable disturbance to wildlife. To some degree the problem has been addressed with the introduction of the speed limit, the zoning of motorised activities and the quiet zone, but users of all craft need to be aware of the impact of their activities on other users and the wildlife of the Harbour.

## **6.8 Monitoring**

The Environment Agency is the competent authority for routine monitoring of water bodies such as the waters of Poole Harbour, its freshwater inputs and coastal waters. This monitoring is undertaken according to frequencies outlined in various EU Directives, currently including Bathing Waters, Dangerous Substances, Shellfish Waters and Freshwater Fisheries, (see Appendix 6). The data collected is passed to DEFRA, who routinely submit this with other relevant data to the EU for consideration. Some sampling however, such as that for Bathing Waters, does not occur all year and with increasing recreational activity throughout the winter months there is a growing need to fill current public information gaps about water quality.

## **6.9 Water Framework Directive (WFD)**

The EU Water Framework Directive came into force in 2000. Its timetable for implementation extends over 15 years, requiring “good ecological and chemical status” or the equivalent for designated water bodies to be achieved by 2015.

The aim of the WFD is to:

“establish a Community framework for the protection of groundwater, inland surface waters, transitional waters and coastal waters, in order to prevent and reduce pollution, promote sustainable water use, protect the aquatic environment, improve the status of aquatic ecosystems and mitigate the effects of floods and droughts.”

It updates and consolidates some of the existing piecemeal EU water legislation (see Appendix 6), whilst establishing a new, integrated, ecosystem based, approach to water protection, improvement and sustainable use.

The WFD is being implemented in a series of stages that started in 2004. By 2009 a River Basin Management Plan (RBMP) must have been prepared. These are statutory plans, which will define the measures required to meet environmental objectives and will provide the mechanism whereby future water use and activities affecting water will be managed. Poole Harbour is included within a River Basin District, which covers most of the south west of England but for planning purposes this region will be subdivided into smaller catchment areas. Protection and improvement measures must be in place by 2012 and water quality targets should be achieved by 2015 unless alternative objectives are sought.

Commercial shipping, agricultural practices and other industrial and recreational activities all have the potential to impact on water quality and future management needs to focus on initiatives aimed at meeting standards that will be set by the Water Framework Directive.

The WFD will undoubtedly have implications for all activities that have the potential to affect the water quality of the Harbour but current monitoring and initiatives mean that it is in a good position to meet all future standards.

## Management Objectives:

The following is a list of the management objectives identified. Whilst some are specific to the management of water quality and pollution, others may relate to activities and issues discussed in other chapters of this plan. All management objectives can be found in the matrix contained within Section 2, which also lists proposed management actions.

- To understand the potential effects of the transfer of ballast water to the marine environment.
- To ensure best practice is followed to minimise the impact of antifouling paints on marine fauna & flora.
- To ensure air quality in and around the Harbour meets agreed emission standards.
- To ensure discharges from industry meet emission standards.
- To ensure discharges from vessels are regulated and comply with legal requirements.
- To investigate the potential effects of sacrificial anodes.
- To ensure discharges of treated effluent meet emission standards.
- To undertake planned improvements to storm sewage and emergency overflows.
- To ensure litter does not affect the interest features of the EMS.
- To seek to encourage the use of more environmentally sensitive farming techniques.

## Chapter 7 Managing the Shoreline

### Guiding Principles:

Chapter 4 details all the guiding principles relevant to the overall management of the Harbour. Whilst all should be given some consideration the following are of particular relevance to managing the shoreline.

**Key Guiding Principle numbers: 1, 5, 8, 9 and 10.**

### 7.1 Climate Change and Sea Level Rise

Probably the most significant long term issue which will affect the future of shoreline management is sea level rise. This is a natural occurrence for the coast, which of course includes Poole Harbour. However, as a result of recent studies, the rate of rise of the sea levels is expected to increase according to the predicted climate change models (see table below). The Inter-Governmental Panel on Climate Change (IPCC) predictions suggest that global temperatures may increase by between 1 degree Celsius to 3.5 degrees Celsius by 2100, with sea level rise predictions for the south west coast being as follows:

Period	Rate of Rise
2007 to 2025	3.5mm/year
2025 to 2055	8.0mm/year
2055 to 2085	11.5mm/year
2085 to 2115	14.5mm/year

(Figures taken from PPS 25 Annex B. Table B.1)

Therefore, starting from 2007, if the predictions are correct it may be possible for the sea levels to be 63mm higher by 2025, 303mm higher by 2055 and 648mm higher by 2085.

Increased extreme events, including increased storminess, are also associated with climate change. The Environment Agency, Southern Coastal Group, SCOPAC (Standing Conference on Problems Associated with the Coastline) and the Dorset Coast Forum are all organisations whose work considers the issues of climate change and sea level rise.

#### 7.1.1 Implications

Higher sea levels and a greater number of stormy events will have implications for everyone around the harbour.

Climate change will need to be considered when undertaking Flood and Coastal Erosion Risk Management and trying to protect life and property. The planning process will also need to take account of the predicted changes when considering planning and development. Government Policy Planning Statement PPS 25 explains how flood risk should be considered at all stages of the planning and development process. It sets out the importance of the management and reduction where possible of flood risk in planning, acting on a precautionary basis and taking account of future climate change scenarios.

Poole Harbour is a SSSI, SPA and Ramsar site and the habitats and species for which it has been designated as important are also under threat from climate change. There is potential for a loss of intertidal habitats from natural processes and “squeeze” against hard defence structures with higher sea levels. Additionally, the flora and fauna will change with warmer air and water temperatures.

Therefore the possible effects of climate change in the Harbour are:

- Increased risks to life and property in the community from flood events can occur from the sea, the rivers and from surface water runoff
- Increased risks to communities from coastal erosion and landslips

- Loss of intertidal habitats within the Harbour including mudflat, saltmarsh and Brownsea Lagoon
- Establishment of new intertidal habitats along the coast and up the rivers as they are flooded by rising sea levels
- Increased air and water temperatures which may affect the flora and fauna found in the harbour causing loss of some species and the introduction of new ones

## **7.2 Flood and Coastal Erosion Risk Management**

In England DEFRA has the overall policy responsibility for both Flood and Coastal Erosion Risk Management. It sets the policy aims, objectives and targets for the operating authorities. They also provide guidance, funding for grant eligible works and run a capital research and development programme.

### **7.2.1 Flood Risk Management**

The Environment Agency (EA) is the principal flood risk management operating authority in England and Wales. They have a general supervisory role for all matters relating to flood risk which includes both river (main river) and tidal issues.

EA's Flood Risk Management includes:

- a) Maintain and operate existing flood risk management schemes and associated structures to alleviate or reduce the risk of flooding. All new flood risk management schemes must be economically viable, technically sound, conserve or enhance the environment and contribute to sustainable development
- b) Provide a flood warning detection and dissemination system capable of issuing flood warnings directly to the public and professional partners
- c) Provide mapping of areas at risk of flooding
- d) Provide, through the Development Control process, discouragement of inappropriate development in areas at risk of flooding. This is achieved as part of the planning consultation process and by Flood Defence Consents (formerly Land Drainage Consents)

Local Authorities also have the powers to undertake flood risk management works on the smaller streams known as Ordinary Watercourses. However, agreement by the EA must be sought before any work is started.

All operating Authorities today realise that defence development may be more cost effective and enduring if, rather than fighting nature, they harness and enhance the natural coastal processes. Establishing a natural regime is thought to have the added advantage of retaining the wildlife of the area and enhancing the quality of the landscape.

Also successful man made defences in one area may have a damaging effect on neighbouring stretches of the coastline if they interfere with the natural movement of sediment. This must be taken into account when considering making any changes to the existing structures or when designing any additional flood risk management schemes.

An example of this is the strategic review of the Wareham Tide Embankments. These banks are adjacent to the Rivers Frome and Piddle at the western end of the Harbour and the long term future and the strategic options are being considered by the Environment Agency. These options need to take account of the interests of the different parties, the environment and the need to reduce the cost of maintenance.

Examples of flood risk management schemes within the Harbour can be seen along Poole Quay and in Hamworthy Park. The location of all existing formal Flood Risk Management Schemes can be seen at [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk). (This does not include any private schemes).

### 7.2.2 Coastal Erosion Risk Management

Coastal Erosion Risk Management is where measures are taken to protect the shoreline against erosion. This can take the form of hard (sea walls, rock armour or groynes) or soft (dunes, marshes and beach replenishment) engineering.

The Environment Agency has a strategic overview of Coastal Erosion Risk Management. In the harbour, the local authorities of Poole and Purbeck have the responsibility for these works under the Coast Protection Act 1949 and any non-statutory responsibilities in accordance with Defra's high level targets. Examples of Coastal Erosion works within Poole Harbour can be seen around the Whitley Lake area, along the eastern shore of Brownsea Island near to Brownsea Castle and at the entrance to the harbour.



### 7.3 Shoreline Management Plans (SMPs)

SMPs are non statutory documents which set out strategic guidance for managing specific lengths of the coast, taking account of natural processes, human and environmental influences and needs. The Local Authorities and the Environment Agency use SMP guidance when putting together planning strategies and policies relating to the shoreline. The SMPs can be viewed at Dorset County Council, Borough of Poole, Purbeck District Council and in local libraries.

Each SMP covers an area of the coastline known as a sub-cell within a littoral sediment cell. A sediment cell is defined as a length of coastline, which is relatively self contained as far as the movement of sand or shingle is concerned, and where interruption to such movement should not have a significant effect on adjacent sediment cells.

The SMPs cover the entire coast of England and Wales and they detail guidance on how best to manage the coast using the following 4 options:

- Advance the line – move the shoreline into areas now covered by the sea.
- Hold the line – maintain the present shoreline.
- Managed realignment – allow the shoreline to move
- No active intervention – commonly applied on undeveloped coastline and means let nature take its course.

The original SMPs (SMP1) were produced in 1999 and have recently been reviewed. This review has now finished and the new SMP2's have been produced and were approved.

The Dorset Coast is covered by two SMP2's (sub cells or sediment cells) 5F - "Hurst Spit to Durlston Head" and 5G - "Durlston Head to Rame Head".

Poole Harbour is included within the SMP2 - 5F, Hurst Spit (*near Lymington*) to Durlston Head (*near Swanage*) and this plan covers a total of 190km, or 118 miles of coastline including all harbours and estuaries. The lead Authority for this plan is Bournemouth Borough Council and more information can be found on the website for the Hurst Spit to Durlston Head SMP2, ([www.twobays.net](http://www.twobays.net)) or on the DEFRA website ([www.defra.gov.uk](http://www.defra.gov.uk)) under flood management.

SMP2's take a longer term view of managing the coast, setting out policies for the next 100 years, as opposed to the 50 year vision of the old plans. Greater stakeholder engagement has been encouraged in the review process and the latest research relating to the environmental, social and economic factors has been considered.

## Management Objectives:

The following is a list of the management objectives identified. Whilst some are specific to the management of the shoreline others may relate to activities and issues discussed in other chapters of this plan. All management objectives can be found in the matrix contained within Section 2, which also lists proposed management actions.

- To ensure all relevant organisations work together and that sea level rise is incorporated in the planning, development and management of the harbour.
- To reduce risks to people, property and the environment from flooding and coastal erosion through the provision of defences, flood forecasting and warning systems against national priorities and criteria.
- To respond to coastal change and rising sea levels in the most sustainable way to comply with flood protection policy and Habitat Regulations.
- To understand where habitats may be lost in the future due to sea level rise and where there is potential for habitat re-creation.
- To identify strategic options for the future management of the Wareham tide banks.

## Chapter 8 Fisheries

### Guiding Principles:

Chapter 4 details all the guiding principles relevant to the overall management of the Harbour. Whilst all should be given some consideration the following are of particular relevance to fisheries.

**Key Guiding Principle numbers: 1, 5, 11, and 12.**

### 8.1 General

Poole Harbour is the base port for a commercial fishing fleet and provides landing and marketing facilities for boats from Mudeford and Swanage. There are approximately 100 registered fishing boats based in the port. The size of the vessels range from offshore potting and trawling boats operating in mid-English Channel, to small Poole canoes working within the Harbour. The Port benefits from its central position within the English Channel fishery coupled with good land and sea communications, particularly for the export trade of shellfish.

All registered vessels fishing within the Southern Sea Fisheries District must hold a permit issued by the Committee to fish commercially. Permits are only issued to vessels under 12 metres overall length. As the fisheries' managers this enables the Sea Fisheries District Committee (SSFDC) to monitor the fishing effort and to keep stocks at a sustainable level through local byelaws, and National and EU legislation enacted to protect coastal waters.

The Environment Agency manages fisheries on all freshwaters in England, which includes all freshwater rivers and streams running into Poole Harbour.

### 8.2 The Fishery

#### 8.2.1 Within the Harbour

Around 35 species of adult finfish, 17 species of bivalve shellfish and 11 species of decapod crustaceans have been recorded in the Harbour. The conditions and productivity of the Harbour are such that shellfish, eels and some fish species are found in much greater quantities within the Harbour than on the open coast.

Wet fish, such as mullet, bass, flounder, sole and plaice are caught commercially using fixed, drift, seine and trawl nets, and hand lines, whilst eels are trapped using fyke nets.

In addition the Harbour is an important shellfish ground which is administered under the Poole Fishery Order 1985 by the Southern Sea Fisheries District Committee. This order allows the Committee to lease sections of the sea bed to companies or individuals for cultivation of shellfish and to regulate the fishing for oysters, clams and mussels in the remainder of the Harbour. Currently the leased beds are used to grow on and fatten stocks of mussels, clams, oysters and cockles, supplying fresh live shellfish to the market.



The Regulated clam fishery provides licensed fishermen with a winter fishery. It has a high monetary value which benefits the immediate community because each licensee provides employment for at least 2-3 employees per boat during the season. Concerns over the environmental effects of this activity on the bird interest of Poole Harbour SPA, through potential bird disturbance and effects on bird prey and on the Ramsar site through impacts on the birds and damage to eelgrass beds, led to the requirement under the Habitat Regulations for an Appropriate Assessment for this fishing activity in 2005. Insufficient

environmental information was provided on the impact of this activity on Poole Harbour SPA and Ramsar site. In order to demonstrate no adverse effect of this fishery on the SPA and Ramsar interests of the site, Natural England advised that the key areas for overwintering, roosting and feeding birds (bird sensitive areas) were excluded at key times in addition to the main eelgrass beds. A byelaw was subsequently introduced for fisheries management purposes which prohibits the use of carrying a dredge and clam and cockle fishing in certain areas of the harbour (a subset of the areas considered as bird sensitive areas).

There is one designated nursery area within the Harbour which is for bass. This comes under the Bass (Specified Areas) (Prohibition of Fishing) (Variation) Order 1999. However other fish species such as cockle, prawn, eel and clam are also protected throughout the Harbour by closed seasons.

In addition to fish and shellfish taken within the Harbour, commercial catches of lobsters, brown crab, spider and velvet crab, whelks, bass, sole, plaice, skate, ray and sand eels are also landed at Poole by boats operating in the English Channel.

### **8.2.2 Waters Feeding the Harbour**

The Environment Agency has control of fish introductions (movements/transfers). Any person introducing fish (or fish eggs) to any inland water requires consent from the Agency. This control is in place primarily to prevent the spread of disease, and/or undesirable fish species. Removal of fish from the source water is dealt with under Agency byelaws. On the Frome and Piddle there is relatively little fish stocking, compared with, say, the Avon. Each year the Agency consents to the introduction of brown trout to various fisheries on the Frome and a limited number on the Piddle. Except for the removal of pike from one or two fisheries on the Frome, this is the extent of fish movements on the two rivers feeding Poole Harbour.



### **8.2.3 Fish Migration**

There are a number of migratory species present in the Frome and Piddle. Some of these (most notably salmon, sea trout, eel and sea lamprey) also use Poole Harbour, passage through which forms an important phase of their migrations. Parts of the Salmon and Freshwater Fisheries Act, 1975 give the Environment Agency powers to ensure the free passage of migratory salmonids. This is done in the Harbour and lower rivers by regulation of the fisheries (e.g. prohibiting certain methods), which the Agency police particularly at vulnerable times. A Southern Sea Fisheries District byelaw also helps with this issue. In recent years there has been a slight reduction in the illegal fishery in Poole Harbour, but there is a need to remain vigilant, as fish are extremely vulnerable here. Within the rivers the Agency facilitates salmon and sea trout migration by maintaining fish passes, investigating and building new structures where the need is identified.

### **8.2.4 Facilities for the Industry**

The existing facilities for the fishing fleet at Poole have been radically improved with the completion of the Poole Quay Boat Haven in 2001. Pontoons provide permanent floating moorings with access by foot to each individual boat. Landing facilities have been placed alongside the Quay to improve accessibility when offloading or loading vessels is carried out. Also adequate car parking facilities have been granted for the sole use of berth holders.

### **8.2.5 Non-Commercial Fishing**

The charter fishing fleet is one of the largest in the UK with around 35 boats in total. Trips are undertaken by commercial fishermen and by skippers specialising in the work, all of whom must be licensed by the local authority. Larger vessels are also required to have safety inspections carried out by the Maritime and Coastguard Agency with details held on the Register of Shipping and Seamen. Fishing takes place in all areas of the Harbour including the entrance and out into Poole Bay.

A large number of anglers also fish from the shoreline of the Harbour. Poole and District Sea Angling Association has 19 clubs as members in the Poole area alone and other local clubs from neighbouring towns and villages use the Harbour for sport fishing. The flounder fishery is one of the biggest in the country and a major attraction for anglers around the UK between October and January.

### 8.2.6 Bait Collection

Poole Harbour supports substantial populations of bait species, which form a valuable economic and ecological resource. Collecting bait for personal or recreational use is part of the public right to fish but there is no legal right to gather bait commercially for sale or reward without the landowner's permission.

#### Bait Digging and Bait Dragging

The main species that are targeted for collection by both anglers and commercial fishermen, are lugworm, catworm and king-ragworm with the majority of the activity taking place on the more accessible North shore. Garden forks are used to dig up the worms and if not done in a sensitive manner this has the potential to cause damage to the mudflats and wildlife of the Harbour. The Poole Harbour Steering Group has produced a code of conduct leaflet to raise awareness among bait diggers as to how they can avoid their activity conflicting with other users and wildlife.

Bait digging activity within the Harbour is of concern from an environmental standpoint. Depending on the location and intensity of bait digging this activity does have the potential to adversely affect the bird life of the Harbour through disturbance and affect bird prey availability. There is evidence that commercial bait digging may be having such an impact in some parts of the Harbour, including Holes Bay. Where this occurs, the Borough of Poole will investigate the possibility of introducing a bye law to control this activity. Overall more studies need to be carried out to understand the exact impacts of bait digging both to target and non-target species and existing bait collectors need to ensure that they carry out their activities in a responsible manner.



Responsible bait collection is not thought to have a significant impact on stocks but non-target invertebrates may be affected. The presence of bait diggers on the foreshore can disturb feeding birds and where it results in heavy perturbation of the sediment it appears to affect bird foraging behaviour.

Bait dragging primarily targets king-ragworm which are harvested using hooked metal drags towed from boats. This generally takes place in the south of the Harbour across shoals of soft mud that are inaccessible to bait diggers. As with bait digging depending on the location and intensity of this activity there is potential, where it results in heavy perturbation of the sediment, to affect bird foraging behaviour, whilst sediment disruption and increased turbidity may affect fish and shellfish. There are currently no statutory controls to regulate bait dragging in the Harbour and the boats are not subject to any licensing or inspections. However responsible bait draggers have expressed an interest in bringing in some form of regulation and also producing a code of conduct.

The recent European Marine Site Risk Review identified bait digging and bait dragging as activities that currently pose a high risk to the bird features of the European marine site (Section 5.15) due to the current low management of these activities, and level at which these activities take place in some of the sensitive parts of the Harbour. In order to reduce the risk to the site the following measures were deemed necessary:

- Monitoring of current levels and the locations of bait digging and bait dragging
- Introduction of a local bye-law to regulate the activity in Holes Bay, a location where there is particular concern as to how this activity may be affecting the European Marine Site.
- Preparatory work by Sea Fisheries Committee if further work deemed it necessary to put a byelaw in place to regulate these activities when Sea Fisheries Committees become Inshore Fisheries and Conservation Authorities.

### 8.2.7 Shellfish Quality Control

In order to ensure that shellfish harvested from the waters of Poole Harbour are fit for human consumption continuous monitoring is undertaken. The Shellfish Waters Directive considers the quality of water in which the shellfish live, while the Shellfish Hygiene Directive relates to the quality of the flesh of shellfish.

#### Shellfish Waters Directive

Under the EC Shellfish Waters Directive, Poole Harbour (with the exception of Holes Bay) is designated as a shellfish water. As such the Environment Agency regularly monitors the quality of water around the Harbour. The Harbour is split into three designated shellfish waters: Poole Harbour North, South and West, and monitoring takes place at fixed points within these areas. In the past, waters within the Harbour have failed

the Shellfish Waters Directive standards due to contamination from bacteria and heavy metals, but improvements in water quality mean that the designated areas currently meet agreed standards.

### Shellfish Hygiene Directive

Under the EC Shellfish Hygiene Directive, waters throughout the Harbour (except Wareham Channel, and Lytchett Bay) have been designated as Class B bivalve production areas for Pacific and native oysters, Manila clams, cockles and mussels. Wareham Channel (West) is classified Class C for production of Manila clams. Lytchett Bay is classified as a prohibited area for the collection of shellfish. Testing is the responsibility of Environmental Health Officers from the Borough of Poole with sample analysis generally being undertaken by the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) who are the statutory advisers to government on such matters. If after testing an area is given a Prohibited Classification (PC) then this will normally stay in place for 2 years before shellfish production or collection can take place there again.

**Table 2: The Classification Categories of Shellfish**

Class	Description
A	Molluscs can be harvested for direct human consumption
B	Molluscs can be marketed for human consumption after purification in an approved plant or after relaying in an approved class A relaying area or after being subject to an EC approved heat treatment process.
C	Molluscs can be marketed for human consumption only after relaying for at least two months in an approved relaying area followed, where necessary, by treatment in a purification centre, or after an EC approved heat treatment process.
Prohibited	Molluscs must not be subject to production nor be collected.

### 8.2.8 Illegal Fishing

Illegal fishing of shellfish, eels and wetfish species is known to occur within the Harbour. This not only exposes the perpetrators to the risk of prosecution but it also poses a health risk, as members of the public could eat shellfish deemed unfit for human consumption.

Poaching activity within the Harbour is an issue. It is compounded by the fact that legislation is outdated and inadequate for the task which, when combined with resource issues, means that policing by all agencies is problematic.

Licensed shellfishermen operating in Class B shellfish areas use purification tanks to ensure their catch is fit for sale to merchants. However it is possible that shellfish collected from Class B, Class C or even Prohibited zones may be illegally sold on without undergoing the necessary purification procedures.

Under the Food Safety (Fishery Products and Live Shellfish) (Hygiene) Regulations, 1998, it is a requirement that a gatherer of shellfish ensures that completed Movement Documentation accompanies each batch of shellfish at all times. The Borough of Poole issue these documents which show where shellfish were caught and by whom and merchants should have sight of these before purchasing shellfish from private or commercial fishermen.

The recent European Marine Site Risk Review identified illegal fishing as an activity that currently posed a high risk to the bird features of the European marine site (Section 5.15 and Appendix?) due to the current low management of this activity, and level at which this activity took place in some of the sensitive parts of the Harbour. In order to reduce the risk to the site the following measures were deemed necessary:

- A survey of watercraft usage in the Harbour to help to monitor the levels and location of illegal fishing in the Harbour.
- A multi-agency agreed plan for enforcement of illegal fishing activities with the aim of reducing the level of illegal fishing significantly by the end of 2011.

### **8.2.9 Management and Regulation**

As has already been mentioned both the shellfishery and wet fishery within the Harbour are regulated and policed by the Southern Sea Fisheries District Committee and the Environment Agency. Both agencies have the powers to make byelaws which are used to enforce sustainable fishing practices within the Harbour. Prosecutions are undertaken on those fishermen that breach legislation, which detail closed seasons, permitted fishing techniques and size of catch. Fishery Officers regularly carry out patrols around the Harbour and under byelaw legislation have the powers to stop, search and inspect a boat which is fishing at any time.

The Environment Agency also have the power to stop and search any vessel in the Harbour and out to 6 miles offshore, suspected of contravening the Salmon and Freshwater Fisheries Act 1975. Eel fishing is regulated by the Agency through licensing and there are strict fishery bylaws operating to prevent entrapment of otters in fyke nets.

The byelaws and catch size information used to regulate fishing activity within the Harbour can be obtained by contacting the Southern Sea Fisheries District Committee or the Environment Agency.

#### **Management Objectives:**

The following is a list of the management objectives identified. Whilst some are specific to the management of fisheries, others may relate to activities and issues discussed in other chapters of this plan. All management objectives can be found in the matrix contained within Section 2, which also lists proposed management actions.

- To identify effective mechanisms (eg codes of conduct, voluntary agreements, byelaws) to manage conflicts between, shellfishing, baitdigging / baitdragging and their impacts on interest features of the EMS.
- To understand further the extent and potential implications of bait collection.
- To ensure the sustainable management of fisheries so as to not significantly affect the interest features of the EMS.
- To continue enforcement & monitoring of fishing practices & awareness raising among fishermen.
- To ensure eel fishing is carried out in a sustainable way that complies with legislation and minimise impact on other wildlife.
- To eliminate all illegal fishing activity from the Harbour.

## Chapter 9      Conservancy and Marine Safety

### Guiding Principles:

**Chapter 4 details all the guiding principles relevant to the overall management of the Harbour. Whilst all should be given some consideration the following are of particular relevance to conservancy and marine safety.**

**Key Guiding Principle numbers: 1, 5, 13, and 14.**

### 9.1      Responsibilities

Poole Harbour Commissioners are responsible for ensuring that shipping channels are routinely surveyed and clearly marked, as well as for controlling the movement of commercial shipping. The Commissioners also have powers to create, police and enforce byelaws such as those for speed limits and safe navigation. The Commissioners have applied for a Harbour Revision Order (HRO), which will review and modernise existing legislation under the Poole Harbour Act 1914. It will also give the Commissioners the powers of General Direction under which the Board of Commissioners will have greater regulatory control.

### 9.2      Harbour Control

Harbour Control is located at the Harbour Office and is manned by a Harbour Control Officer (HCO) on a 24-hour basis. The HCO controls the traffic entering and leaving and monitors all marine activity within the Harbour and its approaches. The office is the communications centre for the Harbour and the first point of contact in cases of emergency. The HCO also disseminates information on shipping movements as well as arranging pilots and tugs.

All craft over 50 metres in length (or over 30m in length if carrying more than 12 passengers) require a pilot. A pilot exemption certificate (PEC) may be awarded to masters on a regular trade who pass an oral and practical examination. These are re-validated on an annual basis.

The HCO employs CCTV and radar for managing traffic. Ships over 350 gross tons are also fitted with the Automatic Identification System (AIS) which enables the HCO to identify and locate ships with great accuracy.

As well as monitoring and recording tidal and weather information, Harbour Control keep an incident log, which records any safety or environmental incident that occurs within the Harbour. All radar, CCTV, radio and telephone conversations are also recorded.

### 9.3      Navigation

Poole Harbour Commissioners have responsibility for ensuring that navigational channels are clearly marked and that buoys and beacons are maintained. They act as a Local Lighthouse Authority to Trinity House who carry out an annual, independent inspection of navigational aids within the Harbour.

The Commissioners' commitment to the maintenance of navigational aids is detailed in the Poole Marine Safety Management Plan 2001.

All navigational marks conform to the International Association of Lighthouse Authorities (IALA) system of buoyage and are numbered consecutively from the seaward end of the Swash Channel. Buoys marking the port hand side of the channel have even numbers and buoys on the starboard side have odd



numbers. Minor channels are also marked with stakes or buoys and the Commissioners also maintain signs and notices around the Harbour.

## 9.4 Hydrographic Surveying

In order to maintain and establish channel depths for safe navigation, Poole Harbour Commissioners employ the services of a Hydrographer who manages the Harbour bathymetry. Regular surveys of the main channels are undertaken and the whole Harbour is surveyed on a 3 year rolling programme of work. Data collected is supplied to the Hydrographic Office who then use it to produce the Admiralty Chart for the Harbour. The continuous survey information collected easily allows for trends in deposition and erosion to be identified and is used to inform environmental studies.



## 9.5 Maintenance Dredging

### 9.5.1 Consents and Responsibilities

Maintenance dredging refers to the activity of removing sediment that has built up in existing channels or basins that have previously been dredged and is considered separately from Capital dredging, which refers to the excavation of the seabed in an area or down to a level not previously dredged during the preceding ten years. Maintenance dredging is carried out routinely by Poole Harbour Commissioners to maintain depths in existing shipping channels and also by third party dredging operators, boatyards, marinas and yacht clubs, to maintain access to their sites. A Harbour Works Licence is required for all dredging operations within the Harbour and is issued by the Commissioners under their 1914 Act. A Food and Environmental Protection Act (FEPA) licence must also be obtained from MMO for the deposition of dredged material at sea, along with Coast Protection Act (CPA) approval. Poole Harbour Commissioners presently hold 3 year licences from the MMO which authorise disposal of dredged material offshore at the Swanage disposal ground east of Old Harry Rocks in Poole Bay, and also for limited in-harbour disposal east of Brownsea Island.

The rights of The Crown Estate as owner of the bed of the Harbour are preserved in the Harbour legislation. The current practice of The Crown Estate is not to require the Harbour Commissioners to seek consent for Maintenance dredging each and every time such operations are undertaken, assuming there is no beneficial use of the material. The consent of The Crown Estate is however required for any Capital dredge and appropriate payments are sought in recognition of the improvements provided and for any beneficial use of the material.

Poole Harbour Commissioners have established a Maintenance Dredging Policy and Harbour Control record the quantity of dredged material removed from the Harbour either from Capital or Maintenance dredging operations.

### 9.5.2 Sediment Management Plan

Intertidal mudflats and marshes within the Harbour are of significant ecological value and are the basis for many of the habitat designations. Each year several thousands cubic metres of fine sediment are lost from the Harbour through natural processes and it is estimated that similar amounts of material are also removed annually through Maintenance dredging. It is recognised that the removal of fine silts and muds from the Harbour may be having a detrimental effect on intertidal habitats and Poole Harbour Commissioners are evolving a Sediment Management Plan. An in-harbour disposal site east of Brownsea Island has been established and is continuing to be monitored closely. Approximately 20,000 m<sup>3</sup> of suitable silty material dredged from marinas and channels is disposed of annually in the Harbour to allow material to recirculate onto the mudflats. The Plan was developed as mitigation for major Capital dredge works and looks to evaluate different dredging techniques with the aim of developing best practice guidance for retaining fine sediments within the Harbour system whilst keeping navigational channels clear.



### **9.5.3 National Dredging Protocol and Baseline Document**

Regulation 48 of the Habitats Regulations 1994, states that an Appropriate Assessment needs to be undertaken in respect of any plan or project which either alone or in combination with other plans or projects would be likely to have a significant effect on a Natura 2000 site. In order to meet the requirements of Regulation 48 for Maintenance dredging and to limit the requirement for an Appropriate Assessment a Conservation Assessment Protocol has been produced. This national scheme has yet to be finalised but will provide assistance to operators and regulators seeking or giving approval for Maintenance dredging activities. Environmental Assessments can be expensive and time-consuming and repeated assessment of separate Maintenance dredge applications can add disproportionately to the cost of obtaining consents. A Baseline Document is being produced which will inform an appropriate assessment for consent applications and fulfil statutory requirements. The Baseline Document will include current and historical information on dredging activities within the Harbour. It will synthesize existing relevant information about its environmental status and the known impacts of previous Maintenance and Capital dredging.

## **9.6 Safety and Enforcement**

### **9.6.1 Overview**

Safety within the Harbour is the responsibility of all users, however Poole Harbour Commissioners seek to maintain safety with the use of guidance and byelaws. Byelaws have been created which pertain to certain recreational activities while others relate to the safe and responsible use of the whole Harbour.

The Commissioners have established a Poole Marine Safety Management Plan for the purpose of meeting the standards set by, and the requirements of, the Government's Port Marine Safety Code in conjunction with their Guidance to Good Practice for Port Marine Operations and Competence Standards for port personnel.

### **9.6.2 Speed Limit**

A speed limit of 10 knots operates within, and to a distance outside, the Harbour for all power driven craft.

This is lifted between the 1st October and the 31st of March in the Swash, Middle Ship, North and Wareham channels only, but remains in force for all remaining areas of the Harbour.

A limit of 6 knots is in force at all times for craft operating within Little Channel and Holes Bay and an advisory speed limit of 6 knots is in place within the quiet area to the south of Brownsea Island.

The Environment Agency also enforces a 4 knot speed limit on the River Frome between South Bridge, Wareham and the mouth of the river.

Some organisations and vessels are exempt from the speed limit where necessary for operational reasons. These include: Police and Harbour Patrol Vessels, RNLI Lifeboats and Inshore Rescue Boats, the Coastguard and Fire and Rescue RIBs and the Royal Marines.

The speed limit may also be lifted for the testing of production craft on the half-mile test zone to the south of the port area, however this requires registration with Harbour Control who must be informed of any intended movements over the 10 knot speed limit.

### **9.6.3 Chain Ferry**

The Harbour entrance is only 300 metres wide and is the most hazardous area for navigation due to the strong tidal streams. A chain ferry operates across the entrance to the Harbour and has right of way over all vessels under 50 metres in length. All vessels with engines are strongly advised to use them when transiting the entrance and to pass well clear astern of the Chain Ferry, which is very restricted in its manoeuvrability.



#### **9.6.4 Enforcement**

The Harbour Master operates a number of patrol craft within the Harbour limits at times of busy recreational activity. Their main roles are byelaw enforcement, escorting commercial vessels, and educating the users who may not have sufficient knowledge of the regulations, or who are behaving irresponsibly. The Harbour Master will take further action in appropriate cases.

The Dorset Police also operate regular patrols around the Harbour. There are also regular joint enforcement operations, one such being Operation Senator. These involve all the regular enforcement authorities including the Southern Sea Fisheries District Committee as well as volunteers from local yacht clubs and boatyards.

### **Management Objectives:**

The following is a list of the management objectives identified. Whilst some are specific to conservancy and marine safety others may relate to activities and issues discussed in other chapters of this plan. All management objectives can be found in the matrix contained within Section 2, which also lists proposed management actions.

- To ensure dredging does not result in a loss of important habitats (e.g. mudflat & saltmarsh) and that potential impacts to shellfish areas are minimised.
- To better understand the potential effects of elevated turbidity due to both anthropological activities and natural or storm events.
- To ensure minimum footprint from dredging.
- To better understand the extent and potential effects of remobilised contaminants.
- To minimise the loss of fine material from sediment budget.
- To maintain current management initiatives and make improvements where necessary.

## Chapter 10 Recreation & Tourism

### Guiding Principles:

**Chapter 4 details all the guiding principles relevant to the overall management of the Harbour. Whilst all should be given some consideration the following are of particular relevance to recreation and tourism.**

**Key Guiding Principle numbers: 1, 5, 15, 16 and 17.**

### 10.1 Introduction

Poole Harbour is a popular and accessible destination both with tourists and recreational water users. Poole Harbour Commissioners (PHC) have jurisdiction over the various water based recreational pursuits that take place within the Harbour and regulate these activities to ensure the safety of users.

Annual recreational surveys are carried out to monitor the usage of the Harbour and to identify trends in activity from year to year. These are done over the summer using fixed sightline points at locations around the Harbour.

Information from previous surveys has highlighted the need to maintain designated areas for certain watersports, where their activity can be carried out with the minimum of disturbance to wildlife and other users. Figure 3 shows the location of the different activity zones and the quiet area within the Harbour.

The use of these zones assists in the reduction of disturbance to ecologically sensitive areas and in minimising the dangers associated with the mixing of powered and non-powered craft. Since its introduction in 1995 the zoning scheme has proved very successful in managing the multifarious recreational activities within the Harbour and the majority of users are now aware of, and restrict their activities to, the relevant areas.

There is also an existing quiet area which lies to the south of a line from Patchins Point to South Haven Point where there is an advisory speed limit of 6 Knots. This allows yachtsmen and other recreationalists a quiet anchorage in which to enjoy the beauty of the southern Harbour. The provision of this quiet zone has helped to reduce adverse impacts on the flora and fauna of the undeveloped mudflats and shallow inlets which characterise much of the southern shores. The area helps to provide a safe haven for birds and wildlife as well as for humans and it is intended to maintain the current policy against changes in land use and excessive recreational activity.

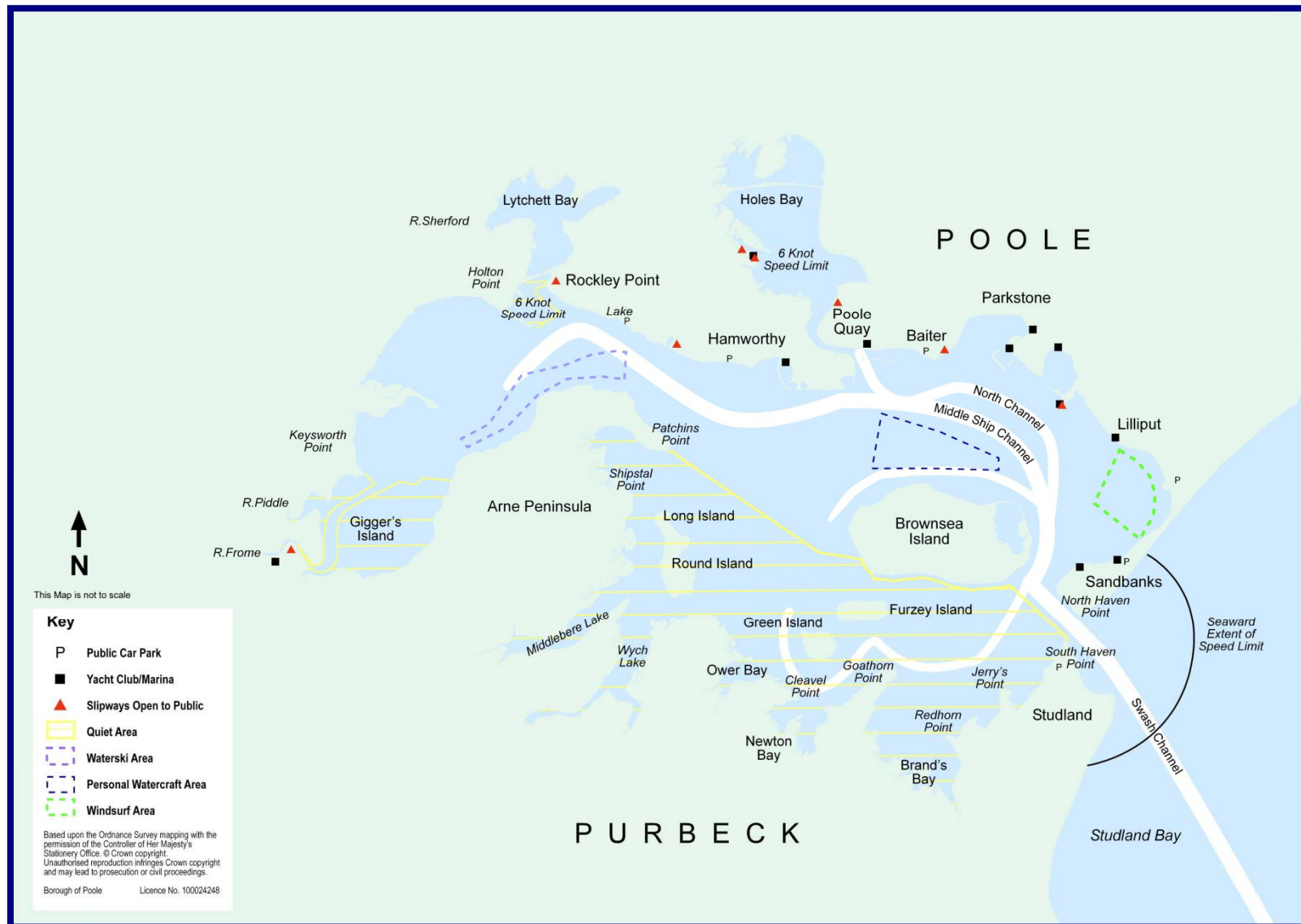
### 10.2 Yachting / Motor Boating

It is estimated that around 5000 yachts visit Poole each year and the eight yacht clubs situated within the Harbour have around 7500 members in total who enjoy racing and cruising within the surrounding waters. There are also several boatyards within the Harbour, which along with the yacht clubs provide facilities for launching, storage and maintenance. Many also offer receptacles for the disposal of litter and waste and some also have pump out facilities for marine holding tanks, and boat owners are encouraged to use them.

#### 10.2.1 Safety and Legislation

The International Regulations for the Prevention of Collisions at Sea (IRPCS) always take precedence over International Sailing Federation (ISAF) Racing Rules and Race Sailing Instructions.

All craft participating in racing or cruising must not impede vessels which can only navigate within the main shipping channel. Crossing or passing close to such a vessel may be regarded as dangerous navigation and could result in prosecution under local byelaws.



**Figure 3:** Map showing the Poole Harbour, Recreational Activity Zones and Access Points.

### 10.2.2 Harbour Dues

Harbour Dues are payable by all motorised vessels over 4.5m in length entering waters under the Harbour Commissioners' jurisdiction. Dues are charged on a daily, weekly, monthly or annual basis and are payable to Poole Harbour Commissioners. The dues can be paid directly at the Harbour office or to the Harbour Master's staff ashore or afloat, or through any of the yacht clubs, boatyards or mooring contractors. They are used to maintain and improve safety within the Harbour, for example the marking of minor boat channels, the policing of the harbour and the management of traffic. Commercial vessels also pay harbour dues by way of "boomage" fees.

### 10.2.3 Moorings Policy

Moorings within the Harbour are managed and regulated by Poole Harbour Commissioners. There are approximately 2500 swinging moorings within the Harbour as well as around 2300 sheltered marina and pontoon berths. The Environment Agency also has over 100 moorings along the River Frome, downstream of South Bridge at Wareham, which are managed independently of those that fall within the jurisdiction of PHC.

Of the moorings regulated by PHC, some are private moorings which are managed directly by the Commissioners, while others are leased to contractors, boatyards, yacht clubs and other small organisations. It is the Commissioners' policy to minimise the number of swinging moorings within the Harbour in environmentally sensitive and recreationally busy areas and to maximize the areas of open water for safe navigation. All moorings are licensed by PHC. Private moorings are allocated to individuals in specific locations and the mooring is maintained by the owner. Block moorings are allocated to organisations who are responsible for the maintenance of all the moorings in the block. However PHC also recognise the need to offer mooring facilities for craft of varying size, particularly in light of the current trend for larger yachts and will always look to retain the most suitable mooring sites. The demand for the convenience of marina berths is increasing and where these are made available the Commissioners' policy is to reduce the swinging moorings managed by that operator by the same number. Marinas offer safer more accessible berths for sailors, but cost is often the deciding factor for the boat user as to which facility they may want to use. Ideally the provision of facilities should reflect demand and it is essential that a range of facilities is available so as not to discriminate participation on the basis of affordability

The swinging moorings are grouped in several different locations around the Harbour with the main concentrations being around the north shore and adjacent to the channels north and east of Brownsea Island. The Commissioners' moorings policy dictates that no moorings will be laid in environmentally sensitive areas and within the quiet area south of Brownsea Island they will be restricted to private moorings leased to local landowners. Swinging moorings continue to be popular due to their affordability compared with marina berths. However there are disadvantages such as lack of security, access to boats from the shore and the need to remove craft from more exposed locations during the winter months.



A licence fee is payable to The Crown Estate for every mooring laid within the Harbour on seabed owned by them. Under the terms of a management agreement this is collected by the Harbour Commissioners and passed on to The Crown Estate on an annual basis.

There are seven significant marinas in the Harbour all of which are located along the north shore. The largest of these is in Holes Bay which has berths for some 800 craft. The Poole Harbour Commissioners manage the Poole Quay Boat Haven which was opened in 2001 with the aim of offering improved facilities for visiting yachts as well as local fishermen.

In addition to marina pontoon berths and swinging moorings, several operators have facilities for dry boat storage throughout the year. Around the Harbour there is capacity for approximately 2000 boats to be stored in this way, which reduces the requirement for swinging moorings. Owners still have continuous access to their boats, which can be launched on request at any time.

Trends in the recreational boating industry are linked closely to the strength of the national economy and if personal affluence continues to grow then there is likely to be an increase in the demand for marina berths

within the Harbour. However construction costs are high, often leading to a demand for associated residential and retail development to make the schemes viable. Some benefits will accrue from such developments, such as reducing the number of swinging moorings in the Harbour, providing better facilities for yachtsmen and bringing revenue to the town. On the other hand there will be environmental concerns which the planning authorities will have to take into account when considering any planning application.

Land for such developments is at a premium and any such project would require a full Environmental Impact and/or Appropriate Assessment in order to obtain the relevant, local authority, Government, and Harbour authority consents.

### **10.3 Windsurfing**

Windsurfing within the Harbour has traditionally taken place within the Whitley Lake zone. This shallow area with easy access has been cleared of swinging moorings and is ideal for windsurfers of all levels. Many more experienced windsurfers also launch from the shore at Hamworthy and enjoy the open waters of the western Harbour, however they need to be aware of the Measured Half Mile that is located in this area and along which craft may be tested at high speed.

There is no recognised local windsurfing association although some groups are run through yacht clubs and equipment hire and tuition can be arranged through many of the local windsurfing shops.

#### **10.3.1 Safety and Legislation**

Windsurfing may take place throughout the Harbour but sailors should avoid the busy shipping channel and craft participating in organised or commercial activities. There are local byelaws which are specific to the regulation of windsurfing within the Harbour.



### **10.4 Kitesurfing**

Kitesurfing is a growing sport within the Harbour and activity is generally centred around the windsurfing zone at Whitley Lake. As with windsurfing local water sports shops provide tuition and equipment hire and there is a local association, which is part of the British Kitesurfing Association (BKSA), which is run through one of the local shops.

#### **10.4.1 Safety and Legislation**

Kitesurfers are urged to restrict their activities to the Whitley Lake area where there is less chance of conflict with other water users. However consideration also needs to be given to the windsurfers who use the zone and the dangers posed by out of control kites to members of the public and traffic on the busy Banks Road.



In terms of conflict with windsurfing, the sports are to some extent self-regulating, with kitesurfers generally operating in shallower water that is inaccessible to deeper finned windsurfing boards.

Kitesurfing is also governed by local byelaws and the activity is controlled by the same restrictions imposed on windsurfers.

### **10.5 Water-skiing / Wakeboarding**

A permit is required for water skiing and wakeboarding inside the harbour; this can be obtained from the Harbour Office or the Poole Harbour Commissioners' website and signifies the Harbour Master's written permission. The designated water ski area is in the Wareham Channel and is approximately 2000 metres long and varies in width between 300 metres and 600 metres. The area is marked by yellow buoys and notice boards. Water skiers are exempt from the general Harbour speed limit when operating within this area. Boats are encouraged to launch from the public slipway at Baiter.

### **10.5.1 Safety and Legislation**

All water skiers must abide by the Harbour Master's directions supplied with the permit application and the activity is controlled under local byelaws. Participants should follow the Code of Safe Practice for Water Skiers, which is issued with every permit.

## **10.6 Personal Watercraft (PW)**

Also known as jet skis or water bikes, PW are permitted to use the Harbour with some restrictions. A permit is required to operate PW within the Harbour and this signifies the Harbour Master's permission. Permits are available from the Harbour Office or the Poole Harbour Commissioners' website.

There is a designated area for PW to the north of Brownsea Island where they are exempt from the speed limit. PW are prohibited from using the quiet area to the South of Brownsea Island and are not allowed to land on the Island. Launching should take place from the public slipway at Baiter where permits can be obtained during the summer months.

### **10.6.1 Safety and Legislation**

Users should abide by the Harbour Master's directions which accompany the permit applications and are urged to follow the Code of Safe Practice for PW which is issued with the permit. This activity is also controlled by local byelaws.

## **10.7 Swimming**

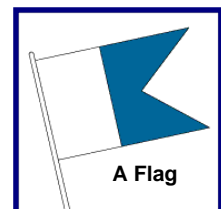
Although there are several small sandy beaches around the Harbour most notably at Hamworthy, swimming is not a common activity within the Harbour. It is however a popular summer activity from the beaches of Sandbanks, Shell Bay and Studland which, although outside the Harbour entrance, fall within the Harbour Authority's jurisdiction.

### **10.7.1 Safety and Legislation**

Along the beach at Sandbanks a zoned swimming area is marked out by buoys during the summer months and the RNLI provide sea rescue lifeguards who are supported by local authority beach rescue lifeguards. Swimming in the Harbour can sometimes be dangerous due to conflict with watercraft that often use the same beaches to launch and land. There are currently no safe swim zones within the Harbour and although swimming is not recommended, it is recognised that some beaches are used for this activity. Future initiatives therefore need to focus on ensuring the safety of all users and that swimming and other recreational activities do not come into conflict.

## **10.8 Other Water Based Activities**

Rowers and canoeists also use the Harbour and there are several clubs, particularly around the Hamworthy area. There are no restrictions as to where these activities can take place within the Harbour but participants should avoid the shipping channels and be fully aware that small craft are difficult to spot from larger vessel. As with all other users, canoeists and rowers should comply with byelaws pertaining to safe navigation and restrictions on where they may land. Recreational diving also takes place within the Harbour and there are currently no regulations pertaining to this activity. However anyone diving within the Harbour must be aware of the dangers posed by other users, particularly those who may not be aware of the flag system used by dive boats. The diving flag (international flag code A) must be flown by boats from which divers are operating or from a point onshore as close as possible to where the dive is taking place.



## 10.9 Harbour Access

There are several points around the north shore which offer public access to the Harbour.

The launching of Personal Watercraft is encouraged from Baiter where there is a manned slipway with parking for cars and trailers. Other small craft such as water ski boats can also be launched from here as well as from Lake Road at Hamworthy, although there is currently restricted access here and parking of cars and trailers can cause conflict with local residents. Many boatyards also offer launch sites and facilities that can be used by members of the public for the payment of an annual, seasonal or daily fee.

The main slipway at Baiter can become very crowded and there are constraints with the area available for parking cars and trailers. However there are not currently any plans to provide additional access points and opportunities for such provision are limited. Creation of a new slipway would require suitable road access and adequate space where cars and trailers would not impact on local residents or the natural environment. Land and resources would also need to be made available for the construction and manning of the slipway. Access and facilities could be improved at Lake Pier but this has caused concern from local residents about increased congestion in the area. As part of the Poole Bridge Regeneration project improvements are planned for Slipway and Whittles Way. The improvements to Slipway will be undertaken ahead of the construction of Twin Sails bridge providing racks for tenders and replacement of the current steps with a proper slip into the Back Water Channel.

Whilst the need to maintain adequate access to the Harbour is essential for many of its users it is also recognised that improving access to environmentally sensitive areas could be potentially damaging. Improving access to southern parts of the Harbour would greatly increase disturbance to wildlife and have a detrimental effect on the natural features of the Harbour. Any review of access would therefore need to have due regard for the environmental interests of the site.

## 10.10 Wildfowling

The Dorset Wildfowlers' Association for Shooting and Conservation (DWASC) undertake their activities in the south and west of the Harbour. They have a long-term lease for the sporting rights over the foreshore, (land between Mean High Water and Mean Low Water) which is granted by The Crown Estate as landowner. The wildfowling season runs from 1st September to the 20th February with most of the activity taking place at dawn or dusk.

As a requirement to first obtaining their lease from The Crown Estate the DWASC produced a management plan. This original management plan was prepared in consultation with English Nature and other conservation bodies such as the Dorset Wildlife Trust (DWT) and the RSPB, who expressed their approval of the plan. The plan is reviewed regularly and revised when necessary. It provides details of refuge areas, conservation initiatives and monitoring of bird numbers.

The plan also makes provision for the regulation of shooting via a permit and warden system, which is administered by the DWASC. Generally only about 40-50 permits are issued to members each year and the numbers of such permits can be restricted if necessary to ensure that there can never be excessive shooting pressure on the area. A small number of permits are also issued to non members who must possess third party liability insurance and belong to the British Association for Shooting and Conservation, (BASC) to whom DWASC is also affiliated. Shooting is further restricted due to the fact that access to the shooting marshes is by boat only, as the Association does not have any direct land access to leased foreshore.

Conservation measures undertaken by the Association include the setting up and management of no shooting areas for birds. These currently reflect what are believed to be significant roosting or feeding areas for wildfowl and waders in the Harbour. Other initiatives have been clean ups of marine debris from the tideline and habitat restoration in conjunction with the RSPB and the DWT. The Association has also helped with the construction of gravel nesting islands on the Brownsea Island lagoon which has led to a significant increase in the numbers of sandwich and common terns breeding in the Harbour.

Overall the DWASC endeavour to carry out its activity in a considerate, sustainable way, with minimal disruption or inconvenience to other Harbour users.

## 10.11 Review of Zoning

Since being established in 1995 the recreational zones as shown in Figure 3 have proven to be successful in segregating potentially conflicting activities. However although surveys have shown that the existence of these zones is widely known and the associated restrictions largely adhered to, it is recognised that their ongoing effectiveness needs to be monitored. In the face of increasing numbers of recreational users and the emergence of different activities and craft over the last 10 years, a complete review of the zoning scheme is necessary to ensure the continued safety of all Harbour users and the natural environment.

### Management Objectives:

The following is a list of the management objectives identified. Whilst some are specific to the management of recreational activities, others may relate to activities and issues discussed in other chapters of this plan. All management objectives can be found in the matrix contained within Section 2, which also lists proposed management actions.

- To ensure all recreational activity is undertaken in a sustainable & sensitive manner.
- To manage access to & use of the Harbour from land to minimise conflicts between users and wildlife.
- To improve communication with user groups & organisations to explain their potential impacts on the interest features of the EMS.
- To ensure safe navigation for all by minimising conflict between commercial and recreational craft.
- To review moorings policy to ensure impact on wildlife, habitats and seascape is minimised.
- To maintain and improve present standards to reduce conflict between yacht racing and commercial activities.

## Chapter 11 Commerce

### Guiding Principles:

Chapter 4 details all the guiding principles relevant to the overall management of the Harbour. Whilst all should be given some consideration the following are of particular relevance to commerce.

**Key Guiding Principle numbers: 1, 5, 18 and 19.**

### 11.1 The Port

#### 11.1.1 Introduction

Poole Harbour has been a centre for maritime trade since at least the Iron Age. Today the port of Poole is an important local and regional asset, which currently offers direct and indirect employment to over 600 people as well as making a significant contribution to the economy of the area. In terms of turnover Poole is the 6th largest Trust Port in the country and is not subsidised in any way. Commercial port operations are responsible for around 90% of the income of the port authority and any surplus monies are used to maintain the Harbour for the benefit of all users.

The future success of the port relies in part on a flexible approach from the Harbour Commissioners who need to be able to adapt to the changing requirements of the commercial operators that use the port. Improved road and rail links both locally and regionally are also key to the future security of the commercial port and initiatives such as the second Poole lifting bridge are vital to the continued development of the area. The regeneration schemes associated with Poole's second lifting bridge have however reduced significantly the length of deep water frontage within the town of Poole.

Transportation issues around the Harbour are considered further in Chapter 12.

#### 11.1.2 Channel Deepening

In order to secure the Harbour as a viable port for use by large ferry operators, the Middle Ship and Swash Channels underwent a Capital Dredge to increase their depth to 7.5m below Chart Datum (CD). The work took place between November 2005 and March 2006 and was jointly commissioned by Poole Harbour Commissioners and the Borough of Poole. Under the Harbour Works (Environmental Impact Assessment) Regulations 1999 the project required a full Environmental Impact Assessment (EIA) to be carried out to investigate the potential social, economic and environmental impacts of the scheme and Coast Protection Act 1949 and Food and Environmental Protection Act 1985 consents were obtained before work could commence.

Around 1.8 million m<sup>3</sup> of material was removed with over half of this being used beneficially for beach replenishment at Poole, Bournemouth and Swanage. In line with the Shoreline Management Plan any suitable material that needs to be maintenance dredged from the Approach Channel to the Port is continuing to be used to replenish the beaches.

The success of this scheme means that the port is more versatile in the type of vessels that it can accommodate and now has the capacity to increase activity and therefore profitability in the long-term.

#### 11.1.3 Ro-Ro Traffic

Commercial ferry operators currently run regular passenger and freight services to Santander, Cherbourg, St Malo and the Channel Islands. The continued custom of ferry companies is key to the Port's economic future. The channel deepening works have ensured that the port can accommodate larger vessels and also attract the custom of other ferry and cruise line operators.



#### 11.1.4 Conventional Cargo

Poole is a major destination for bulk cargo imports and the port receives imports of steel, timber, bricks, fertiliser, grain, aggregates and palletised traffic. Export cargoes include clay, sand, fragmented steel and grain. Poole Harbour Commissioners employ a team of stevedores who handle most of the 500,000 metric tonnes of conventional cargo leaving and entering the port each year. Improvements to facilities over the years mean that a variety of different cargoes can now be handled and stored which offers more economic security for the future.

As well as cargo operations managed by the Commissioners, the commercial quay is currently home to an independent marine aggregate. The commercial quay is also currently home to an independent marine aggregate dredging operation which discharges cargoes of sand and gravel. The Poole Local Plan recognises the importance of the Port as a vital resource in terms of providing an opportunity for aggregate handling. Hence any development that would hinder the port's ability to provide a deep water quay frontage for the handling of aggregates will be resisted by the local council.



#### 11.2 Other Significant Industries

As well as commercial operations directly associated with the port, the Harbour and its shores also support many other industries of differing scales. A number of local companies, boatyards, marinas and sail lofts are located around the Harbour and offer services to both commercial and recreational mariners. The Harbour is also home to a large commercial fishing fleet which supplies local and overseas markets with high quality fish and shellfish, (see Chapter 8). Charter angling and dive boats operate from the quay along with a number of passenger boats, which offer sightseeing trips to visitors during the summer months.

A builder of luxury motor yachts for both domestic and international clients operates from deepwater quay frontages as well as from a number of factory sites around the area.

The Royal Marines have an established base at Hamworthy and much of their assault craft training is carried out in and around the Harbour, while the RNLI has established its National Headquarters and Training College at a waterfront facility in Holes Bay. The complete range of operational lifeboats can be observed at Poole, both at evaluation trials and post refit trials and undergoing work up programmes with their operational crews, prior to going on station at their appointed places.



Europe's largest onshore oil field is also situated within the Harbour. Drilling platforms on Furzey Island and Goathorn Peninsular use extended reach drilling techniques to exploit oil deposits under Poole Bay which are distributed from the Harbour via subterranean pipelines to Southampton Water. Production from the field peaked during the 1990s at around 100,000 barrels per day but current production stands at between 20-30,000 barrels per day. In order to support their operations a small, specialised terminal adjacent to the main Port is used to ferry materials and personnel to Furzey Island. The Dorset Minerals and Waste Local Plan, 1999, sets out policies relevant to the extraction of hydrocarbons in Dorset both for existing and potential sites. They identify the need to minimise the impact of such operations through sound environmental management and the use of existing infrastructure by new developments.

Overall it is important that existing waterfront sites are available for appropriate marine related industries in accordance with Planning Policy Guidance Notes as well as regional and local statutory plans. These industries contribute towards the economic and social health of the Harbour but there is also a need to ensure that strategies, initiatives, project and plans are developed and implemented in accordance with due planning process and the Habitat Regulations. The Harbour and its hinterland also support an important tourism industry, which brings substantial revenue to the region and there is a need to maintain a balance between the Harbour as a working area and its promotion as a tourist destination.

## Chapter 12 Transport Connections

### Guiding Principles:

**Chapter 4 details all the guiding principles relevant to the overall management of the Harbour. Whilst all should be given some consideration the following are of particular relevance to transport connections.**

**Key Guiding Principle numbers: 1, 5, 20 and 21.**

### 12.1 Overview

Poole Town and Harbour are relatively well connected to the main road network and are also served by national rail links, with a principle route connecting the town with London and Southampton to the east and Weymouth to the west. The Port itself is served by a branch line that connects to the main rail network. Transportation by ship has to some extent been covered in Chapter 11, however it is also important to consider the wider transport infrastructure that supports the Port and the surrounding hinterland. With predicted growth in population, combined with increasing visitor numbers and the possibility of higher volumes of port traffic following channel deepening, it is essential that local plans and policies continue to recognise the need for a robust transportation network to support the local area.

The Poole Local Plan and the Bournemouth, Poole and Dorset Structure Plan, both acknowledge and address the need to renew and develop the road and rail links for the region for the socio and economic benefit to the local inhabitants and the port itself. Both these plans support the Government's strategy for sustainable transport development, PPG13, which considers the need for integration of different modes, including the transfer of freight transport to shipping where possible. Local authorities are encouraged to promote the role of ports by encouraging access to them by rail and road. However it is acknowledged that the benefits of securing the economic prosperity of the port need to be balanced against environmental and recreational considerations with regard to due planning process and Habitat Regulations.

### 12.2 Strategic Highway Network

#### 12.2.1 Background

Traffic in Dorset is forecast to grow by around 20% by the year 2011 and while it is recognised that the building of new roads can be counterproductive, local plans do highlight that some improvements to the strategic highway network are necessary. This is particularly true where there are strong economic reasons such as the movement of goods to and from the port and the regeneration of areas such as Hamworthy. The local road network also needs to be able to absorb and support the increasing numbers of tourists that visit the region each year and ensure that the Harbour and Port are as accessible as possible. The general inadequacies of current road link has to some extent hampered the Port's trading capability, where hauliers have tended to use more accessible routes to other ports in the Solent.

#### 12.2.2 Links to the Port

There are currently major congestion problems caused by the absence of an adequate route between the A3049 dual carriageway in Poole and the A31 trunk road. By limiting access to Poole and the port the economic viability of the Borough is compromised and the local council is therefore committed to securing the A31 Poole link through the Local Structure and Transport Plan process.

There is also a proposed road network for the Hamworthy area, which contains a number of new road links, including a replacement A350 route to the port. This will allow traffic flows on Blandford Road to be greatly reduced by traffic management.

### 12.2.3 Poole Bridge Regeneration Initiative

Significant regeneration of land either side of Back Water Channel is proposed to enable land that is currently vacant or under utilised to deliver new homes, employment opportunities, community facilities and a second Harbour crossing. Approximately 25 hectares of land is identified for development and the catalyst is a new bridge, "Twin Sails", that is being promoted by the Borough of Poole. The new bridge will address the access issues that currently hinder reliable road movements between Hamworthy and the Poole Town side of the channel and will considerably improve communication links to the Port of Poole. The new crossing will form part of the primary transport route.

"Twin Sails" will be a lifting bridge that will operate in conjunction with the existing Poole Bridge to ensure whenever possible that there is one bridge open to road traffic. There may be occasions when both bridges will need to be opened together to facilitate the safe movement of vessels. This situation is provided for in the Transport and Works Act Order which allows the Harbour Master to direct that both bridges be lifted to ensure maritime safety is not compromised. A variable messaging system will be put in place to direct road traffic to whichever bridge is available for crossing while measures to ensure the safe navigation of boats through the two bridges will be implemented.



## 12.3 Rail Link

As has been mentioned the conurbation of Poole has good rail links to London and other parts of the country, making it accessible for both tourists and freight operators. In line with government initiatives Poole is working with neighbouring authorities and the train operating companies to develop and expand rail passenger use. The enhanced service is expected to include a Poole – Swanage service, promoted by the Purbeck Railway Partnership.

The branch line that links to the Port is currently under-utilised and is only used for freight. Government guidance states that sites should be identified and protected where they could be critical in developing infrastructure to widen choices for movement of rail freight. The Port rail link will be developed as the principal rail freight access for the conurbation and track capacity and materials handling facilities will be improved. It is also important that local authorities work with port and rail operators in seeking to achieve a major increase in the use of the Port rail link.

## 12.4 Port Services

The Port of Poole is significant in strategic and regional terms in providing ferry and commercial cargo handling services to continental Europe and the Channel Islands. The Government's strategy for ports is encapsulated within the document, "Modern Ports: A UK Policy". It highlights the economic role of ports and the contribution that shipping makes to sustainable transport. The UK economy depends on international trade and ports, such as Poole, to serve the national interests in supporting the competitiveness of national and regional economies. The Department for Transport are reviewing the national Ports Policy and are looking at the future of ports until about 2030. Among other things they are considering the likely future demand for port capacity and how smaller ports can realise their potential as businesses.

The Poole Local Plan identifies that there is sufficient deep water frontage and infrastructure in place to allow for an increase in ferry services and coastal shipping if required. This is a point reiterated in the Poole Core Strategy, adopted in February 2009, with the creation of policy PCS 3 – Poole Port. The increased versatility of the port afforded by channel deepening shows the commitment to supporting local and Government policies in promoting transport of passengers and freight by sea. Growth in this mode of transport will undoubtedly boost the economy of the region but this needs to be underpinned by the fruition of the aforementioned road and rail development proposals.

## Chapter 13 Emergency Planning

### Guiding Principles:

**Chapter 4 details all the guiding principles relevant to the overall management of the Harbour. Whilst all should be given some consideration the following are of particular relevance to emergency planning.**

**Key Guiding Principle numbers: 1 and 22**

### 13.1 Chemical / Oil Spills

#### 13.1.1 Introduction

Poole Harbour is considered to be at low risk from a significant oil or chemical spill within the Harbour but there is always the chance of a major oil incident in the English Channel, which could affect its waters and adjacent beaches. Authorities therefore need to be able to respond to incidents of any size and the Environment Agency's, Pollution Prevention Guidance note, PPG21 – Pollution Incident Response Planning has been prepared to assist local bodies in drawing up pollution incident response plans. In response to the Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998, Poole Harbour Commissioners have prepared an oil response contingency plan known as "Poolspill".

#### 13.1.2 Poolspill

Poolspill is a contingency plan designed to provide the management, control and communications structure for dealing with oil and other hazardous substance release within Poole Harbour Commissioners area of responsibility. It was agreed through consultation with Dorset County Council, Purbeck District Council, Borough of Poole, English Nature, DEFRA and the Environment Agency. The plan has also been approved by the Maritime and Coastguard Agency (MCA), who are the competent UK authority that responds to pollution incidents from shipping and offshore installations. Guidelines created by the MCA ensure that the National Contingency Plan (NCP) and local plans, including those such as Poolspill, work in harmony to enable an effective response to any incident.

It covers scenarios ranging from local through to national scale incidents. The plan is informed by, and interfaces with, many other contingency documents, such as those maintained by local councils, oil companies and the MCA.

The plan contains contact details for the various individuals and organisations who need to be informed of and respond to an incident, along with ongoing training requirements for personnel.

As well as a risk assessment of the various activities within the Harbour that could potentially result in a pollution incident it details site specific response strategies for different areas around the Harbour. The shoreline of the Harbour is a combination of many different habitats and substrates, from concrete walls and slipways to tidal mudflats and saltmarshes. All of these respond differently to the various clean up techniques that can be employed and the situation may be further complicated by the time of year that the spill occurs in. The Plan contains a clean-up options matrix which suggests the preferred method for different shore types.

The effectiveness of Poolspill as a contingency plan is tested every year by a simulated spill exercise. This assesses the readiness and response of all those who would be called to deal with a real life incident and ensures that communication centres and equipment deployments are as effective as possible.

Contingency plans continue to evolve as technology changes and the understanding and experience of spill incidents grow, but one of the key components of a successful contingency strategy is ensuring co-operation between all the main stakeholders. On a European level, the Emergency Response to Coastal Oil, Chemical and Inert Pollution from Shipping (EROCIPS) project looks to initiate an even wider level of integration between different countries.

### 13.1.3 Responsibilities

Poole Harbour Commissioners (PHC), as the statutory harbour authority for Poole, are responsible for the planning and preparation of the response to oil spills and the coordination of the clean up effort on water. The local authorities (Poole and Purbeck) are responsible for the co-ordination of clean-up efforts on shore. Depending on the size of the incident then it may be necessary to involve county or national bodies who may take over responsibility for operations. Other organisations such as English Nature, the Environment Agency, SSFDC and oil companies may all have a role to play in the event of a spill incident and their responsibilities are detailed within the Poolspill document. Nationally the Civil Contingencies Act 2004, places local organisations into two separate categories depending on their roles and responsibilities in planning for and responding to any incident.

### 13.1.4 Spill Categorisation

Oil spills are categorised using an internationally recognised tier system, which relates to the size of the spill and therefore the appropriate response.

- Tier 1 – A small operational spill: Poole Harbour Commissioners have the equipment and personnel trained to deal with this scale of spill without the assistance of outside authorities.
- Tier 2 – A medium sized spill: PHC have a contract with Oil Spill Response Ltd in Southampton who will attend an incident at the port with specialised equipment and trained personnel. Local BP resources can also be mobilised to augment PHC resources. Other agencies such as local authorities, English Nature, the emergency services and the Environment Agency will also be involved and, in some instances, so will the Government.
- Tier 3 – A large spill: An incident of this size will require national resources and the Government in the form of the Secretary of State's representative (SOSREP) will take control and will co-ordinate the overall response.

## 13.2 Non Spill Emergencies

Although chemical spills are the focus of most of the contingency planning within the Harbour, key organisations such as PHC, BP and Local Authorities also produce emergency plans which detail responses to other potential incidents. Events such as explosions, fires and even terrorist attacks, all need to be considered and a contingency plan put in place to ensure the safety of personnel and members of the public.

The production of emergency contingency plans demonstrates a proactive approach by the key organisations involved which will minimise the potential social, economic and environmental cost of any incident in or around the Harbour.

### Management Objectives:

The following is a list of the management objectives identified which are specific to emergency planning. All management objectives can be found in the matrix contained within Section 2, which also lists proposed management actions.

- To review and exercise oil spill contingency plan as required.
- To ensure appropriate emergency & contingency plans are in place.

## Chapter 14 Archaeology

### Guiding Principles:

**Chapter 4 details all the guiding principles relevant to the overall management of the Harbour. Whilst all should be given some consideration the following are of particular relevance to archaeology.**

**Key Guiding Principle numbers: 1, 5, 23, and 24.**

### 14.1 Background

Poole Harbour has been historically important as a commercial port since before Roman times and evidence of human activity has been identified which dates back to a pre Iron Age era. This long period of human occupation, along with the excellent preservation of coastal and marine structures and artefacts, submerged by rising sea levels, has led English Heritage to identify Poole Harbour as one of the most important areas for coastal archaeology in the country. The Harbour has also been included on a list of wetland sites and landscapes of national importance. This has been prepared by Exeter University for English Heritage as part of a protocol for the Heritage managements of England's Wetlands. A comprehensive study of Poole Harbour's heritage is currently being undertaken by the Poole Harbour Heritage Project with the aim of extending the available archaeological information. The study considers the heritage of the Harbour under the following four group of headings:

- Natural changes in the Harbour
- Man-made changes in the Harbour
- Settlements in and around the Harbour
- Industry, trade and recreation associated with the Harbour

### 14.2 Marine Historic Assets

Dorset's Historic Environment Record (HER) and the maritime section of the National Monuments Record (NMR) contain information on the numerous palaeoenvironmental and archaeological sites in and around the Harbour. The Receiver of Wreck, part of the Maritime and Coastguard Agency is also a useful source of information, as it is a legal requirement that any wreck material recovered from UK territorial waters is reported to them. These along with the UK Hydrographic Office (UKHO) are the primary sources of archaeological information relating to the Harbour. However the archaeological and heritage section for the 2005 channel deepening project, environmental impact assessment, compiled by Wessex Archaeology has been useful in drawing all this information together.

Although there are sites within the Harbour that have produced artefacts of a Palaeolithic and Mesolithic origin most marine historic assets of significance date from the iron age or later. Evidence suggests that Poole Harbour was probably inundated sometime during the Mesolithic period and that ships have been visiting the Harbour from at least the Iron Age. Sources indicate that shipping activity within Poole Harbour increased throughout the Roman and Saxon period. At this time Wareham was the principal port within the Harbour, with the port of Poole being established by early Medieval times.

#### **Cleavel Point & Green Island Causeway**

Following on from work undertaken by scouts in the 1950s the Poole Bay Archaeological Research Group and Bournemouth University investigated this feature in 2001 on behalf of the Poole Harbour Heritage Project. It consists of two stone structures, one running out from Cleavel Point on the mainland and the other projecting from Green Island with a 70m gap in between. The mainland pier is 160m long and between eight and ten metres wide and is normally 2m below the water surface and is only exposed at very low tides. As there is no evidence that the piers were ever linked, it is believed that the structures are the remains of two harbour piers rather than being a causeway. Timbers used to support the flagstone surface of the piers have been carbon dated to 250BC, making it the oldest identified constructed port structure in North West Europe.

### **Iron Age Logboat**

The boat was discovered in Poole Harbour in 1964 when a dredger brought it up off Brownsea Island. It was made from one giant log, estimated to have weighed 14 tonnes and could have carried up to 18 people. After it was found it was kept submerged in water for 30 years while archaeologists decided what to do with it. In 1995 it was submerged in a sucrose solution, which gradually replaced the soft tissue of the wood but kept the boat's shape. At 32 feet, it is one of the largest surviving log boats of the prehistoric period in the UK, and is believed to have been built by the Durotriges tribe in about 300 BC. The boat indicates the great potential for preservation of other assets within the silts of the Harbour.

### **Studland Bay Wreck**

Situated just outside the Harbour limits in Studland Bay this wreck is significant in that it demonstrates the type of trade taking place at the Port and is also designated under the Protection of Wrecks Act 1973. The wreck, discovered in 1984, is that of an armed Spanish merchantman which is thought to have sunk around 1520 with a cargo of pottery from Seville. Initial investigations were undertaken by the Poole Maritime Trust and around 750 artefacts have so far been recovered from the wreck which has a 50m exclusion zone around it under its designation.

### **Swash Channel Wreck**

This wreck was discovered during an Environmental Impact Assessment for channel deepening works in 2004 and was immediately designated under the Protection of Wrecks Act, 1973. Research to date suggests that the vessel is a large, high status merchantman c1630, which was constructed for operation in tropical waters.

Approximately 40% of one half of the vessel survives on the seabed and includes elements such as the rudder and bow castle that are internationally unique. The site is under threat from natural seabed erosion.



Other significant maritime finds include two Roman ceramic vessels and a Bronze Age axe head discovered by divers in the entrance to the Harbour. Other scattered finds also indicate the presence of several wrecks dating back to the early eighteenth century. Holes Bay was also traditionally used as a dumping ground for old vessels and the remains of many ships can still be found there.

## **14.3 Legislation and Guidance**

The National Heritage Act, 2002, gave English Heritage responsibility for underwater archaeology within English territorial waters. This not only included day to day responsibility for wrecks protected under the Protection of Wrecks Act, but also enabled them to schedule an underwater site under the Ancient Monuments and Archaeological Areas Act 1979 and National Heritage Act 1983. The precise ways in which these powers will be applied is currently under discussion. A list of the key pieces of legislation relevant to the maritime archaeology of the Harbour and its function can be found in Appendix 7, along with a list of current guidance documents.

## **14.4 Potential Threats**

### **Erosion**

Rising sea levels and increased coastal erosion have the potential to impact marine historic assets both above and below the high water mark. While the potential for damage to coastal structures from retreating shorelines is well documented, the impact of moving seabed is less well understood. Previously unknown wrecks can be exposed and old ones covered. This can both enable a wreck or artefact to be examined but can also expose it to physical, biological and chemical decay. In 2004 English Heritage funded the first stage of a Rapid Coastal Zone Assessment of Dorset's coastal archaeology. One of the principal aims of this assessment is to identify areas where the archaeological resource could be threatened by changes in the shoreline, brought about by erosion, sea level rise or coastal management etc. The desk top study is now completed and the information held in the Historic Environment Record at County Hall, Dorchester.

### **Salvage & Diving**

A minority of recreational divers regard a visit to a wreck as an opportunity to remove items of value or interest. This can cause damage to sites as objects are removed without being recorded or properly conserved, it should always be remembered that all recovered wreck has an owner and therefore all such material must be brought to the attention of the Receiver of Wreck; and failure to do so is an offence under

the Merchant Shipping Act 1995. For wreck considered to be of historical, archaeological or artistic importance designation is possible under the Protection of Wrecks Act, 1973. Close to Poole Harbour, two wrecks are afforded statutory protection under this Act which means that access to these sites is only possible through licences granted by the Secretary of State for Culture, Media and Sport. Further information about these sites should be obtained from English Heritage Maritime Archaeology Team. To ensure that recreational scuba divers are aware of the importance of the marine historic environment and how such material should be treated it is important for the Poole Harbour Steering Group to support initiatives that provide education and further public understanding and appreciation of underwater heritage.

### **Fishing**

Heavy fishing gear can damage archaeological sites and trawling has inadvertently caused wrecks to be discovered through attempts to recover trapped or lost fishing gear. Sites where fishing nets are prone to catch might be submerged wrecks and investigation of them has led to the finding of previously unknown wrecks such as the Studland Bay wreck. However, it is crucial that if such a discovery is made that appropriate measures are taken to implement an archaeological investigation. Further information about the appropriate techniques to be adopted should be obtained from local archaeological curators.

### **Development**

Development of the intertidal and marine areas, such as construction of jetties and marinas has the potential to damage archaeological sites. Recently there have been moves to ensure that approved development proposals take adequate steps to ensure the survival of both marine and terrestrial archaeology. The Government's Planning Policy Guidance Note 20: Coastal Planning recognises the need to protect and enhance the archaeological coastal heritage. In particular, works such as Capital dredging can also significantly impact marine historic assets but also have potential to discover new sites, as was the case with the Swash Channel wreck. Overall best practice and guidance recognises that detailed historic environment assessment prior to development, and liaison with archaeological curators, offers the best means to manage a project that seeks to avoid damaging the historic environment..

## **14.5 Reporting Protocol**

To ensure marine historic assets are not lost and to further improve our understanding of the maritime historic environment, a strict protocol for the reporting of archaeological or potential archaeological finds needs to be developed and adhered to. As previously mentioned it is a legal requirement that all wreck found in UK territorial waters is reported to the Receiver of Wreck. Wreck includes a ship, aircraft or hovercraft, parts of these, their cargo and equipment. However any object either on the seabed or raised to the surface should be reported to a suitable body. Locally this should be the Dorset Historic Environment Record or English Heritage's South West Regional Office (Bristol). Both nationally and locally there is a need to produce a central database to record all the information concerning the location of marine historic assets around the UK and in and around Poole Harbour. This would be of benefit to both archaeologists and developers looking to undertake work on the seabed or along the shoreline.

## Management Objectives:

The following is a list of the management objectives identified. Whilst some are specific to archaeology, others may relate to activities and issues discussed in other chapters of this plan. All management objectives can be found in the matrix contained within Section 2, which also lists proposed management actions.

- To ensure coastal defence schemes do not adversely affect archaeological features, or ensure adequate mitigation and recording.
- To understand what historical assets may be lost or damaged in the future, due to natural changes in the coastline and identify the mitigation measures necessary to protect the resource.
- To adhere to best practice archaeological investigation techniques.

To ensure dredging does not cause undue damage to archaeology through prior investigation and appropriate mitigation.

## Section 2 Management Matrix

### Poole Harbour Aquatic Management Plan



## Section 2 Poole Harbour Aquatic Management Plan Management Matrix

This section of the Plan contains a Matrix which shows a summary of activities taking place in Poole Harbour, their potential impacts, and their current and proposed management. Each activity has been numbered and colour coded so to refer to the relevant section of the main Base Plan document listed. The Matrix also provides lead authorities for each of the activities and contact details for these can be found in the Appendices.

### Abbreviations:

<b>AMP</b> – Asset Management Plan	<b>MCS</b> – Marine Conservation Society
<b>BASC</b> – British Association for Shooting & Conservation	<b>NE</b> – Natural England (English Nature)
<b>BMF</b> – British Marine Federation	<b>NT</b> – National Trust
<b>BoP</b> – Borough of Poole	<b>NVZ</b> – Nitrate Vulnerable Zone
<b>BP</b> – British Petroleum	<b>PDC</b> – Purbeck District Council
<b>DCC</b> – Dorset County Council	<b>PHC</b> – Poole Harbour Commissioners
<b>DWASC</b> – Dorset Wildfowlers Association for Shooting & Conservation	<b>PMT</b> – Poole Maritime Trust
<b>DWT</b> – Dorset Wildlife Trust	<b>PYA</b> – Poole Yachting Association
<b>EA</b> – Environment Agency	<b>RM</b> – Royal Marines
<b>EH</b> – English Heritage	<b>RSPB</b> – Royal Society for the Protection of Birds
<b>EIA</b> – Environmental Impact Assessment	<b>RYA</b> – Royal Yachting Association
<b>EMS</b> – European Marine Site	<b>SIMCAT</b> – Simulate Observations Using Space Catalog
<b>EU</b> – European Union	<b>SMP</b> – Shoreline Management Plan
<b>HCO</b> – Harbour Control Officer	<b>SSFDC</b> – Southern Sea Fisheries District Committee
<b>MARPOL</b> – International Convention for the Prevention of Pollution from Ships	<b>STW</b> – Sewage Treatment Works
<b>MCA</b> – Maritime & Coastguard Agency	<b>TBT</b> – Tributyltin
<b>MCEU</b> – Marine Consents and Environment Unit	<b>UV</b> – Ultra Violet
	<b>WW</b> – Wessex Water Services Ltd

## Contents Table:

This table lists the activities and their given number as found in the Matrix. Activities directly relevant to the management of the European Marine Site are highlighted in green text.

No.	Activity	No.	Activity
1	Grazing of Sika Deer	22	Pilotage & marine traffic management
2	Nutrient enrichment, (diffuse agricultural run-off)	23	Maintenance dredging
3	Use of pesticides & herbicides	24	Capital dredging
4	Soil erosion	25	Anchoring
5	Discharges from industry	26	All recreational activity
6	Airborne emissions from traffic, industry & vessels	27	Yacht racing
7	Discharge of treated effluent from STW	28	Other non-motorised watercraft
8	Overflow of sewage from sewerage network	29	Windsurfing and Kitesurfing
9	Use of antifouling paints	30	Wildfowling
10	Use of sacrificial anodes	31	Dog walking and uncontrolled dogs
11	Ballast water transfer	32	Illegal egg collecting
12	Discharge of waste from commercial & recreational vessels	33	Unauthorised landing on shorelines
13	Marine & terrestrial littering	34	Shoreline & intertidal based development
14	Managing the shoreline	35	Yachting
15	Shellfish dredging	36	Motor boating
16	Drift and set net fishing	37	Moorings
17	Eel fishing	38	Water-skiing / Wakeboarding and Personal Watercraft
18	Bait digging	39	Low flying aircraft & helicopters
19	Bait dragging	40	Chemical transportation by ship & storage on land
20	Use of Hovercraft	41	Archaeological excavations
21	Illegal fishing		

No.	Activity	Reference Point	Potential Impacts	Current Management	Proposed Management	Lead Authorities
1	Grazing of Sika Deer	5.9.2	Trampling and loss of saltmarsh and reedbed habitat	Deer management takes place and effects are monitored.	Monitor to assess whether further management is required	NE, RSPB
2	Nutrient enrichment, (diffuse agricultural run-off)	6.2	Algal blooms and mats-smothering of foreshore & oxygen depletion	Catchment sensitive farming initiative  Designation of nitrate vulnerable zones (NVZ) and Harbour as a nitrate sensitive area	Undertake appropriate measures to reduce nitrate input into Poole Harbour to be identified through a nutrient reduction plan developed by NE, EA and Wessex Water  Monitor the persistence of algal mats through the year	EA, NE, WW
3	Use of pesticides & herbicides	6.2	Fish, invertebrate & plant mortality	Not currently identified as an issue in the River Frome and Piddle catchment	None at present as currently not an issue	EA, NE
4	Soil erosion	6.2	Increased turbidity- smothering of shellfish & reduced prey visibility	Catchment sensitive farming initiative	Increase uptake of appropriate farming practices through the catchment sensitive farming initiative	EA, NE
5	Discharges from industry	6.4	Build up of heavy metals and other chemicals in sediments  Introduction of harmful aquatic organisms and pathogens into the environment	Ongoing monitoring to assess compliance with EU Directives and monitoring discharges	Ongoing monitoring to assess compliance with EU Directives and monitoring discharges	EA
6	Airborne emissions from traffic, industry & vessels	6.4	Potential for toxic contamination	Ongoing monitoring of air quality by local councils  Permits required by shore based industry	None at present	BoP, PDC, Shipping operators

No.	Activity	Reference Point	Potential Impacts	Current Management	Proposed Management	Lead Authorities
7	Discharge of treated effluent from STW	6.5	Eutrophication from nitrate & phosphate discharge. May also contain harmful pathogens	Upgrade of STWs with UV disinfection complete. Nitrate reduction plant installed at Poole STW	<p>Undertake appropriate measures to reduce nitrate input into Poole Harbour to be identified through a nutrient reduction management plan developed by NE, EA and WW</p> <p>Wessex Water to assess the contribution their assets are having to nitrogen inputs into the Harbour using EA SIMCAT model</p> <p>Wessex Water investigating bacterial inputs from Corfe Castle and Studland STWs</p>	NE, WW, EA
8	Overflow of sewage from sewerage network	6.5	Eutrophication from nitrate & phosphate discharge. May also contain harmful pathogens	Provision of additional storm storage and settlement tank capacity, in accordance with AMP4 programme of work	Investigate opportunities for upgrades to the existing system	WW, EA
9	Use of antifouling paints	6.6	Toxic contamination of water and sediment with problems of bio-accumulation	<p>EU Regulations restricting the use of TBT based paints</p> <p>Best Practice Guidance for boatyards</p>	<p>Education of boatyards, yacht clubs and owners on best practice</p> <p>Promotion of The Green Blue initiative</p>	Shipping operators, PHC, EA, PYA, BMF, RYA

No.	Activity	Reference Point	Potential Impacts	Current Management	Proposed Management	Lead Authorities
10	Use of sacrificial anodes	6.6	Possible adverse effect on marine fauna from heavy metals, primarily zinc	Ongoing research Review of existing research by The Green Blue project	Promotion of The Green Blue initiative	EA, BMF, RYA, PHC, PYA
11	Ballast water transfer	6.6	Introduction of harmful aquatic organisms and pathogens into the environment	European strategy	Review future guidance	MCA, PHC, EA, Shipping operators
12	Discharge of waste from commercial & recreational vessels	6.6	Potential for discharge of contaminated bilge water & sewage discharge, as well as litter, with potential impacts on marine life & water quality.	Ongoing monitoring to assess compliance with EU Directives and monitoring discharges  The International Convention for the Prevention of Pollution from Shipping 1973 (MARPOL 73/78)  Harbour byelaws and implementation of Port Waste Management Plan	Awareness raising information published in Poole Harbour Guide and Poole Quay Boat Haven Guide annually  Promotion of The Green Blue initiative	PHC, EA, MCA, RYA, Shipping operators
13	Marine & terrestrial littering	6.7	Birds & mammals can become entangled in or ingest litter	Enforcement through existing byelaws and legislation	Look to organise annual beach cleans around the Harbour.  Awareness raising information published in Poole Harbour Guide and Poole Quay Boat Haven Guide annually	PHC, BoP, PDC, MCS, Keep Britain Tidy, Landowners

No.	Activity	Reference Point	Potential Impacts	Current Management	Proposed Management	Lead Authorities
14	Managing the shoreline	Chapter 7	<p>Direct smothering by man-made structures &amp; indirectly due to changes in sedimentation process</p> <p>Potential damage to coastal / intertidal archaeology</p> <p>Changes to Harbour regime and intertidal and coastal habitats</p> <p>Need for increased dredging to deal with increased erosion, may result in faster currents</p> <p>Sea level rise</p> <p>Deteriorating condition of tidal floodbanks</p> <p>Increased flooding of residential areas</p>	Shoreline Management Plan 2 recently completed	<p>Poole Bay Coastal Strategy in progress – this will investigate sediment movement, coastal processes and the future management of the shoreline in more detail</p>	NE, EA, PHC, BoP, PDC

No.	Activity	Reference Point	Potential Impacts	Current Management	Proposed Management	Lead Authorities
15	Shellfish dredging	8.2	<p>Displacement of birds from breeding, feeding &amp; roosting grounds</p> <p>Over exploitation of shellfish stocks</p> <p>Possible damage to eel grass beds and subtidal habitats by dredging equipment</p> <p>Detrimental effects on non target species</p>	<p>Management by SSFDC using existing byelaws</p> <p>Licensing for clam fishery by SSFDC</p> <p>Clam licence conditions advise holders to stay out of eelgrass beds within the harbour (and have been issued with maps to identify areas)</p> <p>Eelgrass beds re marked with signage saying no trawling</p>	<p>Promote awareness of Bird Sensitive Areas and eelgrass</p> <p>Produce code of conduct for fishermen</p> <p>Enforce byelaws</p>	SSFDC, NE
16	Drift and set net fishing	8.2	<p>Over exploitation of fish stocks</p> <p>Birds caught in unattended nets</p> <p>Possible navigation hazard to recreational yachts &amp; commercial shipping</p>	<p>Management using existing SSFDC and Harbour byelaws</p>	<p>Anti-poaching work ongoing</p> <p>SSFDC continue their practice of making fishermen aware during inspections and boardings</p>	SSFDC, NE, EA, PHC
17	Eel fishing	8.2	<p>Death of otters trapped in fyke nets without otter guards and over exploitation of eel stocks</p>	<p>Enforcement using existing legislation by EA</p>	<p>EA licensing and antipoaching work ongoing</p>	NE, EA

No.	Activity	Reference Point	Potential Impacts	Current Management	Proposed Management	Lead Authorities
18	Bait digging	8.2.6	<p>Direct loss of individual bait species</p> <p>Displacement of birds from breeding, feeding &amp; roosting grounds</p> <p>Unfilled holes left in foreshore</p> <p>Damage to intertidal archaeology</p> <p>Possible physical damage to habitat, flora &amp; fauna</p>	Education through production of bait digging leaflet	<p>Prepare map of known and potential areas of intertidal archaeology for the Harbour</p> <p>Promote awareness of Bird Sensitive Areas</p> <p>Disseminate baitdigging leaflet</p> <p>Commission further research into the impacts and extent of bait digging</p> <p>Improve the management of baitdigging where potential conflict between bait digging and the nature conservation interest of the Harbour</p>	Landowners NE, PDC, BoP
19	Bait dragging	8.2.6	<p>Direct loss of individual bait species</p> <p>Displacement of birds from breeding, feeding &amp; roosting grounds</p> <p>Damage to seabed archaeology</p> <p>Possible physical damage to habitat, flora &amp; fauna</p>	None at present	<p>Monitor location of activity.</p> <p>Raise awareness amongst users of the location of sensitive sites within the Harbour</p>	NE

No.	Activity	Reference Point	Potential Impacts	Current Management	Proposed Management	Lead Authorities
20	Illegal fishing	8.2.8	Over exploitation of fish stocks  Conflict with authorities and other Harbour users  Possible physical damage to habitat and disturbance to wildlife	Enforcement operations and prosecution through existing byelaws	Increase policing effort to catch & prosecute illegal fishermen	SSFDC, EA, NE
21	Use of Hovercraft	Chapter 9 & 5.8.4	Disturbance to birds	Authorisation from PHC required	Continued liaison with users and awareness raising of sensitive times and sensitive parts of the Harbour	PHC, NE
22	Pilotage & marine traffic management	Chapter 9	Potential for collision, grounding and pollution incident	Compulsory pilotage for vessels of a certain size  Poole Marine Safety Plan  Channel routinely surveyed and dredged and navigation aids maintained  Oil spill contingency plan in place  Continue exercises and review of plans in accordance with regulations	Continue with existing management and other initiatives	PHC

No.	Activity	Reference Point	Potential Impacts	Current Management	Proposed Management	Lead Authorities
23	Maintenance dredging	9.5	<p>Removal of sediment from system- loss of intertidal habitat.</p> <p>Increased turbidity- reduced prey visibility for birds &amp; fish</p> <p>Direct physical damage to seabed.</p> <p>Remobilisation of contaminants in bed sediment</p>	Sediment Management Plan & Maintenance Dredging Policy	<p>Poole Harbour Maintenance Dredging &amp; Disposal Plan will be written that will include alternative dredging techniques and beneficial use of dredgings</p>	PHC, SSFDC, EA, NE, BMF, MMO
24	Capital dredging	9.5 & 11.1.2	<p>Removal of sediment from system</p> <p>Increased turbidity</p> <p>Direct physical damage to seabed and benthic flora and fauna</p> <p>Remobilisation of contaminants in bed sediment</p> <p>Direct physical damage to submerged archaeology</p>	National & local consents	<p>Ongoing monitoring</p> <p>Commission further research into potential impacts</p> <p>Set up reporting protocol for any archaeological objects recovered</p> <p>Ensure archaeological interests are included in any EIA</p>	PHC, SSFDC, EA, NE, BMF, MMO
25	Anchoring	5.8.5	<p>Displacement of birds from feeding &amp; roosting grounds</p> <p>Damage to subtidal habitat and communities</p>	Identification of anchorage sensitive zones and promotion of bird sensitive leaflets and eelgrass leaflets	<p>Monitor effectiveness of anchorage sensitive zones</p> <p>Awareness raising of relevant user groups</p>	PHC, SSFDC, NE

No.	Activity	Reference Point	Potential Impacts	Current Management	Proposed Management	Lead Authorities
26	All recreational activity	Chapter 10	<p>Possible conflict with other recreational and commercial users</p> <p>Possible disturbance to wildlife and habitats</p>	<p>Regular liaison meetings between PHC and some users groups</p> <p>Zoning of activities, and restrictions of permits speed limits, byelaws</p>	<p>Review effectiveness of current recreational zoning</p> <p>Annual recreational surveys</p> <p>Evaluate effectiveness &amp; adequacy of existing launch sites</p> <p>Review existing codes of practice for users</p> <p>Investigate setting up workshops &amp; presentations with user groups</p>	PHC, BMF
27	Yacht racing	10.2	Potential for accidents from use of shipping channels by racing yachts	<p>Active liaison between Harbour Control and Race Officers</p> <p>Good communication between HCO and Race Officer</p> <p>Agreed procedures for racing</p>	<p>Continue to progress measures to reduce conflict between commercial and recreational activities and between recreational activities and the nature conservation interest of the site</p>	PHC, PYA
28	Other non-motorised watercraft	10.8	<p>Possible displacement of birds from feeding grounds</p> <p>Trampling of saltmarsh &amp; reedbeds by people landing in remote areas</p>	<p>Existing restrictions on beach landing</p>	<p>Monitor activity to verify whether further management measures required</p> <p>Develop codes of practice for users</p> <p>Promote awareness of Bird Sensitive Areas</p>	PHC

No.	Activity	Reference Point	Potential Impacts	Current Management	Proposed Management	Lead Authorities
29	Windsurfing and Kitesurfing	10.3 & 10.4	<p>Possible displacement of birds from feeding grounds</p> <p>Conflict with other water users, especially kitesurfers</p>	<p>Zoning of activity, and enforcement of byelaws</p> <p>Windsurf area realigned so as to not overlap eelgrass beds</p> <p>Kite surfing code of conduct produced</p>	<p>Monitor activity to verify whether further management measures required</p> <p>Disseminate kite surfing code of conduct</p>	PHC
30	Wildfowling	10.10	<p>Direct mortality of individual species</p> <p>Possible displacement of birds from roosting &amp; feeding grounds</p>	<p>DWASC have existing management plans</p> <p>Wildfowling takes place through a lease of sporting rights granted to DWASC by The Crown Estate</p> <p>DWASC permits required to shoot</p> <p>Bag statistics and visit numbers are analysed by BASC and reported on annually to NE and The Crown Estate</p> <p>No-shooting areas are designated and managed by DWASC</p> <p>Season restricted to 1<sup>st</sup> September to 20<sup>th</sup> February</p>	<p>Monitor activity to verify whether further management measures required</p> <p>Identify on a map, important areas for breeding &amp; feeding birds which users could potentially disturb</p> <p>Improve communication between wildfowlers, statutory bodies and conservation organisations</p>	BASC, DWASC, RSPB, DWT, NE, NT, The Crown Estate

No.	Activity	Reference Point	Potential Impacts	Current Management	Proposed Management	Lead Authorities
31	Dog walking and uncontrolled dogs	5.8.4 Chapter 10	Displacement of birds from breeding, feeding & roosting grounds	Some restricted access to foreshore. The Borough of Poole has installed new signs providing information for owners about controlling dogs around birds.	Monitoring to assess whether further management required through visitor questionnaires, surveys and shore based activity counts	Landowners BoP, NE, DCC
32	Illegal egg collecting	5.8.4 Chapter 10	Removal of eggs, reducing population and causing disturbance	Enforcement through existing national legislation	Appropriate controls in place to alert authorities of illegal egg collecting and surveillance monitoring to prevent further activity  Parties undertaking any scientific research within the harbour contact PHC so when Harbour Control get reports of trespass or illegal activity such as egg collecting they know if it is a bonafide party or not	NE, RSPB, DWT
33	Unauthorised landing on shorelines	Chapter 10 5.8.4	Possible disturbance to breeding, feeding and roosting birds  Damage to intertidal habitats	Landowners permission required	Raise awareness eg appropriate dissemination of Bird Sensitive Areas Leaflet and Harbour Guide. Monitor situation	PHC, Landowners, DWT, RSPB

No.	Activity	Reference Point	Potential Impacts	Current Management	Proposed Management	Lead Authorities
34	Shoreline & intertidal based development	Chapter 10 5.8.4	<p>Direct smothering by man-made structures e.g. jetties &amp; slipways &amp; indirectly due to changes in sedimentation process.</p> <p>Displacement of birds from feeding grounds due to visual disturbance</p> <p>Potential damage to coastal / intertidal archaeology</p> <p>Sea level rise</p>	Regulation through national and local consenting process and local planning controls	Appropriate dissemination of guidance on how small developments could be designed to minimise adverse impacts on the foreshore	PHC, NE, BoP, PDC, MMO
35	Yachting	10.2	<p>Displacement of birds from feeding grounds</p> <p>Potential navigational hazard to large commercial vessels</p>	<p>Enforcement through existing byelaws</p> <p>Education of boat owners &amp; clubs</p>	<p>Review existing codes of practice for users</p> <p>Promote awareness of Bird Sensitive Areas</p> <p>Annual recreational surveys</p> <p>Continue with existing liaison and safety meetings</p>	PHC, PYA, BMF

No.	Activity	Reference Point	Potential Impacts	Current Management	Proposed Management	Lead Authorities
36	Motor boating	10.2	<p>Danger to other water users and possible disturbance due to noise</p> <p>Potential disturbance to wildlife of the Harbour</p> <p>Pollution from oil and fuel</p>	<p>Regulation through existing Harbour byelaws and speed limits</p> <p>Zoning of activities and speed restrictions in quiet area</p>	<p>Evaluate effectiveness &amp; adequacy of existing launch sites</p> <p>Annual recreational surveys</p> <p>Review codes of practice for users</p> <p>Promotion of The Green Blue initiative</p> <p>Investigate setting up workshops &amp; presentations with user groups</p>	PHC, BoP, BMF
37	Moorings	10.2.3	<p>Displacement of birds from feeding grounds</p> <p>Damage to subtidal habitat and communities</p>	Poole Harbour Commissioners Moorings Policy	Review moorings policy to ensure adequate facilities for users and to minimise potential impact on EMS	PHC, EA, PYA, Commercial Operators
38	Water-skiing / Wakeboarding and Personal Watercraft	10.5 & 10.6	<p>Possible displacement of birds from feeding grounds due to wash and noise</p> <p>Danger to other water users and disturbance due to noise</p>	<p>Exclusion from quiet area and restrictions on landing on Brownsea Island</p> <p>Zoning of activity, and restrictions of permit and speed limits</p> <p>Limited launch sites</p>	<p>Review effectiveness of current recreational zoning</p> <p>Annual recreational surveys</p> <p>Evaluate effectiveness &amp; adequacy of existing launch sites</p> <p>Review existing codes of practice for users</p> <p>Investigate setting up workshops &amp; presentations with user groups</p>	PHC, BoP

No.	Activity	Reference Point	Potential Impacts	Current Management	Proposed Management	Lead Authorities
39	Low flying aircraft & helicopters	Chapter 11 5.8.4	Disturbance to birds Noise pollution over urban areas	Routing by Air Traffic Control	Initiate discussions with relevant authorities regarding setting up no fly zones	NE, RSPB, RM, MCA, BP, Bournemouth Airspace Control
40	Chemical transportation by ship & storage on land	Chapter 13	Chemical spill- mortality of birds, mammals, fish and other fauna Smothering of intertidal habitats and long-term persistence of chemicals in sediment	PHC oil spill contingency plan, "Poolspill" MCA ensure compliance with National Contingency Plan	Ensure equipment and personnel are readily available to respond to an incident in accordance with established and up-to-date oil spill contingency plans	PHC, BoP, PDC, DCC, MCA
41	Archaeological Excavations	Chapter 14	Damage to subtidal habitat and communities	Existing guidance	None at present	EH, DCC, Landowners Developers

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## **Appendix 1      Memorandum of Agreement**

### **POOLE HARBOUR STEERING GROUP**

#### **MEMORANDUM OF AGREEMENT**

Between the members of

#### **Poole Harbour Steering Group**

Borough of Poole  
Dorset County Council  
Natural England  
Environment Agency  
Poole Harbour Commissioners  
Purbeck District Council  
Southern Sea Fisheries District Committee  
Wessex Water Services Ltd

Relating to the  
**Poole Harbour Special Protection Area's (SPA)**  
advice and guidance for the management of this site.

**September 2002**

#### **Memorandum of Agreement**

##### **Description**

The Poole Harbour Steering Group provides a framework for coordination between statutory bodies having responsibilities in Poole Harbour. Its members work together to review, prepare and implement common plans and policies including the Poole Harbour Aquatic Management Plan and Poole Harbour Management Policies.

In addition the Poole Harbour Steering Group enables these authorities to coordinate and exercise their responsibilities as Relevant and Competent Authorities with respect to the Poole Harbour Special Protection Area (SPA) under The Conservation of Habitats and Species Regulations 2010.

This Memorandum of Agreement (MoA) is between the Poole Harbour Steering Group Members. It acknowledges the importance of working together for the management of the Poole Harbour SPA and implementing best practice through the implementation of The Conservation of Habitats and Species Regulations 2010.

All parties acknowledge that this process provides an opportunity to co-ordinate their work, policies that are developed by their work and the actions that may be the consequences of this work, in so far as this relates to the Poole Harbour Special Protection Area.

This MoA has been drawn up to;

- Set out the aims of the Poole Harbour Steering Group in relation to the SPA
- For parties to this MoA to agree to use the advice and guidance produced by the Poole Harbour Steering Group

- Reduce unnecessary repetition of work
- Share expertise and information and
- Confirm the commitment of the members to the coordinated management of the Poole Harbour SPA.
- Nothing in this MoA shall in any way alter or affect any member organisation's statutory responsibilities or rights.

## **Introduction**

Poole Harbour is one of the world's largest natural harbours, is a commercial Port and supports many recreational activities. It is also an environmental asset with its shallow waters, extensive mudflats, saltmarshes and reedbeds all of exceptional ecological value, part of which was designated as a Special Protection Area (SPA) on March 31st 1999 for its internationally important populations of regularly occurring Annex 1 bird species, migratory birds and assemblages of waterfowl.

Poole Harbour SPA is a European Marine Site defined by The Conservation of Habitats and Species Regulations 2010. The day to day management of this designated site is conducted by the members of the Poole Harbour Steering Group (here after referred to as the Steering Group) who are the Relevant and Competent Authorities for the site as defined in the Habitat Regulations.

## **Overall Aims**

The Steering Group aims to promote the sustainable use of Poole Harbour, balancing and resolving conflicts of interest.

The Steering Group seeks to stimulate, through shared information, co-operation and action, an appropriate balance between competing demands placed on the harbour and create a culture of openness and communication.

- All parties recognise the importance of working together to co-ordinate their efforts and share information, and/or expertise for the management of the Poole Harbour SPA in maintaining the site's favourable conservation status.
- The Poole Harbour Steering Group will meet approximately every 6 months. The main aims and responsibilities of the Steering Group with regard to the Poole Harbour SPA are:
  - a) To facilitate the management of the Poole Harbour Special Protection Area.
  - b) To report back to their organisations any relevant decisions of the Steering Group, and any other relevant information.

## **Poole Harbour Special Protection Area (SPA) Management**

- Members will have regard for Natural England's advice given under Regulation 35(3) of The Conservation of Habitats and Species Regulations 2010.
- Annually the Steering Group will review the monitoring programme and identify priorities for the coming year producing a summary report on the status of the harbour on an annual basis.
- Each member of the Steering Group is to provide data collected under their normal statutory responsibilities, and/or provide expertise to develop the SPA monitoring programme. All information about Poole Harbour SPA that is in the public domain or is reasonably required to discharge members' responsibilities towards the SPA under Regulation 35(3) of The Conservation of Habitats and Species Regulations 2010 will be shared between Steering Group Members.
- The Steering Group member organisations intend to work to the Advice and Guidance produced in agreement for the SPA by the Steering Group.
- The Secretary to the Steering group will co-ordinate the Steering Group's data collation and activities.

## **Resolution of Problems**

- Should it appear that any element of this agreement cannot be met, a meeting of the relevant parties should be called to explore and identify the issues and seek alternatives / resolutions.
- Where there appears to be fundamental disagreement, any party may call a special meeting to be attended by the representatives sitting on the Steering Group. The parties should attempt to call a meeting within 4 weeks of any such request.

## **Signed By The Parties To This Agreement:**

Borough of Poole: Councillor R. Williams – Environment and Prosperity Portfolio Holder

Dorset County Council: Mr A. Price – Head of Planning

Natural England: Mr J. White – Team Manager

Environment Agency: Mr P. Lodge – Environment Manager (Poole and Dorset)

Poole Harbour Commissioners: Mr G. Sturdy - Chairman

Purbeck District Council: Mr P. Croft – Chief Executive

Southern Sea Fisheries District Committee: Mr I. Carrier – Clerk and Chief Fishery Officer

Wessex Water Services Ltd: Mr J. Jones - Director

## **Appendix 2      Relevant Local and National Bodies & Organisations**

### **Poole Harbour Steering Group Member Organisations**

#### **Borough of Poole**

The Borough of Poole is the responsible local authority for the northern part of Poole Harbour and adjoining land. The Council is a Unitary Authority with responsibilities which include the statutory planning function, transportation, environmental protection, coastal protection and emergency planning. The Council is responsible for the preparation of the Local Development Framework including minerals and waste plans, and Local Transport Plans which set out the spatial planning vision and strategy and management of development within Poole.

#### **Dorset County Council**

Dorset County Council is responsible for strategic planning, highways and waste management, in areas outside the Borough of Poole unitary authority. Within the 'planning' section there are a broad range of environmental specialists covering the historic environment, ecology, coast and countryside, landscape and sustainability, waste and minerals, which provide information and advice to both the County Council and the Borough of Poole.

#### **Environment Agency**

The Environment Agency is a regulatory body responsible for managing the water environment in England and Wales. The responsibilities include Waste Management, Water Quality (including Monitoring and Pollution Incident Response), Flood Risk Management, Coastal Strategic Overview including grant fund administration, Water Resources Management, Fisheries, Conservation and Recreation. In Poole Harbour, water is monitored according to EU 72 Directives. The eel fishery and migrations of salmonids are also regulated, working closely with those having responsibility for marine fisheries. Environment Agency's aim is to support a workable Management Plan by engaging with all partners to provide a sustainable and balanced use of the Harbour by the wider community.

#### **Natural England (English Nature)**

In October 2006 English Nature, the environment activities of the Rural Development Service and the Countryside Agency's Landscape, Access and Recreation division united to form a new organisation, Natural England. Natural England have the responsibility for enhancing biodiversity and our landscapes and wildlife in rural, urban, coastal and marine areas; promoting access, recreation and public well-being, and contributing to the way natural resources are managed – so they can be enjoyed now and for future generations. Under the Habitat Regulations Natural England have a statutory responsibility to advise relevant authorities as to the conservation objectives for European Marine Sites in England such as Poole Harbour. Natural England advise relevant authorities as to the activities which may cause deterioration of natural habitats or the habitats of species, or disturbance of species for which the site has been designated. This information will be a key component of any management scheme which may be developed for these sites.

#### **Poole Harbour Commissioners**

The Harbour and the Port are managed by Poole Harbour Commissioners who are an independent statutory body. Under the Poole Harbour Acts & Orders 1756 – 2001 they have responsibilities for conservation, improvement and regulation of the Harbour and play an important role in the implementation of policies in these areas. As a statutory harbour authority, the commissioners have a duty to run a harbour open for the shipping and unshipping of goods with the only constraint being the physical capacity of the port. The Commissioners have applied for a Harbour Revision Order (HRO) which will review and modernise existing legislation under the Poole Harbour Act 1914. It will also give the Commissioners the powers of General Direction under which the Board of Commissioners can bring prosecutions against individuals without the need for byelaws or other legislation.

#### **Purbeck District Council**

Much of Poole Harbour lies within the administrative boundary of Purbeck District Council. The Council are the local Planning Authority, determining the acceptability of proposals for new development above the mean low water mark. Owing to the considerable nature conservation interest associated with the inter-tidal area, as recognised by international designation, the Council have a duty to consider the impact of new development on the marine environment under the Habitats Regulations and the CROW Act. The Council is concerned with the impacts of climate change, working with partner organisations to plan and, where appropriate, intervene on issues of flood risk. The Council is also pro-actively seeking to address climate

change through the development of new planning policies and the promotion of re-use, recycling and recovery of energy, energy conservation measures, creation of sustainable communities and supporting renewable technologies. The Council is also looking at developing new policies on Sustainable Urban Drainage systems that will assist in reducing flood risk and protecting water quality. The Council is working hard to promote and sustain the economic prosperity of the District and a number of officer's help to contribute towards the careful management of the Harbour as an asset.

### **Southern Sea Fisheries District Committee**

The main aim of Southern Sea Fisheries Committee is to Manage, Regulate, Develop and Protect the fisheries within the Southern Sea Fisheries District to ensure the sustainability of the marine environment both now and for future generations. The main sources of the Committee's local management powers come from two acts: the Sea Fisheries Regulation Act 1966 and the Sea Fisheries (Shellfish) Act 1967, which enables the Committee to make Byelaws to control fishing including size limits, gear restrictions, seasonal limits and to protect the marine environment. District Fishery Officers are empowered to enforce Byelaws, National and EU legislation. The Committee is also a Statutory consultee for discharges to coastal waters, sea defence works, offshore aggregate dredging and oil and gas exploration.

### **Wessex Water Services Ltd**

Wessex Water is the regional water and sewage treatment business serving an area of the south west of England, covering 10,000 square kilometres including Dorset, Somerset, Bristol, most of Wiltshire and parts of Gloucestershire and Hampshire. Wessex Water, as a statutory undertaker, has a duty to enhance and protect biodiversity as laid down in several pieces of legislation. Natural Environment and Rural Communities Act 2006 requires that they have regard, so far as is consistent with the proper exercise of its functions as a statutory undertaker, to the purpose of conserving biodiversity. As well as legal drivers specifically relating to SSSIs, the Water Industry Act 1991 and Environment Act 1995 include general duties on the statutory undertakers in respect of conservation, access and recreation.

### **Relevant National Bodies**

On a national level there are also many other statutory and non-statutory organisations who to some extent play a role or have an interest in the management of the Harbour. A list of some of the key bodies includes:

#### **English Heritage**

English Heritage is the Government's statutory adviser on the historic environment. It works in partnership with the central government departments, local authorities, voluntary bodies and the private sector to; conserve and enhance the historic environment, broaden public access to the heritage of England and increase people's understanding of the past. The National Heritage Act (2002) modified English Heritage's functions to include: securing the preservation of ancient monuments in, on, or under the seabed; and promoting the public's enjoyment of, and advancing their knowledge of these.

#### **MMO**

The Marine Management Organisation (MMO) has been established to make a significant contribution to sustainable development in the marine area and to promote the UK government's vision for clean, healthy, safe, productive and biologically diverse oceans and seas. The MMO are a new executive non-departmental public body (NDPB) established and given powers under the Marine and Coastal Access Act 2009. This ground-breaking act brings together for the first time key marine decision-making powers and delivery mechanisms. The MMO have incorporated the work of the Marine and Fisheries Agency (MFA) and acquired several important new roles, principally marine-related powers and specific functions previously associated with the Department of Energy and Climate Change (DECC) and the Department for Transport (DfT).

#### **Maritime and Coastguard Agency (MCA)**

This Agency is responsible throughout the UK for implementing the Government's maritime safety policy. That includes co-ordinating search and rescue at sea through Her Majesty's Coastguard, and checking that boats such as passenger ferries meet UK and international safety rules. They work to prevent the loss of lives at the coast and at sea, to ensure that ships are safe, and to prevent coastal pollution. Guidelines created by the MCA ensure that the National Contingency Plan (NCP) and local plans, including those such as Poolspill, work in harmony to enable an effective response to any pollution incident. The Agency also has responsibilities in relation to waste management for ports and shipping and in recording archaeological finds through the Receiver of Wreck.

### **The Crown Estate**

The Crown Estate owns virtually the entire seabed around the UK out to the 12 nautical mile territorial limit and around 55% of the foreshore, the area between mean high and mean low water. It also owns approximately half of the beds of estuaries and tidal rivers in the UK including most of Poole Harbour. The Crown Estate grants leases or licences for work and activities to be carried out on its land. Within the Harbour they issue leases for such things as dredging, construction of jetties and marinas, wildfowling and the laying of moorings. Its Marine Stewardship Programme also provides funding for community and practical initiatives around the UK to raise awareness and promote sustainable use of the marine environment.

### **Trinity House**

Trinity House are the General Lighthouse Authority (GLA) for England, Wales, the Channel Islands and Gibraltar. Their remit is to provide aids for navigation to ensure safe passage for vessels in coastal and offshore waters. Their responsibilities also include the annual inspection and auditing of aids to navigation provided by local port and harbour authorities such as Poole Harbour Commissioners.

## **Other Relevant Local Bodies and Organisations**

The following is a list of some of the other organisations and associations with an interest in the management of Poole Harbour and its surrounding coastline.

### **Dorset Coast Forum**

The Dorset Coast Forum was established early in 1995 to look at issues facing the Dorset coast. It consists of a partnership of over one hundred key organisations which have a vested interest in the Dorset coastline. It has no agenda to take on statutory functions, but it can help with co-ordination of coastal policy or management. It works by generating ideas, co-ordinating discussion and encouraging friendly relations and providing good networking. Empowerment is by consensus, peer review and willingness to commit to jointly agreed action.

Its primary aims are to encourage co-operation and dialogue between all the different interests and users of the coast, encourage the gathering and dissemination of knowledge and carrying out of research and to review existing policies, and working towards the production of integrated policies specific to the Dorset Coast, including Poole Harbour.

### **Dorset Environmental Records Centre (DERC)**

Dorset Environmental Records Centre was established in 1976 as an independent organisation to collate information on all of Dorset's wildlife. It provides an opportunity for local naturalists and conservation organisations to work together. The majority of the data held by DERC is accessible to everyone from students and local residents to local authorities, conservation organisations and consultants.

### **The Dorset Wildfowlers' Association for Shooting and Conservation (DWASC)**

DWASC have managed wildfowling in Poole Harbour since 1952. The club have been proactive in designating a number of no-shooting areas in the harbour in areas believed to be important for roosting and feeding birds. The club are involved in local conservation projects including partnership projects with Dorset Wildlife Trust and RSPB.

### **Dorset Wildlife Trust**

The Dorset Wildlife Trust is primarily responsible for managing the nature reserve on Brownsea Island on behalf of owners the National Trust. The reserve consists of wetland habitats and woodland and includes the lagoon. Within the reserve are internationally important numbers of two wintering wading species (Avocet and Black-tailed Godwit), nationally important colonies of Sandwich and Common Tern, one of the largest Little Egret colonies in the UK and a population of Red Squirrels subject to its own Species Action Plan. The Trust also has an advisory input on the marine matters through the Joint Dorset Marine Committee and responds to planning and other development applications.

### **National Trust**

The National Trust is a charity and is completely independent of Government. They protect and open to the public historic houses and gardens as well as industrial monuments and mills. They also look after archaeological sites as well as natural habitats including areas of coastline. Within Poole Harbour the National Trust own and manage Brownsea Island as well as the adjacent Studland Beach and nature reserve.

**Poole Harbour Study Group (PHSG)**

The Poole Harbour Study Group was founded in 1997 and is made up of a group of individuals interested in the recording of wildlife and other biological and scientific aspects of Poole Harbour. The Poole Harbour Study Group is not affiliated to any statutory, commercial or charitable organisation. The group acts to centralise and encourage the dissemination of knowledge about the Harbour but remains neutral about planning and other issues involving Poole Harbour. PHSG members are private individuals and from universities and other wildlife and conservation bodies.

**Poole Maritime Trust**

The Trust, originally founded in 1972 to support the establishment of a Maritime Museum in the Old Town Cellars in Poole, has been involved in several major research projects. The Trust aims to contribute to the public's understanding of Poole's maritime heritage and that of its immediate surroundings. It has recently formed the Poole Harbour Heritage Project Ltd which as a registered charity, instigates and supports archaeological research related to the Harbour.

**Poole Yachting Association**

The Poole Yachting Association is made up of members of sailing, yacht clubs and associations within the Harbour. The Association represents the interests of its members and promotes recreational sailing. It also works closely with other statutory Harbour regulators to help minimise conflict between recreational yachting and other commercial activities.

**Purbeck Heritage Committee**

The Purbeck Heritage Committee is a joint Committee of organisations with an interest in the Purbeck region. It was formed in 1993 to build partnerships between the bodies involved with the conservation, management and enjoyment of Purbeck, raise resources and keep people informed of progress. The Purbeck Forum provides an opportunity for a wide range of bodies such as, Parish Councils, landowners, voluntary conservation, tourism and leisure organisations, local employers and other interested groups, to contribute their ideas and support to the Committee.

**RSPB, Royal Society for the Protection of Birds**

The RSPB are Europe's largest conservation charity and exists to secure a healthy environment for birds and wildlife. They are campaigning for comprehensive legislation to achieve better protection of the marine and coastal environment and its wildlife. Around the Harbour they own the Arne nature reserve which annually is home to thousands of wild birds.

**SCOPAC, Standing Conference on Problems Associated with the Coastline**

SCOPAC works to promote sustainable shoreline management, and to facilitate the duties and responsibilities of local authorities and other organisations managing the coastal zone of central southern England. Its membership consists of Local Councils and other statutory and non-statutory bodies such as English Nature, the Environment Agency, Poole Harbour Commissioners and wildlife trusts. It commissions research and reports on various issues such as sediment transport and coastal defence and is currently committed to understanding the full extent and impact of climate change.

## **Appendix 3            Key Supporting Plans and Documents**

The following is a list of some of the key supporting plans and documents that are used to inform the day-to-day management of the Harbour. Many of the Guiding Principles of this management plan are derived from policies set out within these documents.

**AONB Management Plan, 2004 – Statutory**

Prepared by the Dorset AONB Partnership.

**Bournemouth, Dorset and Poole Structure Plan, 2001 - Statutory**

Prepared by Dorset County Council, Bournemouth Borough Council and the Borough of Poole.

**Bournemouth Dorset and Poole Waste Local Plan adopted 2006 – Statutory**

Prepared by Bournemouth Borough Council, Dorset County Council and Borough of Poole.

**Community Plan for Purbeck April 2006-March 2009 – Statutory**

Prepared by the Purbeck Community Partnership.

**English Nature's advice given under Regulation 33(2) of the Conservation (Natural Habitats &c.) Regulations 1994. Issued 2000 – Statutory**

Prepared by English Nature.

**Frome & Piddle and Poole Harbour & Purbeck Local Environment Agency Plan, 2000 - Statutory**

Prepared by the Environment Agency.

**Making Purbeck More Special, 2002 – Non-Statutory**

Prepared by the Purbeck Heritage Committee.

**Poole Bay and Harbour Coastal Strategic Study, 2004 – Non-Statutory**

Prepared by various operating authorities with an interest in coastal defence.

**Poole and Christchurch Bays Shoreline Management Plan, 1999 – Non-Statutory**

Prepared by coastal groups and operating authorities under guidance from DEFRA.

**Poole Harbour Byelaws – Statutory**

Prepared by Poole Harbour Commissioners

**Poole Local Plan First Alteration, 2004 - Statutory**

Prepared by the Borough of Poole.

**Poole Safety Management Plan, 2001 - Non-Statutory**

Prepared by Poole Harbour Commissioners.

**Purbeck Local Plan: Final Edition, 2004 - Statutory**

Prepared by Purbeck District Council.

## **Appendix 4            Conservation Designations**

### **Area of Outstanding Natural Beauty (AONB)**

Poole Harbour falls within an AONB the purpose of which is the conservation and enhancement of the natural beauty of the area. This includes protecting its flora, fauna and geological and landscape features.

### **European Marine Site (EMS)**

Where SACs or SPAs consist of areas continuously or intermittently covered by tidal waters or any part of the sea in or adjacent to Great Britain up to the limit of territorial waters, they are referred to as European Marine Sites. These are also classed as Natura 2000 sites which are part of a European network of protected sites established under the Birds Directive and the Habitats Directive.

### **Heritage Coast**

This is a non-statutory designation designed to protect the landscape and provide for managed recreation of an area of coast.

### **Local Nature Reserves (LNRs)**

These are established and managed by local authorities in consultation with English Nature. They are generally of local significance and provide important opportunities for environmental education.

### **National Nature Reserves (NNRs)**

These represent some of the most important natural and semi-natural ecosystems in the country and are managed to protect the conservation value of the habitats that occur on these sites.

### **Ramsar Sites**

These are designated under an International Convention on the conservation of wetland habitats and species. The convention on Wetlands signed, in Ramsar, Iran in 1971, is an intergovernmental treaty which provides the framework for national action and international co-operation for the conservation and wise use of wetlands and their resources.

### **Regionally Important Geological and Geomorphological Sites (RIGS)**

These are considered to be sites worthy of protection for their educational, research, historical or aesthetic importance. There are three RIGS within the Harbour: two on Brownsea and the third at Shipstal Point.

### **Special Areas of Conservation (SAC)**

These are defined under the European Habitats Directive. They are sites of European Community importance, designated by a Member state where the necessary conservation measures are applied to maintain the site in "favourable condition". These are also classed as Natura 2000 sites which are part of a European network of protected sites established under the Habitats Directive.

### **Sensitive Marine Areas (SMAs)**

This is not a designation as such but describes nationally important marine sites that require a cautious, detailed and integrated management approach for a whole area.

### **Sites of Nature Conservation Importance (SNCI)**

These are sites of local nature conservation interest that have been defined by wildlife trusts and Local authorities. They are not statutory but are often protected through local and structure plans.

### **Sites of Special Scientific Interest (SSSI)**

These are the finest sites for wildlife and natural features in England, supporting many characteristic, rare and endangered species, habitats and natural features. The purpose of SSSIs is to safeguard a series of sites that are individually of high natural heritage importance.

**Special Protection Areas (SPA)**

These are designated under the Birds Directive, which is the primary European legislation for the protection of birds. They are designated by Member States and are designed to conserve the birds listed in Annex 1 of the Birds directive as well as migratory birds. These are also classed as Natura 2000 sites which are part of a European network of protected sites established under the Birds Directive.

## **Appendix 5                      Selection of Bird Sensitive Areas in Poole Harbour**

The whole of Poole Harbour SPA is recognised as a site which is internationally important for overwintering wildfowl and waders and the mudflat, sandflats, saltmarsh, reedbeds and shallow inshore water areas within the SPA are all integral to providing key feeding and roosting habitats for the birds.

There is the potential for cumulative impacts on overwintering birds from disturbance from recreational and commercial activities in the Harbour. For example, there is nothing to prevent potentially disturbing activities such as bait digging, wildfowling and sailing occurring at the same time in all the bays in the Harbour important for feeding and roosting birds. Morrison (2004) report highlighted areas in the Harbour eg Shell and Studland bay where increases in human activity have led to a demise of roost sites. The die back of saltmarsh has also put additional pressure on bird roost sites. Poole Harbour's double tide means that birds remain at roost for much longer periods compared with more open estuaries while the reduction in feeding time availability places potentially more stress on birds with respect to replenishing their energy reserves.

In some areas of the Harbour visual and noise disturbance is likely to be more significant to the bird interests of the Harbour than other areas. These are areas where at present there is relatively little disturbance, bays whose enclosed nature means water based activities would have the potential to disturb birds over a larger area, where birds appear to be preferentially feeding and roosting and where the key bird interests for which the Harbour is recognised as important reside. Through highlighting bird sensitive areas the aquatic management plan is raising awareness of a number of bays around the Harbour that should be considered by users as sensitive areas for birds over the winter (01 November to 31 March). Further reasoning as to why these particular bays have been chosen is given below.

### **Factors considered during the selection of the Bird Sensitive Areas**

- 1) Bays whose enclosed nature means water based activities would have the potential to disturb birds over a larger area
- 2) Areas situated a distance away from urban areas and areas likely to have a high people presence and where birds are less likely to be habituated to disturbance
- 3) Areas where birds are known to preferentially roost and feed
- 4) Areas where key over-wintering bird interests of the SPA reside (shelduck, black tailed godwit and avocet). The avocet in particular has a more localised distribution.
- 5) Provision of a number of areas throughout the site to form a network to ensure a lesser distance to the nearest bird sensitive site and thereby cater for a greater proportion of the site's population while allowing a range of different sites suitable for different tide and weather conditions.
- 6) Sufficiently large to allow the birds accommodated within them to be unaffected by sources of disturbance from outside.

### **Poole Harbour's Bird Sensitive Areas**

Brownsea lagoon is an enclosed area of water and the other areas highlighted as bird sensitive areas are enclosed bays where water based activity could have the potential to disturb birds over a large area. All the bird sensitive areas are significantly large to accommodate birds without being disturbed from outside and are far enough away from significant people pressure for birds to be more vulnerable to disturbance.

The bird sensitive areas are spread throughout the site to form a network. Thomas et al 2004 found birds preferentially fed in some areas of Poole Harbour compared to other areas (Table 1 & Figure 1). All the sensitive bird areas are in significant feeding areas for birds including black tailed godwit and shelduck (Figures 6 & 7). In addition there are further reasons why specific areas are important as listed below:

### **Part of Wareham Channel in front of Keyworth**

An important area for bird feeding (Table 1 and Figure 1) which is at present over utilised (Thomas et al., 2004). The food requirements of the numbers of shelduck and curlew recorded were found to exceed the food available here which indicates that this sector is very important for these bird species but that food supply is limited here (Thomas et al, 2004). The adjacent land is also an important roosting site (Figure 2).

### **Arne Bay, Brands Bay, Wych Lake, Newton Bay, Ower Bay, and Middlebere Lake**

As stated by Gray 1985 the remoteness, complex topography and diversity of feeding grounds make these areas of the shoreline particularly attractive to overwintering waders and wildfowl. These areas are also important roost sites for a number of waders eg black tailed godwit, redshank, grey plover, knot, and greenshank roosting (Figure 2).

### **Wych Lake and Brownsea Lagoon**

These are the main feeding areas of the avocet, an Annex 1 species (Figure 5). Species listed under Annex 1 are in danger of extinction, rare or vulnerable. Poole Harbour supports a third of the British avocet population. The avocet has been observed to be particularly wary of human disturbance often being the first bird to take flight (Morrison 2004)

### **Holes Bay (north)**

The area is an important roosting site including for avocet and black tailed godwit (See Figure 3 & 4). In the upper section of Holes Bay the mudflats are exposed for longer than the lower part of the bay while there is generally less disturbance in this area

### **Lytchett Bay (west)**

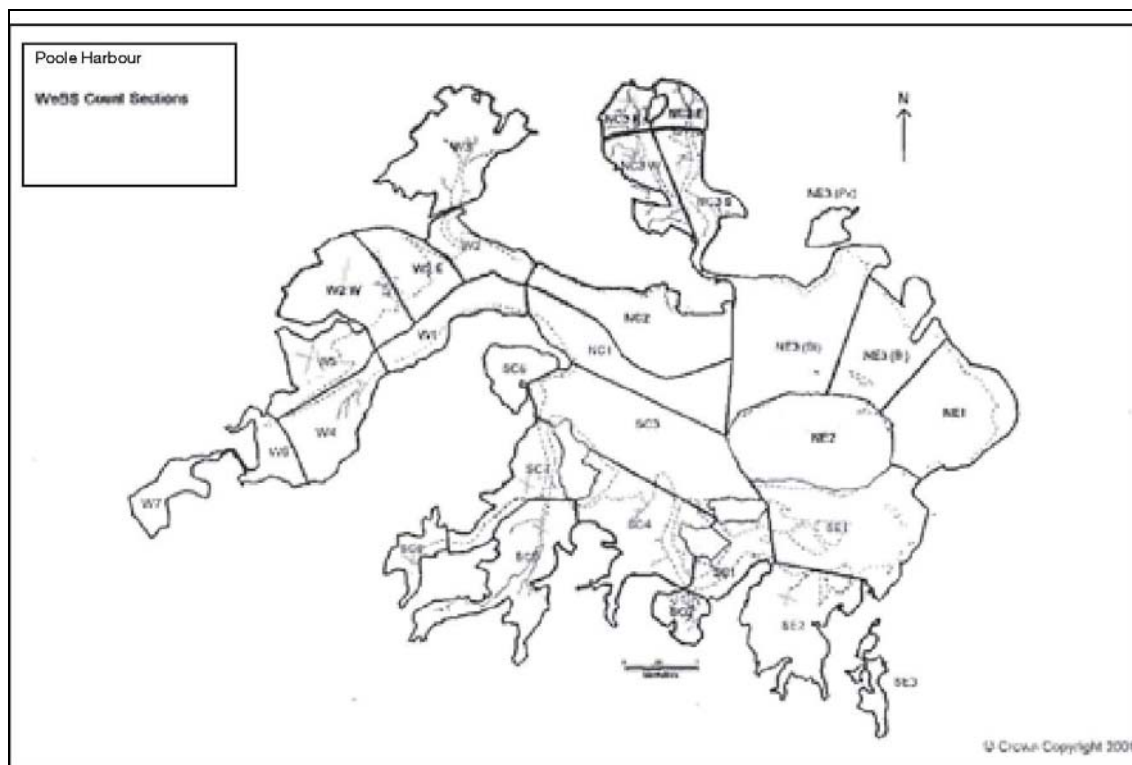
The area is an important roosting site for waders including the black tailed godwit (Figure 4). The western part of the bay is particularly important in terms of roosting sites while it is generally less disturbed.

It is hoped that a monitoring programme will be established to assess if these areas as defined on the basis of the past patterns of wintering birds are appropriate to cope with changes in bird distribution and of habitat conditions. In the light of new evidence the location of these areas may change but in the meantime raising awareness amongst users of the sensitivity of these areas will help to alleviate disturbance pressures on the important bird populations of Poole Harbour.

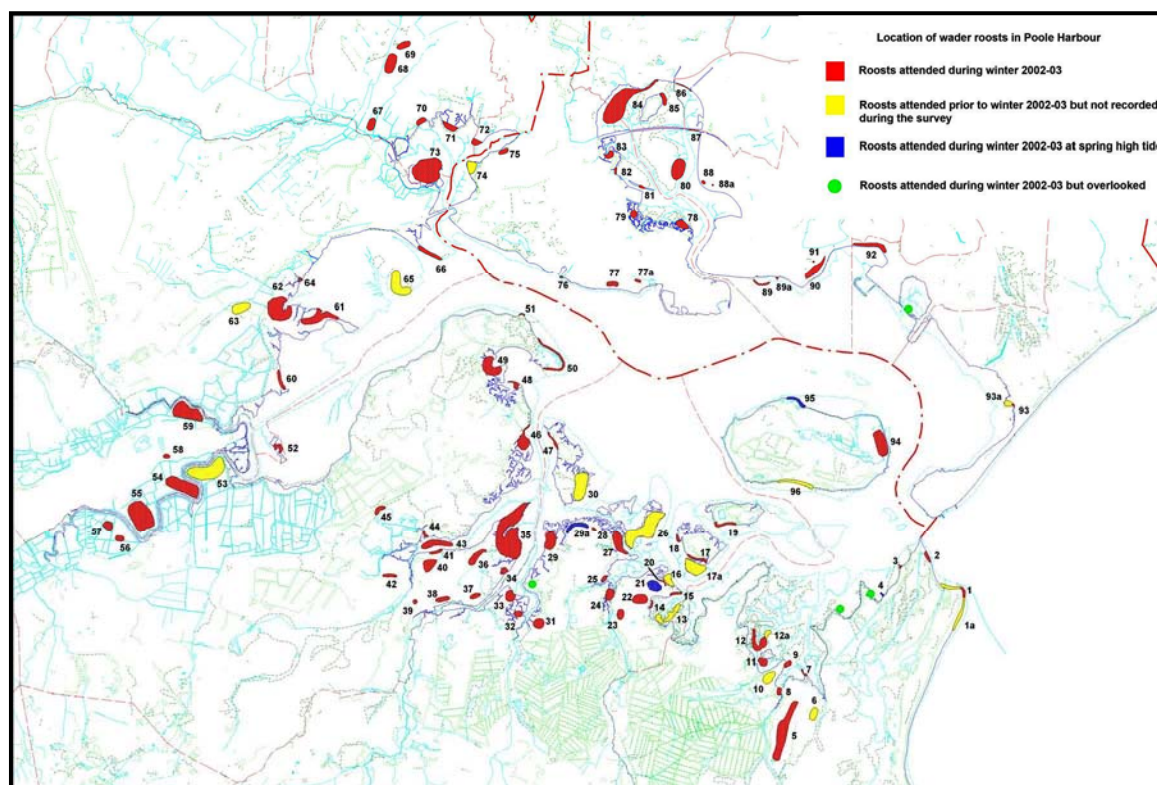
**Table 1.** Preferential feeding areas (Energy available and energy required in each WeBS sector) the lower the ratio the higher the preference for birds feeding in this sector (Thomas et al 2004)

WeBs Sectors	WeBs Sectors Total Energy Requirement (kJ x 106)	Energy as Biomass Available (kJ x 106)	Ratio of energy available to required
W6	49.39	72.77	1.5
W5	141.17	164.78	1.2
W4	144.33	430.21	3.0
W3	55.98	336.50	6.0
W2W	120.26	268.50	2.2
W2E	41.55	192.48	4.6
W1/W2	15.04	266.85	17.7
NC3NW/SW	84.91	159.74	1.9
NC3NE/SE	95.44	588.27	6.2
NE3	30.84	745.23	24.2
NE1	20.20	481.14	23.8
SE1	9.48	358.22	37.8
SE2	187.92	264.75	1.4
SC1/2	98.89	137.71	1.4
SC3/6	102.74	474.40	4.6
SC4	123.29	423.91	3.4
SC5	101.63	223.00	2.2
SC7/8	69.46	311.38	4.5
<b>Total</b>	<b>1492.53</b>	<b>5899.83</b>	<b>4.0</b>

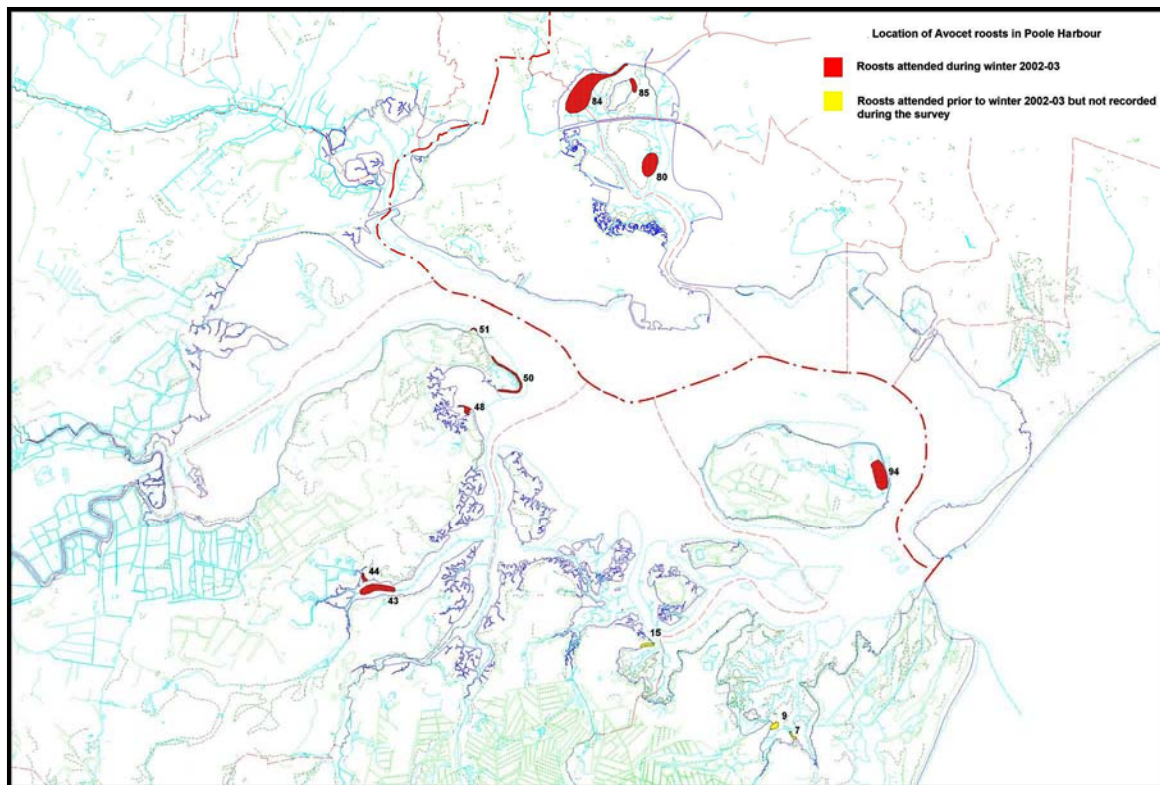
NB It should be noted that the overall ratio for Poole Harbour based on the sectoral analysis gives an availability of food to requirement value of 3.5-4 to 1 (Thomas et al. (2004). However a ratio of 3.5-4:1 does not necessarily mean that there is a surplus food resource for all bird species. For example, in the case of the oystercatcher, recent work by Goss Custard, et al (2004) indicated that in the order of 8 times the estimated requirement of this species is needed to ensure survival of a population through to the next breeding season



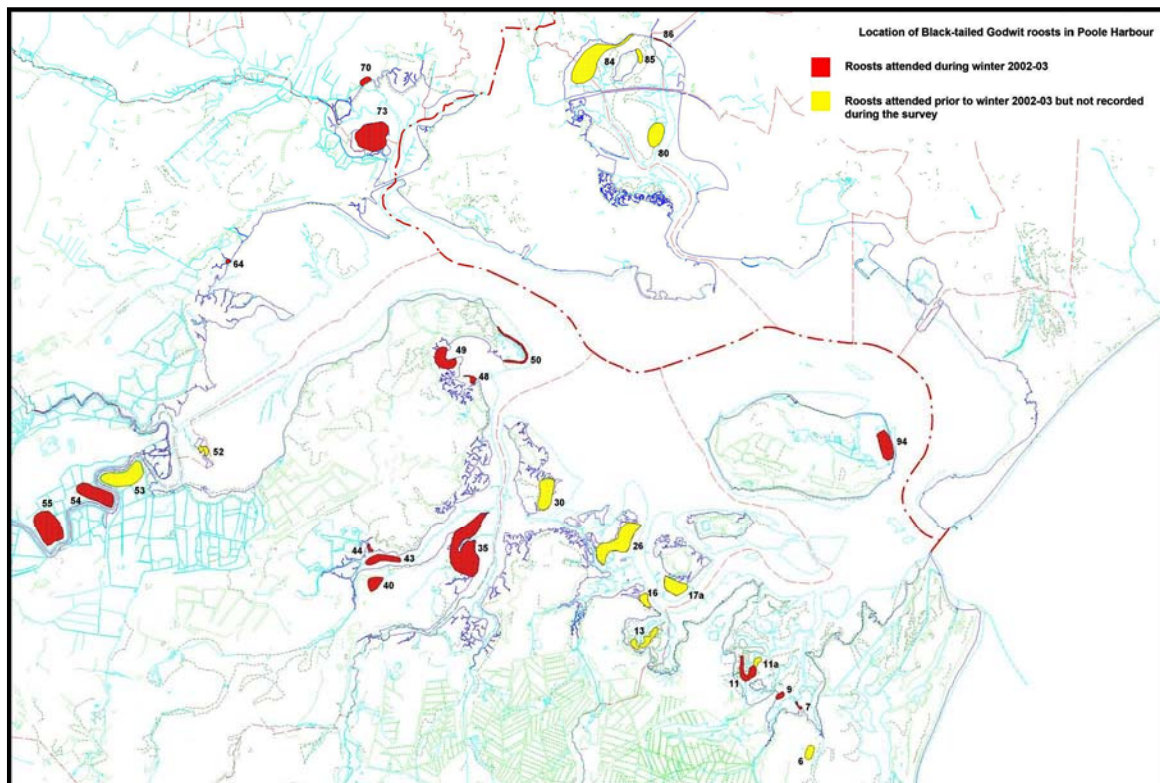
**Figure 1:** WeBS Count sectors (Pickess & Day, 2002)



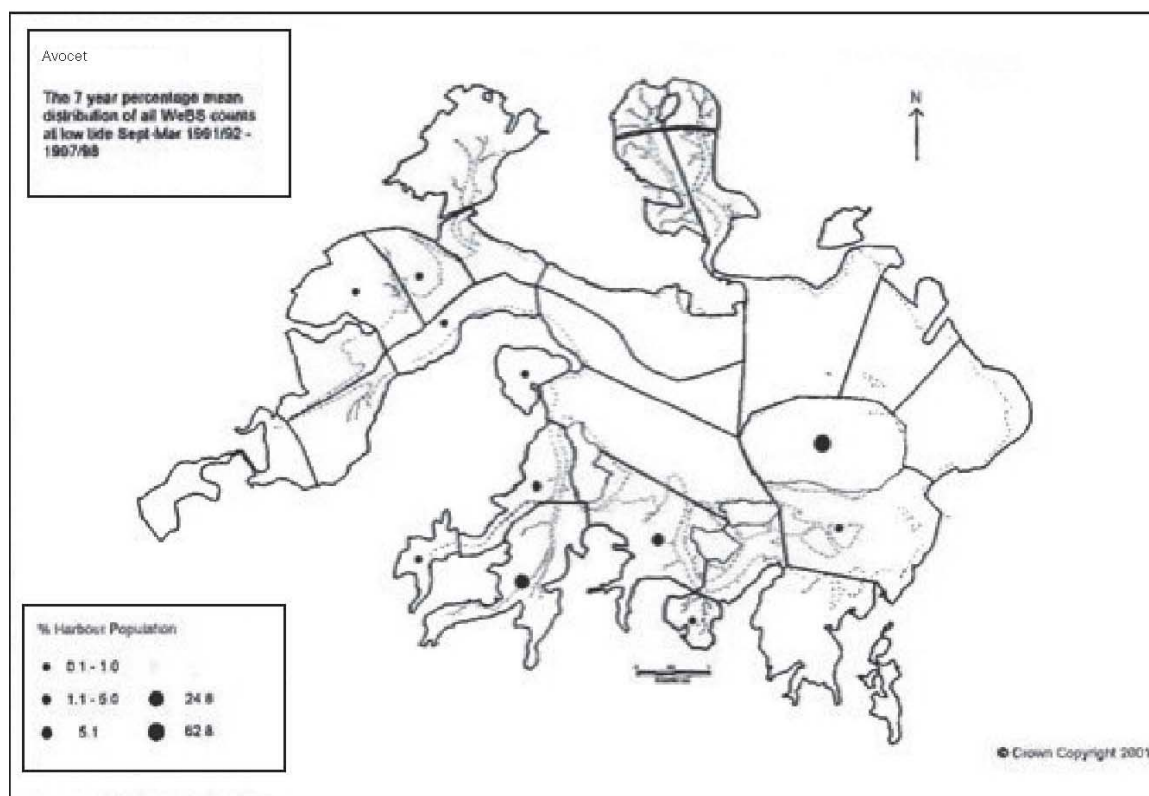
**Figure 2:** The location of wader roosts in Poole Harbour (Morrison 2004)



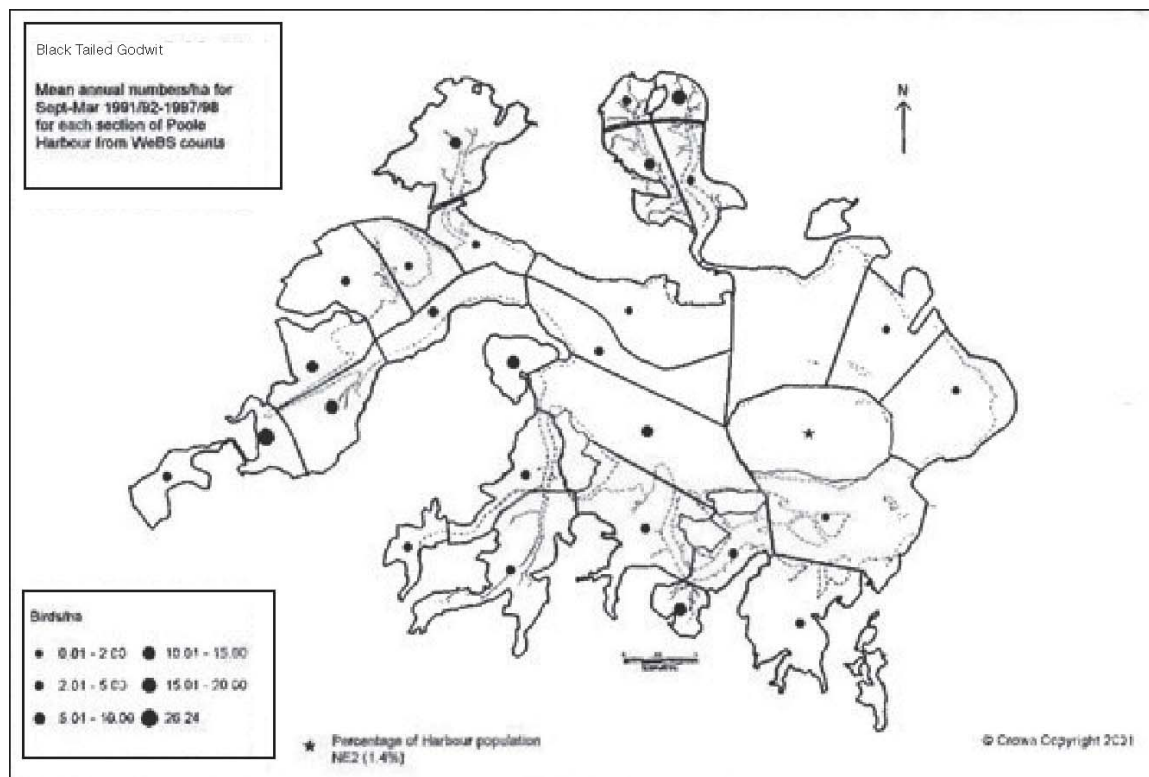
**Figure 3:** Location of Avocet Roosts in Poole Harbour (Morrison, 2004)



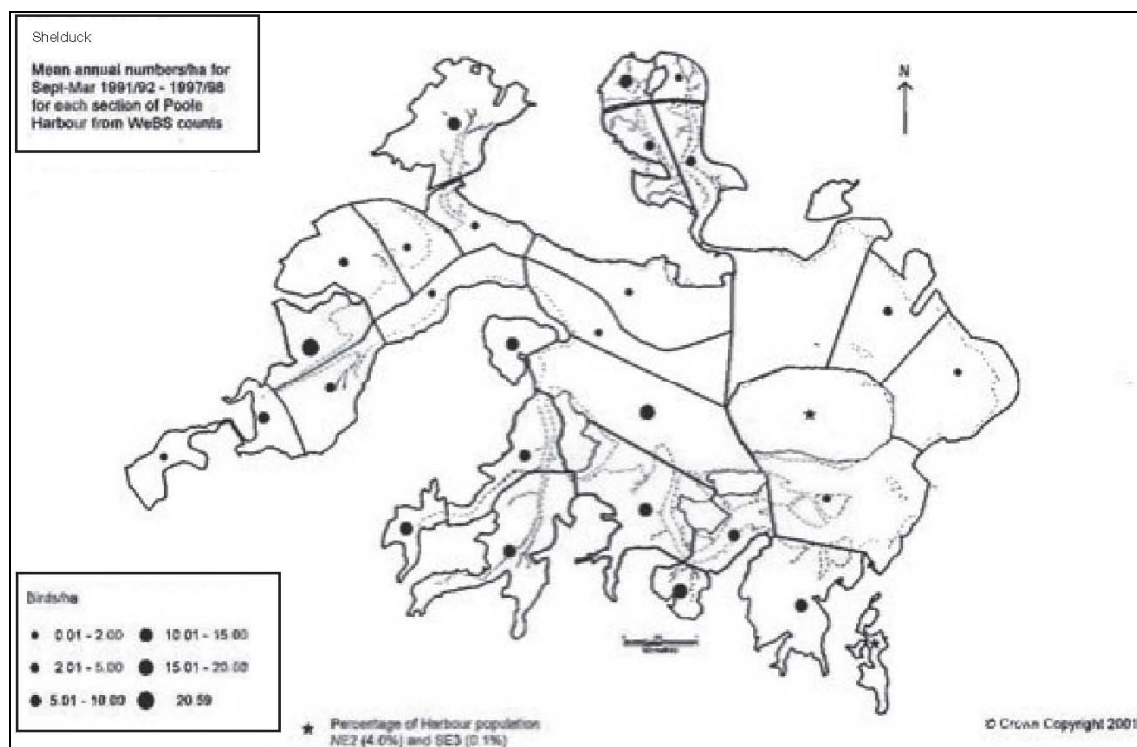
**Figure 4:** Location of Black Tailed Godwit Roosts in Poole Harbour (Morrison, 2004)



**Figure 5:** Distribution of feeding Avocet (7 year percentage mean distribution of all WeBs counts at low tide Sept-March 1991/92 – 1997/98) (Pickess & Day, 2002)



**Figure 6:** Distribution of feeding Black Tailed Godwit (7 year percentage mean distribution of all WeBs counts at low tide Sept-March 1991/92 – 1997/98) (Pickess & Day, 2002)



**Figure 7:** Distribution of feeding Shelduck (7 year percentage mean distribution of all WeBs counts at low tide Sept-March 1991/92 – 1997/98) (Pickess & Day, 2002)

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## **Appendix 6      Water Quality & Pollution: Legislation, Monitoring and Guidance.**

### **Legislation**

There is a multitude of international and UK legislation relating to pollution. Some is generic and considers all aspects of pollution while other regulations and conventions are specific to the marine environment and shipping activities. The following outlines some of the key legislation that relates to the Harbour and the activities that take place either on its waters or along its shoreline.

#### **Bathing Water Directive 76/160/EEC**

The Bathing Water Directive concerning the quality of bathing water, protects the environment and public health of bathing waters, by reducing pollution entering identified bathing areas. The Directive contains standards for nineteen microbiological, physical and chemical parameters to assess bathing water quality, but compliance is assessed mainly by standards for bacteria found in sewage, (total and faecal coliforms). There are three sampling points in and around the Harbour at, Rockley Sands, Lake and Sandbanks and samples are collected 20 times per bathing water season (01 May to 30 September). Historically the waters of the Harbour have always met bathing water standards as detailed in the Directive.

#### **Dangerous Substances Directive 76/464/EEC**

The Dangerous Substances Directive on pollution by certain substances discharged in the aquatic environment protects the water environment by controlling discharges to rivers, estuaries and coastal waters. The Directive describes two lists of compounds. List 1 contains substances regarded as particularly dangerous because they are toxic, persist in the environment and bioaccumulate. List 2 contains substances which are considered to be less dangerous but still have a harmful effect on the water environment.

The Environment Agency are responsible for authorising, limiting and monitoring dangerous substances in discharges.

#### **Environmental Protection Act, 1990**

This is the key piece of environmental legislation and was designed with wide ranging powers and is responsible for many innovations in environmental protection. The main relevant sections are Part I on integrated pollution control and Local Authority Air Pollution Control, Part II which covers waste on land and Part III which covers statutory nuisances and clean air.

#### **The International Convention for the Control and Management of Ships' Ballast Water and Sediments, 1994**

This legislation seeks to regulate the transfer of ballast water to prevent the introduction of non-indigenous species and harmful pathogens. It details where ballast water can be transferred and sets timescales for the introduction of management technology and the development of guidelines.

#### **MARPOL**

The International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) provides an international framework on how pollution from shipping should be regulated. It applies to all UK ships and ships in UK territorial waters, including fishing vessels, passenger ferries, small craft and yachts, harbour authorities and terminal operators. It governs the design and equipment of ships, establishes systems of certificates and inspections and the requirements of ports to provide reception facilities for the disposal of oily waste and chemicals. It covers all the technical aspects of pollution from ships which are detailed in six specific annexes.

- Annex I – Pollution by Oil
- Annex II – Pollution by Noxious Liquid Substances
- Annex III – Pollution by Harmful Substances in Packaged Form
- Annex IV – Pollution by Sewage from Ships
- Annex V – Pollution by Garbage from Ships
- Annex VI – Prevention of Air Pollution from Ships

### **The Merchant Shipping (Pollution) Act, 2006**

This is a wide-ranging act, but it seeks to regulate discharge from ships and also attempts to ensure the speedy compensation to those affected by oil spills. It also covers air pollution from ships and brings into UK legislation the regulations introduced by the MARPOL convention.

### **The Merchant Shipping and Vessels Regulations, 2003**

The Merchant Shipping and Vessels (Port Waste Reception Facilities) Regulations 2003 implements EC Directive 2000/59/EC on port reception facilities for ship generated waste and cargo residues. They provide a mechanism for landing shipping waste for appropriate disposal and prevent it from being disposed of at sea. This legislation controls the landing of waste and the provision of appropriate facilities. In compliance with this regulation Poole Harbour Commissioners have produced a Port Waste Management Plan that aims:

- **To ensure that sufficient and appropriate facilities are readily available to receive waste materials from vessels using the port and to dispose of all waste in a timely and correct manner.**

### **National Marine Monitoring Programme - NMMP2**

Two sites within the Harbour are also sampled as part of the National Marine Monitoring Programme which seeks to identify trends in physical, chemical and biological variables at certain coastal and estuarine sites around the UK. Water samples are collected quarterly for oyster embryo analysis, while sediment, seaweed, shellfish and fish tissue samples are collected annually.

### **Nitrates Directive 91/67/EEC**

The Nitrates Directive is an environmental measure designed to reduce water pollution by nitrate from agricultural sources and to prevent such pollution occurring in the future. Poole Harbour was classified a Nitrate Vulnerable Zone (NVZ) but initiatives such as catchment sensitive farming will seek to minimise inputs of nitrates from agricultural land.

### **Shellfish Hygiene Directive 91/492/EEC**

The Shellfish Hygiene Directive “laying down the health conditions for the production and the placing on the market of live bivalve molluscs”, protects the public health of consumers of live bivalve molluscs such as clams, cockles and mussels. It classifies bivalve mollusc shellfish harvesting areas into four categories according to the concentrations of bacteria found in the shellfish flesh.

### **Shellfish Waters Directive 79/923/EEC**

The Directive on the quality of shellfish waters protects shellfish populations (defined as bivalve and gastropod molluscs) from harm caused by pollution. This Directive specifies quality standards of waters supporting shellfish populations. Samples are currently collected monthly at sites within the Harbour and in Poole Bay.

### **Urban Waste Water Treatment Directive 98/05/EEC**

The EC Directive concerning urban wastewater treatment specifies minimum standards for levels of sewage treatment and collection systems. The Directive specifies secondary treatment for all discharges serving population equivalents greater than 2,000 to inland waters and estuaries and those greater than 10,000 to coastal waters. Although STWs that discharge into the Harbour are managed by Wessex Water Services Ltd, the Environment Agency are responsible for ensuring that discharges receive the level of treatment specified in the Directive. Poole Harbour is classified as a sensitive area due to the size of the population serviced by the STWs and also its propensity for eutrophication. As such discharges are treated to a higher standard for nitrates and phosphates than waters in less sensitive areas.

Routine monitoring and reporting is carried out by Wessex Water in accordance with strict Environment Agency requirements.

### **Water Resources Act, 1991**

This is the main piece of legislation relating to water pollution. Under this Act it is an offence to allow any polluting, poisonous or noxious material (including solid waste matter) to enter a “controlled water”, without a consent or outside of the terms of the consent issued by the Environment Agency. Controlled waters are defined as virtually all fresh and saline natural waters out to 3 miles. All discharges >5m<sup>3</sup>/day are monitored by the Environment Agency on set frequencies (dependant on flow) against the numeric conditions in the discharge consent.

### **Pollution Prevention Guidance (PPG)**

The Environment Agency produce a series of Pollution Prevention Guidance notes many of which address pollution issues which affect the Harbour. All are available on their website but some of the key ones are as follows.

- PPG01 – General Guide to Water Pollution Prevention – An introduction to pollution prevention and guidance notes on this subject
- PPG08 – Storage and Disposal of Used Oils – Guidance to all those who handle, use and store oil from recreational users to commercial operators.
- PPG14 - Marinas and Craft - Guidance to users of powered craft, operators of boating support facilities and general recreational users. It covers topics such as storage and disposal of fuels and oils both on craft and at marinas as well as offering guidance on application and removal of antifouling paints. Management of waste and sewage is also covered both at marinas and on board vessels.
- PPG21 – Pollution Incident Response Planning - Guidance to assist in the development of site-specific pollution incident response plans to prevent and mitigate damage to the water environment caused by accidents such as spillages and fires. (Section 8)

## **Appendix 7            Maritime Archaeology: Legislation and Guidance**

### **Dorset Coast Forum Coastal and Maritime Archaeology Topic Paper (1998)**

This topic paper summarises the status of coastal and maritime archaeology in Dorset at that time and its interaction with other coastal activities.

### **English Heritage Guidance, Coastal Defence and the Historic Environment (2003)**

This guidance provides advice on the implications of coastal and flood defence for the historic environment to those involved in coastal planning and coastal defence and to local authority historic environment officers. It sets out how the protection of historic remains can be fully integrated within the shoreline management planning process including implications of managed realignment and provides guidance on appropriate responses.

### **English Heritage, Ports: the impact of development on the maritime historic environment (2006)**

This policy statement is intended to inform developers and others about the importance and relevance of the historic environment in relation to ports, and how it must be taken into account in development proposals. It focuses mainly on the marine aspect of new developments, but also touches on the development of existing ports and inland impacts of development, and gives pointers to useful policy documents to inform these aspects.

### **JNAPC Code of Practice for Seabed Development (2006)**

The code produced by the Joint Nautical Archaeology Policy Committee (JNAPC) presents an overview of procedures for consultation and co-operation between seabed developers and marine archaeologists. It describes relationships that will ensure a best practice model for development both within and outside the remit of the formal Environmental Impact Assessment (EIA) process.

### **Marine Aggregate Extraction and the Historic Environment (2003)**

This document was produced by English Heritage and the British Marine Aggregate Producers Association (BMAPA) and looks to provide practical guidance on evaluating, assessing, mitigating and monitoring the impacts of aggregate dredging on the marine historic environment. Although it is aimed at the marine aggregate industry, the principles it promotes can be applied to any seabed development.

### **Merchant Shipping Act, 1995**

The ownership of underwater finds that turn out to be from a wreck is decided by procedures set out in this act. Wreck includes a ship, aircraft or hovercraft, parts of these, their cargo and equipment. All possible wreck must be reported to the Receiver of Wreck, part of the Maritime and Coastguard Agency. The Receiver will then investigate the ownership of the items and determine any salvage award.

### **Planning Policy Guidance: Archaeology and Planning (PPG 16, 1990)**

This government guidance note advises that the preservation of archaeological remains should be a material consideration within the planning process for any development. PPG 16 promotes a policy in favour of physical preservation of nationally important archaeological remains. However where preservation is not an appropriate option, it states that a developer should take appropriate measures for excavation and recording.

### **Protection of Wrecks Act, 1973**

Under this act, wrecks and wreckage of archaeological, historical or artistic importance can be protected by way of designation. It is an offence to carry out certain activities in a defined area surrounding a designated wreck unless a license for those activities has been obtained from the Government. Under this act it is possible to designate a wreck in an emergency at very short notice as demonstrated by the Swash Channel wreck.

## Appendix 8 Poole Harbour Steering Group – Lead Competent Authority for Assessments of Plans or Projects that may affect the SPA

### Lead Competent Authorities for Assessments of Plans or Projects That May Affect The Poole Harbour Special Protection Area (SPA)

Competent Authorities, as defined in Regulation 6(1) of the Habitats Regulations, are required to determine whether a plan or project is likely to have a significant effect. In order to do this the competent authority *may* require applicants to provide additional information pertinent to that assessment. To avoid unnecessary delays the applicant should be directed to a single lead authority at the earliest opportunity. The lead authority will then advise the applicant on what authorisations and what supporting information will be required. Where an Appropriate Assessment (under Regulation 48 of the Habitats Regulations) is deemed necessary then this will normally be based on the supporting information already requested and will be undertaken independently by the competent authority(ies) concerned.

The current paper sets out the competent authority that would normally be expected to act as the lead authority in respect to different categories of plans and projects that may affect the Poole Harbour SPA, however there may be exceptions that will be dealt with differently.

Lead Competent Authority					
	Environment Agency	Planning Authority	Poole Harbour Commissioners	DEFRA	Notes
Land claim (Reclaim from the sea)			✓		
Construction/alteration of slipways, jetties, marinas, pontoons below HW			✓		
Other development Below HW			✓		
Laying moorings			✓		
Coastal protection & Flood Defence Above HW		✓			
Coastal protection & Flood Defence Below HW			✓		
Dredging Activities			✓		
Disposal of dredge spoil into the sea				✓	
Disposal of dredge spoil onto land	✓	✓			Depending on Quantity
Foreshore recharge/Beneficial use of Dredgings			✓		
Discharge / Abstraction Applications	✓				
Land Based Development Requiring Planning Permission		✓			
Water based recreational activities			✓		

#### Notes:

- Where a major plan / project will involve a number of the above items the relevant Authorities will meet at an early stage to agree between them who will act as the Lead Competent Authority for that plan / project.
- Plans / projects / activities covered by the Poole Harbour SSSI Operations Likely to Damage (OLDs) or the Regulation 33(2) of the Habitats Regulations will require written consent from English Nature.

DTLR are willing to act as the lead authority where applicants require FEPA / Coast Protection Act licences. Normally this offer would only be accepted where there may be issues of overriding public interest.

## Appendix 9            Abbreviations and Glossary of Terms

**Please refer to Appendix 4 for abbreviations relating to conservation designations**

**Algal Mat:** A layer of algae usually filamentous on marine soft bottoms.

**AMP 4:** Asset Management Plan, produced by Wessex Water.

**Annex 1 Bird Species:** Species listed in Annex 1 of the Birds Directive that are in danger of extinction, rare or vulnerable.

**Annex 1 Habitats:** A natural habitat listed in Annex 1 of the Habitats Directive for which Special Areas of Conservation can be selected.

**BASC:** British Association for Shooting and Conservation

**Benthic/Benthos:** Those organisms attached to, or living on, in or near, the seabed, including that part which is exposed by tides.

**Bioaccumulation:** The accumulation of a substance, such as a toxic chemical, in various tissues of a living organism.

**CEFAS:** Centre for Environment, Fisheries and Aquaculture Science.

**Competent Authority:** The Term 'Competent Authorities' includes any statutory body or public office exercising legislative powers, whether on land or sea.

**Conservancy:** Activities such as dredging and marking of navigation channels, required to maintain safe access to the Harbour.

**CROW:** Countryside and Rights of Way Act 2000

**DEFRA:** Department for Environment Food and Rural Affairs

**EIA:** Environmental Impact Assessment

**EMS:** European Marine Site

**Eutrophication:** This is a process whereby water bodies receive excess nutrients that stimulate excessive plant growth, often called an algal bloom. This can reduce dissolved oxygen in the water when dead plant material decomposes and can cause other organisms to die.

**Habitats Directive:** The abbreviated term of Council directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora. Its aim is to promote the conservation of certain habitats and species within the European Union.

**Interest Feature:** A natural or semi-natural feature for which a European site has been selected.

**Intertidal:** The region between the high tide mark and the low tide mark.

**MCA:** Maritime and Coastguard Agency

**MMO:** Marine Management Organisation

**Natura 2000 Sites:** The European network of protected sites established under the Birds Directive and the Habitats Directive.

**Plan or Project:** Any proposed development that is within a relevant authority's function to control, or over which a competent authority has a statutory function to decide on applications for consents, authorisations, licences or permissions.

**PPG's:** Planning Policy Guidance notes (PPGs) set out Government policy on different aspects of planning in the UK. They provide guidance for local authority development plans and inform decisions relating to planning applications and appeals. The Environment Agency have also produced a series of Pollution Prevention Guidance notes also known as PPG's.

**PW:** Personal Watercraft (also known as Jet Skis and water bikes)

**Relevant Authority:** 'Relevant Authorities' are those competent authorities who are already involved in some form of relevant regulatory function and would therefore be directly involved in the management of a marine site.

**Ro-Ro Freight:** Roll on Roll off of cars and lorries from ferries.

**SMP:** Shoreline Management Plan.

**STW:** Sewage Treatment Works.

**Turbidity:** A measure of water cloudiness caused by the amount of suspended matter in the water

**UKBAP Priority Habitat:** United Kingdom Biodiversity Action Plan Priority Habitat.

**UV:** Ultra Violet.

**WeBS:** Wetland Bird Survey: a collaborative national surveillance scheme of the UK's waterfowl, based on counts undertaken once per month outside of the breeding season.

## Appendix 10      Supporting Documents and Sources of Further Information

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Purbeck Heritage Committee, 2002. <i>Making Purbeck More Special. A Strategy for the Purbeck Heritage Area 2002-7</i> . Purbeck Heritage Committee. Wareham, Dorset.

## **Appendix 11      Poole Harbour Steering Group Contacts**

Borough of Poole Council  
Planning & Regeneration  
Civic Centre  
Poole  
Dorset  
BH15 2RU  
Tel: 01202 633633  
Fax: 01202 633077  
Web: [www.boroughofpoole.com](http://www.boroughofpoole.com)

Poole Harbour Commissioners  
Harbour Office  
20 New Quay Road  
Poole  
Dorset  
BH15 4AF  
Tel: 01202 440200  
Fax: 01202 440235  
Web: [www.phc.co.uk](http://www.phc.co.uk)

Dorset County Council  
County Hall  
Dorchester  
Dorset  
DT1 1XJ  
Tel: 01305 224285  
Fax: 01305 225132  
Web: [www.dorsetforyou.com](http://www.dorsetforyou.com)

Purbeck District Council  
Community Planning and Policies  
Westport House  
Worgret Road  
Wareham  
Dorset  
BH20 4PP  
Tel: 01929 556561  
Fax: 01929 552688  
Web: [www.purbeck.gov.uk](http://www.purbeck.gov.uk)

Natural England  
Government Buildings  
Prince of Wales Road  
Dorchester  
Dorset  
DT1 1PY  
Tel: 01305 257 086  
Web: [www.naturalengland.org.uk](http://www.naturalengland.org.uk)

Southern Sea Fisheries District Committee  
64 Ashley Road  
Poole  
Dorset  
BH14 9BN  
Tel: 01202 721373  
Fax: 01202 721373  
Web: [www.southernsfc.org.uk](http://www.southernsfc.org.uk)

Environment Agency  
Rivers House  
Sunrise Business Park  
Higher Shaftesbury Road  
Blandford  
Dorset  
DT11 8ST  
Tel: 08708 506506  
Fax: 01258 455998  
Pollution Hotline: 0800 807060  
Web: [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

Wessex Water Services Limited  
Claverton Down Road  
Claverton Down  
Bath  
BA2 7WW  
Tel: 01225 526000  
Fax: 01225 528000  
Web: [www.wessexwater.co.uk](http://www.wessexwater.co.uk)

## **Appendix 12      Management Matrix Lead Authority Contacts \***

British Association for Shooting and Conservation (BASC)

Tel: 01244 573000

Web: [www.basc.org.uk](http://www.basc.org.uk)

British Marine Federation (BMF)

Tel: 01784 473377

Web: [www.britishmarine.co.uk](http://www.britishmarine.co.uk)

Dorset Wildfowlers Association for Shooting and Conservation (DWASC)

Web: [www.dorsetwildfowlers.org.uk](http://www.dorsetwildfowlers.org.uk)

Dorset Wildlife Trust (DWT)

Tel: 01305 264620

Web: [www.dorsetwildlifetrust.org.uk](http://www.dorsetwildlifetrust.org.uk)

English Heritage (EH)

Tel: 0870 333 1181

Web: [www.english-heritage.org.uk](http://www.english-heritage.org.uk)

Keep Britain Tidy

Tel: 01942 612621

Web: [www.keepbritaintidy.org](http://www.keepbritaintidy.org)

Marine Conservation Society (MCS)

Tel: 01989 566017

Web: [www.mcsuk.org](http://www.mcsuk.org)

Marine Management Organisation (MMO)

Tel: 0300 123 1032

Web: [www.marinemanagement.org.uk](http://www.marinemanagement.org.uk)

Maritime and Coastguard Agency (MCA)

Tel: 02380 329481

Web: [www.mcga.gov.uk](http://www.mcga.gov.uk)

National Trust (NT)

Tel: 0844 800 1895

Web: [www.nationaltrust.org.uk](http://www.nationaltrust.org.uk)

Royal Society for the Protection of Birds (RSPB)

Tel: 01767 693690

Web: [www.rspb.org.uk](http://www.rspb.org.uk)

Royal Yachting Association (RYA)

Tel: 023 8060 4100

Web: [www.rya.org.uk](http://www.rya.org.uk)

The Crown Estate

Tel: 020 7851 5000

Web: [www.thecrownestate.co.uk](http://www.thecrownestate.co.uk)

\* Some Lead Authority contacts are already displayed in Appendix 11

## **Appendix 13      Draft Site Plan for the Poole Harbour European Marine Site**

### **Introduction**

Natural England (NE) was commissioned by Defra to undertake a strategic review of the risks from all ongoing activities within European marine sites (EMS), in order to identify future management required to ensure site features are maintained at or restored to favourable condition. This is the first national audit of risks on EMS to help focus management effort on EMS that are under threat or the potential to become under threat.

Natural England classed activities as those which could pose either a high, medium, low, or no risk to designated Natura 2000 features. Activities classed as a high risk are those which have been prioritised by Natural England as potentially requiring additional management measures to avoid deterioration and disturbance in line with the obligations under Article 6(2) of the Habitats Directive. Activities classified as a medium or low risk are considered to have existing management systems in place and/or they have less potential to pose harm to site features. All activities should be kept under review by the competent authorities, or management schemes where they exist. More details may be found in the report card in Annex A.

Defra has worked with Natural England and relevant regulatory bodies to formulate recommended actions to address the high risk activities identified by Natural England in its review. The following site plan sets out such recommended actions, as well as the relevant background information and risk assessment, as advised by Natural England.

### **Description**

#### **Qualifying features**

- Annex 1 bird species (avocet, Mediterranean gull, common tern)
- Migratory bird species (shelduck, black tailed godwit)
- Assemblage of wintering waterfowl

#### **Conservation Objectives**

Subject to natural change, maintain in favourable condition the habitats supporting the above species and assemblage:

- Shallow inshore waters
- Intertidal sediment communities
- Saltmarsh
- Reedbed
- Seagrass (*Zostera*)

### **Management**

A Poole Harbour Aquatic Management Plan has been produced by Poole Harbour Steering Group. The Steering Group is made up of representatives of each of the relevant authorities (Relevant Authorities as defined in Regulation 6 of the Habitat Regulations 2010) that have statutory functions within Poole Harbour. The members of the Group are Borough of Poole, Purbeck District Council, Dorset County Council, the Environment Agency, Natural England, Poole Harbour Commissioners, Purbeck District Council, Southern Seas Fisheries District Committee and Wessex Water Services Ltd.

The 'Management Matrix' within the Aquatic Management Plan (Annex B) sets out actions required to ensure activities taking place on the site do not alone or in combination with others cause deterioration to the site features. The Steering Group review this table annually and meet biannually to discuss progress.

## **Activities**

The following activities could pose a high risk to the site features:

### **Activity 1 - Baitdragging and Baitdigging**

#### **Background**

The collection of organisms for use in coastal angling is an important activity that occurs throughout the UK. With an estimated one million anglers in coastal communities (Fowler 1999) there is a great demand for bait; particularly lugworm (*Arenicola marina*) and ragworm (*Nereis virens*). This demand is fulfilled by individuals who collect bait for personal use and those who collect commercially in order to sell to local fishing shops. The bait is collected from soft sediment intertidal habitats typically within estuaries and harbours. In many cases, these habitats are protected under national and international law for their high conservation value in terms of habitats and biodiversity.

The impacts of bait collection have been researched. Intensive bait digging causes habitat modification (McLusky et al. 2003), changes the population structure and abundance of both target and non-target species (Watson et al. 2007). Bird species are also affected through the removal of prey species (Shepherd and Boates, 1999) and by bait diggers causing disturbance (Townshend and O'Connor, 1993). Intensive bait digging, usually done for commercial purposes, is particularly damaging and negatively affects the interest features of designated sites. There is a right to dig for bait for personal use as part of the Magna Carta right to fish, but providing baitdigging is permitted in some areas of the Harbour this would not extinguish this right. The public right to collect bait does not apply to those digging for commercial purposes which is considered to be illegal without the landowner's permission. Whilst the law is clear that commercial bait digging is illegal if it has not been given landowner permission, unless an individual is caught actively selling the bait then there is little that the Police can do to take enforcement action.

It is therefore extremely difficult to prove whether baitdigging is being undertaken for personal use or commercial use. Whether baitdigging has an adverse effect is likely to depend on its location and intensity. Bait digging and bait dragging are identified in the Aquatic Management Plan as activities that need to be investigated in the short term. It advises:

- Further research into the impacts and effects of baitdigging
- Awareness of users through a bait digging code of conduct
- Awareness of users through a leaflet highlighting the importance of Poole Harbour for birds and the location of bird sensitive areas

#### **Current controls on Baitdigging**

The Borough of Poole is working to introduce a local bye-law to regulate the activity in one area of the harbour (Holes Bay). Natural England has concerns about this activity taking place in this location as it has been highlighted as one of the most important feeding and roosting sites for birds in Poole Harbour (bird sensitive areas). Baitdigging activity at this location has been observed to cause disturbance and displacement of bird populations while it is taking place and afterwards where the sediment has been dug over. The location (at the top of a bay enclosed within Poole Harbour) results in the dug over areas taking some considerable time to weather down (2-10 weeks) (Morrison, 2006). An additional concern is the release of sediment bound toxins during this activity at a site which is known to have elevated sediment bound contamination (Day, 2006). Some bait diggers belong to the Solent Bait Diggers Association (SBDA), with whom there was a voluntary agreement in 2006 for zoning digging activities in Holes Bay by digging in Creekmoor Lake or Upton Lake, but not both simultaneously, and for a ban on digging north of the railway line, to reduce disturbance to feeding birds (Morrison 2006).

Currently there are no effective statutory controls in place to regulate this activity while bait dragging boats are not subject to any licensing or inspections. From April 2011, IFCA's will be able to control bait digging.

Poole Harbour Steering group have produced a leaflet publicising good practice for bait diggers in Poole Harbour.

'A Condition Assessment of Poole Harbour European Marine site', an English Nature commissioned report in 2006 (Day, 2006), provides more information on the possible impacts from bait digging, in Poole Harbour

SPA and a review of surveys that have taken place up to that date. The conclusion in this report is that bait digging and bait dragging is not adequately monitored in Poole Harbour and that the distribution and extent of these activities needs to be established and monitored. This would be a necessary prerequisite for deciding whether further Harbour wide controls were required.

## **Actions**

In order to monitor the levels of baitdigging and baitdragging taking place in the Harbour a map will be produced using the relevant authorities' knowledge of where the activities are known to take place in the Harbour. This will be repeated annually.

The survey of watercraft usage in the Harbour will also be undertaken this financial year and information from this will help to monitor the levels and location of baitdragging in the Harbour.

Natural England will support the Borough of Poole in their attempts to introduce a local bye-law to regulate the activity in Holes Bay where there is particular concern as to how this activity may be affecting the European Marine Site.

Sea Fisheries Committee to prepare an IFCA byelaw in place after April 2011 to ensure there are no unnecessary delays if further work deemed it necessary to put a byelaw in place.

## **Activity 2 - Illegal Fishing**

### **Background**

There is a high level of illegal unlicensed fishing activity (especially for Manila clams) posing a risk to SPA features and their supporting habitat.

A byelaw has been put in place by Southern Sea Fisheries District Committee (SSFDC) prohibiting the use of a dredge in certain areas of the harbour (subset of the areas considered as bird sensitive areas - particularly important for roosting and feeding birds). However evidence suggests that illegal fishing is taking place in the Harbour and fishing continues to take place in the bird sensitive areas where cockle and clam fishing are prohibited. The reason for the illegal fishing seems to be that the clam remains a relatively high value resource. The Fishery Order on which the regulation of this byelaw is based is funded from licence fees and therefore resources are limited.

Unlicensed clam fishing falls to the MMO to enforce in relation to the Sea Fish (Conservation) Act 1967. It falls to the Southern SFC to enforce illegal fishing in relation to the Several and Regulating Order. There are a number of other authorities who have regulatory interest in the activities of the unlicensed fishermen. These include: Environmental Health Officers, Poole Harbour Commissioners, Work & Pensions, Gang Master Licensing Authority and the Police. The Police have organised and chaired meetings with a view to adopting a multi-agency approach to enforcement.

SSFDC work with others to police this problem (37 boat patrols, and daily land patrols) and there have been a number of successful prosecutions. SSFDC prosecutions are ongoing with some positive results regarding illegal fishing and using multi-agency policing.

Any enforcement activity undertaken by the MMO needs a full health and safety risk assessment. There is a significant and real risk of harm to any enforcement officers (including the Police) which have resource implications for enforcement. A multi-agency approach is undoubtedly the most effective way to address the illegal fishing.

Poole Harbour's Aquatic Management Plan's Action Plan is reviewed annually. Shellfish dredging is identified as a concern in terms of damage to seagrass beds, effect on prey availability and displacement of birds in the short term. The document advises increased policing effort to catch & prosecute illegal fisherman.

## **Actions**

A combination of the following actions is recommended to reduce the risk of this activity to the European marine site:

- A survey of watercraft usage in the Harbour will be undertaken this financial year and information from this will help to monitor the levels and location of illegal fishing in the Harbour.
- A multi-agency agreed plan for enforcement of illegal fishing activities should be developed and implemented. This should include a clear and transparent risk based enforcement approach for dealing with the problem, with an assessment of any additional resources required. The plan should also address how legal operators can contribute to reduce the level of illegal activities. The plan should be produced by March 2011 and have the aim of significantly reducing the level of illegal activity within three years.

A summary of the recommended actions for baitdigging and baitdragging, and illegal fishing is in Annex B.

## **Monitoring**

The responsible authority will review progress of actions annually and report to the Poole Harbour Steering Group. Natural England will also report back to the Steering Group on the condition monitoring of the site in order to help monitor the effect of the actions. The Poole Harbour Study group will be engaged as a source of information.

## **Review**

The Steering Group will review these actions at the same time as the annual review of the Poole Harbour Aquatic Management Plan actions. Natural England will report to Defra within 6 years.

## **Annex A. Report card for Poole Harbour**

### 1. Activities which could pose a high risk

Activity	Risk (High, Low, Medium, negligible)	Harm Potential	Activity Level	Current Management
Bait dragging	H	H	H	L
Bait digging	H	H	H	L
Commercial fishing - Illegal fishing	H	H	H	M

### 2. Activities posing a medium, low or no risk;

Activity	Risk	HP	Activity	Management
Coastal Squeeze	M	H	H	M
Other - bait collection	M	H	L	L
Commercial fishing - Cultivation of manila clams	M	M	L	M
Commercial fishing - Cultivation of pacific oysters	M	M	M	M
Pollution - discharge of TBT	M	M	M	M
Pollution - historic contamination of toxics	M	M	M	M
Pollution - sewage point sources	M	H	H	M
Pollution - diffuse agricultural pollution	M	H	H	M
Commercial vessels - ballast	M	H	L	M
Recreation - beach maintenance	M	M	H	M
Other - hovercraft	M		M	L
Pollution - recreational boats	M	H	H	M
Recreation - water sports	M	H	H	M
Recreation - unauthorised landing on shoreline	M	M	M	L
Recreation - pleasure craft	M	M	H	M
Pollution - litter	M	M	M	M
Recreation - dog walking	M	M	M	L
Recreation - wildfowling	M	M	M	M
Other - spread of non-native (sargassum)	M	M	M	L
Other - spread of non-native (pacific oyster)	M	M	M	L
Other - spread of non-native (slipper limpet)	M	L	H	L
Other - illegal egg collecting	M	H	L	M
Other - overgrazing	M	M	M	M
Recreation - moorings	M	M	H	H
Recreation - low flying aircraft	M	H	M	M
Habitat Loss – jetties, slipways	M	M	H	M
Dredging – maintenance dredging	L	H	H	H
Commercial fishing - Seine Netting & Beach Seine	L	M	L	L
Commercial fishing - ring nets	L	L	L	M
Commercial fishing - Fixed Nets Gill Nets / Tangle / Trammel Nets	L	L	L	M
Commercial fishing - drift nets	L	L	L	M
Commercial fishing - prawn pots	L	M	L	M

Commercial fishing - Shrimp/prawn push netting	L	H	L	M
Commercial fishing - Hand - raking cockles	L	M	L	M
Commercial fishing - Winkle hand gathering	L	M	L	M
Commercial fishing - Peeler crabs	L	M	L	N
Commercial fishing - Cultivation of native oysters	L	M	L	M
Commercial fishing - Cultivation of mussels	L	M	M	M
Commercial fishing - Cultivation of cockles	L	M	M	M
Pollution - sacrificial zinc anodes	L	L	M	L
Pollution - industry point sources	L	M	L	M
Pollution - airborne emissions	L	H	L	L
Commercial vessels - sewage	L	H	L	H
Commercial vessels - oil transportation	L	H	M	H
Commercial vessels - chemical transportation	L	H	L	H
Commercial vessels -anchoring	L	L	L	H
Recreation - anchoring	L	M	L	L
Commercial vessels - maintenance dredging	L	H	L	H
Commercial vessels - plough dredging	L	M	L	M
Other - Archaeological excavations	L	M	L	M
Commercial fishing - Fyke nets (eels)	N	N	L	M
Commercial fishing - Trolling / hand lining	N	N	M	M
Recreation - angling	N	N	H	M
Commercial fishing - Shrimp trawl	N	M	N	M
Commercial fishing - Otter trawl	N	M	N	M

Note: List comprises actual or possible ongoing activities, and does not include planned development whether small scale e.g. moorings or large scale e.g. port expansion.

### **Cumulative Effects**

This assessment was intended to identify those individual activities where suitable management to control or reduce the risk they pose to EMS features should be prioritised.

It is also important to understand the cumulative effects from the broad list of pressures acting on the site. Cumulative effects are defined in Habitat Regulations Guidance note 4 (English Nature 2001) as comprising of all “plans or projects” and other influences on the site (including non-licensed activities and natural conditions) which have affected and are continuing to affect the condition of each European interest feature on the site.

## Annex B Summary of actions to be undertaken in Poole Harbour

### Key Actions for High Risk Activities

Activity	Action	Responsible Authority for Action	Stakeholders Involved	Start of Action	Completion Deadline
<b>Other - bait dragging &amp; bait digging</b>	<b>A map</b> needs to be produced of where both bait dragging and bait digging activities are known to take place	Natural England and Southern Sea Fisheries District Committee	Poole Harbour Study Group and Poole Harbour Steering Group	ASAP	Dec 2010 and then repeated annually
	<b>Borough of Poole Bye-law:</b> Implement a byelaw to prohibit bait digging (commercial and personal use) in parts of Holes Bay 2010/2011	Borough of Poole and Natural England	Poole Harbour Steering Group	Dependent on gaining agreement with landowners	Dec 2011 (Dependent on gaining agreement with landowners)
<b>Commercial fishing – illegal fishing</b>	Watercraft survey all year around especially during key bird sensitive times (e.g. winter) and bird sensitive areas (in addition to key wintering bird sensitive areas need to consider Mediterranean gull breeding sites and breeding common tern feeding sites) <i>(In addition to fishing boats other watercraft (recreational, baitdragging etc would be recorded )</i>	SSFDC/IFCA	NE, Borough of Poole, Poole Harbour Commissioners	<b>ASAP</b>	<b>Winter 2011</b>
	A multi-agency agreed plan for enforcement of illegal fishing activities should be developed and implemented. This should included a clear and transparent risk based enforcement approach for dealing with the problem, with an assessment of any additional resources required. The plan should have the aim of significantly reducing the level of illegal activity within three years.	Police, SSFDC and MMO using Multi agency approach	Licensed fishermen	September 2010	Production of a plan by Dec 2011 Significant reduction in illegal fishing by March 2014

**Other actions which could support assessment of impacts but are not essential to reducing the high risk and will be dependent on available funding**

Activity	Action	Responsible Authority for Action	Stakeholders Involved	Start of Action	Completion Deadline
<b>Other - bait dragging &amp; bait digging</b>	<b>Additional evidence:</b> Further research is required on the extent and impacts of bait digging in Poole Harbour to gauge the intensity/extent of damaging activity and therefore the appropriate management actions.	Natural England	Poole Harbour Study Group and Poole Harbour Steering Group	Dependent on funding	Dec 2011 (Dependent on funding)
	<b>Further research</b> into the impacts of bait dragging to assess the full environmental effect on the site.	Natural England	Poole Harbour Study Group and Poole Harbour Steering Group	Dependent on funding	Dec 2011 (Dependent on funding)
	<b>Voluntary restrictions.</b> In parallel, NE and the SSFDC will consider a programme of awareness raising including dissemination of code of practice leaflets being produced through the Poole Harbour Steering group to highlight the location sensitive areas. Eg Angling shops	Natural England and Southern Sea Fisheries Committee	Poole Harbour Steering Group	April 2011	Dec 2011
	<b>Voluntary agreement and a Code of Practice</b> agreed between Natural England and responsible bait draggers to avoid sensitive bird areas and zostera areas	Natural England	IFCA, NE and Poole Harbour Steering Group	April 2011	Dec 2011
<b>Commercial fishing – illegal fishing</b>	<b>Improved understanding of the impacts</b> of visual and noise disturbance and prey availability effect and bird behaviour (ie how feeding effected by physical change in the mudflat) in combination with other disturbance activities	NE, SSFDC	Poole Harbour Study Group, University of Bournemouth	<b>Funding dependent</b>	<b>Dec 2012</b>
	<b>Liaison meetings with licensed clam fisherman</b> to ensure their views as to intensity and extent of problem considered			Ongoing	

For medium and low risk activities see Annex A (page A13/v)

<http://www.pooleharbouraqmp.co.uk/>