

Medina Estuary Management Plan

A Strategic framework

First Edition 1997

Revised Edition 2000

Preface

Who is this plan for?

The Medina Estuary Management Plan (MEMP) is for everyone who cares about the Medina Estuary. It is of prime importance to people who live and work in the area, but will also be of concern to those who visit or have an interest in the estuary. This includes the many organisations and agencies concerned with the estuary. It has been written for a public audience as well as for professionals.

Why has this plan been produced?

The MEMP was produced in response to Government guidance which outlined the need for improved management of estuaries and the coast. It is a non-statutory initiative which seeks to provide support for:

- an integrated approach to the management of the estuary resources and activities which take place on and around the Medina; and
- consistency and co-ordination in decision-making.

Who has produced this plan?

The plan was prepared by the Medina Estuary Project Officer under the guidance of:

- a Steering Committee comprising representatives of the key statutory organisations (see Appendix A1); and
- key organisations and individuals with an interest in the estuary.

Its preparation was assisted by a public meeting and workshop, and the preparation of a series of Topic Reports produced by Topic Groups, consisting of representatives from key organisations and individuals. Funding was provided by the organisations listed in Appendix A2.

What does the plan contain?

The plan provides a framework which draws together the range of issues which need to be considered for the future management of the estuary. It provides a base from which issues can be resolved in the best interests of all parties.

- Section I provides a background to the Management Plan. It describes the study area and the aims of the strategy.
- Section II outlines the activities which require management in the estuary. It identifies objectives for management, sets out an action plan to achieve the objectives and identifies the lead bodies responsible for each recommendation.
- Section III provides the framework for the implementation of the strategy.

The Second Edition

The first edition of the Medina EMP was produced in May 1997. In February 1999 an Estuaries Officer was appointed to implement this plan (section 3.7) and the Western Yar EMP. It was decided that a second edition of the Medina plan was needed to provide more specific guidance to aid the implementation stage. The second edition includes:

- incorporating amendments to any recent changes in the stated Issues and Policies,
- incorporating a revision of the timescales for the Action Plans to be achieved
- listing the Lead Bodies responsible for each recommendation

At the time of production of this edition of the MEMP, the Management Committee decided that a fundamental revision of the plan was needed to provide a mechanism to answer questions identified in the plan. Due to the time this is likely to take the preparation of the current document has been undertaken as an interim measure.

Acknowledgements

The Medina Estuary Management Plan (MEMP) was prepared with the co-operation and involvement of many individuals and organisations.

The Steering Committee have contributed a large amount of time and effort to the project. Their guidance and constructive help has been invaluable

The Topic Group members responsible for producing and informing the Topic Reports provided considerable input into the plan preparation process.

I would also like to acknowledge all the individuals who provided advice or comment throughout its preparation.

Caroline Davis
Medina Estuary Project Officer

I would like to acknowledge the Medina Estuary Management Committee for their support and guidance in producing the second edition of the Medina Estuary Management Plan.

Jess Pennington
Isle of Wight Estuaries Officer (1999-2000)

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As a result of the resources required to update the maps found in this plan, we have used the maps from the 1997 edition of the MEMP. If you would like further information about any of the maps please contact the Isle of Wight Estuaries Officer, 01983 823863.

Vision for the Medina Estuary

To achieve the sustainable use of the Medina Estuary through the integrated management of its resources by ensuring that a balance is secured between the protection and enhancement of the natural and man-made environment and the continued development of the local economy.

To develop appropriate management of the resource through co-operation and liaison between estuary managers, user groups, the voluntary sector and the community.

Abbreviations

BMIF	British Marine Industries Federation
BTO	British Trust for Ornithology
CA	Countryside Agency
CC	Countryside Commission
CHC	Cowes Harbour Commissioners
CM	Coastal Management
CPRE	Council for the Protection of Rural England
cSAC	candidate Special Area of Conservation
EA	Environment Agency
EH	English Heritage
EMP	Estuary Management Plan
EN	English Nature
EO	Estuaries Officer
EU	European Union
HWTMA	Hampshire and Isle of Wight Trust for Marine Archaeology
HWWT	Hampshire and Isle of Wight Wildlife Trust
IAG	Isle of Wight Industrial Archaeology Group
IWNHAS	Isle of Wight Natural History and Archaeological Society
IWC	Isle of Wight Council
IWCFA	Isle of Wight Commercial Fisherman's Association
IWOG	Isle of Wight Ornithological Group
IWS	Isle of Wight Society
LEAP	Local Environment Action Plan
LNR	Local Nature Reserve
MAFF	Ministry of Agriculture, Fisheries and Food
MEMP	Medina Estuary Management Plan
MMA	Medina Mariners Association
MROC	Medina River Oyster Company Ltd
MVC	Medina Valley Centre
NFSA	National Federation of Sea Anglers
NHA	Newport Harbour Authority
NFU	National Farmers Union
PPG	Planning Policy Guidance
RA	Ramblers Association
RSPB	Royal Society for the Protection of Birds
RYA	Royal Yachting Association
SC	Sports Council
SINC	Sites of Importance for Nature Conservation
SMR	Sites and Monuments Record
SPA	Special Protection Area
SSFC	Southern Sea Fisheries Committee
SSSI	Site of Special Scientific Interest
STW	Sewage Treatment Works
SW	Southern Water
TBT	Tri Butyl Tin
UDP	Unitary Development Plan

1.0 Introduction

1.1 Background

The Medina Estuary is an important natural and heritage resource supporting a wide range of uses and interests. Due to the resulting variety of demands being placed on the estuarine resource, this plan has been developed to explore the future of the estuary. The preparation of the plan has involved collaboration between the range of organisations responsible for activities on the Medina and has involved partnership with the local community.

Following extensive consultation, discussion and research, this plan draws together a framework of management for the estuary. It offers a mechanism to help secure widely acceptable sustainable use of the estuary, with the aim of maintaining its conservation value, commercial productivity and importance for local people.

The plan makes no attempt to prescribe the outcome of the issues. Rather a framework is offered for their resolution through collaboration within a vision of sustainable management. It is not an attempt to override existing responsibilities but rather, through joint management, to use existing powers and influences to secure agreed objectives, so to improve the value of the estuary to the local community. It is a non-statutory document and success will only be achieved if users and managers work together to implement the plan.

1.2 Coastal and Estuarine Management in Britain

Formal recognition by the UK Government of the need to adopt a strategic approach to estuary and coastal management occurred in 1992, following the publication of a report by the House of Commons Environment Select Committee on coastal planning. The report stated the need for coastal users and managers to work together to produce coastal and estuary management plans. Consequently, estuary management plans are being produced for 39 estuaries in England.

1.3 Medina Estuary Management Plan (MEMP)

The Medina Estuary Management Plan (MEMP) has been developed in response to the House of Commons Select Committee Report on Coastal Planning, the recognition of the importance of European Union (EU) Directives and a recommendation for its development by the Ports Industry. The plan is an informal document which complements and informs the Isle of Wight Unitary Development Plan, the Isle of Wight Local Environment Agency Plan and the Isle of Wight Shoreline Management Plan to provide supplementary advice and guidance for the Medina Estuary. It will also, along with other estuarine and coastal initiatives around the Solent, deliver some of the objectives to the Single Scheme of Management for the Solent Special Area of Conservation. Integration between the MEMP and other plans is important to ensure an understanding between the different bodies managing the coastal zone and to prevent conflict occurring between the policies and objectives in place. An overall integrated management framework is necessary for action and decision making since many activities have wider implications. In addition, it is intended that other organisations will use the ideas set out in the MEMP to inform their policy development and work plans. It has been developed within the confines of the existing legislative framework and aims to build upon it to achieve successful management.

The principal benefits of the plan are:

- the **collation of existing information** relevant to the estuary and the identification of gaps in knowledge;
- the **co-ordination of interest groups and agencies** with responsibility for the management and regulation of the

different aspects relating to the use of the estuary, to form an integrated management structure and an increase in cross-issue understanding;

- the development of a **framework** which addresses issues relating to the estuary as a whole;
- the development of **agreed management objectives and recommendations**; and
- the provision of a **clear statement** about the sustainable use of the estuary to provide a bench mark for its future management.

1.4 Area to be included in the Management Plan

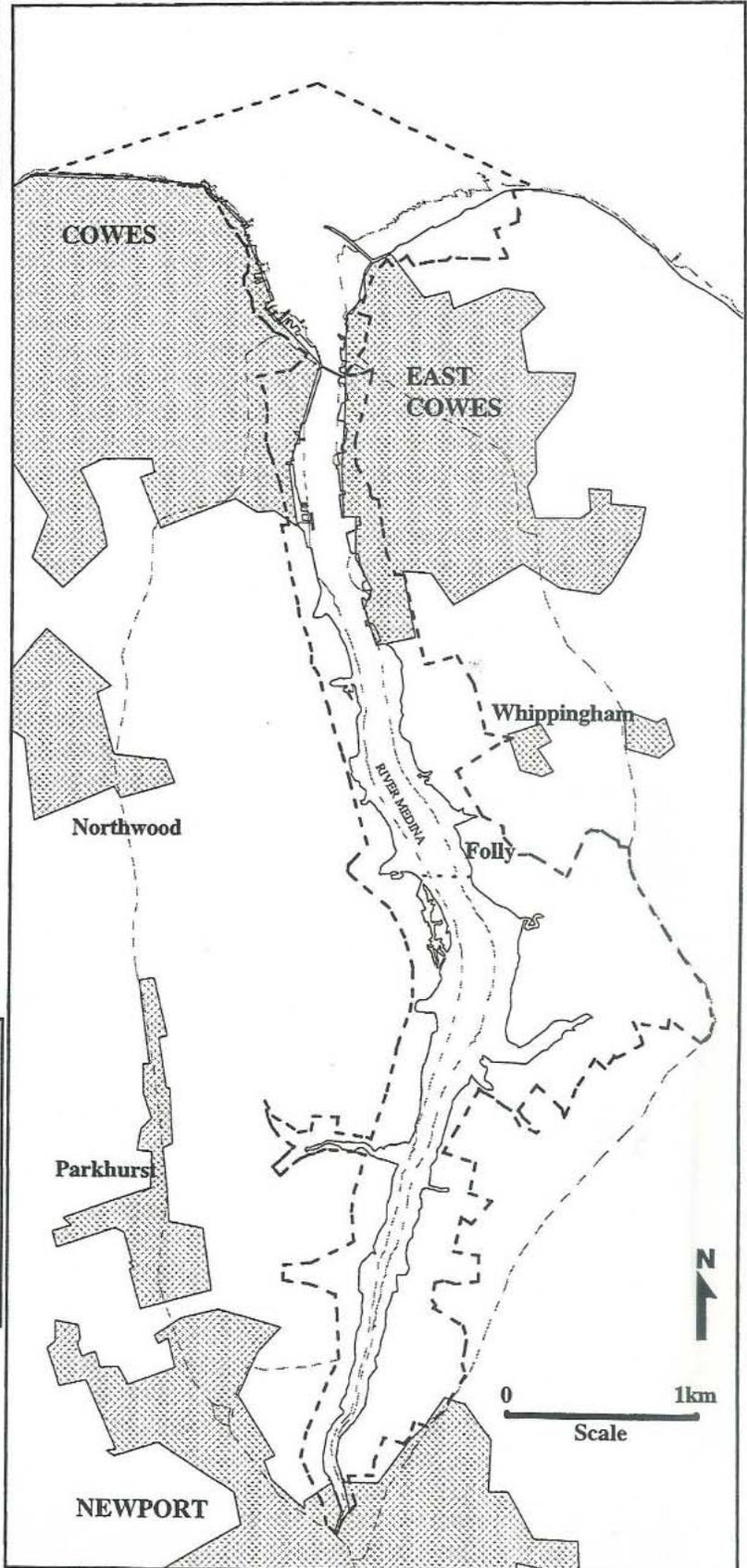
The area to be included in the MEMP is shown on **Map 1**. The boundary was determined by environmental and use factors established during initial consultation. In order to tackle issues which directly affect the estuary a more flexible consideration of this boundary may be required.

1.5 Format

The MEMP is geared towards stimulating action on the variety of issues which have been identified during the process of plan preparation.

- Section 2.0 of the plan outlines the key areas which require management and identifies: issues which require management; management objectives; and recommendations to address the issue. It also identifies the action required to address the recommendations and the responsible lead body.
- Section 3.0 provides a framework for implementing the action plan.

Map 1: Medina Estuary Management Plan Boundary



Legend

- Main Roads
- Medina Estuary Management Plan Boundary
- Mean Low Water Mark
- Mean High Water Mark
- Harbour Authority Boundary
- ▨ Urban Areas

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2.0 Topic Chapters

2.0.1 Introduction

This section has been divided into key topics which require management within the estuary. Each of the sections contain background information and a focus on the specific issues which require management.

Each of the topics sections identify:

- **issues** which require management;
- management **objectives** supported by an explanation;
- **recommendations** which can be implemented to address the issue, with **actions** which suggest means for achieving the implementation stage. **Timescales** and **partnerships** required to achieve implementation, with the **lead body** highlighted in bold, are also included.

Each of the objectives are cross referenced using the prefix of the objectives (e.g. A1 refers to Objective A1) and indicate which management objectives should be considered in parallel. A comprehensive list of the objectives is provided in Appendix A3 to facilitate use of the document and identify the lead body.

The key topics are presented in alphabetical order, followed by sections on public awareness and research and monitoring which draw together issues relating to a number of the key topic areas.

A summary of issues which are of importance to the range of topic areas is provided in Table 1. The table helps to identify areas of management which require consideration by a range of interests. They should not be considered to be of greater importance than any other issue identified within the plan.

Table 1: Cross reference of issues

Topic/ Issue	Agriculture	Commercial and Economic Use	Fisheries	Historical and Cultural Resource	Landscape	Nature Conservation	Physical Processes	Recreation and Leisure	Water Management
Access	✓	✗	✓	✗	✓	✓	✗	✓	✗
Dredging	✗	✓	✓	✓	✓	✓	✓	✓	✗
Facilities Provision	✗	✓	✗	✓	✗	✗	✗	✓	✗
Land Use Change and Development	✓	✓	✗	✓	✓	✓	✗	✗	✗
Public Awareness and Education	✓	✓	✗	✓	✓	✓	✗	✓	✗
Research and Monitoring	✗	✗	✓	✓	✗	✓	✓	✓	✓
Water Quality	✓	✗	✓	✗	✗	✓	✗	✓	✓

2.1.0 Agriculture

2.1.1 Background

Agriculture is the primary land use between Cowes and Newport with farms ranging from 35 to 1,700 acres in size. The farms to the west of the estuary have changed from mixed farming to become predominantly arable, with crops of oil seed rape, beans, spring barley and winter wheat. It includes an area on Werrar Farm which has been taken out of production through the introduction of set-aside. However, some of the farms on the western bank continue to use the land for grazing cattle and sheep. The eastern bank is predominantly used for arable farming. Map 3 illustrates the land use of the Medina Estuary and indicates the arable and grassland areas.

The change in farming from mixed to arable has resulted in the removal of hedges to increase field size. Development has occurred at the edge of the urban areas of Cowes and Newport resulting in the loss of agricultural land.

Regulation: The principle bodies involved in the regulation of agriculture are the Ministry for Agriculture, Fisheries and Food (MAFF) and the Environment Agency (EA). MAFF is responsible for the implementation of national legislation and European legislation and directives, while the EA deals with agricultural waste issues and monitoring water quality which includes the monitoring of diffuse pollutants entering the water course from agricultural land. Farmers rely on these bodies, the National Farmers Union (NFU) and professional consultants to keep them up to date on regulation and control.

2.1.2 Issues

2.1.2.1 Public access

Public footpaths and a cycleway exist adjacent to or through agricultural land (see Map 8). Public access issues have been raised on both sides of the estuary by the farming community. Key concerns include:

- increased public access on agricultural land has adverse impacts on the land and

- agricultural businesses; and public rights of way result in trespass due to public access to other areas being assumed.

Objective A1

To ensure that existing and future rights of way are designated, managed and maintained appropriately to minimise potential trespass.

Objective A2

To increase public awareness about the existing rights of way network and the effects of trespass.

2.1.2.2 Consultation

Farmers have indicated that:

- they feel that consultation over issues relating to land use in the area is inadequate; and
- their views are not taken into consideration when consulted.

Objective A3

To ensure that landowners and farmers are consulted over appropriate issues relating to present and future land use.

2.1.3 AGRICULTURE ACTION PLAN

Objective	Recommendations	Timescale	Partners	Cross References
<p>A1</p> <p>To ensure that existing and future rights of way are designated, managed and maintained appropriately to minimise potential trespass</p>	<ul style="list-style-type: none"> ➤ Involve landowners in consultations regarding the review of rights of way ➤ Establish a dialogue between the farming community and recreational users <p>Action: Statutory Policy</p>	<p>Ongoing</p> <p>Ongoing</p>	<p>Farmers and Landowners, Rights of Way Dept. IWC, NFU Cyclewright, Farmers and Landowners, Local Community, NFSA, RA</p>	<p>A3, R2</p> <p>R4, PA1</p>
<p>A2</p> <p>To increase public awareness about the existing rights of way network and the effects of trespass</p>	<ul style="list-style-type: none"> ➤ Produce information (including information boards, at strategic locations) outlining the rights of way network and a code of conduct for rights of way users ➤ Ensure that all existing footpaths are way marked to minimise potential for damage to agricultural land <p>Action: Statutory Policies. EO to include information in an 'Estuaries Leaflet'</p>	<p>Medium</p> <p>Short</p>	<p>Cyclewright, EA, EN, Farmers and Landowners, Rights of Way Dept. IWC, Local Community, NFSA, NFU, RA, Rights of Way Dept. IWC</p>	<p>NC4, PA2</p> <p>NC4</p>
<p>A3</p> <p>To ensure that landowners and farmers are consulted over appropriate issues relating to present and future land use</p>	<ul style="list-style-type: none"> ➤ Appropriate land use and/or land management issues should be discussed with the farming community <p>Action: Statutory Policy</p>	<p>Medium</p>	<p>EN, Farmers and Landowners, Rights of Way Dept. IWC, NFU</p>	<p>A1</p>

Key to Timescales:
Short: within 2 years Medium: within 5 years Long: within 10 years

2.2.0 Commercial and Economic Use

2.2.1 Background

Commercial and economic use of the estuary includes principally: commercial shipping; the marine service industry; the ferry services; commercial fishing; and tourism. The areas of the estuary used for commercial activity are illustrated in Map 2.

Commercial shipping: The Medina Estuary is the only location on the Island which handles bulk cargo. While trade has declined it continues to handle approximately 400,000 tonnes of cargo per annum with the main commodities being shingle/ballast, timber, grain, fuel spirit/oil, stone, pumice/limestone. The majority of the cargo is landed at Kingston and Medina wharves. Newport Harbour continues to receive shingle. However, use of the Harbour for the transportation of cargo is declining as vessel sizes increase. A disused wharf exists at Stag Lane which could potentially be reused in the future to provide better access than Newport Quays.

Marine services: Marine services are provided by an array of businesses within the estuary offering a wide range of services including: boat building and repair; supply (including riggers, sailmakers, engineers and electricians); and support services (chandlers, brokers, towing and mooring facilities). The main foci of marine services is in the vicinity of Cowes but additional businesses are located at Island Harbour and Newport.

Ferry services: Red Funnel operate a high speed passenger service from Cowes and a passenger and vehicle service from East Cowes providing vital links to Southampton and the mainland.

Commercial fishing: Cowes Harbour serves as a port of registry and harbour for commercial craft who fish the wider Solent waters. There are currently no full time commercial fishing vessels registered and based at Cowes. However, Cowes Harbour Commission issue licences to 8 fishing vessels. There is also 1 rod and line vessel (licence not required). The main species commercially fished are oysters, eels, mullet, bass and flounder, together with small quantities of sole and plaice. The main commercial fishing activity which occurs within the estuary is the

dredging of oysters. Objectives and recommendations relevant to commercial fishing are also listed in the Fisheries section (2.3).

Tourism: The study area contributes significantly to the Island's tourism industry. In particular, Cowes is one of the focal points of tourism on the Island, attracting people for events including Cowes Week. In 1992, Cowes attracted 154,000 yachtsmen who spent an estimated £10 million on local goods and services. In addition, an estimated £3.25 million of local expenditure was generated from visitors attracted to yachting (Pieda, 1994).

Future developments: The integrated multi-million pound re-development of Town Quay is now progressing. Partnered by the IWC, CHC, Red Funnel and Cowes Waterfront Trust it will increase public access to the waterfront, re-develop the Red Jet Terminal and increase the size of the Yacht Basin.

Also in Cowes, East Cowes Marina is being developed and there are proposals to develop Shepherds Wharf.

An Aerolaminates Ltd. Marine Transfer Unit on the Western bank of the estuary just north of Newport is also under development review. Another major potential development at Newport is the regeneration of Newport Harbour for which the Isle of Wight Council is currently (1999) examining the options.

Regulation: Cowes Harbour Commissioners (CHC) and Newport Harbour Authority (NHA) have statutory responsibility for conservation and navigation within the estuary and have the powers to make byelaws for regulation purposes. CHC jurisdiction, as established by the Cowes Harbour Act 1897, extends on the northern boundary from Egypt Point to Prince Consort Buoy to Castle Point and thereafter on the foreshore at the high water mark throughout the estuary to an east-west boundary at the Folly Inn, as indicated on Map 2. South of the boundary the estuary is regulated by the Isle of Wight Council as Newport Harbour Authority, who own the river bed south of the boundary. The Harbour Authorities are also

responsible for providing licences for dredging and navigational licences for oyster dredging within the estuary. Commercial fishing in the Solent is regulated by the Southern Sea Fisheries Committee (SSFC). The SSFC regulate inshore fishing via the implementation of byelaws. The Isle of Wight Council is responsible for planning and development control on the land to the mean low water mark offshore and within the whole of the estuary.

2.2.2 Issues

2.2.2.1 Future commercial use of the estuary

Commercial and economic use of the estuary is in decline following the change in cargo transportation from sea to overland and the recent recession, which has had an impact on the marine services sector. It is necessary to examine the commercial and economic use of the estuary as a whole to identify a means for ensuring continued economic productivity and the availability of sites for commercial activity in the future.

Objective C1
To identify the means to establish alternative commercial opportunities and attract new businesses to the area.

Objective C2
To reserve, where appropriate, riverside land or areas of the harbour with adjacent deep water for river dependent activities.

2.2.2.2 Dredging

Maintenance dredging of existing shipping channels and berths, which have been affected by siltation, occurs regularly within the estuary. This must continue in order to provide access to the estuary for commercial shipping, the ferry service and recreational craft.

Objective C3
To maintain access channels and wharves, subject to technical and environmental considerations.

2.2.2.3 Fishing facilities provision in Cowes

There are no dedicated fishing facilities for the landing of commercial catches and the storage of gear within the estuary.

Objective C4
To investigate the feasibility of providing landing and storage facilities for the commercial fishermen registered at Cowes.

2.2.2.4 Tourism

Tourism within the study area is severely limited by the inadequate provision of appropriate accommodation, public transport, ancillary facilities, the unrealised potential of the historical and cultural resource and the promotion of the area.

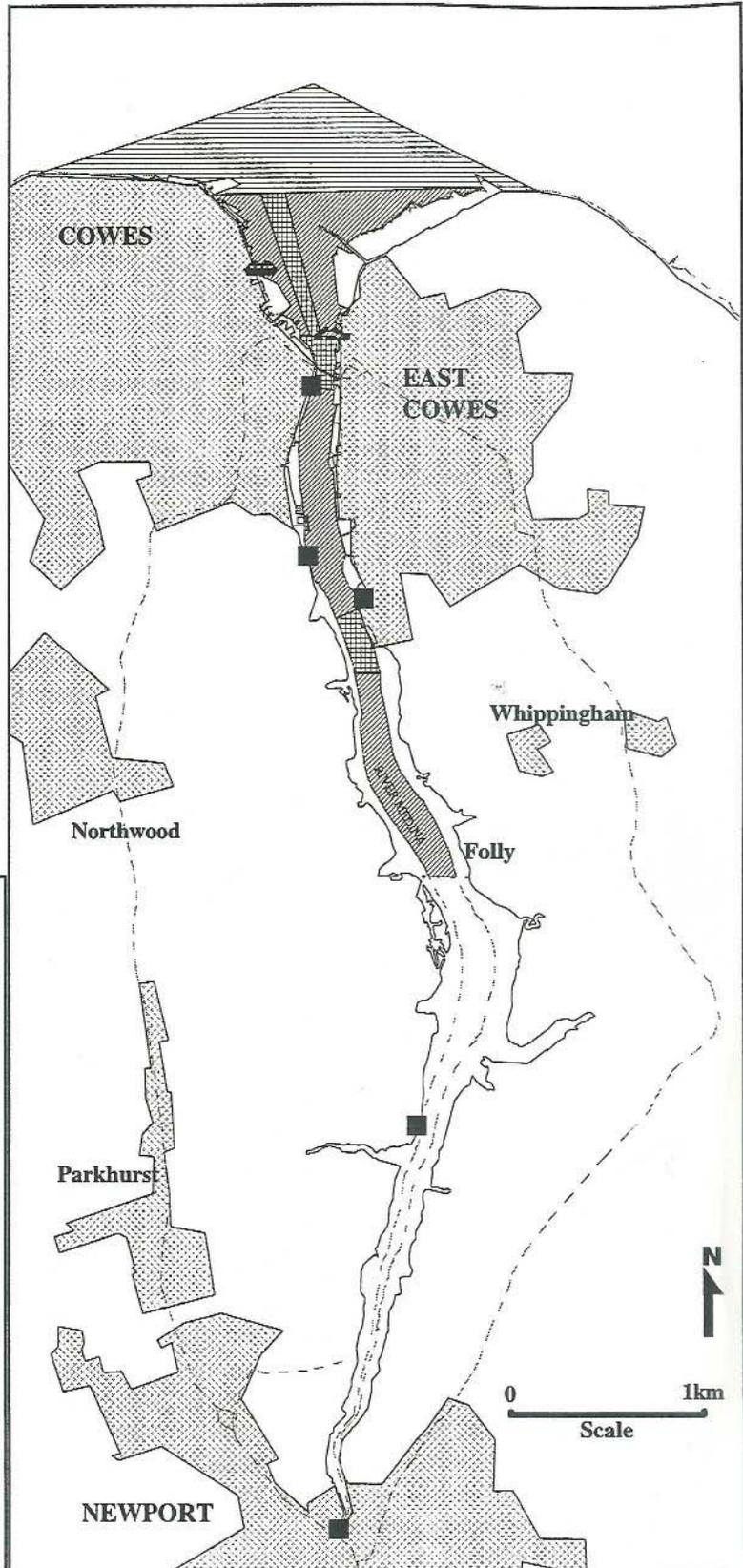
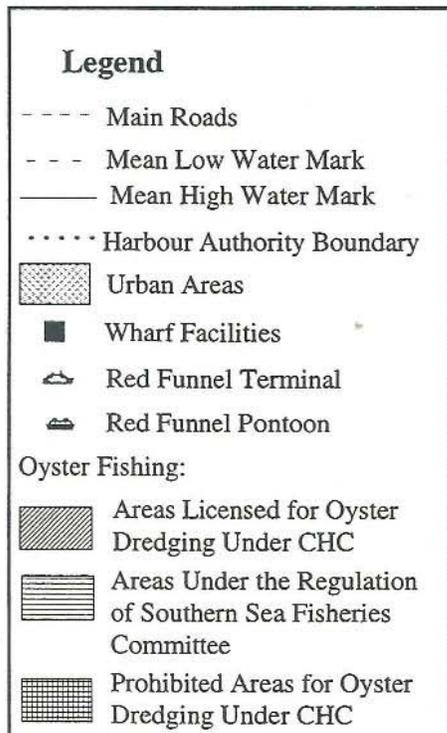
Objective C5
To improve the tourism resource and actively promote tourism.

2.2.2.5 Conflict between commercial activities and recreational use

Conflict between commercial craft and recreation users of the water occurs along the length of the estuary but is primarily an issue of concern in Cowes Harbour during the main sailing season. CHC are in regular communication with clubs and organisations to examine ways to address this issue and have established radio communication between commercial craft and recreational users/organisations. The development of the eastern channel for use by commercial craft would also potentially reduce the conflict within the harbour.

Objective C6
To continue to develop strategies and the means of communication to ensure that conflict between commercial and recreational users is minimised.

Map 2: Commercial Use of the Medina Estuary



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2.2.3 COMMERCIAL AND ECONOMIC USE ACTION PLAN

Objective	Recommendations	Timescale	Partners	Cross References
<p>C1</p> <p>To identify the means to establish alternative commercial opportunities and attract new businesses to the area</p>	<ul style="list-style-type: none"> ➤ Promote the regeneration of Newport Harbour, subject to technical and environmental considerations. <p>Action: Under review by the NHA</p> <ul style="list-style-type: none"> ➤ Encourage commercial and recreational development in appropriate locations <p>Action: Currently being addressed through various projects (refer to ‘Future developments’ page 8)</p> <ul style="list-style-type: none"> ➤ Provide incentives for the establishment of new businesses <p>Action: Work with the Island Partnership</p>	<p>Ongoing</p> <p>Ongoing</p> <p>Medium</p>	<p>Commercial interests, Directorate of Environment Services, EA, EN, Island Partnership, NHA, BMIF, CHC, Directorate of Environment Services, EA, Island Partnership, NHA</p> <p>Central Government, CHC, EU, Island Partnership</p>	<p>A3, L1, NC1, NC2, NC4</p>
<p>C2</p> <p>To reserve, where appropriate, riverside land or areas of the harbour with adjacent deep water for river dependent activities</p>	<ul style="list-style-type: none"> ➤ Identify appropriate sites for potential estuarine commercial activities taking into consideration other suitable land uses <p>Action: Planning Policy</p>	<p>Short/Medium</p>	<p>EA, Planning Dept. - IWC</p>	<p>A3, L1, NC1, NC2, NC4</p>
<p>C3</p> <p>To maintain access channels and wharves, subject to technical and environmental considerations</p>	<ul style="list-style-type: none"> ➤ Areas of the Medina should be dredged as necessary in order to maintain channels, in full consultation with all relevant organisations <p>Action: Addressed through harbour maintenance programmes</p> <ul style="list-style-type: none"> ➤ All new dredging proposals should be preceded by an environmental statement in accordance with legislation <p>Action: Conduct research to identify the cumulative effects of dredging on the estuary. Work with EN on Solent Dredging Study (see section 2.6)</p>	<p>Ongoing</p> <p>Ongoing</p>	<p>Commercial interests, NHA, CHC, dredging companies, EA, EN, IWC, NHA</p> <p>Commercial interests, NHA, CHC, dredging companies, EA, EN</p>	<p>HC1, HC2, NC4, P1</p> <p>NC4</p>

Objective	Recommendations	Timescale	Partners	Cross References
C4 To investigate the feasibility of providing landing and storage facilities for the commercial fishermen registered at Cowes	<ul style="list-style-type: none"> ➤ Investigate the feasibility of providing onshore facilities for commercial fishermen <p>Action: Estuaries Officer to investigate the need</p>	Short/Medium	Commercial Fishermen, CHC , IWC, IWCFA, MROC, SSFC	
C5 To improve the tourism resource and actively promote tourism	<ul style="list-style-type: none"> ➤ Improve facilities provision within the study area ➤ Consolidate tourism information about the area ➤ Promote the tourism resource of the estuary <p>Action: Ongoing through Tourism – IWC, however the integration of tourism with other issues within the estuary needs to be identified</p>	Medium/Long Short/Medium Medium/Long	Tourism – IWC , NHA and CHC Tourism – IWC , NHA and CHC Tourism – IWC , NHA and CHC	R3 HC3, PA1 PA1
C6 To continue to develop strategies and the means of communication to ensure that conflict between commercial and recreational users is minimised	<ul style="list-style-type: none"> ➤ Promote the development of the various proposals subject to environmental considerations <p>Action: Planning policy</p> <ul style="list-style-type: none"> ➤ Co-ordinated management between CHC and recreation organisations should continue <p>Action: Ongoing through the employment of the EO</p> <ul style="list-style-type: none"> ➤ Develop a code of practice for recreational activities, to create awareness about the areas used by commercial craft and general safety <p>Action: Communicate with recreational and commercial topic groups and harbour authorities to develop a voluntary code of practice.</p> <p>Overall Action: Work towards producing a Recreation Strategy</p>	Ongoing Ongoing Short/Medium	CHC, Planning Dept. – IWC , NHA CHC , Recreation Clubs, RYA, Training Centres Estuaries Officer , CHC, IWC, NHA, Recreation Clubs, RYA, Training Centres	NC1, NC3 R4, PA2 R4, PA2

Key to Timescales:
Short: within 2 years Medium: within 5 years Long: within 10 years

2.3.0 Fisheries

2.3.1 Background

The Medina Estuary and Solent support a number of fish populations which sustain a locally important commercial fishery. The main commercial fishing activity which occurs in the estuary is the dredging of oysters in the northern section of the estuary (see Map 2).

Oyster fishery: The native oyster fishery in the River Medina dates back to post-Roman times. It peaked in the late 19th century and became a public fishery in 1897 with the introduction of the Cowes Harbour Act. By the end of the 1920s, the oyster stocks in Cowes had died, a phenomenon which also took place in the wider Solent. Commercial oyster fishing did not recommence until the beginning of 1980. In August 1996, the River Medina Oyster Company Ltd was established to provide a framework for the management of the oyster fishery within the estuary. Consequently, the navigational licence required for oyster dredging from CHC is issued to the company rather than the individual fishermen.

Recreational fishery: The Medina is a popular recreational fishing location for club competitions. Anglers principally fish for flounder, mullet and bass. Objectives and recommendations relevant to recreational angling are listed in the Recreation and Leisure section (2.8)

Regulation: The principal bodies involved in the regulation of the fisheries within the estuary and wider Solent area are Cowes Harbour Commissioners (CHC), the Ministry of Agriculture, Fisheries and Food (MAFF), Southern Sea Fisheries Committee (SSFC), the Environment Agency (EA) and the Isle of Wight Council (IWC). The Medina River Oyster Company Ltd are required to obtain a Cowes Harbour Oyster Dredging Licence from CHC which limits oyster dredging to times when navigational conflict within the harbour will not occur and to members of the company. Commercial fishing within the Solent (not including the Medina Estuary) is the responsibility of the SSFC whose administrative boundary adjoins CHC jurisdiction. All vessels involved with fishing for the purpose of sale must

be registered with the SSFC which regulates inshore fishing through the implementation of byelaws to deal with local problems and management requirements. MAFF is responsible for the implementation of national legislation and European legislation and directives. The EA is responsible for regulating freshwater fisheries and the IWC is responsible for sampling oysters and enforcing food safety legislation.

2.3.2 Issues

2.3.2.1 Improvement in the oyster fishery

The requirements for the production of shellfish are set out in the Food Safety (Live Bivalve Mollusc and Other Shellfish) Regulations 1992, as part of the requirements laid down by an EU Directive. This includes the requirement for the classification of shellfish harvesting areas in Europe and divides areas into one of four classifications:

- A - Molluscs can be harvested for direct human consumption;
- B - Molluscs can go for human consumption after purification in an approved plant or after relaying in an approved area or after an EU approved heat treatment process;
- C - Molluscs can go for human consumption only after being relaid for at least two months in an approved relaying area, whether or not combined with purification, or after an approved EU heat treatment process; and
- D - Molluscs must not go for human consumption.

The oysters of the Medina are graded as category C (1998) which requires the shellfish to be relaid for at least two months prior to purification.

Local fishing interests are of the opinion that an improvement in the classification of oysters from category C to category B would enable the potential of the oyster fishery to be fulfilled and would substantially increase the value of the catch due to the reduction in the time needed for the relaying of the oysters.

The Government have now set new targets for all shellfish waters. There will be additional funding to ensure that all sewage entering shellfish waters is treated to tertiary level. This will affect the Fairlee Sewage outfall, which currently receives secondary treatment, thus improving the Medina Oyster Fishery.

Objective F1
To improve the quality of the oyster fishery.

2.3.2.2 Knowledge of fisheries and fish populations

Information about fisheries is limited to the report 'Angling in the Medina Estuary' compiled by the National Federation of Sea Anglers (NFSA) and the annual review of angling published in 'Medina Valley Wildlife', an annual report produced by the Medina Valley Centre.

Objective F2
To expand the knowledge of fisheries and fish populations in the estuary.

Objectives and recommendations relevant to commercial fishing are also listed in the Commercial and Economic Use section (2.2).

2.3.3 FISHERIES ACTION PLAN

Objective	Recommendations	Timescale	Partners	Cross References
<p>F1 To improve the quality of the oyster fishery</p>	<ul style="list-style-type: none"> ➤ Continue to improve water quality towards the long term objective of achieving a grade B classification of the oyster fisheries within the estuary Action: Encourage SW to upgrade Fairlee in line with Government Policy ➤ Identify any change in the quality of shellfish and indicate appropriate action Action: EO to liaise with IWC Environmental Health Officers ➤ Identify and examine the feasibility of methods to improve the productivity of the oyster fishery Action: EO to maintain a watching brief on the oyster fishery, and monitoring of shellfish and shellfish waters 	<p>Long</p> <p>Ongoing</p> <p>Short / Medium</p>	<p>EA, IWC, SW</p> <p>Environmental Health - IWC, EA, MROC</p> <p>CHC, MROC, SSFC</p>	<p>W1, W2</p> <p>NC6</p>
<p>F2 To expand the knowledge of fisheries and fish populations in the estuary</p>	<ul style="list-style-type: none"> ➤ To collate information about fish catches and stocks Action: Encourage the collection of information about fish catches and stocks ➤ To promote further research into the trends in resident fish populations Action: EO to identify the possibilities of further research 	<p>Short / Medium</p> <p>Medium / Long</p>	<p>Commercial Fishermen, EA, MVC, NFSA, SSFC</p> <p>EA, MAFF</p>	<p>RM1</p> <p>RM1</p>
<p>Key to Timescales: Short: within 2 years Medium: within 5 years Long: within 10 years</p>				

2.4.0 Historical and Cultural Resources

2.4.1 Background

The River Medina and its adjacent urban and countryside areas are rich in sites of historical and cultural value. This diverse resource includes both buried archaeological materials and upstanding structural remains. Sites and archaeological finds of importance are recorded in the County Sites and Monuments Record (SMR) of which there are 247 records within the MEMP study area, dating back to prehistoric times. Urban areas of special architectural and historic interest are designated as conservation areas. Only one conservation area exists within the study area, in Cowes, although the Newport conservation area adjoins at the extreme south.

The historic and cultural resource includes:

- the archaeological resource;
- palaeo-environmental resource;
- remains and historical information pertaining to change in the urban, commercial and industrial use of the estuary; and
- military installations.

2.4.1.1 Archaeological resource

Marine archaeology: The bed of the estuary offers important archaeological and palaeo-environmental evidence relevant to the understanding of the long-term timetable of sea level rise, coastal change and past uses of the estuary. Minimal investigation into marine archaeology has occurred to date.

Intertidal archaeology: The intertidal zone comprises the area between the levels of high and low water which is subjected repeatedly to periods of exposure and submergence. Evidence of prehistoric occupation is to be found on submerged land surfaces in the estuary's intertidal zone. These are subject to threat from both erosion and bait-digging. The occurrence of archaeological material in this area is often directly associated with its former exploitation, settlement or the loss of artefacts during landings and unloading. Numerous hulks survive in this zone, including the Cowes ketch 'Bee'. Other finds include evidence of post-medieval maritime industrial activities, and a wealth of remains

associated with the wharfage of vessels and shipbuilding.

Terrestrial archaeology: Archaeological material has also been found within the dry land area of the MEMP study area. Evidence suggests that the estuary has been occupied since Palaeolithic times. Other finds include evidence of Neolithic settlement, Bronze Age tools, Roman artefacts and medieval and post-medieval features including defence sites.

During 1999 the County Archaeology Service in collaboration with English Heritage carried out an archaeological audit of the intertidal zone and coastal fringe. This survey significantly increased the number of sites of all periods recorded in the Medina Estuary.

Hearths believed to be of prehistoric date were found in the intertidal zone and the face of the low, eroding riverbanks, where they were often associated with palaeo-environmental material. Numerous intertidal post alignments of unknown date were observed. Evidence of post medieval salterns and oyster beds were recorded, and industrial sites including shipyards, ropewalks, sea plane factories, watermills and brickworks were noted. Twenty hulks were recorded in the intertidal zone. Sites associated with recreation and tourism, including promenades, drinking fountains and piers were also found within the MEMP study area.

2.4.1.2 Palaeo-environmental resource

The estuary has a deep deposit of sediments which can be studied to provide an understanding of environmental change. Organic material, including plant and insect remains which are preserved within sediments provide important indications of the nature, scale and pace of coastal change. The sediments in the Medina Estuary, both marine and terrestrial, represent an invaluable component of the resource and should not be disturbed without due evaluation of their scientific value.

2.4.1.3 The historic urban, commercial and industrial resource

Settlements: The 'old world' character and charm of Cowes and Newport is an important heritage resource for the Island. Newport, the capital of the Island, was named after the town received a charter from Richard de Redvers during the reign of Henry II. East and West Cowes are settlements which take their name from the offshore anchorage formerly known as 'Cowe'. Cowes is a community which grew around the Tudor Castle or shore-fort which now lies on the site occupied by the Royal Yacht Squadron. At East Cowes a somewhat similar settlement first grew south of a Tudor blockhouse which complemented the role of Cowes Castle. Unlike, Cowes, this settlement has few buildings pre-dating the 19th century.

Maritime History: The River Medina has been recognised as an important waterway for access to the Island for centuries and has an extensive maritime history. The Medina Estuary has been a natural focus for the construction and repair of ships, due to its proximity to the sheltered waters of the Solent, where for centuries commercial and military vessels alike have congregated. Shipbuilding and repair were the mainstay industries in East Cowes through the 16th to 18th centuries and were crucial to the area's industrial development and commercial success. A number of structures remain as testimony to the shipbuilding heritage. These include: engineering sheds; slipways; dry docks; and ropewalks.

Cowes also supported the development of an aero industry of national significance. The area was central in the development of sea planes and flying boats. In addition, Cowes has been the focus of hovercraft development and production although these activities have declined in recent years.

Commercial Trade: Commercial trade occurred in the area as early as the 17th century. A small proportion of the stone built quays, wharves and warehouses remain. Brick vaults have been discovered under the waterfront at Cowes. Such sites are typical of the infrastructure required for the operation of a busy Post-Medieval port. It is likely that similar features remain undiscovered or misidentified in Newport and Cowes Harbour.

2.4.1.4 Military installations

In the past the defence of the Medina Estuary was an important military objective as the estuary provided a route into the centre of the Island for any invading force. To command the mouth of the Estuary Henry VIII had two castles constructed, one at East Cowes and one at Cowes.

Other historic features include:

- the remains of East Medina Tide Mill Pond;
- the remains of Medina Cement Works;
- the harbour at Newport, including the hand crane with parasol top on Seaclose Quay and the swing bridge at New Quay.
- the floating bridge; and
- the disused railway line linking Cowes and Newport, complete with viaduct

Regulation: The Isle of Wight's County Archaeology Service ensure that historical and archaeological interests are safeguarded through compliance with: Planning Policy Guidance from Central Government on Archaeology and Planning (PPG 16) and Coastal Planning (PPP 20); South East Regional Planning Conference (SERPLAN) policy guidance (1993); and the guiding principles set out in 'A Statement on England's Coastal Heritage' by English Heritage (EH). The unit provides a continuing overview of the archaeology within the estuary and should be consulted in relation to all proposals and activities which pose a potential threat to the known and concealed resource. In addition, regulation is provided by the Harbour Authorities who are required to ensure that developments under their control, which are likely to have significant environmental impacts, are subject to environmental assessment before consent is given.

2.4.2 Issues

2.4.2.1 Safeguarding the cultural heritage

The archaeological resource is concealed within the subtidal, intertidal and terrestrial zone of the estuary. The resource needs to be safeguarded, as it is scientifically valuable, vulnerable and non-renewable.

Estuary users may find or damage historic

structures and artefacts. In particular, dredging for oysters or digging for bait could result in the discovery or damage these items. It is important that awareness levels of important archaeological sites are raised in order to promote their sensitive use and the recording of finds.

Objective HC1
To safeguard the cultural resource.

2.4.2.2 Knowledge about the historical and cultural resource

Knowledge about the estuary's historic and cultural resource is fragmentary. Following the County Archaeology Service's coastal audit, collation of information and more detailed survey work is required.

Objective HC2
To promote survey, research and integrate historic information and data to achieve a thorough understanding of the historical and archaeological interest of the estuary.

2.4.2.3 Awareness, education and interpretation

The estuary possesses a wealth of heritage in a variety of forms. However, much of it is not accessible due to a lack of premises and resources for information and the display of artefacts. Due to the limited promotion of the resource, awareness and appreciation of the resource is limited. Public awareness of the resource is important to ensure its long term protection and preservation.

Objective HC3
To promote a better understanding of the man made heritage resource.

2.4.3 HISTORICAL AND CULTURAL RESOURCE ACTION PLAN

Objective	Recommendations	Timescale	Partners	Cross References
<p>HC1 To safeguard the cultural resource</p>	<ul style="list-style-type: none"> ➤ Preserve the archaeological resource in situ Action: Ongoing through IWC Archaeology Service ➤ Any decisions concerning activities which may impact the archaeological resource should consider best available archaeological information Action: Ongoing through planning policy ➤ Improve awareness between estuary users and operations about sensitive archaeological sites and the Sites and Monument Record Action: Identify means for interpretation, e.g. estuary leaflet / interpretation boards 	<p>Ongoing</p> <p>Ongoing</p> <p>Short/Medium</p>	<p>CHC, Archaeology Service - IWC, NHA CHC, Planning Dept. - IWC., NHA</p> <p>Archaeology Service - IWC</p>	<p>C3, R1</p> <p>HC2, PA1</p>
<p>HC2 To promote survey, research and integrate historic information and data to achieve a thorough understanding of the historical and archaeological interest of the estuary</p>	<ul style="list-style-type: none"> ➤ Identify a means for collating historical and cultural information and improve the integrated recording of the different types of information Action: Ongoing by the IWC Archaeology Service ➤ Identify mechanisms to achieve further survey work Action: EO to work with the IWC Archaeology Service ➤ Improve liaison between oyster fishermen and dredging operators to ensure that all archaeological finds are recorded Action: Raise awareness of Joint Nautical Archaeological Policy Committee Voluntary Code of Conduct between archaeological and dredging operators ➤ Introduce watching briefs for dredging operations which are carried out in new or sensitive areas Action: To be arranged by the Estuaries Officer and IWC Archaeology Service 	<p>Short</p> <p>Medium</p> <p>Short</p> <p>Short</p>	<p>Archaeology Service - IWC</p> <p>EH, HWTMA, Archaeology Service - IWC CHC, dredging companies, Archaeology Service - IWC, NHA, MROC</p> <p>CHC, dredging companies, Archaeology Service - IWC, NHA</p>	<p>RM1</p> <p>HC1, PA1</p> <p>C3</p>

Objective	Recommendations	Timescale	Partners	Cross References
<p>HC3 To promote a better understanding of the man made heritage resource</p>	<ul style="list-style-type: none"> ➤ Production of interpretative publications, heritage trails and educational information to identify and explain the attributes of the heritage resource Action: EO to liaise with IWC Archaeology Service to identify further interpretation needs. Also identify means for integrating other issues with this interpretation ➤ Provision for the conservation and storage of heritage materials within the museum framework to ensure long term preservation and accessibility of the resource for educational and leisure purposes Action: Ongoing through the IWC Archaeology Service ➤ Interpretation of selected key historical sites Action: Identify means for interpretation, e.g. estuary leaflet / interpretation boards 	<p>Medium</p> <p>Ongoing</p> <p>Medium</p>	<p>IWC Archaeology Service, IWS, IAG</p> <p>EH, IWC Archaeology Service</p> <p>EH, IWC Archaeology Service, IWS, IAG</p>	<p>C5, PA1</p> <p>C5, PA1</p> <p>C5, PA1</p>

Key to Timescales:
Short: within 2 years Medium: within 5 years Long: within 10 years

2.5.0 Landscape

2.5.1 Background

The Medina Estuary is predominantly a rural estuary with the urban areas of Cowes and Newport at its northern and southern extremes. The rural landscape is characterised by a wide shallow valley comprising gently sloping pasture and arable farmland, pockets of woodland with saltmarsh and intertidal mudflats at the land/water interface. A dominant feature of the landscape is the visual change caused by the tidal cycle. Table 2 outlines the distinctive features which characterise the landscape of the estuary. The locations of the key features are illustrated in Map 3.

2.5.2 Issues

2.5.2.1 Development and visual quality

Development adjacent to the estuary has occurred primarily at the urban fringes of Cowes and Newport but includes sites in other areas, for example: the Saro Works and Stag Lane sites. While the functions of the estuary necessitate

urban/industrial development, landscape improvements to these sites would greatly improve its visual appearance. In addition, any redevelopment or new development should respect the estuarine setting, aim to complement the landscape and have minimal impact upon it.

Objective L1
To maintain and enhance the estuarine landscape.

The open rural landscape of the estuary is an essential landscape feature of the estuary which is of important amenity and ecological value.

Objective L2
To preserve and enhance the open rural landscape.

Table 2 : Landscape features of the Medina Estuary

Landscape Features	Characteristics
• agriculture	➤ arable and pasture
• intertidal mudflats	➤ deposits of fine silt, organic matter, gravel and shells
• grassland	➤ improved and unimproved grassland used for agriculture or recreation
• saltmarsh	➤ fragments of previously more extensive saltmarsh
• woodland and scrub	➤ mixed deciduous woodland and scrub fringe much of the shoreline
• historical and urban	➤ Newport Quay warehouses and wharfage, Cowes Harbour early post-medieval shipbuilding and repair industries including engineering sheds, slipways, dry docks, cranes and rope walks
• derelict and waste land	➤ including the old cement works and disused waste tips

Poor maintenance of the estuary results in negative impacts on the estuary landscape. Neglected or patched up defences, litter and poorly maintained structures all have a negative effect on visual quality.

Objective L3
To promote a high standard of maintenance of the estuary landscape.

2.5.2.2 Landscape Awareness

The environment and composite features of the estuary is used by, and is of interest to, a wide range of people including local communities, recreational users, industry, local authorities and local groups. There is a need to ensure that all parties are aware of the amenity value of the estuary and the options available for its conservation and enhancement.

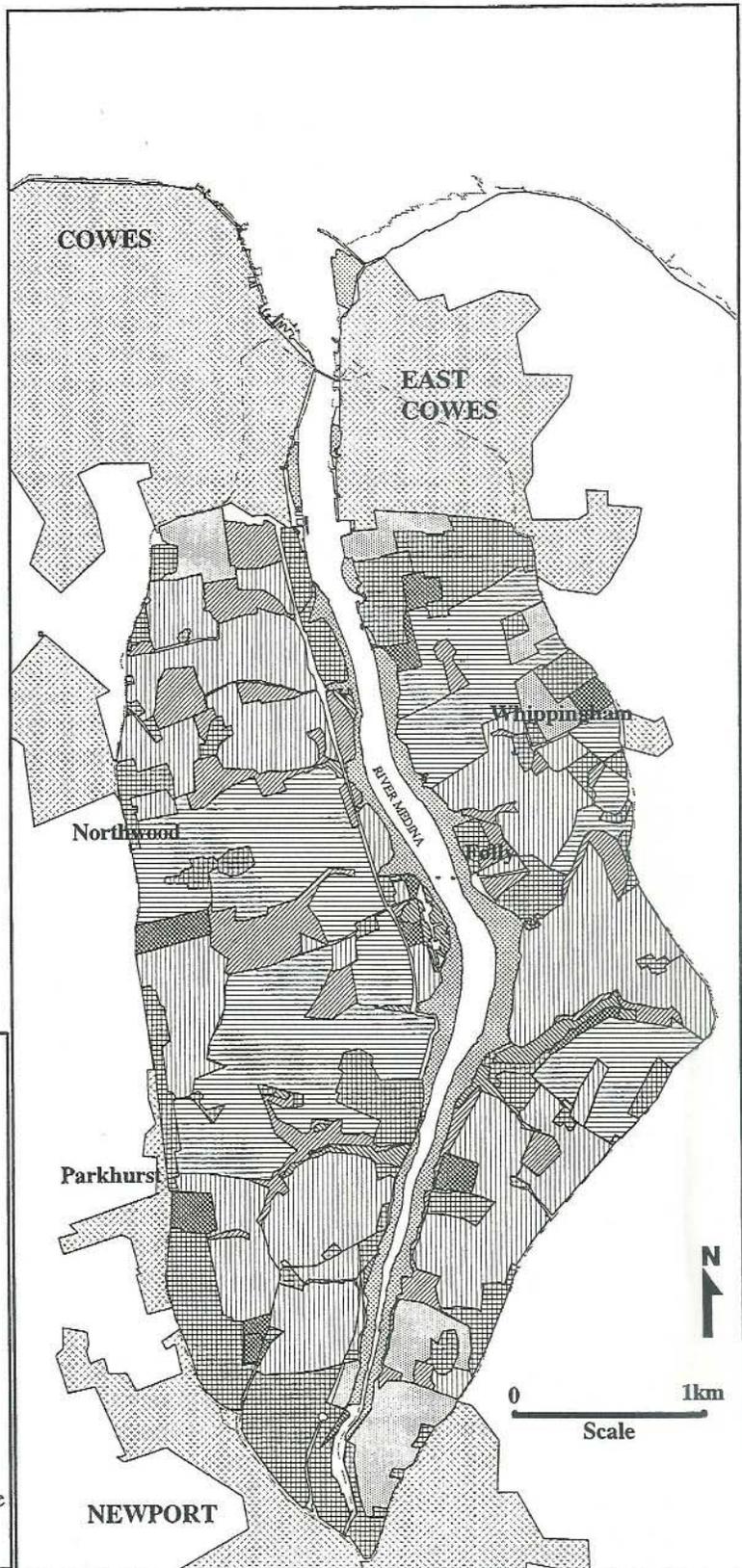
Objective L4
To promote enjoyment, awareness and understanding of the estuary landscape.

Map 3: Landscape Features

Legend

- - - - Main Roads
- - - - Mean Low Water Mark
- Mean High Water Mark
- · · · Harbour Authority Boundary

	Arable (Orchards & Set-aside)
	Intertidal Mudflats
	Grass
	Tended Open Space
	Wetland & Marshes
	Woodland
	Industrial, Commercial & Urban Use
	Unused, Derelict or Waste land



Based on Marston, 1996.

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2.5.3 LANDSCAPE ACTION PLAN

Objective	Recommendations	Timescale	Partners	Cross References
L1 To maintain and enhance the estuarine landscape	<ul style="list-style-type: none"> ➤ Development on the urban fringe should aim to minimise visual landscape impact Action: Ongoing through planning policy ➤ Encourage the preparation of an estuary wide landscape strategy Action: To be addressed by the IWC Countryside Section ➤ Identify key areas for targeting landscape enhancement measures Action: To be addressed by the IWC Countryside Section 	<p>Ongoing</p> <p>Medium/Long</p> <p>Short/Medium</p>	<p>Developers, Farmers and Landowners, Planning Dept. IWC</p> <p>Commerce and Industry, CA, CPRE, Farmers and Landowners, Countryside Section- IWC, MAFF</p> <p>Commerce and Industry, CA, CPRE, Farmers and Landowners, Countryside Section- IWC, MAFF</p>	<p>C1, C2, NC2</p> <p>NC2</p> <p>NC2</p>
L2 To preserve and enhance the open rural landscape	<ul style="list-style-type: none"> ➤ Where possible, protect and enhance the open landscape to maximise its landscape and amenity value Action: Ongoing through planning policy 	<p>Ongoing</p>	<p>CA, CPRE, Farmers and Landowners, Countryside Section - IWC, Local Groups, MAFF</p>	<p>NC1, NC3, NC4</p>
L3 To promote a high standard of maintenance of the estuary landscape	<ul style="list-style-type: none"> ➤ Encourage removal of litter and debris from the estuary and foreshore Action: To be addresses by the EO ➤ Encourage high standards of buildings and defences along the estuary Action: Existing Policy within flood, coastal defence and planning policy 	<p>Short</p> <p>Short/ Ongoing</p>	<p>Farmers and Landowners, Coastal Management and Countryside Section - IWC, Local Groups, MMA</p> <p>EA, Farmers and Landowners, IW Centre for the Coastal Environment / Planning Dept. - IWC</p>	<p>C1, C2, P2</p>

<p>L4 To promote enjoyment, awareness and understanding of the estuary</p>	<p>➤ Actively promote the estuary landscape through the provision of interpretative facilities and literature Action: Ongoing through the Tourism and Harbour Authorities but this needs to be more targeted</p>	<p>Short/Medium</p>	<p>CA, CPRE, EN, EO, Tourism - IWC</p>	<p>PA1</p>
<p>Key to Timescales: Short: within 2 years Medium: within 5 years Long: within 10 years</p>				

2.6.0 Nature Conservation

2.6.1 Background

The Medina Estuary is a significant wildlife resource which supports a diverse and complex mosaic of habitats, which are of value in themselves, while supporting a wide range of species.

Subtidal: The estuary has one main channel which supports a variety of fish species and invertebrates. Knowledge about these species is limited.

Intertidal muds: This habitat is dependent on the continual deposition of sediment at a rate equal to that lost through erosion, dredging and rising sea levels. The intertidal muds extend along much of the length of the estuary and include large areas of mudflats and the shrape muds at East Cowes. The muds support a large number of species, including shellfish, algae and locally and regionally important species of worm, which are important sources of food for fish and bird populations. In addition, the intertidal muds of the shrape support an important area of eel-grass beds.

Saltmarsh: The saltmarsh habitat develops from continued deposition on to, and colonisation of the mudflats. It consists of a sea couch-grass zone which persists along much of the estuary and numerous saltmarsh fragments. The saltmarsh is an important habitat for breeding waders and is a high tide roost. In addition, seven nationally important species of plant have been recorded within this habitat.

Freshwater marsh: Two relatively small but important freshwater and brackish marshes exist inland from the western shore of the estuary at Dodnor and Lower St Cross. These habitats support stands of common reed, sedges and reedmace and are used by some waterfowl species as a high water roost. They support breeding bird populations. Dodnor Creek is important ecologically for its transition from fen vegetation through marginal scrub to ancient woodland and supports reedmace and sea club rush stands.

Scrub, hedgerows and woodland: Much of the shoreline is fringed by mixed deciduous woodland and scrub. Dicksons Copse supports at least 28 ancient woodland indicator species (those normally associated with woodlands more than 400 years old).

The nationally scarce narrow-leaved lungwort and a notable community of woodland ferns including hart's tongue and the soft shield fern can be found in the copse. Red squirrels and dormice, both protected species, are found in the woods and scrub bordering the estuary.

Grassland: Grassland within the valley is mainly grazed by cattle or managed for playing fields and amenity. It also includes a number of unimproved grassland sites including the Medina Valley Centre Nature Reserve and the Medina Riverside Park, at the southern end of the cycleway. Grassland habitats provide important breeding and feeding sites for birds and improved grassland can also be important as high tide wader roosts.

In total the estuary habitats provide important feeding, breeding and roosting grounds for birds. They support locally important numbers of oystercatchers, occasionally support nationally important numbers of black-tailed godwits and are an important component of the internationally important Solent estuarine system. Seasonally, the Medina regularly supports 19 species of wildfowl, 15 species of wader, 4 species of gull and 2 of tern (Marston, 1996). A steady increase in the populations of waders and waterfowl have been recorded since the 1970s. Map 6 illustrates the areas of the estuary used by the waterbirds for feeding, breeding and roosting.

The importance of the nature conservation resource is reflected by the various tiers of designation at an international, national and local level.

- The importance of the Medina Estuary, within the wider Solent estuarine system, both for bird life and habitats is reflected in the three **international** designations for the area: the Solent and Southampton Water Special Protection Area (SPA); the candidate Solent Maritime Special Area of Conservation (cSAC); and the Solent and Southampton Water Ramsar Site.
- At a **national** level, a large proportion of the Estuary is designated as a Site of Special

Scientific Interest (SSSI).

- At a **local** level, the designation of Sites of Importance for Nature Conservation (SINC) and Dodnor Local Nature Reserve (LNR) indicate conservation significance at the County level.

The extent of each of these designations within the Medina Estuary is illustrated on Maps 4 and 5.

Regulation: The bodies with a responsibility for protecting the nature conservation resource include, English Nature (EN), Isle of Wight Council and the Environment Agency (EA). Cowes Harbour Commission (CHC) are empowered to issue works licenses and therefore have a duty of care to the environment taking into consideration the Habitats Directive. EN is the government body responsible for nature conservation in England. It has a duty to identify nationally and internationally important sites for nature conservation, to advise on appropriate management to ensure the protection of habitats and species and to ensure that national and international obligations are met. Consultation with EN is required for any proposal which may affect, directly or indirectly, areas designated as SSSI, SPA, Ramsar and cSAC. Sites of Importance for Nature Conservation and Local Nature Reserves are identified by the Isle of Wight Council. The Isle of Wight Council as Planning Authority protect the natural resource through their policy and development control functions. The EA has a duty to further or have regard to the conservation of flora, fauna, geological and physical features of special interest whilst carrying out its own function.

2.6.2 Issues

2.6.2.1 Development

Development may involve direct or indirect impacts on the nature conservation resource. Direct impacts may occur due to habitat loss caused by development or the creation of new habitats. This may result in a reduction of habitat area, species populations and species diversity. Indirect impacts of development may occur due to disturbance, pollution, habitat fragmentation and modification of the sediment patterns of accretion and erosion.

Objective NC1
To minimise the adverse impact of development on the nature conservation resource.

Objective NC2
To maximise opportunities to conserve and enhance the nature conservation resource.

2.6.2.2 Protection of Designated Areas

National and international nature conservation designations are supported by national and international legislation to ensure that the sites are safeguarded. The full implications associated with national and international designations need to be more widely communicated to estuary users.

Objective NC3
To ensure that appropriate protection is given to designated areas of the estuary

2.6.2.3 Disturbance to habitats and wildlife

All activities which occur within the Medina Estuary cause a degree of disturbance to wildlife and the nature conservation resource. Activities of primary concern are: angling, bait digging, dog walking, capital and maintenance dredging, land-use change; walking; and water based recreation.

- Angling, bait digging, dog walking and walkers disturb breeding, feeding and roosting birds. Individuals straying from public rights of way may cause disturbance in areas which are important habitats.
- Capital and maintenance dredging results in the removal of sediment and potential alteration to patterns of sediment transport and accretion which may influence the intertidal and saltmarsh habitats.
- Land use change may result in the loss of important feeding, roosting and breeding grounds for birds or the loss of important habitats or species.

The possible introduction of international conservation designations may require appropriate steps to avoid significant disturbance to certain birds species and habitats to be taken.

Objective NC4
To minimise disturbance to estuarine habitats and wildlife in recognition of international obligations.

2.6.2.4 Saltmarsh erosion

Saltmarsh erosion is occurring predominantly in the middle and upper reaches of the estuary. The habitat is an important roosting and breeding ground and is known to support seven nationally important species. Knowledge of the cause and rates of erosion is unknown and survey work and monitoring work is imperative to provide information.

A bid for funding under the EU LIFE Environment Programme for the 'Beneficial use of dredgings in intertidal recharge' is currently being prepared (1999-2000). This project will actively examine the beneficial use of dredgings for intertidal recharge and re-creation. This is a Solent-wide project which is a partnership between Chichester Harbour Conservancy, EA, EN, Hampshire County Council, IWC, New Forest District Council and SCOPAC (Standing Conference On Problems Associated with the Coastline).

Objective NC5
To monitor and conserve the saltmarsh habitat and where appropriate encourage opportunities for re-creation.

2.6.2.5 Pollution

Poor water quality or pollution incidents are likely to have a detrimental impact upon the nature conservation resource.

Objectives and recommendations relevant to water quality are listed in the Water Management section (2.9).

2.6.2.6 Information and data

Information and data concerning the nature conservation resource is not comprehensive and is held by a number of organisations and individuals.

Regular, co-ordinated information collection and analysis is required to ensure that comprehensive information about the resource exists. In addition, research and information is lacking about the interaction and impact of other activities on the resource. Areas which require research include:

- the impacts of bait digging;
- the impacts of shell fishing;
- saltmarsh erosion;
- methods for saltmarsh reclamation/ protection;
- effects and accumulative effects of dredging on habitats and wildlife in the estuary;
- the sub-tidal nature conservation resource; and
- current Tri Butyl Tin (TBT) levels and its ecological effects.

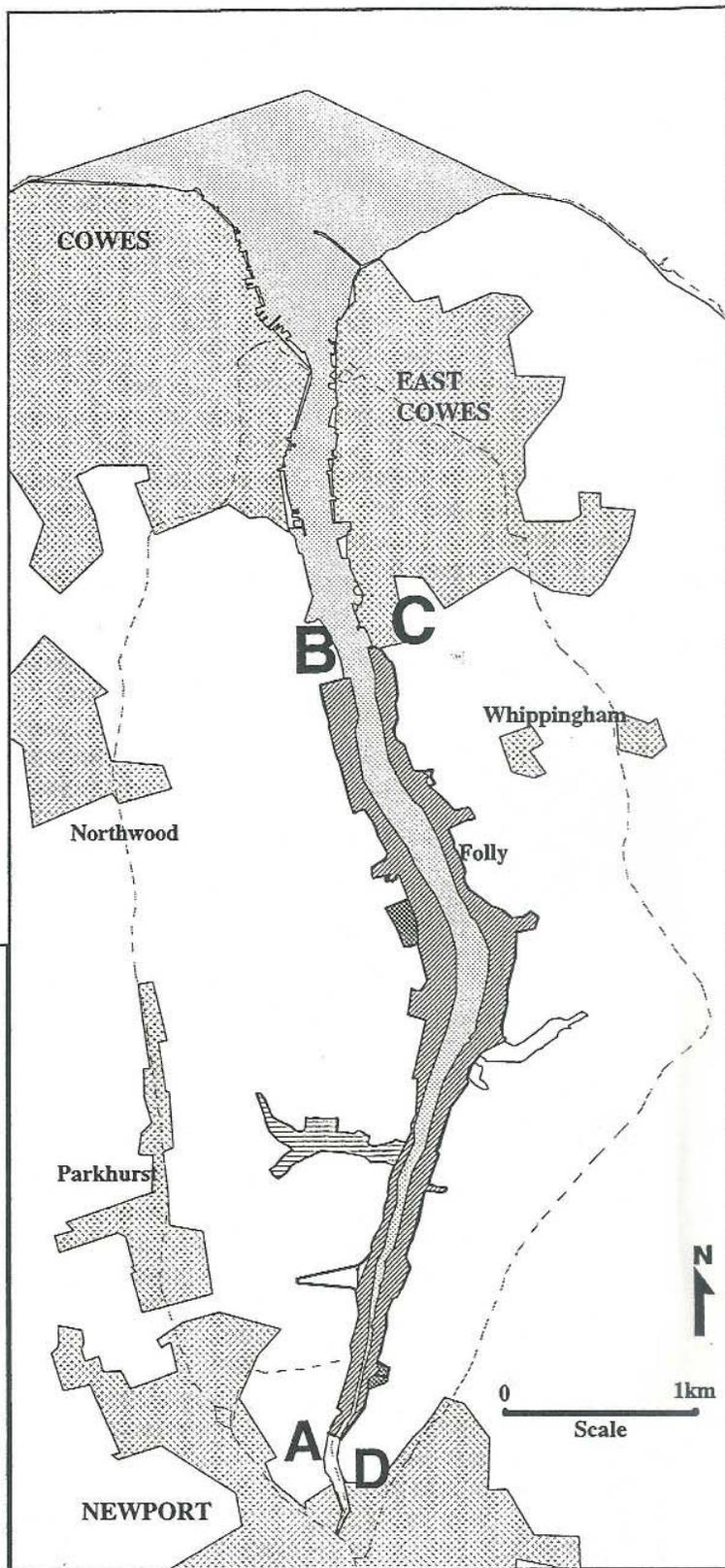
Another bid for funding under the EU LIFE Nature Programme was approved in 1999. Driven by EN and titled 'Living with the sea: Managing Natura 2000 Sites on Dynamic Coastlines' this will produce CHAMPS (Coastal Habitat Management Plans) which will provide 50 year strategies for the Management of coasts.

Objective NC6
To achieve co-ordinated, comprehensive information about the nature conservation resource.

Map 4: National & International Conservation Designations

Legend

- Main Roads
- - - Mean Low Water Mark
- Mean High Water Mark
- Harbour Authority Boundary
-  Urban Areas
-  Proposed SAC
-  Proposed SPA, SAC and proposed Ramsar Site
-  Proposed Ramsar Site
-  Area of SSSI excluded from proposed SAC
- SSSI Boundary follows Mean Low Water between A&B and C&D and is liable to change

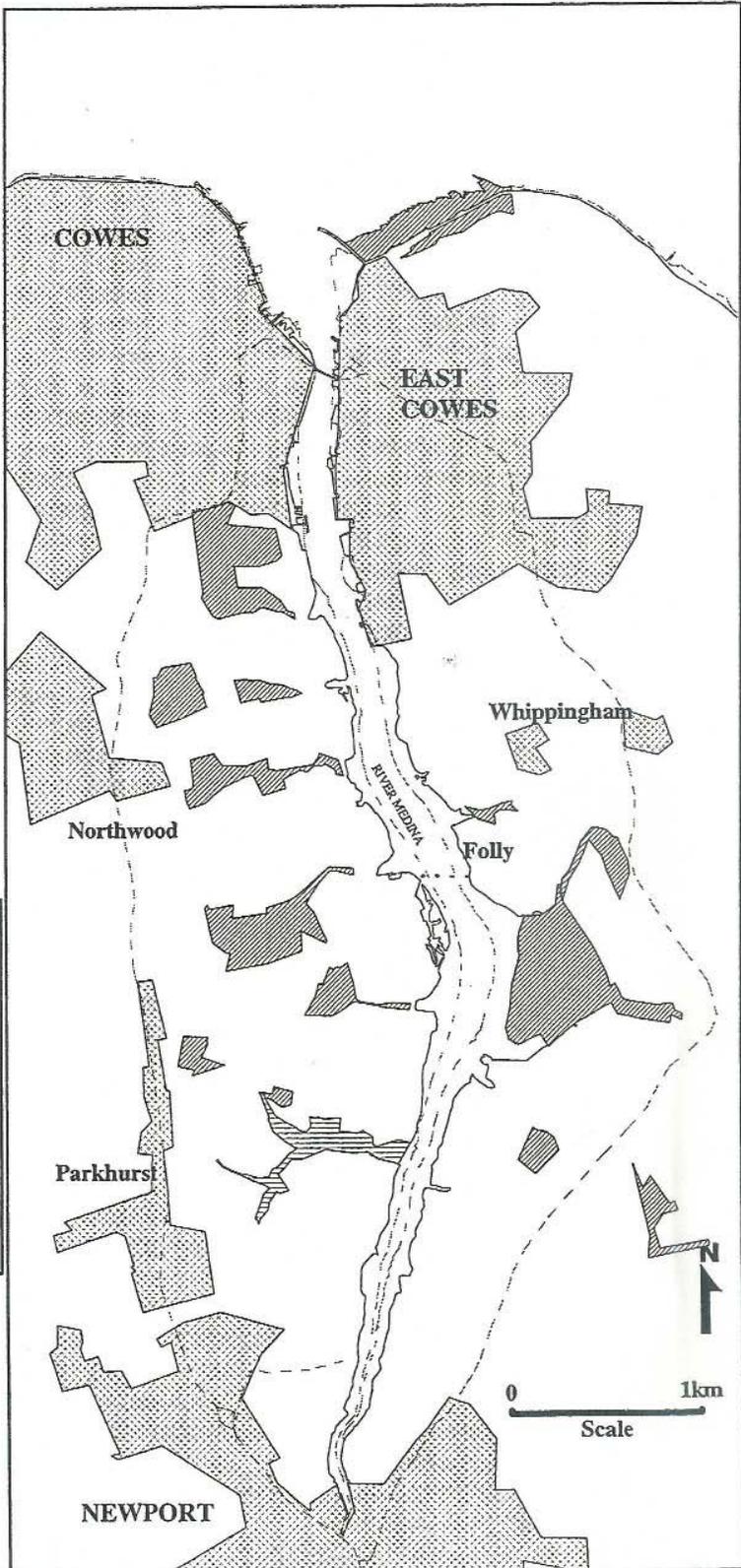


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Map 5: Local Nature Conservation Designations

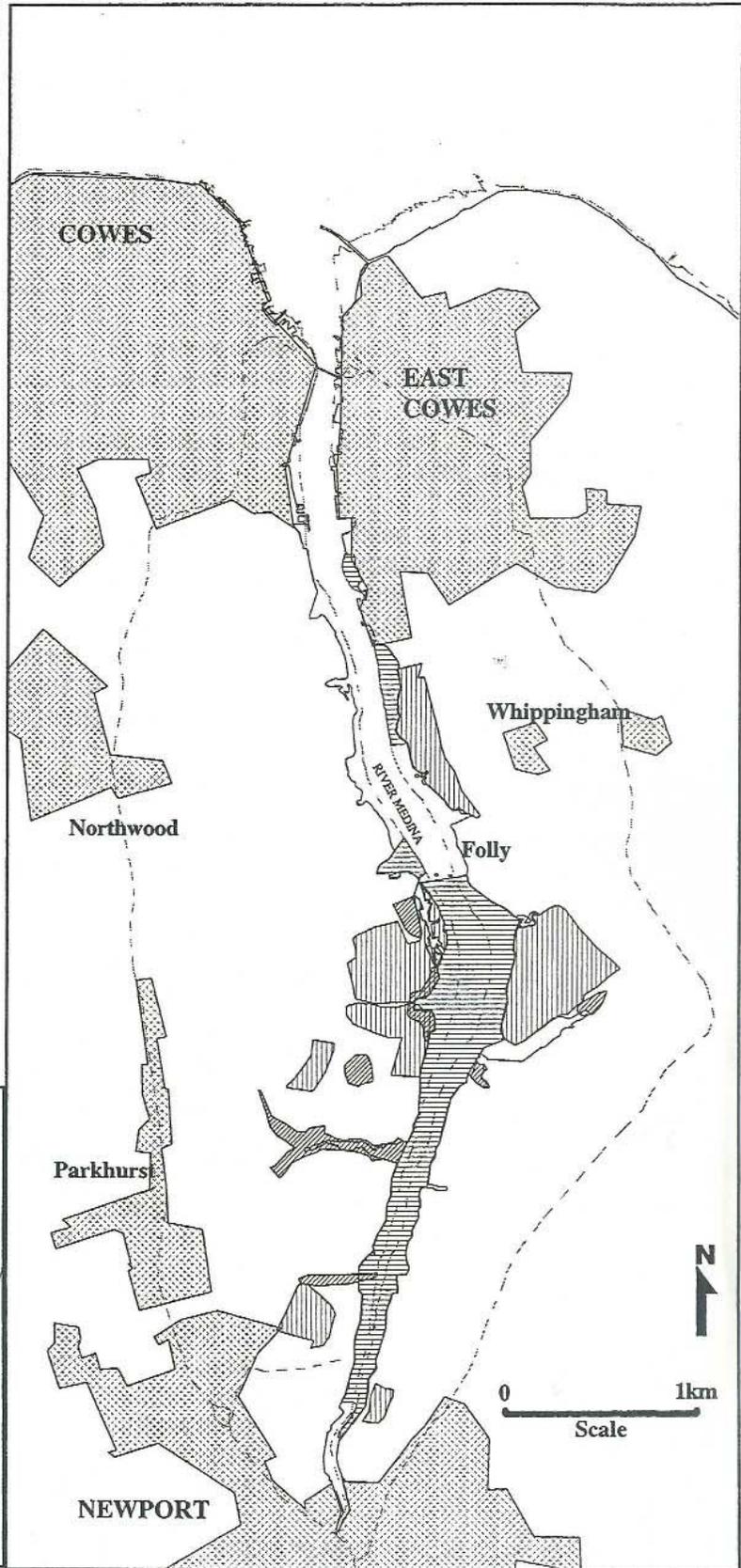
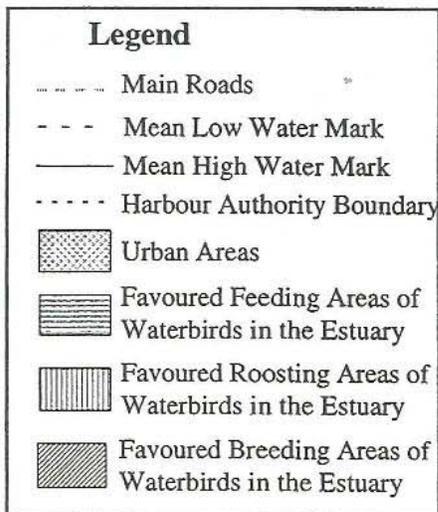
Legend

- Main Roads
- - - - - Mean Low Water Mark
- Mean High Water Mark
- Harbour Authority Boundary
-  Urban Areas
-  SINC's
-  Dodnor Local Nature Reserve



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Map 6: Areas of Importance for Birds



Based on Marston, 1996.

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2.6.3 NATURE CONSERVATION ACTION PLAN

Objective	Recommendations	Timescale	Partners	Cross References
<p>NC1</p> <p>To minimise the adverse impact of development on the nature conservation resource</p>	<ul style="list-style-type: none"> ➤ Avoid development which may damage irreplaceable wildlife and habitats ➤ Any new development should be encouraged to minimise their impact on the habitats and wildlife of the estuary ➤ Only developments which require a waterside location should be considered for location adjacent to the estuary ➤ Any new development should comply with Policy Guidance and the Habitats Regulations <p>Action: Liaison between the IWC Planning Dept., EA and EN should be encouraged <u>early</u> in the development of any proposal.</p>	<p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>	<p>EA, EN, Planning Dept. - IWC</p> <p>CHC, Developers, EA, EN, Planning Dept. - IWC</p> <p>Developers, EA, Planning Dept. - IWC</p> <p>Developers, EA, EN, Planning Dept. - IWC</p>	<p>C1, C2, L2</p> <p>C1, C2</p> <p>L2</p> <p>C1, C2</p>
<p>NC2</p> <p>To maximise opportunities to conserve and enhance the nature conservation resource</p>	<ul style="list-style-type: none"> ➤ Design guidelines for developers should include opportunities for wildlife enhancement ➤ Landowners and farmers should be informed of land uses and management which is of benefit to nature conservation <p>Action: Ongoing through Planning Policy</p> <p>Overall Action: Conduct research to learn more about the resource</p>	<p>Ongoing</p> <p>Ongoing</p>	<p>CA, EA, EN, Countryside Section IWC</p> <p>EA, EN, Farmers and landowners, Countryside Section IWC, NFU, MAFF</p>	<p>L1</p> <p>PA1</p>

Objective	Recommendations	Timescale	Partners	Cross References
<p>NC3</p> <p>To ensure that the appropriate protection is given to designated areas of the estuary</p>	<ul style="list-style-type: none"> ➤ Promote understanding of the duties and responsibilities of the estuary decision makers, managers and users relating to conservation designations and legislation ➤ Involve local people and organisations in the protection and conservation of important nature conservation areas ➤ Monitor the effectiveness of policies and designations <p>Action: Encourage further research and monitoring on the resource</p>	<p>Short</p> <p>Short/Medium</p>	<p>EA, EN, Planning Dept. - IWC</p> <p>EA, EN, Countryside Section - IWC, Local Community & Groups EA, EN, Countryside SectionIWC</p>	<p>L2, PA2</p> <p>PA1 RM2</p>
<p>NC4</p> <p>To minimise disturbance to estuarine habitats and wildlife in recognition of international obligations</p>	<ul style="list-style-type: none"> ➤ A methodology for monitoring the impacts of disturbance should be developed ➤ Users of the estuary should be informed of areas which are sensitive and areas which can be used without disturbing habitats and wildlife, via: <ul style="list-style-type: none"> • clubs and organisations; • interpretation; and • codes of practice. ➤ The development of foreshore frontages for mooring and the provision of additional access, either on the land or water, should be discouraged in sensitive locations ➤ Future land use changes should be reviewed to consider potential impacts on the resource ➤ A sustainable strategy for maintenance dredging within the estuary is required to avoid or minimise adverse impacts on the nature conservation resource and to identify the beneficial uses of dredging material <p>Action: Encourage further research and monitoring on the</p>	<p>Short</p> <p>Short</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>	<p>Countryside Section – IWC, CHC, EA, EN, MVC, NFSA, RA Countryside Section - IWC, EA, EN, Farmers and Landowners, Local Community, Local Groups</p> <p>CHC, Countryside Section – IWC, EA, EN, NHA</p> <p>Countryside Section – IWC, EN</p> <p>CHC, Countryside Section - IWC, EA, NHA</p>	<p>RM1</p> <p>A2, R4, PA2</p> <p>C1, L2, R1, R2</p> <p>C1, C2, L2</p> <p>C4, P1</p>

	resource			
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Objective	Recommendations	Timescale	Partners	Cross References
<p>NC5</p> <p>To monitor and conserve the saltmarsh habitat and where appropriate encourage opportunities for re-creation</p>	<ul style="list-style-type: none"> ➤ An investigation into areas currently subject to erosion and accretion should be completed ➤ The opportunities for saltmarsh re-creation and/or protection should be examined <p>Action: Collate all research and identify habitat change Encourage the development of the salt marsh LIFE project and involve the Medina where appropriate</p>	<p>Ongoing /Short</p> <p>Ongoing / Medium</p>	<p>EA, EN, HWWT, Countryside Section - IWC, IWNHAS, MVC Coastal management – IWC, EA, EN, HWWT, IWNHAS, MVC</p>	<p>P1, RM1</p> <p>L2, RM1</p>
<p>NC6</p> <p>To achieve co-ordinated, comprehensive information about the nature conservation resource</p>	<ul style="list-style-type: none"> ➤ To develop a co-ordinated data collection and monitoring system <p>Action: Ongoing by the Estuaries Officer</p> <ul style="list-style-type: none"> ➤ To complete survey work to provide a comprehensive database of the nature conservation resource <p>Action: Encourage further research</p> <ul style="list-style-type: none"> ➤ To carry out research into the impacts of activities on nature conservation <p>Action: Encourage further research</p>	<p>Ongoing</p> <p>Medium/Long</p> <p>Medium/Long</p>	<p>BTO, EN, HWWT, Countryside Section - IWC, IWOOG IWNHAS, MVC, NFSA, RA, RSPB</p> <p>EN, HWWT, Countryside Section - IWC, IWOOG IWNHAS, NFSA, MVC, RA, RSPB</p> <p>EN, HWWT, Countryside Section - IWC, IWOOG IWNHAS, NFSA, MVC, RA, RSPB</p>	<p>RM1</p> <p>RM1</p> <p>NC3, RM1</p>

Key to Timescales:
Short: within 2 years Medium: within 5 years Long: within 10 years

2.7.0 Physical Processes

2.7.1 Background

The Medina Estuary is the product of the flooding of a pre-existing narrow, and relatively deep, river-eroded valley caused by sea-level rise during the past 10,000 years, following the last glacial period. The estuary as we see it today has been formed by the physical processes associated with the coast, the hydrography and hydraulic regime of the estuary and surrounding areas and the associated sediment transport or accretion.

The estuary is tidal with the River Medina, which flows from St Catherine's Down, making a very small contribution to both water volume and sediment transport within the estuary. Cowes Harbour and the upper estuary are influenced by the high energy conditions which result from coastal waves, currents and the tidal regime, which declines rapidly inland. As hydraulic gradients weaken, sediment mobility diminishes and marine influences, in general, become weaker. As a result, over several millennia, there has been a net input of sediment into the estuary.

The hydraulic regime of the Medina Estuary may be regarded as substantially natural with local modifications due to waterfront development, the dredging of the main channel and the installation of protection structures.

Erosion: Erosion of the banks and saltmarshes adjacent to the estuary is variable, but is occurring predominantly within the middle and upper reaches of the estuary. Some sites are known to have been receding progressively since the 1940s. Preliminary examination of aerial photography indicate approximate losses of between 5 and 17 metres since the mid to late 1960s. The cause of the erosion is unknown and will require investigation to substantiate the cause.

Flooding: Flooding is of concern in the urban areas of Cowes, East Cowes and Newport. A recent assessment of the vulnerability of low lying areas of Cowes has determined that flooding is due to the combination of high tide levels and rapid run off

from steep slopes above the settlements. Flooding events in Newport are related to high tides.

Shoreline Protection: Shoreline protection in the estuary consists of concrete and timber walls, piers, quays and pontoons. Continuous defences exist within the urban areas and sections of the middle reaches are protected by defence structures. The main protection feature within Cowes Harbour is the breakwater which primarily reduces the input of sediment derived from the shrape mud and other sediment sources within the Solent and has contributed to the stable channel configurations within Cowes Harbour. A variety of options have been considered for improvements to the breakwater.

Dredging: Maintenance dredging is undertaken in Cowes and Newport Harbours by the Harbour Authorities for navigation purposes and amount to approximately 10,000 tonnes and 2,000 tonnes per annum respectively. Dredging of wharves and marinas also occurs depending upon need. The effects of dredging on the physical dynamics of the estuary require further research.

Regulation: Sea defence is the responsibility of the Environment Agency (EA) under the 1991 Land Drainage Act which empowers the EA to construct defences to protect low lying coastal land from flooding. The Isle of Wight Council is responsible for coastal protection under the 1949 Coastal Protection Act which empowers the Council to construct defences against erosion in consultation with all interested parties. Dredging is regulated by Cowes Harbour Commissioners (CHC) in CHC jurisdiction and by Isle of Wight Council in the jurisdiction of Newport Harbour.

2.7.2 Issues

2.7.2.1 Knowledge and understanding of the Physical Processes

Knowledge about the physical processes within the estuary is limited. Historically, data has been generated by specific and relatively short-term requirements. Longer-term co-ordinated monitoring of almost all aspects of the physical environment of the Medina is absent, making accurate description difficult and evaluation highly problematic. Requirements include the need for investigation into:

- suspended and bedload sediment transport within the estuary and along the adjacent coast;
- sediment budget;
- the tidal regime of the estuary;
- the impact of dredging;
- erosion; and
- sea level rise.

In 1999 ABP Research & Consultancy Ltd. commenced work to analyse the bathymetric changes in the River Medina. To be completed in March 2000 this study will improve the understanding of the ebb / flood dominance of the system and will aid decision making for dredging applications.

Further research in the estuary includes the possible support from 2 EU LIFE bids.

1. EU LIFE – Nature, ‘Living with the sea: Managing Natura 2000 Sites on Dynamic Coastlines’. Funding has been approved for this project
2. EU LIFE – Environment, ‘Beneficial use of dredgings in intertidal recharge’. Bid submitted Nov. / Dec. 1999

A North-West Coast Strategy Study has been proposed for the Island and includes the stretch of coast from East Cowes to the Needles. It is hoped to commence by the beginning of 2000, is part grant aided by MAFF, and will provide a framework for the management of the Process Unit over the next 50 years.

The North-East Coast Strategy is aimed to be completed by May 2000 and covers the area from

Old Castle Point, East Cowes, to Culver Cliff. Both NW and NE strategies need to recognise the Medina Estuary in its entirety and take on board the policies within the EMP and vice versa.

Objective P1

To develop a comprehensive knowledge base about the physical processes to inform and facilitate decisions.

2.7.2.2 Flooding and shoreline protection

The Isle of Wight Council and the Environment Agency have devoted considerable resources to the monitoring and maintenance of protection structures and the prevention of flooding within the developed parts of the estuary. Maintenance, monitoring and improvement of shoreline protection within the developed areas of the estuary is required. Extensive parts of the estuary, both developed and natural, are in private ownership and protection of certain areas of the estuary is dependent upon the private owner, thereby fragmenting comprehensive coastal protection.

Objective P2

To ensure the co-ordination of appropriate coastal protection and flood relief.

2.7.3 PHYSICAL PROCESSES ACTION PLAN

Objective	Recommendations	Timescale	Partners	Cross References
<p>P1</p> <p>To develop a comprehensive knowledge base about the physical processes to inform and facilitate decisions</p>	<ul style="list-style-type: none"> ➤ Develop a co-ordinated data collection and monitoring system <p>Action: Ongoing by the Estuaries Officer</p> <ul style="list-style-type: none"> ➤ Encourage the operation of the tidal gauge in Cowes Harbour to record and archive data on surge events and rising sea-level ➤ Centralise the recording of the removal of dredged material <p>Action: EO to obtain data from Harbour Authorities</p> <ul style="list-style-type: none"> ➤ Complete a detailed survey of bedload and suspended sediment transport <p>Action: Initiate research to fully investigate this</p>	<p>Ongoing</p> <p>Short</p> <p>Short</p> <p>Medium/Long</p>	<p>CHC, EA, EO, IW Centre for the Coastal Environment - IWC, NHA</p> <p>CHC, EA</p> <p>CHC, IW Centre for the Coastal Environment - IWC, NHA</p> <p>CHC, IW Centre for the Coastal Environment - IWC, NHA</p>	<p>NC5, RM1</p> <p>RM1</p> <p>C4, NC4, RM1</p> <p>RM1</p>
<p>P2</p> <p>To ensure the co-ordination of appropriate coastal protection and flood relief</p>	<ul style="list-style-type: none"> ➤ Maintain and improve the system of drainage of the immediate estuary catchment, particularly on the coastal slopes in East and West Cowes <p>Action: Addressed through LEAP</p> <ul style="list-style-type: none"> ➤ Implement multiple purpose measures wherever appropriate, such as the protection of property and infrastructure and the improvement of coastal defences and amenity <p>Action: Statutory procedure.</p> <p>Review the possibilities for improving the coast defence and flood relief along Cowes High Street</p> <ul style="list-style-type: none"> ➤ Include all coastal defence structures within any coastal protection strategy <p>Action: Include within the North West Coast Strategy</p>	<p>Long</p> <p>Ongoing</p> <p>Ongoing</p>	<p>EA, IW Centre for the Coastal Environment - IWC</p> <p>EA, IW Centre for the Coastal Environment - IWC</p> <p>EA, IW Centre for the Coastal Environment - IWC, Landowners</p>	<p>L3</p>

Key to Timescales:
Short: within 2 years Medium: within 5 years Long: within 10 years

2.8.0 Recreation and Leisure

2.8.1 Background

The estuary supports a range of recreational activities, both on the water and on the adjacent land, including: yachting, cruising, dinghy sailing, canoeing, rowing, windsurfing, angling, walking, cycling and bird watching. It is the only one of the four estuaries on the Isle of Wight which is accessible to the public along most of the shoreline and intertidal areas. It is used by individuals, clubs, training centres and for organised events and regattas. In 1996, approximately 250 water based and 15 land based recreation events were organised. Recreation facilities on the estuary include sailing and rowing clubs, training centres, slipways and landing facilities, marinas, moorings, public footpaths and a cyclepath. Maps 7 and 8 illustrate the location of recreational provision and public access within the estuary.

Angling: The Medina is a popular recreational fishing location for club competitions and the individual angler. Fishing is carried out from the shore and boats throughout the estuary at all times of the day and year with the main season occurring between October and March. Anglers principally fish for flounder, mullet and bass. The estuary is used regularly by 9 of the 18 Island based angling clubs, with approximately 90 competitions being held annually on the estuary. The estuary is also the most important source of worm bait for the Island's anglers. Of the approximate 75 miles of coastline on the Island, bait can be dug from only a 10 mile section, 6 miles of which are in the Medina Estuary.

Watching birds and other wildlife: Watching birds and other wildlife is very popular along the shores of the estuary. It occurs most extensively in areas adjacent to Dodnor Creek, Kingston mudflats, Folly Lake, Pinkmead Creek and the mudflats adjacent to the Medina Valley Centre. The estuary is also used as a field study site for courses provided by the Medina Valley Centre.

Canoeing / Kayaking: Training centres and clubs use the length of the estuary for canoeing. Canoe training tends to remain within the estuary, while individual canoeists canoe within the estuary or travel along the adjacent open coast.

Cycling: The cyclepath, which follows the route of the former railway line between Cowes and Newport is a popular route for recreational cyclists and commuters, and serves as a link between Newport and Cowes. Cyclists also use public footpaths on the eastern side of the estuary.

Jet skis: Jet skis are launched from East Cowes beach and use areas of the open coast. Harbour byelaws stipulate a six knot speed limit within its jurisdiction which limits jet ski activity within the estuary.

Rowing: The estuary is used by both Newport and Ryde Rowing Clubs who use the length of the estuary for training. Craft are launched from either Newport Rowing Club or from the White Hart Slip in East Cowes. Approximately 7 rowing events are held per annum, primarily in the middle and lower reaches of the estuary.

Yachting/Cruising/Dinghy Sailing: For racing, the Medina Estuary is a haven from which sailing craft operate, with the climax occurring in August with Cowes Week. This primarily occurs within the areas north of Whitegates and East Cowes Marina. In the interest of safety, the majority of the yachting events are not undertaken within Cowes Harbour or the estuary. The only exceptions are events organised by East Cowes Sailing Club and Cowes Corinthian Yacht Club which have consent during the autumn months to undertake sailing events on start lines within the main harbour, clear of the fairway. For the majority of the other yachting events, the estuary is used to berth craft, resulting in Cowes Harbour being busy during the main sailing season from April to October.

Marinas, boatyards and the Harbour Authorities provide moorings for recreational craft throughout the estuary attracting yachts and cruising craft south of Cowes into the lower reaches of the estuary. South of Folly Inn craft are restricted to the main channel of the estuary and are limited by the tidal window.

Due to its status as a popular sailing location, there are 6 sailing clubs based in the estuary with approximately 65% of its membership comprising

members from the mainland.

Dinghy sailing is particularly commonplace in the mid and upper reaches of the estuary, especially in the Folly Lake and Hurstake area, where intensive dinghy training is carried out by local training establishments. The waters adjacent to East Cowes Beach are also popular for dinghy sailing, especially for novice sailors undertaking a programme of training with one of the local training establishments. When the prevalent conditions are not ideal for dinghy sailing near East Cowes beach, then it is often pursued in the lee of the harbour breakwater. The Medina Mariners' Association and East Cowes Sailing Club organise dinghy events within the estuary, primarily in the middle reaches.

Rambling/walking: Rambling/walking is very popular along the majority of the footpaths which run adjacent to the shore of the estuary.

Training centres: Three training centres are based on the estuary and use the area for yacht, powerboat, dinghy, canoe and windsurf training.

Windsurfing: Windsurfing is generally pursued on the open coast, both east and west of Cowes Harbour. Windsurfing is not permitted in the harbour, although the occasional windsurfer sails upstream.

2.8.2 Issues

2.8.2.1 Facilities Provision

Recreation facilities within the estuary include:

- club facilities;
- training centres;
- slipways and landing facilities to provide access to the water;
- facilities for yachtsmen including: marinas, moorings, public wash and shower facilities; and
- footpaths and a cycleway to provide access to the countryside along the estuary.

A significant number of slipways only provide limited access to the estuary due to tidal constraints, inappropriate access to the slipway, inadequate parking (including parking for boat trailers) and/or inappropriate slipway surfaces. The slipways regularly used are White Hart in East Cowes, Thetis Wharf, Town Quay and Watch House Slip in Cowes and Folly Slip adjacent to the Folly Inn.

There is also a need for further access to the water on both the east and west side of the estuary south of Cowes. Further access on the eastern side, at Kingston, was highlighted in the UDP Enquiry which does not outline specific provisions for further access but does not rule out the possibility.

An Inventory of Public Launch Points along the Medina can be found on:

<http://www.cowes.co.uk/faciliti.html>

<http://www.solentforum.hants.org.uk/>

Objective R1

To provide adequate and appropriate access onto the water.

Public footpaths and the cycleway provide access along the estuary into the rural areas, see Map 8. On the eastern bank it is limited to footpath provision between Newport and the Folly Inn. This is regularly used by cyclists indicating the demand for the development of a cycle route on the eastern bank. The extension of the footpath to link the Folly Inn to East Cowes is desired to provide access all the way along the estuary between Newport and East Cowes.

Objective R2

To improve the quality and provision of footpaths and cyclepaths.

Facilities for yachtsmen visiting the Cowes and Newport Harbour authority moorings located within the harbours and at Folly Inn are inadequate. This was highlighted in the Cowes Visitor and Yachtsmen Survey (1994) which reported that the public shower and wash facilities in Cowes were the lowest rated aspect of the town.

Newport Harbour in January 2000 installed new pontoons along the Newport quay wall and is also aiming to improve the areas for winter yacht storage. The proposal to build a sill at Newport to retain water in the Harbour at low tide, is also being considered.

In Cowes, Town Quay re-development (2000) will improve the Red Jet Ferry Terminal, increase the size of the Yacht Haven and improve water front access in this area. East Cowes Marina is also seeing an improvement in its facilities for yachtsmen and there are proposed developments for Shepherds Wharf.

Objective R3
To improve facilities for yachtsmen visiting Cowes and Newport Harbours and the Harbour Authorities moorings.

2.8.2.2 Interaction between estuary users

Recreational users in general co-exist with other users and with each other. However, there are instances of local conflict. They include conflict with:

- commercial interests when recreational users are unaware of the manoeuvring characteristics and operational limitations of large commercial craft;
- landowners and farmers due to trespass into areas which are not part of the public rights of way network;
- nature conservation interests, for example, disturbance to birds, primarily caused by anglers, bait diggers, dog walkers and walkers; and
- other recreational users caused by the sharing of water space in narrow areas and cyclists using public footpaths.

The majority of the problems result from the actions of a small minority of users who are not fully aware of the implications of their actions on others or the natural environment. Voluntary regulation is flexible and allows for self policing and education at the local level. However, with the introduction of international nature conservation obligations, the development of byelaws or legislation may be necessary if voluntary management is not successful in reducing conflict.

Objective R4
To promote the responsible use of the estuary as a recreational resource while minimising the conflict with and between other users and interests.

2.8.2.3 Water Quality

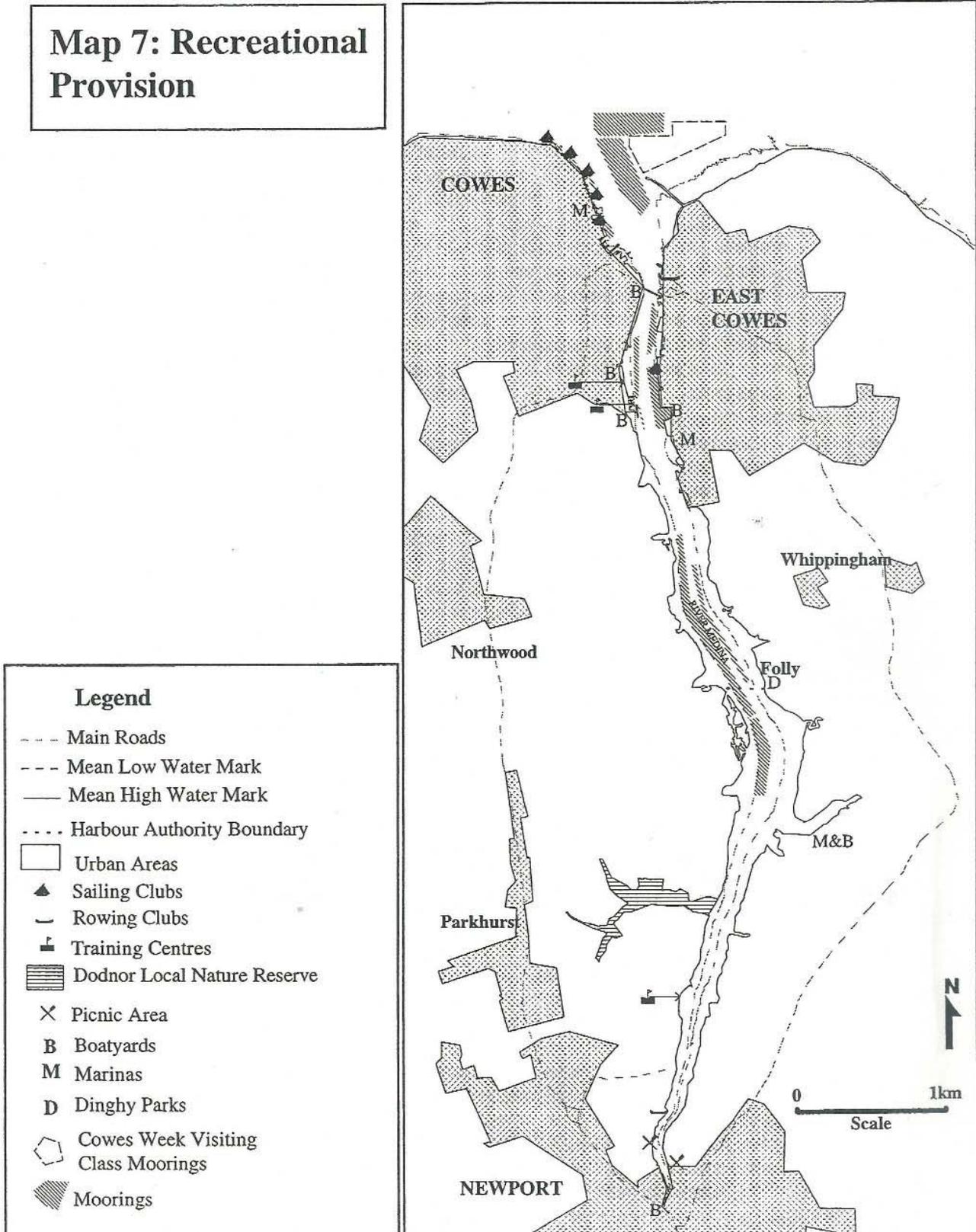
Water quality is primarily of concern to recreational users involved in water borne activities. Concerns relate to possible health problems resulting from contact with sewage effluent disposed into the estuary and the odour and visual impact of the

disposal of effluent and sludge.

Objective R5
To improve the water quality of the estuary.

Objectives and recommendations relevant to water quality are listed in more detail in the Water Management section (2.9)

Map 7: Recreational Provision

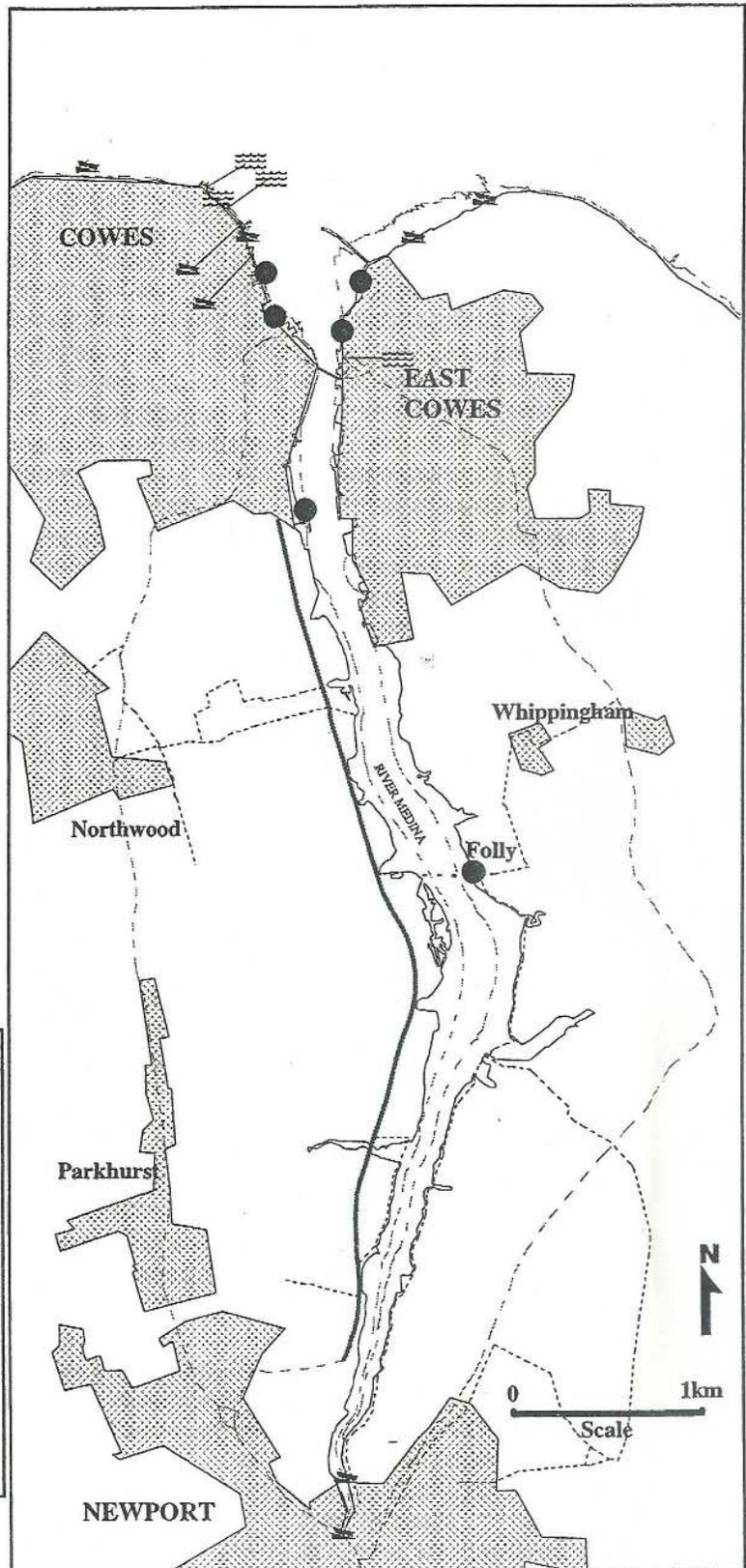


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Map 8: Public Access

Legend

- Main Roads
- - - - - Mean Low Water Mark
- Mean High Water Mark
- Harbour Authority Boundary
-  Urban Areas
-  Slipway
-  Landing
-  Slipway & Landing
- Public Footpaths
- Cycleway and footpath



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2.8.3 RECREATION AND LEISURE ACTION PLAN

Objective	Recommendations	Timescale	Partners	Cross References
<p>R1 To provide adequate and appropriate access onto the water</p>	<ul style="list-style-type: none"> ➤ Address all slipways and identify their purpose and the facilities required. Identify areas where parking is available for vehicles and trailers. Any inappropriate slipways should be improved or closed for public use ➤ Additional access to the water should be provided south of Cowes and East Cowes to provide access to the estuary south of the urban and commercial areas of Cowes Harbour <p>Action: Identify areas where there is a demand for, and where it is possible for, further access to the water.</p> <ul style="list-style-type: none"> ➤ Provision of dinghy storage in close proximity to slipways should be sought <p>Action: Identify areas where this is required and areas where it is possible</p>	<p>Ongoing/ Medium</p> <p>Medium</p> <p>Long</p>	<p>CHC, Wight Leisure - IWC, NHA, MMA, NFSA, RYA, SC</p> <p>CHC, EN, Wight Leisure – IWC, MMA, NFSA, NHA, RYA</p> <p>CHC, Wight Leisure - IWC, MMA, NFSA, NHA, RYA, SC</p>	<p>HC1, NC4</p> <p>HC1, NC4</p> <p>HC1, NC4</p>
<p>R2 To improve the quality and provision of footpaths and cyclepaths</p>	<ul style="list-style-type: none"> ➤ Options for extending the rights of way network on the eastern bank should be examined <p>Action: Ongoing debate. The impact that any further increase in rights of way would have on the nature conservation requires close examination</p>	<p>Medium</p>	<p>Cyclewight, EA, EN, Farmers and Landowners, Rights of Way Dept.-IWC, Tourism Dept. - IWC, NFSA, RA</p>	<p>A1, A2, NC4</p>
<p>R3 To improve facilities for yachtsmen visiting Cowes and Newport Harbours and the Harbour Authorities moorings</p>	<ul style="list-style-type: none"> ➤ Opportunities for improving the facilities should be examined and developed <p>Action: Further up-to-date research is required, however improvements are being addressed through re-developments at Cowes and Newport Harbours</p>	<p>Short/Medium</p>	<p>CHC, Directorate of Environment Services - IWC, MMA, Whitbread</p>	

2.9.0 Water Management

2.9.1 Background

Water management within the Medina includes wastewater management, the monitoring of water quality and the management of potential oil spills.

Wastewater management: Improvements in wastewater management within the Medina Estuary have occurred during the 20th century. A major development in 1935 was the construction of a primary sewage treatment works (STW) at Fairlee. Further improvements occurred in the 1970s when monitoring by Southern Water (SW) indicated that further improvements in sewage treatment were necessary. A major investment programme was instigated and the STW at Fairlee was rebuilt to incorporate new inlet works, storm holding tanks, secondary biological treatment, sludge treatment and the extension of the discharge pipe into the deep water channel of the estuary with the aim of ensuring that, even at low tide, the effluent was dispersed rather than being deposited on mudflats. Associated with the new plant was a sealing of unsatisfactory storm overflows and a new overflow sited at Town Quay, Newport. The Fairlee plant is presently the Island's largest sewage treatment works, until Sandown is operational (End 2000), and has consent from the EA to discharge up to 12,115 m³ per day into the estuary.

Wastewater management at Cowes was not tackled until the 1980s. A scheme was adopted in 1985 to provide preliminary treatment for effluent from Cowes with treated effluent being discharged into the deep water of the Solent from a outfall off Old Castle Point. The EU Designated Bathing Beach at West Cowes, which had consistently failed tests every summer, now passes all tests, providing evidence of significant improvements in water quality.

Sewage treatment on the Island has been reviewed by Southern Water which has applied for consents to develop a treatment works in Sandown to treat much of the Island's wastewater before discharging effluent into the English Channel, to conform to European Directives. Wastewater from Cowes, East Cowes, Gurnard and Norton will be part of this scheme with wastewater being pumped across the island.

The Fairlee works will continue to operate and will treat wastewater from Newport, Porchfield, Whitecroft Hospital, Havenstreet and Wootton. There are also a number of small wastewater treatment works (population >2000) which will remain operational.

All the Island's sludge will be transported to Sandown where it will be digested, dried and sold to farmers.

The Medina crossing will use trenchless technology reducing any disturbance to the estuary bed. The works at Sandown, aim to be operational before the end of 2000.

Other discharges of wastewater into the estuary include wastewater from storm overflows, run off from roads etc. and wastewater from private treatment works and recreational craft. Map 9 illustrates the present points of discharge within the estuary. (Please note that the sea outfall north of the Shrape will no longer be used once Sandown Treatment Works are operational.)

Water quality monitoring: The EA have three main sampling points, at Newport Harbour, the Folly and the main pontoon in West Cowes, with interim sites scattered around the estuary. The EA report that there are no significant water quality problems. Monitoring of oyster quality is also carried out by Environmental Health Officers from the Isle of Wight Council who sample oysters to grade shellfish harvesting areas depending on the levels of bacteria. This determines the level of treatment the oysters require before they are fit for human consumption. Water samples are also taken to detect dangerous algal blooms.

Management of potential oils spills: The estuary is vulnerable to potential pollution from a tanker incident in the wider Solent and to oil tank ruptures in East Cowes. Oil spill plans exist for the Solent, Isle of Wight, Cowes Harbour and Newport Harbour to provide emergency action in the event of a spill.

Regulation: The EA has a duty conferred by the Water Resources Act 1991 to maintain and protect the water quality in controlled waters. Its duty includes the setting of water quality standards, controlling all discharges of wastewater from sewage works and industry, monitoring water quality and taking corrective action, and taking action to reduce the risk of pollution incidents.

Cowes Harbour bye-laws state that no person shall discharge sewage or other pollution into the Harbour when moored to areas that have access to the shore.

2.9.2 Issues

2.9.2.1 Wastewater management

Despite the improvements in water quality, there are a number of remaining issues regarding effluent disposal. At present, heavy rainfall results in storm discharge (approximately twice a month) of effluent which has only been subject to primary treatment. There are also continuing concerns about the private treatment works which have consents from the EA to discharge wastewater into the estuary.

Objective W1
To improve the treatment of wastewater within the estuary.

2.9.2.2 Chemical Aspects of Water Quality

One of the main chemical water quality concerns in the Medina has been the impact of the Tri Butyl Tin (TBT) based antifouling paints on the ecology of the estuary. Although the use of TBT was banned for use on vessels under 25m in length, the chemicals involved are persistent and are likely to have a long term impact. The disappearance of the common dog whelk from sea walls at Cowes and throughout the Solent is attributed to TBT contamination, with the Medina Estuary recording the highest levels on the Island (Langston et al 1994). Other potential chemical sources of pollution relate to contaminated land and agricultural run off.

Stag Lane tip is the main contaminated land site of concern. This landfill site is effectively decommissioned but still receives some special wastes such as drilling muds. The site has been

stabilised but the tip requires ongoing management and monitoring in spite of a leachate recirculation system installed in the mid 1980s to prevent leachate entering the estuary. Other potentially contaminated sites, which could impact on the water quality, exist within the estuary. However, a comprehensive survey of contaminated sites has not been carried out to date.

Run off from agricultural land contains pesticides and fertilisers which can have an impact on the water quality. According to the EA, the impact of agriculture is not currently a serious problem in the Medina. However, monitoring is required to review agricultural inputs to ensure that negative impacts do not arise.

Objective W2
To ensure that chemical pollutants do not significantly affect water quality.

2.9.2.3 Oil Spill Contingency Planning

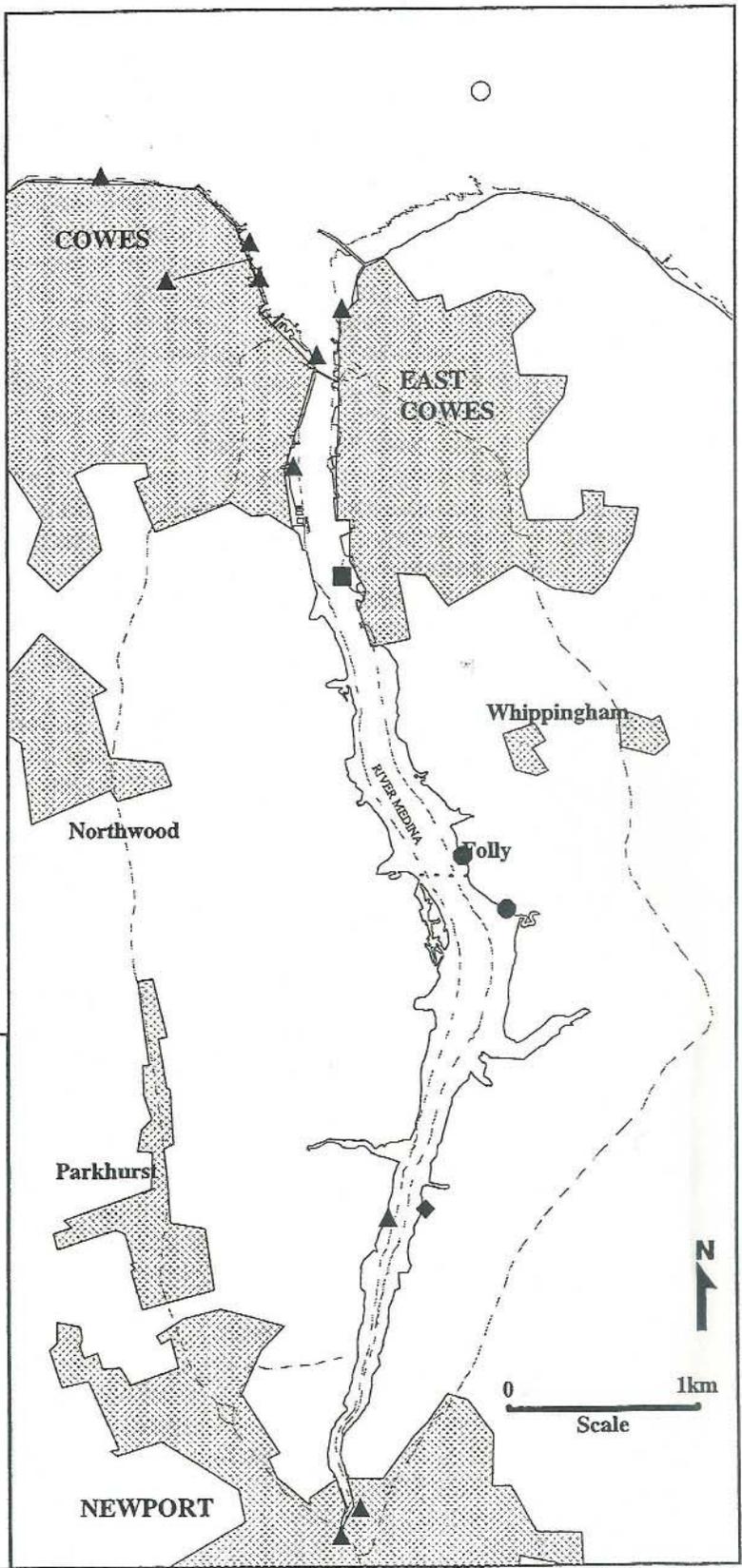
The impact of oil on the Medina is mainly thought to be an aesthetic problem comprising occasional oil sheens from commercial and recreational craft. However, the estuary is vulnerable to pollution from an oil spill within the Solent or within the estuary. Oil spill contingency planning within the estuary is fragmented, based primarily on the two Harbour Authority jurisdictions. Cowes Harbour has an Oil Spill Contingency Plan (1999/2000) which is reviewed yearly to be kept up to date, and oil spill incidents are addressed in the Newport Harbour Emergency Plan. In addition, the Isle of Wight Council is currently revising the IOW County Oil Spill Contingency Plan.

Objective W3
To ensure that up to date and comprehensive plans to deal with any oil spill incident exist.

Map 9: Discharges into the Medina Estuary

Legend

- Main Roads
- - - - Mean Low Water Mark
- Mean High Water Mark
- Harbour Authority Boundary
-  Urban Areas
-  Fairlee Sewage Treatment Works
-  Sea Outfall
-  Discharges from Private Treatment Works
-  Industrial Discharges
-  Storm Outfalls



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2.9.3 WATER MANAGEMENT ACTION PLAN

Objective	Recommendations	Timescale	Partners	Cross References
<p>W1 To improve the treatment of wastewater within the estuary</p>	<ul style="list-style-type: none"> ➤ Identify the Water Quality Objectives in the estuary ➤ Support the relocation of wastewater treatment or the upgrading of water treatment if necessary ➤ Encourage improved treatment of effluent from private treatment works <p>Action: Encourage the water quality objectives to be identified</p>	<p>Medium Ongoing</p> <p>Short</p>	<p>EA, SW EA, IWC, SW</p> <p>EA, Private Treatment Work Owners, SW</p>	<p>F1, NC6, R5 R5</p>
<p>W2 To ensure that chemical pollutants do not significantly affect water quality</p>	<ul style="list-style-type: none"> ➤ Instigate surveys to assess the effects of TBT ➤ Encourage the completion of a comprehensive inventory of potentially contaminated land surrounding the estuary ➤ Establish regular monitoring of potentially contaminated land sites and assess the potential damage to the environment ➤ Monitor the input of pollutants from agricultural run off to ensure that agriculture is not having an adverse effect on the estuary ➤ Take the necessary action required to eliminate any discharge of leachate or polluting agricultural run off from entering the water course <p>Action: Liaise with EA regarding the monitoring of chemical pollutants (e.g. nitrates, diffuse pollution) and the identification of discharges through storm overflows</p>	<p>Medium Short/Medium</p> <p>Medium</p> <p>Ongoing</p> <p>Ongoing</p>	<p>EA, EN EA, IWC</p> <p>EA, IWC</p> <p>EA</p> <p>EA</p>	<p>F1, NC6, RM1 RM1, R5</p> <p>RM1, R5</p> <p>RM1, R5</p> <p>RM1, R5</p>

2.10.0 Public Awareness and Education

2.10.1 Background

The estuary is a natural and heritage resource that supports a wide range of uses and interests. Awareness of the resource and its value to the range of interests that it supports is imperative for the future well being of the resource and its uses. The need for increased public awareness about the resource and its uses is identified throughout sections 2.1-2.9 and is drawn together here with an action plan to achieve integrated public awareness and education.

Objective PA2
To increase awareness and understanding of the range of estuary users.

2.10.2 Issues

2.10.2.1 Public Awareness of the Resource

Awareness and understanding of the resource is limited. As a result, the nature and agricultural resource have been damaged or misused due to lack of understanding and the tourism, historical and cultural resources are not fully realised due to lack of interpretation and information. Increased awareness of the following resources is required:

- agriculture (A2);
- tourism (C6);
- historical and cultural (HC1, HC2, HC3); and
- nature conservation (NC2, NC3, NC6)

Objective PA1
To increase public awareness and understanding of the estuarine resource.

2.10.2.2 Awareness of other estuary users

A number of the issues identified within sections 2.1-2.9 reflect a lack of awareness and understanding of other users. Conflict between the interests could be reduced by raising awareness and educating users. This approach could help to alleviate the following conflicts:

- agriculture and land based recreation (A2); and
- commercial and recreational use in restricted areas (C6, R4).

2.10.3 PUBLIC AWARENESS AND EDUCATION ACTION PLAN

Objective	Recommendations	Timescale	Partners	Cross References
<p>PA1</p> <p>To increase public awareness and understanding of the estuarine resource</p>	<ul style="list-style-type: none"> ➤ Produce a public awareness strategy of the estuary to promote the resource and its protection <p>Action: Include presentations to public groups and interpretative material</p> <ul style="list-style-type: none"> ➤ Increase collaboration between teachers and organisations to improve the educational use of the estuary <p>Action: Liaise with teachers and educational groups</p> <ul style="list-style-type: none"> ➤ Produce integrated interpretative information for key sites, heritage trails and educational information to explain the attributes of the estuarine resource <p>Action: Produce interpretation signs, notes for teachers and an estuary leaflet.</p> <p>Overall Action: Research into the existing level of awareness. Collate and co-ordinate research, data and information about the resource.</p>	<p>Medium</p> <p>Medium</p> <p>Medium</p>	<p>EA, EN, EO, Directorate of Environment Services - IWC, Local Community, Local Groups</p> <p>EA, EO, Directorate of Environment Services - IWC, MVC, Schools</p> <p>EA, EN, EO, Directorate of Environment Services - IWC, Local Groups</p>	<p>A2, C5, HC2, HC2, HC3, L4, NC2, NC3, NC6</p> <p style="text-align: center;">⇓</p>
<p>PA2</p> <p>To increase awareness and understanding of the range of estuary users</p>	<ul style="list-style-type: none"> ➤ Develop a means for liaison and communication between estuary users to provide a platform for raising and solving issues <p>Action: Include presentations to public groups and interpretative material</p> <ul style="list-style-type: none"> ➤ Develop codes of conduct for estuary users based on the local situation. Include information about navigation, safety, areas of conservation interest, countryside code etc <p>Action: Disseminate information through recreation forum, public groups, leaflet and any other estuary publicity</p>	<p>Short</p> <p>Short</p>	<p>CHC, EN, EO, Farmers and Landowners, Directorate of Environment Services - IWC, Local Community, Local Groups, NHA, Recreational Users, SC</p> <p style="text-align: center;">⇓</p>	<p>A1, A2, C6 NC4, R4</p> <p style="text-align: center;">⇓</p>

Key to Timescales:
Short: within 2 years Medium: within 5 years Long: within 10 years

2.11.0 Research and Monitoring

2.11.1 Background

Detailed knowledge of the estuarine resource and impacts of activities upon it is required in order to inform and facilitate decisions about the use and management of the estuary.

2.11.2 Issues

2.11.2.1 Limited knowledge about the resource

Knowledge about the estuarine resource and the impacts of activities upon the resource is limited. Data and information has been generated by specific and relatively short term requirements making accurate description difficult and evaluation and assessment of impacts highly problematic. Sections 2.1-2.9 identify a range of research and monitoring requirements which are necessary to ensure that the effective management of the estuary is achieved.

Objective RM1
To develop and co-ordinate programmes of research and monitoring.

2.11.2.2 Monitoring the performance of the EMP objectives

It is important that the objectives and recommendations in the EMP are monitored to identify any changes that may arise through new information, improved understanding, the performance of policies, legislative change and changing conservation priorities.

Objective RM2
To develop and co-ordinate specific targets which will enable the success of the project to be measured

2.11.3 RESEARCH AND MONITORING ACTION PLAN

Objective	Recommendations	Timescale	Partners	Cross References
<p>RM1</p> <p>To develop and co-ordinate programmes of research and monitoring</p>	<ul style="list-style-type: none"> ➤ Develop a central database for data and information to be held at the Harbour Office and with the Estuaries Officer <p>Action: Develop the database to be user-friendly with schools, universities and the general public</p> <ul style="list-style-type: none"> ➤ Establish programmes of research and monitoring to provide comprehensive information about the resource and the effects of activities upon it <p>Action: To be co-ordinated through the Medina Estuary Management Committee</p>	<p>Ongoing</p> <p>Ongoing</p>	<p>CHC, EA, EN, EO, Directorate of Environment Services - IWC, SW</p> <p>CHC, EA, EN, EO, Directorate of Environment Services - IWC, SW</p>	<p>F2, HC1, NC3, NC4, NC5, NC7, P1, W2, W3</p>
<p>RM2</p> <p>To develop and co-ordinate specific targets which will enable the success of the project to be monitored.</p>	<ul style="list-style-type: none"> ➤ Identify a means for being able to monitor the success / achievement of the objectives and recommendations in Action Plans 2.1.3 – 2.11.3 ➤ Develop a mechanism to monitor the performance of the implementation of the EMP and establish a reporting procedure 	<p>Ongoing</p> <p>Ongoing</p>	<p>CHC, EA, EN, EO, Directorate of Environment Services - IWC, SW</p>	<p>NC3</p>
<p>Key to Timescales: Short: within 2 years Medium: within 5 years Long: within 10 years</p>				

3.0 Implementation

3.1 Introduction

The success of the MEMP relies upon the implementation of the objectives and recommendations identified in each of the action plans. This depends on gaining the support and participation of many organisations and individuals, from the national agencies to the local farmers and landowners.

In order to achieve this, the following are required:

- a management framework;
- resources;
- mechanisms for implementing the action plans;
- public and political support; and
- monitoring and review.

3.2 Framework for Implementing the Medina Estuary Management Plan

The implementation of the MEMP requires a management framework to co-ordinate, support and monitor the implementation of the Action Plans which necessitates the continued commitment of all parties to work together.

A good management framework demands high standards of:

- communication;
- leadership; and
- direction.

The development of the management framework has been a key priority to ensure that the transition between plan development and implementation is smooth and effective.

3.2.1 Formation of a Medina Estuary Management Committee

It was suggested that the Steering Committee's purpose and membership be carefully reviewed and that a Medina Estuary Management Committee evolves from the existing Steering

Committee's membership (see Appendix A1). It is

important that member organisations of the Management Committee have both the staff time and commitment to give to the project.

The Management Committee contains members from the following organisations as they have the statutory responsibilities for the control of planning and management

- English Nature;
- Environment Agency;
- Harbour Authorities;
- IoW Council;
- Southern Water.

In addition, other key interests, for example, agriculture, commerce and recreation require representation (see section 3.5).

The Committee meets quarterly; user groups, voluntary groups and the private sector are in liaison with the partners to ensure all the estuary interests are considered.

3.2.2 Co-ordinating the Implementation Framework

The co-ordination role should take on the following responsibilities:

- co-ordinate the implementation of the recommendations set out in the Action Plans, through the liaison with individual partner organisations and Committees, as required;
- act as a central point for correspondence;
- provide administrative support for the MEMP's implementation; and
- maintain an up-to-date database of contacts.

It is important that the co-ordination remains independent and impartial. Options for the provision of this support have been as follows:

- employment of a dedicated Project Officer/Estuary Manager;
- sharing a Project Officer/Estuary

- Manager with a similar/nearby project; carrying out the co-ordinating role, on a rotating basis, in house within the organisations which make up the project Committee; and
- one of the partner organisations take over the co-ordination function, though this may lack impartiality.

The appointment of a Project Officer/Estuary Manager was the preferred option and, after consultation within the Steering Committee, an Estuary Officer was appointed in February 1999. This is for an initial 3 year period with the post being partner funded by the Environment Agency, English Nature, Isle of Wight Council, Cowes Harbour Commissioners and Yarmouth Harbour Commissioners. Tasks include implementing both the Medina and Western Yar (Dec. 1998) Estuary Management Plans and co-ordinating the preparation of plans for other estuaries on the Isle of Wight.

3.2.3 Requirement of the Medina Estuary Management Committee

The following tasks have been, and are an ongoing commitment to be undertaken by the Management Committee:

- establish the appropriate means for co-ordinating implementation and facilitating links between interested organisations/individuals;
- examine the financial resources required to support the implementation of the MEMP;
- prepare and implement annual work programmes;
- identify flag-ship projects for implementation;
- identify evolving areas of concern and appropriate solutions;
- promote awareness of the MEMP and estuary issues;
- set up the mechanisms required to monitor the success of the plan.

3.3 Resources

The implementation of the MEMP is dependent on the provision of adequate resources.

3.3.1 Future resource requirements

The following resource requirements are required for the implementation of the plan:

- Project Officer/Estuary Manager salary;
- travelling expenses;
- funding to implement specific projects;
- staff time;
- publicity materials;
- venues for meetings.

3.3.2 Sources of funding

Some elements of the Action Plans involve certain organisations resourcing the specific actions/projects which come entirely within their remit. However, many of the other action programmes involve co-operation between agencies and organisations. One suggestion is for partners to contribute resources, both financial and in-kind, to a central resource holder which can then be used to fund projects involving several interest groups.

In the medium to long term, other opportunities for funding and resourcing need to be identified to diversify the funding base. Possible sources include:

- European Funding (Atlantis II, Coastal Strategy etc. LIFE, Interreg III);
- Lottery Funds;
- Sponsorship; and
- Estuary Users.

3.4 Mechanisms for implementing the action plans

One of the most important aims of the implementation phase is to avoid duplication of effort and work towards the resolution of conflicts. Issue resolution and the implementation of recommendations should be steered by the Management Committee. There are several options for achieving this:

- The Topic Groups should be reinstated following a review of their membership. They could agree and co-ordinate programmes to

implement actions related to their interest, and a nominated leader of each Topic Group could report back to the Management Committee on progress. Continuation of the Topic Group approach may not be helpful in the long term as a single interest may perpetuate the compartmental approach to management rather than encouraging integration.

- Issues or Action Groups could be established to focus on a specific issue with membership drawn from a wide range of interests including managers, users and the local community.
- The responsibility for taking up and implementing the Action Plans could be left to the individual organisations
- The Medina Management Committee could handle ongoing matters and oversee the formation of Issues or Action Groups to deal with specific issues.

During 1999 the last 3 of these methods for implementing the action plans have been used. It was decided not to reform the Topic Groups at this stage since individual involvement of members was used through direct liaison with the Estuary Officer.

3.5 Public and Political Support

The preparation of the plan has achieved public and political awareness through consultation and the development of the Topic Groups. This involvement needs to continue to ensure that widespread support is maintained.

This can be achieved by:

- keeping the public and political sectors informed about the plan's implementation;
- involving the public and political sectors in the implementation of objectives and recommendations when deemed necessary;
- increasing the profile of the MEMP to the public and political organisations; and
- the formation of an Advisory Group for the Medina Estuary. With the

announcement in 1999 from DETR of the forthcoming Trust Ports Review there is a requirement for all ports to have port/harbour advisory body. For the Medina, there would be merit gained if only one Advisory Group was formed which would advise Cowes Harbour as well as the Medina Estuary Management Committee. Representatives would be from the entire length of the estuary and would help identify action to be addressed by the Estuary Officer.

It is intended to continue the level of public involvement throughout the implementation stage of the Medina Estuary Management Plan.

3.6 Monitoring and review

Management planning for the Medina Estuary is an ongoing process. In order to assess changes in the estuary, evaluate the effectiveness of the plan and identify new issues or conflicts, monitoring and review must be undertaken. Objective RM2 provides recommendations for monitoring and review.

Monitoring and review should include:

- evaluation of overall progress;
- review of annual work programme;
- identification of areas which require additional research;
- identification of new conflicts;
- monitoring of how conflicts have been resolved;
- review of funding.

Objectives and Action Plans may require modification following the completion of the review.

The monitoring of the EMP process can be achieved through 'Best Value'. This is a Government framework for developing Local Services by establishing a process of continuous improvement and review, and to engage more closely with the public.

Appendices

A1: Current Management Committee

- Mr Matthew Chatfield, Senior Countryside Officer, Isle of Wight Council (Chair)
- Ms Judith Beard, Conservation and Recreation Officer, Environment Agency
- Ms Susan Hawley, Estuaries Officer, Isle of Wight Estuaries Project.
- Dr Claire Lambert, Conservation Officer, English Nature
- Ms Claire Marriott, Coastal Officer, Isle of Wight Council
- Mr Robin McInnes, Coastal Manager, Isle of Wight Council
- Captain Stuart McIntosh, Cowes Harbour Master / Chief Executive
- Mr David Moore, Senior Planning Officer, Isle of Wight Council
- Dr Colin Pope, County Ecology Officer, Isle of Wight Council

A2: Funding

The Medina Estuary Project has been made possible due to the financial support of:

Cowes Harbour Commission
Crown Estate Commissioners
English Nature
Environment Agency
Isle of Wight Council

A3: Medina Estuary Management Plan Objectives

References	Objectives	Lead Body	Cross References
A1	To ensure that existing and future rights of way are designated, managed and maintained appropriately to minimise potential trespass	Rights of Way Dept.- IWC	A3, R2, R4, PA1
A2	To increase public awareness about the existing rights of way network and the effects of trespass	Rights of Way Dept.- IWC	NC4, PA2
A3	To ensure that landowners and farmers are consulted over appropriate issues relating to present and future land use	Rights of Way Dept.- IWC	A1
C1	To identify the means to establish alternative commercial opportunities and attract new businesses to the area	Island Partnership	A3, L1, NC1, NC2, NC4
C2	To reserve, where appropriate, riverside land or areas of the harbour with adjacent deep water for river dependant activities	Planning Dept.-IWC	A3, L1, NC1, NC2, NC4
C3	To maintain access channels and wharves, subject to technical and environmental considerations	CHC, NHA	HC1, HC2, NC4, P1
C4	To investigate the feasibility of providing landing and storage facilities for the commercial fishermen registered at Cowes	CHC	
C5	To improve the tourism resource and actively promote tourism	Tourism-IWC	HC2, R3, PA1
C6	To continue the development of strategies and the means of communication to ensure that conflict between commercial and recreational users is minimised	CHC, Planning Dept.-IWC	NC1, NC3, R4, PA2
F1	To improve the quality of the oyster fishery	CHC, EA,IWC - Env.Health	NC6, W1, W2
F2	To expand the knowledge of fisheries and fish populations in the estuary	MAFF, NFSA	RM1
HC1	To safeguard the cultural resource	Archaeology Centre - IWC	C3, HC2, PA1, R1
HC2	To promote survey, research and integrate historic information and data to achieve a thorough understanding of the historical and archaeological interest of the estuary	Archaeology Centre - IWC	C3, HC1, PA1, RM1
HC3	To promote a better understanding of man made heritage resource	Archaeology Centre - IWC	C5, PA1
L1	To maintain and enhance the estuarine landscape	Countryside Section-IWC	C1, C2, NC2

References	Objectives	Lead Body	Cross References
L2	The preserve and enhance the open rural landscape	Countryside Section-IWC	NC1, NC3, NC4
L3	To promote a high standard of maintenance of the estuary landscape	Issue dependant	C1, C2, P2
L4	To promote enjoyment, awareness and understanding of the estuary	EO, Tourism –IWC	PA1
NC1	To minimise the adverse impact of development on the nature conservation resource	Planning Dept.-IWC	C1, C2, L2
NC2	To maximise opportunities to conserve and enhance the nature conservation resource	Countryside Section–IWC,	L1, PA1
NC3	To ensure that the appropriate protection is given to designated areas of the estuary	EN	L2, PA1, PA2, RM2
NC4	To minimise disturbance to estuarine habitats and wildlife in recognition of international obligations	EN	A2, C1-4, L2, P1, R1-2, R4, PA2, RM1
NC5	To monitor and conserve the saltmarsh habitat and where appropriate encourage opportunities for re-creation	EN	L2, P1, RM1
NC6	To achieve co-ordinated, comprehensive information about the nature conservation resource	EN	NC3, RM1
P1	To develop a comprehensive knowledge base about the physical processes to inform and facilitate decisions	EO, CHC, EA	C4, NC4, NC5, RM1
P2	To ensure the co-ordination of appropriate coastal protection and flood relief	EA, IW Centre for the Coastal Env – IWC	L3
R1	To provide adequate and appropriate access onto the water	CHC, NHA, Wight Leisure - IWC	HC1, NC4
R2	To improve the quality and provision of footpaths and cyclepaths	Rights of Way -IWC	A1, A2, NC4
R3	To improve facilities for yachtsmen visiting Cowes and Newport Harbour and the Harbour Authorities moorings	CHC, Directorate of Env. Sve–IWC	
R4	To promote the responsible use of the estuary as a recreational resource while minimising the conflict with and between other users and interests	All User Groups	A3, C6, NC4, PA2
R5	To improve the water quality of the estuary	EA, SW	W1, W2

References	Objectives	Lead Body	Cross References
W1	To improve the treatment of wastewater within the estuary	EA, SW	F1, NC6, R5
W2	To ensure that chemical pollutants do not significantly affect water quality	EA	F1, NC6, R5, RM1
W3	To ensure that up to date and comprehensive plans to deal with any oil spill incident exist	CHC, Centre for the Coastal Env-IWC,	NC5, RM1
PA1	To increase public awareness and understanding of the estuarine resource	EO	A2, C5, HC1-3, L4, NC2,3,6
PA2	To increase awareness and understanding of the range of estuary users	EO	A1, A2, C6, NC4, R4
RM1	To develop and co-ordinate programmes of research and monitoring	EO	F2, HC2, NC3, 4,5, 7, P1, W2,3
RM2	To develop and co-ordinate specific targets which will enable the success of the project to be monitored	EO	NC3

Glossary

Bronze Age	c.1800-700 BC.
Catchment	an Environment Agency plan which provides a comprehensive framework for addressing
Management Plan	all their functions, including flood defence, within the catchment of a main river.
Coastal Defence against	collective term for the protection of the coast against erosion plus sea defence flooding.
Conservation Areas	locally defined areas of special architectural historic significance worthy of protection and enhancement. Within such areas there are strengthened controls over demolition, minor development and protection of trees.
Contaminated Land	any use of land which may cause it to be contaminated with noxious substances.
Discharge (Consent)	a statutory document issued by the Environment Agency under the Water Resources Act 1991 to indicate any limits and conditions on the discharge of an effluent to a controlled water.
Ecology	the study of the relationship between an organism and its environment.
Ecosystem	a dynamic complex of plant, animal, fungal and micro-organism communities and their associated non-living environment interacting as an ecological unit.
Effluents	liquid discharged as waste from an industrial plant or sewage works.
Environment	this term is used to encompass all the facets of our surroundings: landscape/natural beauty, flora, fauna, geological or geomorphological features and buildings, sites and objects of archaeological, architectural or historic interest.
Estuary	a partially enclosed area of water and soft tidal shore and its surroundings, with interchange with the saline water of the sea and receiving fresh water from rivers, land run-off or seepage.
EU Directive	a type of legislation issued by the European Union which is binding on Member States in terms of the results to be achieved but which leaves to Member States the choice of methods.
Fauna	animal life.
Flood Defences	anything natural or artificial that protects against flooding, by rivers as well as by the sea.
Flora	plant life.
Foreshore	the area lying above the high tide level.
Habitat	the customary and characteristic dwelling place of a species or community.
Intertidal	between mean high tide and mean low tide levels.

Landfill	the disposal of waste by its permanent deposition in or on the ground, involving either the filling of man-made voids or the construction of features above ground level.
Local Nature Reserve (LNR)	areas of land or wetland of local importance declared by the local authority, in consultation with English Nature under the provision of the National Parks and Access to the Countryside Act 1949.
Medieval	AD1066-1540.
Mudflat	an area of fine silt, usually exposed at low tide but covered at high tide, occurring in sheltered estuaries or behind shingle bars or sand spits.
Neolithic	the New Stone Age (c. 4000 - 1800 BC).
Palaeo-environmental	relating to the changes of the environment through prehistory and history, particularly the more distant past.
Physical Processes	coastal phenomena such as sediment transport, erosion and accretion responsible for shaping the coast and underpinning its dynamic qualities. It refers to geological/earth science processes only.
Planning Policy Guidance	a series of notes issued by the Department of the Environment setting out the Government's policy guidance on planning issues, such as the countryside, nature conservation, archaeology, development etc.
Pollution	the addition of materials or energy into the existing environmental system to the extent that undesirable changes are produced directly or indirectly in that system.
Post Medieval	AD 1540 - present.
Preliminary Treatment	physical treatment of effluent by screening and grit removal.
Primary Treatment	physical treatment of effluent by screening and settlement.
Ramsar Site	The Convention on Wetland of International Importance, especially as wildfowl habitat was adopted at a meeting held at Ramsar in Iran. The UK Government in signing the convention in 1973 designates wetlands in accordance with agreed criteria. A wetland is regarded as internationally important if it regularly supports 20,000 waterfowl or 1% of a species, or sub-species of waterfowl.
Rights of Way Network	Byways, bridle ways and footpaths that provide public access.
Roman	AD 43 - c. 410.
Rural	land outside of the settlements.
Saltmarsh	a coastal marsh found along low-lying shores, usually protected by a spit, an expanse of mudflat or in the sheltered part of an estuary, colonised by plant species capable of withstanding frequent and often prolonged immersion in saltwater.
Sea Defences	anything natural or artificial that prevents the ingress of land by sea.

Secondary Treatment	biological degradation of effluent which has already received primary treatment. The process may also involve some chemical and physical treatment.
Sediment	deposited particles or grains of rock.
Set-aside (CAP)	land removed from food production as part of the Common Agricultural Policy reform.
Sewage	liquid waste matter from domestic or industrial source that is carried in sewers or drains (sewerage) to a sewage treatment works (STW).
Sewage Sludge	the solid constituents of sewage that are removed for subsequent purification.
Shoreline Management Plan	plans through which local authorities and others provide a framework for sustainable coastal defence policies within a sediment cell or sub-cell.
Siltation	at low velocities water will deposit the material being carried in suspension. The slower the velocity the finer the material deposited.
Site of Importance for Nature Conservation (SINC)	areas of land and wetland of local importance for the conservation of semi-natural habitats including mosaics of heathland, unimproved grassland, scrubland and plantation and/or habitats which support rare local wildlife species. They are not of sufficient extent or quality to qualify for national recognition as a SSSI.
SSSI, Site of Special Scientific Interest	an area of land which in the opinion of English Nature is of special interest at a national level due to its flora, fauna or geological or physiographical features. EN provide notification to owners, occupiers, local planning authorities and the Secretary of State under the provision of Section 28 of the Wildlife and Countryside Act, 1981.
SAC, Special Area for Conservation	areas of open water or land of international importance designated by the UK Government to comply with the requirements of the EC Habitats & Species Directive. To conserve natural habitats and wild fauna and flora, which are considered rare or endangered and are recognised as being under a particular threat. Nationally implemented under the Habitat Regulations, 1994.
SPA, Special Protection Area	an area designated by the UK Government to comply with the requirements of the EC Directive of 1979 on the Conservation of Wild Birds. Member states are required to take special conservation measures concerning the habitat of species of wild birds listed in Annex 1 of the Directive (certain rare and vulnerable species) and of regularly occurring migratory species where particular attention needs to be paid of wetlands, especially those of international importance. These measures include classifying the most suitable localities as SPAs and taking appropriate steps to avoid pollution or deterioration of the habitat or disturbance affecting the birds. Nationally implemented under the Habitat Regulations, 1994.
Sustainable	capable of being maintained at a steady level without exhausting natural resources or causing severe ecological damage.
Sustainable natural Development	balancing the need for development and growth against the need to protect the and built environment whilst meeting the needs of the present generation without compromising the needs and aspirations of future generations.

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