

THE MENAI STRAIT CATCHMENT MANAGEMENT PLAN ACTION PLAN; 1995



NRA

*National Rivers Authority
Welsh Region*

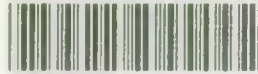
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THE NRA'S VISION FOR THE MENAI CATCHMENT

The Menai Strait catchment features immediate attractions for those interested in its scenic beauty or participation in the wide variety of water sports supported by the Catchment.

The catchment is also of significant ecological importance having been a location, for more than a hundred years, of research into marine ecology, centred on the University College of North Wales, Bangor. This importance would be further enhanced by the designation of the Strait as only the second Marine Nature Reserve (MNR) in Wales, a proposal fully supported by the NRA.

The main challenge of managing and improving the Menai Strait will be to achieve improvements in water

quality by reducing the impact of sewage discharges. At the same time, a reduction in the discharges from boats will be sought - by encouraging the harbour and marina authorities to install pump - out facilities and, where necessary, by the introduction of byelaws. In order that migratory fish stocks may be safeguarded, byelaws have been introduced to prohibit gill netting during certain times of the year. The NRA's commitment to protecting people and property from flooding will be vigorously pursued, as demonstrated by our participation in the re-establishment of the sea defence at Dinas Dinlle.

However, being realistic, it is important to recognise that there are a number of adverse impacts which fall outside the NRA's direct influence. These include, particularly, the transport of sediments into the Strait and algal blooms.

Nevertheless, the NRA intends to work with all other agencies and representative organisations in the catchment to promote and achieve an integrated approach to management. In particular, the NRA anticipates that this plan will influence the planning processes of local authorities.

The realisation of the NRA's vision will be achieved through a balanced management approach to all activities so that the qualities of a pristine catchment can, as far as practicable, be obtained and sustained in active collaboration with all users of the catchment.

Whereas the vision expresses the long term ambitions for the catchment, this Action Plan concentrates on the next five years.



D. R. THOMAS
NORTHERN AREA MANAGER
NRA WELSH REGION



ASiantaeth yr Amgylchedd Cymru
ENVIRONMENT AGENCY WALES

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Cover Picture: The Menai Strait



CATCHMENT STATISTICS

GENERAL

Population	49,400 (1991 census)
Peak holiday influx (July/August)	350,000* (additional)
	150,000* (day trippers)

* Most recent estimate

Menai Strait tide levels

	Beaumaris	Menai Bridge	Port Dinorwic	Caernarfon	Fort Belan
Mean Low Water Spring	-3.2m	-3.1m	-2.25m	-2.2m	-2.0m
Mean High Water Spring	3.7m	3.3m	2.65m	2.5m	2.1m

Main towns and populations:

Bangor (city)	11,025
Caernarfon	9,681

WATER QUALITY

December 1990 Survey National Water Council Classification	A (good)
Number of sewage treatment works discharging into the Strait	11
Number of untreated sewage outfalls discharging into the Strait	28

FLOOD DEFENCE

Area at risk of tidal flood	710 Ha
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FISHERIES

The Strait is a designated shellfishery under EC Shellfish Waters Directive (79/923/EEC)
The Strait supports migratory salmonids

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1.0 INTRODUCTION

THE CONCEPT OF CATCHMENT MANAGEMENT PLANNING

The rivers, lakes, estuaries and coastal waters of England and Wales are subject to large and rapidly increasing demands from the users of water. Many different uses interact or compete for water and will inevitably come into conflict with one another. The National Rivers Authority is the major manager of the water environment in England and Wales and has the responsibility to reconcile conflicts between water users. Our Mission Statement expresses the following principles:

We will protect and improve the water environment by the effective management of water resources and by substantial reductions in pollution. We will aim to provide effective defence for people and property against flooding from rivers and the sea. In discharging our duties we will operate openly and balance the interests of all who benefit from and use rivers, groundwaters, estuaries and coastal waters. We will be businesslike, efficient and caring towards our employees.

We have chosen to use Catchment Management Plans to translate those principles into action. The plans describe our vision for each catchment, identify problems and issues and propose actions that may be taken to resolve them. The plans also provide the means of promoting two key aspects of environmental management;

- land use planning
- water quality objectives.

RELATIONSHIP BETWEEN LAND USE PLANNING AND CATCHMENT MANAGEMENT PLANNING

The broad objective of catchment management planning is to conserve and enhance the total water environment through effective land and resource management. However, while the NRA is well placed to influence some of the factors affecting the water environment, and extending to the littoral zone, it has very little control over the mechanisms which determine land use change on a catchment-wide basis. This is largely the responsibility of local planning authorities through the implementation of the Town and Country Planning Acts.



Oystercatcher.

The policies in statutory development plans are important in this regard in that they set out the framework for land use change, and provide the key reference in determining development applications. The NRA encourages the inclusion of policies which reflect its concerns and responsibilities.

As guidance for local authorities, the NRA has prepared a set of statements relating to the broad headings of water quality and water resources, flood defence, fisheries, conservation, recreation and navigation in controlled waters, and mineral workings and waste disposal. These statements are summarised in the NRA's "Guidance Notes for Local Planning Authorities on the Methods of Protecting the Water Environment through Development Plans".

This CMP Action Plan sets out issues and actions specific to the Mepai Strait which have been agreed within the framework of these Guidance Notes. Section 4 outlines how the concerns of the water environment should influence the location and nature of development and land use change within the catchment.

WATER QUALITY OBJECTIVES

The Water Resources Act 1991 allows for the introduction of a scheme of Statutory Water Quality Objectives (WQOs). This is a new system for water quality planning which would place quality targets on a statutory footing. The scheme is based upon the uses to which waters may be put, recognising that there is a cost involved in meeting the quality targets necessary

to support these uses.

So far WQOs relate to freshwaters and consequently do not apply to the Menai Strait, although it is the intention eventually to extend the scheme to include all controlled waters. This unique body of water was, for the purposes of the old National Water Council (NWC) classification, defined as an estuary. The water quality objectives for the Menai Strait are therefore expressed in terms of the NWC standards for estuarine waters, supplemented by the requirements of various EC Directives such as those relating to Bathing Waters, Shellfish Waters and Dangerous Substances.

It is anticipated that the NWC estuary classification scheme will eventually be replaced by the WQO scheme when it is extended to include estuaries and other controlled waters. The objectives for the Menai Strait will be modified accordingly at that time.



Working Dredger at Caernarfon Harbour.

2.0 REVIEW OF THE CONSULTATION PROCESS

The Menai Strait Catchment Management Plan consultation report was distributed to 105 organisations including statutory and non statutory bodies to seek their views on the NRA's proposals. These were sent out two weeks in advance of the formal public launch of the Plan at Plas Menai, Caernarfon, on the 21st June, 1993. In addition to the comments received at the launch, all consultees were invited to submit their detailed views by 31st August, 1993.

There were 27 respondents, the support of which the NRA found most encouraging. A small number were of the view that the NRA's proposals were not sufficiently exacting, others questioned some of the

factual information and provided corrections/ amendments. All respondents were sent an acknowledgement for their valued contributions which were considered in the preparation of this Action Plan.

The consultation report identified 13 issues within the catchment, and the public consultation identified a further potential 4 issues of which 3 were considered as new discrete issues by the NRA, and which are now included in the Actions section (Issues 14, 15, 16, Section 5.0). The other issue was already catered for in the Plan. The three new issues are:-

- (i) Oil pollution in docks and marinas.
- (ii) Requirement for improved access along the Ynys Môn shoreline.
- (iii) The impact of gill netting in the Strait.

The consultation process is a very important integral part of the NRA's development of a Catchment

Management Plan and in particular in the preparation of the second phase or Action Plan. The consultation on this particular Plan has revealed that many share the NRA's vision for the Menai Strait and are supportive of the proposed actions to achieve the objectives set by the Authority.

3.0 OVERVIEW

CATCHMENT DESCRIPTION

The Menai Strait is a magnificent sea channel, famed for its scenic beauty, ecological importance and wide-ranging recreational opportunities, that separates Ynys Môn (Anglesey) from the mainland of Gwynedd in North Wales. The Strait is spanned by two famous 19th century bridges, the Menai suspension road bridge completed by Thomas Telford in 1827 and Robert Stephenson's Britannia tubular railway bridge (1849) which, since rebuilding works after a devastating fire in the 1970s, also carries the A5 Holyhead to London trunk road.

For the purposes of this Management Plan the boundary is defined as the area from Ynys Seiriol (Puffin Island) across to Pen y Gogarth (Great Orme's Head) in the north-east and from Ynys Llanddwyn across to Dinas Dinlle in the south-west. This Plan includes all the area below high water together with the coastal strip that influences or is under the influence of the Strait. The water channel is narrow, varying in width between 180 metres (200 yards) and 3.2 kilometres (2 miles), and extends for some 24 kilometres (15 miles) from Ynys Seiriol to Abermenai. The Strait is made up of eastern and western reaches, both running from north-east to south-west, linked by a short central north-south (Llanfairpwll to Felinheli) reach.

Tidal patterns are complicated as flows enter the Strait from both ends, strongly influenced by the currents of the Irish Sea. Tidal range increases clockwise around Anglesey and eastwards through the Strait with a maximum difference of 3 metres. The differences in tidal cycle and range bring about a north-east to south-west residual flow.

The catchment with a population of approximately 50,000, 42% of which are located in the two centres of Bangor and Caernarfon, relies heavily upon



Menai Strait from Caernarfon.

agriculture, public services and tourism for employment. It lies within the County of Gwynedd and covers parts of Aberconwy, Arfon and Ynys Môn Borough Council areas. A very small sector of the catchment falls inside the northern boundary of the Snowdonia National Park.

The Strait is not now a merchant seaway although there is a high degree of use by small vessels. The coastal strip carries important trunk road (A55) and rail (Holyhead-London) links which, through crossing the Strait via the Britannia Bridge, provide the main arterial routes for trade between Britain and Eire.

Whilst water quality in the Strait is generally good, (Class A in the National Water Council Survey) algal blooms (extensive growths) occur in most years. Their origin is outside the Strait and the resultant decaying algal masses are often mistaken for sewage debris. There are also aesthetic water quality problems arising from discharges of crude sewage, but these are localised and the major ones will be incorporated into a Dŵr Cymru sewage treatment and disposal scheme.



National Water Sports Centre Plas Menai.

The Strait supports a wide variety of water sports principally sailing, diving, water skiing and canoeing. It is the location of the Sports Council for Wales' Water Sports Centre at Plas Menai, where some 16,000 person hours of tuition are provided each year. The rocky shore limits bathing to a few locations with only Morfa Dinlle being identified under the EC Bathing Waters Directive.

Effective defence for people and property against flooding from rivers and the sea is an important objective within the area of the Strait with 710 Ha of land being at risk. The NRA is responsible for the maintenance of a number of coastal defences notably the Foryd and Dwyran Embankments and the Rhuddgaer sea wall. The coastal defences at Dinas Dinlle which were severely storm damaged have been reconstructed to provide an adequate level of defence for the area. This is a joint scheme involving Arfon Borough Council (as the authority responsible for the defences) and the NRA.

The natural resources of the area are exploited commercially and for recreation. In particular there

is a commercial fishery for sea fish, shellfish and crustaceans, as well as NRA licensed net fisheries for salmon and sea trout which migrate through the Strait. It is a popular sea angling venue whilst organised wildfowling is practised at two estuarial locations.

The main archaeological interests in the Strait include several stone fish traps (goradau) constructed in the fifteenth century or earlier, the best preserved of these being Gorad Goch and Gorad Ddu in the Swellies. There are many wrecks, particularly in the Swellies, including HMS Conway.

The Menai Strait is a natural resource of such outstanding ecological importance that the Countryside Council for Wales (CCW) has proposed the site for designation as only the second Marine Nature Reserve (MNR) in Wales. There are 10 sites of Special Scientific Interest in the Plan Area and Newborough Warren and Ynys Llanddwyn are designated National Nature Reserves. In addition there are a number of Local Nature Reserves and the Anglesey Coast is in itself designated as an Area of Outstanding Natural Beauty (AONB).

CATCHMENT USES

The range of uses and activities is extensive within the Menai Strait catchment and all legitimate uses of the catchment which can impact, or interact with the water environment have been described under 15 categories of Use in phase I of the Catchment Management Plan or Consultation Report.

These are:-

- Development - Housing, Industry & Commerce.
- Basic Amenity



Marina at Port Dinorwic.

Conservation/Marine Ecology
Special Conservation Areas
Marine Fisheries
Angling
Salmonid Fishery
Commercial Shellfishery
Flood Defence
Immersion Sports
Boating
Water Abstraction
Effluent Disposal
Scientific Research
Navigation

There will inevitably be some interaction and sometimes conflict between different Uses, though conflict has only been identified as existing between the establishment of the MNR and the impact any necessary controls may have on boating and the digging of bait for angling. Also, enforcement of

Harbour Authority byelaws to curtail discharges from boats may reduce the freedom currently enjoyed by these users.

All the Uses will have water quality and quantity needs, as well as requirements with respect to physical features. These are already available at the appropriate standards for the great majority of the Uses. Where one or more of these requirements are not available at the appropriate standards this is interpreted as an issue in need of action(s) to resolve it. These are outlined in the Actions section (Section 5.0).

There is no reason, given a collaborative co-ordinated approach and mutual respect and understanding, why all the Uses of the Menai Strait catchment cannot continue in harmony without adversely impacting on each other or on the water environment. Certainly the NRA will be seeking to maintain the water quality, quantity and physical features currently available to all legitimate Uses. Where appropriate, and within prevailing financial constraints, it will seek to improve the existing situation.

4.0 RELATIONSHIP BETWEEN LAND USE AND THE WATER ENVIRONMENT

The policies in local authorities' statutory development plans are very important, given that they provide the framework for land use change and provide the key reference in determining development applications (Planning and Compensation Act 1991). The NRA therefore welcomes the inclusion of policies which reflect its concerns and responsibilities in development plans, including the statutory requirement to conserve and enhance the water environment and associated lands. To facilitate this the NRA has provided 'Guidance Notes for Local Planning Authorities on the Methods of Protecting the Water Environment through Development Plans' to all local planning authorities.

The Menai Strait catchment is a varied and generally high quality environment, nevertheless the impacts of different land uses on the water environment are evident. The extensive residential development which has taken place around the Strait without any accompanying development of adequate sewage disposal facilities has resulted in crude sewage being discharged into the Strait, causing aesthetic pollution.

The NRA will always object to development in areas where existing inadequate sewage disposal facilities cause aquatic environmental degradation with no commitment to an adequate improvement scheme.

Development in low lying areas will subject the development and existing properties to risk from flooding, as will development on higher ground where fluvial flooding can put property at risk where the area of the natural flood plain or its rate of drainage has been reduced in any way. The NRA is obliged to advise the local planning authorities where any proposed development is at risk from flooding, in accordance with the Welsh Office circular 68/92.

The catchment is predominantly rural. If not properly managed, agriculture and forestry with their associated activities can result in the deterioration of water quality. The Control of Pollution (Sludge, Slurry and Agricultural Fuel Oil) Regulations 1991 have set standards of construction within the agricultural industry which will serve to reduce the



Dinas Dinlle sea defence.

incidence of agricultural pollution. The Forestry and Water Industries have produced the Forests and Water Guidelines which set standards to minimise problems

from forestry operations.

Any land use which could result in contamination of land or which could mobilise pollutants in land already contaminated will be subject to the requirements of the NRA's Groundwater Protection Policy. Whilst the presence of groundwater is limited in the catchment, the NRA will nevertheless look to the planning authorities to have regard to the protection of groundwater, as a material consideration in the determination of planning applications.

Land use and the water environment are therefore closely inter-related, and the NRA will actively promote with the local planning authorities the need for the protection of the water environment to be clearly evident in policies within their statutory development plans.

5.0 ACTIONS

INTRODUCTION

The Menai Strait catchment is generally of high quality, but issues have been identified that must be resolved to progress the vision for the catchment.

The Action Plan is the means by which the vision is gradually turned into reality. It is a clear statement of intent to carry out operational work in the field that will translate aims and objectives into tangible results. The implementation of this is necessary if the vision for the catchment is to be realised.

This has a 5 year programme initially and, whereas many of the actions required will be in place by the end of this period, there will be some outstanding which will need to be addressed for the vision to be fully realised. Moreover, Catchment Management Planning is dynamic in nature and more actions may be identified over the ensuing years which will be required to ensure that the environment is effectively

protected. First of all, however, there are 11 issues to be resolved which are presented in tabular form in this section.

All the actions identified herein have been discussed with those parties involved. Only where these parties have agreed to the actions, the timescale of implementation and the costs involved, has the NRA featured these elements in this section. In the absence of these agreements or sufficient information, the issues are included but without the details of costs, timescale, and responsibility.

PROGRESS WITH ACTION PLAN / VISION

The baseline from which the Action Plan operates is the 'State of the Catchment' reported in the consultation document distributed during 1993. The success criteria for the Actions are given in the tables 'Menai Strait Actions - Success Criteria' (Section 6.0).

5.0 MENAI STRAIT ACTIONS

ISSUE 1 Discharge of Untreated Sewage.									
ACTIONS	RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE
	LEAD	OTHER							
New STWs for Beaumaris and Brynsiencyn. Upgrade the Treborth Works for Secondary Treatment and extend to cater for flows from Menai Bridge, Llandegfan, Port Dinorwic and Bangor.	Dŵr Cymru	NRA	22m						
Identify significant Private Discharges.	NRA		5k						
Provision of appropriate treatment by Private Dischargers.	Private Dis- chargers		>200k						
ISSUE 2 Proposed Marine Nature Reserve.									
Decision with the Secretary of State.	Welsh Office	CCW	Not yet known						
ISSUE 3 Bird disturbance at Llanddwyn, Foryd Bay and Penmon by human activity.									
The Secretary of State's decision on the MNR (Issue 2) will indicate the options available.	CCW	Welsh Office	Not yet known						
ISSUE 4 Uncontrolled bait digging damaging the shores at Foryd Bay and Lafan Sands.									
The Secretary of State's decision on the MNR (Issue 2) will indicate the options available.	CCW	Welsh Office	Not yet known						
ISSUE 5 Algal blooms (Phaeocystis sp.) cause aesthetic problems and shutdown of abstraction(s).									
Natural process. Withdrawn as an issue.									
ISSUE 6 Re-establishment of adequate sea defence at Dinas Dinlle.									
The scheme is substantially completed. A warranty/ maintenance period will run until June 1995.	NRA	Welsh Office Arfon BC Gwynedd CC	1.5m						

5.0 MENAI STRAIT ACTIONS

ISSUE 7 Water quality non-compliance with EC Shellfish Waters Directive with regard to copper.									
ACTIONS	RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE
	LEAD	OTHER							
Enhanced sampling programme has shown that the copper concentration has fallen and is now below the directive limit. Withdrawn as an issue	NRA		2k						
ISSUE 8 Lifting of Closure Orders may render the waters bacteriologically non-complaint with EC Shellfish Water Directive.									
The bacteriological standards requirements of the Shellfish Waters Directive 79/923/EEC on the lifting of Closure Orders have been overtaken by the requirements of the Shellfish Hygiene Directive 91/492/EEC. All shellfish beds are in classes B or C and harvested shellfish must be purified prior to consumption. Withdrawn as an issue.									
ISSUE 9 Mussel beds in one area in Class C accordance with EC Shellfish Hygiene Directive. Class B a minimum MAFF objective in the Strait.									
It is expected that achieving the Actions outlined in Issue 1 will allow an improvement in shellfish bed classification.	Dŵr Cymru Private Dis- chargers	NRA MAFF	See Issue 1 above						
ISSUE 10 Transport of sediments into estuary is increasing turbidity, and may be affecting the ecology e.g. distribution of some seaweed species.									
Accepted as a natural process. Withdrawn as an issue.									

5.0 MENAI STRAIT ACTIONS

ISSUE 11									
Bathing water in parts of the western half of the Penmaenmawr/Dwygyfylchi beach fails to comply with EC Bathing Waters Directive.									
ACTIONS	RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE
	LEAD	OTHER							
Identified in Mid 1994 as EC Bathing Water. Appropriate sewage treatment to be implemented by the year 2000.	NRA/ Dwr Cymru		Will depend upon scheme						
ISSUE 12									
Discharges from boats of bilge water and toilet waste within the Strait.									
As a statutory consultee the NRA will press for the installation of pump out facilities at new and redeveloped marinas and harbours.	NRA	Plann- Author- ities	Cost of install- ations if imple- mented						
ISSUE 13									
Hydraulic dredging for cockles may adversely affect the ecology and conservation value of the Strait.									
NWNWSFC to consult CCW on all dredging applications.	NWNW SFC	CCW	None						
CCW to prepare policy on hydraulic dredging at sensitive sites	CCW		None						
ISSUE 14									
Oil Pollution in docks and marinas.									
Enforcement of existing Caernarfon Harbour Trust Byelaws. Close liaison between Harbour Trust and NRA to clear up any major spills.	Har- bour Trust	NRA	Not yet known						
ISSUE 15									
Improved access along the Ynys Môn shoreline.									
Promotion of a coastal footpath network as part of the Ynys Môn Coastal Project by the end of 1997.	Ynys Môn BC		3k ann- ually						
ISSUE 16									
Reduction in impact of gill netting in the Strait.									
Introduce Byelaws to prohibit Gill Netting in the Strait between April and November. Implemented During 1993	NRA		None						

6.0 MENAI STRAIT ACTIONS - SUCCESS CRITERIA

ISSUE 1 Discharge of Untreated Sewage.		
ACTIONS	SUCCESSFUL OUTCOME	HOW WILL IT BE MEASURED
New STWs for Beaumaris and Brynsiencyn. Upgrade the Treborth Works for Secondary Treatment and extend to cater for flows from Menai Bridge, Llandegfan, Port Dinorwic and Bangor.	No crude sewage discharges in the Strait.	Completion of identified schemes, monitoring by NRA staff and the public.
Identify significant Private Discharges.	All major sources of pollution identified.	Monitoring by NRA WQ specialists and no adverse public reports concerning new or previously identified sources.
Provision of appropriate treatment by Private Dischargers.	No unacceptable sewage discharges to the Strait.	No adverse reports from public and NRA staff.
ISSUE 2 Proposed Marine Nature Reserve.		
Decision with the Secretary of State.	Approval by Secretary of State for Designation of the Strait as a Marine Nature Reserve.	Implementation of decision. No failure to comply with any byelaws enacted as a consequence of Designation.
ISSUE 3 Bird disturbance at Llanddwyn, Foryd Bay and Penmon by human activity.		
The Secretary of State's decision on the MNR (Issue 2) will indicate the options available.	No disturbance of the bird populations at Llanddwyn, Foryd Bay and Penmon.	No adverse reports of bird disturbance by NRA staff, CCW, RSPB or the public.
ISSUE 4 Uncontrolled bait digging damaging the shores at Foryd Bay and Lafan Sands.		
The Secretary of State's decision on the MNR (Issue 2) will indicate the options available.	No further damage to the foreshore at Foryd Bay and Lafan Sands from bait digging.	No reports of damage by NRA staff, CCW or members of the public.
ISSUE 5 Algal blooms (<i>Phaeocystis</i> sp.) cause aesthetic problems and shutdown of abstraction(s).		
Natural process. Withdrawn as an issue		
ISSUE 6 Re-establishment of adequate sea defence at Dinas Dinlle.		
The scheme is substantially completed. A warranty/maintenance period will run until June 1995.	Sea Defence at Dinas Dinlle re-established.	Evaluation by NRA Flood Defence Specialists, of whether the scheme affords the level of defence and environmental protection specified in original design plans.

6.0 MENAI STRAIT ACTIONS - SUCCESS CRITERIA

ISSUE 7 Water quality non-compliance with EC Shellfish Waters Directive with regard to copper.		
ACTIONS	SUCCESSFUL OUTCOME	HOW WILL IT BE MEASURED
Enhanced sampling programme has shown that the copper concentration has fallen and is now below the directive limit. Withdrawn as an issue.		
ISSUE 8 Lifting of Closure Orders may render the waters bacteriologically non-compliant with EC Shellfish Water Directive.		
Closure Orders were lifted on the introduction of the 'Shellfish Hygiene Directive' 91/492/EC and all shellfish beds are classed as B or C. Therefore all harvested shellfish must be purified before consumption and the bacterial standards in the Shellfish Waters Directive 79/923/EEC do not apply. Withdrawn as an issue.		
ISSUE 9 Mussel beds in one area in Class C accordance with EC Shellfish Hygiene Directive. Class B a minimum MAFF objective in the Strait.		
It is expected that achieving the Actions outlined in Issue 1 will allow an improvement in shellfish bed classification.	Class B classification achieved for mussel beds throughout the Strait.	Evaluation by MAFF of compliance with the bacteriological standards of the EC Hygiene Directive applicable to a Class B classification.
ISSUE 10 Transport of sediments into estuary is increasing turbidity, and may be affecting the ecology e.g. distribution of some seaweed species.		
Accepted as a natural process. Withdrawn as an issue.		
ISSUE 11 Bathing water in parts of the western half of the Penmaenmawr/Dwygyfylchi beach fails to comply with EC Bathing Waters Directive.		
Identified in Mid 1994 as EC Bathing Water. Appropriate sewage treatment to be implemented by the year 2000.	Selected scheme ensures bathing water compliance with the EC Bathing Waters Directive mandatory bacteriological standards.	Completion of selected scheme. Monitoring by NRA staff and assessment of compliance by DOE.

6.0 MENAI STRAIT ACTIONS - SUCCESS CRITERIA

ISSUE 12 Discharges from boats of bilges and toilet waste within the Strait.		
ACTIONS	SUCCESSFUL OUTCOME	HOW WILL IT BE MEASURED
As a statutory consultee the NRA will press for the installation of pump out facilities at new and redeveloped marinas and harbours.	Installation of pump out facilities at all new and redeveloped marinas and harbours within the catchment.	Monitoring by NRA staff.
ISSUE 13 Hydraulic dredging for cockles may adversely affect the ecology and conservation value of the Strait.		
NWNWSFC to consult CCW on all dredging applications. CCW to prepare policy on hydraulic dredging at sensitive sites.	Agreement between participating bodies on environmentally protective practices and implementation in the field.	Monitoring of effect of hydraulic dredging. (Responsible authority to be determined).
ISSUE 14 Oil Pollution in docks and marinas.		
Enforcement of existing Caernarfon Harbour Trust Byelaws. Close liaison between Harbour trust and NRA to clear up any major spills.	Adherence to byelaws with no visible oil on water surface. Effective containment and clean up of any major spill.	No reports by Harbour Trust or NRA staff or the public of violations. No reports of chronic oil pollution by Harbour Trust or public. No adverse reports on effectiveness of clean up operations.
ISSUE 15 Improved access along the Ynys Môn shoreline.		
Promotion of a coastal footpath network as part of the Ynys Môn Coastal project by the end of 1997.	Coastal footpath network for Ynys Môn shoreline set up.	Verified increased public access to shoreline by Ynys Môn B.C.
ISSUE 16 Gill netting in the Strait adversely impacting on recruitment of fish stocks.		
Introduce Byelaws to prohibit Gill Netting in the Strait between April and November. Implemented During 1993.	Adherence to byelaws.	No enforcement action by NRA bailiffs or verified activity reports from public.

7.0 FUTURE REVIEW AND MONITORING

The NRA will be jointly responsible, with other identified organisations and individuals, for implementing this Action Plan. Progress will be monitored and normally reported annually. The reviews will examine the need to update the CMP in the light of changes in the catchment. The period between major revisions will normally be five years.

The annual review will take the form of a short progress report, to include work achieved compared with that planned, and to highlight any changes to the Plan.

The annual review will be sent to all those involved in the actions identified for the catchment and will be made widely available.

CONTACTING THE NRA

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