

NRA-Wales 25

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Menai Strait
Catchment
Management
Consultation
Report
Summary



NRA

*National Rivers Authority
Welsh Region*

**Guardians of
the Water Environment**

INTRODUCTION

Never before has there been such a pressing need to conserve our rivers, lakes and coastal waters to support the rapidly increasing recreational, domestic, agricultural and industrial demands placed upon them. On the other hand, the need to protect life and property from flooding has never been greater. The NRA has a wide range of responsibilities for the control of the water environment, and seeks to reconcile the conflicts raised by the competing needs for water.

In particular the NRA is responsible for:

- conservation of water resources
- pollution control
- flood defence and flood warning
- maintenance and improving of fisheries
- nature conservation in water related habitats
- promotion of water based recreation
- control of navigation, in some areas.

The NRA believes that it can only carry out its work by adopting the

concept of **integrated catchment management**. This means that a river catchment is considered as a whole and the actions in each of the NRA areas of responsibility must take account of the possible impact on other areas.

The NRA has decided to formally present its catchment management policies to the public via Catchment Management Plans which will be produced for all the river in Wales by 1998. The Plans are intended to provide a link between the NRA and the users of water in each catchment so that the Authority can better reflect their interests whilst carrying out its duties. For this reason each Plan includes a Consultation Phase during which the general public are invited to comment on the NRA's proposals for the future management of the catchment.



YOUR VIEWS

The Menai Strait Catchment Management Consultation Report is our assessment of the state of the catchment and indentifies all the key issues which need to be resolved. The most important of these issues are outlined in the tables at the end of this summary report.

We need your views:

- what do you think about the Plan in general?
- have we identified all the uses?
- have we identified all the issues?
- what do you think about the options proposed?

If you would like to comment on the Consultation Report or receive a free copy of the full document please write to:

**The Catchment Planning Co-ordinator,
 National Rivers Authority,
 'Highfield',
 Priestly Road,
 Caernarfon.
 LL55 1HR.
 Telephone: 0286 672247**

Please send your comments in writing, but if this is not possible contact us on the telephone number above.



CATCHMENT STATISTICS

GENERAL

Population	45,000 (1991 estimate)
Peak holiday influx (July/August)	350,000 * (additional)
	150,000 * (day trippers)

* 1980 figures

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)	11,772
Caernarfon	9,279

WATER QUALITY

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

MENAI STRAIT CATCHMENT





FLOOD DEFENCE

Effective defence for people and property against flooding from rivers and the sea is an important objective within the area of the Strait.

The NRA has the power to maintain or improve certain rivers (which are designated as main rivers) and some sea defence structures. Other sea defences are the responsibility of a variety of public and private bodies.

Several designated main rivers discharge to the Menai Strait. As part of maintenance operations, particular attention is paid to those outfalls which are protected by tidal doors.

The NRA is currently responsible for the maintenance of the Foryd Embankment, Dwyran Embankment and Rhuddgaer Sea Wall, which are coastal defences noted as being in generally good condition by the Sea Defence Survey Report 1992. There are many defences within the area, outside the responsibility of the NRA, against which the Sea Defence Survey reports a varying degree of protection.

Coastal defences at Dinas Dinlle are at present the responsibility of Arfon Borough Council and have been severely damaged by the storms of recent winters. The Borough Council and the NRA are currently involved in the promotion of a scheme to re-establish an adequate level of defence for the area.

RECREATION

The use of the Menai Strait can be traced through history for more than 2,000 years. Today it is of very high amenity value to both residents and visitors. The wide ranging recreational opportunities attract thousands of people each year.

The sheltered areas of the Strait are very popular for sailing and the ten local sailing clubs have a total membership of more than 2,000. Each year a two week regatta is held in July/August when more than 150 boats compete each day making it an important tourist attraction.

The Strait is intensively used for water sports and is the site of the Sports Council for Wales' National Watersports Centre at Plas Menai, where 16,000 days of tuition are provided each year.

The most common immersion sports are canoeing, wind surfing, water and jet skiing and scuba diving. The rocky shore limits bathing to a few locations (Morfa Dinlle/Dinas Dinlle, Llanfairfechan, Llanddwyn and Penmaenmawr). Only the Morfa Dinlle is identified under the EC Bathing Waters Directive.

The Strait must be maintained in a suitable condition to support recreational activities at, as a minimum, their current levels.



ABSTRACTION

Abstraction of water from below the low water mark of ordinary spring tides is exempt from licensing by the NRA. The NRA does not, therefore, have any pollution control duties to ensure that the water taken is fit for its intended purpose. Nonetheless, the NRA recognises that the provision of water of suitable quality is vital to the majority of abstractors in the Strait.

Anglesey Sea Zoo and the Marine Science Laboratory at Menai Bridge abstract water to supply their aquaria, and also supply other academic institutions. Myti Mussels at Port Penrhyn abstract water for shellfish collected from its lays at Bangor which are subject to closure orders.

There is some concern that severe blooms of the alga *Phaeocystis* have detrimental effects on water quality and in most years result in the closure of abstractions for short periods during the summer.



EFFLUENT DISPOSAL

Water quality in the Strait is generally good, (Class A in the National Water Council Survey) but algal blooms 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 will be incorporated into a Dŵr Cymru Welsh Water sewage treatment and disposal scheme.

Other consented discharges, with the exception of Ferodo Ltd, are of relatively minor consequence. There is growing concern about the potential impact of discharges of sewage from the many boats using the Strait.

Spoil dumping, controlled and licensed by MAFF, takes place at two locations but mostly at the site in the Conwy Bay. However this normally only consists of dredged material but there is concern that the dredging and dumping of silt may re-suspend pollutants such as heavy metals and contribute to turbidity in the Strait.

Sewage sludge is not dumped within the Menai Strait and the decision that sludge dumping in Liverpool Bay should cease will result in a reduction in the enrichment of coastal waters including the Strait.

Good water quality within the Strait is fundamental to all users and is one of the major aims of this plan.

CONSERVATION

The Menai Strait is a natural resource of outstanding ecological importance which is considered by the Countryside Council for Wales (CCW) to be worthy of designation as a Marine Nature Reserve (MNR). The Strait has been the site for more than a hundred years of research into marine ecology, centred on the University College of North Wales, Bangor.

Whilst the marine communities in the Strait have evolved within a long history of use and remain relatively natural, there is some evidence that turbidity has increased in the past 30 years which could have affected the distribution of some seaweed species.

In 1947 the Anglesey Coast was designated a Conservation Area, later modified to an Area of Outstanding Natural Beauty (AONB), and Great Ormes Head is a designated Heritage Coast. The conservation needs of these areas are taken into account by the local planning authorities.

Newborough Warren and Ynys Llanddwyn are designated National Nature Reserves. There are also 10 Sites of Special Scientific Interest (SSSIs) and a number of Local Nature Reserves, e.g. Traeth Lafan.

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.

Clearly there is a particular need to safeguard the immense conservation value of these waters.



DEVELOPMENT

The area of the plan lies within the County of Gwynedd and covers parts of the Aberconwy, Arfon and Ynys Môn Borough Councils areas. A very small sector of the catchment falls inside the northern boundary of the Snowdonia National Park.

Development within the Arfon and Ynys Môn areas is currently controlled by the Menai Strait Local Plan which was formally adopted in 1989. It was prepared jointly by the Borough Councils and Gwynedd County Council. This will be replaced by District Wide Local Plans which are currently in preparation by all three Borough Councils and the National Park. A new draft Structure Plan has been prepared by Gwynedd County Council, and is currently being modified by the Secretary of State for Wales.

No development proposals identified in these plans could significantly affect the Menai Strait.

LAND USE

Agriculture and tourism are the main industries in the area, the only other significant employers (number greater than 100) are Ferodo at Caernarfon, Ferranti at Bangor and Lairds at Beaumaris.

The Strait is an important route for migrating salmon and sea trout either returning to rivers to spawn, returning to the sea after spawning or going to the sea for the first time as smolts.

It is illegal to fish, take, or intend to fish for salmon or sea trout without a licence. The NRA licenses 6 commercial seine (draft) nets in the Strait which must be fished within defined areas using approved methods and only during stipulated time periods.

The NRA has a major enforcement problem in the Strait because there is considerable illegal netting of salmon and sea trout, often under the guise of fishing marine species. In conjunction with the North Western and North Wales Sea Fisheries Committee, new bye-laws to control this illegal fishing are being drafted.

The Strait is a very popular angling venue, because of the wide variety of fish species available - 96 species have been recorded - and nearly the whole length is accessible. There is a limited amount of trawling in the area but most fish landed at the local ports are caught outside the Strait

The sheltered waters of the Strait support important shellfisheries. A mussel fishery is operated by Myti Mussels, and hydraulic dredging for cockles is practised at Traeth Lafan although there is growing concern about the environmental impact of this technique. In 1983 the Strait was notified as a designated area under the EC Shellfish Waters Directive. New hygiene regulations now apply to the shellfishery, which will be implemented fully by 1996 under the recent EC Directives (91/492/EEC, and 91/493/EEC). These Directives set standards which must be met to ensure the suitability of shellfish for human consumption.



ISSUES AND OPTIONS

The following tables list the 13 issues which the NRA has identified within the Menai Strait. We would like to hear from you if:

- you think that there are other issues which have been missed.
- you think that we have not considered all the options available.
- you have any views on the options suggested.
- you have any other information about the catchment or any comment about its future management.

ISSUE 1: DISCHARGE OF UNTREATED SEWAGE			
Options	Responsibility	Advantages	Disadvantages
<p>All discharges to be appropriately treated, and diluted.</p> <p>All outfalls to discharge below mean low water spring tide level (Currently being progressed)</p>	<p>Dŵr Cymru Welsh Water and Private Dischargers</p>	<p>Removal of aesthetic problems</p> <p>Amenity gain. Enhanced Protection of uses in the catchment, in particular shellfishery and bathing</p>	<p>Cost £23m to Dŵr Cymru Welsh Water</p> <p>Cost for private dischargers unknown</p>
<p>This entails determination of appropriate quality standards for discharges</p>	<p>NRA</p>	<p>As above</p>	<p>Cost and commitment of staff resources</p>
ISSUE 2: PROPOSED MARINE NATURE RESERVE BY COUNTRYSIDE COUNCIL FOR WALES AWAITING DETERMINATION			
<p>Welsh Office (WO) and CCW to progress determination. (Currently being progressed)</p>	<p>WO/CCW</p>	<p>Protection of ecology and conservation value of the Strait</p> <p>Controlled bait digging. Bird disturbance minimised</p>	<p>Impact on other uses of the Strait</p>
ISSUE 3: BIRD DISTURBANCE AT LLANDDWIN, FORYD BAY AND PENMON			
<p>Designation of Strait as MNR. (Currently being progressed)</p>	<p>CCW/WO</p>	<p>Disturbance minimised</p>	<p>Impact on other uses, in particular boating</p>
ISSUE 4: UNCONTROLLED BAIT DIGGING, DAMAGING THE SHORES AT FORYD BAY AND LAFAN SANDS			
<p>Designation of Strait as MNR (Currently being progressed)</p>	<p>CCW/WO</p>	<p>Controlled bait digging</p>	<p>May impact on anglers</p>

ISSUE 5: ALGAL BLOOMS (PHAEOCYSTIS SP.) CAUSE AESTHETIC PROBLEMS AND SHUTDOWN OF ABSTRACTION(S)

Options	Responsibility	Advantages	Disadvantages
Options limited. Origin from outside the catchment. General reduction in nutrient inputs from agriculture, industry and domestic sewage discharges may help	Industry including Agriculture, Dŵr Cymru Welsh Water, Private Dischargers	Increase in nutrient content of waters will be minimised. Improved water quality for all uses	Cost - unknown. May not reduce the size or frequency of the blooms. Natural nutrient status of sea water may not be a limiting factor to the growth of algae
Investigation of any trends in nutrient status of coastal waters (Currently being progressed)	Irish Sea Nutrients Group	Establish any trend as basis for determining action required	Action may prove costly

ISSUE 6: RE-ESTABLISHMENT OF ADEQUATE SEA DEFENCE AT DINAS DINLLE

Promotion of scheme to re-establish adequate sea defence at Dinas Dinlle (During 1993/1994)	NRA/Arfon B.C.	Protection of land and property from inundation	Cost - unknown
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ISSUE 7: WATER QUALITY NON COMPLIANCE WITH EC SHELLFISH WATERS DIRECTIVE (COPPER)

Revision of historical data to establish whether there has been any increase in the content of copper, and whether it is a natural phenomenon (Completion by 1994/95)	NRA	Establishment of cause as a basis for determining the required action	If a natural phenomenon the elevated levels will have to be accepted. If pollution, the source may prove difficult to identify/ do anything about it
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ISSUE 8: LIFTING OF CLOSURE ORDERS MAY RENDER THE WATERS BACTERIOLOGICALLY NON COMPLAINT WITH EC SHELLFISH WATER DIRECTIVE

Options	Responsibility	Advantages	Disadvantages
All sewage discharges to be adequately treated and diluted (During 1995-1998)	Dŵr Cymru Welsh Water and Private Dischargers	Compliance with bacteriological standards of EC directive. Enhanced protection of other uses in the catchment	Cost £23m to Dŵr Cymru Welsh Water. Cost to private dischargers unknown. Waters may still not comply with EC Directive
	NRA/MAFF	As above	Cost - unknown

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

As in issue 8	As in issue 8	As in issue 8	As in issue 8
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ISSUE 10: TRANSPORT OF SEDIMENTS INTO ESTUARY IS INCREASING TURBIDITY, AND MAY BE AFFECTING THE ECOLOGY E.G. DISTRIBUTION OF SOME SEAWEED SPECIES

Origin from outside the catchment. Sediment source identification	UCNW Bangor (School of Marine Science)	Reduction of sediment load in the Strait	Cost - unknown. Difficult to implement
Prevention of sewage sludge dumping at sea from 1988, under EC Municipal Waste Waters Directive	Water Companies	Reduction of turbidity in the Strait	Cost - unknown. Will cause sludge disposal problems. May not have the desired effect on the Strait

ISSUE 11: BATHING WATERS IN PARTS OF THE WESTERN HALF OF THE PENMAENMAWR/DWYGYFYLCHI BEACH WOULD FAIL TO COMPLY WITH EC BATHING WATERS DIRECTIVE

Options	Responsibility	Advantages	Disadvantages
Provide adequate treatment at the Dwygyfylchi sewage outfall. Outfall to discharge below mean low water spring level (Target date 2000+)	Dŵr Cymru Welsh Water	Compliance with EC directive, and enhanced protection for bathers and other users	Cost - unknown Waters may still not comply with EC directive. Non Identified waters do not have to comply with EC Directive
NRA to set appropriate quality standards for discharge	NRA	As above	

ISSUE 12: DISCHARGES FROM BOATS OF BILGES AND TOILET WASTE WITHIN THE STRAIT

Promotion of byelaws	NRA Harbour Authorities	Improvement to aesthetic quality for all uses	Cost - unknown. Difficult to implement
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ISSUE 13: HYDRAULIC DREDGING FOR COCKLES MAY ADVERSELY AFFECT THE ECOLOGY AND CONSERVATION VALUE OF THE STRAIT

Review of available historical data, to establish whether this is a problem	NRA CCW NWNWSFC	Provision of data for determining action required	Cost - unknown. Determined action may impact on the commercial harvesting of cockles
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Water sports photographs by courtesy of Sports Council for Wales

