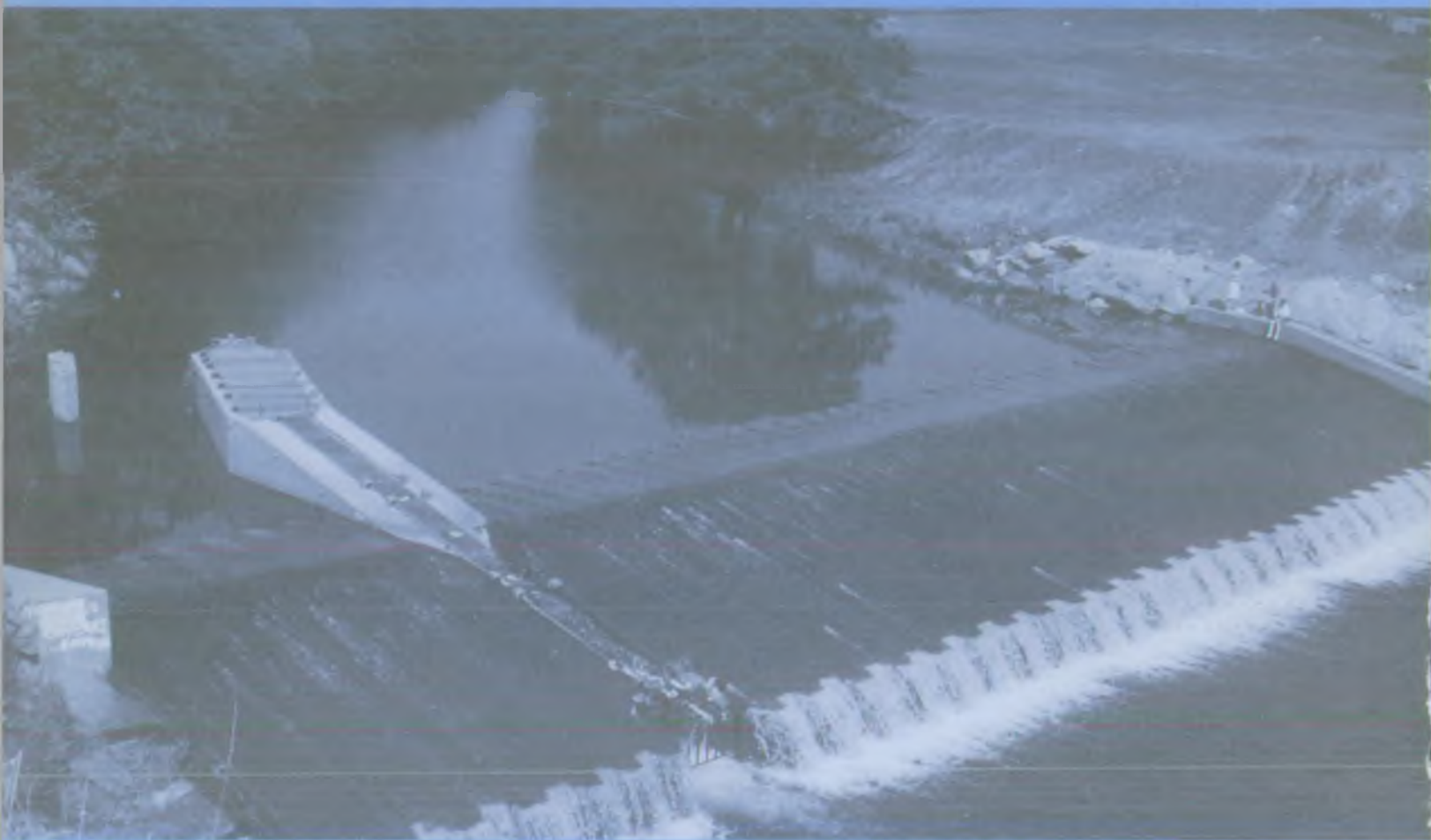


THE TAFE AND SOUTH GOWER
CATCHMENT MANAGEMENT PLAN
ACTION PLAN

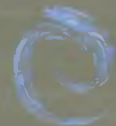
1995

CYNLLUN RHEOLI DALGYLCH
TAFE A DE GWYR
CYNLLUN GWEITHREDU



*Awdurdod Afonydd Cenedlaethol
Rhanbarth Cymru*

AAC



NRA

*National Rivers Authority
Welsh Region*

KEY DETAILS / MANYLION ALLWEDDOL

General / Cyffredinol

Area	272 km ²	Arwynebedd
Population (1991 Census)	232,100	Poblogaeth(Cyfrifiad 1991)
Population Density	853/km ²	Dwysedd Poblogaeth

Topography / Topograffeg

Ground Levels	Max height	802 m AOD / USO	Lefelau Daear	Uchder Mwyaf
Sea Levels (Swansea)	Mean High Water Springs	4.5 m AOD / USO	Lefelau Môr (Abertawe)	Penllanw Cymedrig
	Mean Low Water Springs	-3.9 m AOD / USO		Distyll Cymedrig

Water Quality / Ansawdd Dwr

Length of Classified River in 1992 General Quality Assessment (GQA)		Hyd yr afon a Ddosbarthwyd yn Asesiad Ansawdd Cyffredinol 1992
Class A	46.0 km	Dosbarth A
Class E	2.2 km	Dosbarth E
Class B	35.7 km	Dosbarth B
Class F	0.0 km	Dosbarth F
Class C	6.4 km	Dosbarth C
Insufficient data	6.0 km	Data annigonol
Class D	0.0 km	Dosbarth D
Tawe Estuary (1990 Survey) Class A (highest class)	6.2 km (100%)	Aber Tawe (Arolwg 1990) Dosbarth A (dosbarth uchaf)

Water Resources / Adnoddau Dwr

Annual Average Rainfall	1980 mm	Cyfartaledd Glawiad Blynnyddol
Primary Gauging Station	Tawe at / yn Ynystanglws	Prif Orsaf Fesur

Flood Protection / Amddiffyn Rhag Llifogydd

Length of Designated Main River	100.7 km	Hyd y Brif Afon Ddynodedig
Length of River on which Flood Alleviation Schemes implemented	12.6 km	Hyd yr Afon Lle Gweithredwyd Cynlluniau Lliniaru Llifogydd
Length of River covered by a Flood Warning Scheme	34 km	Hyd yr Afon a warchodir gan Gynllun Rhybuddion Llifogydd

Fisheries / Pysgodfeydd

Average Annual Declared Catches Rods (10 Year Average 1982-1991)	Salmon / Eog	Sea Trout / Siwin	Cyfartaledd Dalfeydd Datganedig Blynnyddol Gwialen (Cyfartaledd 10 mlynedd 1982-1991)
	57	538	

THE AREA MANAGER'S VISION FOR THE TAFE & SOUTH GOWER CATCHMENTS

The Tawe and South Gower catchments provide local residents and visitors with a wealth of spectacular scenery and wildlife around the City of Swansea and valley conurbations. In the north, the catchment is almost completely unspoilt, the wild uplands being protected by the umbrella of the Brecon Beacons National Park. The physical nature of the middle and lower reaches of the river has been managed over the years, and regular maintenance to protect people and property from flooding takes place. The historical heavy industrial use of the lower Swansea valley is reflected in the large dock complex, part of which has now been converted into a marina. The river discharges into the dramatic seascape of Swansea Bay, which sweeps around on the western side towards the beautiful Gower peninsula, whose sandy beaches attract thousands of visitors each year.

During the life of this Plan, we wish to see significant progress in:

- **improving water quality** - the impact of existing sewage discharges will largely be addressed as the phased programme of improvements to infrastructure and sewage treatment works detailed within Dŵr Cymru's second Asset Management Plan (AMP2) become operational. The major improvement schemes for Swansea Bay should be completed by 1997. Similarly, problems downstream of Trebanos sewage treatment works should have been rectified by then. The more extensive problems caused by unsatisfactory combined sewer overflows (CSOs) throughout the catchment, must also be addressed. The success of AMP2 in delivering improvements to the most environmentally significant CSO problems will have a major influence on whether or not the NRA's aspirations for the catchment are realised.
- **assessing the impact of the barrage, and addressing any damaging effects** - further improvement in the migratory fishery will be dependent upon the fish being able to pass the

barrage safely. It is also essential that a management strategy for the operation of the barrage is adopted that prevents retention of poor quality water in the impoundment.

- **developing the migratory fishery** - it will be necessary to control poaching, improve access for migratory fish to obstructed tributaries, and improve areas deficient in suitable salmonid habitat.
- **protecting river corridors and floodplains** - the concept of "buffer zones" alongside watercourses needs to be developed, in rural and urban areas, to encourage the formation of natural river corridor habitats where waterside flora and fauna can thrive. Wherever possible, new development should be directed away from floodplains, unless appropriate flood defence works are in place or alleviation works form part of the proposal.
- **developing an abstraction licensing policy** - abstraction uses must be balanced against the environmental needs of the river system, and we propose to implement an objective methodology for assessing the state of the catchment in water quantity terms.

Implementation of this Action Plan will ensure that the problems that have been identified are addressed. The NRA's vision will be achieved through a balanced management approach to all activities. We will encourage imaginative proposals to allow sustainable economic and community development to proceed whilst ensuring protection and improvement of the water environment. We will collaborate actively with all users of the catchment and all those statutory bodies that can assist us in striving to achieve this vision.



DAVID WALKER

AREA MANAGER - SOUTH WEST WALES



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ENVIRONMENT AGENCY



092010

GWELEDIGAETH Y RHEOLWR ARDAL AR GYFER DALGYLCH TAWE A DE GWYR

Mae dalgyrch Tawe a De Gwyr yn cynnig i drigolion lleol ac ymwelwyr gyfoeth o fywyd gwyllt a golygfeydd ysbennedd o gwmpas Dinas Abertawe a threfi'r cwm. Yn y gogledd, mae'r dalgyrch bron yn gyfangwbl ddilychwin, gyda'r uwchdiroedd gwyllt yn dod dan warchodaeth ymbarel Parc Cenedlaethol Bannau Brycheiniog. Rheolwyd natur ffisegol rhannau canol ac is yr afon dros y blynyddoedd, a gwneir gwaith cynnal rheolaidd i warchod pobl ac eiddo rhag llifogydd. Mae hanes dyffryn isaf Abertawe fel canolfan diwydiant trwm wedi'i adlewyrchu yn y dociau helaeth, rhan ohonynt bellach wedi'u troi'n farina. Llifa'r afon i fôr dramatig Bae Abertawe, bae sy'n ymestyn draw tua'r gorllewin at harddwch penrhyn Gwyr a'i draethau melyn sy'n denu miloedd o ymwelwyr bob blwyddyn.

Yn ystod oes y Cynllun hwn, hoffem weld cynnydd arwyddocaol o ran:

- **gwella ansawdd dŵr** - ymdrinnir ag effaith yr arllwysiau carthion presennol i raddau helaeth wrth i'r rhaglen raddol o welliannau i isadeiledd a gweithfeydd trin carthion a amlinellwyd yn ail Gynllun Rheoli Asedau (CRhA2) Dŵr Cymru ddod i rym. Dylai'r prif gynlluniau gwella ar gyfer Bae Abertawe fod wedi'u cwblhau erbyn 1997. Yn yr un modd, dylai problemau islaw gwaith trin carthion Trebanos fod wedi'u datrys erbyn hynny. Rhaid mynd i'r afael hefyd â'r problemau mwy a achosir gan bibelli gorlif carthion cyfun (PGCC) ledled y dalgyrch. Bydd llwyddiant CRhA2 i sicrhau gwelliannau i'r problemau PGCC sy'n effeithio fwyaf ar yr amgylchedd yn dylanwadu'n fawr ar p'un ai y gwiredir dyheadau'r AAC ar gyfer y dalgyrch ai peidio.
- **asesu effaith y morglawdd, a delio ag unrhyw effeithiau niweidiol** - bydd gwelliannau pellach yn y bysgodfa fudol yn dibynnu ar allu'r pysgod i fynd heibio i'r morglawdd yn ddiogel. Mae'n hanfodol hefyd y mabwysiedir strategaeth reoli ar gyfer gweithredu'r morglawdd a fydd yn

caniatáu i ddŵr o ansawdd gwael gael ei gadw yn y cronïad.

- **datblygu'r bysgodfa fudol** - bydd angen rheoli potsio, gwella mynediad i bysgod mudol i isafonydd sydd wedi'u rhwystro, a gwella ardaloedd diffygiol o ran cynefin addas i bysgod eogaidd.
- **gwarchod coridorau afon a gorlifdiroedd** - mae angen datblygu'r cysyniad o "ardaloedd clustogi" nesaf at afonydd mewn ardaloedd gwledig a threfol, er mwyn hyrwyddo ffurfiant cynefinoedd coridor afon naturiol lle gall bywyd gwyllt glannau afon ffynnu. Lle bynnag y bo modd, dylid cyfeirio datblygiad newydd i ffordd oddi wrth orlifdiroedd, oni bai fod gweithfeydd amddiffyn rhag llifogydd priodol mewn lle neu bod gwaith lliniaru'n rhan o'r cynnig.
- **datblygu polisi trwyddedu tynnu dŵr** - rhaid sicrhau cydbwysedd rhwng defnyddiau tynnu dŵr ac anghenion amgylcheddol y system afonydd, a bwriadwn ddefnyddio methodoleg wrthrychol i asesu cyflwr y dalgyrch o safbwynt maint dŵr.

Wrth weithredu'r Cynllun Gweithredu hwn fe sicrhawn ymateb i'r problemau sydd wedi'u nodi. Gwiredir gweledigaeth yr AAC trwy ymarweddïad rheolaethol gytbwys tuag at bob gweithgaredd. Byddwn yn annog cynlluniau dychmygus i ganiatau i ddatblygiad economaidd a chymunedol cynaladwy fynd rhagddo tra'n sicrhau y caiff yr amgylchedd dyfrol ei warchod a'i wella. Byddwn yn cydweithredu'n weithredol gyda holl ddefnyddwyr y dalgyrch a'r holl gyrff statudol hynny a all ein helpu i ymgynhyrchu at wireddu'r weledigaeth hon.

David Walker

DAVID WALKER

RHEOLWR ARDAL DE-ORLEWIN CYMRU

National Rivers Authority	
Information Centre	
Head Office	
Class No	
Accession No	<i>1000</i>

**TAWE & SOUTH GOWER
CATCHMENT MANAGEMENT PLAN**

ACTION PLAN

1995

Mae'r cynllun yn Gymraeg ar dudalen 24

Text in Welsh starts on page 24

**National Rivers Authority
Welsh Region**

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INTRODUCTION

THE CONCEPT OF CATCHMENT MANAGEMENT PLANNING

The rivers, lakes, estuaries and coastal waters of England and Wales have never before been subject to such large and rapidly increasing demands from the users of water. Many different uses interact, or compete for water or water space, and will inevitably come into conflict with one another. The National Rivers Authority (NRA) is the major manager of the water environment in England and Wales and aims to harmonise conflicts between competing 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 (CMPs) to translate these 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 and water quality objectives.

RELATIONSHIP BETWEEN LAND USE PLANNING AND CATCHMENT MANAGEMENT PLANNING

The broad objectives of catchment management planning are to conserve and enhance the total river environment through effective land and resource management. However, while the NRA is well placed to influence some of the factors affecting the water environment, particularly in relation to the river corridor itself, 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, although the NRA is a statutory consultee under this legislation.

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 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 Tawe and South Gower catchments which have been agreed within the framework of these Guidance Notes. This plan also outlines how the concerns of the water environment should influence the location and nature of development and land use change within the catchment.

The first phase of the second Asset Management Plan (AMP2) of Dŵr Cymru for the period 1995 to 2000 is currently being finalised following approval by the Director General of OFWAT. The phased programme of improvements to sewerage infrastructure and sewage treatment works identified within AMP2 will determine the pace of future remedial measures. This will have an important effect on both improvements in water quality and development/planning control as indicated within the Actions identified within this plan.

WATER QUALITY OBJECTIVES

The statutory Water Quality Objectives (WQO) scheme, introduced under the Water Resources Act 1991, is a new system for water quality planning

which places water quality targets on a statutory footing. The scheme is based upon the recognised uses to which a river stretch may be put and is consistent with the principles of CMPs. These uses will include River Ecosystem (formerly identified as Fisheries Ecosystem in the Tawe & South Gower CMP Consultation Report), Special Ecosystem, Abstraction for Potable Supply, Agricultural/Industrial Abstraction and Watersports.

At present, only the standards for the River Ecosystem Use have been developed on a formal basis and, as a result, this is the first WQO Use to be introduced by the Government through The Surface Waters (River Ecosystem) (Classification) Regulations 1994. For each classified stretch within the Tawe & South Gower catchments a River Ecosystem (formerly Fisheries Ecosystem) Use class target was proposed and this CMP Action Plan identifies, where appropriate, the actions required to achieve these targets. At present, these targets will only be applied informally although it is hoped that in the near future they may be established as formal WQOs by the Secretaries of State for the Environment and Welsh Office.

REVIEW OF THE CONSULTATION PROCESS

The NRA published the Tawe & South Gower Catchment Management Plan (CMP) Consultation Report in March 1994. The plan was launched as a consultative document seeking comments from all those interested in the water environment. Around 60 individuals representing various key organisations attended the public launch in Pontardawe on March 22nd 1994. A display was subsequently placed in Swansea and Morriston public libraries, explaining the CMP process and the key details and issues in the Tawe & South Gower catchments. The report was placed in all libraries and local council offices within the catchment for members of the public to read and a press release was sent to local papers to raise awareness of the CMP and the consultation period. The official consultation period ran from the public launch through to May 20th, although several organisations and individuals provided written comments after this period. Around 350 copies of the Consultation Report have been circulated to external interests. A total of 37 written responses were received from the following individuals and organisations:



Educational Visit on the River Tawe.

INCO Europe Angling Section

British Steel

Wales Tourist Board

Forest Enterprise

INCO Europe Ltd

South Wales Sea Fisheries Committee
 Craig-y-Nos Country Park
 Cilybebyll Community Council
 Swansea Canal Society
 West Glamorgan County Council
 Swansea Civic Society
 Campaign for the Protection of Rural Wales
 Royal Commission on Ancient & Historical
 Monuments in Wales
 City of Swansea
 Sports Council for Wales
 Associated British Ports
 Keep Wales Tidy
 British Waterways
 Welsh Canoeing Association
 Inland Waterways Association
 Bishopston Comprehensive School
 British Waterways
 Welsh Office

Dŵr Cymru Welsh Water
 Pontardawe & Swansea Angling Society
 Tawe & Tributaries Angling Association
 Royal Society for the Protection of Birds
 Brecknock Wildlife Trust
 The Ramblers Association
 Glamorgan Wildlife Trust
 Countryside Council for Wales
 The Forestry Authority
 Cadw
 BP Oil
 Brecon Beacons National Park
 Surfers Against Sewage

All of the comments received concerning the Consultation Report were taken into account when formulating the Action Plan for the Tawe & South Gower catchments. This Action Plan includes and reflects many of the comments received from those organisations and individuals.

AN OVERVIEW OF THE TAWE & SOUTH GOWER CATCHMENTS

GENERAL

The Tawe and South Gower Catchment Management Plan (CMP) area includes the hydrological catchment area of the River Tawe, as well as Gower streams draining in a southerly direction between Worms Head and the mouth of the Tawe (North Gower streams will be included within the Loughor CMP, scheduled for production in 1995/6).

The source of the Tawe is on the Black Mountain above Llyn-y-Fan Fawr, some 590m above sea level. This upland area provides rough pasture for sheep grazing, whilst lower lying areas are used for mixed beef, dairy and sheep farming, although the level of agricultural activity within the catchment is relatively low. Some small discrete areas of coniferous forestry are to be found in the catchment, as well as some extensive broadleaf woodlands along south Gower.

The Tawe has been, and is continuing to be, affected by development. Urbanisation is concentrated mainly in

the south of the catchment at Swansea, as well as some large towns and ribbon development hugging the corridors of the main river and its principal tributaries. The catchment has a very well developed infrastructure with good road and railway links.

The lower Tawe estuary has been significantly changed by the construction of a tidal barrage which retains estuarine water within an impoundment. This is the first such barrage to be constructed within England and Wales. Completed in 1992, the barrage consists of primary and secondary weirs with an associated navigational lock and fish pass. The scheme also includes a small reversible turbine hydrogenerator.

From the early 18th Century, the lower Swansea valley was a centre for metal refining, principally copper smelting. This area has been redeveloped as the Swansea Enterprise Zone, resulting in stabilisation of much of the tipped material. Any future developments that involve disturbance of contaminated land present

possible risks to ground and surface water quality.

Coal mining has historically been extensive in the middle section of the catchment. Although there are now no operational deep mines, there is an increasing number of small private mines and washeries. Opencast mining is also carried out at a number of locations.

FLOOD DEFENCE

Flood defence interest in the catchment is centred primarily on the urbanised areas of Ystradgynlais, Ystalyfera, Pontardawe, Ynystawe and Morriston. Flood defences have been constructed to cope with the increased run-off experienced as a result of such high levels of development.

The Tawe characteristically carries a heavy sediment load. As a result shoaling occurs extensively along the river channel and can lead to an increase in flood risk.

South Gower watercourses generally drain more rural catchments than those of the Tawe. However, there are a number of sites where property is at risk of flooding and where flood alleviation schemes have been undertaken.

The coastal flood plain adjoining Swansea Bay is heavily developed and much of its length is protected by coastal defences. Lowering of beaches and sand loss around Swansea Bay has the potential to reduce the level of protection provided by coastal defences and will need to be monitored.

The NRA operates a flood warning system on the Tawe. This involves continuously monitoring weather and potential flooding conditions, and issuing warnings via the police as appropriate.



River Tawe at Glyntawe.



Abandoned Mine Discharge.

WATER QUALITY

Water quality within the main watercourses is generally high, 85% of the classified reaches being within Class A or B in the 1992 General Quality Assessment.

Eleven significant sewage discharges occur within the catchment, six of which are made to coastal waters. Sewage effluent from the lower Swansea Valley and the City of Swansea is discharged following preliminary treatment (screening), via a tidally controlled short sea outfall off Mumbles Head. A major scheme is currently being designed by Dŵr Cymru to provide full treatment and disinfection, and replacement of the short outfall with a long sea outfall, during 1997.

The only significant industrial discharge to the catchment is made from the INCO Europe Ltd nickel refinery at Clydach on the Tawe.

Heavy metals (in particular zinc) continue to affect water quality in the Nant-y-fendrod and the Tawe, largely due to historical uses of the catchment. Levels of metals in the river sediments are high and the Tawe Barrage may increase the availability of these within the impounded section.

WATER RESOURCES

Annual average rainfall figures vary considerably with altitude across the catchment area, from approximately 1100mm at Mumbles Head to over 2400mm on the Black Mountain to the north. Water use is varied, the emphasis being on industrial use in the urbanised areas of the Tawe and agricultural use in the rural south Gower area.

Most of the public water supply for both potable and industrial uses originates from other catchments,

although Dŵr Cymru does abstract from a spring at Parkmill on Gower.

British Waterways transfer water from the Tawe to the Swansea Canal, from which there are four abstractions. Water is also abstracted by the coal industry at Tirbach, and for water bottling in south Gower and in the upper Tawe catchment.

Abstraction for spray irrigation is largely confined to the Gower peninsula, although many small agricultural abstractions from groundwater are scattered throughout the catchment. Two sites abstract water for the purposes of rearing fish.

The primary gauging station on the Tawe is located near Ynystawe. There is a need for monitoring of flows and levels in smaller watercourses to provide information for flood warning and consenting of abstractions, discharges and new developments. Groundwater resources are not currently monitored.

FISHERIES AND CONSERVATION

The fisheries of the Tawe have recovered significantly in recent years due to improvements in water quality and the alleviation of barriers to fish migration. The river now supports substantial populations of salmon and sea trout in addition to resident brown trout.

Fish passage has been eased by the NRA and its predecessors at Penycae Falls and Beaufort Weir and a fish pass has been constructed on Panteg Weir. Swansea City Council have also incorporated a fish pass as part of the tidal barrage structure. Studies currently underway to assess the impact of the barrage on migratory salmonid populations indicate that the barrage is hindering the migration of salmon and sea trout. The nature of the fishery within the tidal reach is likely to be influenced in future years by the barrage.

No commercial fishery or shellfishery exists within the river system. Coastal beach netting is restricted to the winter months to protect migratory salmonid stocks as they enter inshore waters.

The CMP area is one rich in flora, fauna and scenic beauty, as demonstrated by the Gower Area of Outstanding Natural Beauty (AONB), Gower Heritage Coast, Brecon Beacons National Park and numerous Sites of Special Scientific Interest (SSSIs). In addition to these, the Glamorgan Wildlife Trust and the National Trust manage several sites and the RSPB own a reserve along the Lower Clydach. The intertidal mudflats at Blackpill in Swansea Bay provide an important feeding and roosting area for gulls and



Otter

C. H. Gomersall / RSPB

wading birds.

Otters have recently been recorded throughout the main river, and some of the major tributaries. Artificial resting and breeding areas (holts) have been constructed to enhance bankside cover for this species and their distribution is expected to increase.

There are over 50 sites of archaeological interest listed by Cadw within the catchment. The majority of these sites are ancient fortifications, earthworks or stones outside the river corridor.

Invasive weeds are present in abundance in the middle and lower reaches of the Tawe and its tributaries. These plants cause considerable problems by, for example, reducing access to the river and affecting several of the land reclamation schemes which are being carried out in the lower part of the valley.

RECREATION

The Tawe catchment and surrounding areas are highly populated and it is therefore understandable that there is a high demand for existing and potential recreational sites. These needs are currently met by the provision of country parks, footpaths, cycleways, beach car parks and many well organised special interest bodies such as angling associations and boating clubs. The construction of the barrage, and conversion of South Dock into a marina, has presented new, mainly recreational opportunities.

The catchment area has a high amenity value and is attractive to birdwatchers, pot-holers, climbers and walkers. South Gower has many campsites and is a popular holiday destination for people attracted by the picturesque bathing beaches. Those at Caswell and Oxwich are extremely popular with bathers throughout the summer season. Watersports, including jet-skiing and water-skiing, take place around the coast.

Angling is very popular on the Tawe and its tributaries. Local angling clubs permit fishing for salmonids in most stretches; stocks of brown trout are supplemented by stocking fish reared by Tawe and Tributaries AA. Several private 'put and take' rainbow trout fisheries have been created and these attract large numbers of visitors. Many lakes are also fished for coarse fish species, with those in the Swansea parks being particularly popular.

BOATING AND NAVIGATION

Public rights of navigation exist in the Tawe only as far upstream as the tidal limit at Beaufort Weir. The passage of large vessels into the tidal reach is restricted by the size of the lock in the barrage. In addition to several small commercial fishing vessels mooring within the impoundment, there are over 600 berths for local and visiting pleasure craft. Since the construction

of the barrage these boats have been able to enter the impoundment at all states of the tide.

Restoration of parts of the Swansea Canal has resulted in a valuable local amenity, with boat trips being operated and an information/heritage centre sited at Clydach.

The commercial docks at Swansea, managed by Associated British Ports, are not used to the same extent as previously although they continue to serve as an important docking facility for BP shipments. Cargo and passenger vessels visit regularly. There is also a car ferry service operating to Cork, in the Irish Republic, between March and October. In the estuary, downstream of the barrage, a navigation channel is maintained by dredging to enable the passage of ships entering/exiting the port of Swansea.

THE INTERACTION BETWEEN LAND USE AND THE WATER ENVIRONMENT

INTRODUCTION

Man's use of land, whether for residential, farming, industry, amenity or infrastructure developments, is likely to impact on the water environment, either directly or indirectly. This Catchment Management Plan (CMP) aims to address existing problems, seek general environmental improvement and protect the catchment from future damage.

The central section of the Tawe catchment drains a predominantly urban/industrialised area centred around the City of Swansea, Ystalyfera, Ystradgynlais, Clydach and Pontardawe. The Gower peninsula to the south forms part of a popular holiday area which attracts thousands of visitors each year. By way of further contrast, the northern part of the catchment is almost completely unspoilt uplands, which encompasses the Black Mountain and falls within the Brecon Beacons National Park. Issues of particular concern to the NRA are:

- the impact of the barrage on water quality and fish migration
- the impact of discharges from abandoned metal mines, and contaminated land
- the protection of a high landscape value
- the deficiencies in infrastructure, especially sewerage
- the risks associated with developing in floodplains

- the impact of abstractions and discharges on dry weather flows
- the impact of gravel removal upon river habitats and fisheries

The NRA's stance on all new development is that it is the responsibility of developers to assess the impact of their proposals on the water environment, and provide suitable mitigation works where necessary. In order to ensure that the right issues are addressed, and the relevant consents applied for, the developer must consult with the NRA at the earliest opportunity.

INFRASTRUCTURE

Sewerage: It is clearly important that, wherever new development or redevelopment is proposed, the local authorities and Dŵr Cymru ensure that adequate and suitable drainage and treatment systems are available. The NRA has welcomed the planned investment of £78m by Dŵr Cymru to install sewage treatment facilities at Swansea. However, the discharge from Trebanos sewage treatment works continues to cause an unacceptable impact on the water environment. Dŵr Cymru has committed itself to implementing remedial works, within AMP2, by the end of 1997. In the meantime, the NRA will oppose all but very modest development proposals, which will be considered on a case by case basis.



River Tawe at Landore.

DEVELOPMENT IN FLOOD RISK AREAS

Development situated within a floodplain is generally at risk, and the NRA is obliged to advise the local planning authorities, in accordance with Welsh Office circular 68/92, where a proposed development may flood. Commencing in 1995, the NRA will be undertaking major surveys of all river catchments, on a phased basis and with the agreement of the local authorities, to identify more accurately the extent of the flood plain and the impact of development on flood risk throughout the catchment. This work will take several years to complete but will concentrate initially on those areas where flooding is seen as a major issue.

Development may affect rivers and flood defences directly, or affect the risk of flooding. It is Government policy that new development in areas of flood risk should make provision for flood defence. Where alleviation works are possible, the onus is on the developer to investigate the flood risk, and design and submit amendments to his planning application to show how any unacceptable flood risk arising from the development proposed will be mitigated or alleviated. In view of the complex and lengthy discussions that

may ensue, developers should consult with the NRA prior to making an application.

Within the Tawe catchment, flooding problems are generally localised. Several schemes have been implemented to alleviate the risk of flooding but particular areas (eg. Cwmtwrch) remain at risk.

CONTAMINATED LAND

When promoting redevelopment plans, developers need to be mindful of the past use of sites. There is contamination within the Lower Swansea Valley and the coastal strip of east Swansea, resulting from historical industrial activities. Certain areas have been well documented and restoration work carried out in recent years.

The Swansea Valley Project addressed a large, grossly contaminated area in the lower valley; a tip clearance programme was carried out over a ten year period during the late 1960s and early 1970s. An Enterprise Zone was designated on the site in 1981, and much of the area has now been landscaped. The removal of tips and the provision of impermeable coverings offered by such development, combined with grassing and planting, has helped to reduce metal contamination of the water environment. However, continued careful management is essential.

Areas of contaminated land outside this zone are less well documented and researched, and can pose significant risks to the water environment. It is always the developer's responsibility to assess the problem and implement appropriate remedial works, in close consultation with the NRA.

GROUNDWATER

The preservation of groundwater quality and quantity is a major objective of the NRA, and the Authority has produced a document "Policy and Practice for the Protection of Groundwater", which provides advice on the management and protection of groundwater on a sustainable basis. This policy deals with the concept of vulnerability and risk to groundwater from a range of human activities. Aquifers within the Tawe catchment are not regarded as a major source of supply, although several properties do rely on small groundwater sources for private domestic purposes and there is a significant commercial use of water by abstraction for water bottling. In particular, developers need to be aware of protected zones in the north of the catchment, near Abercraf, and to the south within the Gower area of the CMP. The NRA will look to the planning

authorities to have regard to the protection of groundwater where it exists, as a material consideration in the determination of planning applications.

RIVER CORRIDORS

Buffer Zones: River corridors provide important interconnections between habitats and are used extensively by wildlife. The NRA would wish to see buffer zones created along all watercourses, in both rural and urban areas, to help protect the water environment from the impact of potentially damaging activities on adjacent land. These zones would have to be fenced where livestock are present, to avoid damage to river banks which could lead to channel instability, increased flood risk and a reduction in fisheries and conservation value.

Culverts, River Diversions and Wetlands: The use of culverts to direct and convey watercourses underground must have consent from the NRA. Whilst the installation of culverts of suitable dimensions for small river crossings is generally an acceptable practice, the NRA does not support the widespread use of culverts to enable a change in land use - this would be contrary to its conservation duties. In particular, the practice of culverting streams in order to use their valleys as landfill sites, and the infilling of wetlands, is generally unacceptable. Similarly, the NRA would generally oppose the diversion of established watercourses in order to permit development, and would wish the original natural course to be retained as a feature wherever possible.

AGRICULTURE

A significant proportion of the catchment is farmland with low intensity mixed farming being particularly prominent. The lack of adequate investment in effluent management facilities occasionally causes problems. The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations 1991 have set minimum standards of construction for new or substantially altered systems. The NRA is using these Regulations, and its well established contacts with

farming organisations, to secure more effective, long term solutions.

Afforestation is present within the catchment in south Gower and central/northern areas of the Tawe catchment. Where future proposals fall within areas where afforestation may pose a risk to water quality, they will be considered by the NRA in detail, on a case by case basis.

BARRAGES, MARINAS AND TIDAL WEIRS

This type of development, which is usually proposed to improve amenity and recreational value, can cause a variety of problems. These may include flooding, a deterioration in water quality - sometimes leading to odours and toxic algal blooms - and obstruction to the movements of migrating fish. The Tawe Barrage was completed in 1992 and has raised concerns about water quality in the impounded river, and the impact on fish migration. The barrage includes a scheme for the generation of hydro-electric power. The authorisation of abstraction for power generation effectively precludes any large net surface water abstraction licence being granted upstream, unless the operators of the Barrage agree to a derogation of their abstraction rights.

Since future problems are often difficult to predict for such developments, the NRA will look to the planning authorities to adopt a robust precautionary approach when considering any new proposals.



The Tawe Barrage.

ISSUES AND ACTIONS

The following section outlines the actions that have been agreed in order to tackle the issues identified within the Tawe & South Gower CMP Consultation Report. The organisation(s) responsible for implementing the actions, the costs involved, and the agreed timescales within which the actions are to be undertaken are shown. Actions are only included where agreed and signed up to by the body responsible for undertaking the work/investment. Where an action is subject to constraint or is awaiting approval, this is made clear within the action table.

The Action Plans look largely to the five year period from publication of the Consultation Report ie. to the end of 1998. Where Issues are unlikely to be resolved within this timescale, this is indicated clearly within the tables. CMPs should be seen to be continually evolving, and therefore if priorities change or new opportunities for improvements present themselves, they will be reflected in annual reviews of the plan.

In 1994, subsequent to the production of the Tawe & South Gower CMP Consultation Report, the Government introduced regulations for the implementation of a new Water Quality Classification Scheme called River Ecosystem (RE), which replaced the Fisheries Ecosystem (FE) Scheme used in the earlier report. The new scheme contains water quality standards which are statistically more robust than those in the earlier proposal. Consequently, the data used for the CMP Consultation Report have been re-examined to reflect the new scheme and some of the actions proposed may have changed as a result. The benefit of this more rigorous examination is that the NRA can be even more confident that the money it spends or asks others to spend to resolve issues will lead to a significant improvement in water quality.

In the Consultation Report, 47 issues were identified where targets were not being achieved and therefore requiring some action in order to resolve them. These issues were presented, together with various management options, for discussion as part of the consultation process. All of the responses received from external interests were considered, and where necessary further discussions were held to resolve issues and to agree appropriate, realistic and affordable actions.

All of the 47 issues identified within the Consultation Report have been retained within this Action Plan although some have been amended in the light of comments made during the consultation period and the re-examination of the water quality data. One new issue has been added subsequent to the publication of

the Consultation Report (Issue 48).

The following abbreviations have been used in the main text and tables:

AMP	Asset Management Plan
BBC	Brecknock Borough Council
BBNP	Brecon Beacons National Park
BOD	Biochemical Oxygen Demand
BS	British Steel
BW	British Waterways
CCW	Countryside Council for Wales
CA	Coal Authority
CLA	Country Landowners Association
CSO	Combined Sewer Overflow
DCW/W	Dŵr Cymru Welsh Water
DO	Dissolved Oxygen
DoE	Department of the Environment
EC	European Community
GQA	General Quality Assessment
HMIP	Her Majesty's Inspectorate of Pollution
IFG	Informal Fisheries Group
KWT	Keep Wales Tidy
LAs	Local Authorities
LPAs	Local Planning Authorities
LVBC	Lliw Valley Borough Council
MAFF	Ministry of Agriculture, Fisheries and Food
NNR	National Nature Reserve
NRA	National Rivers Authority
OFWAT	Office of Water Services
PCC	Powys County Council
RA	The Ramblers Association
RE	River Ecosystem
RSPB	The Royal Society for the Protection of Birds
SBCCG	Swansea Bay Coastal Cell Group
SCC	Swansea City Council
SEP	Swansea Enterprise Park
SSSI	Site of Special Scientific Interest
STW	Sewage Treatment Works
SWSFC	South Wales Sea Fisheries Committee
WCA	Welsh Canoeing Association
WDA	Welsh Development Agency
WGCC	West Glamorgan County Council
WO	Welsh Office
WQO	Water Quality Objective
WTB	Wales Tourist Board



Penycat Falls.

ISSUES AND ACTIONS

ISSUE 1									
Poor bacteriological quality and aesthetic standard in Swansea Bay and at Gower beaches.									
ACTIONS	RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE
	LEAD	OTHER							
a) Completion of sewage treatment facility and improvements to CSOs discharging to the Bay.	DCWW		78m						
b) Establish a collaborative working party on litter to define standards and explore solutions. See also Issue 9.	NRA	SCC, KWT, WTB, LAs, CCW, land & beach owners	2.5k						
c) Undertake litter survey to quantify extent of problem following completion of sewage treatment improvements, possibly in conjunction with SCC. See also Issue 9.	NRA	SCC	2k						
ISSUE 2									
Poor aesthetic quality in the Swansea Marina.									
a) Review litter control procedures and define standards.	SCC	NRA	Estimated SCC 1.5k NRA 0.5k						
b) Investigate reports of algal blooms and odour problems.	NRA	SCC	1.7k						
ISSUE 3									
Low dissolved oxygen in Tawe Barrage impoundment.									
a) Adopt a management strategy for operation of the Tawe Barrage that prevents retention of poor quality water in the impoundment. To be agreed with NRA as part of current liaison arrangements.	SCC	NRA	Subject to investigation						
b) Determine priorities for improvements to CSOs in line with AMP2.	DCWW	NRA, SCC	0.6k						
c) Complete improvements to CSOs in line with AMP2 - timescales for individual or groups of CSOs to be defined by NRA/DCWW negotiations on Regional priorities (currently underway). Same as Action 5 b).	DCWW		9.65m						By 2000

ISSUES AND ACTIONS

ISSUE 4 Carbon dioxide releases from sediments around New Cut.									
ACTIONS	RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE
	LEAD	OTHER							
No action necessary. This is no longer an issue.									
ISSUE 5 High levels of bacteria and ammonia in the estuary due to CSOs.									
a) Determination of priorities for improvements to CSOs in line with AMP2.	DCWW	NRA, SCC	0.6k (part of Action 3b)						
b) Complete improvements to CSOs in line with AMP2 - timescales for individual or groups of CSOs to be defined by NRA/DCWW negotiations on Regional priorities (currently underway). Same as Action 3 c).	DCWW		9.65m						By 2000
ISSUE 6 High levels of nickel in the estuary.									
a) Investigate and report on sources of nickel in the lower reaches of the impoundment.	NRA		3.5k						
b) Depending on outcome of a), implement scheme of remedial actions and take into account in management strategy for Tawe impoundment.	NRA	SCC							
c) Review discharge consent conditions granted to INCO.	NRA	HMIP	5k						
d) Reduce concentration and loading of nickel discharged from INCO.	INCO	NRA, HMIP	0.5m						Ongoing
ISSUE 7 Elevated levels of metals (particularly zinc) in the estuary and Nant-y-fendrod (RE Class 5), caused by contaminated land.									
a) Desk top study to identify primary sources and ranked listing.	NRA	SCC, WDA	4k						
b) Continued provision of comment/advice at planning stage for developments within contaminated land zone.	NRA		0.6k per annum						Ongoing

ISSUES AND ACTIONS

ISSUE 8 Marginally elevated levels of BOD and suspended solids and low DO in the Nant-y-fendrod, only achieving RE Class 2 standards (target RE Class 1).									
ACTIONS	RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE
	LEAD	OTHER							
a) Identify polluting sources.	NRA		2.5k						
b) Agree remedial measures and timetable for implementation to secure improvements in water quality.	NRA	Site Owners	Dependent on a)						
ISSUE 9 Litter problems in the Tawe and Nant-y-fendrod.									
a) Establish a collaborative working party to define acceptable standards and explore possible solutions. See also Issue 1.	NRA	LAs, KWT, CCW, WDA	2.5k (Costs part of Issue 1b)						
b) Implement findings from a).	Not known	Not known	Not known						
c) Undertake litter survey to quantify extent of problem, possibly in conjunction with Local Authorities. See also Issue 1.	NRA	LAs	5k (Costs part of Issue 1c)						
ISSUE 10 Occasional poor aesthetic quality due to British Steel Velindre discharge.									
a) Investigate the alleged problem.	British Steel		Not available						
b) Review discharge consent.	NRA		1k						
ISSUE 11 The Tawe downstream of the Upper Clydach falls into RE Class 2 due to low DO and slightly elevated BOD. Biological quality is poor here and on the lower Clydach, where suspended solids levels are elevated (the Lower Clydach now achieves RE Class 1).									
a) Investigate cause of chemical and biological problems in the affected stretches.	NRA		3.5k						
b) Agree remedial measures and timetable for implementation to secure improvements in water quality.	NRA	Site Owners	Dependent on a)						

ISSUES AND ACTIONS

ISSUE 12 Failure to achieve target RE Class 1 in the Tawe due to the discharge of ammonia from Trebanos STW, causing the stretch to fall into RE Class 2.									
ACTIONS	RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE
	LEAD	OTHER							
a) Refurbish Trebanos STW in line with AMP2.	DCWW		1.8m						
b) Undertake a review of the discharge consent to ensure compliance downstream with target RE Class 1 (consent to become operational by the end of 1997 at the latest).	NRA		1.5k						
ISSUE 13 The Upper Clydach fails to meet its target in the upper river due to elevated levels of ammonia, placing it mostly in RE Class 2 with some stretches in RE Class 5. Biological quality is poor throughout. The RE Class 1 standards for BOD are now met in most stretches, but marginally fall into RE Class 2 in the lower stretches.									
a) Agree a restoration proposal addressing groundwater problems at the Pwllfawacyn site.	LVBC	NRA	15k to date						
b) Implement restoration proposals.	LVBC		To be costed as part of a) above						
c) Identify long term restoration proposals at the Abernant Colliery Site.	NRA	CA, WGCC	0.5k (NRA costs only)						
d) Implement restoration proposals (timetable and costs to be agreed).	CA, Site Owner								
e) Investigate biological and chemical quality in the upper reaches to identify problems and target remedial measures to facilitate achievement of RE Class 1 target.	NRA		0.5k						
ISSUE 14 Poor biological quality in the Tawe between Abercraf and the Upper Clydach and in the Nant Giedd.									
Undertake a detailed biological investigation.	NRA		0.7k						

ISSUES AND ACTIONS

ISSUE 15 Poor aesthetic and water quality due to abandoned mine discharges.									
ACTIONS	RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE
	LEAD	OTHER							
Actions are dependent on the outcome of current research into remedial solutions (such as the EC funded demonstration scheme on the River Pelenna) and the future remit and resources of the Local Authority. Opportunities will be sought to address minewater problems if funding sources can be identified. Actual programming of individual solutions will be dependent on Regional priorities and cost benefit for each problem site.									
ISSUE 16 Elevated levels of ammonia and BOD cause parts of the Llynfell to fall into RE Class 2. Poor biological quality has been found in the Twrch and the Llynfell.									
a) Agree a restoration proposal addressing ground and surface water problems at the closed Tycanol Waste Disposal Site.	BBC	NRA	12k						
b) Implement restoration proposals at Tycanol Site.	BBC	NRA	70k						
c) Investigate other sources leading to poor chemical and biological quality.	NRA		0.7k						
d) Agree remedial measures and timetable for implementation to secure improvements in water quality.	NRA	Site Owners	Dependent on c)						
ISSUE 17 High levels of BOD in the Nant Cwmdru were identified in the original Consultation Report.									
The RE Class 1 target for BOD has now been achieved and therefore no action is required.									
ISSUE 18 The Swansea Canal marginally fails to achieve RE Class 1 targets for BOD.									
a) Monitor water quality to ensure no deterioration in quality.	NRA		1.7k						
b) Review chemical data to confirm water quality status of canal.	NRA		0.2k						

ISSUES AND ACTIONS

ISSUE 19										Low DO, high BOD and ammonia causing the Clyne to fail its RE Class 1 target, falling into RE Class 4.													
ACTIONS				RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE											
				LEAD	OTHER																		
a) Review water quality data and CSO information to identify polluting inputs.				NRA	DCWW	1.7k																	
b) Agree remedial measures and timetable for implementation to secure improvements in water quality.				NRA	Site Owners, Land Owners, DCWW	Dependent on a)																	
ISSUE 20														Low levels of DO in the Parkmill Stream.									
Undertake a special investigation into the water quality.				NRA		0.9k																	
ISSUE 21														Marginal failure of RE Class 1 targets for DO and ammonia caused by Pennard STW discharge, which has now ceased (Oct. 1993).									
Continue to monitor river for a period to demonstrate compliance with RE Class 1 target.				NRA		0.5k																	
ISSUE 22														Potential for low flows in the Tawe and Gower streams caused by abstraction.									
Assess using regional licensing policy when available.				NRA		1k																	
ISSUE 23														Potential low flow in the Tawe between Panteg Weir and the Lower Clydach caused by canal abstraction.									
a) Investigate the potential effect of the canal abstraction on the flow regime in the Tawe under low flow conditions.				NRA	BW	5k																	
b) Carry out assessment of environmental impact of canal abstraction on the Tawe.				NRA	BW	1k																	
c) If significant impact identified undertake feasibility study of possible solutions.				NRA		8k																	

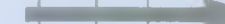
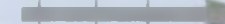
ISSUES AND ACTIONS

ISSUE 24 There are no flow measurement facilities on smaller watercourses.									
ACTIONS	RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE
	LEAD	OTHER							
a) Identify user requirements for hydrometric data.	NRA		0.5k						
b) Review catchment and produce strategy to meet requirements.	NRA		3k						
c) Implement strategy.	NRA		Un-known						Ongoing
ISSUE 25 No groundwater measurements undertaken in the Tawe catchment.									
a) Review catchment to identify strategic requirements for monitoring groundwater levels.	NRA		1k						
b) Install groundwater monitoring.	NRA		50k						
ISSUE 26 There is a need to maintain flood defences in areas of gravel build up.									
Review existing gravel extraction operations and identify and implement improvements where possible.	NRA		6k						
ISSUE 27 Flood protection standards not known at present for Ystradgynlais, Cwmtwrch, Clydach and Ynysmeudwy.									
Establish current standards of flood protection and identify and undertake improvement works where possible.	NRA		30k for study						
ISSUE 28 Reduced flood defence standards due to sedimentation etc.									
Issue addressed by actions in 26 and 27.									
ISSUE 29 Property at risk from flooding due to blockages caused by trees carried down river in flood events and bankside erosion problems.									
Conduct a survey of bankside tree conditions in the upper catchment and develop a tree management programme in consultation with conservation bodies.	NRA	Riparian Owners, RSPB, Conservation Bodies	8k (NRA costs)						

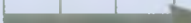
ISSUES AND ACTIONS

ISSUE 30									
The need to undertake S105 surveys to identify the extent of lands liable to flood, for input to Development Plan preparation.									
ACTIONS	RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE
	LEAD	OTHER							
a) Liaise with all Planning Authority's in Wales to determine order for carrying out catchment surveys.	NRA	WGCC, PCC, SCC, LVBC, BBC	50k						
b) Undertake S105 survey for the Tawe catchment.	NRA		To be costed during a)						By 1999
ISSUE 31									
Inadequate flood warning for Upper Tawe catchment.									
a) Bring into operation telemetric river level recorders on the Tawe at Craig-y-Nos and the Twrch at Gurnos.	NRA		0.5k						
b) Correlate recorded river levels with defence levels at Abercraf, Cwmtwrch and Ystradgynlais in order to calibrate alarm settings.	NRA		2k						
ISSUE 32									
Beach loss in Swansea Bay.									
a) Continue to monitor, collect data and expand current study if possible.	SBCCG	NRA, LAs, CCW, DoE, Private Interests	14k						
b) Adopt a precautionary approach towards dredging licence applications until impacts of proposals can be confidently predicted.	NRA		No extra costs						Ongoing

ISSUES AND ACTIONS

ISSUE 33										Inaccessibility of suitable spawning grounds for migratory fish due to natural and man-made obstructions.									
ACTIONS		RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE									
		LEAD	OTHER																
a) Undertake a cost/benefit analysis on the impact of fish passes at Abercraf Weir and Lower Clydach Falls.		NRA		1k															
b) Prioritise easement facilities at other obstructions within the catchment.		NRA		0.5k															
c) Seek funding to construct fish passes in collaboration with external interests.		NRA		0.2k per annum						Ongoing									
d) If funding is forthcoming, complete the construction of the facilities in agreement with riparian owners at:		NRA	Riparian Owners																
Abercraf				40k						Ongoing									
Clydach Falls				55k						Ongoing									
e) Implement easement facilities at other locations where possible, if funding is available.		NRA	Riparian Owners	Dependent on b)						Ongoing									
ISSUE 34										Impact of invasive weeds on native habitats and flood defences.									
a) Continue to implement effective and co-ordinated control measures within the catchment. Refine methods and adopt "best practice".		NRA	LAs, Riparian Owners	120k (NRA costs)						Ongoing									
b) Increase public awareness about invasive weeds and control measures by the strategic distribution of the NRA leaflet "Guidance for the Control of Invasive Plants near Watercourses".		NRA		0.2k per annum						Ongoing									

ISSUES AND ACTIONS

ISSUE 35									
Availability of holding pools, spawning and nursery areas for migratory fish.									
ACTIONS	RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE
	LEAD	OTHER							
a) Identify areas which are deficient in suitable habitats and plan remedial measures in conjunction with riparian interests.	NRA	Angling Clubs, Riparian Owners, Fishery Owners	0.5k						
b) When opportunities arise and funding is available instigate remedial measures.	NRA	As above	Un-known						Ongoing
ISSUE 36									
"Standards of Service" for SSSIs have not been formally agreed with CCW.									
a) Agree "Standards of Service".	NRA	CCW	0.5k						
b) Implement the agreed standards.	NRA	CCW	0.5k						Ongoing
ISSUE 37									
Lack of suitable riverside footpaths, especially beside the main Tawe.									
a) Establish a forum to discuss the progression of a feasibility study which would identify areas where access could be improved.	NRA	RA, Conservation Bodies, CLA, LAs, BW, Angling Clubs, Fishery Owners	0.5k						
b) Implement recommendations arising from the above forum.	NRA	As above	Cost un-known						Ongoing
ISSUE 38									
Potential intake of migratory fish by the barrage hydropower abstraction.									
a) Review the adequacy of safeguards when the scheme is operational, using the results of tracking surveys where applicable.	NRA	SCC	0.5k						Ongoing
b) Instigate improvement measures if required.	SCC	NRA	Un-known						Ongoing

ISSUES AND ACTIONS

ISSUE 39		The extent to which conservation value has been degraded needs to be established.							
ACTIONS	RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE
	LEAD	OTHER							
a) Undertake a River Corridor Survey in the catchment.	NRA		80 per km						
b) Establish a conservation forum at which the above can be considered.	NRA	RSPB, CCW, Wildlife Trusts, BBNP, LAs, CLA, Angling Clubs, Fishery Owners	0.5k						
c) Implement recommendations where possible.	As appropriate	As above	Un-known						Ongoing

ISSUE 40		Disturbance to spawning gravels during flood defence gravel removal exercises.							
a) Monitor levels of disturbance caused by in-river works and seek to achieve best practice.	NRA		0.5k per annum						Ongoing
b) Carry out in-river works in a sympathetic manner.	NRA		No additional costs						Ongoing

ISSUES 41 & 42		Certain developments, such as those within the flood plain or adjacent to the river corridor, may impact on the NRA's environmental and flood defence interests.							
a) Ensure suitable policies are included in Local District Plans.	NRA	LPAs	2.5k						
b) Set up meeting/seminar to enhance liaison with LPAs.	NRA	LPAs	1k						

ISSUES AND ACTIONS

ISSUE 43 The presence and exploitation of coarse fish in the lower reaches of the Tawe.									
ACTIONS	RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE
	LEAD	OTHER							
a) Determine the feasibility of studying fish populations in the impounded area behind the barrage.	NRA		0.5k						
b) Continue to grant dispensation for use of the maggot, under controlled conditions, in order to determine the potential impact on the salmonid fishery and also the possible natural development of the coarse fishery.	NRA	Lower Tawe Angling Clubs	0.2k p.a.						Ongoing
ISSUE 44 Illegal fishing reduces the stock of migratory fish for bona fide angling and spawning.									
a) Continue enforcement of legislation in an effective and co-ordinated manner.	NRA		35k per annum						Ongoing
b) Review the effectiveness of all byelaws and introduce new proposals where necessary.	NRA	SWSFC, Angling Clubs, IFG	1k						
ISSUE 45 Tawe Barrage hinders salmonid migration despite the presence of a fish pass.									
a) Review the results of the current monitoring work in 1994 and determine whether studies need to be continued.	NRA	SCC, WO, MAFF	0.5k						
b) If deemed necessary, and funding is available, undertake studies.	NRA		60k per annum						Ongoing
ISSUE 46 Development of recreational facilities at Fendrod Lake, Swansea.									
a) Develop a management plan for the lake, balancing recreational and conservation issues.	Brynmill Angling Club	SCC, NRA, SEP	0.5k						
b) Implement the recommendations of the plan.	Brynmill Angling Club	NRA, SCC, Conservation Bodies	3k						Ongoing

ISSUES AND ACTIONS

ISSUE 47										Lack of canoeing access to the Tawe.	
ACTIONS	RESPONSIBILITY		COST £	1994	1995	1996	1997	1998	FUTURE		
	LEAD	OTHER									
a) Establish a forum to develop the recreational use of the Tawe impoundment.	NRA	SCC, WCA, Recreational Interests	0.5k								
b) Establish contacts with angling clubs in order to pursue access arrangements in areas where public rights of navigation do not exist.	WCA	Angling Clubs	0.4k (no NRA costs)						Ongoing		

ISSUE 48										A proposal exists for a navigable link between the Swansea Canal and the tidal waterway, possibly using the Tawe. This has potentially serious implications for NRA activities.	
Ensure that NRA interests are safeguarded if the proposal develops further.	NRA		Un- known						Ongoing		

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. These 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, which will be made widely available, 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.

CYNLLUN RHEOLI DALGYLCH
TAW E A DE GWYR

CYNLLUN GWEITHREDU

1995

Awdurdod Afonydd Cenedlaethol
Rhanbarth Cymru

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CYFLWYNIAD

CYSYNIAD CYNLLUNIAU RHEOLI DALGYLCH

Yn fwy nag erioed o'r blaen, mae galwadau mawr a phrysur gynyddol gan ddefnyddwyr dŵr ar afonydd, llynnoedd, aberoedd a dyfroedd arfordirol Cymru a Lloegr. Mae sawl defnydd gwahanol yn cyd-fynd, neu'n cystadlu am dŵr, ac mae'n anochel y bydd gwrthdaro rhyngddynt. Yr Awdurdod Afonydd Cenedlaethol (AAC) yw prif reolwr yr amgylchedd dyfrol yng Nghymru a Lloegr a'i nod yw sicrhau cytgord rhwng defnyddwyr dŵr sy'n cystadlu a'i gilydd. Mae ein Darganiad Cenhadaeth yn mynegi'r egwyddorion a ganlyn:

"Byddwn yn gwarchod ac yn gwella'r amgylchedd dyfrol trwy reoli adnoddau dŵr yn effeithiol a thrwy gwtogi'n sylweddol ar lygredd. Ein nod fydd darparu amddiffyniad effeithiol i bobl ac eiddo rhag llifogydd o'r afon a'r môr. Wrth gyflawni'n dyletswyddau fe weithredwn yn agored gan gydbwysu buddiannau pawb sy'n defnyddio ac yn manteisio ar afonydd, dyfroedd daear, aberoedd a dyfroedd arfordirol. Byddwn yn ymarferol, yn effeithiol ac yn ofalgar yn ein hymwneud a'n gweithwyr".

Rydym wedi dewis defnyddio Cynlluniau Rheoli Dalgylch (CRhD) i droi'r egwyddorion hyn yn weithredu. Mae'r cynlluniau'n disgrifio'n gweledigaeth ar gyfer pob dalgylch, yn nodi problemau a materion ac yn cynnig ffyrdd o weithredu i'w datrys. Mae'r cynlluniau hefyd yn darparu'r modd i hybu dwy brif agwedd ar reolaeth yr amgylchedd - cynllunio defnydd tir a chargedau ansawdd dŵr.

Y BERTHYNAS RHWNG CYNLLUNIO DEFNYDD TIR A CHYNLLUNIAU RHEOLI DALGYLCH

Nod cyffredinol cynlluniau rheoli dalgylch yw gwarchod a chyfoethogi amgylchedd yr afon gyfan trwy reoli tir ac adnoddau'n effeithiol. Ond er bod yr AAC mewn sefyllfa dda i ddylanwadu ar rai o'r ffactorau sy'n effeithio ar yr amgylchedd dyfrol, yn enwedig mewn perthynas â choridor yr afon ei hun, ychydig iawn o reolaeth sydd ganddo dros y peirianweithiau sy'n penderfynu newidiadau defnydd tir ledled y dalgylch. Cyfrifoldeb awdurdodau cynllunio lleol yw hyn i raddau helaeth, trwy weithrediad y Deddfau Cynllunio Gwlad a Thref, er bod yr AAC yn gorff y mae'n rhaid ymgynghori ag ef o dan y ddeddfwriaeth hon.

Mae'r polisïau mewn cynlluniau datblygu statudol yn bwysig yn hyn o beth gan eu bod yn gosod y fframwaith ar gyfer newidiadau defnydd tir, ac yn bwynt cyfeirio allweddol wrth benderfynu ar geisiadau am ddatblygu; mae'r AAC yn annog y dylid cynnwys polisïau sy'n adlewyrchu'i ddiddordebau a'i gyfrifoldebau.

Fel arweiniad i awdurdodau lleol, paratôdd yr AAC set o ddatganiadau yn ymwneud yn fras â phenawdau ansawdd dŵr ac adnoddau dŵr, amddiffyn rhag llifogydd, pysgodfeydd, cadwraeth, adloniant, mwyngloddio a gwaredu gwastraff. Ceir crynodeb o'r darganiadau hyn yn Nodiadau Canllaw yr AAC i Awdurdodau Cynllunio Lleol ar y Dulliau o Warchod yr Amgylchedd Dyfrol trwy Gynlluniau Datblygu.

Mae'r Cynllun Gweithredu CRhD hwn yn amlinellu Materion ac anghenion Gweithredu penodol i ddalgylch Tawe a De Gŵyr a gytunwyd o fewn fframwaith y Nodiadau Canllaw hyn. Amlinella'r cynllun hwn hefyd sut y dylai buddiannau'r amgylchedd dyfrol ddylanwadu ar leoliad a natur datblygiad a newidiadau defnydd tir o fewn y dalgylch.

Mae cam cyntaf ail Gynllun Rheoli Asedau (CRhA2) Dŵr Cymru am y cyfnod 1995 i 2000 yn cael ei offen ar hyn o bryd yn dilyn cymeradwyaeth gan Gyfarwyddwr Cyffredinol OFWAT. Bydd y rhaglen o welliannau camwrth-gam i'r isadeiledd carthffosiaeth a gweithfeydd trin carthion a amlinellir o fewn CRhA2 yn gosod yr amserlen ar gyfer mesurau adfer yn y dyfodol. Caiff hyn effaith bwysig ar welliannau ansawdd dŵr a rheolaeth gynllunio/datblygiad fel a nodir o fewn y camau Gweithredu a enwir yn y cynllun hwn.

TARGEDAU ANSAWDD DŴR

Cyflwynwyd y cynllun Targedau Ansawdd Dŵr (TADau) statudol dan Ddeddf Adnoddau Dŵr 1991. System newydd ar gyfer cynllunio ansawdd dŵr ydyw, sy'n gosod targedau ansawdd dŵr ar seiliau statudol.

Mae'r cynllun wedi'i seilio ar y defnyddiau cydnabyddedig y gellir eu gwneud ar ddarn afon, ac mae'n gyson ag egwyddorion CRhD. Bydd y defnyddiau hyn yn cynnwys Ecosystem Afon (a alwyd gynt yn Ecosystem Pysgodfeydd yn Adroddiad Ymgynghorol CRhD Tawe a De Gŵyr), Ecosystem Arbennig, Tynnu Dŵr ar gyfer Cyflenwad Dŵr Yfed, Tynnu Dŵr ar gyfer Amaethyddiaeth/Diwydiant a Chwaraeon Dŵr.

Ar hyn o bryd, dim ond y safonau ar gyfer y Defnydd Ecosystem Afon a ddatblygwyd ar sail ffurfiol ac, o ganlyniad, dyma'r Defnydd TAD cyntaf i'w gyflwyno gan y Llywodraeth trwy Reoliadau Dyfroedd Wyneb (Ecosystem Afon) (Dosbarthiad) 1994. Ar gyfer pob darn afon dosbarthedig o fewn dalgylch Tawe a De Gŵyr fe gynigiwyd targed dosbarth Defnydd Ecosystem Afon (Ecosystem Pysgodfeydd gynt), ac mae'r Cynllun Gweithredu CRhD hwn yn pennu, lle bo'n briodol, sut y dylid gweithredu i gyflawni'r targedau hyn. Ar hyn o bryd, targedau anffurfiol yn unig fydd y rhain, ond gobeithir y gellir eu sefydlu cyn bo hir yn Dargedau Ansawdd Dŵr ffurfiol gan yr Ysgrifennydd Gwladol dros yr Amgylchedd ac Ysgrifennydd Gwladol Cymru.

ADOLYGIAD O'R BROSES YMGYNGHORI

Cyhoeddodd yr AAC Adroddiad Ymgynghorol Cynllun Rheoli Dalgylch (CRhD) Tawe a De Gŵyr ym mis Mawrth 1994. Lansiwyd y cynllun fel dogfen ymgynghorol gan geisio sylwadau oddi wrth baw oedd â diddordeb yn yr amgylchedd dyfrol. Daeth oddeutu 60 o unigolion yn cynrychioli amryfal sefydliadau allweddol i'r cyfarfod lansio cyhoeddus ym Mhontardawe ar 22 Mawrth 1994. Codwyd arddangosiad wedyn yn llyfrgelloedd cyhoeddus Abertawe a Threforys, yn egluro'r broses CRhD a'r manylion a'r materion allweddol yn nalgylch Tawe a De Gŵyr. Gadawyd yr adroddiad ym mhob llyfrgell a swyddfa cyngor lleol o fewn y dalgylch er mwyn i aelodau'r cyhoedd gael ei ddarllen ac anfonwyd datganiad i'r wasg leol i godi ymwybyddiaeth am y CRhD a'r cyfnod ymgynghori. Parhaodd y cyfnod ymgynghori swyddogol o'r lansio cyhoeddus drwodd i'r 20fed o Fai, er yr anfonodd sawl corff ac unigolyn sylwadau ysgrifenedig i mewn wedi'r cyfnod hwn. Dosbarthwyd rhyw 350 copi o'r Adroddiad Ymgynghorol i gyrff allanol. Cafwyd cyfanswm o 37 ymateb ysgrifenedig oddi wrth yr unigolion a'r



Ymweliad Addysgol ag Afon Tawe.

sefydliadau canlynol:

Adran Enweirio INCO Ewrop

Dur Prydain

Bwrdd Croeso Cymru

Menter Coedwigaeth

INCO Ewrop Cyf.

Pwyllgor Pysgodfeydd Môr De Cymru

Parc Gwledig Craig-y-Nos

Cyngor Cymuned Cilybebyll

Cymdeithas Camlas Abertawe

Cyngor Sir Gorllewin Morgannwg

Cymdeithas Ddinesig Abertawe

Ymgyrch Diogelu'r Gymru Wledig

Y Comisiwn Brenhinol ar Henebion yng Nghymru

Dinas Abertawe

Cyngor Chwaraeon Cymru

Cymdeithas Porthladdoedd Prydain

Cadwch Gymru'n Daclus

Cymdeithas Ganŵio Cymru

Cymdeithas y Camlesi

Ysgol Gyfun Bishopston

Camlesi Prydain

Y Swyddfa Gymreig

Dŵr Cymru

Cymdeithas Enweirio Pontardawe ac Abertawe

Cymdeithas Enweirio Tawe a'i Hisafonydd

Y Gymdeithas Frenhinol er Gwarchod Adar

Ymddiriedolaeth Bywyd Gwyllt Brycheiniog

Cymdeithas y Cerddwyr

Ymddiriedolaeth Bywyd Gwyllt Morgannwg

Cyngor Cefn Gwlad Cymru

Yr Awdurdod Coedwigaeth

Cadw

Olew BP

Parc Cenedlaethol Bannau Brycheiniog

Syrffwyr yn Erbyn Carthion

Rhoddwyd ystyriaeth i'r holl sylwadau a dderbyniwyd ynghylch yr Adroddiad Ymgynghorol wrth lunio'r Cynllun Gweithredu hwn ar gyfer dalgylch Tawe a De Gŵyr. Mae'r Cynllun Gweithredu hwn yn cynnwys ac yn adlewyrchu llawer o'r sylwadau a wnaed gan y cyrff a'r unigolion hynny.

GOLWG GYFEREDINOL AR DDALGYLCH TAWE A DE GŴYR

CYFFREDINOL

Mae ardal Cynllun Rheoli Dalgylch (CRhD) Tawe a De Gŵyr yn cynnwys dalgylch hydrolegol Afon Tawe, yn ogystal â nentydd Gŵyr sy'n draenio tua'r de rhwng Pen Pyrod a cheg afon Tawe (caiff nentydd Gogledd Gŵyr eu cynnwys yng Nghynllun Rheoli Dalgylch Llchwyr, y gobeithir ei gyhoeddi ym 1995/6).

Mae tarddell afon Tawe yn y Mynydd Du uwchben Llyn y Fan Fawr, ryw 590m uwchlaw lefel y môr. Mae'r ardaloedd ucheldirol hyn yn darparu porfa arw i ddefaid, tra defnyddir y tiroedd is ar gyfer ffermio cymysg eidion, llaeth a defaid, er mai cymharol ychydig o weithgaredd amaethyddol sydd o fewn y dalgylch. Ceir rhai coedwigoedd conwydd bychain yma ac acw yn y dalgylch, yn ogystal ag ambell goedwig frasddeiliog fawr yn ne Gŵyr.

Effeithiwyd ar afon Tawe gan ddiwydiant, ac mae'n dal i effeithio arni. Mae'r trefoli wedi'i ganoli'n bennaf yn rhan ddeheuol y dalgylch yn Abertawe, ynghyd â rhai

trefi mawr a datblygiad rhubanog ar hyd coridorau'r brif afon a'i phrif isafonydd. Mae gan y dalgylch isadeiledd datblygedig iawn gyda chysylltiadau da ar ffordd a rheilffordd.

Newidiwyd moryd afon Tawe'n sylweddol wrth adeiladu morglawdd sy'n cadw dŵr yr afon o fewn cronïad. Dyma'r morglawdd cyntaf o'i fath i'w adeiladu yng Nghymru a Lloegr ac fe'i cwblhawyd ym 1992. Mae'r morglawdd yn cynnwys coredau cynradd ac eilradd gyda loc mordwyo cysylltiedig a grisiau pysgod. Mae'r cynllun hefyd yn cynnwys generadur tyrbîn gwrthdro bach.

O ddechrau'r 18fed ganrif ymlaen, bu rhan isaf Cwm Tawe'n ganolfan ar gyfer puro metelau; smeltio copr yn bennaf. Ailddatblygwyd yr ardal hon dan gynllun Cylch Menter Abertawe, gan sefydlogi llawer o'r tomenni gwastraff. Bydd unrhyw ddatblygiadau yn y dyfodol sy'n golygu aflonyddu ar dir halogedig mewn perygl o beryglu ansawdd dŵr daear ac wyneb.

Yn hanesyddol bu cloddio mawr am lo yn rhan ganol y dalgylch. Er nad oes dim pyllau dwfn yn gweithredu mwyach, y mae nifer gynyddol o byllau a golchfeydd bach preifat. Gwneir gwaith cloddio glo brig hefyd mewn sawl lle.

AMDDIFFYN RHAG LLIFOGYDD

Mae'r gwaith amddiffyn rhag llifogydd yn y dalgylch wedi'i ganoli'n bennaf o gwmpas ardaloedd trefol Ystradgynlais, Ystalyfera, Pontardawe, Ynystawe a Threforys. Adeiladwyd amddiffynfeydd i ddelio â'r cynnydd mewn dŵr ffo a geir o ganlyniad i lefelau datblygiad mor uchel.

Mae afon Tawe yn nodweddiadol yn cludo llwyth gwaddodol trwm. O ganlyniad i hyn, mae gwely'r afon yn codi'n helaeth ar hyd sianel yr afon a gall hyn greu mwy o berygl llifogydd.

Mae cyrsiau dŵr De Gŵyr ar y cyfan yn draenio mwy o ddalgylchoedd gwledig na rhai afon Tawe. Serch hynny, y mae nifer o safleoedd lle mae eiddo mewn perygl o ddioddef llifogydd a lle y gweithredwyd cynlluniau i liniaru eu heffaith.

Bu datblygiad trwm ar y gorlifdir arfordirol wrth Fae Abertawe ac mae amddiffynfeydd arfordirol yn gwarchod y rhan fwyaf ohono. Wrth i draethau ostwng ac i dywod gael ei golli o gwmpas Bae Abertawe gallai lefel y warchodaeth a roddir gan yr amddiffynfeydd arfordirol gwmpo a bydd angen cadw llygad ar hyn.

Mae'r AAC yn gweithredu system rybuddio rhag llifogydd ar afon Tawe. Mae hyn yn golygu monitro parhaus ar y tywydd ac amodau llifogydd posib, a chyhoeddi rhybuddion trwy'r heddlu fel y bo'n briodol.

ANSAWDD DŴR

Mae ansawdd y dŵr o fewn y prif gyrsiau dŵr yn uchel



Afon Tawe yng Nglyntawe.



Arllwysiad o hen fwynglaudd.

ar y cyfan. Rhoddwyd 85% o'r darnau afon dosbarthedig yn Nosbarth A neu B yn Arolwg Ansawdd Cyffredinol 1992.

Ceir unarddeg o arllwysfeydd carthion arwyddocaol o fewn y dalgylch, chwech ohonynt i ddyfroedd arfordirol. Arllwysir elifant carthion o Gwm Tawe isaf a dinas Abertawe yn dilyn triniaeth gyntaf (sgrinio), trwy arllwysfa fer i'r môr a gaiff ei rheoli gan y llanw oddi ar Drwyn y Mwmbwls. Mae cynllun mawr ar y gweill ar hyn o bryd gan Dŵr Cymru i ddarparu triniaeth a diheintiad llawn, a darparu arllwysfa hir i'r môr yn lle'r arllwysfa hon, yn ystod 1997.

Yr unig arllwysiad diwydiannol sylweddol a wneir i'r dalgylch yw hwnnw o burfa nicel INCO Europe Cyf yng Nghlydach ar afon Tawe.

Mae metelau trwm (yn enwedig zinc) yn dal i niweidio ansawdd y dŵr yn Nant y Fendrod ac Afon Tawe, i raddau helaeth oherwydd defnyddiau hanesyddol y dalgylch. Mae lefelau metelau yng ngwaddodion yr afon yn uchel a gall Morglawdd Tawe gynyddu presenoldeb y rhain o fewn y rhan a gronnir.

ADNODDAU DŴR

Mae'r ffigyrau glawiad blynyddol cyfartalog yn amrywio'n sylweddol gydag uchder y tir ar draws y dalgylch, o oddeutu 1100mm ar Drwyn y Mwmbwls i dros 2400mm ar y Mynydd Du yn y gogledd. Amrywiol yw'r defnydd a wneir o'r dŵr, gyda'r pwyslais ar ddefnydd diwydiannol yn ardaloedd trefol cwm Tawe a defnydd amaethyddol yn ardal wledig De Gŵyr.

Daw'r rhan fwyaf o'r cyflenwad dŵr cyhoeddus ar gyfer yfed a defnydd diwydiannol o'r tu allan i'r dalgylch, er bod Dŵr Cymru yn tynnu dŵr o ffynnon yn Parkmill ar Benrhyn Gŵyr i'r diben hwn.

Bydd Bwrdd Camlesi Prydain (British Waterways) yn tynnu dŵr o afon Tawe i Gamlas Abertawe, a thynnir dŵr eto o honno mewn pedwar lle. Tynnir dŵr hefyd gan y diwydiant glo yn Nhirbach, ac ar gyfer potelu dŵr yn ne Gŵyr ac yn nalgylch Tawe uchaf.

Mae tynnu dŵr ar gyfer chwistrell-ddyfrhau yn gyfyngedig ar y cyfan i benrhyn Gŵyr, er y gwneir llawer o dynnu ar raddfa fach o ddŵr daear at ddibenion amaethyddol ar hyd a lled y dalgylch. Mae dau safle'n tynnu dŵr at ddibenion magu pysgod.

Mae'r brif orsaf fesur ar afon Tawe ger Ynystawe. Mae angen monitro'r llif a'r lefelau yn y cyrsiau dŵr llai er mwyn darparu gwybodaeth ar gyfer rhybuddion llifogydd a chydysyniadau i dynnu dŵr, arllwys a chodi datblygiadau newydd. Nid arolygir adnoddau dŵr daear ar hyn o bryd.

PYSGODFEYDD A CHADWRAETH

Mae pysgodfeydd Tawe wedi gwella'n sylweddol yn y blyneddau diwethaf oherwydd gwelliannau yn ansawdd y dŵr, ac wrth i rwystrau i bysgod mudol gael eu symud. Mae'r afon bellach yn cynnal poblogaethau sylweddol o eogiaid a brithyllod môr yn ogystal â'r brithyllod cyffredin cynhenid.

Hwyluswyd mynediad pysgod dros Raeadr Penycae a Chored Beaufort gan yr AAC a'i ragflaenwyr, ac adeiladwyd grisiau pysgod ar Gored Panteg. Yn ôl astudiaethau sydd ar droed ar hyn o bryd i asesu effaith y morglawdd ar boblogaethau eogiaid a brithyllod mudol, mae'n debyg bod y morglawdd yn rhwystr i'r eogiaid a'r siwin rhag mudo. Mae'r morglawdd yn debyg o ddylanwadu yn y dyfodol ar natur y bysgodfa o fewn cyrraedd y llanw.

Does dim pysgodfa fasnachol na physgodfa gregyn o fewn system yr afon. Mae rhwydo ar draeth yr arfordir wedi'i gyfyngu i fisoedd y gaeaf er mwyn gwarchod stociau eogiaid mudol wrth iddynt ddod i mewn i'r dyfroedd mewndirol.

Mae ardal y CRhD yn gyfuriog o blanhigion, anifeiliaid a golygfeydd hardd. Yn dyst i hyn ceir Ardal o Harddwch Naturiol Eithriadol (AHNE) Gŵyr, Arfordir Treftadaeth Gŵyr, Parc Cenedlaethol Bannau Brycheiniog a sawl Safle o Ddiddordeb Gwyddonol Arbennig (SDdGA - SSSI). Yn ogystal, mae Ymddiriedolaeth Bywyd Gwylt Morgannwg a'r Ymddiriedolaeth Genedlaethol yn rheoli nifer o safleoedd ac mae gan Gymdeithas Warchod Adar yr RSPB warchodfa ar hyd Clydach Isaf. Mae'r fflatiau llaid yn Blackpill ym Mae Abertawe'n darparu mannau bwydo a chlwydo pwysig i wylanod ac adar basddwr.



C. H. Gomersall / RSPB

Dyfrgi

Cofnodwyd dyfrgwn yn ddiweddar yn y brif afon ar ei hyd, ac yn rhai o'r prif isafonydd. Adeiladwyd mannau gorffwys a bridio (holtiau) artiffisial i roi gwell cynefin i'r anifeiliaid hyn yng nglannau'r afon, a disgwyli'r i'w dosbarthiad gynyddu.

Mae dros 50 safle o ddiddordeb pensaernïol wedi'u rhestru gan CADW o fewn y dalgylch. Hen geirydd, gweithiau pridd neu gerrig y tu allan i goridor yr afon yw'r rhan fwyaf o'r safleoedd hyn.

Mae chwyn ymledol yn tyfu'n doreithiog yn rhannau canol ac isaf afon Tawe a'i hisafonydd. Mae'r planhigion hyn yn achosi cryn broblemau, er enghraifft trwy leihau mynediad at yr afon ac felly effeithio ar amryw o'r cynlluniau adennill tir sy'n cael eu cyflawni yn rhan isaf'r cwm.

ADLONANT

Mae poblogaeth fawr yn nalgylch Tawe a'r ardal o'i gwmpas ac felly mae'n ddealladwy bod galw mawr am safleoedd adloniant sy'n bodoli ac a allai fodoli. Ar hyn o bryd darperir ar gyfer yr anghenion hyn drwy ddarparu parciau gwledig, llwybrau, lonydd beicio, meysydd parcio i'r traethau a nifer o gyrff trefnus sy'n ymwneud â diddordebau arbennig, fel cymdeithasau pysgota a chlybiau hwyllo. Mae adeiladu'r morglawdd, a throï Doc y De'n farina, wedi cyflwyno cyfleoedd newydd, adloniannol yn bennaf.

Mae gan y dalgylch werth cadwraethol mawr ac mae'n atyniadol i wylwyr adar, ogofwyr, dringwyr a cherddwyr. Mae gan Dde Gŵyr nifer o feysydd gwersylla ac mae'n gyrchfan wyliau boblogaidd gan bobl a gaiff eu denu gan y traethau ymdrochi hardd. Mae traethau Caswell ac Oxwich yn boblogaidd iawn gydag ymdrochwyr drwy dymor yr haf. Ceir chwaraeon dŵr, yn cynnwys sgio-jet a sgio-dŵr, o gwmpas yr arfordir.

Mae pysgota â genwair yn boblogaidd iawn ar afon Tawe a'i hisafonydd. Mae clybiau genweirio lleol yn caniatáu pysgota am bysgod eogaidd (eogiaid a brithyllod môr - siwin) yn y rhan fwyaf o ddarnau o'r afon; ategir stociau'r brithyll cyffredin trwy stocio pysgod a fagwyd gan Gymdeithas Enweirio Tawe a'i Hisafonydd. Crewyd sawl pysgodfa brithyllod enfys preifat ar sail 'rhoi a chymryd' ac mae'r rhain yn denu niferoedd mawr o ymwelwyr. Pysgotir mewn llawer o lynnoedd hefyd am bysgod cyffredin, ac mae'r llynnoedd ym mharciau Abertawe'n arbennig o boblogaidd.

CYCHOD A MORDWYO

Dim ond hyd derfyn y llanw wrth Gored Beaufort y mae hawliau mordwyo cyhoeddus yn bodoli ar afon Tawe. Mae maint y loc yn y morglawdd yn cyfyngu ar y cychod a all fynd i'r darn llanw. Bydd sawl cwch pysgota masnachol bach yn defnyddio angorfeydd o

fewn y croniad. Ers creu'r morglawdd, bu modd i'r cychod hyn ddod i mewn i'r croniad waeth beth fo cyflwr y llanw.

Wrth adfer rhannau o Gamlas Abertawe, crewyd adnodd lleol gwerthfawr, gyda theithiau cwch wedi'u trefnu a chanolfan wybodaeth/dreftadaeth yng Nghlydach.

Ni ddefnyddir y dociau masnachol yn Abertawe, sydd dan reolaeth Associated British Ports, i'r un graddau ag o'r blaen er eu bod yn dal i wasanaethu fel cyfleuster docio pwysig i longau BP. Bydd llongau cargo a theithwyr yn ymweld yn rheolaidd. Mae hefyd wasanaeth fferi ceir yn teithio i Gorc yng Ngweriniaeth Iwerddon rhwng misoedd Mawrth a Hydref. Yn yr aber islaw'r morglawdd cynhelir sianel fordwyo drwy dreillio er mwyn sicrhau mynediad i longau i mewn ac allan o borthladd Abertawe.

Y BERTHYNAS RHWNG DEFNYDD TIR A'R AMGYLCHEDD DYFROL

CYFLWYNIAD

Mae defnydd dyn ar dir, boed hynny ar gyfer datblygiadau trigianol, amaethyddol, diwydiannol, mwyrnderol neu isadeileddol, yn debyg o effeithio ar yr amgylchedd dyfrol, un ai'n uniongyrchol neu'n anuniongyrchol. Ceisia'r Cynllun Rheoli Dalgylch (CRhD) hwn fynd i'r afael â phroblemau presennol, sicrhau gwelliannau amgylcheddol cyffredinol a diogelu'r dalgylch rhag niwed pellach.

Mae rhan ganol dalgylch Tawe'n draenio ardal drefol/ddiwydiannol yn bennaf wedi'i chanoli o gwmpas Dinas Abertawe, Ystalyfera, Ystradgynlais, Clydach a Phontardawe. Mae penrhyn Gŵyr tua'r de yn rhan o ardal wyliau boblogaidd sy'n denu miloedd o ymwelwyr bob blwyddyn. Fel cyferbyniad pellach, mae rhan ogleddol y dalgylch yn ucheldir sydd bron yn gwbl ddilychwin, sy'n cynnwys y Mynydd Du ac sydd o fewn ffiniau Parc Cenedlaethol Bannau Brycheiniog. Dyma faterion sy'n peri pryder arbennig i'r AAC:

- effaith y morglawdd ar ansawdd dŵr a physgod mudol
- effaith gollyngiadau o fwyngloddiau metel segur, a thir halogedig
- gwarchod tirwedd o werth uchel
- diffygion isadeiledd, yn enwedig o ran carthffosiaeth
- y peryglon cysylltiedig â datblygu ar

orlifdir

- effeithiau tynnu ac arllwys dŵr ar lifeiriain tywydd sych
- effaith tynnu gro ar gynefinoedd afonydd a physgodfeydd.

Safbwynt yr AAC ar bob datblygiad newydd yw mai cyfrifoldeb y datblygwyr yw asesu effaith eu cynigion ar yr amgylchedd dyfrol a darparu gweithfeydd lliniaru addas lle bo hynny'n angenrheidiol. Er mwyn sicrhau yr edrychir ar y materion iawn, ac y gwneir cais am y cydsyniadau perthnasol, rhaid i'r datblygwyr ymgynghori â'r AAC cyn gynted ag y bo modd.

ISADEILEDD

Carthffosiaeth: Mae'n amlwg yn bwysig i'r awdurdodau lleol a Dŵr Cymru sicrhau fod systemau draenio a thrin digonol ac addas ar gael lle bynnag y bo datblygiad newydd neu ailddatblygiad ar y gweill. Croesawodd yr AAC fwriad Dŵr Cymru i fuddsoddi £78m mewn gosod cyfleusterau trin carthion yn Abertawe. Ond mae'r arllwysiad o waith trin carthion Trebanos yn dal i achosi effaith annerbyniol ar yr amgylchedd dyfrol. Mae Dŵr Cymru wedi ymrwmo i wneud gwaith adfer, o fewn CRhA2, erbyn diwedd 1997. Yn y cyfamser, bydd yr AAC yn gwrthwynebu pob datblygiad ac eithrio rhai bach iawn, a ystyrir ar sail yr achos unigol.



Afon Tawe yn Landore.

DATBLYGIAD MEWN ARDALOEDD LLE CEIR PERYGL LLIFOGYDD

Mae datblygiad ar orlifdir fel arfer mewn perygl, a rhaid i'r AAC hysbysu'r awdurdodau cynllunio lleol, yn unol â chylchlythyr y Swyddfa Gymreig 68/92, lle gallai datblygiad arfaethedig ddioddef llifogydd. Gan ddechrau ym 1995, bydd yr AAC yn gwneud arolygon mawr o bob dalgylch afon, fesul cam a chyda chytundeb yr awdurdodau lleol, i ganfod maint y gorlifdir, ac effaith datblygiad ar beryglon llifogydd ledled y dalgylch, mewn mwy o fanylder. Fe gymer y gwaith hwn flynyddoedd lawer i'w gwblhau ond bydd yn canolbwyntio ar y dechrau ar yr ardaloedd hynny lle bernir bod llifogydd yn fater pwysig.

Gall datblygiad effeithio ar afonydd ac amddiffynfeydd llifogydd yn uniongyrchol, neu gall effeithio ar y perygl gorlifo. Polisi'r Llywodraeth yw y dylai datblygiadau newydd mewn ardaloedd lle ceir perygl llifogydd wneud darpariaeth ar gyfer amddiffyn rhag llifogydd. Lle bo modd gwneud gwaith lliniaru, bydd yn ddisgwyliedig i'r datblygwr ymchwilio i'r perygl llifogydd, a chynllunio a chyflwyno gwelliannau i'w gais cynllunio i ddangos sut y lliniarir neu y gwneir

iawn am unrhyw berygl llifogydd annerbyniol a gyfyd o'r datblygiad arfaethedig. Oherwydd y trafodaethau hir a chymhleth a all ddilyn, dylai datblygwyr ymgynghori â'r AAC cyn gwneud cais.

O fewn dalgylch Tawe, problemau lleol yw problemau llifogydd ar y cyfan. Gweithredwyd sawl cynllun i liniaru perygl llifogydd, ond mae ambell ardal (e.e. Cwmtwrch) yn dal i fod mewn perygl.

TIR HALOGEDIG

Wrth hyrwyddo cynlluniau aildatblygu, mae angen i ddatblygwyr gofio sut y defnyddiwyd safleoedd yn y gorffennol. Mae halogiad yn rhan isaf Cwm Tawe a llain arfordirol dwyrain Abertawe, yn deillio o waith diwydiannol hanesyddol. Ysgrifennwyd llawer am rai ardaloedd arbennig a gwnaed gwaith adfer yn weddol ddiweddar.

Deliodd Project Cwm Tawe ag ardal fawr halogedig iawn yn rhan isa'r cwm; cwblhawyd rhaglen glirio tomenni dros gyfnod o ddeng mlynedd ddiwedd y 1960au a dechrau'r 1970au. Dynodwyd Cylch Menter ar y safle ym 1981, ac erbyn hyn mae llawer o'r ardal wedi'i thirwedu. Wrth i'r datblygiad hwn symud y tomenni a darparu gorchuddion anhydraid, ynghyd â glaswelltu a phlannu, helpwyd i leihau llygredd metelaidd yr amgylchedd dyfrol. Ond mae'n hanfodol parhau i reoli'n ofalus.

Mae llai o waith papur ac ymchwil wedi'i wneud ar ardaloedd tir halogedig y tu allan i'r cylch hwn, a gall y rhain achosi perygl arwyddocaol i'r amgylchedd dyfrol. Cyfrifoldeb y datblygwr bob amser yw asesu'r broblem a gwneud gwaith adfer priodol, mewn ymgynghoriad agos â'r AAC.

DŴR DAEAR

Mae cadw ansawdd a maint dŵr daear yn un o brif amcanion yr AAC, a chyhoeddodd yr Awdurdod ddogfen "Polisi ac Ymarfer ar gyfer Gwarchod Dŵr Daear", sy'n rhoi cyngor ar reoli a gwarchod dŵr daear ar sail gynladwy. Mae'r polisi hwn yn delio â chysyniad sensitifrwydd a pherygl i ddŵr daear oddi wrth amrediad o weithgareddau dyn. Nid ystyrir bod dyfrhaenau o fewn dalgylch Tawe'n brif ffynhonnell cyflenwad, ond mae sawl eiddo yn dibynnu ar ffynonellau dŵr daear bychain ar gyfer dibenion domestig preifat a gwneir defnydd masnachol arwyddocaol ar ddŵr wrth ei dynnu i'w botelu. Yn arbennig, mae angen i ddatblygwyr fod yn ymwybodol o gylchoedd gwarchodedig yn rhan ogleddol y dalgylch, ger Aber-craf, a thua'r de o fewn ardal Gŵyr y

CRhD. Bydd yr AAC yn disgwyl i'r awdurdodau cynllunio ystyried yr angen i warchod dŵr daear lle mae'n bodoli, fel ystyriaeth faterol wrth benderfynu ar geisiadau cynllunio.

CORIDORAU AFON

Lleiniau Clustogi: Mae coridorau afonydd yn darparu cysylltiadau pwysig rhwng cynefinoedd ac fe'u defnyddir yn helaeth gan fywyd gwyllt. Hoffai'r AAC weld creu lleiniau clustogi ar hyd pob cwrs dŵr, mewn ardaloedd gwledig a threfol, i helpu i warchod yr amgylchedd dyfrol rhag effaith gweithgareddau ar dir cyfagos a allai beri niwed. Byddai'n rhaid i'r lleiniau hyn gael eu ffensio lle bo da byw'n bresennol, er mwyn osgoi difrod i lannau afonydd a allai achosi ansefydlogrwydd sianel, mwy o berygl llifogydd a lleihad mewn gwerth pysgodfaol a chadwraethol.

Cwlfertydd, Dargyfeirio Afonydd a Thiroedd Gwlyb: Rhaid cael cydsyniad oddi wrth yr AAC i ddefnyddio cwlfertydd i gyfeirio a chludo cyrsiau dŵr o dan y ddaear. Er bod sefydlu cwlfertydd o faint addas ar gyfer croesfannau afon bychain yn ymarfer derbyniol yn gyffredinol, nid yw'r AAC o blaid defnydd eang ar gwlfertydd i alluogi newid defnydd tir - byddai hyn yn groes i'w ddyletswyddau cadwraeth. Yn enwedig, mae'r arfer o gwlfertu nentydd er mwyn defnyddio'u dyffrynnoedd fel safleoedd tirlenwi, a mewnlenni tiroedd gwlyb, yn gyffredinol annerbyniol. Yn yr un modd, byddai'r AAC ar y cyfan yn gwrthwynebu dargyfeirio cyrsiau dŵr sefydledig er mwyn caniatáu datblygiad, a byddai'n dymuno i'r cwrs naturiol gwreiddiol gael ei gadw fel nodwedd pryd bynnag y bo modd.

AMAETHYDDIAETH

Mae cyfran arwyddocaol o'r dalgylch yn dir amaethyddol gyda ffermio cymysg dwysedd isel yn arbennig o amlwg. Mae'r diffyg buddsoddi digonol mewn cyfleusterau rheoli elifiant yn achosi problemau weithiau. Gosododd y Rheoliadau Rheoli Llygredd (Silwair, Slyri ac Olew Tanwydd Amaethyddol) 1991 safonau isaf ar gyfer adeiladu systemau newydd neu rai wedi'u haltro'n sylweddol. Bydd yr AAC yn

defnyddio'r Rheoliadau hyn, a'i gysylltiadau hir-sefydledig a chymdeithasau'r ffermwyr, i sicrhau atebion mwy effeithiol, hirdymor.

Ceir coedwigaeth o fewn y dalgylch, yn ne Gŵyr a rhannau canolog/gogleddol dalgylch Tawe. Lle bydd cynigion i'r dyfodol yn digwydd o fewn ardaloedd lle gallai coedwigaeth beryglu ansawdd dŵr, bydd yr AAC yn eu hystyried yn fanwl, fesul achos.

MORGLODDIAU, MARINAS A CHOREDAU LLANW

Gall y math hwn o ddatblygiad, a gynigir fel arfer i wella gwerth mwynderol ac adloniannol, achosi amrywiaeth o broblemau. Gall y rhain gynnwys llifogydd, dirywiad yn ansawdd dŵr - gan arwain weithiau at flodau algaidd gwenwynig ac arogleuon - a rhwystr i symudiadau pysgod mudol. Cwblhawyd Morglawdd Tawe ym 1992 ac mae wedi codi pryderon ynghylch ansawdd y dŵr yn yr afon gronedig, a'r effaith ar fudiad pysgod. Mae'r morglawdd yn cynnwys cynllun ar gyfer cynhyrchu pŵer trydan-dŵr. Wrth awdurdodi tynnu dŵr ar gyfer cynhyrchu trydan, i bob pwrpas rhwystrir caniatáu unrhyw dynnu dŵr wyneb ar raddfa fawr i fyny'r afon, oni bai fod gweithredwyr y

Morglawdd yn cytuno i waethygiad yn eu hawliau tynnu. Gan fod problemau'r dyfodol i ddatblygiadau o'r fath yn aml yn anodd eu rhagweld, bydd yr AAC yn disgwyl i'r awdurdodau cynllunio arfer ymagwedd rhagofalus eithaf cryf wrth ystyried unrhyw gynigion newydd.



Morglawdd Tawe.

MATERION A DULLIAU GWEITHREDU

Mae'r adran ganlynol yn amlinellu'r ffyrdd y cytunwyd i weithredu i fynd i'r afael â'r materion a enwyd yn Adroddiad Ymgynghorol CRhD Tawe a De Gŵyr. Dangosir y sefydliad(au) sy'n gyfrifol am y gweithredu, y costau dan sylw, a'r amserlen y cytunwyd arni ar gyfer y gweithredu. Dim ond lle bo'r corff cyfrifol am wneud y gwaith/y buddsoddiad wedi cytuno ac wedi arwyddo cytundeb i'r perwyl hwnnw y cynhwysir y gweithredu yn y tabl. Lle nad oes cytundeb ar y dull gweithredu neu lle nas cymeradwywyd eto, gwneir hynny'n glir yn y tabl gweithredu.

Mae'r Cynlluniau Gweithredu'n anelu'n bennaf at y cyfnod pum mlynedd wedi cyhoeddi'r Adroddiad Ymgynghorol, h.y. hyd ddiwedd 1998. Lle nad yw'n debygol y caiff Materion eu datrys o fewn y cyfnod hwn, nodir hynny'n eglur yn y tablau. Dylid gweld CRhD fel rhywbeth sy'n esblygu o hyd, ac felly os gwelir newid blaenoriaethau neu gyfleoedd newydd ar gyfer gwelliannau, fe'u hadlewyrchir mewn adolygiadau blynyddol o'r cynllun.

Ym 1994, wedi i Adroddiad Ymgynghorol CRhD Tawe a De Gŵyr gael ei lunio, cyflwynodd y Llywodraeth reoliadau ar gyfer gweithredu Cynllun Dosbarthu Ansawdd Dŵr newydd sef Ecosystem Afonydd (EA), a ddisodlodd y Cynllun Ecosystem Pysgodfeydd (EP) a ddefnyddiwyd yn yr adroddiad cynharach. Mae'r cynllun newydd yn cynnwys safonau ansawdd dŵr sy'n ystadegol gryfach na'r rheiny yn y cynnig blaenorol. Yn sgîl hynny, edrychwyd eto ar y data a ddefnyddiwyd ar gyfer Adroddiad Ymgynghorol y CRhD i adlewyrchu'r cynllun newydd ac fe all fod rhai o'r dulliau gweithredu a gynigir wedi newid o ganlyniad. Y peth da am yr archwiliad manylach hwn yw y gall yr AAC fod yn fwy hyderus fyth y bydd yr arian y mae'n ei wario neu'n gofyn i eraill ei wario i ddatrys materion yn arwain at welliant arwyddocaol yn ansawdd dŵr.

Yn yr Adroddiad Ymgynghorol, enwyd 47 o faterion lle roedd methiant i gyrraedd targedau ac felly lle roedd angen rhyw weithredu i'w datrys. Cyflwynwyd y materion hyn, ynghyd â gwahanol ddewisiadau rheoli, er trafodaeth fel rhan o'r broses ymgynghori. Ystyriwyd pob un o'r ymatebion a ddaeth oddi wrth gyrff allanol, a lle roedd angen cynhaliwyd trafodaethau pellach i ddatrys materion ac i gytuno ar ddulliau gweithredu priodol ac ymarferol y gellid eu fforddio.

Cadwyd pob un o'r 47 o faterion a enwyd yn yr Adroddiad Ymgynghorol o fewn y Cynllun Gweithredu hwn, er yr addaswyd ambell un yng ngolau sylwadau a wnaed yn ystod y cyfnod

ymgynghori ac yn sgâl ail-archwilio data ansawdd dŵr. Ychwanegwyd un mater newydd ers cyhoeddi'r Adroddiad Ymgynghorol (Mater 48). Defnyddiwyd y byrfoddau a ganlyn yn y prif destun a'r tablau:

An	Anhysbys
AAC	Yr Awdurdod Afonydd Cenedlaethol
ACLI'au	Awdurdodau Cynllunio Lleol
ADC	Awdurdod Datblygu Cymru
AG	Yr Awdurdod Glo
ALI'au	Awdurdodau Lleol
ALIEM	Arolygwyr Llygredd Ei Mawrhydi
AyrA	Adran yr Amgylchedd
BCC	Bwrdd Croeso Cymru
CBB	Cyngor Bwrdeistref Brycheiniog
CBDLI	Cyngor Bwrdeistref Dyffryn Lliw
CCG	Y Cyngor Cefn Gwlad
CDA	Cyngor Dinas Abertawe
CE	Cymuned Ewrop
CGC	Cymdeithas Gan io Cymru
CGD	Cadwch Gymru'n Daclus
CP	Camlesi Prydain
CRhA	Cynllun Rheoli Asedau
CSGM	Cyngor Sir Gogledd Morgannwg
CSP	Cyngor Sir Powys
CT	Cymdeithas y Tirfeddianwyr
CyC	Cymdeithas y Cerddwyr
DCWW	Dŵr Cymru Welsh Water
DP	Corfforaeth Ddwr Prydain
EA	Ecosystem Afon
GBO	Galw Biocemegol am Ocsigen
GCABA	Grŵp Cell Arfordir Bae Abertawe
GNG	Gwarchodfa Natur Genedlaethol
GPA	Grŵp Pysgodfeydd Anffurfiol
GTC	Gwaith Trin Carthion
OFWAT	Swyddfa Gwasanaethau Dŵr
OT	Ocsigen Toddedig
PGCC	Pibell Gorlif Carthion Cyfun
PCBB	Parc Cenedlaethol Bannau Brycheiniog
PMA	Parc Menter Abertawe
PPMDC	Pwyllgor Pysgodfeydd Mir De Cymru
RSPB	Y Gymdeithas Frenhinol er Gwarchod Adar
SDdGA	Safle o Ddiddordeb Gwyddonol Arbennig
SG	Y Swyddfa Gymreig
TAD	Targed Ansawdd Dŵr
WAPB	Y Weinyddiaeth Amaeth, Pysgodfeydd a Bwyd



Rhaeadr Penycae.

MATERION A GWEITHREDIADAU

MATER 1										Safonau esthetig ac ansawdd bacteriolegol gwael ym Mae Abertawe ac ar draethau Gŵyr.									
GWEITHREDU		CYFRIFOLDEB		COST £	1994	1995	1996	1997	1998	DYFODOL									
		PRIF	ARALL																
a) Cwblhau cyfleuster trin carchion a gwelliannau i'r PGCC sy'n arllwys i'r Bae.		DCWW		78m															
b) Sefydlu cyd-weithgor ar sbwriel i ddiffinio safonau ac ymchwilio i atebion. Gweler hefyd Fater 9.		AAC	CDA, CGD, BCC, ALL'au CCG, perchno-gion tir a thraeth	2,500															
c) Gwneud arolwg sbwriel i fesur maint y broblem ar ôl cwblhau'r gwelliannau trin carchion, o bosib ar y cyd efo CDA. Gweler hefyd Fater 9.		AAC	CDA	2,000															

MATER 2										Ansawdd esthetig gwael ym Marina Abertawe.									
a) Adolygu trefniadau rheoli sbwriel a diffinio safonau.		CDA	AAC	Amc CDA 1,500 AAC 500															
b) Ymchwilio i adroddiadau am flodau algaid a phroblemau arogleuon.		AAC	CDA	1,700															

MATER 3										Lefel isel ocsigen toddedig yng nghroniad Morglawdd Tawe.									
a) Mabwysiadu strategaeth reoli ar gyfer gweithredu Morglawdd Tawe fydd yn atal dŵr o ansawdd gwael rhag cael ei gadw yn y gronfa. I'w gytuno gyda'r AAC fel rhan o'r trefniadau cyd-gyswllt presennol.		CDA	AAC	Angen ymch-wilio															
b) Pennu blaenoriaethau ar gyfer gwelliannau i bibelli PGCC yn unol â CRhA2.		DCWW	AAC, CDA	600															
c) Gwneud gwelliannau i bibelli PGCC yn unol â CRhA2 - diffinir amserlenni ar gyfer PGCC unigol neu grwpiau ohonynt gan drafodaethau'r AAC/DCWW ar flaenoriaethau Rhanbarthol (ar droed ar hyn o bryd). Gweler Gweithredu 5(b).		DCWW		9.65m						Erbyn 2000									

MATERION A GWEITHREDIADAU

MATER 4 Gollyngiadau carbon deuocsid o waddodion o gwmpas y toriad newydd.									
GWEITHREDU	CYFRIFOLDEB		COST £	1994	1995	1996	1997	1998	DYFODOL
	PRIF	ARALL							
Dim angen gweithredu. Nid yw hyn yn fater mwyach.									
MATER 5 Lefelau uchel bacteria ac amonia yn yr aber oherwydd pibelli PGCC.									
a) Pennu blaenoriaethau ar gyfer gwelliannau i bibelli PGCC yn unol â CRhA2.	DCWW	AAC,	600 (rhan o Weithred 3b)						
b) Gwneud gwelliannau i bibelli PGCC yn unol â CRhA2 - diffinir amserlenni ar gyfer PGCC unigol neu grwpiau ohonynt gan drafodaethau'r AAC/DCWW ar flaenoriaethau Rhanbarthol (ar droed ar hyn o bryd). Gweler Gweithredu 3(c).	DCWW		9.65m						Erbyn 2000
MATER 6 Lefelau uchel nicel yn yr aber.									
a) Ymchwilio ac adrodd ar ffynonellau nicel yn rhannau isaf y cronid.	AAC		3,500						
b) Yn dibynnu ar ganlyniad (a), gweithredu cynllun adfer a rhoi ystyriaeth iddo yn y strategaeth reoli ar gyfer cronid Tawe.	AAC	CDA							
c) Adolygu amodau cydsyniad arllwys a roddir i INCO.	AAC	ALIEM	5,000						
ch) Gostwng crynodiad a llwythiad y nicel a arllwysir o INCO.	INCO	AAC, ALIEM	0.5m						Parhaus
MATER 7 Lefelau rhy uchel o fetelau (yn enwedig zinc) yn yr aber ac yn Nant-y-fendrod (EA Dosbarth 5), oherwydd tir halogedig.									
a) Astudiaeth ddesg i ganfod y prif ffynonellau a'u trefn pwysigrwydd.	AAC	CDA, ADC	4,000						
b) Parhau i roi sylwadau/cyngor yn y cyfnod cynllunio ar gyfer datblygiadau o fewn yr ardal o dir halogedig.	AAC		600 y flwyddyn						Parhaus

MATERION A GWEITHREDIADAU

MATER 8 Lefelau GBO a solidau mewn crogiant fymryn yn uchel ac OT isel yn Nant-y-fendrod, dim ond yn cyrraedd safonau EA Dosbarth 2. (Targed EA Dosbarth 1).									
GWEITHREDU	CYFRIFOLDEB		COST £	1994	1995	1996	1997	1998	DYFODOL
	PRIF	ARALL							
a) Canfod ffynonellau'r halogiad.	AAC		2,500						
b) Cytuno ar gamau adferol ac amserlen ar gyfer eu gweithredu i sicrhau gwelliannau yn ansawdd y dŵr.	AAC	Perchnogion y Safle	Dibynnu ar (a)						
MATER 9 Problemau sbwriel yn afon Tawe a Nant-y-fendrod.									
a) Sefydlu cyd-weithgor i ddiffinio safonau derbyniol ac ymchwilio i arebion posib. Gw. hefyd Fater 1.	AAC	ALL'au, CGD, CCG, ADC,	2,500 (i'w rhannu â Mater 1b)						
b) Gweithredu canfyddiadau (a).	An	An	An						
c) Gwneud arolwg sbwriel i fesur maint y broblem, o bosib ar y cyd â'r Awdurdodau Lleol. Gweler hefyd Fater 1.	AAC	ALL'au	5,000 (i'w rhannu â Mater 1, Gweith (c))						
MATER 10 Ansawdd esthetig gwael weithiau oherwydd arllwysiad Gwaith Dur Felindre.									
a) Ymchwilio i'r broblem honedig.	Dur Prydain		Ddim ar gael						
b) Adolygu'r cydsyniad arllwys.	AAC		1,000						
MATER 11 Mae afon Tawe islaw Clydach Uchaf yn EA Dosbarth 2 o achos OT isel a GBO ychydig yn uchel. Mae ansawdd biolegol yn wael yma ac ar Glydach isaf, lle mae solidau mewn crogiant yn rhy uchel (mae Clydach Isaf yn awr yn Nosbarth EA 1).									
a) Ymchwilio i achos problemau cemegol a biolegol yn y darnau dan sylw.	AAC		3,500						
b) Cytuno ar fesurau adfer ac amserlen ar gyfer gweithredu i sicrhau gwelliannau yn ansawdd y dŵr.	AAC	Perchnogion y Safle	Dibynnu ar (a)						

MATERION A GWEITHREDIADAU

MATER 12

Methiant i gyrraedd targed EA Dosbarth 1 yn afon Tawe oherwydd arllwysiad amonia o GTC Trebanos, yn achosi i'r darn yma gwmpo i Ddosbarth EA 2.

GWEITHREDU	CYFRIFOLDEB		COST £	1994	1995	1996	1997	1998	DYFODOL
	PRIF	ARALL							
a) Ailwampio GTC Trebanos yn unol â CRhA2.	DCWW		1.8m						
b) Adolygu'r cydsyniad arllwys i sicrhau cydymffurfiaid i lawr yr afon ag EA Dosbarth 1 (daw'r cydsyniad i rym erbyn diwedd 1997 fan bellaf).	AAC		1,500						

MATER 13

Clydach Uchaf yn methu cyrraedd ei tharged yn yr afon uchaf oherwydd lefelau uchel amonia, sy'n ei rhoi'n bennaf yn Nosbarth EA 2, gyda rhai darnau yn Nosbarth EA 5. Mae ansawdd biolegol yn wael drwyddi draw. Cyflawnir safonau Dosbarth EA 1 am y GBO bellach yn y rhan fwyaf o rannau, ond cwmpa o fymryn bach i Ddosbarth EA 2 yn y rhannau isaf.

a) Cytuno ar gynnig adfer i ddatrys problemau dŵr daear yn safle Pwllfawatcyn.	CBDLI	AAC	15,000 hyd yma						
b) Gweithredu cynigion adfer.	CBDLI		I'w gostio fel rhan o (a) uchod						
c) Nodi cynigion adfer tymor hir yn Safle Glofa Abernant.	AAC	AG, CSGM	500 (costau'r AAC yn unig)						
ch) Gweithredu'r cynigion adfer (amserlen a chostau i'w cytuno).	AG, Perchennog y Safle								
d) Ymchwilio i ansawdd biolegol a chemegol y rhannau uchaf i nodi problemau a thargedu gwaith adfer i helpu cyrraedd targed Dosbarth EA 1	AAC		500						

MATER 14

Ansawdd biolegol gwael yn afon Tawe rhwng Abercrâf a Chlydach Uchaf ac yn Nant Giedd.

Gwneud ymchwiliad biolegol manwl.	AAC		700						
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MATERION A GWEITHREDIADAU

MATER 15

Ansawdd esthetig a dŵr gwael oherwydd gollyngiadau o fwyngloddiau segur.

GWEITHREDU	CYFRIFOLDEB		COST £	1994	1995	1996	1997	1998	DYFODOL
	PRIF	ARALL							
Mae'r modd y gweithredir yn ddibynnol ar ganlyniad ymchwil cyfredol i atebion adferol (fel y cynllun arddangos dan nawdd CE ar Afon Pelenna) a maes llafur ac adnoddau'r ALL yn y dyfodol. Ceisir cyfleoedd i ddatrys problemau dŵr o fwyngloddiau os gellir canfod ffynonellau cyllid. Bydd rhaglennu atebion unigol yn dibynnu ar flaenoriaethau Rhanbarthol a'r manteision cost ar gyfer pob safle problemus.									

MATER 16

Lefelau uchel o amonia a GBO yn achosi i rannau o afon Llynfell gwympo i Ddosbarth EA 2. Canfuwyd ansawdd biolegol gwael yn afonydd Twrch a Llynfell.

a) Cytuno ar gynnig adfer i ddatrys problemau dŵr daear ac wyneb yn hen Safle Gwaredu Gwastraff Tycanol.	CBB	AAC	12,000						
b) Gweithredu cynigion adfer ar Safle Tycanol.	CBB	AAC	70,000						
c) Ymchwilio i ffynonellau eraill sy'n achosi ansawdd biolegol a chemegol gwael.	AAC		700						
ch) Cytuno ar fesurau adfer ac amserlen i'w gweithredu er mwyn sicrhau gwelliannau yn ansawdd y dŵr.	AAC	Perchnogion y Safle	Dibynnu ar (c)						

MATER 17

Gwelwyd lefelau uchel GBO yn Nant Cwmdy yn yr Adroddiad Ymgynghorol gwreiddiol.

Cyrhaeddwyd y targed Dosbarth EA 1 erbyn hyn ac felly does dim angen gweithredu.									
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MATER 18

Mae Camlas Abertawe'n methu o fymryn â chyrraedd targed Dosbarth EA 1 ar fer GBO.

a) Monitro ansawdd y dŵr i sicrhau nad oes dirywiad.	AAC		1,700						
b) Adolygu'r data cemegol i gadarnhau statws ansawdd dŵr y gamlas.	AAC		200						

MATERION A GWEITHREDIADAU

MATER19 OT isel, GBO ac amonia uchel yn peri i afon Clun fetu'i tharged Dosbarth EA 1, gan gwynpo i Ddosbarth EA 4.									
GWEITHREDU	CYFRIFOLDEB		COST £	1994	1995	1996	1997	1998	DYFODOL
	PRIF	ARALL							
a) Adolygu data ansawdd dŵr a gwybodaeth PGCC i ganfod mewnlifau llygrol.	AAC	DCWW	1,700						
b) Cytuno ar fesurau adfer ac amserlen ar gyfer eu gweithredu i sicrhau gwelliannau yn ansawdd y dŵr.	AAC	Perch-nogion Safleoedd, Tirfeddianwyr, DCWW	Dibynnu ar (a)						
MATER 20 Lefelau OT isel yn Nant Parkmill.									
Gwneud ymchwiliad arbennig i ansawdd y dŵr.	AAC		900						
MATER 21 Methu o fymryn â chyrraedd targedau Dosbarth EA 1 ar gyfer OT ac amonia oherwydd arllwysiad GTC Pennard, sydd bellach wedi peidio (Hydref 1993).									
Parhau i fonitro'r afon am gyfnod i ddangos cydymffurfiaid â tharged Dosbarth EA 1.	AAC		500						
MATER 22 Llif isel posib yn afon Tawe a nentydd Gŵyr oherwydd tynnu dŵr.									
Asesu gan ddefnyddio'r polisi trwyddedu rhanbarthol pan fydd ar gael.	AAC		1,000						
MATER 23 Llif isel posib yn afon Tawe rhwng Cored Panteg a Chlydach Isaf oherwydd tyniad camlas.									
a) Ymchwilio i effaith bosib tyniad y gamlas ar drefn y llif yn afon Tawe dan amodau llif isel.	AAC	CP	5,000						
b) Gwneud asesiad o effaith tyniad y gamlas ar amgylchedd Tawe.	AAC	CP	1,000						
c) Os canfyddir effaith arwyddocaol, gwneud astudiaeth o ymarferoldeb gwahanol atebion posib.	AAC		8,000						

MATERION A GWEITHREDIADAU

MATER 24 Does dim cyfleusterau mesur llif ar y cyrsiau dŵr llai.									
GWEITHREDU	CYFRIFOLDEB		COST £	1994	1995	1996	1997	1998	DYFODOL
	PRIF	ARALL							
a) Canfod gofynion defnyddwyr am ddata hydrometrig.	AAC		500						
b) Adolygu'r dalgylch a llunio strategaeth i gwrdd â'r gofynion.	AAC		3,000						
c) Gweithredu'r strategaeth.	AAC		An						Parhaus

MATER 25 Ni wneir dim mesuriadau dŵr daear yn nalgylch Tawe.									
a) Adolygu'r dalgylch i ganfod y gofynion strategol am fonitro lefelau dŵr daear.	AAC		1,000						
b) Sefydlu trefn fonitro dŵr daear.	AAC		50,000						

MATER 26 Mae angen cynnal amddiffynfeydd rhag llifogydd mewn ardaloedd lle mae gro wedi ymgasglu.									
Adolygu'r gweithgareddau tynnu gro presennol a nodi a gweithredu gwelliannau lle bo modd.	AAC		6,000						

MATER 27 Nid oes safonau amddiffyn rhag llifogydd yn hysbys ar hyn o bryd ar gyfer Ystradgynlais, Cwmtwrch, Clydach ac Ynysmeudwy.									
Sefydlu safonau cyfredol ar gyfer amddiffyn rhag llifogydd a nodi a gwneud gwaith gwella lle bo modd.	AAC		30,000 am yr astud- iaeth						

MATER 28 Gostyngiad yn safonau amddiffyn rhag llifogydd oherwydd gwaddodiad a.y.y.b.									
Ymdriniwyd â'r mater gan weithredoedd yn 26 a 27.									

MATER 29 Eiddo mewn perygl llifogydd oherwydd rhwystrau a achosir gan goed a gludir i lawr yr afon mewn llifogydd a phroblemau erydu'r glannau.									
Cynnal arolwg o gyflwr coed ar y glannau yn rhan uchaf'r dalgylch a darblygu rhaglen reoli coed mewn ymgynghoriad â chyrrff cadwraethol.	AAC	Perch-nogion, y Glannau, RSPB, Cyrrff Cadwraeth	8,000 (costau'r AAC)						

MATERION A GWEITHREDIADAU

MATER 30

Yr angen i wneud arolygon Adran 105 i ganfod faint o dir sy'n agored i lifogydd, er mwyn medru cyfrannu at baratoad Cynlluniau Datblygu.

GWEITHREDU	CYFRIFOLDEB		COST £	1994	1995	1996	1997	1998	DYFODOL
	PRIF	ARALL							
a) Cydweithio gyda phob Awdurdod Cynllunio yng Nghymru i bennu'r drefn ar gyfer gwneud arolygon dalgylch.	AAC	CSGM, CSP, CDA, CBDLI, CBB	50,000						
b) Gwneud arolwg Adran 105 ar gyfer dalgylch Tawe.	AAC		I'w gostio yn ystod (a)						erbyn 1999

MATER 31

Rhybudd llifogydd annigonol i ddalgylch Tawe Uchaf.

a) Dechrau gweithredu recordyddion lefel afon telemetrig ar afon Tawe yng Nghraig-y-Nos ac ar afon Twrch yn y Gurnos.	AAC		500						
b) Cydberthynu'r lefelau afon cofnodedig a lefelau'r amddiffynfeydd yn Abercraf, Cwmtwrch ac Ystradgynlais er mwyn mesur ar ba lefel y dylid gosod y larwm.	AAC		2,000						

MATER 32

Colli traeth ym Mae Abertawe.

a) Parhau i fonitro, casglu data ac ehangu'r astudiaeth bresennol os oes modd.	GCABA	AAC, ALL'au, CCG, AyrA, Budd-iannau Preifat	14,000						
b) Cymryd ymagwedd rhagofalus tuag at geisiadau am drwyddedau treillio hyd nes gellir proffwydo effeithiau'r cynigion yn hyderus.	AAC		Dim costau ychwanegol						Yn parhau

MATERION A GWEITHREDIADAU

MATER 33

Meysydd silio addas i bysgod mudol yn anodd cyrraedd atynt oherwydd rhwystrau naturiol a rhai a achoswyd gan ddyn.

GWEITHREDU	CYFRIFOLDEB		COST £	1994	1995	1996	1997	1998	DYFODOL
	PRIF	ARALL							
a) Gwneud dadansoddiad cost/manteision o effaith grisiau pysgod ar Gored Abercrâf a Rhaeadr Clydach Isaf.	AAC		1,000						
b) Rhoi blaenoriaeth i gyfleusterau hwyluso ar rwystrau eraill yn y dalgylch.	AAC		500						
c) Ceisio cyllid i adeiladu grisiau pysgod ar y cyd â buddiannau allanol.	AAC		200 y ffwyd-dyn						Parhaus
ch) Os daw'r cyllid i law, adeiladu'r cyfleusterau mewn cytundeb â pherchnogion y glannau yn:	AAC	Perch-nogion y Glannau							
Abercrâf			40,000						Parhaus
Rhaeadr Clydach			55,000						Parhaus
d) Gweithredu cyfleusterau hwyluso mewn lleoliadau lle bo modd, os bydd cyllid ar gael.	AAC	Perch-nogion y Glannau	Dibynnau ar (b)						Parhaus

MATER 34

Effaith chwyn ymledol ar gynefinoedd brodorol ac amddiffynfeydd rhag llifogydd.

a) Dal i weithredu mesurau rheoli effeithiol a chydgyssylltiol o fewn y dalgylch. Caboli dulliau a mabwysiadu'r "arfer gorau".	AAC	ALI'au, Perch-nogion	120,000 (costau'r AAC)						Parhaus
b) Cynyddu ymwybyddiaeth y cyhoedd o chwyn ymledol a mesurau rheoli trwy ddosbarthiad strategol taflen yr AAC "Canllawiau ar gyfer Rheoli Chwyn Ymledol ger Cysiau Dŵr".	AAC		200 y flwyd-dyn						Parhaus

MATERION A GWEITHREDIADAU

MATER 35 Y pyllau dal, graeanau silio a mannau meithrin sydd ar gael i bysgod mudol.

GWEITHREDU	CYFRIFOLDEB		COST £	1994	1995	1996	1997	1998	DYFODOL
	PRIF	ARALL							
a) Nodi ardaloedd sy'n ddiffygiol o ran cynefinoedd addas a chynllunio mesurau adfer ar y cyd â chynrychiolwyr buddiannau'r glannau.	AAC	Clybiau Genweirio, Perchnogion y Glannau, Perchnogion Pysgodfeydd	500						
b) Pan gyfyd cyfleoedd a phan fo arian ar gael, gweithredu mesurau adfer.	AAC	Fel uchod	An						Parhaus

MATER 36 "Safonau Gwasanaeth" ar gyfer SDdGAoedd heb eu cytuno'n ffurfiol gyda'r CCG.

a) Cytuno ar "Safonau Gwasanaeth".	AAC	CCG	500						
b) Gweithredu'r safonau y cytunwyd arnynt.	AAC	CCG	500						Parhaus

MATER 37 Diffyg llwybrau addas ar lan yr afon, yn enwedig wrth brif afon Tawe.

a) Sefydlu fforwm i drafod cynnal astudiaeth o'r posibilïadau a fyddai'n nodi mannau lle gellid gwella mynediad.	AAC	CyC, Cyrff Cadwraeth, CT, ALL'au, CP Clybiau Genweirio, Perchnogion Pysgodfeydd	500						
b) Gweithredu ar yr argymhellion a gyfyd o'r fforwm uchod.	AAC	Fel uchod	Cost anhysbys						Parhaus

MATER 38 Potensial y caiff pysgod mudol eu tynnu i mewn gan y gwaith tynnu dŵr hydrobŵer ar y morglawdd.

a) Adolygu pa mor ddigonol yw'r mesurau diogelu unwaith y bydd y cynllun yn weithredol, gan ddefnyddio canlyniadau arolygon tracio lle bont yn berthnasol.	AAC	CDA	500						Parhaus
b) Rhoi cychwyn ar fesurau gwella os oes angen.	CDA	AAC	An						Parhaus

MATERION A GWEITHREDIADAU

MATER 39

Mae angen sefydlu i ba raddau yr israddiwyd gwerth cadwraethol.

GWEITHREDU	CYFRIFOLDEB		COST £	1994	1995	1996	1997	1998	DYFODOL
	PRIF	ARALL							
a) Gwneud Arolwg o Goridor yr Afon yn y dalgylch.	AAC		80 y km						
b) Sefydlu fforwm cadwraeth lle gellir ystyried yr uchod.	AAC	RSPB, CCG, Ymddiriedolaethau Bywyd Gwylt, PCBB,, ALI'au, CT, Clybiau Genweirio, Perchnogion Pysgodfeydd	500						
c) Gweithredu ar yr argymhellion lle bo modd.	Fel y bo'n briodol	Fel uchod	An						Parhaus

MATER 40

Aflonyddu graeanau silio yn ystod gwaith tynnu graean ar gyfer amddiffyn rhag llifogydd.

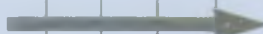
a) Arolygu lefelau'r aflonyddwch a achosir gan waith yn yr afon a cheisio sicrhau'r arfer gorau.	AAC		500 y flwyddyn						Parhaus
b) Gwneud gwaith yn yr afon mewn modd cydymdeimloll.	AAC		Dim costau ychwanegol						Parhaus

MATER 41 & 42

Gall rhai datblygiadau, megis y rheiny o fewn y gorlifdir neu nesaf at goridor yr afon, effeithio ar fuddiannau'r AAC o ran yr amgylchedd ac amddiffyn rhag llifogydd.

a) Sicrhau y caiff polisïau addas eu cynnwys mewn Cynlluniau Dosbarth Lleol.	AAC	ACLI'au	2,500						
b) Sefydlu cyfarfod/seminar i wella cydweithrediad a'r ACLI'au.	AAC	ACLI'au	1,000						

MATERION A GWEITHREDIADAU

MATER 43									
Presenoldeb a physgota pysgod cyffredin yn rhannau isaf afon Tawe.									
GWEITHREDU	CYFRIFOLDEB		COST £	1994	1995	1996	1997	1998	DYFODOL
	PRIF	ARALL							
a) Penderfynu ar ymarferoldeb astudio poblogaethau pysgod yn y rhan gronedig y tu ôl i'r morglawdd.	AAC		500						
b) Dal i roi hawliau i ddefnyddio cynrhon, dan amodau rheoledig, er mwyn canfod yr effaith potensial ar y bysgodfa eogaidd a hefyd ar ddatblygiad naturiol posib y bysgodfa gyffredin.	AAC	Clybiau Genweirio Tawe Isaf	200 y Flwyddyn						Parhaus
MATER 44									
Mae pysgota anghyfreithlon yn lleihau'r stoc o bysgod mudol ar gyfer genweirio cyfreithlon a Silio.									
a) Dal i orfodi deddfwriaeth mewn modd effeithiol a chydgyssylltiol.	AAC		35,000 y flwyddyn						Parhaus
b) Adolygu effeithiolrwydd pob is-ddeddf a chyflwyno cynigion newydd lle bo angen.	AAC	PPMDC, Clybiau Genweirio GPA	1,000						
MATER 45									
Mae Morglawdd Tawe'n rhwystro mudiad pysgod eogaidd er gwaethaf presenoldeb grisau pysgod.									
a) Adolygu canlyniadau'r gwaith monitro cyfredol ym 1994 a phenderfynu a oes angen dal i astudio.	AAC	CDA, SG, WAPB	500						
b) Os bernir bod angen, a bod cyllid ar gael, gwneud yr astudiaethau.	AAC		60,000 y flwyddyn						Parhaus
MATER 46									
Datblygu cyfleusterau adloniannol ar Lyn y Fendrod, Abertawe.									
a) Datblygu cynllun rheoli i'r llyn, gan sicrhau cydbwysedd rhwng materion adloniannol a chadwraethol.	Clwb Genweirio Brynmill	CDA, AAC, PMA Cyrff Cadwraeth	500						
b) Gweithredu ar argymhellion y cynllun.	Clwb Genweirio Brynmill	AAC, CDA,	3,000						Parhaus

MATERION A GWEITHREDIADAU

MATER 47										Dim mynediad i ganwod i afon Tawe.	
GWEITHREDU	CYFRIFOLDEB		COST £	1994	1995	1996	1997	1998	DYFODOL		
	PRIF	ARALL									
a) Sefydlu fforwm i ddatblygu defnydd adloniannol cronfa Tawe.	ACC	CDA, CGC, Buddian-nau Adloniant	500								
b) Sefydlu cysylltiadau a chlybiau genweirio er mwyn mynd ymlaen a threfniadau mynediad lle nad oes hawliau mordwyo cyhoeddus.	CGC	Clybiau Genweirio	400 (dim costau i'r ACC)						Parhaus		

MATER 48										Mae cynnig ar y gweill i greu cyswllt mordwyo rhwng Camlas Abertawe a dyfrffordd y llanw, o bosib gan ddefnyddio afon Tawe. Gallai hyn fod a goblygiadau difrifol i weithgareddau'r AAC.	
Sicrhau y caiff buddiannau'r AAC eu diogelu os datblygir y cynnig ymhellach.	AAC		An-						Parhaus		

ADOLYGU A MONITRO YN Y DYFODOL

Bydd yr AAC yn gyd-gyfrifol, gyda chyrrff ac unigolion eraill penodedig, am weithredu'r Cynllun Gweithredu hwn. Caiff y gwaith ei fonitro ac fel arfer cyflwynir adroddiad lynyddol. Bydd yr adolygiadau hyn yn edrych ar yr angen i ddiweddarau'r CRhD yng ngoleuni newidiadau yn y dalgylch. Fel rheol bydd cyfnod o bum mlynedd rhwng pob adolygiad mawr.

Bydd yr adolygiad blynyddol, a ddosberthir yn eang, ar ffurf adroddiad gwaith cryno, yn amlinellu'r gwaith a gyflawnwyd o gymharu â'r hyn a gynlluniwyd, ac yn tanlinellu unrhyw newidiadau i'r Cynllun.



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Hawlfraint Amodol Yr AAC

Bwriedir i'r adroddiad yma gael ei ddefnyddio'n eang a gellir ei ddyfynnu, ei gopio neu ei gynhyrchu mewn unrhyw fodd ar yr amod nad yw darnau'n cael eu dyfynnu allan o'u cyd-destun a bod yr Awdurdod Afonydd Cenedlaethol yn cael ei gydnabod.

Cydnabyddiaeth

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POCED AR GYFER ADRODDIAD MONITRO BLYNYDDOL

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