

catchment management plan



LOUGHOR AND NORTH GOWER action plan March 1997



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AMGYLCHEDD
ENVIRONMENT
AGENCY

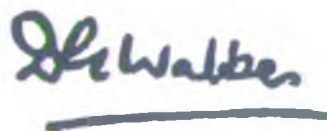
OUR VISION FOR THE LOUGHOR AND NORTH GOWER CATCHMENT

The Loughor catchment drains the remote uplands of the Black Mountain before meandering through the rolling countryside of the middle and lower reaches to drain into the Loughor Estuary and Burry Inlet. The catchment contains areas of very high conservation and landscape value, with important agricultural activities. There are also areas which have suffered from the adverse effects of industrial activity, particularly associated with the coal industry which has been active in the catchment for over 300 years. The pressures which are put on the catchment, particularly around the estuary, present specific problems which we address in this plan.

Following the production of the Consultation Report in February 1996, and consideration of the responses we received, our aim is to manage the catchment in a way that provides significant progress in:

- **improving water quality** - the major investments in excess of £20 million into the sewerage systems will result in significant improvements in water quality, both in terms of reduced organic loadings and aesthetic quality. These will be especially noticeable in the lower river and the estuary where the migratory salmonid fishery, the commercial shellfisheries and the EC identified and non identified bathing waters will all benefit. Our objective is to further improve water quality through more effective control of coal extraction and processing activities and reducing the impact of the major industrial effluent discharges.
- **balancing abstraction with the needs of the environment** - the abstraction of water must be balanced against the environmental needs of the river system, and our key objective is to implement a methodology for assessing the state of the catchment in water quantity terms and determining availability of water for any new abstraction uses.
- **protecting and developing the migratory fishery** - our objective is to protect the high quality of the sea trout fishery from major developments and illegal activity, particularly poaching of fish. The migratory fishery should develop as environmental improvements, particularly in water quality, are realised.
- **protecting river corridors and flood plains** - our key objectives are: (i) to protect and encourage the formation of natural river corridor habitats where waterside flora and fauna can thrive, particularly by promoting the creation of "buffer zones" alongside watercourses in rural and urban areas and (ii) wherever possible, to influence developers and planning authorities to direct new development away from flood plains, unless appropriate flood defence works are in place or alleviation works form part of the proposal.

The realisation of our 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.



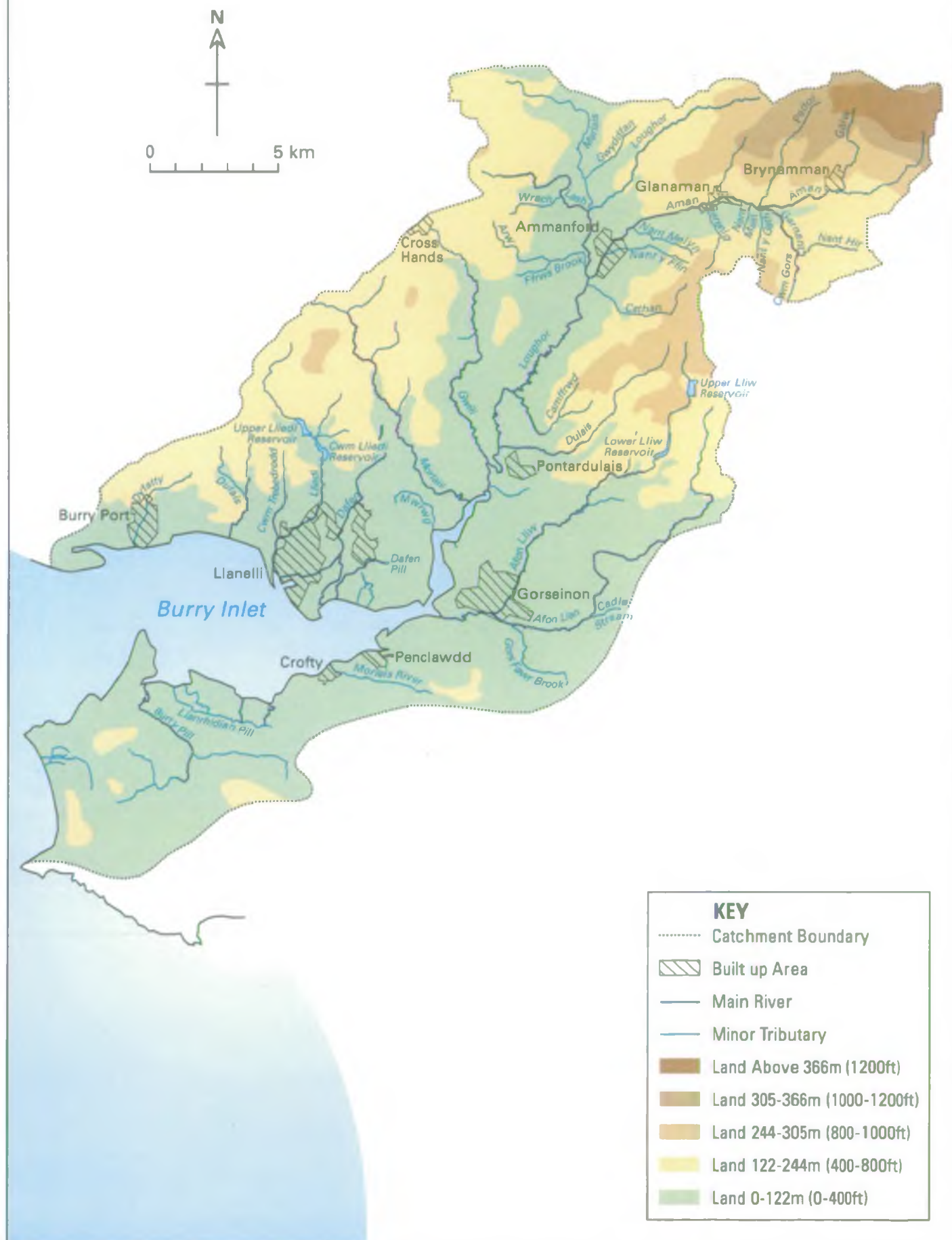
DAVID WALKER

AREA MANAGER - SOUTH WEST WALES

Cover picture: Loughor upstream of Glynhir Waterfall



THE LOUGHOR AND NORTH GOWER CATCHMENT



KEY DETAILS

General

Area	539km ²
Population (1991 Census)	133,380
Population Density	247.5/km ²

Topography

Ground Levels	Max height	616m AOD
Sea Levels	Mean High Water Springs	3.9m AOD
	Mean Low Water Springs	-3.6m AOD

Water Quality

Length of Classified River in 1995	Class A	65.7km
General Quality Assessment (GQA)	Class B	27.5km
	Class C	15.0km
	Class D	nil
	Class E	2.1km

Estuary Quality (1995 Survey)	Class A	23.8km
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Water Resources

Annual Average Rainfall	1500mm	
Total Licensed Abstraction	Public	23,877Ml/a
	Industrial/	
	Agricultural	18,354Ml/a
Primary Gauging Station	Loughor at Tir-y-Dail	
Principal Reservoirs (volumes)	Upper Lliw	1,318Ml
	Lower Lliw	1,137Ml
	Lliedi Reservoirs	1,637Ml

Flood Protection

Length of Designated Main River	173.93km
Length of River on which Flood Alleviation/Drainage Schemes implemented	5.24km
Length of River covered by a Flood Warning Scheme	42km

Fisheries

Declared Rod Catches of Migratory Fish	Salmon	Sea Trout
(Annual Average : 1980 - 94 inclusive)	12	201

Conservation

Statutory Designated Sites	SSSI	31
	Marine SAC	1
	Other SAC/SPA	4
	SAM	70

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INTRODUCTION

THE CONCEPT OF INTEGRATED AGENCY PLANNING

The Environment Agency is a non departmental public body established by the Environment Act 1995. We are sponsored by the Department of the Environment with policy links to the Welsh Office and the Ministry of Agriculture, Fisheries and Food. The Environment Agency has taken over the functions of its predecessors the National Rivers Authority (NRA), Her Majesty's Inspectorate of Pollution, Waste Regulation Authorities and some parts of the Department of the Environment.

Our Vision is: A better environment in England and Wales for present and future generations.



Glybir Waterfall

We will:

- protect and improve the environment as a whole by effective regulation, by our own actions and by working with and influencing others
- operate openly and consult widely
- value our employees
- be efficient and businesslike in everything we do.

We have chosen to use Local Environment Agency Plans (LEAPs) 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. LEAPs will follow the basic principles of the former NRA's Catchment Management Plans (CMPs), but cover the full range of Agency activities. However, the Consultation Report for the Loughor and North Gower catchment was prepared by the NRA, and therefore covered only water-based aspects of the Agency's responsibilities. As such this Action Plan is also water-based.

The Action Plan is a strategic policy framework for the management of the catchment and is produced after we have considered the comments received on the Consultation Report. It includes Activity Plans to help achieve the vision for the Loughor and North Gower catchment and will form the basis for improvements to the water environment by outlining the areas for work and investment proposed by the Agency and others. The Action Plan primarily covers the five year period from 1996 to 2000. A number of the projects may take longer depending on unavailability of funds and government policy. The Agency will formally adopt the proposals in the Action Plan.

The plans also provide the means of promoting two key aspects of environmental management - land use planning and water quality objectives.

THE 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 we are well placed to influence some of the factors affecting the water environment, particularly in relation to the river corridor itself, we have 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. However, we are a statutory consultee under this legislation.

The policies in statutory development plans set out the framework for land use change, and provide the key reference in determining development applications. We encourage the inclusion of policies which reflect our concerns and responsibilities.

As guidance for local authorities, the former NRA had 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 summarised the "Guidance Notes for Local Planning Authorities on the Methods of Protecting the Water Environment through Development Plans". These are also appropriate to the Environment Agency.

This Action Plan sets out Issues and Actions specific to the Loughor and North Gower catchment 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 phased programme of improvements to sewerage infrastructure and sewage treatment works, agreed with the Agency and identified within the second Dŵr Cymru Welsh Water Asset Management Plan (known as AMP2) for the period 1995 to 2000, will determine the pace of future remedial measures in line with legislative requirements. This will have an important influence 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 (SWQO) scheme, introduced under the Water Resources Act 1991, is a system for water quality planning which will place 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 and LEAPs.

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 SWQO Use to be introduced by the Government through the Surface Waters (River Ecosystem) (Classification) Regulations 1994. For each classified stretch within the Loughor and North Gower catchment a River Ecosystem Use Target Class has been proposed and this 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, in the near future, that they may be established as Statutory WQOs by the Secretaries of State for the Environment and Wales.

REVIEW OF THE CONSULTATION PROCESS

We published the Loughor and North Gower Catchment Management Plan (CMP) Consultation Report in February 1996. The plan was a consultative document seeking comments from all those interested in the water environment. Approximately 400 copies of the report have been

circulated to interested organisations, educational establishments and the public.

The official consultation period ran for 16 weeks from 8th March to 28th June 1996. A total of 31 replies were received within this period from the following individuals and organisations:

Mr Andrew Davies

Cllr John Evans

Dr Roscoe Howells

Cllr Ioan M. Richard

Ammanford & District Angling Association

Betws Community Council

Cadw Welsh Historic Monuments

Campaign for the Protection of Rural Wales

Carmarthenshire County Council

Celtic Energy

Club Godre'r Mynydd Du

Countryside Council for Wales

Dyfed Archaeological Trust

Forestry Authority

Forest Enterprise

Friends of the Earth

The Gower Society

The Gower and Swansea Bay Marine Forum

Her Majesty's Inspectorate of Pollution

Institute of Chartered Foresters

Llanelli Rural Council

The Ramblers Associations

Royal Society for the Protection of Birds

South Wales Sea Fisheries Committee

Sports Council for Wales

Tarmac Quarry Products

Wales Tourist Board

Welsh Canoeing Association

Welsh Development Agency

Welsh Office (Environment Division)

Welsh Office Agriculture Department

A brief paper, the 'Statement of Public Consultation', is included with this plan, detailing the list of consultees who responded to the consultation report, their summarised comments, and how we incorporated them into the production of this plan.

AN OVERVIEW OF THE LOUGHOR AND NORTH GOWER CATCHMENT

GENERAL

The Loughor and its upper tributaries drain the remote uplands of the Black Mountain in the northeast of the catchment. The river runs in a southwesterly direction, meandering through its wide flood plain before entering the Loughor Estuary and Burry Inlet. The catchment is predominately rural in nature, but with a wide range of industry present. As with other South Wales valleys, the coal industry has had, and continues to have, a great impact on the environment.

For the purposes of this CMP the term 'catchment' refers to the catchment areas of the Loughor and the

smaller rivers of the North Gower unless otherwise stated. The streams of the South Gower are included in the Tawe and South Gower CMP Action Plan published in April 1995.

The M4 motorway, part of a Euroroute linking London to Fishguard, crosses the catchment to end at Pont Abraham where it joins the A48, which leaves the catchment north of Cross Hands. Also at Pont Abraham the A483 heads up the valley towards Ammanford and Llandybie, with the A474 linking Ammanford to Glanamman. The A484 links Burry Port and Llanelli, and crosses the Loughor Estuary to link with Gorseinon. The A476 is the main route between

Cross Hands and Llanelli.

The main rail link is that from Swansea to Fishguard, calling at Gowerton, Llanelli and Burry Port. At Llanelli a line runs north east up the valley, with stops at Bynea, Llangennech, Pontardulais, Pantyffynnon, Ammanford and Llandybie.

Agricultural activity is widespread although, generally, the larger dairy units are found in the west of the catchment and in North Gower, with mixed livestock farming in the east.

Much of the population has settled around the estuary, particularly in Llanelli, Burry Port and Gorseinon, with other towns located up the valley at Pontardulais and Ammanford.

The catchment is currently home to a wide range of industry, with large new industrial estates at Cross Hands, Capel Hendre and Fforestfach. Previous industrial activity has left a legacy of contaminated land, particularly around Llanelli. There is also widespread coal extraction and associated processes, with a number of deep mines, opencast sites and coal washeries present throughout the catchment.

FLOOD DEFENCE

The catchment contains areas of flood plain, both tidal and fluvial, where extensive development has occurred. All these areas are at flood risk, and some have a history of extensive flooding. Our flood defence interest relates primarily to these areas and we aim to provide and maintain appropriate standards of flood protection.

Our flood defence operations generally involve maintaining channel capacity, by dredging and removing gravel and other obstructions from the channel, and maintaining and protecting against erosion of existing flood defences. These operations will continue, although they are regularly reviewed to ensure a cost effective service. Each year we spend around £100k on these maintenance operations in the catchment.

Flood protection standards at Halfway, Pontardulais and Hendy are known to be below the appropriate standard for residential land. Studies have confirmed that improvements are feasible and cost effective, and schemes have been progressed and appropriate maintenance programmes implemented. Flooding problems also occur at many other sites in the catchment and maintenance operations will continue at these sites in order to maintain the channel carrying capacity.

We issue flood warnings for flood risk areas within the catchment. These warnings, while providing advanced notice of flooding, do not comply with our target standards. Existing procedures will therefore be reviewed to determine whether improvements can be made.

WATER QUALITY

Water quality in the catchment is generally high with 84.5% of classified river length placed into Classes A and B in 1995, according to the General Quality Assessment (GQA) Scheme. Approximately 31km of the Loughor and its tributaries have been designated as Salmonid Waters under the EC Freshwater Fisheries Directive. The Estuary was classified as Class A in the 1995 Estuary Quality Survey.

The majority of sewage disposal within the catchment is into the estuary and currently causes pollution problems at nearby beaches and local shellfisheries. Inland water quality is adversely affected by unsatisfactory overflows from the sewerage system, particularly in the Amman Valley, and discharges from the sewage treatment works of Garnswllt and Cross Hands. Many of these sewage pollution problems are being addressed by Dŵr Cymru Welsh Water as part of their capital expenditure programme for the next 5 - 10 years. This investment is expected to be in excess of £20 million and should result in a significant improvement in water quality within the catchment.

The catchment contains a wide range of industry with significant industrial discharges at BSC Trostre and at Calsonic (Llanelli Radiators) Ltd. The legacy of contaminated land within the catchment poses particular risks to water quality. In addition, the coal extraction and processing industries present water quality problems and there are a number of abandoned mine water discharges in the catchment. The new and existing industrial estates pose a risk to



Looking South towards the estuary

the quality of surface waters through contamination of surface water drains.

Agricultural activity can sometimes cause water quality problems, and discharges of farm effluent have been identified as causing pollution of watercourses.

WATER RESOURCES

Annual average rainfall in the catchment ranges from 1120mm on the coast west of Llanelli, to around 1200mm on the North Gower coast and up to 2400mm on the Black Mountain at the Northern extreme of the catchment. The catchment average of 1500mm is higher than the Welsh Region average of 1310mm and two thirds higher than the England and Wales average of 909mm. The Loughor is the principal river of the catchment. It descends steeply in its upper reaches and hence responds rapidly to heavy rainfall. This flashy characteristic dominates over the contribution of groundwater to the flow regime.

The geology of the catchment is made up primarily of Carboniferous strata, consisting mainly of Pennant Sandstone and Millstone Grit. The remainder is of the Lower Coal Series. These strata yield usable amounts of water as demonstrated by the large number of boreholes developed for agricultural use. A band of Carboniferous limestone underlying the Millstone Grit to the north provides the flow at Llygad Llŵchwr, source of a major public water supply abstraction.

FISHERIES

The Loughor has developed into a high quality sea trout fishery although several factors limit the continued improvement and development of stocks. Many of these factors are related to man's activities including, for example, past channelisation of river reaches leading to unstable river beds and consequently



The Loughor, near its Source



Courtesy of C. H. Gossard/ICZN

An otter

poor spawning areas. Obstructions, both man made and natural, hinder or prevent upstream migration. Development has further been hampered by major mortalities of fish caused by low dissolved oxygen levels in the Loughor downstream of Garnswllt STW during low summer flows.

The other rivers within the catchment are predominantly brown trout fisheries, although salmon and sea trout do enter the Lliw and Llan in order to spawn.

The Burry Inlet and coastal waters support a large and highly active commercial sea fishery with both fish, predominantly bass, and shellfish being sought.

CONSERVATION

Conservation of the natural and historic environment is very important in a catchment that also has areas of high landscape quality.

There are 31 Sites of Special Scientific Interest. Of these, habitats within three sites, namely Gower Commons, Burry Inlet Dunes and Burry Inlet Saltmarsh and Loughor Estuary, have been formally submitted to the European Commission as candidate Special Areas of Conservation (SACs) under the Habitats Directive (92/43/EEC). The Burry Inlet and Loughor Estuary has also been designated a RAMSAR site and is a Special Protection Area for its wetland communities and birdlife, in particular wildfowl. Within the catchment there are several key species and habitats listed within the UK Biodiversity Action Plan, for example Shad, Water Vole and Otter. Invasive plants, such as Japanese Knotweed and Himalayan Balsam, whose presence can reduce bankside diversity and restrict native plant growth, are also present throughout the catchment.

The historic landscape has been strongly influenced by the past heavy industrialisation of much of the scenery

THE INTERACTION BETWEEN LAND USE AND THE WATER ENVIRONMENT



The new Llanelli sewage treatment works

providing treatment of sewage from populations greater than 10,000. A new STW at Bynea has recently been completed, replacing works at Pwll, Burry Port, Llanelli and Bynea. Other improvements during the life of the plan will provide major benefits for water quality. There are also a number of Combined Sewer Overflows in the catchment, some of which cause water quality problems.

Roads. It is important that all road improvements are undertaken in an environmentally sympathetic manner so as to protect water quality, the landscape and the flora and fauna within the river corridor, and to ensure flooding problems are not created or exacerbated.

DEVELOPMENT IN FLOOD RISK AREAS

Development situated within a flood plain is generally at risk from flooding. In our capacity as statutory consultees in the planning process, we are obliged to advise the local planning authorities, in accordance with Welsh Office Circular 68/92, on flood risk. The Agency is continuing to undertake major surveys, begun in 1995, of all river catchments, on a phased basis and with the agreement of the local authorities. These surveys will identify more accurately the extent of the flood plain and the impact of future development on flood risk throughout the catchment. This work will take several years to complete and 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. The Government looks to Local Authorities to guide development away from the flood plain, wherever possible. When this is not possible then flood defences or mitigation works should be provided as part of any development proposal. Where alleviation works are necessary, the onus is on the developer to investigate the flood risk, and to design and construct necessary mitigation works as part of the planning application/consent. Such works must be undertaken in a manner which is environmentally acceptable. In view of the complex and lengthy discussions that may ensue, developers should consult with us prior to making an application.

The frequency of flooding has precluded much development on the floodplain of the lower Loughor, other than roads, railways and services. Further upstream, and along the major tributaries, development has encroached onto the flood plain and is at risk from flooding. Such sites include Llandybie,

Ammanford, Brynamman, Penybanc, Fforestfach, Cheriton, Pontlliw, Garnswllt and the Llwyn Hendy Moors. At Glan Marlais and on the Gors Fawr Brook, the problem is made worse by urban development encroaching onto the river bank, making access to the watercourse for maintenance works both difficult and expensive.

Major flooding incidents have occurred in the past at Pontardulais, Halfway and Furnace and these locations have benefitted from improvement works to raise the level of flood protection. Extensive development is present on the coastal flood plain, particularly on the north bank of the estuary, and is at risk from flooding. Defences have been constructed at Hendy, Machynys/Llwyn Hendy, Llangennech and Crofty, however those at Crofty are considered to be below our target standard and are being reviewed.

CONTAMINATED LAND

The Agency's role in respect of contaminated land is twofold. Firstly, the Agency is the enforcement authority for 'special sites' and will have the duty to require remediation of contaminated land that is causing, or has the possibility of causing, significant harm or where pollution of controlled waters is being, or is likely to be, caused. Secondly, the Agency acts as a consultee during the redevelopment of contaminated land. At present the detail of the legislative framework on contaminated land under the Environment Act 1995 has not been produced. The Agency will be issuing guidance to the Unitary Authorities to assist them in their primary role of identifying all contaminated land in their area, as well as offering assistance on a site specific basis.

When promoting redevelopment plans, developers need to be mindful of the past use of sites, eg. former gasworks. Previous industrial activity has left a legacy of contaminated land, particularly in the Llanelli area. Any disturbance to such sites has the potential to affect water quality. It is always the developer's responsibility to assess the problem and implement appropriate remedial works in close consultation with the Agency.

GROUNDWATER

The preservation of groundwater quality and quantity is a major objective for us. The former NRA 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. The Agency will continue to use this document for guidance. This policy deals with the concept of vulnerability and risk to groundwater from a range of human activities.

Dŵr Cymru Welsh Water has an abstraction from Llygad Llŵchwr, the spring source of the Loughor. A groundwater protection zone has been established around the source in order to protect the quality of the groundwater. Water for bottling is abstracted from a borehole near to Llygad Llŵchwr, and two further sources for bottling are to be found on North Gower.

We 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

Development within river corridors can have a significant impact on river corridors by reducing the extent and variety of habitats, restricting access to the river for recreational purposes and in some cases by assisting the spread of invasive weed species. Existing flood defence schemes, which are designed to protect such development from flooding, and other structures in the river channel require regular maintenance. Such activity often disturbs the river corridor, albeit temporarily, and can sometimes have longer term impacts. Flood defence works are therefore carefully managed in order to minimise these impacts.

Buffer Zones. River corridors provide important interconnections between habitats and are used extensively by wildlife. We 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, and to provide access to the watercourse for river management purposes. 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 construction of culverts to direct and convey watercourses must have consent from the Agency. Whilst the installation of culverts, of suitable dimensions, for small river crossings is generally an acceptable practice, we do not support the widespread use of culverts to enable a change in land use - this would be contrary to our conservation duties. For instance, the practice of culverting streams in order to use their valleys as landfill sites, and the infilling of wetlands, is generally unacceptable. Similarly, we would usually 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

Agricultural activity is widespread throughout the catchment although, generally, larger dairy units are found to the west and on North Gower, with mixed livestock farming to the east. There are also two fish farms in the catchment.

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. We are using these regulations, and our well established contacts within farming organisations, to secure more effective, long term solutions.

On pre-notification, if it can be demonstrated to have an agricultural and/or ecological benefit to the land, wastes from sewage and industrial sources can be applied to farmland. These wastes then qualify for exemption from licensing under the 1994 Waste Management Licensing regulations. Sewage sludge from municipal sewage treatment works is also applied to land under the Sludge (Use in Agriculture) Regulations 1989 (as amended). These activities need to be carefully monitored and controlled and the Agency works closely with Water Companies and Waste Disposal Contractors to ensure best practices are applied to prevent water pollution. The Agency is also in the process of drawing up a document to give further guidance on responsibilities in sludge disposal activities.

Forestry. The planting and felling of trees can impact on the water environment if not carefully managed. We



The meandering lower reaches of the Loughor

comment on future proposals received from the Forestry Authority and County Councils in order to help reduce any potential adverse impacts. Of particular concern to us is the risk to water quality, the alteration to surface water run-off rates, protection of natural riparian habitats, and the installation of inappropriate stream crossings. We support the recommendations of 'The Forests and Water Guidelines', published by the Forestry Authority, which lay down standards for best practice designed to minimise the impact of forest management on the water environment. However, there are only a few small plantations within the catchment and no water quality issues are envisaged from the management of these plantations within the life of this plan.

ISSUES AND ACTIVITY PLANS

The following section outlines the actions that have been agreed in order to tackle the problems identified within the Loughor and North Gower Catchment Management Plan (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 usually only included where they have been agreed 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 Activity Plan.

The Action Plan looks largely to the five year period from publication of the Consultation Report i.e. to the end of 2000. 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 future reviews of the plan.

In the Consultation Report, 46 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 have been considered, and where necessary further discussions have been held to resolve issues and to agree appropriate, realistic and affordable actions. A 'Statement of Public Consultation' has been produced which summarises all of the comments we have received and our responses to them. This is included with this plan.

We would want to see restriction in the development of new conifer forests in acid sensitive areas and the promotion of mixed or deciduous woodland in buffer zones.

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 movement of migrating fish. Since future problems are often difficult to predict for such developments, we look to the planning authorities to adopt a robust precautionary approach when considering any new proposals.

All of the 46 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. The numbering system for Issues from the Consultation Report has been retained in this Action Plan for ease of reference, but it has proved sensible to combine issues 1, 6 and 10, 3 and 17, and 12 and 13 in addressing the necessary actions. Five new issues were added during the consultation period, some as a result of comments from consultees, others as a result of new statutory responsibilities on the Agency; Issues 47 to 51.

Within the costs column of the Activity Plans, care has been taken to identify to whom the predicted costs apply. Where there is a lone responsibility, the costs will be borne by that organisation/interest. Where responsibility is shared (lead or other), but the costs are only available for the Environment Agency input to that Action, this is clarified by "Agency costs". Where responsibility is shared but the costs will only be incurred by one organisation/interest, this is shown by e.g. "Agency costs only".

Where '#' appears next to an action, that action has been completed.

Solid lines () in the tables define actions due to be complete within the life of the plan.

Arrowhead lines () define actions that are either ongoing year by year, or not due to be complete within the life of the plan.

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

AMP	Asset Management Plan
AOD	Above Ordnance Datum
BOD	Biochemical Oxygen Demand
CA	Coal Authority
CC	Community Council
CCC	Carmarthenshire County Council
CCS	City and County of Swansea
CCW	Countryside Council for Wales
CMP	Catchment Management Plan
CSO	Combined Sewer Overflow
DAT	Dyfed Archaeological Trust
DCWW	Dŵr Cymru Welsh Water
DWT	Dyfed Wildlife Trust
EA	Environment Agency
EC	European Community
GGAT	Glamorgan Gwent Archaeological Trust
GWT	Glamorgan Wildlife Trust
IBU	Internal Business Unit
k	thousand
km	kilometre
LA	Local Authority

LEAP	Local Environment Agency Plan
LFG	Local Fisheries Group
LPA	Local Planning Authority
LTRQO	Long Term River Quality Objective
m	million
MAFF	Ministry of Agriculture, Fisheries and Food
MI/d	Megalitres per day
MPA	Mineral Planning Authority
OIW	Otters In Wales
pa	per annum
RE	River Ecosystem
RCS	River Corridor Survey
RHS	River Habitat Survey
RSPB	The Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SSSI	Site of Special Scientific Interest
STW	Sewage Treatment Works
SWSFC	South Wales Sea Fisheries Committee
WCA	Welsh Canoeing Association
WDA	Welsh Development Agency
WWT	Wildfowl and Wetlands Trust

LOUGHOR & NORTH GOWER ISSUES AND ACTIONS

ISSUE 1 6 & 10

The Garnant, immediately upstream of the confluence with the Amman, and the Loughor, between the 1, 6 & 10 confluence of the Amman and the Fferws Brook at Pantyffynnon, have elevated BOD concentrations causing a marginal failure to achieve RE Class 1. Also, the Amman has poor biological quality below Glanamman Hospital road bridge.

ACTIONS	RESPONSIBILITY		COST £	1996	1997	1998	1999	2000	FUTURE
	LEAD	OTHER							
a) Undertake full hydraulic modelling of the Loughor/Amman sewerage system and assess performance of CSOs against Agency requirements.	DCW/W		80k						
b) Dependent on a), undertake improvements to those CSOs identified as causing failures of targets.	DCW/W		1.1m						
c) Undertake improvements to other CSOs as part of the DCW/W capital programme to achieve required standards, subject to available funding	DCW/W		3.0m						By 2005
d) Undertake survey to assess improvements in water quality as a result of the above improvements.	EA		1.5k						

ISSUE 2

The Fferws Brook, upstream of the confluence with the Loughor, has elevated total ammonia concentrations causing failure to achieve RE Class 1.

a) Complete major improvement scheme for Capel Hendre sewerage system, to reduce the number of CSOs from three to one, and abandon the problematic sewage pumping stations at Wernos.	DCW/W		1.5m						
b) Undertake survey to confirm that CSOs discharging to the Fferws Brook are operating in accordance with their design.	EA		1.5k						

ISSUE 3 & 17

The Loughor, from Garnswllt STW downstream to Pontardulais road bridge, has elevated concentrations of both total and unionised ammonia leading to a failure to achieve RE Class 2. There are elevated nutrient concentrations in the discharge leading to excessive algal growth downstream. This growth under certain conditions leads to low dissolved oxygen levels, which when associated with high ammonia, low flows and high temperatures, has led to fish mortalities in recent years.

a) Complete improvement works at Garnswllt STW, as part of AMP2 programme.	DCW/W	EA	2.2m (DCW/W costs)						
b) Review Garnswllt STW discharge consent to "environmentally protective" conditions to permit achievement of target RE Class 2.	EA		1k						
c) Review nutrient monitoring data and assess if river meets the requirements for designation as a "Sensitive Water" under the Urban Waste Water Treatment (UWWT) Directive.	EA		1k						
d) If designated, implement appropriate improvement measures at the STW to achieve nutrient reduction in accordance with the UWWT Directive.	DCW/W	EA	Not known						By 2004
e) Implement a monitoring programme to assess impact of the discharge following completion of the improvement works.	DCW/W	EA	10k						

LOUGHOR & NORTH GOWER ISSUES AND ACTIONS

ISSUE 4

The upper reach of the Gwili at Cross Hands has reduced concentrations of dissolved oxygen and elevated levels of BOD, total and unionised ammonia causing a failure to achieve RE Class 2.

ACTIONS	RESPONSIBILITY		COST £	1996	1997	1998	1999	2000	FUTURE
	LEAD	OTHER							
a) Relocate the final effluent discharge from Cross Hands STW to a point affording greater dilution. (#)	DCWW		200k						
b) Complete major improvement works at Cross Hands STW as part of AMP2 programme.	DCWW	EA	1.3m (DCWW costs)						
c) Review Cross Hands STW discharge consent to "environmentally protective" conditions.	EA		1k						
d) Continue to apply "Grampian*" conditions through the planning consultation process, to restrict loadings to the STW, until major improvement works are completed.	EA, LPA		< 1k						

ISSUE 5

The lower reach of the Dafen has elevated concentrations of dissolved copper and total zinc. These have caused failures of the LTRQO of RE Class 3, interim targets and the EC Dangerous Substances Directive.

a) Assess the feasibility of discharging the trade effluent from Calsonic (Llanelli Radiators) Ltd to the foul sewer. To include measures to minimise the volumes of effluent produced.	Calsonic	EA	15k						
b) Propose methods for reduction of metals present in the effluent discharge from Calsonic (Llanelli Radiators) Ltd. To include a review of supplementary effluent treatment systems and assess suitability.	Calsonic	EA	15k (Calsonic costs)						
c) Reduce metal concentrations in emissions from Calsonic (Llanelli Radiators) Ltd. Combine phased introduction of new/alternative materials used in production.	Calsonic		50k						
d) Continue to monitor metal levels in the Dafen and assess compliance with targets.	EA		1.5k pa						Ongoing

* Following consultation with the LPA, the Agency requests a condition to be included in any planning permission that may be granted by the LPA, which will delay construction/occupation of a development until sewerage/STW improvements have been agreed/implemented by the relevant body (usually DCWW if public sewers/STW).

LOUGHOR & NORTH GOWER ISSUES AND ACTIONS

ISSUE 7

The Lash, upstream of its confluence with the Loughor, has elevated ammonia concentrations which causes a failure to achieve RE Class 1. This stretch also has poor biological quality.

ACTIONS	RESPONSIBILITY		COST £	1996	1997	1998	1999	2000	FUTURE
	LEAD	OTHER							
a) Impact of Blaenau / Penygroes STW:									
i) Identify precise extent of impact of Blaenau Penygroes STW discharge.	EA	DCWW	1.5k						
ii) Determine requirements for improvements and prioritise these for inclusion into DCWW capital programme post 2000.	EA	DCWW	Not known						By 2005
iii) Implement long term solution for STW in accordance with DCWW capital programme priorities.	DCWW		Not known						Post 2000
iv) Assess and implement any potential short term improvements to reduce impact.	DCWW		Not known						
v) Apply "Grampian" conditions in planning consultation process to restrict loadings to works.	EA	LPA	<1k						Until works improved
b) Impact of ferruginous discharges on river:									
i) Subject to available funding, undertake full environmental assessment of catchment, identifying all sources of ferruginous discharges and recommend remedial actions.	EA		30k						
ii) Dependent on above, implement remedial actions as appropriate.	EA	CA, Site Owners	Not known						

ISSUE 8

The Marlais, upstream of its confluence with the Loughor, has elevated BOD concentrations that cause a failure to achieve RE Class 1.

a) Reassess status using recent monitoring data and, if problem confirmed, initiate survey to identify source of problem.	EA		2.5k						
b) Initiate required remedial action with dischargers/land owners as appropriate.	EA	Dischargers / Land owners	1.5k (EA costs)						

ISSUE 9

The potable abstractions from the Lower Lliw Reservoir have failed to meet the EC Surface Water Directive standards for hydrocarbons and chromium.

This is no longer considered an Issue as no exceedences were detected during sampling in 1995 and 1996.

ISSUE 11

Poor biological quality of the Loughor, upstream of the Marlais confluence, at Bonllwyn Road Bridge in Ammanford.

a) Reassess the biological data at this location and, if problem confirmed, determine the extent and source of the discharge(s) causing an impact.	EA		1.5k						
b) Initiate any remedial action necessary with dischargers etc.	EA	Not known at present	Not known						

LOUGHOR & NORTH GOWER ISSUES AND ACTIONS

ISSUE 12 & 13 Poor biological quality in the middle and lower reaches of the Llan, between Cadle and Gowerton.

ACTIONS	RESPONSIBILITY		COST £	1996	1997	1998	1999	2000	FUTURE
	LEAD	OTHER							
a) Investigate the causes of the problem, suspected to be discharges from CSOs and industrial site drainage, including that from Fforestfach Industrial Estate.	EA		5k						
b) Collate information on the operation of CSOs to allow prioritisation of remedial work in DCWW capital programme post 2000.	EA	DCWW	3.5k (EA costs)						
c) Implement CSO improvements in accordance with DCWW capital programme priorities.	DCWW		Not known						Post 2000
d) Assess and implement any potential short term improvements to reduce impact.	DCWW		Not known						
e) Undertake a programme of site inspections at Fforestfach Industrial Estate and other local industrial premises to identify sources of pollution.	EA	Site Owners/ Occupiers	2k pa (EA costs)						Ongoing
f) Complete remedial measures at industrial premises to reduce pollution incidents and improve water quality.	Site Owners/ Occupiers	EA	Not known						Ongoing

ISSUE 14 Llanelli and Burry Port beaches are recreational waters not currently identified as Bathing Waters under the EC Bathing Waters Directive. These beaches would not have achieved the standards in the Directive between 1992 and 1996, if the beaches had been identified.

a) Complete new Llanelli coastal sewage treatment and disposal scheme to treat discharges of sewage from Llanelli, Pwll and Burry Port STWs (see also Issues 16a and 22a) at the new Bynea STW.	DCWW		18.5m						
b) Continue bathing water monitoring programme at Llanelli and Burry Port beaches.	CCC		2k pa						Ongoing
c) In the event of quality not achieving Directive standards, investigate the input rivers/streams to determine other influences on bathing water quality.	EA	CCC	3k						
d) As appropriate, recommend remedial works to improve bathing water quality.	EA	Not known	Not known						Ongoing

ISSUE 15 The beach at Broughton is not currently identified under the EC Bathing Waters Directive but is used for recreational purposes. Had it been so identified, water quality at this beach would not have met the Directive standards in 1994, but would have done so in 1995 and 1996.

a) Continue bathing water monitoring at Broughton beach.	CCS		1k pa						Ongoing
b) In the event of quality not achieving Directive standards, investigate input streams to determine local influences to bathing water quality.	EA	CCS	1k						
c) As appropriate, recommend remedial works to improve bathing water quality.	EA	Not known	Not known						

LOUGHOR & NORTH GOWER ISSUES AND ACTIONS

ISSUE 16 Failure of dissolved oxygen standards for the protection of migratory salmonids at Loughor Road Bridge, and problems with unionised ammonia, have been detected.

ACTIONS	RESPONSIBILITY		COST £	1996	1997	1998	1999	2000	FUTURE
	LEAD	OTHER							
a) Complete new Llanelli coastal sewage treatment and disposal scheme to treat discharges of sewage from Llanelli, Pwll and Burry Port STWs (see also Issues 14a and 22a) at the new Bynea STW.	DC/WW		18.5m						
b) Maintain existing discharge quality at Gowerton STW.	DC/WW		Not known						Ongoing
c) Monitor discharge from Gowerton STW and water quality in the Loughor estuary.	EA		2.5k pa						
d) Dependent on results of c), implement nitrification at Gowerton STW in accordance with the AMP2 programme.	DC/WW		2.5m						

ISSUE 18 Discharges of contaminated surface water from industrial estates in the area give rise to pollution incidents.

a) Undertake targeted campaign of pollution prevention site visits to Industrial Estates.	EA		1.5k pa						Ongoing
b) Where problems are identified, discuss and progress remedial actions with occupiers and owners.	Factory occupiers/owners	EA	Not known						Ongoing
c) Ensure pollution prevention measures are incorporated into future developments through planning liaison process.	EA, LPA		< 1k pa (EA costs)						Ongoing

ISSUE 19 Abandoned minewaters cause aesthetic, biological and water quality impacts at a number of locations within the catchment.

a) In accordance with agreed National and Regional priorities, complete feasibility studies for treating abandoned mine discharges in the									
i) Morlais (#)	CA	EA	20k						
ii) Cathan.	CA	EA	20k						
b) Implement remedial actions proposed by above reports as resources become available and in accordance with National and Regional Priorities	CA	EA Local and Central Gov't	600k						When funding becomes available
c) Review National ranking lists as appropriate to ensure any additional or new abandoned minewater discharges are prioritised accordingly.	EA		Not known						Ongoing
d) Ensure pollution prevention measures are incorporated into future developments through planning liaison process and production of mine closure plans.	EA/ MPA/ LPA		Not known						Ongoing

LOUGHOR & NORTH GOWER ISSUES AND ACTIONS

ISSUE 20 Pollution of both groundwater and surface water can occur during the rehabilitation of former contaminated land sites.									
ACTIONS	RESPONSIBILITY		COST £	1996	1997	1998	1999	2000	FUTURE
	LEAD	OTHER							
a) Identify areas and ensure developers are aware of the risks and necessary precautions to avoid contamination of controlled waters.	EA		1.5k pa						Ongoing
b) Ensure pollution prevention measures are incorporated into future developments through planning liaison process.	EA, LPA, MPA	Developer	Not known						Ongoing
ISSUE 21 Watercourses can be affected by discharges from coal mines, opencast sites and coal processing plants.									
a) Ensure that adequate pollution prevention measures are incorporated into future developments through the planning liaison process.	EA, LPA, MPA	Site operator	Not known						Ongoing
b) Undertake programme of visits to identify sources of pollution and ensure that occupiers take appropriate remedial action.	EA, MPA	Site operator	Not known						Ongoing
c) Issue and review consents to achieve 'environmentally protective' standards and enforce these limits.	EA		Not known						Ongoing
ISSUE 22 Classification of the Pwll, Machynys, Burry Port and Northside (West) of the Burry Inlet as Class D under EC Shellfish Hygiene Directive, prohibits the harvesting of mussels and cockles in these areas.									
a) Complete new Llanelli coastal sewage treatment and disposal scheme to treat discharges of sewage from Llanelli, Pwll and Burry Port STW's (see also Issues 14a and 16a) at the new Bynea STW.	DCWW		18.5m						
b) Continue monitoring shellfish bacterial levels and review classification if appropriate.	CCC, MAFF		3.3k pa						Ongoing
c) Dependent on results, remove prohibition of shellfish harvesting.	MAFF		Not known						Not known
ISSUE 23 There is no compensation flow set below Cwm Lliedi Reservoir.									
a) Undertake a study to assess the benefits of various compensation flow options on the fisheries, other aquatic wildlife and water quality of the Lliedi.	EA	DCWW	9k (EA costs)						
b) Investigate the costs of the compensation flow options and implement the optimum solution, if cost-beneficial.	EA		Not known						By 2010
ISSUE 24 There is an inadequate hydrometric monitoring network within the catchment.									
a) Undertake hydrometric review of the catchment to assess the need for hydrometric data and design a network to provide the required benefits at reasonable cost.	EA		5k						
b) Install an improved hydrometric network, according to identified needs and funding availability.	EA		Not known						Post 2000

LOUGHOR & NORTH GOWER ISSUES AND ACTIONS

ISSUE 25 The Loughor fails to meet the current water quantity target, reducing available dilution at Garnswllt STW.									
ACTIONS	RESPONSIBILITY		COST £	1996	1997	1998	1999	2000	FUTURE
	LEAD	OTHER							
Initial assessment of the catchment indicates that insufficient benefit would arise from limiting the public water supply abstraction at Llygad Loughor, which is the principal abstraction in the catchment. Therefore, the surface water abstraction licence policy, when developed, will be applied to control new applications for abstraction.	EA		1k						Ongoing
ISSUE 26 Flood protection standards at Halfway and Pontardulais are below the indicative standard of service for land use for residential and non-residential purposes.									
a) Construct flood defences at Halfway to improve flood protection standards.	EA		550k						
b) Construct flood defences at Pontardulais to improve flood protection against the Loughor.	EA		343k						
c) Investigate existing flood protection standards on the Dulais through Pontardulais to ensure consistency of standards on the Loughor and Dulais.	EA		10k						
ISSUE 27 The level of protection against tidal flooding at Hendy is known to be below the indicative standard of service for land use for residential and non-residential purposes.									
Improve flood defences at Hendy to enhance existing flood protection standards.	EA		25k						
ISSUE 28 The levels of protection against flooding at Glan Marlais from the Llan, and on the Gors Fawr Brook are believed to be below the indicative standard of service for land use for residential and non-residential areas. Maintenance operations are severely hampered by limited access onto the river banks.									
Undertake feasibility studies for these sites to determine whether improvement can be justified.	EA		10k						
ISSUE 29 The tidal flood defences at Crofty do not provide a standard of protection suitable for a residential area, and are expensive to operate.									
a) Promote an improvement scheme for this site, supported by all interested bodies.	EA		2k						
b) Implement improvement scheme. Progress of works will depend upon agreement of interested bodies.	EA	Land owners, Conserv'n interests	10k (EA costs)						
ISSUE 30 The high costs of gravel removal from the river channel to maintain existing flood protection standards.									
a) Review existing gravel removal operations in the catchment.	EA		1k						
b) Implement changes to the maintenance regime as required.	EA		Depend-ent on a)						

LOUGHOR & NORTH GOWER ISSUES AND ACTIONS

ISSUE 31 Section 105 surveys are required to establish the extent of land liable to flood.

ACTIONS	RESPONSIBILITY		COST £	1996	1997	1998	1999	2000	FUTURE
	LEAD	OTHER							
Undertake surveys of the flood plains in the catchment area.	EA		60k						

ISSUE 32 The flood warnings for the Loughor catchment do not meet our target standards.

a) Review existing flood warning procedures for all sites within the catchment.	EA		0.5K						
b) Implement change if necessary, subject to funding and cost effectiveness of improvements.	EA		Depend- ent on a)						

ISSUE 33 Consenting protocols need to be agreed between the Agency and CCW for the Burry Inlet Dunes and Gower Commons candidate SACs and any other relevant designated conservation sites (wetlands, lakes, estuarine/coastal SSSIs).

a) Agree relevant sites.	CCW	EA	0.5k (EA costs)						
b) Produce a conservation strategy for each site.	CCW	EA, RSPB, land owners	2k (EA costs)						
c) Agree consenting protocol for each site.	EA	CCW	2k (EA costs)						
d) Implement protocols and strategies.	EA	CCW	4k (EA costs)						Post 2000

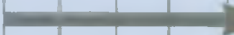
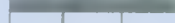
ISSUE 34 In-river and riparian habitats have been degraded by past industrial activity.

a) Identify degraded habitats using RCS, RHS and other existing survey data.	EA		0.5k						
b) Carry out further RHS surveys as appropriate.	EA		1k						
c) Plan remedial works in conjunction with riparian owners.	EA	Riparian/ land owners	2k (EA costs)						
d) Implement remedial works	EA	To be deter- mined	To be deter- mined						Post 2000

ISSUE 35 Impaired migration of salmonids due to man made obstructions.

a) Identify sites where fish access is prevented or impeded.	EA	Angling Clubs, riparian owners	2k (EA costs)						
b) Determine programme of improvement works.	EA		2k						
c) Design fish passes/easements, subject to available funds.	EA	Angling Clubs, riparian owners	Depend- ent on b)						
d) Construct fish passes/easements, subject to available funds.	EA	Angling Clubs, riparian owners	Not known						

LOUGHOR & NORTH GOWER ISSUES AND ACTIONS

ISSUE 36 Invasive plants are present throughout the catchment.									
ACTIONS	RESPONSIBILITY		COST £	1996	1997	1998	1999	2000	FUTURE
	LEAD	OTHER							
a) Determine the extent of invasive plants in the river corridors of the catchment using RHS and RCS data.	EA		0.5k						
b) Implement the appropriate Agency strategy (currently draft) for the control of such plants.	EA	WDA, CCW, LA, Riparian/ land owners	To be deter- mined						
c) Increase public awareness regarding invasive plants and control measures by the distribution of the Agency leaflet 'Guidance for the Control of Invasive Plants near Watercourses'.	EA		None						Ongoing
ISSUE 37 Low population densities of juvenile trout have been recorded on the Amman.									
a) Identify reasons for low densities of trout and plan remedial works to address identified impacts.	EA	Angling Clubs	5k						
b) Implement works, subject to available funding.	EA	LA, Angling Clubs, Riparian owners	20k (EA costs)						
c) Monitor impact of mitigation works to ensure problems is resolved.	EA		5k pa						Ongoing
ISSUE 38 The otter population should be safeguarded by implementing the "Conservation Strategy for Otters in Wales" and the Biodiversity Action Plan for otters.									
a) Establish contact with relevant organisations and groups.	OIW	EA, Conserva- tion interests	1k (EA costs)						
b) Review available information and develop a priority otter catchment management plan to comply with the Biodiversity Action Plan.	OIW	EA, Conserva- tion interests	2k (EA costs)						
c) Implement management plans.	OIW	EA, Conserva- tion interests	To be deter- mined						
ISSUE 39 The status of coarse fisheries in the catchment is unknown.									
a) Identify status of coarse fisheries.	EA		2k						
b) Consult with LFG to identify if present facilities are sufficient.	EA	LFG	2k (EA costs)						

LOUGHOR & NORTH GOWER ISSUES AND ACTIONS

ISSUE 40 Public access to many areas of the river system is restricted due to the lack of public footpaths. Consideration needs to be given to the feasibility of extending and linking the existing footpath network to improve access to the river corridor.

ACTIONS	RESPONSIBILITY		COST £	1996	1997	1998	1999	2000	FUTURE
	LEAD	OTHER							
a) Support and promote initiatives that will enable all relevant and existing Rights of Way to be opened up and made accessible.	LA	EA, CCW, RA, land owners, CCs	5k (EA costs)						
b) Support the creation of new footpaths where these are promoted by local communities and land owners, having fully considered all environmental issues.	LA		<1k pa						By 2001

ISSUE 41. In-river engineering works can cause disturbance of silts and detract from the amenity value of the fishery.

a) Undertake environmental impact assessments for both capital and revenue in-river work, where appropriate, to ensure proposals remain both cost effective and environmentally appropriate.	EA	CCW, Angling Clubs, land owners, consvt'n interest	Not known						Ongoing
b) Continually review and, where possible, improve existing flood defence practices to minimise environmental impacts.	EA	As above	Not known						Ongoing

ISSUE 42 In the middle and lower reaches of the Loughor, the need for riparian and fishery owners to protect against bank erosion conflicts with the natural river processes which have important landscape, historic and ecological features.

a) Identify critical sites.	EA	CCW, DAT, GGAT	1k (EA costs)						
b) Liaise with riparian owners, anglers, environmentalists and archaeologists to seek mutually acceptable solutions and minimal environmental impact.	EA	CCW, DAT, GGAT, Riparian/ land owners, angling clubs, environ- ment interests	To be deter- mined						

LOUGHOR & NORTH GOWER ISSUES AND ACTIONS

ISSUE 43 Opencast mining activity can cause a local reduction in biodiversity of watercourses.									
ACTIONS	RESPONSIBILITY		COST £	1996	1997	1998	1999	2000	FUTURE
	LEAD	OTHER							
a) Identify areas degraded by past opencast activity. (#)	EA		5k						
b) Undertake remedial works on the Lash.	EA		43k						
c) Prioritise and cost remedial works at remaining sites and implement when appropriate.	EA	Celtic Energy*, site owners	Not known						
d) Identify future schemes and seek to reduce their impact through consultation with developers and LPAs.	EA	Developer/ LPA	To be determined						Ongoing
ISSUE 44 No canoeing access in the Loughor upstream of the tidal limit (public right of navigation in tidal waters).									
a) Liaise with relevant parties to discuss canoeing on the Loughor and aim to draw up a canoeing agreement.	EA	WCA, LA, angling clubs, Riparian owners	0.5k (EA costs)						
b) Consider the potential use of other watercourses within the catchment.	EA	WCA, LA, angling clubs, Riparian owners	1k (EA costs)						
ISSUE 45 Certain developments, such as those within the flood plain or adjacent to the river corridor, may impact on the Agency's environmental and flood defence interests.									
a) Ensure suitable policies are included within Local Plans. (#)	EA	LPAs	2.5k (EA costs)						
b) Set up meeting/seminar to enhance liaison with LPAs. (#)	EA	LPAs	1k (EA costs)						
ISSUE 46 Illegal fishing reduces stocks of fish for bona fide angling and spawning.									
a) Continue to deploy Agency enforcement team in effective and coordinated manner.	EA		25k pa						Ongoing
b) Review effectiveness of byelaws and introduce new proposals where necessary.	EA	LFG, angling clubs	1k pa (EA costs)						
c) Widely publicise 0800 emergency number in line with Regional strategy.	EA	LFG	1k pa (EA costs)						

* To be agreed with Celtic Energy

LOUGHOR & NORTH GOWER ISSUES AND ACTIONS

ISSUE 47 The lower and middle reaches of the Loughor are devoid of tree cover.									
ACTIONS	RESPONSIBILITY		COST £	1996	1997	1998	1999	2000	FUTURE
	LEAD	OTHER							
a) Identify areas where trees could be planted to provide cover and improve the river corridor habitat.	EA		5k						
b) Liaise with landowners to draw up agreements to plant and protect with fencing, encouraging financial support from landowners and the heritage funding.	EA	Angling clubs, land owners	Not known						
ISSUE 48 A Water Level Management Plan has not been prepared by the Agency for Llangennith Moors.									
a) Determine required water level management regime and agree overall objectives.	EA	CCW, land owners	2k (EA costs)						
b) Produce water level management plan.	EA	CCW	2k (EA costs)						
c) Review Plan.	EA	CCW	1k (EA costs)						
ISSUE 49 The Burry Inlet and Loughor Estuary candidate marine SAC needs to be protected by compliance with the EC Habitats Directive (The Environment Agency being a "Relevant Authority").									
a) Establish management and advisory groups. (#)	CCW	EA, LAs, SWSFC, WWT, RSPB	2k						
b) Produce management plan.	CCW	As above	2k						
c) Implement management plan.	CCW	As above	To be determined						
ISSUE 50 There is a need to comply with the UK Biodiversity Action Plan.									
For each short list species (eg. Shad and Otter) and habitat within the catchment, implement the appropriate action plan:									
a) Identify the presence and distribution of short list species and habitats.	CCW, EA	DWT, GWT, LAs, land owners, angling clubs	5k						
b) Review Agency operations to ensure such species and habitats are safeguarded.	EA		1k						
c) Identify areas where improvements may enhance conservation status of those species and habitats, where the Agency is the lead organisation.	EA	As above	To be determined						
d) Implement improvements.	EA	As above	Dependent on c)						Post 2000

LOUGHOR & NORTH GOWER ISSUES AND ACTIONS

ISSUE 51 Lack of information on the historic landscape of the Loughor catchment.

ACTIONS	RESPONSIBILITY		COST £	1996	1997	1998	1999	2000	FUTURE
	LEAD	OTHER							
a) Liaise with archaeological trusts to expand the Agency database of historic sites. (#)	EA	DAT, GGAT	<1k (EA costs)						Ongoing
b) Ensure that Agency operations likely to impact on the known and unknown archaeological resource are identified and where appropriate, archaeological trusts are fully consulted.	EA		<1k						

FUTURE REVIEW AND MONITORING

The Agency 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, prior to producing LEAPs, in the light of changes in the catchment. The period between major revisions is normally five years, but the Agency is committed to having a set of LEAP Consultation Reports covering England and Wales by the end of 1999, a significant challenge for the Agency but one which we hope to achieve.

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.

Further copies of this Action Plan, and copies of the original Consultation Report (if available), can be obtained from :

The Area Environment Planner
Environment Agency
Llys Afon
Hawthorn Rise
Haverfordwest
Pembrokeshire
SA61 2BQ

Telephone Enquiries:
Haverfordwest (01437) 760081

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Acknowledgement:

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cynllun rheoli dalgylch



LLWCHWR A GOGLEDD GŴYR cynllun gweithredu Mawrth 1997



ASiantaeth yr
AMGYLCHEDD
ENVIRONMENT
AGENCY

MANYLION ALLWEDDOL

Cyffredinol

Arwynebedd	539km ²
Poblogaeth (cyfrifiad 1991)	133,380
Dwysedd Poblogaeth	247.5/km ²

Topograffeg

Lefelau Daeor	Lefel Uchaf	616m USO
Lefelau Môr	Penllanw Cymedrig	3.9m USO
	Distyll Cymedrig	-3.6m USO

Ansawdd Dŵr

Hyd yr Afon Ddosbarthedig yn	Dosbarth A	65.7km
Aseiad Ansawdd Cyffredinol 1995	Dosbarth B	27.5km
	Dosbarth C	15.0km
	Dosbarth D	dim
	Dosbarth E	2.1km

Ansawdd yr Aber (Arolwg 1995)	Dosbarth A	23.8km
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Adnoddau Dŵr

Cyfartaledd Glawiad Blynnyddol	1500mm	
Cyfanswm y dŵr y mae trwydded i'w dynnu	Cyhoeddus	23,877Ml/fl
	Diwydiant/	
	Amaethyddiaeth	18,354Ml/fl
Prif Orsaf Fesur	Llwchwr yn Nhir-y-Dail	
Prif Gronfeydd Dŵr (cyfaint)	Lliw Uchaf	1,318Ml
	Lliw Isaf	1,137Ml
	Cwm Lliedi	1,637Ml

Gwarchod Rhag Llifogydd

Hyd Prif Afon Ddynodedig	173.93km
Hyd Afon lle gweithredir Cynlluniau Lliniaru Llifogydd/Draenio	5.24km
Hyd Afon a warchodir gan Gynllun Rhybuddio rhag Llifogydd	42km

Pysgodfeydd

Dalfeydd Pysgod Mudol Blynnyddol â Gwialen (Datganedig)	Eog	Siwin
(Cyfartaledd Blynnyddol 1980 - 1994)	12	201

Cadwraeth

Safleoedd wedi'u Dynodi'n Statudol	SDdGA	31
	AGA Môr	1
	AGA/AWA Arall	4
	Henebion Rh.	70

Statement of Public Consultation - Loughor and North Gower Catchment Management Plan (to be read in conjunction with Action Plan)

Name of Consultee	Comments	Our Response
Mr Andrew Davies	Bank erosion has caused river flow to decline, causing static pools. Erosion needs to be tackled and flow improved for angling. Sea trout lost due to low oxygen levels in river. Snag in river.	Comments noted. Agency is keen to see banks stabilised by tree planting (see also Issue 47) and management where appropriate. Improvements to Gamswilt STW and the Amman Valley sewerage system will result in improved water quality in the Loughor.
Cllr John Evans	Concerned about abandoned mine discharges on Betws mountain, Ammanford.	Discharges from abandoned mines are exempt from current legislation. The Agency is currently assessing abandoned minewater discharges with a view to drafting a priority listing (England and Wales) to initiate remedial action, which will then be discussed with the Coal Authority.
Dr Roscoe Howells	Plan represents a thorough and comprehensive review of the catchment. Lack of a compensation flow at Cwm Lliedi needs looking at. Issue 39 disadvantages should include introduction of coarse fish species. Public access to the estuary needs improving. Development pressure on valuable Llangennech reed beds needs to be considered.	Coarse Fish Strategy now launched. Public access to the estuary will be considered when Issue 40 is implemented. Development pressure on Llangennech reed beds will be considered when responding to relevant planning applications and issuing Agency authorisations. Cwm Lliedi reservoir is dealt with in Issue 23.
Cllr Ioan M. Richard	Information on flooding on the Cathan. More woodland management adjacent to rivers, possibly via heritage funding. Water quality issues related to mines, industrial sites, collieries and organo phosphates. Problems associated with wind turbines.	Comments noted, particularly regarding flooding, for future reference. New issue (47) deals with woodland management adjacent to watercourses.
Ammanford & District Angling Association	Report identifies relevant issues fully and hopefully. Issues of concern include lack of spawning grounds, water pollution, water abstraction, land drainage, improved access to the river for infirm or disabled, canoeing, river bank erosion and poaching.	Comments noted. Meeting held re. disabled fishing platform at Bettws. Issue 40 will include consideration of improved access for the disabled, and ADAA will be included in discussions. Addressing lack of spawning grounds and access to them in Issue 35. Improvements to Gamswilt STW and the Amman Valley sewerage system will result in improved water quality in the Loughor. Water abstraction not a significant issue in this catchment. Agency does not propose to straighten out watercourses or undertake land drainage work but undertake maintenance and capital work where appropriate. Consultation takes place before such work is implemented. Canoeing addressed under Issue 44, part of which ADAA will be consulted.
Betws Community Council	Concerned about abandoned mine discharges on Betws mountain, Ammanford.	Comments noted. Discharges from abandoned mines are exempt from current legislation. The Agency is currently assessing abandoned minewater discharges with a view to drafting a priority listing (England and Wales) to initiate remedial action, which will then be discussed with the Coal Authority.

Statement of Public Consultation - Loughor and North Gower Catchment Management Plan (to be read in conjunction with Action Plan)

Name of Consultee	Comments	Our Response
Cadw Welsh Historic Monuments	No mention of historic environment in the Overview. Conservation of historic monuments should be mentioned in Issues 42 and 45, and their vulnerability reflected in Issues 28-31 and 40, in relation to flood defence. Statutory position regarding Scheduled Ancient Monuments spelt out. River Corridor Surveys should cover heritage as well as conservation and be included in the targets. SAMs not mapped as in other CMPs.	Comments noted for future reference. Introduction to Action Plan and Issue 42 now include reference to the historic environment. New issue (51) now included. Extensive consultation is undertaken with external bodies prior to undertaking flood defence capital and maintenance work, including archaeological interests.
Campaign for the Protection of Rural Wales	General support for the plan and many of the options to solve the issues. Canoe access agreements should be encouraged, avoiding disturbance to wildlife. Flood defences should be carefully thought about, agricultural land in less need of protection. Concern about fish farms. Development on flood plains should be avoided. Broughton beach should be identified under the EC Directive.	Comments noted. Canoe access agreements will be covered in Issue 44. WCA should consult fully with relevant bodies to ensure, amongst other issues, wildlife is protected. Flood defences are justified and prioritised according to land use. Agency follows Government advice when advising planning authorities where development and flood risk are involved. Promotion of beach for designation falls to Local Authorities.
Carmarthenshire County Council	No apparent commitment to undertake S105 surveys. Improving flood protection a priority. Ensure that improvements to sewerage systems are undertaken. Issues surrounding Wernddu waste disposal site should be discussed. Closer liaison between new Mineral Planning Authority and the Agency welcomed.	Comments noted for future reference. S105 surveys are being undertaken across the Region on a prioritised basis, subject to funding limitations. This also applies to flood defence capital work.
Celtic Energy	Dispute Issues 7, 21 and 43. Certain statements regarding opencast lack supporting evidence. Plan gives impression that opencast is responsible for more problems in catchment than is justified.	Comments noted. Meetings held to discuss areas of concern and a way forward agreed. Issue 43 reflects Agency position and view on this subject.
Club Godre'r Mynydd Du	Sewage infrastructure requires improvement. Gravel movements need more control. Amman could be improved for migratory salmonids. Spawning tributaries need protecting. Hopes the Agency will have the teeth to help the environment.	Meeting held with club officials in January 1997 to discuss identified problem areas. Proposals for improvements in hand. Improvements to Garnswllt STW and the Amman Valley sewerage system will result in improved water quality in the Loughor.
Countryside Council for Wales	Welcome production of the plan and commitment to involve community in long term management. Potential for certain options to impact upon landscape quality. Details of SSSIs, SACs and RAMSAR sites provided. Opportunity for positive change should be reinforced. General duty of promoting water based recreation should be clearly reflected, including positive catchment targets set.	Introduction to Action Plan and Issue 42 now include reference to landscape quality. RAMSAR designation also in the introduction. SACs included in Issues 39 and 49. Water based recreational issues covered in Issues 40 and 44.

Statement of Public Consultation - Loughor and North Gower Catchment Management Plan (to be read in conjunction with Action Plan)

Name of Consultee	Comments	Our Response
Dyfed Archaeological Trust	Lack of an archaeological river survey underpinning the information presented. Heritage interest is much wider than SAMs. Recommendations of archaeology report have not been included. Overall historic features need to be given a higher profile.	Comments noted for future reference. Introduction to Action Plan and Issue 42 now include reference to the historic environment. New issue (51) now included.
Forestry Authority	Welcome continued creative dialogue in producing Indicative Forestry Strategies.	Noted.
Forest Enterprise	No comments.	Noted.
Friends of the Earth	Various problems with industrial and sewage discharges to the catchment, contaminated water from industrial estates, waste disposal sites, minewater discharges, contaminated land, bankside development and water based recreation. The use of reed beds to treat discharges should be more widespread. Safeguarding rare local species is important.	Concerns over water quality noted. Current work programmes reflect environmental priorities and will ensure issues identified are addressed. Issue 44 covers water based recreation. All relevant bodies will be involved before canoe access agreements are drawn up. Safeguarding rare local species is included in Issues 33, 38, 49 and 50.
Gower Society	Document is clear and concise and could find no fault with it's comments.	Noted.
Gower and Swansea Bay Marine Forum	Sewage improvements welcomed. Concerned that no shellfisheries are designated under the EC Shellfish Waters Directive. Garmswllt STW must have nutrient removal. Timetable to improve some CSOs is unsatisfactory. Issues to be resolved concerning effluent disposal at Gowerton. Quality of the Dafen and proposed solution is unacceptable. Certain non-identified bathing beaches should be. Failure to achieve drinking water quality should be qualified. Flood defence standards should be improved at Crofty and Glan Marlais.	Comments noted. Several projects underway at present, including Garmswllt and Cross Hands STW and Llanelli sewerage scheme, which will result in water quality improvements. Improvements to CSOs are influenced by DCWW/OFWAT AMP programmes. A phased improvement to the Dafen is proposed. Issues 28 and 29 deal with flooding issues at Glan Marlais and Crofty respectively.
Her Majesty's Inspectorate of Pollution	No comments.	Noted.
Institute of Chartered Foresters	Report demonstrated a sound working relationship between water and forestry interests. Suggested improvement to general forestry text.	Noted for future reference.
Llanelli Rural Council	Production of report complemented and content accepted.	Noted.
Ramblers' Association	Welcome production of CMP. Deplore abandoned mine discharges and their affects. Support plans to improve riverside access where appropriate. Impact of opencast mining should be reduced.	Comments noted. The impacts of opencast mining are being monitored and improvement schemes are underway. Public access covered in Issue 40.

Statement of Public Consultation - Loughor and North Gower Catchment Management Plan (to be read in conjunction with Action Plan)

Name of Consultee	Comments	Our Response
Royal Society for the Protection of Birds	Well covered the key issues of the catchment. Implementation of the UK Biodiversity Report needs to be identified. Not all issues have disadvantages if the cost is small. Issue 42 not really an issue.	Comments noted. New Issue (50) identifies the need to ensure compliance with the UK Biodiversity Action Plan. Issue 42 has been amended.
South Wales Sea Fisheries Committee	Production of plan welcome. Water quality improvements identified should benefit the estuarine bivalve molluscs. Various comments upon detail of sea fisheries sections and issues. Alleged incursions into bass nursery areas may have consequences for migratory fish.	Comments noted for future reference.
Sports Council for Wales	No comments.	Noted.
Tarmac Quarry Products	Cilyrhychen Quarry better described as small to medium sized.	Noted.
Wales Tourist Board	Welcome use of river banks for recreational activities.	Included in Issues 40 and 44.
Welsh Canoeing Association	Detailed comments on suitable canoeing areas in the catchment. Various comments on the interaction between canoeing and the environment and other users. Keen to be involved in negotiating access agreements. Suggested rewording of some parts of text.	Comments noted. See Issue 44. Meetings with WCA have been held and suitable canoeing areas discussed. We will assist WCA to negotiate access agreements.
Welsh Development Agency (Area Development)	Support principle and philosophy of integrated management through CMPs. Information on Landscape Strategies in the plan area and overlap with some issues in these recognised, so partnership approach welcomed. Will seek to influence best practice with respect to land reclamation. Will work with Agency to maximise opportunities to implement Issue 45.	Comments noted. Partnership approach to Landscape Strategies and CMPs acknowledged.
Welsh Office	All three potential SACs have been submitted to the EC.	All SACs are referred to as candidate SACs in the Action Plan.
Welsh Office Agriculture Department	Support for tackling agricultural pollution by prevention. Need to work together when dealing with aftercare of mineral and landfill sites. More investigation needed on effect of piscivorous birds. Could take a more positive approach to river bank habitat enhancement. River bank fencing and public access should be carefully considered. Flood warnings are needed for agricultural purposes as well as residential.	Comments noted. River bank habitat enhancement is included in Issues 34, 36 and 47. Comments regarding fencing and flood warning agreed and noted.

CYNNWYS

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RHAGYMATRODD

CYSYNIAD CYNLLUNIO ASiantaethOL CYFUNEDIG

Corff cyhoeddus anadrannol yw Asiantaeth yr Amgylchedd a sefydlwyd gan Ddeddf yr Amgylchedd 1995. Cawn ein noddi gan Adran yr Amgylchedd, gyda chysylltiadau polisi â'r Swyddfa Gymreig a'r Weinyddiaeth Amaeth, Pysgodfeydd a Bwyd. Mae Asiantaeth yr Amgylchedd wedi ymgymryd â swyddogaethau ei rhagflaenwyr yn yr Awdurdod Afonydd Cenedlaethol (AAC), Arolygwyr Llygredd Ei Mawrhydi, Awdurdodau Rheoli Gwastraff a rhai rhannau o Adran yr Amgylchedd.



Rhaeadr Glynbir

Dyma'n Gweledigaeth: Gwell amgylchedd yng Nghymru a Lloegr ar gyfer cenedlaethau'r presennol a'r dyfodol.

Byddwn yn:

- gwarchod a gwella'r amgylchedd yn ei gyfanrwydd drwy reolaeth effeithiol, drwy ein gweithredoedd ni a thrwy weithio gydag eraill a dylanwadu arnynt
- gweithredu'n agored ac yn ymgynghori'n eang
- gwerthfawrogi'n gweithwyr
- effeithlon ac yn ymarferol ym mhopeth a wnawn.

Rydym wedi dewis defnyddio Cynlluniau Asiantaeth Amgylchedd Lleol (CAALI) i droi'r egwyddorion hyn yn weithredu. Mae'r cynlluniau'n disgrifio'n gweledigaeth ar gyfer pob dalgylch, yn enwi'r problemau a'r materion ac yn cynnig ffyrdd y gellid gweithredu i'w datrys. Bydd CAALI yn dilyn egwyddorion sylfaenol Cynlluniau Rheoli Dalgylch (CRhD) yr hen AAC, ond yn ymdrin â holl amrediad gweithgareddau'r Asiantaeth. Ond fe baratowyd yr Adroddiad Ymgynghorol ar gyfer dalgylch Lluchwr a Gogledd Gŵyr gan yr AAC, ac felly dim ond yr agweddau o gyfrifoldebau'r Asiantaeth oedd yn seiliedig ar ddŵr a gafodd sylw ynddo. Oherwydd hynny, mae'r Cynllun Gweithredu hwn yn seiliedig ar ddŵr hefyd.

Fframwaith polisi strategol yw'r Cynllun Gweithredu ar gyfer rheoli'r dalgylch, ac fe'i lluniwyd wedi inni ystyried y sylwadau a ddaeth i law ar yr Adroddiad Ymgynghorol. Mae'n cynnwys Cynlluniau Gweithgaredd i helpu i wireddu'r weledigaeth ar gyfer dalgylch Lluchwr a Gogledd Gŵyr a bydd yn ffurfio'r sail ar gyfer gwelliannau i'r amgylchedd dyfrol drwy amlinellu'r meysydd lle mae angen gwaith a buddsoddiad gan yr Asiantaeth ac eraill. Mae'r Cynllun Gweithredu'n ymdrin yn bennaf â'r cyfnod pum mlynedd o 1996 hyd 2000. Gall nifer o'r projectau

gymryd mwy o amser, yn dibynnu ar gyfyngiadau ariannol a pholisi'r llywodraeth. Bydd yr Asiantaeth yn mabwysiadu'r cynigion yn y Cynllun Gweithredu yn ffurfiol.

Mae'r cynlluniau hefyd yn darparu'r modd i hybu dwy brif agwedd ar reolaeth yr amgylchedd, sef cynllunio defnydd tir a thargedau ansawdd dŵr.

Y BERTHYNAS RHWNG CYNLLUNIO DEFNYDD TIR A CHYNLLUNIAU RHEOLI DALGYLCH

Nod cynlluniau rheoli dalgylch yn fras yw cadw a chyfoethogi amgylchedd yr afon gyfan drwy reolaeth effeithiol dros dir ac adnoddau. Ond er ein bod ni 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 gennym 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. Ond rydym yn gorff y mae'n rhaid ymgynghori ag ef o dan y ddeddfwriaeth hon.

Mae'r polisiâu mewn cynlluniau datblygu statudol yn gosod y fframwaith ar gyfer newidiadau defnydd tir, ac yn bwynt cyfeirio allweddol wrth benderfynu ar geisiadau am ddatblygu. Rydym yn annog y dylid cynnwys polisiâu sy'n adlewyrchu'n diddordebau a'n cyfrifoldebau ni.

Fel arweiniad i awdurdodau lleol, paratodd yr hen 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. Roedd y datganiadau hyn yn grynodedig o'r "Nodiadau Canllaw i Awdurdodau Cynllunio Lleol ar y Dulliau o Warchod yr Amgylchedd Dyfrol trwy Gynlluniau Datblygu". Mae'r rhain yn briodol i Asiantaeth yr Amgylchedd hefyd.

Mae'r Cynllun Gweithredu hwn yn amlinellu Materion

ac Anghenion Gweithredu penodol i ddalgylch Llŵchwr a Gogledd Gŵyr a gytunwyd o fewn fframwaith y Nodiadau Canllaw hyn. Mae'r cynllun hwn yn amlinellu hefyd sut y dylai buddiannau'r amgylchedd dyfrol ddylanwadu ar leoliad a natur datblygiad a newidiadau defnydd tir o fewn y dalgylch.

Bydd y rhaglen fesul cam o welliannau i isadeiledd carthffosiaeth a gweithfeydd trin carthion, a gytunwyd gyda'r Asiantaeth ac a bennwyd o fewn ail Gynllun Rheoli Asedau (CRhA2) Dŵr Cymru am y cyfnod 1995 i 2000, yn penderfynu pa mor gyflym y gellir cyflawni camau adfer yn y dyfodol yn unol â gofynion y gyfraith. Caiff hyn ddylanwad pwysig ar welliannau i ansawdd dŵr a rheolaeth datblygu/cynllunio fel y'u dangosir o fewn yr Anghenion Gweithredu a bennir yn y cynllun hwn.

TARGEDAU ANSAWDD DŴR

Cyflwynwyd y cynllun Targedau Ansawdd Dŵr Statudol (TADS) dan Ddeddf Adnoddau Dŵr 1991. System ydyw ar gyfer cynllunio ansawdd dŵr, a bydd yn gosod targedau ansawdd 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 a CAALI.

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 TADS cyntaf i'w gyflwyno gan y Llywodraeth trwy Reoliadau Dyfroedd Wyneb (Ecosystem Afon) (Dosbarthiad) 1994. Ar gyfer pob darn afon dosbarthedig yn nalgylch Llŵchwr a Gogledd Gŵyr, cynigiwyd targed dosbarth Ecosystem Afon, ac mae'r Cynllun Gweithredu hwn yn nodi, lle bo'n briodol, pa weithredu sydd ei angen i gyrraedd y 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 Statudol gan yr Ysgrifennydd Gwladol dros yr Amgylchedd ac Ysgrifennydd Gwladol Cymru.

ADOLYGIAD O'R BROSES YMGYNHORI

Cyhoeddwyd Adroddiad Ymgynghorol Cynllun Rheoli Dalgylch (CRhD) Llŵchwr a Gogledd Gŵyr yn Chwefror 1996. Dogfen ymgynghorol oedd y cynllun a geisiai sylwadau gan bawb oedd â diddordeb yn yr amgylchedd dyfrol. Dosbarthwyd oddeutu 400 o gopïau o'r adroddiad i gyrff â diddordeb, sefydliadau addysgol a'r cyhoedd.

Parhaodd y cyfnod ymgynghori swyddogol am 16 wythnos o 8 Mawrth hyd 28 Mehefin 1996. Cafwyd cyfanswm o 31 o ymatebion yn ystod y cyfnod hwn oddi wrth yr unigolion a'r cyrff canlynol:

Mr Andrew Davies

Y Cyng John Evans

Dr Roscoe Howells

Y Cyng Ioan M. Richard

Adran Amaeth y Swyddfa Gymreig

Arolygwyr Llygredd Ei Mawrhydi

Awdurdod Coedwigaeth

Awdurdod Datblygu Cymru

Bwrdd Croeso Cymru

Cadw

Celtic Energy

Clwb Godre'r Mynydd Du

Cyfeillion y Ddaear

Cyngor Cefn Gwlad Cymru

Cyngor Cymuned Betws

Cyngor Chwaraeon Cymru

Cyngor Gwlad Llanelli

Cyngor Sir Caerfyrddin

Cymdeithas Canŵwyr Cymru

Cymdeithas Enweirio Rhydaman a'r Cylch

Cymdeithas Gŵyr

Cymdeithas y Cerddwyr

Fforwm Môr Gŵyr a Bae Abertawe

Y Gymdeithas Frenhinol er Gwarchod Adar

Menter Coedwigaeth

Pwyllgor Pysgodfeydd Môr De Cymru

Sefydliad y Coedwigwyr Siartredig

Y Swyddfa Gymreig (Adain yr Amgylchedd)

Tarmac Quarry Products

Ymddiriedolaeth Archaeolegol Dyfed

Ymgyrch Diogelu Cymru Wledig

Mae papur byr, 'Datganiad yr Ymgynghoriad Cyhoeddus', wedi'i gynnwys gyda'r cynllun hwn, yn rhoi manylion am y rhai a ymatebodd i'r adroddiad ymgynghorol, crynodeb o'u sylwadau, a sut y bu inni eu hymgorffori yn y cynllun hwn.

GOLWG GYFFREDINOL AR DDALGYLCH LLŴCHWR A GOGLEDD GŴYR

CYFFREDINOL

Mae Afon Llŵchwr a'i hisafonydd uchaf yn draenio uwchdiroedd anghysbell y Mynydd Du yng ngogledd-ddwyrain y dalgylch. Rhed yr afon i gyfeiriad y de-orllewin, gan ymdroelli drwy ei gorlifdir llydan ac yna llifo i mewn i Aber Llŵchwr a moryd Porth Tywyn. Natur wledig sydd i'r dalgylch yn bennaf, ond mae amrediad eang o ddiwydiannau'n bresennol. Fel gyda

chymoedd eraill y De, cafodd y diwydiant glo effaith fawr ar yr amgylchedd, ac mae'n dal i gael.

At ddibenion y CRhD hwn, cyfeiria'r term 'dalgyrch' at ddalgyrchodd Afon Llŵchwr ac afonydd llai Gogledd Gŵyr oni nodir yn wahanol. Mae nentydd De Gŵyr wedi'u cynnwys yng Nghynllun Gweithredu CRhD Tawe a De Gŵyr a gyhoeddwyd ym mis Ebrill 1995.

Mae traffordd yr M4, rhan o Ewroffordd sy'n cysylltu Llundain ag Abergwaun, yn croesi'r dalgylch cyn dod i ben ym Mhont Abraham lle'r ymuna â'r A48, sy'n gadael y dalgylch i'r gogledd o Cross Hands. Ym Mhont Abraham hefyd aiff yr A483 i fyny'r cwm tua Rhydaman a Llandybïe, ac unir Rhydaman a Glanamau gan yr A474. Mae'r A484 yn cysylltu Porth Tywyn a Llanelli, ac yn croesi Aber Llŵchwr i gyrraedd Gorseinion. Yr A476 yw'r brif ffordd rhwng Cross Hands a Llanelli.

Y prif gyswllt rheilffordd yw hwnnw o Abertawe i Abergwaun, sy'n galw yn Nhre-gŵyr, Llanelli a Phorth Tywyn. Yn Llanelli rhed y lein hon tua'r gogledd-ddwyrain i fyny'r cwm, gyda gorsafoedd ym Mynea, Llangennech, Pontarddulais, Pantyffynnon, Rhydaman a Llandybïe.

Ceir gweithgaredd amaethyddol ledled y dalgylch er, ar y cyfan, mae'r unedau godro mwy i'w cael yng ngorllewin y dalgylch ac yng ngogledd Gŵyr, a ffermydd da byw cymysg yn y dwyrain.

Mae llawer o'r boblogaeth wedi setlo o gwmpas yr aber, yn enwedig yn Llanelli, Porth Tywyn a Gorseinion, gyda threfi eraill wedi'u lleoli i fyny'r cwm ym Mhontarddulais a Rhydaman.

Mae'r dalgylch ar hyn o bryd yn gartref i amrediad eang o ddiwydiant, gyda stadau diwydiannol newydd mawr yn Cross Hands, Capel Hendre a Fforestfach. Mae gweithgaredd diwydiannol y gorffennol wedi gadael llygredd yn y tir, yn enwedig o gwmpas Llanelli. Ceir llawer o lofeydd a gweithfeydd prosesu cysylltiedig hefyd, gyda nifer o byllau, safleoedd glo brig a golchfeydd glo'n bresennol ledled y dalgylch.

AMDDIFFYN RHAG LLIFOGYDD

Mae'r dalgylch yn cynnwys ardaloedd o orlifdir, yn orlifdir llanw ac afon, lle bu datblygiad helaeth. Mae perygl llifogydd yn yr ardaloedd hyn i gyd, ac mae gan rai hanes o lifogydd helaeth. Yn yr ardaloedd hyn y mae'n diddordeb pennaf ni o safbwynt amddiffyn rhag llifogydd, ac anelwn at ddarparu a chynnal safonau priodol o warchodaeth rhag llifogydd.

Mae a wnelo'n gweithgareddau atal llifogydd ar y cyfan â chynnal cynhwysedd y sianel, drwy garthu a thynnu gro a rhwystrau eraill o'r sianel, a chynnal amddiffynfeydd llifogydd presennol a'u gwarchod rhag erydu. Bydd y gweithgareddau hyn yn parhau, er y cânt eu hadolygu'n rheolaidd i sicrhau gwasanaeth cost-effeithiol. Bob blwyddyn fe wariwn tua £100,000 ar y gwaith cynnal

hwn yn y dalgylch.

Gwyddys fod safonau'r warchodaeth rhag llifogydd yn Halfway, Pontarddulais a'r Hendy yn is na'r safon briodol ar gyfer tir preswyl. Mae astudiaethau wedi cadarnhau fod gwelliannau yn bosib ac yn gost-effeithiol, ac mae cynlluniau ar y gweill a rhaglenni cynnal priodol wedi'u gweithredu. Ceir problemau llifogydd hefyd ar sawl safle arall yn y dalgylch a bydd gwaith cynnal yn parhau yn y safleoedd hyn er mwyn cadw cynhwysedd y sianel.

Byddwn yn cyhoeddi rhybuddion rhag llifogydd ar gyfer ardaloedd lle mae perygl llifogydd o fewn y dalgylch. Er bod y rhybuddion hyn yn rhoi rhybudd ymlaen llaw am lifogydd, nid ydynt yn cydymffurfio â'r safonau targed sydd gennym. Fe adolygir y trefniadau presennol, felly, er mwyn penderfynu a ellir gwneud gwelliannau.

ANSAWDD Y DŴR

Mae ansawdd y dŵr yn y dalgylch yn gyffredinol uchel, gydag 84.5% o'r darnau afon dosbarthedig wedi'u gosod yn Nosbarthiadau A a B yn 1995, yn ôl y Cynllun Asesu Ansawdd Cyffredinol. Dynodwyd oddeutu 31km o Afon Llŵchwr a'i hisafonydd yn Ddyfroedd Eogaidd dan Gyfarwydddeb Pysgodfeydd Dŵr Croyw y GE. Dosbarthwyd yr Aber yn Ddosbarth A yn Arolwg Ansawdd Aberoedd 1995.

I'r aber yr arllwysir y rhan fwyaf o garthion o fewn y dalgylch, ac ar hyn o bryd mae'n achosi problemau llygredd ar draethau cyfagos a physgodfeydd cregyn lleol. Amherir ar ansawdd dŵr mewndirol gan orlifau anfoddhaol o'r system garthffosiaeth, yn enwedig yng Nghwm Aman, ac arllwysiadau o weithfeydd trin carthion Garnswllt a Cross Hands. Mae Dŵr Cymru'n edrych ar lawer o'r problemau llygredd carthion hyn fel rhan o'u rhaglen wariant cyfalaf am y 5-10 mlynedd nesaf. Disgwylir i'r buddsoddiad hwn fod yn fwy nag



Edrych i'r de tua'r môr

£20 miliwn, a dylai olygu gwelliant mawr yn ansawdd y dŵr o fewn y dalgylch.

Mae'r dalgylch yn cynnwys amrediad eang o ddiwydiant, gydag arllwysiadau arwyddocaol yn BSC Trostre a Calsonic (Llanelli Radiators) Cyf. Mae'r etifeddiaeth o dir halogedig o fewn y dalgylch yn peri peryglon arbennig i ansawdd dŵr. At hynny, mae'r diwydiannau cloddio a phrosesu glo'n codi problemau ansawdd dŵr a cheir nifer o arllwysiadau dŵr o hen byllau glo yn y dalgylch. Mae'r stadau diwydiannol newydd a phresennol yn peryglu ansawdd dyfroedd wyneb trwy halogi draeniau dŵr wyneb.

Gall gweithgaredd amaethyddol weithiau achosi problemau ansawdd dŵr, a nodwyd bod arllwysiadau elifant o ffermydd yn achosi llygredd mewn cyrsiau dŵr.

ADNODDAU DŴR

Mae'r cyfartaledd glawiad blyneddol yn y dalgylch yn amrywio o 1120mm ar yr arfordir i'r gorllewin o Lanelli, i oddeutu 1200mm ar arfordir Gogledd Gŵyr a hyd at 2400mm ar y Mynydd Du ym mhen mwyaf gogleddol y dalgylch. Mae cyfartaledd y dalgylch, sef 1500mm, ychydig yn uwch na chyfartaledd Rhanbarth Cymru, sef 1310mm, a dwy ran o dair yn uwch na chyfartaledd Cymru a Lloegr, sef 909mm. Llŵchwr yw prif afon y dalgylch. Mae'n disgyn yn serth yn ei rhannau uchaf ac felly'n ymateb yn gyflym i law trwm. Mae'r nodwedd fflachiog hon yn ffactor llawer pwysicach na chyfraniad dŵr daear i system y llif.

Haenau Carbonifferaidd yw daeareg y dalgylch yn bennaf, sef Tywodfaen Pennant a Grut Melinfaen gan mwyaf. Mae'r gweddill yn perthyn i'r Cystradau Glo Isaf. Rhydd yr haenau hyn ddŵr mewn meintiau y gellir eu defnyddio, fel a welir yn ôl y nifer fawr o dreidd-dyllau a ddatblygwyd ar gyfer defnydd amaethyddol. Mae band o Galchfaen Carbonifferaidd o dan y Grut



Yr afon llŵchwr ger ei ffynhonnell



Y ddysfrgwn

Melinfaen tua'r gogledd yn darparu'r llif yn Llygad Llŵchwr, sy'n ffynhonnell bwysig ar gyfer y cyflenwad dŵr cyhoeddus.

PYSGODFEYDD

Mae Afon Llŵchwr wedi datblygu'n bysgodfa siwin o safon uchel er bod sawl ffactor yn cyfyngu ar y gallu i barhau i wella a datblygu'r stoc. Mae'r ffactorau hyn yn gysylltiedig i raddau helaeth â gweithgareddau dyn, gan gynnwys, er enghraifft, sianelu darnau afon yn y gorffennol gan ansefydlogi gwely'r afon a'i wneud yn lle gwael i bysgod fwrw'u grawn. Mae rhwystrau, yn rhai a wnaed gan ddyn ac yn rhai naturiol, yn llesteirio neu'n rhwystro pysgod rhag mudo i fyny'r afon. Rhwystrowyd datblygiad ymhellach wrth i niferoedd mawr o bysgod farw oherwydd lefelau ocsigen toddedig isel yn Afon Llŵchwr islaw GTC Garnswllt yn ystod cyfnodau llif isel.

Mae'r afonydd eraill o fewn y dalgylch yn bysgodfeydd brithyllod cyffredin yn bennaf, er bod yr eog a'r siwin yn mynd cyn belled ag afonydd Lliw a Llan i fwrw'u grawn.

Mae moryd Porth Tywyn a dyfroedd yr arfordir yn cynnal bysgodfa fôr fawr a phrysur iawn lle pysgotir am bysgod, draenogiaid yn bennaf, a physgod cregyn.

CADWRAETH

Mae gwarchod yr amgylchedd naturiol a hanesyddol yn bwysig iawn mewn dalgylch sydd hefyd yn cynnwys ardaloedd o ansawdd tirwedd uchel.

Ceir 31 Safle o Ddiddordeb Gwyddonol Arbennig. O'r rhain, mae cynefinoedd o fewn tri safle, sef Comin Gŵyr, Twyni Porth Tywyn a Morfa Heli Porth Tywyn ac Aber Llŵchwr, wedi'u cyflwyno'n ffurfiol i'r Comisiwn Ewropeaidd fel ymgeiswyr am statws Ardal Gadwraeth Arbennig (AGA) dan y Gyfarwydddeb Cynefinoedd (92/43/EEC). Mae Porth Tywyn ac Aber Llŵchwr hefyd wedi'i ddynodi'n safle Ramsar ac yn Ardal Warchodaeth

Y BERTHYNAS RHWNG DEFNYDD TIR A'R AMGYLCHEDD DYFROI



Gwaith trin carffwsiseth newydd Llanelli

ISADEILEDD

Carthffosiaeth a Thrin a Gwaredu Carthion: 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.

Mae Gweithfeydd Trin Carthion (GTC) yn gwasanaethu cymunedau ledled y dalgylch, gyda phedwar o'r 27 o weithfeydd yn darparu triniaeth i garthion poblogaethau mwy na 10,000. Cwblhawyd GTC newydd ym Mynea yn ddiweddar, gan gymryd lle gweithfeydd yn y Pwll, Porth Tywyn, Llanelli a Bynea. Bydd gwelliannau eraill yn ystod oes y cynllun yn golygu gwelliant mawr yn ansawdd dŵr. Mae nifer o Bibelli Gorlif Carthffos Cyfun yn y dalgylch hefyd, sydd rai ohonynt yn achosi problemau ansawdd dŵr.

Ffyrdd. Mae'n bwysig i bob gwelliant ffyrdd gael ei wneud mewn modd sy'n gydnaws â'r amgylchedd er mwyn diogelu ansawdd dŵr, y tirwedd a'r bywyd gwylt o fewn coridor yr afon, ac i sicrhau na chaiff problemau llifogydd eu creu na'u gwaethygu.

DATBLYGIAD MEWN ARDALOEDD LLE CEIR PERYGL LLIFOGYDD

Mae datblygiad ar orlifdir fel arfer mewn perygl gan lifogydd. Yn rhinwedd ein statws fel corff y mae'n rhaid ymgynghori ag ef yn y broses gynllunio, rhaid i ni gynghori'r awdurdodau cynllunio lleol, yn unol â chylchlythyr y Swyddfa Gymreig 68/92, am beryglon llifogydd. Mae'r Asiantaeth yn dal i gynnal arolygon mawr, a ddechreuwyd ym 1995, o bob dalgylch afon, fesul cam a gyda 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 a bydd yn canolbwyntio i ddechrau 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. Mae'r Llywodraeth yn disgwyl i Awdurdodau Lleol arwain datblygiad i ffwrdd oddi wrth y gorlifdir, lle bynnag y bo modd. Lle nad yw hyn yn bosib yna dylid darparu amddiffynfeydd rhag llifogydd neu weithfeydd lliniaru fel rhan o'r cynnig datblygu. Lle mae angen gwaith lliniaru, bydd yn ddisgwyliedig i'r datblygwr ymchwilio i'r perygl llifogydd, a chynllunio ac adeiladu'r gwaith lliniaru angenrheidiol fel rhan o'r cais/caniatâd cynllunio. Rhaid i'r gwaith yma gael ei wneud mewn modd sy'n amgylcheddol dderbyniol.

Oherwydd y trafodaethau hir a chymhleth a all ddilyn, dylai datblygwyr ymgynghori â ni cyn gwneud cais.

Mae amllder y llifogydd wedi golygu na fu modd datblygu llawer ar orlifdir Lluchwr isaf, ar wahân i ffyrdd, rheilffyrdd a gwasanaethau. Ymhellach i fyny'r afon, ac ar hyd y prif isafonydd, mae datblygiad wedi ymledu i'r gorlifdir ac mae perygl iddo ddioddef llifogydd. Mae safleoedd o'r fath yn cynnwys Llandybie, Rhydaman, Brynaman, Penybanc, Fforestfach, Cheriton, Pontlliw, Garnswllt a Gweunydd Llwyn Hendy. Yng Nglan Marlais ac ar Nant Gors Fawr, gwneir y problem yn waeth am fod datblygiad trefol yn cyrraedd glan yr afon, gan ei gwneud hi'n anodd ac yn gostus mynd at y cwrs dŵr i wneud gwaith cynnal a chadw.

Cafwyd llifogydd mawr yn y gorffennol ym Mhontarddulais, Halfway a Ffwrnais, ac elwodd y lleoliadau hyn o waith gwella i godi lefel yr amddiffynfeydd llifogydd. Mae datblygiad helaeth wedi digwydd ar orlifdir yr arfordir, yn enwedig ar lan ogleddol y foryd, ac mae perygl llifogydd yno. Adeiladwyd amddiffynfeydd yn yr Hendy, Machynys/Llwyn Hendy, Llangennech a Chrofty, ond credir bod y rhai yng Nghrofty yn is na'r safon sy'n darged gennym ac maent yn cael eu hadolygu.

TIR HALOGEDIG

Mae gan yr Asiantaeth rôl ddeublyg yng nghyswllt tir halogedig. Yn gyntaf, bydd yn gyfrifol am nodi safleoedd a ddynodir yn 'Safleoedd Arbennig', a sicrhau eu hadferiad drwy weithredu gorfodaeth. Yn ail, bydd yr Asiantaeth yn gorff i ymgynghori ag ef yn ystod ailddatblygu tir halogedig. Ar hyn o bryd nid yw manylion y fframwaith deddfwriaethol ar dir halogedig dan Ddeddf yr Amgylchedd 1995 wedi'u llunio. Bydd yr Asiantaeth yn rhoi arweiniad i'r Awdurdodau Unedol i'w helpu hwy yn eu rôl bwysig o nodi pob tir halogedig yn eu hardal, ac yn cynnig cymorth gyda safleoedd penodol.

Wrth hyrwyddo cynlluniau ailddatblygu, mae angen i ddatblygwyr gofio sut y defnyddiwyd safleoedd yn y gorffennol, e.e. hen waith nwy. Mae gweithgarwch diwydiannol yn y gorffennol wedi gadael etifeddiaeth o dir halogedig, yn enwedig yn ardal Llanelli. Gallai unrhyw aflonyddu ar safleoedd o'r fath effeithio ar ansawdd dŵr. Cyfrifoldeb y datblygwr bob amser yw asesu'r problem a gwneud gwaith adfer priodol, mewn ymgynghoriad agos â'r Asiantaeth.

DŴR DAEAR

Mae cadw ansawdd a maint dŵr daear yn brif amcan

gennym ni. Cyhoeddodd yr hen AAC ddogfen "Polisi ac Ymarfer ar gyfer Gwarchod Dŵr Daear", sy'n rhoi cyngor ar reoli a gwarchod dŵr daear ar sail gynladwy. Bydd yr Asiantaeth yn dal i ddefnyddio'r ddogfen hon am arweiniad. Mae'r polisi hwn yn delio â chysyniad breguster a pherygl i ddŵr daear oddi wrth amrediad o weithgareddau dyn.

Mae Dŵr Cymru'n tynnu dŵr o Lygad Lluchwr, tarddiad afon Lluchwr. Sefydlwyd cylchfa warchod dŵr daear o gwmpas y ffynhonnell yma er mwyn gwarchod ansawdd y dŵr daear. Caiff dŵr i'w botelu ei dynnu o dreidd-dwll yn agos at Lygad Lluchwr, a cheir dwy ffynhonnell arall ar gyfer dŵr potel ar Ogledd Gŵyr.

Disgwyliwn 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

Gall datblygiad o fewn coridorau afonydd gael effaith arwyddocaol ar y coridorau hynny drwy leihau maint ac amrywiaeth cynefinoedd, gan gyfyngu ar fynediad at yr afon i ddibenion hamdden ac weithiau gan gynorthwyo ymlediad rhywogaethau chwyn ymwithiol. Mae angen gwaith cynnal rheolaidd ar gynlluniau atal llifogydd sy'n bodoli eisoes i warchod datblygiad o'r fath rhag llifogydd, ac ar adeileddau eraill yn sianel yr afon. Mae gweithgarwch o'r fath yn aml yn aflonyddu ar goridor yr afon, er mai dim ond dros dro, a gall weithiau gael effaith fwy hirdymor. Felly ceir rheolaeth ofalus ar weithfeydd atal llifogydd er mwyn lleihau'r effeithiau hyn.

Lleiniau Clustogi. Mae coridorau afonydd yn darparu dolenni cyswllt pwysig rhwng cynefinoedd ac fe'u defnyddir yn helaeth gan fywyd gwyllt. Hoffem weld creu lleiniau clustogi ar hyd pob cwrs dŵr, mewn ardaloedd gwledig a threfol fel ei gilydd, i helpu i warchod yr amgylchedd dyfrol rhag effaith gweithgareddau a allai fod yn niweidiol ar dir cyfagos, ac

i ganiattu mynediad at y cwrs dŵr i ddibenion rheoli afon. Byddai'n rhaid ffensiō'r lleiniau hyn lle byddai da byw'n bresennol, er mwyn osgoi difrod i lannau afonydd a allai arwain at ansadrydd yn y sianel, mwy o berygl llifogydd a lleihad mewn gwerth pysgodfaol a chadwraethol.

Cwlfertydd, Dargyfeirio Afonydd a Thiroedd

Gwlyb. I adeiladu cwlfertydd i gyfeirio a chludo cyrsiau dŵr, mae'n rhaid cael cydsyniad gan yr Asiantaeth. Er bod gosod cwlfertydd, o faint addas, ar gyfer croesfannau afon bychain yn arferiad derbyniol ar y cyfan, nid ydym yn cefnogi defnydd eang o gwlfertydd i alluogi newid defnydd tir - byddai hyn yn groes i'n dyletswyddau cadwraethol. Er enghraifft, 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, byddem fel arfer yn gwrthwynebu arallgyfeirio cyrsiau dŵr sefydledig er mwyn caniatáu datblygiad, a hoffem i'r cwrs dŵr naturiol gwreiddiol gael ei gadw fel nodwedd arbennig, lle bynnag y bo hynny'n bosib.

AMAETHYDDIAETH

Ceir llawer o weithgaredd amaethyddol ledled y dalgylch. Yn gyffredinol, ceir yr unedau godro mwy i'r gorllewin ac ar Ogledd Gŵyr, gyda ffermio da byw cymysg tua'r dwyrain. Mae dwy fferm bysgod yn y dalgylch hefyd.

Mae'r diffyg buddsoddi digonol mewn cyfleusterau rheoli elifant weithiau'n achosi problemau. Gosododd Rheoliadau Rheoli Llygredd (Silwair, Slyri ac Olew Tanwydd Amaethyddol) 1991 safonau isaf ar gyfer adeiladu systemau newydd neu rai wedi'u haltro'n sylweddol. Byddwn yn defnyddio'r rheoliadau hyn, a'n cysylltiadau hir-sefydledig â chymdeithasau'r ffermwyr, i sicrhau atebion mwy effeithiol, hirdymor.

Gyda rhybudd ymlaen llaw, ac os gellir dangos y bydd o fudd amaethyddol a/neu ecolegol i'r tir, gellir taenu gwastraffau o ffynonellau carthion a diwydiannol ar dir ffermio. Bydd y gwastraffau hyn wedyn yn gymwys i'w heithrio o'r angen am drwydded dan reoliadau Trwyddedu Rheolaeth Gwastraff 1994. Caiff slwj carthion o weithfeydd trin carthion cyhoeddus ei daenu ar dir hefyd dan Reoliadau Slwj (Defnydd mewn Amaethyddiaeth) 1989 (fel y'u diwygiwyd).

Mae angen cadw llygad a rheolaeth ofalus ar y gweithgareddau hyn, a bydd yr Asiantaeth yn cydweithio'n agos gyda'r Cwmnïau Dŵr a Chontractwyr Gwaredu Gwastraff er mwyn sicrhau y dilyniar yr arferion gorau er mwyn atal llygredd i'r dŵr. Mae'r Asiantaeth



Rhan isaf ymdroellog o'r lluchwr

wrthi hefyd yn llunio dogfen ar y cyd â Chymdeithas Genedlaethol y Swyddogion Rheoleiddio Gwastraff i roi arweiniad pellach ar gyfrifoldebau mewn gweithgareddau gwaredu slwj.

Coedwigaeth. Gall plannu a thorri coed effeithio ar yr amgylchedd dyfrol os na chaiff ei reoli'n ofalus. Byddwn yn rhoi sylwadau ar gynigion ar gyfer y dyfodol a dderbyniwn oddi wrth yr Awdurdod Coedwigaeth a'r Cynghorau Sir er mwyn helpu i leihau unrhyw niwed posib. Materion sy'n peri pryder arbennig i ni yw'r perygl i ansawdd dŵr, newid cyfraddau dŵr ffo ar yr wyneb, gwarchod cynefinoedd naturiol y glannau, a sefydlu croesfannau anaddas. Cefnogwn argymhellion y 'Canllawiau ar Goedwigoedd a Dŵr' a gyhoeddwyd gan yr Awdurdod Coedwigaeth, sy'n pennu safonau ar gyfer yr arfer gorau gyda'r nod o leihau effaith rheolaeth coedwigoedd ar yr amgylchedd dyfrol i'r eithaf. Fodd bynnag, dim ond ychydig o

MATERION A CHYNLLUNIAU GWEITHGAREDD

Mae'r adran ganlynol yn amlinellu'r ffyrdd y cytunwyd i weithredu i fynd i'r afael â'r problemau a enwyd yn Adroddiad Ymgynghorol Cynllun Rheoli Dalgylch (CRhD) Llwhchwyr a Gogledd 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/buddsoddiad wedi cytuno, y cynhwysir y gweithredu yn y tabl fel arfer. Lle bo cyfyngiadau ar y dull gweithredu neu lle nas cymeradwywyd eto, gwneir hynny'n glir yn y Cynllun Gweithgaredd.

Mae'r Cynllun Gweithredu'n anelu'n bennaf at y cyfnod pum mlynedd wedi cyhoeddi'r Adroddiad Ymgynghorol, h.y. hyd ddiwedd 2000. 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 o'r cynllun yn y dyfodol.

Yn yr Adroddiad Ymgynghorol, enwyd 46 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. Lluniwyd 'Datganiad Ymgynghoriad Cyhoeddus' sy'n crynhoi'r holl sylwadau a dderbyniwyd, a'n hymatebion ni. Caiff hwn ei gynnwys gyda'r cynllun yma.

blanigfeydd sydd o fewn y dalgylch ac ni ragwelir unrhyw faterion ansawdd dŵr yn codi o reolaeth y planigfeydd hyn o fewn oes y cynllun hwn.

Hoffem weld cyfyngu ar ddatblygu fforestydd conwydd newydd mewn ardaloedd asid-sensitif a hyrwyddo coedlannau cymysg neu gollddail mewn lleiniau clustogi.

MORGLODDIAU, MARINAS A CHORED AU 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 algaid gwenwynig ac arogleuon) a rhwystr i symudiadau pysgod mudol. Gan fod problemau'r dyfodol i ddatblygiadau o'r fath yn aml yn anodd eu rhagweld, disgwyliwn i'r awdurdodau cynllunio arfer ymagwedd ragofalus eithaf cryf wrth ystyried unrhyw gynigion newydd.

Cadwyd pob un o'r 46 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 sgîl ail-archwilio data ansawdd dŵr. Cadwyd y system rifo Materion o'r Adroddiad Ymgynghorol yn y Cynllun Gweithredu hwn i hwyluso'r gwaith o gyfeirio atynt, ond gwelwyd ei bod yn gwneud synnwyr cyfuno materion 1, 6 a 10, 3 ac 17, a 12 a 13 wrth drafod yr anghenion gweithredu. Ychwanegwyd pum mater newydd yn ystod y cyfnod ymgynghori, sef Materion 47 i 51.

O fewn colofn gostau'r Cynlluniau Gweithgaredd, cymerwyd gofal i nodi i bwy y daw'r costau a ragwelir. Lle mai cyfrifoldeb unigol sydd, telir y costau gan y sefydliad/corff hwnnw. Lle rhennir cyfrifoldeb (prif neu arall), ond mai dim ond costau cyfraniad Asiantaeth yr Amgylchedd at y gweithredu sy'n hysbys, eglurir hynny drwy nodi "costau'r Asiantaeth". Lle bo'r cyfrifoldeb wedi'i rannu ond mai dim ond un sefydliad/corff fydd yn talu unrhyw gostau, dangosir hyn drwy nodi e.e. "costau'r Asiantaeth yn unig".

mae "##" yn ymddangos nesaf at weithrediad, mae'r gweithredu hwnnw wedi'i gwblhau.

Mae llinellau cyfan () yn y tablau'n diffinio anghenion gweithredu y disgwyli'r eu cwblhau yn ystod oes y cynllun. Mae llinellau pen saeth (➔) yn diffinio anghenion gweithredu sydd naill ai'n barhaus flwyddyn ar ôl blwyddyn, neu na fydd wedi'u cwblhau o fewn oes y cynllun.

Defnyddiwyd y byrfoddau a ganlyn yn y prif destun a'r tablau:

AA	Asiantaeth yr Amgylchedd	GPLI	Grŵp Pysgodfeydd Lleol
ACorA	Arolwg Coridor Afon	GTC	Gwaith Trin Carthion
ACynA	Arolwg Cynefin Afon	km	cilometr
ACLI	Awdurdod Cynllunio Lleol	m	miliwn
ACM	Awdurdod Cynllunio Mwynau	MI/d	Megalitr y dydd
ADC	Awdurdod Datblygu Cymru	PGCC	Pibell Gorlif Carthffos Cyfun
AG	Yr Awdurdod Glo	PPMDC	Pwyllgor Pysgodfeydd Môr De Cymru
AGA	Ardal Gadwraeth Arbennig	RSPB	Y Gymdeithas Frenhinol er Gwarchod Adar
ALI	Awdurdod Lleol	SDdGA	Safle o Ddiddordeb Gwyddonol Arbennig
CAALI	Cynllun Asiantaeth Amgylchedd Lleol	TAATH	Targed Ansawdd Afon Tymor Hir
CC	Cyngor Cymuned	UFM	Uned Fusnes Mewnol
CCG	Y Cyngor Cefn Gwlad	USO	Uwchlaw'r Seilnod Ordnans
CCC	Cymdeithas Canwio Cymru	WAPB	Y Weinyddiaeth Amaeth, Pysgodfeydd a Bwyd
CE	Cymuned Ewrop	YAD	Ymddiriedolaeth Archaeolegol Dyfed
CSC	Cyngor Sir Caerfyrddin	YAGTG	Ymddiriedolaeth Adar Gwyllt a Thiroedd Gwlyb
CRhA	Cynllun Rheoli Asedau	YAMG	Ymddiriedolaeth Archaeolegol Morgannwg Gwent
CRhD	Cynllun Rheoli Dalgylch	YBGD	Ymddiriedolaeth Bywyd Gwyllt Dyfed
CyC	Cymdeithas y Cerddwyr	YBGM	Ymddiriedolaeth Bywyd Gwyllt Morgannwg
DC	Dŵr Cymru Welsh Water	yf	y flwyddyn
DSA	Dinas a Sir Abertawe		
DYNg	Dyfrgwn yng Nghymru		
EA	Ecosystem Afon		
GBO	Galw Biocemegol am Ocsigen		
GE	y Gymuned Ewropeaidd		

MATERION AC ANGHENION GWEITHREDU LLWCHWR A GOGLEDD GWYR

MATERION 1, 6 a 10

Mae gan y Garnant, yn union uwchlaw'r cymer ag Afon Aman, ac Afon Lluchwr, rhwng cymer Afon Aman a Nant Fferws ym Mhantyffynnon, grynodiadau GBO rhy uchel sy'n achosi methiant o drwch blewyn i gyrraedd Dosbarth EA 1. Hefyd, mae gan Afon Aman ansawdd biolegol gwael islaw pont ffordd Ysbyty Glanamau.

GWEITHREDU	CYFRIFOLDEB		COST £	1996	1997	1998	1999	2000	DYFODOL
	PRIF	ARALL							
a) Ymgymryd â modelu hydrolog llawn o system garthffosiaeth Lluchwr/Aman ac asesu perfformiad PGCC yn erbyn gofynion yr Asiantaeth.	DC		80,000						
b) Yn dibynnu ar a), gwneud gwelliannau i'r PGCC hynny a nodwyd fel rhai sy'n achosi methu targedau.	DC		1.1m						
c) Gwneud gwelliannau i BGCC eraill fel rhan o raglen gyfalaf DC i gyrraedd y safonau gofynnol, ar yr amod fod cyllid ar gael.	DC		3.0m						Erbyn 2005
ch) Gwneud arolwg i asesu gwelliannau mewn ansawdd dŵr o ganlyniad i'r gwelliannau uchod	AA		1,500						

MATER 2

Mae gan Nant Fferws, uwchlaw'r cymer ag Afon Lluchwr, grynodiadau cyfanswm amonia rhy uchel sy'n achosi iddi fethu cyrraedd Dosbarth EA 1.

a) Cwblhau cynllun gwella mawr ar system garthffosiaeth Capel Hendre, i leihau nifer y PGCC o dair i un, a rhoi'r gorau i'r gorsafoedd pwmpio carthion problemus yn y Wernos.	DC		1.5m						
b) Gwneud arolwg i gadarnhau fod PGCC sy'n arllwys i Nant Fferws yn gweithio'n unol â'u cynllun.	AA		1,500						

MATER 3 ac 17

Mae gan Afon Lluchwr, islaw GTC Garnswllt i lawr at bont ffordd Pontarddulais, grynodiadau rhy uchel o gyfanswm amonia ac amonia anïonedig, gan achosi methiant i gyrraedd Dosbarth EA 2. Mae crynodiadau rhy uchel o faethynnau yn yr arllwysiad, sy'n achosi gordyfiant algaidd i lawr yr afon. Mae'r twf yma dan rai amodau'n arwain at lefelau ocsigen toddedig isel, sydd pan gysylltir hwy ag amonia uchel, llif isel a thymheredd uchel, wedi achosi marwolaethau pysgod mewn blynyddoedd diweddar.

a) Cwblhau gwaith gwella yn GTC Garnswllt, fel rhan o raglen CRhA2.	DC	AA	2.2m (costau DC)						
b) Adolygu cydsyniad arllwys GTC Garnswllt i gynnwys amodau "gwarchodol i'r amgylchedd" fel y gellir cyrraedd targed Dosbarth EA 2.	AA		1,000						
c) Adolygu data monitro maethynnau ac asesu a yw'r afon yn cwrdd â'r gofynion ar gyfer ei dynodi'n "Ddŵr Sensitif" dan Gyfarwydddeb Trin Dŵr Gwastraff Trefol (TDGT).	AA		1,000						
ch) Os dynodir, gweithredu camau gwella priodol yn y GTC i sicrhau lleihad yn y maethynnau yn unol â Chyfarwydddeb TDGT.	DC	AA	Anhysbys						Erbyn 2004
d) Gweithredu rhaglen fonitro i asesu effaith yr arllwysiad ar ôl cwblhau'r gwaith gwella.	DC	AA	10,000						

MATERION AC ANGHENION GWEITHREDU LLWCHWR A GOGLEDD GŴYR

MATER 4

Mae gan ran uchaf Afon Gwili yn Cross Hands grynodiadau rhy isel o ocsigen toddedig a lefelau rhy uchel o GBO, cyfanswm amonia ac amonia anāonedig, gan achosi methiant i gyrraedd Dosbarth EA 2.

GWEITHREDU	CYFRIFOLDEB		COST £	1996	1997	1998	1999	2000	DYFODOL
	PRIF	ARALL							
a) Symud arllwysfa derfynol yr elifiant o GTC Cross Hands i fan lle mae mwy o lastwreiddiad ar gael. (#)	DC		200,000						
b) Gwneud gwaith gwella mawr yng NgTC Cross Hands fel rhan o raglen CRhA2	DC	AA	1.3m (costau DC)						
c) Adolygu cydsyniad arllwys GTC Cross Hands i amodau "gwarchodol i'r amgylchedd".	AA		1,000						
ch) Dal i osod amodau "Grampian*" drwy'r broses ymgynghori cynllunio, i gyfyngu ar lwytho'r GTC, hyd nes bydd gwaith gwella mawr wedi'i gwblhau.	AA, ACLI		<1,000						

MATER 5

Mae gan ran isaf Afon Dafen grynodiadau rhy uchel o gopr toddedig a chyfanswm zinc. Mae'r rhain wedi achosi i'r afon fethu cyrraedd TAATH Dosbarth EA 3, targedau interim a Chyfarwydddeb Sylweddau Peryglus y GE.

a) Asesu ymarferoldeb arllwys yr elifiant masnach o Calsonic (Llanelli Radiators) Cyf i'r garthffos aflan. Cynnwys mesurau i leihau'r maint o elifiant a gynhyrchir gymaint ag y bo modd.	Calsonic	AA	15,000						
b) Cynnig dulliau i leihau'r metelau sy'n bresennol yn yr arllwysiad elifiant o Calsonic (Llanelli Radiators) Cyf. Cynnwys adolygiad o systemau trin elifiant ategol ac asesu eu haddasrwydd.	Calsonic	AA	15,000 (costau Calsonic)						
c) Lleihau crynodiadau metelau yn yr arllwysiadau o Calsonic (Llanelli Radiators) Cyf. Cyfuno hyn â chyflwyno, yn raddol, ddefnyddiau newydd/gwahanol i'w defnyddio wrth gynhyrchu.	Calsonic		50,000						
ch) Parhau i fonitro lefelau metelau yn afon Dafen ac asesu cydymffurfiaid â'r targedau.	AA		1.500 yf						Parhaus

* Ar ôl ymgynghori gyda'r ACLI, mae'r Asiantaeth yn gofyn am i amod gael ei gynnwys mewn unrhyw ganiatâd cynllunio a roddir gan yr ACLI, a fydd yn gohirio adeiladu/meddiannu datblygiad hyd nes bydd gwelliannau carthffosiaeth/GTC wedi'u cytuno/cwblhau gan y corff perthnasol (DC fel rheol os mai carthffosydd/GTC cyhoeddus sydd dan sylw).

MATERION AC ANGHENION GWEITHREDU LLWCHWR A GOGLEDD GWYR

MATER 7 Mae gan Afon Lash, i fyny'r afon o'i chymer ag Afon Lluchwr, grynodiadau amonia rhy uchel, sy'n achosi iddi fethu cyrraedd Dosbarth EA 1. Mae gan y darn hwn ansawdd biolegol gwael hefyd.

GWEITHREDU	CYFRIFOLDEB		COST £	1996	1997	1998	1999	2000	DYFODOL
	PRIF	ARALL							
a) Effaith GTC Blaenau / Penygroes:									
i) Canfod yn union faint o effaith y mae arllwysiad GTC Blaenau / Penygroes yn ei chael	AA	DC	1,500						
ii) Pennu'r gofynion ar gyfer gwelliannau a'u rhoi mewn trefn flaenoriaeth i'w cynnwys yn rhaglen gyfalaf DC wedi 2000.	AA	DC	Anhysbys						Erbyn 2005
iii) Gweithredu ateb tymor hir ar gyfer y GTC yn unol â blaenoriaethau rhaglen gyfalaf DC.	DC		Anhysbys						Wedi 2000
iv) Asesu a gweithredu unrhyw welliannau tymor byr posib i leihau'r effaith.	DC		Anhysbys						
v) Defnyddio amodau "Grampian" yn y broses ymgynghori cynllunio er mwyn cyfyngu'r llwytho ar weithfeydd.	AA	ACLI	<1,000						Nes bo'r gwaith wedi gwella
b) Effaith arllwysiadau rhydlyd ar yr afon:									
i) Os oes cyllid ar gael, gwneud asesiad amgylcheddol llawn o'r dalgylch, gan nodi pob ffynhonnell arllwysiadau rhydlyd ac argymell camau i adfer y sefyllfa.	AA		30,000						
ii) Yn dibynnu ar yr uchod, gweithredu camau adfer fel y bo'n briodol.	AA	AG, Perchenogion safleoedd	Anhysbys						

MATER 8 Mae gan Afon Marlais, uwchlaw ei chymer ag Afon Lluchwr, grynodiadau amonia rhy uchel, sy'n achosi iddi fethu cyrraedd Dosbarth EA 1. Mae ansawdd biolegol gwael yn y darn yma hefyd.

a) Ailasesu statws yr afon gan ddefnyddio data monitro diweddar ac, os cadarnheir y broblem, cychwyn arolwg i ganfod o ble y mae'n deillio.	AA		2,500						
b) Cychwyn y gwaith adferol angenrheidiol gyda'r arllwyswyr/ tirfeddianwyr fel y bo'n briodol.	AA	Arllwyswyr Perchnogion Tir	1,500 (costau AA)						

MATER 9 Mae'r tyniadau dŵr yfed o Gronfa Lliw Isaf wedi methu cwrdd â Safonau Cyfarwydddeb Dŵr Wyneb y GE o ran hydrocarbonau a chromiwm.

Nid ystyrir fod hwn yn Fater bellach gan na chanfuwyd unrhyw lefelau uchel wrth samlo ym 1995 a 1996.

MATER 11 Ansawdd biolegol gwael Afon Lluchwr uwchlaw'r cymer ag Afon Marlais, dan Bont Ffordd Bonllwyn yn Rhydaman.

a) Ailasesu'r data biolegol yn y lleoliad yma, ac os cadarnheir problem, canfod beth yw maint a tharddiad yr arllwysiad(au) sy'n achosi'r effaith.	AA		1,500						
b) Cychwyn unrhyw gamau adfer sy'n angenrheidiol gyda'r arllwyswyr ayyb.	AA	Anhysbys ar hyn o bryd	Anhysbys						

MATERION AC ANGHENION GWEITHREDU LLWCHWR A GOGLEDD GŴYR

MATERION 12 a 13 Ansawdd biolegol gwael yn rhannau canol ac isaf Afon Llan, rhwng Cadle a Thre-gŵyr.

GWEITHREDU	CYFRIFOLDEB		COST £	1996	1997	1998	1999	2000	DYFODOL
	PRIF	ARALL							
a) Ymchwilio i achosion y broblem, sef efallai arllwysiadau o BGCC a draeniad safleoedd diwydiannol, yn cynnwys hwnnw o Stad Ddiwydiannol Fforestfach.	AA		5,000						
b) Casglu gwybodaeth am weithrediad PGCC i ganiatáu blaenoriaethu gwaith adfer yn rhaglen gyfalaf DC wedi 2000.	AA	DC	3,500 (costau AA)						
c) Gwneud gwelliannau i PGCC yn unol â blaenoriaethau rhaglen gyfalaf DC.	DC		Anhysbys						Wedi 2000
ch) Asesu a gweithredu unrhyw welliannau tymor byr posib i leihau'r effaith.	DC		Anhysbys						
d) Ymgymryd â rhaglen o archwiliadau safle yn Stad Ddiwydiannol Fforestfach a safleoedd diwydiannol lleol eraill i ganfod ffynonellau llygredd.	AA	Perchnogion Meddianwyr Safleoedd	2,000 yf (costau AA)						Parhaus
dd) Cwblhau camau adfer mewn safleoedd diwydiannol i leihau digwyddiadau llygredd a gwella ansawdd dŵr.	Perchnogion Meddianwyr Safleoedd	AA	Anhysbys						Parhaus

MATER 14 Mae traethau Llanelli a Phorth Tywyn yn ddyfroedd adloniannol sydd heb eu dynodi'n Ddyfroedd Ymdrochi ar hyn o bryd dan Gyfarwyddeb Dyfroedd Ymdrochi'r GE. Byddai'r traethau hyn wedi methu'r safonau a osodir yn y Gyfarwyddeb rhwng 1992 a 1996, petasai'r traethau wedi'u dynodi.

a) Cwblhau cynllun trin a gwaredu carthion arfordirol newydd Llanelli i drin arllwysiadau carthion o GTC Llanelli, Pwll a Phorth Tywyn (Gweler hefyd Faterion 16a a 22a) yng NgTC newydd Bynea.	DC		18.5m						
b) Parhau gyda'r rhaglen fonitro dŵr ymdrochi ar draethau Llanelli a Phorth Tywyn.	CSC		2,000 yf						Parhaus
c) Os na fydd yr ansawdd yn cyrraedd safonau'r Gyfarwyddeb, ymchwilio i'r afonydd/nentydd mewnlifol i ganfod dylanwadau eraill ar ansawdd dŵr ymdrochi.	AA	CSC	3,000						
ch) Fel y bo'n briodol, argymhell gwaith adfer i wella ansawdd dŵr ymdrochi.	AA	Anhysbys	Anhysbys						Parhaus

MATER 15 Nid yw'r traeth ym Mrychdyn wedi'i ddynodi ar hyn o bryd dan Gyfarwyddeb Dyfroedd Ymdrochi'r GE, ond fe'i defnyddir at ddibenion adloniannol. Petasai wedi'i ddynodi yn y fath fodd, ni fuasai ansawdd y dŵr ar y traeth hwn wedi cyrraedd safonau'r Gyfarwyddeb yn 1994, ond buasai wedi gwneud hynny yn 1995 a 1996.

a) Parhau i fonitro dŵr ymdrochi ar draeth Brychdyn.	DSA		1,000 yf						Parhaus
b) Os nad yw'r ansawdd yn cyrraedd safonau'r Gyfarwyddeb, ymchwilio i nentydd mewnlifol i ganfod dylanwadau lleol ar ansawdd dŵr ymdrochi.	AA	DSA	1,000						
c) Fel y bo'n briodol, argymhell gwaith adfer i wella ansawdd y dŵr ymdrochi.	AA	Anhysbys	Anhysbys						

MATERION AC ANGHENION GWEITHREDU LLWCHWR A GOGLEDD GWYR

MATER 16

Canfuwyd methiant safonau ocsigen toddedig er gwarchod pysgod eogaidd mudol wrth Bont Ffordd Lluchwr, a phroblemau gydag amonia anïonedig.

GWEITHREDU	CYFRIFOLDEB		COST £	1996	1997	1998	1999	2000	DYFODOL
	PRIF	ARALL							
a) Cwblhau cynllun trin a gwaredu carthion arfordirol newydd Llanelli i drin arllwysiadau carthion o GTC Llanelli, Pwll a Phorth Tywyn (Gweler hefyd Ffaterion 14a a 22a) yng NgTC newydd Bynea.	DC		18.5m						
b) Cynnal ansawdd arllwysiad presennol GTC Tre-gŵyr.	DC		Anhysbys						Parhaus
c) Monitor arllwysiad GTC Tre-gŵyr ac ansawdd y dŵr yn aber afon Lluchwr.	AA		2,500 yf						
ch) Yn dibynnu ar ganlyniadau (c), gweithredu nitreiddiad yng NgTC Tre-gŵyr yn unol â rhaglen CRhA2.	DC		2.5m						

MATER 18

Mae arllwysiadau dŵr wyneb halogedig o Stadau Diwydiannol yn yr ardal yn achosi digwyddiadau llygredd.

a) Cynnal ymgyrch targededig o ymweliadau safle er atal llygredd ar Stadau Diwydiannol.	AA		1,500 yf						Parhaus
b) Lle nodir problemau, trafod a chyflawni camau adfer gyda pherchenogion a deiliaid ffatrioedd.	Perchnogion / deiliaid ffatrioedd	AA	Anhysbys						Parhaus
c) Sicrhau yr ymgorfforir camau atal llygredd mewn datblygiadau yn y dyfodol drwy'r broses gyswllt cynllunio.	AA, ACLI		<1,000 yf (costau AA)						Parhaus

MATER 19

Mae dŵr o byllau glo segur yn achosi effeithiau esthetig a biolegol ac yn niweidio ansawdd y dŵr mewn sawl lleoliad o fewn y dalgylch.

a) Yn unol â blaenoriaethau a gytunwyd ar lefel genedlaethol a Rhanbarthol, cwblhau astudiaethau posibiliadau ar gyfer trin arllwysiadau o byllau glo segur yn afonydd									
i) Morlais (#)	AG	AA	20,000						
ii) Cathan.	AG	AA	20,000						
b) Gweithredu cynlluniau adfer a gynigir gan yr adroddiadau uchod wrth i adnoddau ddod i law ac yn unol â Blaenoriaethau Rhanbarthol a Chenedlaethol.	AG	AA, Llywodr Leol a Chanolog	600,000						Pan ddaw arian ar gael
c) Adolygu rhestr safle cenedlaethol fel y bo'n briodol i sicrhau y caiff unrhyw arllwysiadau ychwanegol neu newydd o byllau glo segur eu gosod yn eu trefn flaenoriaeth.	AA		Anhysbys						Parhaus
ch) Sicrhau yr ymgorfforir camau atal llygredd mewn datblygiadau yn y dyfodol drwy'r broses gyswllt cynllunio a chynhyrchu cynlluniau cau pyllau.	AA/ ACM/ ACLI		Anhysbys						Parhaus

MATERION AC ANGHENION GWEITHREDU LLWCHWR A GOGLEDD GWYR

MATER 20 Gall llygredd ddigwydd i ddŵr daear a dŵr wyneb yn ystod y gwaith o adfer hen safleoedd tir halogedig.

GWEITHREDU	CYFRIFOLDEB		COST £	1996	1997	1998	1999	2000	DYFODOL
	PRIF	ARALL							
a) Nodi'r ardalwedd hyn a sicrhau bod datblygwyr yn ymwybodol o'r peryglon a'r rhagofalon angenrheidiol i osgoi halogi dyfroedd rheoledig.	AA		1,500 yf						Parhaus
b) Sicrhau yr ymgortffortir camau atal llygredd mewn datblygiadau yn y dyfodol drwy'r broses gyswllt cynllunio.	AA, ACLI, ACM	Datblygwr	Anhysbys						Parhaus

MATER 21 Gall cyrsiau dŵr gael eu heffeithio gan arllwysadau o byllau glo, safleoedd glo brig a gweithfeydd prosesu glo.

a) Sicrhau yr ymgortffortir camau aral llygredd digonol mewn datblygiadau yn y dyfodol drwy'r broses gyswllt cynllunio.	AA, ACLI, ACM	Gweith-redwr safle	Anhysbys						Parhaus
b) Ymgynryd â rhaglen o ymweliadau i ganfod ffynonellau llygredd a sicrhau fod deiliaid yn gweithredu i adfer y sefyllfa fel y bo'n briodol.	AA, ACM	Gweith-redwr safle	Anhysbys						Parhaus
c) Rhoi ac adolygu cydsyniadau i sicrhau safonau 'gwarchodol i'r amgylchedd' a gorfodi'r terfynau hyn.	AA		Anhysbys						Parhaus

MATER 22 Mae Pwll, Machynys, Porth Tywyn a Gogledd Moryd Porth Tywyn (Gorllewin) wedi'u dosbarthu'n Ddosbarth 'D' dan Gyfarwydddeb Hyllendid Pysgod Cregyn y GE, gan wahardd cynaeafu cregyn gleision a chocos yn yr ardaloedd hyn.

a) Cwblhau cynllun trin a gwaredu carthion arfordirol newydd Llanelli i drin arllwysadau carthion o GTC Llanelli, Pwll a Phorth Tywyn (Gweler hefyd Faterion 14a a 16a) yng NgTC newydd Bynea.	DC		18.5m						
b) Parhau i fonitro lefelau bacteriol pysgod cregyn ac adolygu'r dosbarthiad os yw hynny'n briodol.	CSC, WAPB		3,300 yf						Parhaus
c) Yn dibynnu ar y canlyniadau, dileu'r gwaharddiad ar hel pysgod cregyn.	WAPB		Anhysbys						Anhysbys

MATER 23 Does dim llif digolledu wedi'i osod islaw cronfa Cwm Lliedi.

a) Gwneud astudiaeth i asesu manteision amryfal ddewisiadau digolledu llif i'r pysgodfeydd, bywyd gwyllt arall y dŵr ac ansawdd dŵr Afon Lliedi.	AA	DC	9,000 (costau AA)						
b) Ymchwilio i gostau'r dewisiadau llif digolledu a gweithredu'r ateb gorau, os yw'n gost-fanteisiol.	AA		Anhysbys						Erbyn 2010

MATER 24 Mae rhwydwaith monitro hydrometrig y dalgylch yn annigonol.

a) Gwneud adolygiad hydrometrig o'r dalgylch i asesu'r angen am ddata hydrometrig a dylunio rhwydwaith i ddarparu'r manteision gofynnol am gost resymol.	AA		5,000						
b) Gosod gwell rhwydwaith hydrometrig yn ei le, yn ôl yr anghenion a welir a'r cyllid sydd ar gael.	AA		Anhysbys						Wedi 2000

MATERION AC ANGHENION GWEITHREDU LLWCHWR A GOGLEDD GWYR

MATER 25 Mae Afon Lluchwr yn methu cwrdd â'r targed maint dŵr cyfredol, gan leihau'r gallu i lastwreiddio arllwysiadau GTC Garnswllt.

GWEITHREDU	CYFRIFOLDEB		COST £	1996	1997	1998	1999	2000	DYFODOL
	PRIF	ARALL							
Mae asesiad cychwynnol o'r dalgylch yn dangos na fyddai digon o fudd yn deillio o gyfyngu ar y dŵr a dynnir ar gyfer cyflenwad cyhoeddus yn Llygad Lluchwr, sef y prif dyniad yn y dalgylch. Felly, caiff y polisi trwyddedu tynnu dŵr wyneb, pan fydd wedi'i ddatblygu, ei ddefnyddio i reoli ceisiadau newydd am dynnu dŵr.	AA		1,000						Parhaus

MATER 26 Mae'r Safonau Gwarchodaeth rhag Llifogydd yn Halfway a Phontarddulais yn is na'r safon gwasanaeth fynegol ar gyfer tir a ddefnyddir at ddibenion trigiannol ac anhrigiannol.

a) Adeiladu amddiffynfeydd rhag llifogydd yn Halfway i wella safonau gwarchod rhag llifogydd.	AA		550,000						
b) Adeiladu amddiffynfeydd rhag llifogydd ym Mhontarddulais i wella gwarchodaeth rhag llifogydd o Afon Lluchwr.	AA		343,000						
c) Ymchwilio i'r safonau gwarchod rhag llifogydd presennol ar Afon Dulais drwy Bontarddulais i sicrhau cysondeb safonau ar Lluchwr a Dulais.	AA		10,000						

MATER 27 Mae lefel y warchodaeth rhag llifogydd y llanw yn yr Hendy yn is na'r safon gwasanaeth fynegol ar gyfer tir a ddefnyddir at ddibenion trigiannol ac anhrigiannol.

Gwella amddiffynfeydd rhag llifogydd yn yr Hendy i wella safonau presennol gwarchodaeth rhag llifogydd.	AA		25,000						
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MATER 28 Credir bod lefelau'r warchodaeth rhag llifogydd yng Nglan Marlais o Afon Llan, ac ar Nant Gors Fawr, yn is na'r safon gwasanaeth fynegol ar gyfer tir a ddefnyddir at ddibenion trigiannol ac anhrigiannol. Caiff gwaith cynnal a chadw ei lesteirio'n arw gan gyfyngiadau mynediad at lannau'r afon.

Cynnal astudiaethau ymarferoldeb ar y safleoedd hyn i benderfynu a ellir cyfiawnhau gwaith gwella.	AA		10,000						
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MATER 29 Nid yw amddiffynfeydd llifogydd y môr yng Nghraffy yn darparu safon o warchodaeth sy'n addas ar gyfer ardal drigiannol, ac maent yn ddud i'w rhedeg.

a) Hyrwyddo cynllun gwella i'r safle, gyda chefnogaeth pob corff sydd â diddordeb.	AA		2,000						
b) Gweithredu'r cynllun gwella. Bydd hyn y gwaith yn dibynnu ar gyntundeb y cyrff sydd â diddordeb.	AA	Perchnogion tit, Cadwraeth- wyr	10,000 (costau AA)						

MATER 30 Costau uchel tynnu gro o sianel yr afon i gynnal safonau presennol gwarchodaeth rhag llifogydd.

a) Adolygu'r gweithgareddau tynnu gro presennol yn y dalgylch.	AA		1,000						
b) Gwneud newidiadau i'r drefn gynnal yn ôl y gofyn.	AA		Dibynnu ar a)						

MATERION AC ANGHENION GWEITHREDU LLWCHWR A GOGLEDD GWYR

MATER 31 Mae angen arolygon Adran 105 i sefydlu faint o dir sy'n debygol o ddioddef llifogydd.

GWEITHREDU	CYFRIFOLDEB		COST £	1996	1997	1998	1999	2000	DYFODOL
	PRIF	ARALL							
Gwneud arolygon o'r gorlifdiroedd yn y dalgylch	AA		60,000						

MATER 32 Nid yw'r rhybuddion llifogydd i ddalgylch llwchwr yn cwrdd â'n safonau targed.

a) Adolygu'r trefniadau rhybuddion llifogydd ar gyfer pob safle yn y dalgylch.	AA		500						
b) Gweithredu newid os oes angen, yn amodol ar gyllid a chost-effeithiolrwydd y gwelliannau.	AA		Dibynnu ar a)						

MATER 33 Mae angen cytuno ar brotocolau cydsynio rhwng yr Asiantaeth a'r CCG ar gyfer darpar AGA Twyni Porth Tywyn a Chomin Gŵyr ac unrhyw safleoedd cadwraeth dynodedig perthnasol eraill (tiroedd gwlyb, llynnoedd, SDdGA yn y foryd/ar yr arfordir).

a) Cytuno ar safleoedd perthnasol.	CCG	AA	500 (costau AA)						
b) Llunio strategaeth gadwraeth i bob safle.	CCG	AA, RSPB, perchnogion tir	2,000 (costau AA)						
c) Cytuno ar brotocol cydsynio ar gyfer pob safle.	AA	CCG	2,000 (costau AA)						
ch) Gweithredu protocolau a strategaethau.	AA	CCG	4,000 (costau AA)						Wedi 2000

MATER 34 Mae pysgodfeydd a chynefinoedd yr afon a'r glannau wedi'u hisraddio gan weithgaredd diwydiannol y gorffennol.

a) Nodi cynefinoedd a ddiraddiwyd gan ddefnyddio ACOrA, ACynA a data arolygon eraill sydd ar gael.	AA		500						
b) Gwneud rhagor o arolygon ACynA fel y bo'n briodol.	AA		1,000						
c) Cynilunio gwaith adfer ar y cyd â pherchnogion y glannau.	AA	Perchnogion tir / y glannau	2,000 (costau AA)						
ch) Gweithredu'r gwaith adfer	AA	I'w bennu	I'w bennu						Wedi 2000

MATER 35 Rhwystrau o waith dyn yn amharu ar symudiad pysgod eogaidd.

a) Nodi safleoedd lle mae mynediad pysgod wedi'i atal neu ei rwystro.	AA	Clybiau Genweirio, perchnogion y glannau	2,000 (costau AA)						
b) Pennu rhaglen o waith gwella.	AA		2,000						
c) Dylunio grisiau pysgod/dyfeisiau hwyluso mynediad, yn amodol fod yr arian ar gael.	AA	Clybiau Genweirio, perchnogion y glannau	Dibynnu ar b)						
ch) Adeiladu grisiau pysgod/dyfeisiau hwyluso mynediad, yn amodol fod yr arian ar gael.	AA	Clybiau Genweirio, perchnogion y glannau	Anhysbys						

MATERION AC ANGHENION GWEITHREDU LLWCHWR A GOGLEDD GWYR

MATER 36 Mae chwyn ymledol yn bresennol ledled y dalgylch.

GWEITHREDU	CYFRIFOLDEB		COST £	1996	1997	1998	1999	2000	DYFODOL
	PRIF	ARALL							
a) Penderfynu faint o chwyn ymledol sydd yng nghoridorau afonydd y dalgylch drwy ddefnyddio data ACynA ac ACorA.	AA		500						
b) Gweithredu strategaeth briodol yr Asiantaeth (drafft ar hyn o bryd) ar gyfer rheoli'r planhigion hyn.	AA	ADC, CCG, ALI, perch-nogion tir / y glannau	I'w bennu						
c) Cynyddu ymwybyddiaeth y cyhoedd ynghylch planhigion ymledol a mesurau rheoli drwy ddosbarthu taflen yr Asiantaeth 'Canllawiau ar gyfer Rheoli Planhigion Ymledol ger Cysiau Dŵr'.	AA		Dim						Parhaus

MATER 37 Cofnodwyd niferoedd isel o frithyllod ifainc yn Afon Aman.

a) Canfod y rhesymau dros y niferoedd isel o frithyllod a chynllunio gwaith adfer i ddelio â'r effeithiau a nodwyd.	AA	Clybiau Genweirio	5,000						
b) Cwblhau'r gwaith, ar yr amod fod cyllid ar gael.	AA	ALI, perch-nogion tir / y glannau	20,000 (costau AA)						
c) Monitro effaith y gwaith lliniaru i sicrhau y caiff y broblem ei datrys.	AA		5,000 yf						Parhaus

MATER 38 Dylid diogelu'r boblogaeth ddyfrgwn drwy weithredu "Strategaeth Gadwraeth i Ddyfrgwn yng Nghymru" a'r Cynllun Gweithredu Bioamrywiaeth i Ddyfrgwn.

a) Sefydlu cysylltiad gyda sefydliadau a grwpiau perthnasol.	DYNg	AA cadwraeth-wyr	1,000 (costau AA)						
b) Adolygu'r wybodaeth sydd ar gael a datblygu cynllun rheoli dalgylch sy'n rhoi blaenoriaeth i ddyfrgwn yn unol â'r Cynllun Gweithredu Bioamrywiaeth.	DYNg	AA cadwraeth-wyr	2,000 (costau AA)						
c) Gweithredu cynlluniau rheoli.	DYNg	AA cadwraeth-wyr	I'w bennu						

MATER 39 Mae statws pysgodfeydd bras yn y dalgylch yn anhysbys.

a) Pennu statws y pysgodfeydd bras	AA		2,000						
b) Ymgynghori â GPLI i nodi a yw'r cyfleusterau presennol yn ddigonol	AA	GPLL	2,000 (costau AA)						

MATERION AC ANGHENION GWEITHREDU LLWCHWR A GOGLEDD GWYR

MATER 40 Mae mynediad y cyhoedd i sawl rhan o'r system afonydd wedi'i gyfyngu oherwydd y diffyg llwybrau cyhoeddus. Mae angen ystyried ymarferoldeb ehangu a chydgysylltu'r rhwydwaith llwybrau presennol er mwyn hwyluso mynediad i goridor yr afon.

GWEITHREDU	CYFRIFOLDEB		COST £	1996	1997	1998	1999	2000	DYFODOL
	PRIF	ARALL							
a) Cefnogi a hyrwyddo ymgyrchoedd a fydd yn galluogi i bob Hawl Tramwy perthnasol a phresennol gael eu hagor a hwyluso mynediad iddynt.	ALI	AA, CCG, CyC, perchnogion tir, CSau	5,000 (costau AA)						
b) Cefnogi creu llwybrau newydd lle hyrwyddir y rhain gan gymunedau a pherchnogion tir lleol, wedi llawn ystyried yr holl gwestiynau amgylcheddol.	AA		<1,000 yf 2001						Erbyn 2001

MATER 41 Gall gwaith peirianyddol yn yr afon aflonyddu ar siltiau a thynnu oddi ar werth mwynderol y bysgodfa.

a) Gwneud asesiadau effaith amgylcheddol ar gyfer gwaith cyfalaf a refeniw yn yr afon, lle bo'n briodol, i sicrhau fod y cynigion yn parhau'n gost-effeithiol ac yn amgylcheddol briodol.	AA	CCG, Clybiau genweirio, perchnogion tir, cadwreath-wyr	Anhysbys						Parhaus
b) Adolygu yn barhaus, a, lle bo modd, gwella arferion atal llifogydd presennol er mwyn sicrhau cyn lleied ag y bo modd o effeithiau amgylcheddol.	AA	Fel uchod	Anhysbys						Parhaus

MATER 42 Yn rhannau canol ac isaf Afon Lluchwr, mae'r angen i berchnogion y glannau a physgodfeydd warchod rhag erydu'r glannau yn gwrthdaro â phrosesau naturiol yr afon sy'n cynnwys nodweddion pwysig o safbwynt tirwedd, hanes ac ecoleg.

a) Nodi'r safleoedd critigol.	AA	CCG, YAD, YAMG	1,000 (costau AA)						
b) Cydweithio gyda pherchnogion y glannau, genweirwyr, amgylcheddwyr ac archaeolegwyr i geisio atebion sy'n dderbyniol gan bawb ac yn cael lleiaf o effaith ar yr amgylchedd.	AA	CCG, YAD, YAMG, perchnogion glannau/tir, clybiau genweirio, cadwreath-wyr	I'w bennu						

MATERION AC ANGHENION GWEITHREDU LLWCHWR A GOGLEDD GWYR

MATER 43 Mae gweithgaredd cloddio glo brig yn gallu achosi gostyngiad lleol ym miaoamrywiaeth cyrsiau dŵr.

GWEITHREDU	CYFRIFOLDEB		COST £	1996	1997	1998	1999	2000	DYFODOL
	PRIF	ARALL							
a) Nodi ardaloedd a ddiraddiwyd gan weithgaredd glo brig yn y gorffennol. (#)	AA		5,000						
b) Gwneud gwaith adfer ar Afon Lash.	AA		43,000						
c) Blaenoriaethu a phennu costau gwaith adfer yn y safleoedd eraill a gweithredu pan fo'n briodol.	AA	Celtic Energy*, perchnogion safle	Anhysbys						
ch) Nodi cynlluniau ar gyfer y dyfodol a cheisio lleihau eu heffaith drwy ymgynghori â datblygwyr ac ACLI.	AA	Datblygwr / ACLI	I'w bennu						Parhaus

MATER 44 Dim mynediad i ganŵwyr yn Afon Llŵchwr uwchben terfyn y llanw (hawli mordwyo cyhoeddus yn nyfroedd llanw).

a) Cydgysylltu â'r partaon perthnasol i drafod canwio ar Afon Llŵchwr a cheisio llunio cytundeb canwio.	AA	CCC, ALI, clybiau genweirio, perchnogion y glannau	500 (costau AA)						
b) Ystyried posibiliadau defnyddio cyrsiau dŵr eraill o fewn y dalgylch.	AA	CCC, ALI, clybiau genweirio, perchnogion y glannau	1,000 (costau AA)						

MATER 45 Gall rhai datblygiadau, fel rhai ar y gorliffdir neu nesaf at goridor yr afon, gael effaith ar fuddiannau amgylcheddol ac atal llifogydd yr Asiantaeth.

a) Sicrhau bod polisiau addas yn cael eu cynnwys mewn Cynlluniau Lleol. (#)	AA	ACLI	2,500 (costau AA)						
b) Sefydlu cyfarfod/seminar i wella cysylltiadau gyda'r ACLI. (#)	AA	ACLI	1,000 (costau AA)						

MATER 46 Mae pysgota anghyfreithlon yn lleihau'r stociau pysgod i bysgotwyr cyfreithlon ac ar gyfer silio.

a) Parhau i ddefnyddio tîm gorfodi'r Asiantaeth mewn modd effeithiol a chydgyssylltiedig.	AA		25,000 yf						Ongoing
b) Adolygu effeithiolrwydd is-ddeddfau a chyflwyno cynigion newydd lle bo angen.	AA	GPLI, clybiau genweirio	1,000 yf (costau AA)						
c) Rhoi cyhoeddusrwydd eang i'r rhif argyfwng 0800 yn unol â'r strategaeth Ranbarthol.	AA	GPLI	1,000 yf (costau AA)						

* I'w gytuno gyda Celtic Energy

MATERION AC ANGHENION GWEITHREDU LLWCHWR A GOGLEDD GWYR

MATER 47 Does dim gorchudd coed dros rannau isaf a chanol Afon Lluchwr.

GWEITHREDU	CYFRIFOLDEB		COST £	1996	1997	1998	1999	2000	DYFODOL
	PRIF	ARALL							
a) Nodi ardaloedd lle gellid plannu coed i ddarparu gorchudd a gwella cynefin coridor yr afon.	AA		5,000						
b) Cydweithio gyda pherchnogion tir i lunio cytundebau i blannu a gwarchod gyda ffensys, annog cefnogaeth ariannol gan y perchnogion tir a chyllid treftadaeth.	AA	Clybiau genweirio, perchnogion tir	Anhysbys						

MATER 48 Nid oes Cynllun Rheoli Lefelau Dŵr wedi'i baratoi gan yr Asiantaeth ar gyfer Gweunydd Llangynydd.

a) Penderfynu ar drefn reoli lefelau dŵr sydd ei hangen a chytuno ar amcanion cyffredinol.	AA	CCG, perchnogion tir	2,000 (costau AA)						
b) Llanio cynllun rheoli lefelau dŵr	AA	CCG	2,000 (costau AA)						
c) Adolygu'r Cynllun.	AA	CCG	1,000 (costau AA)						

MATER 49 Mae angen gwarchod darpar AGA Fôr Moryd Porth Tywyn ac Aber Lluchwr trwy gydymffurfio â Chyfarwydddeb Cynefinoedd y GE (mae Asiantaeth yr Amgylchedd yn "Awdurdod Perthnasol").

a) Sefydlu grwpiau rheoli a chynghori. (#)	CCG	AA, ALL'au, PPMDC, YAGTG, RSPB	2,000						
b) Llanio cynllun rheoli.	CCG	Fel uchod	2,000						
c) Gweithredu'r cynllun rheoli.	CCG	Fel uchod	I'w bennu						

MATER 50 Mae angen cydymffurfio â Chynllun Gweithredu Bioamrywiaeth Gwledydd Prydain.

Ar gyfer pob rhywogaeth (e.e. Gwangen a Dyfrgi) a chynefin ar y rhestr fer o fewn y dalgylch, rhoi'r cynllun gweithredu priodol ar waith:									
a) Nodi presenoldeb a dosbarthiad rhywogaethau a chynefinoedd sydd ar y rhestr fer.	CCG, AA	YBGD, YBGM, ALL'au, perchnogion tir clybiau genweirio	5,000						
b) Adolygu gwaith yr Asiantaeth i sicrhau y caiff y rhywogaethau a'r cynefinoedd hyn eu diogelu.	AA		1,000						
c) Nodi ardaloedd lle gall gwelliannau godi statws cadwraethol y rhywogaethau a'r cynefinoedd hynny, lle mai'r Asiantaeth yw'r corff pennaf gyfrifol.	AA	Fel uchod	I'w bennu						
ch) Gweithredu'r gwelliannau.	AA	Fel uchod	Dibynnu ar c)						Wedi 2000

MATER 51 Diffyg gwybodaeth ar dirwedd hanesyddol dalgylch Lluchwr.

GWEITHREDU	CYFRIFOLDEB		COST £	1996	1997	1998	1999	2000	DYFODOL	
	PRIF	ARALL								
a) Cydweithio gydag ymddiriedolaethau archaeolegol i ehangu databas yr Asiantaeth o safleoedd hanesyddol. (#)	AA	YAD, YAMG	<1,000 (costau AA)							
b) Sicrhau fod gweithgareddau gan yr Asiantaeth sy'n debyg o effeithio ar yr adnoddau archaeolegol hysbys ac anhysbys yn cael eu nodi a, lle bo'n briodol, yr ymgynghorir yn llawn â'r ymddiriedolaethau archaeolegol.	AA		<1,000							Ongoing

ADOLYGU A MONITRO YN Y DYFODOL

Bydd yr Asiantaeth yn gyd-gyfrifol, gyda chyrff ac unigolion dynodedig eraill, am weithredu'r Cynllun Gweithredu hwn. Caiff y gwaith ei fonitro ac fel rheol bydd adroddiad arno bob blwyddyn. Bydd yr adolygiadau hyn yn archwilio'r angen i ddiweddarau'r CRhD yn wyneb newidiadau yn y dalgylch. Fel rheol, bydd cyfnod o bum mlynedd rhwng y prif adolygiadau. Yn yr adolygiad pum mlynedd cyntaf (yn 2001), neu'n gynt na hynny os penderfynir felly gan y rhaglen Ranbarthol, caiff y CRhD hwn ei drosi'n GAALl a bydd ymgynghori arno.

Bydd yr Adolygiad Blyneddol, a fydd ar gael yn gyffredinol eang, wedi'i lunio ar ffurf adroddiad gwaith cryno, yn cynnwys cymariaethau rhwng y gwaith a gyflawnwyd a'r hyn a gynlluniwyd, ac yn tanlinellu unrhyw newidiadau i'r cynllun.

Gellir cael copïau pellach o'r Cynllun Gweithredu hwn, a chopïau o'r Adroddiad Ymgynghorol gwreiddiol (os ydyw ar gael), oddi wrth:

Cynlluniwr Amgylchedd yr Ardal
Asiantaeth yr Amgylchedd
Llys Afon
Hawthorn Rise
Hwlfordd
Sir Benfro
SA61 2BQ

Ymholiadau Ffôn:
Hwlfordd (01437) 760081

Ildiad Hawlfraint Asiantaeth yr Amgylchedd:

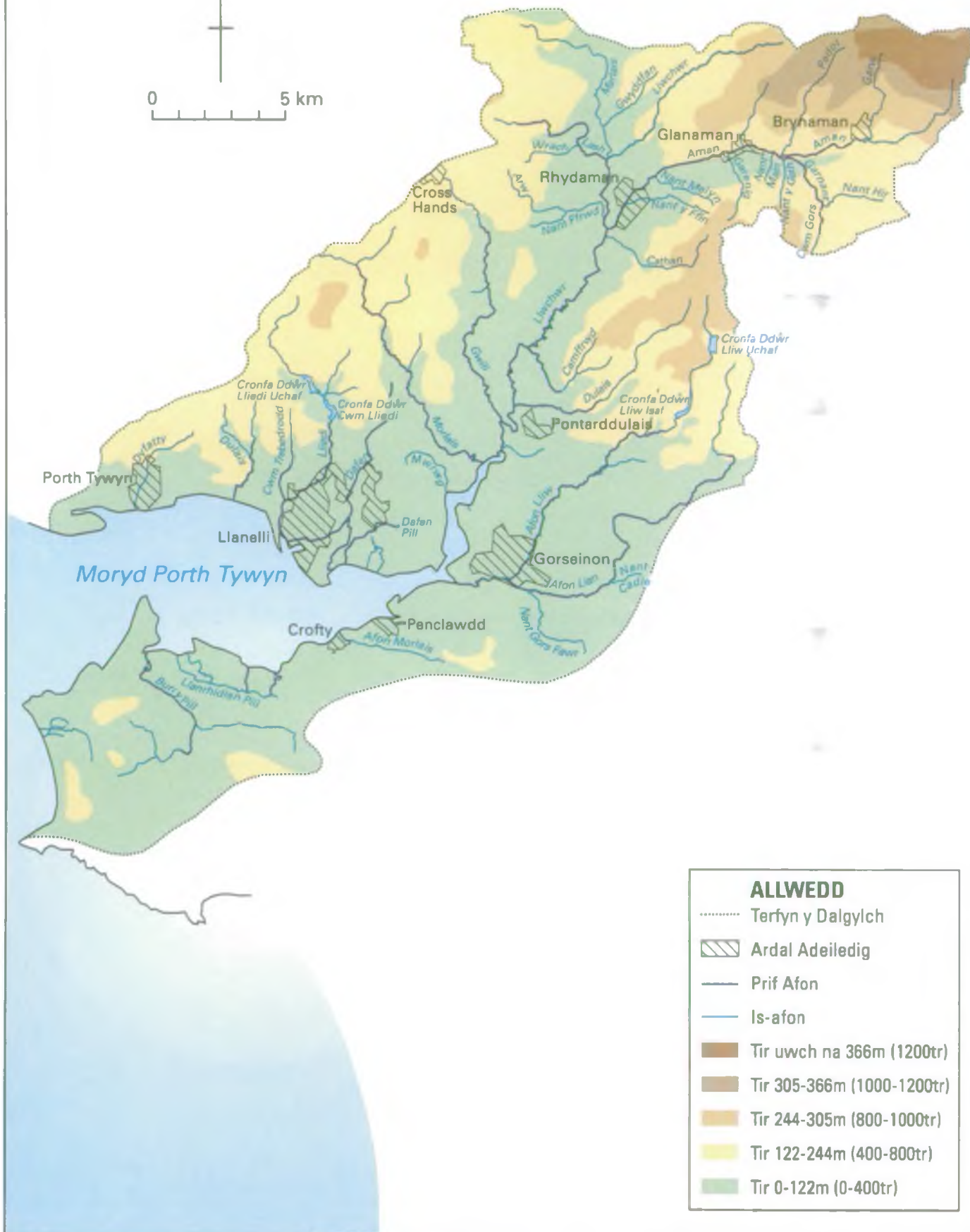
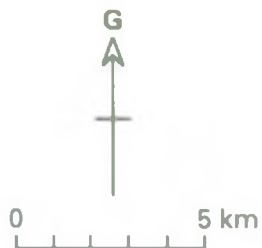
Bwriedir i'r adroddiad hwn gael ei ddefnyddio'n helaeth a gellir dyfynnu ohono, ei gopïo neu ei atgynhyrchu mewn unrhyw ffordd, ar yr amod na ddyfynnir y darnau y tu allan i'w cyd-destun ac y rhoddir y briod gydnabyddiaeth i Asiantaeth yr Amgylchedd.

Cydnabyddiaeth:

Mae'r mapiau'n seiliedig ar fap graddfa 1:50,000 Arolwg Ordnans 1992 gyda chaniatâd Rheolwr Gwasg Ei Mawrhydi © Hawlfraint.

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DALGYLCH LLWCHWR A GOGLEDD GWŶR



Mae dalgylchoedd hardd Dyfi a Leri, ym mhen Mae dalgylch Lluchwr yn draenio uwchdiroedd anghysbell y Mynydd Du cyn i'r afon ymdroelli drwy gefn gwlad bryniog y rhannau canol ac is i ddraenio i mewn i Aber Lluchwr a moryd Porth Tywyn. Mae'r dalgylch yn cynnwys ardaloedd hynod o werthfawr o safbwynt cadwraeth a thirwedd, ynghyd â gweithgareddau amaethyddol pwysig. Ceir ardaloedd hefyd sydd wedi dioddef effeithiau andwyol gweithgaredd diwydiannol, yn enwedig yn gysylltiedig â'r diwydiant glo, a fu'n weithredol yn y dalgylch ers dros 300 mlynedd. Mae'r pwysau a roddir ar y dalgylch, yn enwedig o gwmpas ardal yr aber, yn creu problemau penodol y byddwn ni'n eu trafod yn y cynllun hwn.

Yn dilyn cyhoeddi'r Adroddiad Ymgynghorol yn Chwefror 1996, ac wedi ystyried yr ymatebion a ddaeth i law, ein nod yw rheoli'r dalgylch mewn ffordd fydd yn sicrhau y cyflawnir camau arwyddocaol o ran:

- **gwella ansawdd dŵr** - bydd y buddsoddiadau mawr o fwy nag £20 miliwn yn y systemau carthffosiaeth yn arwain at welliannau sylweddol yn ansawdd dŵr, yn nhermau llai o lwytho organig a gwell ansawdd eshetig. Bydd y gwelliannau hyn i'w gweld yn arbennig yn rhan isaf'r afon a'r aber, lle bydd y bysgodfa eogiaid a siwin mudol, y pysgodfeydd cregyn masnachol a'r dyfroedd ymdrochi (rhaid dynodedig gan y GE a rhai heb eu dynodi) i gyd yn elwa. Ein nod yw gwella ansawdd y dŵr ymhellach drwy reolaeth fwy effeithiol dros weithgareddau cloddio a phrosesu glo, a thrwy leihau effaith y prif arllwysiadau elifiant diwydiannol.
- **sicrhau cydbwysedd rhwng anghenion tynnu dŵr ac anghenion yr amgylchedd** - rhaid sicrhau cydbwysedd rhwng defnyddiau tynnu dŵr ac anghenion

amgylcheddol y system afonydd, a'n nod allweddol ni yw gweithredu methodoleg i asesu cyflwr y dalgylch yn nhermau maint dŵr a phenderfynu faint o ddŵr sydd ar gael ar gyfer unrhyw ddefnyddiau tynnu dŵr newydd.

- **gwarchod a datblygu'r bysgodfa fudol** - ein nod yw gwarchod ansawdd uchel y bysgodfa siwin rhag datblygiadau mawr a gweithgareddau anghyfreithlon, yn enwedig botsio pysgod. Dylai'r bysgodfa fudol ddatblygu wrth i welliannau amgylcheddol, yn enwedig yn ansawdd y dŵr, gael eu gwireddu.
- **gwarchod coridorau afon a gorlifdiroedd** - dyma'n nodau allweddol: (i) gwarchod ac annog ffurfio cynefinoedd naturiol ar hyd coridor yr afon lle gall planhigion a chreaduriaid y glannau ffynnu, yn enwedig drwy greu "lleiniau clustogi" nesaf at gyrsgau dŵr, yn yr ardaloedd gwledig a threfol, a (ii) lle bynnag y bo modd, dylanwadu ar ddatblygwyr ac awdurdodau cynllunio i gyfeirio datblygiad newydd i ffordd oddi wrth orlifdiroedd, oni bai fod gwaith priodol yn ei le i amddiffyn rhag llifogydd neu fod gwaith lliniaru'n ffurfio rhan o'r cynnig.

Gwiredir ein gweledigaeth trwy ddull rheoli cytbwys ar gyfer pob gweithgaredd. Byddwn yn annog cynlluniau dychmygus i ganiatáu i ddatblygiad economaidd a chymunedol cynladwy fynd rhagddo tra'n sicrhau y caiff yr amgylchedd dyfrol ei warchod a'i wella. Byddwn yn cydweithio'n frwd gyda holl ddefnyddwyr y dalgylch a'r holl gyrff statudol hynny a all ein helpu i ymgynghoedd at wireddu'r weledigaeth hon.

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RHEOLWR ARDAL - DE-ORLLEWIN CYMRU