Cyfoeth Naturiol Cymru
Natural Resources Wales

Ynys Môn Management Catchment Summary

Contents

1. Background to the management catchment summary

This management catchment summary supports the current consultation on the updated river basin management plans. Along with detailed information on the Water Watch Wales website, this summary will help to inform and support delivery of local environmental improvements.

Natural Resources Wales has adopted the ecosystem approach. This means being more joined up in how we manage the environment and its natural resources to deliver economic, social and environmental benefits for a healthier, more resilient Wales. It means considering and regulating the environment as a whole, rather than dealing with individual aspects separately; weighing up and setting priorities for the many competing demands on our natural resources in a more integrated way. Partnership working is essential to achieve our ambition. By working together in this management catchment we will:

- understand the issues in catchments and how they interact
- understand how the issues are affecting the current local benefits and future uses of water
- involve local people, communities, organisations and businesses in making decisions by sharing evidence
- identify which issues to tackle as a priority.

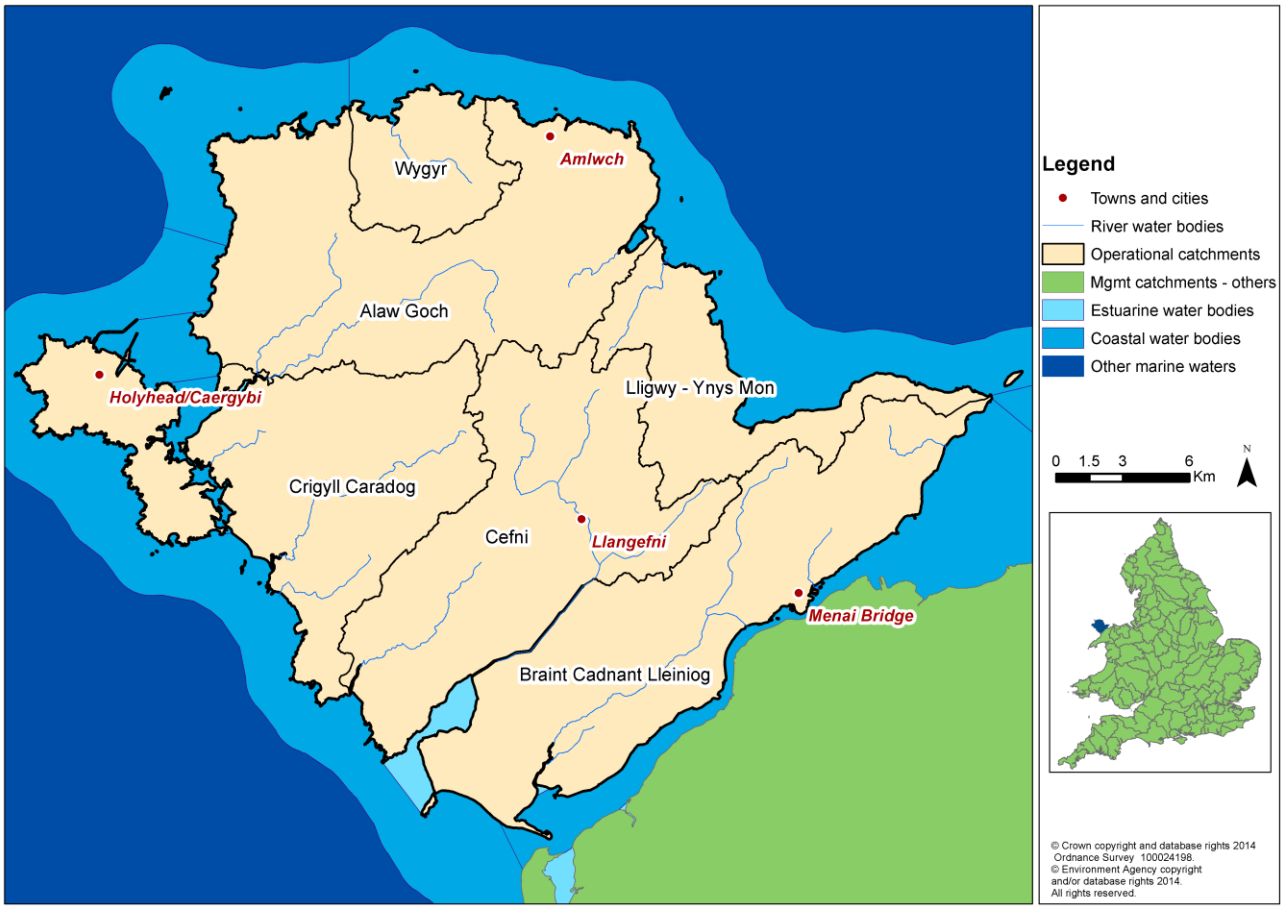
The Water Framework Directive provides a major overarching framework for river basin management. The Floods Directive sets out a strategic approach to flood risk management planning. A flood risk management plan has been produced for consultation in parallel to the river basin management plan and can also be found on our website. The flood risk management plan details how we propose to manage flood risk across the river basin district by prioritising those communities that are most at risk of flooding and detailing the measures we intend to take to manage their risk.

The flood risk management plan and the river basin management plan will shape important decisions, direct considerable investment and action, and deliver significant benefits to society and the environment.

As part of the consultation we are asking you for your input on priority opportunities and how we can make these summary documents as useful and relevant to the management catchment as possible. Within the river basin management plan consultation documents are a number of consultation questions; these will provide a useful starting point to gather your ideas in order to improve not only this document but partnership options to ensure that we work together to provide the best environmental options. We encourage you to look at the river basin management plans and respond to the consultation questions which you can find on our website.

2. The Ynys Môn Management Catchment

Figure 1. Ynys Môn Management Catchment



The landscape of Anglesey is dominated by agriculture. Tourism is of great economic importance to the island, and maintaining the quality of the general environment, bathing waters and associated water-based recreation is a high priority. The island has many sites designated for conservation and biodiversity purposes. The coastline of cliffs and sandy beaches has 12 EU designated bathing waters, as well as designated shellfish beds. There are several small industrial estates located near the main population centres such as Llangefni, and Holyhead with its ferry terminal. The west of the island is a nitrate vulnerable zone. A number of lakes on Anglesey have been modified for public water supply.

In February 2014 an Ynys Môn management catchment workshop was held at Beaumaris. During this event the benefits of the catchment were captured. These included;

- Biodiversity – coast and wetlands. Malltraeth marsh, Anglesey Fens, marine aquaculture – mussels in the Menai Strait, Biodiversity Action Plan species e.g. otter and water voles
- Food production.
- Recreation & Tourism – beaches, fisheries, walking Lon Las Cefni and Wales Coastal Path,
- Energy production – Wylfa
- Water as a resource for drinking, irrigation and navigation
- Woodlands - both as a resource and for their own ecological importance, Pentraeth woodlands, Newborough Forest

- Archaeology, pre-history

Natural Resources Wales continues to work in partnership with a range of partners and sectors in innovative ways so that we can achieve even more together. A flavour of some of the projects that have been delivered within this management catchment over the last 3 years together with projects are presented as case studies.

2.1 Key facts

We use the term water bodies to help understand and manage the water environment. A water body is part, or the whole, of a river, lake, ground water or coastal water. The number and type of water bodies in the management catchment is shown in the table below

Table 1. Number and type of water bodies

Number of water bodies	Natural	Artificial	Heavily Modified	Total
River*	**16**		**3**	**19**
Lake	**3**		**2**	**5**
Coastal	**4**		**4**	**8**
Estuarine	**3**		**1**	**4**
Groundwater	**4**			**4**
Total	**30**		**10**	**40**

There are areas in the catchment where the water environment is recognised as being of particular importance, including rare wildlife habitats, bathing waters or areas around drinking water sources. These areas are known collectively as protected areas and are detailed in the table below.

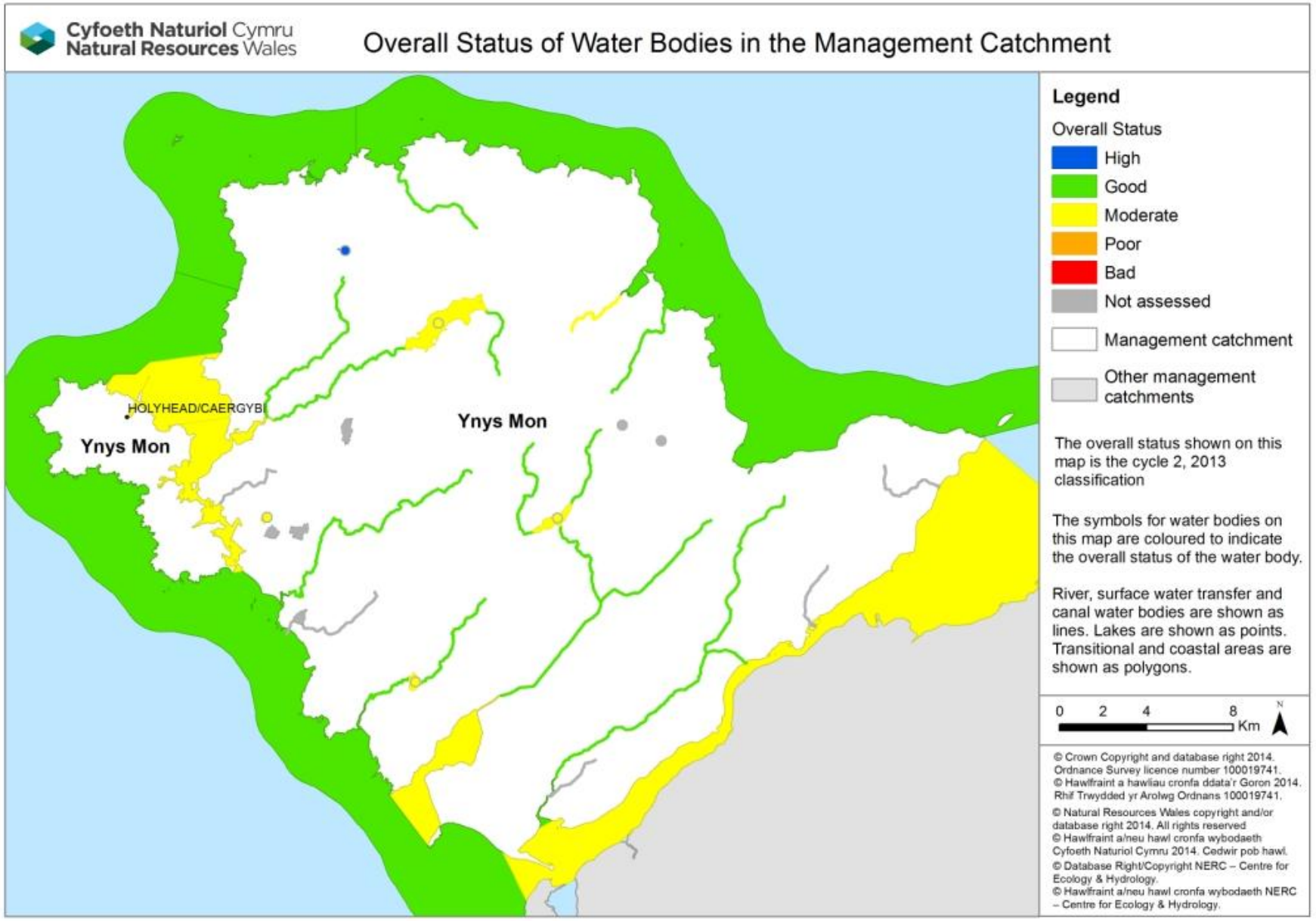
Table 1. Protected areas in the management catchment

Protected Area	Number
Bathing Waters	**13**
Drinking Water Protected Areas	**6**
Natura 2000 and Ramsar sites	**14**
Nitrate Vulnerable Zones	**1996ha**
Shellfish Waters	**4**
Urban Waste Water Treatment Directive - Sensitive areas	**0**

3. Current Status of the water environment

We assess the condition of water bodies through monitoring which produces an annual classification. The current status for each water body is shown in figure 2. Note, since 2009, we have updated some of the systems we use to classify water bodies, including changes to some standards and water body boundaries.

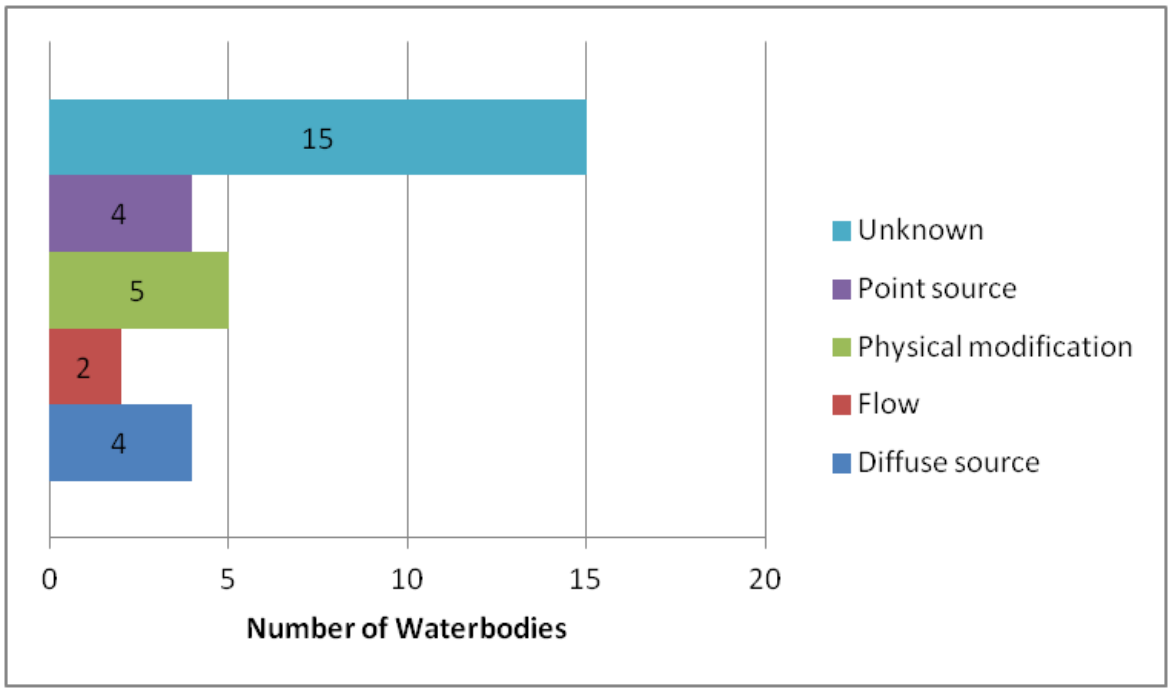
Figure 4. Current status of the Ynys Môn Management Catchment (new building blocks, interim 2013 classification)



4. The main challenges

We have carried out a programme of investigations to better understand the causes as to why water bodies are failing to meet the required standards. The results of our findings are summarised in Figure 5.

Figure 5. Reason for not achieving good status in the Ynys Môn Management Catchment



Reasons for not achieving Good Status

Nutrient enrichment, particularly by phosphorus, affects some of the lakes and one river on the island, including Llyn Dinam, Llyn Coron and the Afon Goch Dulas. This can cause excessive algal growth, affecting other water uses including drinking water abstraction, angling, wildlife conservation and livestock watering. Agricultural land management, and discharges from wastewater treatment and septic tanks are contributory sources. Land spreading of waste can also be a factor, and there are several large scale intensive agricultural units on the island which routinely dispose of waste in this way. Discharges of acidic metal rich mine water from the abandoned metal mine at Parys Mountain have a significant impact on the Afon Goch Amlwch. Bacteria from waste water treatment and agricultural land present a risk to shellfish and bathing water quality around the coastline.

3.3 Workshop feedback on challenges

We need to work together to ensure the overall aims of the Water Framework Directive are met and to agree on the priority issues and solutions. The following is a list of some of the challenges that were raised as part of the workshop (it is not a full list). All of the comments received will be taken into account and the following is just a flavour of these comments:

- Invasive species control e.g. mink, spread of invasive plants along river corridors
- Potential impact on designated sites and landscape from Energy Island associated development
- Pollution from septic tanks & private drainage not on public sewerage system, impacts on surface and groundwater
- Diffuse pollution from agriculture, impacts on surface and groundwater
- Increasing water demand on Anglesey e.g. Wylfa Newydd, wood chip power stations

Case study – Anglesey and Llyn Fens LIFE project

The once extensive fens on Anglesey have become the focus for restoration and repair; the now fragmented remains are in poor condition due to a number of factors. Some of the factors affecting the fens occur off-site, such as aerial pollution, water abstraction and agricultural run-off.
Therefore, the Natural Resources Wales is working in partnership with North Wales Wildlife Trust (NWWT), Dwr Cymru and Anglesey Local Grazing Partnership to create a holistic management approach. This Living Landscape aims to create strong partnerships with local communities, developing opportunities for local businesses and the local economy to thrive.
The main aim is to restore or improve 751 hectares of very rare fen habitats, which depend on a delicate water balance and limestone springs that flow into the peat.
The **Anglesey and Llyn Fens LIFE project**, funded by the EU, has already had a major impact. It has tackled factors affecting the sites condition and hydrology. Measures are also being put in place to reduce and remove pollutants leaching into drinking water reservoir downstream and so meeting Water Framework Directive targets.

NWWT is working with partners to enhance and connect key sites. This will be achieved by ensuring appropriate management, creation of buffer zones and reducing pollution in the catchment. This will achieve **Water Framework Directive** objectives. NWWT will promote Glastir as means of establishing a programme of habitat improvement to create wildlife corridors including riparian habitats, ditches and ponds. The Trust is also working with stakeholders to eradicate invasive **non-native species** such as Himalayan Balsam from the Living Landscape area and across Anglesey.
Key Partners: Isle of Anglesey County Council , Natural Resources Wales, Visit Wales, PONT and Dwr Cymru.

5. Objectives and measures

This section outlines what we are aiming to achieve and the proposed new measures that need to be put in place. We aim to develop a single integrated programme of measures by 2021 that meets Water Framework Directive objectives:

- **Prevent deterioration in status**

Water body status will not be allowed to deteriorate from the current reported status.

- **Achieve the objectives for protected areas**

Achieve the standards set by the relevant directive under which they were designated. For water dependent Natura 2000 sites we will aim to achieve conservation objectives, achieving good status by 2021 is a milestone towards this objective.

- **Aim to achieve good overall status for surface and ground waters**

Implement measures to achieve good overall status where they are technically feasible and not disproportionately costly.

5.1 Measures

We have reviewed the reasons why water bodies are failing to achieve objectives and identified potential measures .Measures are divided into two groups. National measures apply to the whole of Wales, or the United Kingdom. In general these set the legislative, policy or strategic approach. Examples include a national ban on using a particular chemical or a national strategy for prioritising and funding the remediation of abandoned mines. Local measures are specific to the river basin district or a part of it. For example, the removal of invasive plants along a length of designated river or a local campaign targeting misconnections across an industrial estate. Many of the actions listed will also have multiple benefits. For example, sustainable urban drainage (SuDs) schemes help to reduce urban pollution, sewage pollution and changes to water levels.

A list of all national measures, both new and existing, and the local measures at the water body scale are detailed on Water Watch Wales. If you know about any others or want to suggest new measures, please tell us in your response to the consultation. The river basin management plan will become a statutory document hence the importance of ensuring that the correct measures are identified through this consultation.

The table below summarises the local measures for the management catchment, including those identified for protected areas. The high level categories describe the types of action required and broadly the options that are available, including voluntary and regulatory measures. At the local scale some of the options described might not be considered appropriate. There is overlap between some categories.

Table 4 Summary of local measure

Measure	Description	No. of water bodies
Address air pollution	Emissions controls to reduce nitrogen and acidic deposition.	7
Address point source pollution	Investigate and regulate pollution from point sources. Overlaps with "reduce pollution from sewage discharges" and "other waste	5

Measure	Description	No. of water bodies
	water discharges".	
Appropriate coastal process and sediment management	Measures to protect and restore integrity of dune systems	7
Complete first cycle investigation	All ongoing WFD investigations from first cycle programme.	16
Drainage and water level management	Investigate and implement changes to land drainage regimes and structures to restore water levels.	11
Dredging and silt management	Includes reducing siltation at source through land management, and implementing sustainable dredging and silt disposal regimes.	4
Improve fish passage and habitat	Remove or modify barriers to fish passage	4
Improve flows and water levels	Reduce impacts of regulated flows and abstractions, restore more natural flow regimes, implement options to improve water levels, such as water efficiency and recycling measures, alternative sources and supplies.	4
Manage invasive non-native species	Eradication and/or management of invasive non-native species in line with current national invasive species Action Plans. Includes biosecurity good practice, such as "CHECK-CLEAN-DRY" and Be Plant Wise.	14
Mine water and contaminated land remediation	Coal and metal mine, and contaminated land remediation - including passive and active mine water treatment, capping of spoil, removal of wastes to landfill, and channel diversion	2
Mitigate impacts of flood and coastal defences	Reduce impacts of flood defence structures and operations - improve connectivity, habitat, and	7

Measure	Description	No. of water bodies
	morphology by implementing options through capital and maintenance programmes, such as soft engineering, opening culverts, upgrading tidal flaps, changing dredging and vegetation management. Includes the national habitat creation programme to address coastal squeeze.	
Mitigate impacts of shipping, navigation and dredging	Assess and implement options for adapting dredging regimes and reducing the impacts of physical modifications.	3
Mitigate impacts of water resource impoundments	Assess and implement options for improving fish passage and habitat.	2
New Investigation	Includes investigations for all new failures, deterioration, and drinking water protected areas.	17
Other sustainable land and marine management practices	Includes measures to mitigate impacts from construction and maintenance of infrastructure, including within military training sites.	5
Reduce impacts from other physical modifications	Improve connectivity, habitat and morphology through soft engineering and restoration techniques.	1
Reduce pollution from septic tanks	Target actions to ensure septic tanks are maintained correctly. Where necessary issue formal works notices to owners to relocate or replace tanks and soakaways.	7
Reduce pollution from sewage discharges	Reducing pollution from continuous and intermittent discharges, includes additional treatment at sewage treatment works (e.g. phosphate stripping), investigating and tackling sewer blockages, and implementing sustainable drainage to reduce surface	3

Measure	Description	No. of water bodies
	water drainage to sewers.	
Specific habitat and feature works	Restoration and/or conservation of specific habitat and features, including natural (e.g. caves, geological outcrops) and human structures (e.g. bridges, ruins).	11
Sustainable access and recreation management	Reduce the impacts of erosion, disturbance and damage from both water-based and terrestrial access, including tackling illegal off-roading.	7
Sustainable aggregate extraction	Reduce and mitigate impacts of extraction industries	4
Sustainable agricultural practices	Implement basic and additional measures such as correct management of slurry, silage, fuel oil, and agricultural chemicals; clean and dirty water separation; nutrient management planning; buffer strips and riparian fencing; cover crops and soil management. In N2k sites changes to grazing regimes may be required, includes scrub management. Within NVZs comply with storage and spreading regulations.	18
Sustainable fisheries management	Includes measures for both freshwater and marine fisheries to reduce and mitigate impacts	7
Sustainable marine development	Includes off-shore energy developments, such as oil and gas exploration and tidal energy.	3
Sustainable woodland and forestry management	Restore the riparian zone, disconnect forest drains, monitor the effectiveness of the 5 principle risks associated with forestry and use forestry and woodland to reduce diffuse pollution.	9

Measure	Description	No. of water bodies
Tackle misconnections and urban diffuse pollution	Investigate and solve misconnections to surface water drains (at residential and commercial properties) and implement sustainable drainage schemes (SuDS) to reduce diffuse pollution.	1
Waste management	Includes appropriate management of spoil and sludge, illegal fly-tipping and litter	4
Total		**184**

Some examples of actions that are already under way include:

- Land owners are working to minimise the impact of agricultural diffuse pollution by controlling runoff, avoiding bank side erosion and encouraging best practice
- Private sewage dischargers and Welsh Water are working to prevent or improve inappropriate point source sewage discharges, and consequently control excessive solids, bacteria and nutrients entering the river system.
- NRW is working with partners towards a solution, and funding, to treat the minewater at Parys Mountain Copper Mine.
- NRW is conducting pollution prevention campaigns in specific sub catchments, such as the Afon Wygyr to tackle diffuse pollution impacting Cemaes Bay beach.
- Mawndir Môn project – partners including Isle of Anglesey CC and North Wales Wildlife Trust. Work to restore wetlands and adjoining land of high biodiversity within the Anglesey Fens SAC catchment.

5.2 Workshop feedback on solutions

Concerns on current status raised at the workshop have been highlighted in Section 3, solutions and priorities were also discussed. Of the issues raised on the day, the following were flagged as priorities:

- **Pollution from septic tanks & private drainage not on public sewerage system**. Impacts surface and groundwater
  Proposed solutions include - more river walks in winter, report issues in smaller rivers and streams, education, community engagement, publicity about maintenance & number to report incidents, enforcement final option.
- **Diffuse pollution from agriculture,** impacts on surface and groundwater
  Proposed solutions include - large scale fen creation, less intensive land management, improved agri-environment schemes, promote good practice, build incentives, fencing, tree planting, soil testing and nutrient management planning.
- **Increasing water demand on Anglesey** for example Wylfa Newydd, wood chip power stations
  Proposed solutions include - address leaks, look at supply options from the mainland, change location of industry, improve water collection e.g. consider on-farm reservoirs (reduces demand from elsewhere), sustainable urban drainage schemes

5.3 Alternative objectives

We have identified a small number of water bodies where because of the nature of the problem or the required measures we propose an extended deadline or less stringent objective (less than good). In each case we have provided a justification.

Table 5. Proposed alternative objectives and justifications

Alternative objective	Justifications	Number of water bodies	Water body
Less stringent objective	Technically infeasible - complex transitional or coastal water failure	2	Alaw estuary, Holyhead Bay
	Technically infeasible - minewater scheme	1	Ynys Môn secondary groundwater
	Technically infeasible – ubiquitous and persistent chemical	1	Ynys Môn Central Carboniferous Limestone

5.4 Opportunities for partnerships

There are several external funding opportunities, which could support projects that contribute towards Water Framework Directive outcomes. Each fund has its own priorities, budgetary allocation and application process. Types of funding for consideration include:

- European funds – The EU provides funding from a broad range of programmes – go to the Welsh European Funding Office website for more information.
- Lottery Funding – such as Heritage Lottery Fund, Postcode Lottery and BIG Lottery Fund which have a range of programmes from £5000 up to £millions.
- Charities, trust & foundations – there are many of these operating and they often have a specific focus – either geographically or topically and will support local charities and projects.
- Businesses and sponsorship opportunities – including making the most of the Welsh carrier bag charge!
- Public bodies – Local authorities, Welsh Government, UK Government and NRW may have annual funding opportunities or one-off competitions for their priority areas.
- Crowdfunding – gathering support from a wide range and number of funders, often including individuals and usually using the internet to raise awareness for a specific project needing funds.
- Trading – Increasingly funders are looking to support organisations with longer term sustainability in mind so developing trading opportunities can be something to consider too.

Your local County Voluntary Council and Wales Council for Voluntary Action will have up to date information on opportunities such as these as well as a host of other support available.

6. What next?

This summary is intended to be a snap shot of the management catchment and should enable you to be able to access further detail using Water Watch Wales. We welcome your views on how we can improve how we do this.

The summary supports the current consultation on the updated river basin management plans. We encourage you to look at the river basin management plans and respond to the consultation questions which you can find on our website. If you have any questions, please e-mail:

ardalbasnafongorllewincymru@cyfoethnaturiolcymru.gov.uk / westernwalesrbd@naturalresourceswales.gov.uk

7. Water Watch Wales

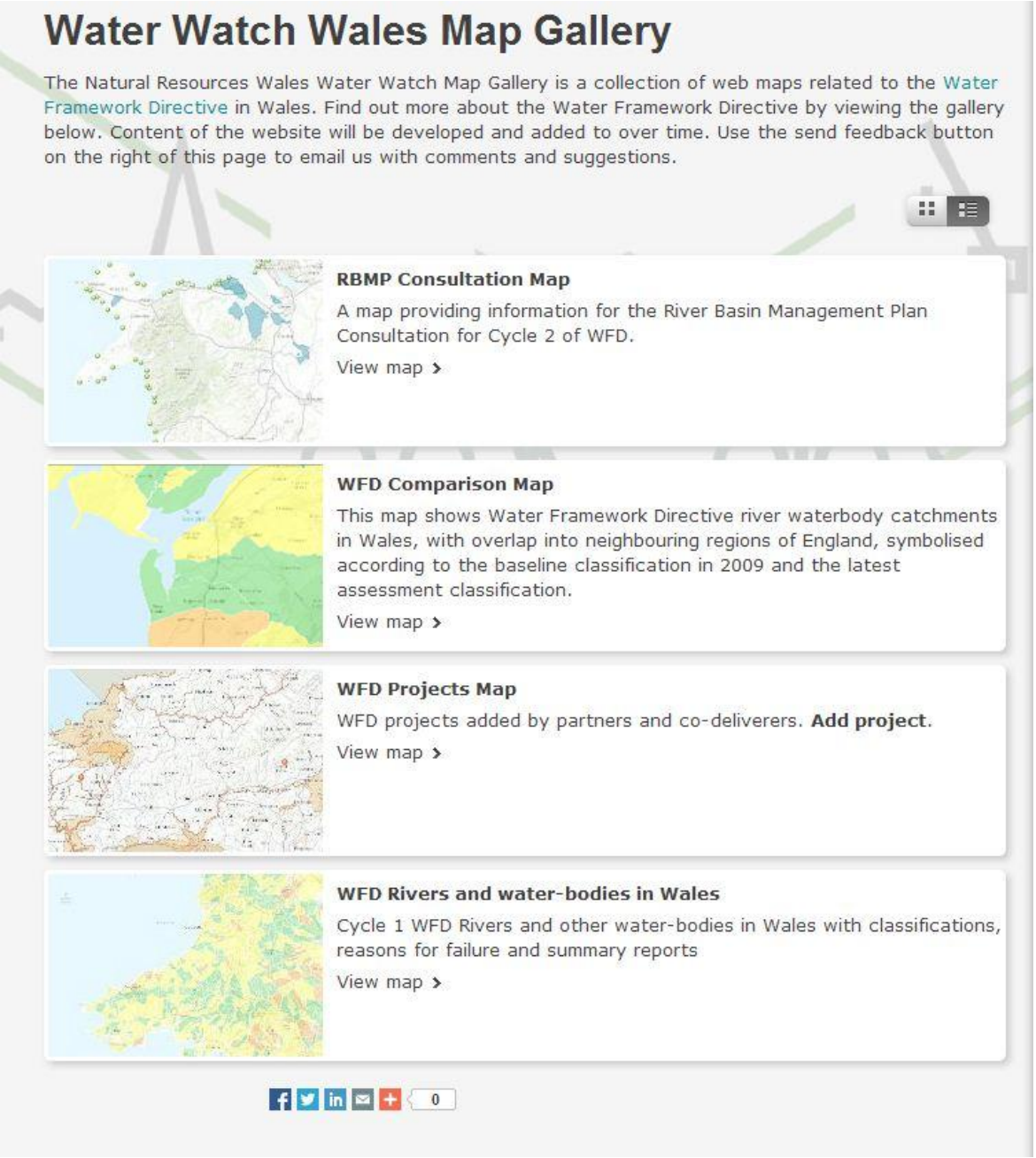
During the implementation phase of the first river basin management plan many of our partners and stakeholders requested access to data and information to assist them in helping to deliver local environmental improvements. It was quite clear early on that the first plan was difficult to navigate and access at a local scale. Consequently with both the support and input from the river basin district liaison panels a web based tool has been developed. This tool is called Water Watch Wales. This is an interactive spatial web-based tool that provides supporting information and data layers which can assist partners.

We are continuing to develop this tool and see it as a critical link between the more strategic river basin management plan and local delivery. It should enable the user to access information on:

- classification data at the water body scale
- reasons for not achieving good status
- objectives
- measures/actions, including protected area information
- partnership projects

Data can be retrieved in a number of formats (spreadsheets and summary reports). A user guide together with frequently asked questions is included with the tool and can be accessed from a link on the home page.

Figure 6. Opening screen shot for Water Watch Wales



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