

South East Valleys Management Catchment Summary

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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 South East Valleys Management Catchment



Figure 1. South East Valleys Management Catchment

The main rivers in the South East Valleys management catchment are the Ebbw and Sirhowy, which flow into the Usk Estuary and the Rhymney, Taff and Ely, which discharge to the Severn Estuary. The major urban centres include Aberdare, Caerphilly, Merthyr Tydfil, Pontypridd and Cardiff, which has an important commercial port.

The 'valleys' rivers begin high in the Brecon Beacons and flow through steep-sided valleys to the low-lying coastal areas of Cardiff and the Gwent Levels. The valley slopes have managed grassland and forest, while the narrow valley floors are extensively urbanised.

While many of the rivers have recovered from historical degradation caused by the iron, coal and other industries, the narrow valley floors mean that industrial and urban development has tended to lie close to the banks of the rivers, resulting in extensive man made changes, loss of riverside habitats and leaving rivers vulnerable to urban pollution.

Fish migration is restricted by alterations such as weirs, culverts and tunnels, which are the legacy of industrialisation and urbanisation. Through a prioritised programme of fish pass construction and weir removal involving Natural Resources Wales, Cardiff Harbour Authority and South East Wales Rivers Trust, most rivers are now accessible to migratory fish and work is ongoing to make sure fish can access spawning areas higher up the rivers and their tributaries. Further modifications took place at the lower end of the catchment when Cardiff Bay was created in 2000 by fully impounding the Rivers Taff and Ely, allowing redevelopment of Cardiff and Penarth and providing flood defence against the extreme tides of the Severn Estuary.

In the upper catchment, the headwaters of the Taff have been modified by a series of dams and reservoirs to supply water to the industries and residents of South Wales. Natural Resources Wales and Dwr Cymru Welsh Water are working to balance the impact on the natural environment from the dams and reservoirs in the catchment whilst securing the valuable water supply. The rivers have a flashy flow regime and due to the underlying geology some smaller tributaries can dry up in very dry summers.

Overflows from abandoned coal mine workings can cause water quality problems, but may also benefit river flows in the summer months. Multi-million pound minewater treatment schemes are operated by the Coal Authority at Taff Merthyr and Ebbw Six Bells. Many minewaters remain untreated, larger discharges to the Rhymney at Pontlottyn and Hengoed and the Sirhowy at Sunningdale have been costed at around several million pounds each over 25 years. Risk from misconnections and sewer overflows is high due to the old Victorian sewerage systems and the trunk sewers that run along the base of many of the rivers.

Priorities to achieve healthy waters in this catchment are to reduce the impacts of man made changes to the water environment to allow river life to thrive; balance the needs of water supply and river flow and tackle polluting discharges from minewaters and sewage inputs.

The Rhondda Valley is one of three areas in Wales where we are trialling an approach to natural resource planning/management. The purpose of the trials is to work with local stakeholders in determining how natural resources are best used and managed. A key element of this is understanding what roles our environment plays in supporting wider society. Our aim is to ensure that our environment is used sustainably, whilst at the same time we are responding to local needs, delivering benefits for people and business.

The South East Valleys management catchment summary does not include information on neighbouring coastal or estuarine waters as these are included within the Severn River Basin Management Plan.

in March 2014 a South East Valleys management catchment workshop was held at the Orbit Business Centre Merthyr. During this event the benefits of the catchment were captured. These included;

- Biodiversity of the rivers and wetlands. Important for species such as Otters, kingfishers, dippers, various bats, marsh fritillary butterfly, salmon, trout and other fish
- Proximity of the wider outdoor environment to the urban communities with opportunities for education and community groups.
- Recreation & Tourism angling, canoeing, walking, boating, cycling (Taff Trail, Bike Park Wales), Brecon Beacons National Park, Cardiff Bay.
- Renewable energy hydropower and windfarms (such as Penycymoedd).
- Water as a resource.
- Woodlands both as a resource and for their own ecological importance.

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 in development are included below:

Table 1.	Projects	delivered	in the SE	Valleys
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Project Name	Project Description	Partners
Living Levels	A project on the Gwent levels in development which aims to improve landscape connectivity, land management, restore wetland habitats & develop recreation opportunities with benefits for local communities, WFD and biodiversity.	RSPB, Gwent Wildlife Trust, IDB, local landowners, community
River Cynon Habitat and Easement Improvement Project	On the River Cynon, Groundwork and the South East Wales Rivers Trust are working together to improve fish passage over human made barriers.	SEWRT Groundwork Merthyr & RCT
Ebbw/Sirhowy Catchment Improvement Project	A local partnership working together with landowners to improve fish passage and restore habitat.	SEWRT, KWT, Groundwork Caerphilly, Blaenau Gwent CBC, Caerphilly CBC

Case study – Clean the Clun

The River Clun is currently failing to meet its WFD targets on Invertebrates and Fish, with the main reason for failure sighted as Misconnections and Sewage pollution.

"Clean the Clun" is a multi-partner landscape-scale initiative. Several partners have key objectives in the area, but all are centred on the flood plain and better ecosystem catchment management to achieve these objectives. Led by the South East Wales Rivers Trust but including other key partners such as RCTCBC, South and West Wales Wildlife Trust and Butterfly Conservation. The partnership is supported internally by NRW's biodiversity, fisheries and Environment Management teams. The project aims to undertake a wide range of activities to restore and protect the natural environment of the River Clun in the Ely Catchment in order to:

- Restore water quality and natural river features to promote ecological recovery;
- Remediate and prevent habitat degradation such as landfilling and fly tipping
- Create habitat for species particularly the Marsh fritillary Butterfly through nature reserves and management agreements
- Create appreciation and stewardship in local residents through education and activates
- Ensure a lasting legacy through planning policy and volunteer groups.

Recently NRW officers have been working with the Wales Community Rehabilitation Company (WCRC formerly Wales Probation) with offenders that have been given community payback orders, (formerly known as community service). To remove Himalayan Balsam from the banks of the River Clun.



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.

Number of water bodies	Natural	Artificial	Heavily Modified	Total
River*	21	4	12	37
Lake	0	0	18	18
Coastal	0	0	0	0
Estuarine	0	0	2	2
Groundwater	0	0	0	12
Total	21	4	32	69

Table 2. Number and type of water body.

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 3. Number and type of protected area.

Protected Area	Number
Bathing Waters	0
Drinking Water Protected Areas	35
Natura 2000 and Ramsar sites	10
Nitrate Vulnerable Zones	0ha
Shellfish Waters	0
Urban Waste Water Treatment Directive - Sensitive Areas	1

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.





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. In the South East Valleys catchment this included 13 river walks to assess the situation on the ground in more detail. The results of our findings are summarised in figure 3.



Figure 3. Reason for not achieving good status in the South East Valleys Management Catchment

The major issues are around physical modifications: barriers to fish migration from weirs and impoundments, flood defence structures, urban modifications and land drainage on the Wentlooge levels adjacent to the Severn estuary. Due to the heavily populated areas there is pressure from urban diffuse pollution, sewage and misconnections. There is also pressure from minewaters.

4.1 Workshop feedback on challenges

We need to work together to ensure the overall aims of the Water Framework Directive are met, in order to work together effectively we need to agree on the issues and solutions. The following section includes some of the challenges that were raised at the recent 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:

- Poor public perception of the environment pollution, litter, flytipping
- Catchment level management required joining up research, rural land management, forestry management, development pressures and river improvements
- Culverts / drainage structures / urban pollution
- Barriers to fish migration
- Diffuse pollution from urban areas, sewage outfalls and misconnections.
- Flooding
- INNS (Invasive Non Native Species) e.g. Himalayan Balsam, Japanese Knotweed,
- Lack of habitat connectivity
- Lack of education & advice on a range of issues
- Mine waters

4.2 Rhondda natural resource management trial

The Environment Bill proposes new duties for Natural Resources Wales to take an areabased approach to the sustainable management of natural resources. The Rhondda river catchment is one of three areas being used to explore how to embed the ecosystems approach to natural resource management in a specific geographical area.

The Rhondda is located in the central / northern valleys of Rhondda Cynon Taf County Borough Council (RCT), and was chosen as a trial area as it embodies the myriad of environmental, social and economic pressures found across the South Wales valleys. The Rhondda trial is also unique in that the Welsh Government Woodland Estate NRW manages accounts for approximately 40% of the whole catchment.

The Rhondda has two main valleys: the larger Rhondda Fawr and the smaller Rhondda Fach. The Fawr and the Fach valleys are generally steep-sided with narrow and developed valley floors. The valley side ffridd (the hillsides) comprises a mixture of acid grassland, heath, bracken, woodland, scrub and flushes. Many of the post-industrial sites in the Rhondda also support fantastic mosaics of grassland, wetland and woodland habitat.

The urban areas are experiencing: high levels of deprivation; dereliction compounded by a declining population; low levels of house building; below average levels of economic activity; and high levels of out commuting for employment. The local environment is also at risk from fires through arson, fly-tipping and anti-social behaviour, e.g. off road motorbikes in prohibited areas.

Natural resource planning requires a joint collaborative planning exercise through which issues and priorities are agreed, opportunities are identified and existing mechanisms that impact on natural resources work together to achieve delivery.

The output from this approach is proposed to be an Area Statement which clearly sets out the priorities and opportunities for the management of natural resources in the Rhondda catchment. The ongoing River Basin Planning work within the Rhondda catchment will form an integral part of the natural resource management trial. More information on the ecosystems approach and natural resource management can be found in the Severn River Basin Plan.

Case study – Fisheries improvement in the Ebbw catchment

- There have been major improvements in water quality over recent decades following the closure of the collieries and then Ebbw Vale steelworks along with improvements to the Western Valley trunk sewer. However the status is still only Moderate due to the quality of its fish populations, primarily as a result of barriers to migration, with the additional pressure of sewage issues in this densely populated catchment.
- In 2012 -13 via the Salmon for Tomorrow project we have removed or improved a number of weirs that were impassable to migratory fish on the Sirhowy, a main tributary of the Ebbw and on the main river itself. Fish can migrate as far as the former steel works site at Cwm on the Ebbw Fawr.
- We have developed plans to improve passage at 4 major barriers on the Ebbw Fach, with construction of fish passes via the Salmon for Tomorrow project at 2 of these sites in 2014. To complement this we have been working with South East Wales Rivers Trust, Groundwork Caerphilly and KWT to undertake in river habitat improvements, riparian tree work, bank revetment, invasive weed control, fencing and installation of gravel traps and introduction of gravel to create spawning beds.
- Gibbs Weir on the Sirhowy was a 3m high weir that we removed and regraded the river channel. We have evidence of salmon spawning upstream of this site in winter 2013 and salmon fry found in surveys undertaken in summer 2014.



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.

Measure	Description	No. of water bodies
Address air pollution	Emissions controls to reduce nitrogen and acidic depostion.	3
Complete first cycle investigation	All ongoing WFD investigations from first cycle programme.	19
Drainage and water level management	Investigate and implement changes to land drainage regimes and structures to restore water levels.	1
Improve fish passage and habitat	Remove or modify barriers to fish passage	18

Table 4. Summary of local measures.

Measure	Description	No. of water bodies
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.	8
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.	2
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	3
Mitigate impacts of flood and coastal defences	Reduce impacts of flood defence structures and operations - improve connectivity, habitat, and 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.	11
Mitigate impacts of water resource impoundments	Assess and implement options for improving fish passage and habitat.	13
New Investigation	Includes investigations for all new failures, deterioration, and drinking water protected areas.	41
Other sustainable land and marine management practices	Includes measures to mitigate impacts from construction and maintenance of infrastructure, including within military training sites.	1
Reduce impacts of other physical modifications	Improve connectivity, habitat and morphology through soft engineering and restoration techniques.	11
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 water drainage to sewers.	12
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.	1

Measure	Description	No. of water bodies
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.	11
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.	1
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.	7
Waste management	Includes appropriate management of spoil and sludge, illegal fly-tipping and litter	2

5.2 Workshop feedback on solutions

Of the challenges raised at the management catchment workshop, the following solutions were proposed as priorities:

- Poor public perception of the environment pollution, litter, fly tipping.
 Proposed Solutions: education of children to reach adults. Better education / information for the various interest groups. Better links between partners. Reward schemes linked to voluntary work.
- Catchment Scale Management. Proposed Solutions: partnership working at a catchment scale giving more collaboration, knowledge sharing, research, help to secure funding, better agricultural land management, better woodland management.
- Invasive Non Native Species Proposed Solutions: better coordination and drawing on a wide range of partner organisations and local communities.
- Diffuse pollution from urban areas, misconnections, development pressure.
 Proposed Solutions: relevant organisations working in partnership, proper assessment of planning applications and Local Development Plan obligations. Use of Sustainable Urban Drainage Systems, educating the public on where their drains go and what can / cannot be put down them.

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.

Alternative objective	Justifications	Number of water bodies	Water body
	Disproportionately costly - improvements to sewage treatment works	1	Nant Dowlais - source to conf Ely R
Less stringent objective	Technically infeasible – ubiquitous and persistent chemical	4	Ebbw R - conf Ebbw Fach R to Maes-glas Ely R - conf Nant Clun to Allot Gardens, Ely Taff - conf Rhondda R to Castle Street Taff - conf Rhondda R to Castle Street

Table 5. Proposed alternative objectives and justifications

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, trusts & 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.
- Crowd funding 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.

Opportunities suggested at the workshop include:

- Valleys Regional Park an initiative to co-ordinate, drive and promote activities related to the environment and heritage and associated tourism activities across the valleys of South Wales.
- Pen y Cymoedd Wind Energy Community Fund this fund may be worth around £1.8m per annum from 2016 and will be in place over 20 years. An opportunity currently to add and share ideas, project proposals & priorities for the fund.

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 4. Opening screen shot for Water Watch Wales

Water Watch Wales Map Gallery

The Natural Resources Wales Water Watch Map Gallery is a collection of web maps related to the Water Framework Directive in Wales. Find out more about the Water Framework Directive by viewing the gallery below. Content of the website will be developed and added to over time. Use the send feedback button on the right of this page to email us with comments and suggestions.





WFD Rivers and water-bodies in Wales

Cycle 1 WFD Rivers and other water-bodies in Wales with classifications, reasons for failure and summary reports View map >

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