



**Cyfoeth  
Naturiol  
Cymru**  
**Natural  
Resources**  
Wales



# Updated Local Authority services and the water environment

Advice note on the Water Framework Directive

Updated 22 November 2017

## **About Natural Resources Wales**

Natural Resources Wales' purpose is to pursue sustainable management of natural resources in all of its work. This means looking after air, land, water, wildlife, plants and soil to improve Wales' well-being, and provide a better future for everyone.

The Environment (Wales) Act sets out our statutory purpose. In the exercise of its functions NRW must:

1. pursue sustainable management of natural resources in relation to Wales, and
2. apply the principles of sustainable management of natural resources.

We also have a duty under the Well-being of Future Generation (Wales) Act to maximise our contribution to the seven well-being goals, through sustainable management of natural resources.

## **About the Welsh Local Government Association**

The Welsh Local Government Association (WLGA) represents the interests of local government and promotes local democracy in Wales. It represents the 22 local authorities in Wales and the 3 fire and rescue authorities and 3 national park authorities are associate members.

The WLGA's primary purposes are to promote better local government and its reputation and to support authorities in the development of policies and priorities which will improve public services and democracy.

Originally established in 1996 primarily as a policy development and representative body, the WLGA has since developed into an organisation that also leads on improvement and development, equalities, procurement, employment issues and hosts a range of partner bodies supporting local government:

The WLGA remains a constituent part of the Local Government Association (LGA) for England and Wales and since April 2005, Welsh local authorities have a revised Welsh corporate membership with the LGA, ensuring that the organisation continues to represent the interests of Welsh local government to the UK Government.

## **FOREWORD**

Restoring Wales' water environment is a priority and a key action within Welsh Government's programme for environment & sustainability. It requires an integrated approach to planning and managing our water and the wider ecosystem; balancing environmental, economic and social priorities. Working collaboratively will help deliver these Welsh Government priorities and is also the basis for taking an ecosystems approach that will benefit us now and in the future.

The Water Framework Directive (WFD) is a key tool to achieve these priorities and sets a framework to provide substantial benefits for the long term sustainable management of our waters delivered through River Basin Management Plans (RBMPs). We are all affected by this legislation. As individuals, at the most basic level we use water every day to drink, to bathe in, to cook with and to take our human waste away. We use water through the goods we buy and the industrial processes that make them. We use water for recreation, agriculture, fishing and transport. Water is essential for our health, our wellbeing, the economy and enabling a healthy functioning environment on whose services we all rely. Through our actions however, the fragile relationship between soil, water and vegetation has been altered. Urban development, drainage infrastructure and flood defences have further exacerbated those issues. All our activities place enormous pressure on water quality and quantity, and the ecosystems it supports and the services they provide to society.

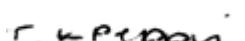
Natural Resources Wales role is to develop the RBMPs with key stakeholders and communicate the approach in Wales to improve the quality and ecological health of all our waters. As such, Local Authorities have a key role in contributing to the planning, delivery and promotion of the RBMPs in exercising their functions. This note provides further information on how Local Authorities can contribute in meeting these objectives and further background on the the WFD.

In Wales, the Directive now sits in a wider context under the Environment (Wales) Act 2016 and the Well-being of Future Generations (Wales) Act 2015. Natural Resources Wales and Welsh Local Government Association recognise the importance of working together. We all need to have a better understanding of the roles and responsibilities of our respective organisations, as well as those of our partners and how they can contribute to the requirements of the WFD.

The Environment (Wales) Act puts in place a delivery framework for the sustainable management of natural resources and introduces some simple principles to underpin the way we all work. The Well-being of Future Generations Act asks 44 Public Bodies in Wales to work in a sustainable way, and think about the impact our work can have for people living in Wales, now and in the future. The RBMPs set a framework for shared decision making and joint delivery. This will help us to focus on a more integrated approach to natural resource management, looking at the root causes of problems and working with stakeholders to find solutions which improve Wales' water environment and deliver the widest benefits.



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## **1. What is the Water Framework Directive?**

The WFD is the most substantial piece of environmental legislation ever produced by the European Commission. It came into force in December 2000 and became part of UK law in December 2003<sup>1</sup> (as amended)<sup>2</sup>. WFD is implemented across Wales and England through the Water Environment Regulations 2003. These Regulations were revoked in April 2017 by the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017.

The three key principles of the WFD are to: protect (prevent deterioration), restore (aim to achieve ‘good or better status’ and promote the value of the water environment. [See the RBMP Infographics](#). It sets a target for all waters; good overall status (e.g. insect, plant, fish life and chemistry) which is a measure of healthy water and a timeframe to achieve this. These Regulations aim to provide an integrated framework for the protection and restoration of the water environment through the delivery of actions set out in the RBMPs. This document reflects the need to meet the European Union Directive requirements and would be revised upon any changes following the Brexit process.

Natural Resources Wales has been designated by Welsh Government as the Appropriate Agency to develop and communicate the approach in Wales to improve the quality and ecological health of all our waters. These include rivers, streams, brooks, lakes, estuaries, canals, coastal waters out to one mile from low water, groundwater bodies and all water dependent protected areas. The Water Environment Regulations 2017 requires Public Authorities, including Local Authorities to “have regard to the RBMPs and any supplementary plans in exercising their functions” and ensure that water bodies status does not deteriorate through their actions.

The Well-being of Future Generations (Wales) Act 2015 sets out seven well-being goals that describe ‘the kind of Wales we want to see. The RBMPs are a key component of natural resource management. [The State of Natural Resources Wales Report \(SoNaRR\) 2016](#) sets out the state of Wales’ natural resources. It assesses the extent to which natural resources in Wales are being sustainably managed, and recommends a proactive approach to building resilience. The report links the resilience of Welsh natural resources to the well-being of the people of Wales as set out in the [Well-being of Future Generations \(Wales\) Act 2015](#)

Welsh Government have published their Natural Resources Policy that sets out a national context for our work and shows a clear link between the sustainable management of natural resources and the Government’s programme. Area statements will be developed by Natural Resources Wales with partners and stakeholders to put this policy into action. Area statements are an evidence base to help better integration of Natural Resources Wales and others’ plans and programmes.

### **1.2 River Basin Management Plans and their objectives**

For each River Basin District, the Water Framework Directive requires a RBMP to be published. These are plans that set out the environmental objectives for all the water bodies within the River Basin District and how they will be achieved. The plans will be based upon a detailed analysis of the pressures on the water bodies and an assessment of their impacts. The plans must be reviewed and updated every six years. Wales has three River Basin Districts: Western Wales is entirely within Wales, the

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<sup>1</sup> SI 2003/3242.

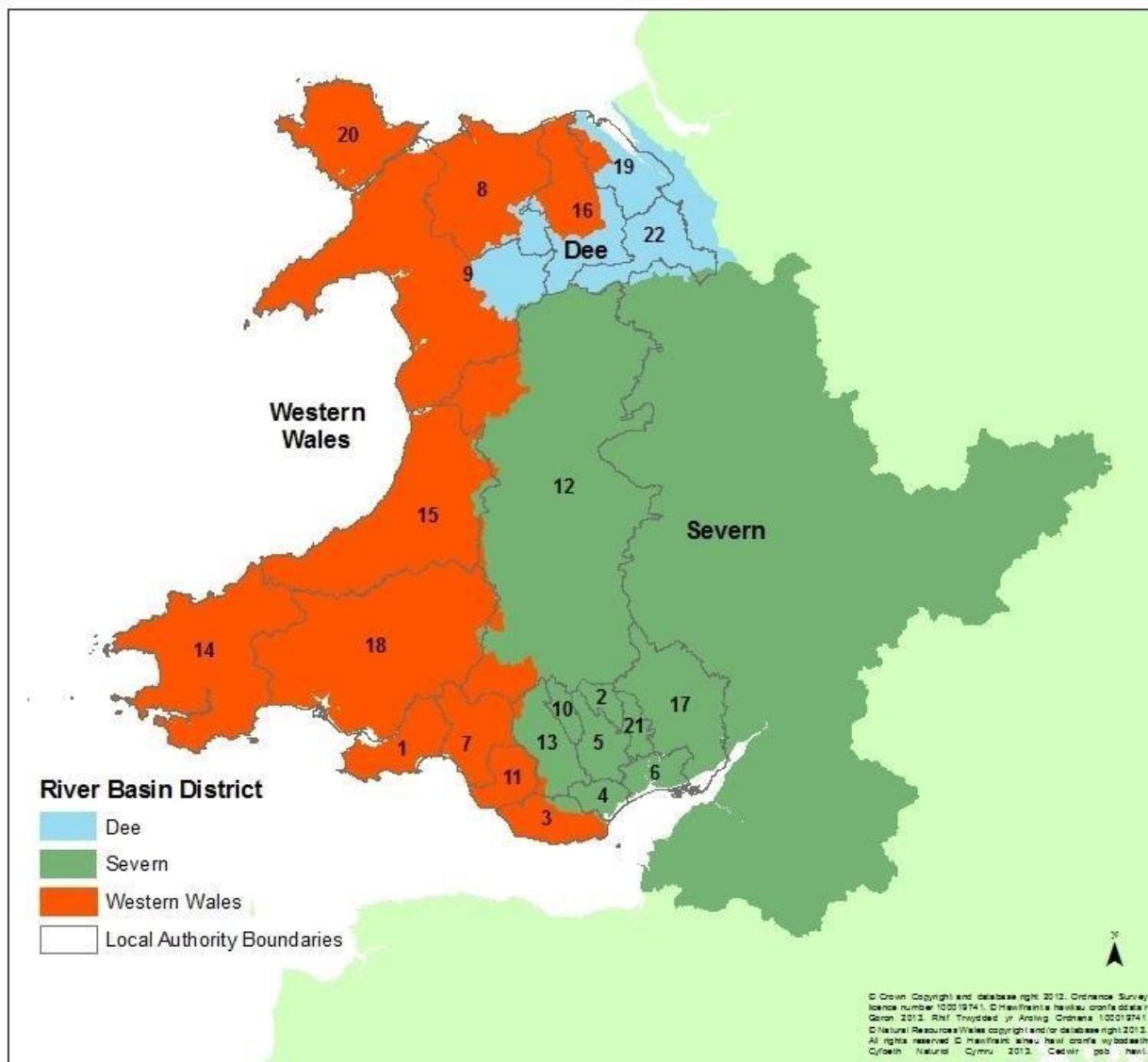
<sup>2</sup> The Water Environment (Water Framework Directive) (England and Wales) Amendment Regulations 2015, SI 2015/1623; and The Water Environment (Water Framework Directive) (England and Wales) Amendment Regulations 2016, SI 2016/138.

Severn and Dee are cross border with England (see Figure 1). Natural Resources Wales leads on the Dee and Western Wales plans, the Environment Agency lead on the Severn plan. We work with the Environment Agency and partners on the cross border aspects for the Dee and the [Severn](#). The [updated River Basin Management Plans 2015-2021](#) are available on the web site. The updated plans have been influenced locally by the feedback from the consultations that were held during the first cycle.

The plans have been aligned with the development of the Flood Risk Management Plans to identify where there are mutual benefits and able to co-ordinate delivery for the environment, economy and society of Wales. The plans are updated every six years. The plans are prepared in consultation with a wide range of organisations and individuals. They set out how Natural Resources Wales, Welsh Government, Local Authorities, water companies, farming groups, industry, individuals and many others need to take collective action to improve Wales' waters via a programme of measures.

Each district has a Liaison Panel with members from the key sectors that provides an open forum for delivery partners to discuss and influence the development of the plans and assist with implementation.

**Figure 1 shows the River Basin Districts and the Local Authorities that fall within them**



**Figure 2 Local Authorities and River Basin Districts**

Label No.	Local Authority	Label No.	Local Authority
1	Abertawe – Swansea	12	Powys - Powys
2	Blaenau Gwent - Blaenau Gwent	13	Rhondda Cynon Taf - Rhondda Cynon Taf
3	Bro Morgannwg - the Vale of Glamorgan	14	Sir Benfro - Pembrokeshire
4	Caerdydd – Cardiff	15	Sir Ceredigion - Ceredigion
5	Caerffili – Caerphilly	16	Sir Ddinbych - Denbighshire
6	Casnewydd – Newport	17	Sir Fynwy - Monmouthshire
7	Castell-nedd Port Talbot - Neath Port Talbot	18	Sir Gaerfyrddin - Carmarthenshire
8	Conwy – Conwy	19	Sir y Fflint - Flintshire
9	Gwynedd – Gwynedd	20	Sir Ynys Mon - Isle of Anglesey
10	Merthyr Tudful - Merthyr Tydfil	21	Torfaen - Torfaen
11	Pen-y-bont ar Ogwr – Bridgend	22	Wrecsam - Wrexham
23	Pembrokeshire Coast National Park	24	Brecon Beacons National Park
24	Snowdonia National Park		

The RBMPs include statutory commitments to:

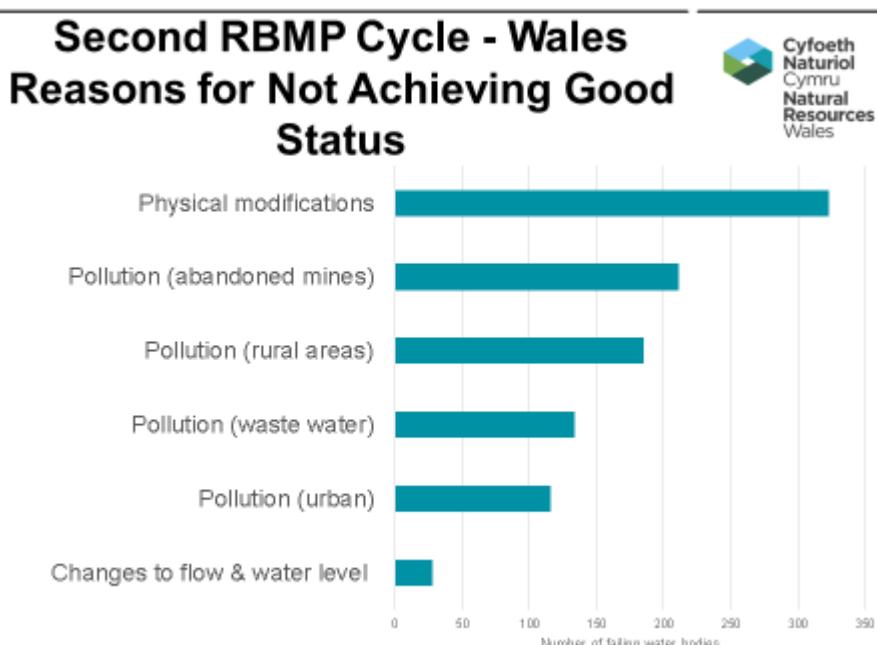
- protect the water environment from deterioration;
- achieve the objectives of Protected Areas by 2021 (i.e. Habitats and Birds, Bathing Waters, Drinking Water, Freshwater Fish, Shellfish Waters, Nitrates, Urban Waste Water);
- aim to achieve WFD Good Ecological Status/Potential and Good Chemical Status for all surface waters (and the equivalent for ground waters) by 2021.

### 1.3 Current status

In the first cycle (2009-2015), an increase of 7% of water bodies meeting good or better overall status was achieved in Wales. At the start of this second cycle, 37% of water bodies are at good or better overall status and we are aiming for a minimum increase to achieve 42% by 2021. For more information on progress during the first cycle see the [River Basin Planning Progress Report for Wales 2009-2015](#) that was updated in December 2015.

The main reasons for not achieving good status are shown in figure 3. The diagram illustrates the scale and the reasons for not achieving good status across Wales. The data was obtained from the 'Reasons for Not Achieving Good' (RNAG) data that was gathered from the investigation work carried out during the first cycle of the RBMPs. RNAGs are categorised as suspected, probable or confirmed, depending on the level of confidence in our investigation. This is available on [Water Watch Wales](#)

**Figure 3**



Local Authorities have measures identified by Natural Resources Wales and the list of measures can be found on [Water Watch Wales](#). The [Catchment Management Summaries](#) have been developed which present information at a more local level. They have also been updated and are available on the website.

## 2. Local Authorities functions and the water environment

Every public body has a duty 'to have regard' to the WFD. On a more practical level, Natural Resources Wales do not own or manage all water bodies and the surrounding land. Natural Resources Wales needs organisations, communities and individuals to take responsibility and put actions in place to improve Wales' water environment.

Unlike many other legislations, the responsibility for delivering the Water Environment Regulations 2017, WFD does not always clearly fall within the remit of a single department but is spread across several key services and can be indirectly delivered through various legislation as highlighted in Figure 6 WFD Interactions).

Local Authorities have committed to delivering measures to improve the water environment under the Programme of Measures in the RBMPs. Implementing the Programmes of Measures will involve bringing together funding from various sources and co-ordination of the activities of organisations with an interest in the use of land and water. Some measures will require Local Authority implementation through the land use planning system, for example, the granting of planning permission with appropriate planning conditions and/or planning obligations. These could require measures (eg Sustainable Drainage Systems (SUDS), grey water recycling etc.) to be implemented or funds provided.

**Figure 4 WFD Interactions**



The following sections sets out the main Local Authority responsibilities and how they can be discharged in a manner that will assist in the achievement of the objectives of the WFD. Section 4 provides information on guidance WFD compliance and assessment. The Advice Note was first produced in 2013 when Natural Resources Wales was established and is now updated.

## 2.1 The Town and Country Planning Process and Building Control

Development has the potential to have both positive and negative impacts on the water environment and the status of water bodies. The Planning and Building Control functions are therefore at the forefront to help deliver the requirements of the WFD through careful considerations and consultation, and by avoiding or minimising the adverse effects of any environmental risks on present or future land use.

National strategic aims are set out in Chapter 13: ‘*Minimising and Managing Environmental Risks & Pollution*’ of Planning Policy Wales (PPW) (Edition 9, November 2016) <http://gov.wales/topics/planning/policy/ppw/?lang=en>. This document emphasises the role of local planning policies in contributing to the requirements of the WFD through development plans and clear strategic policies.

The Planning Inspectorate has published a series of advice notes that are intended to inform developers, consultees, the public and others about a range of processes. Find out more about proposed major infrastructure projects within England and Wales see <https://infrastructure.planninginspectorate.gov.uk/>

In delivering for the water environment through strategic planning and the development management and building control processes, Local Planning Authorities (LPAs) may be able to achieve many objectives of their Local Development Plans (LDPs). For example, improvements in the water environment contribute to the wider amenity, flood risk management, recreation, tourism and biodiversity objectives, climate change resilience which can support local economies.

## **What can you do?**

### **Strategic Planning and Planning Process:**

- Ensure LDPs and their associated Strategic Environmental Assessments/ Sustainability Appraisals are informed by evidence and information, including data from the RBMPs and Catchment Summaries. This should help draw out the issues relating to water which need to be addressed through the LDP. Some examples are shown below:
- Ensure development is appropriately located. For example, water-intensive development should only be allocated in areas where sufficient water is available for use.
- Protection, through allocation in the LDP, of water-related sensitive locations, such as wetland habitat.
- Restore and protect the water environment by encouraging the use of green engineering to restore the natural state and functioning of the river system. This will help to support biodiversity, recreation, flood management and landscape development. See <http://eprints.hrwallingford.co.uk/1400/> for information on green engineering.
- Encourage upgrades to water related infrastructure, for example, water supply, wastewater sewerage and treatment, flood risk management, sustainable drainage and green infrastructure. Such improvements can help ensure that infrastructure is in place to enable delivery of strategic development sites.
  - Incorporate Water Sensitive Urban Design (WSUD) techniques (including Sustainable Drainage Systems (SuDS) into new development. See Greener Grangetown Case Study below. See the [Connect Right](#) campaign for more information.
- Encourage the remediation of land affected by contamination.
- Consider the role of the Community Infrastructure Levy (CIL) or S106 agreements to help deliver WFD outcomes, for example, water based habitat creation, green and blue infrastructure enhancement or creation.
- Seek the views of other Local Authority departments and partners for advice on how the LDP can deliver wider outcomes relating to water, for example, habitat improvement and creation opportunities, encourage water-based recreation or reduction of surface water flooding by developing and delivering green infrastructure. There may also be opportunities to make links to other Local Authority and partner plans and strategies.
- Seek the views of other local authority departments and specialist consultees on individual planning applications to ensure proposed developments will not have adverse effects on water bodies.
- Identify appropriate indicators to record alongside Sustainable Development Indicators to monitor the effectiveness of WFD implementation. For example:
  - Number/percentages of planning permissions granted that include SuDS.
  - Area of wetland habitat created through the development process.
  - Number of removals of barriers to fish for example, weirs etc.
  - Ecological status of the water bodies within the LDP area.

Many of the ecological indicators will already be collated by Local Authority ecologists / biodiversity officers:

- Prepare appropriate guidance for developers (for example, Supplementary Planning Guidance); if there are significant WFD issues. This could also be linked to existing guidance for example ordinary watercourse consenting guidance managed by flood colleagues.
- Ensure early engagement on projects likely to have an impact on the water environment: For example: raise awareness of WFD within planning policy and other LA teams.
  - Ensure early engagement on projects likely to have an impact on the water environment with: Natural Resources Wales – operational planning teams.

- Relevant Local Authority teams, such as Drainage, Highways, Regeneration, Community Planning, Parks, Recreation and Health. and Local Authority ecologists / biodiversity officers.
- Raise awareness with Water Companies.
- Incorporate any WFD issues into planning application validation checklists. All applicable planning applications should include the requirement for a WFD assessment or screening. This should inform changes to the proposed location or design to ensure that impacts can be avoided, mitigated or compensated.
- Promote TAN 22 and The Code for Sustainable Homes to developers and home owners.
- Collaborate early with flood and pollution control lead officers when drawing up S106 agreements that secure foul and surface water drainage connections from new development. Early collaboration can help ensure any proposed attenuation measures or soakaways to ground do not affect surface and groundwater water quality and quantity. This should be done before the S106 agreement has been signed.
- Classify and assess the disposal of waste  
<https://naturalresources.wales/guidance-and-advice/environmental-topics/waste-management/how-to-classify-and-assess-waste/?lang=en>

### **Case Study: Greener Grangetown, Cardiff**

Using the SuDS techniques, the scheme will catch, clean and divert rainwater directly into the River Taff instead of pumping it over eight miles through the Vale of Glamorgan to the sea. This will significantly reduce the carbon footprint and costs associated with pumping the water through the existing network.

The innovative techniques include installing rain gardens and kerbside planting areas. Once up and running these areas will not only help to improve local drainage, but will also enhance local biodiversity and wildlife. They will deliver important improvements to water quality in the River Taff too. The scheme will also establish 135 new trees and 1,600m<sup>2</sup> of additional green space. These will provide new homes for wildlife and open up new opportunities for people to enjoy walking, cycling and other recreation close to where they live and work. There is overwhelming research that being closer to green space also improves people's physical and mental well-being. At the same time, more greenery and tree planting will also mean noise and pollutants should be better absorbed, and air will be cleaner too.

Since its conception, the project has put community involvement at the heart of the scheme, with drop-in events and street surgeries to explain the project and provide opportunities to comment on potential designs, proposed new road layouts and parking arrangements. Construction started in January 2017 and will be completed in November 2017

A video is available to explain the project, what currently happens to rainwater in Grangetown and the benefits the project will bring. For more information contact [Martyn.Evans@cyfoethnaturiolcymru.gov.uk](mailto:Martyn.Evans@cyfoethnaturiolcymru.gov.uk) visit the [Greener Grangetown website](#) or follow the project on Twitter @greenergrange using #greenergrangetown



## **2.2 Flood Risk Management**

Following the implementation of the Flood & Water Management Act 2010 (FWMA), councils in Wales are the Lead Local Flood Authorities (LLFAs) are responsible for the management of flood risk from surface water, groundwater and ordinary watercourse. Under the Land Drainage Act, LLFAs also lead on ordinary watercourse consenting and enforcement.

These functions are mostly covered by Land Drainage and Highways departments. The impacts on the water environment resulting from land management, highways and flood risk management activities can often affect the physical, ecological and chemical processes.

These impacts are not only limited to freshwater environments but will also affect coastal waters and the marine environment. For example:

- Physical alterations of the water environment for the purpose of flood risk management or land reclamation purpose including coastal defences.
- Changes to drainage patterns, such as increased volumes of run-off and changes to natural functioning of flood plains can also have an adverse impact on the water environment.
- Diffuse pollution and water run-off from roads: run-off can carry a mix of polluting substances, such as oils, toxic metals, pesticides, salts and sediments which can seriously affect surface, groundwater bodies and bathing water quality.
- Poorly designed highways and the excessive use of artificial channels and culverts will also affect the morphology and ecology of watercourses.
- Excessive discharge of surface water from developments into watercourses can affect water quality and ultimately increase the risk from flooding downstream.
- Temporary works in, on or around ordinary watercourses.

### **What can you do to minimise the impacts on the water environment and contribute to the WFD objectives to enhance the water environment.**

- Ensure that works such as culverts, crossing points, bank repair works in terms of hydromorphology and land drainage are checked and assessed to meet WFD requirements.
- Ordinary watercourse consent should include a WFD screening to take into account WFD requirements and objectives.
- Consider adopting the recently approved Land Drainage byelaws which will provide an element of control over unconsented works and other activities likely to increase both the risk of flooding and impact on water bodies.
- Assess and comment on the impact of proposed development on water environments as part of your planning consultation response to inform decisions.
- Flood defence should meet WFD requirements and not cause any water bodies to deteriorate from their current status or prevent future improvements taking place.
- Consider mitigation measures when undertaking flood defence work in Heavily Modified Water Bodies. To mitigate for the increase in channel morphological diversity see the example that shows [restoring and stabilising over-deepened river bed levels, River Ogwen and Nant Francon, Gwynedd](#).

The [River Restoration Manual](#) contains more examples in the form of environmental improvements to help river managers identify potential restoration techniques for use in river restoration and sustainable river management. It now includes 64 case examples which can be downloaded as PDFs at 35 sites across the UK.

- Encourage the opening up of culverted watercourses and removal of artificial structures, where they fall within the boundaries of new development sites.

- Use green engineering where possible – see <http://eprints.hrwallingford.co.uk/1400/> for examples of green engineering.
- Planned works can be adapted to ensure they are beneficial to the water environment. Liaising with your biodiversity section and third sector organisations can bring additional support and opportunities for resources and funding.
- Ensure a WFD assessment is undertaken as early as possible in the process to inform decisions and prior to any major work taking place. Your local NRW officers will be able to advise.
- Early engagement with Natural Resources Wales, planners and other key players to identify and solve potential issues and identify opportunities which deliver wider benefits is key to successful schemes.
- Promote the non-statutory SuDS standards to help deliver long term benefits in tackling diffuse pollution, surface water flood risk and ecosystem benefits.
- Seek opportunities for retrofitting existing developments with SuDS and WSUD. These can bring benefits to communities, such as decreased levels of surface water flooding, improved water efficiency in homes and improvements to local open spaces.
- More information can be found at [CIRIA](#)

## 2.3 Highways

- Ensure that transport and new road projects are designed and assessed for the WFD to reduce the polluting effect to a minimum from any resulting run-off and to reduce flood risk. The use of environmental assessment tools (incorporating consideration of the water environment) can assist. Drainage from roads should ideally be to surface waters and not to sewers.



### Case Study: Ordinary Watercourse Regulation

The Vale of Glamorgan Council take a proactive approach to ensuring that consentable activities on a watercourse are compliant within the Water Framework Directive. A standard advisory note is requested to be attached to planning application decision notices where the LLFA are directly consulted upon sites which are located near watercourses and works have the potential to affect water quality. This is to raise the awareness for the potential requirements of Land Drainage Consents for works in and around a watercourse.

The Vale are actively talking to developers at early stages of planning applications to discuss the requirements of surface water drainage strategies and Land Drainage Consents, along with the need for WFD Assessments as part of the consenting process. An example of this would be Darren Farm, Cowbridge where Vale of Glamorgan have been involved from an early stage of the surface water design advising on requirements for the surface water drainage strategy and OWC/WFD Assessment for a new link road which will cross the site.

The Vale of Glamorgan Council also provide applicants with up front information on their website; this includes the potential need for applicants to complete an assessment to demonstrate compliance.

**Water Framework Directive Assessment:** Certain consentable activities or works will require a Water Framework Directive (WFD) Assessment to be carried out. The purpose of the WFD (Directive 2000/60/EC) is to establish a framework for the protection of surface waters (including rivers, lakes, transitional and coastal waters) and ground waters throughout the EU territory. Pre-application discussions will identify, or rule out, the need for such an assessment. Please note that if required the WFD Assessment must be completed prior to submission of an application for consent. If a WFD assessment is deemed necessary and not supplied consent will be denied.

- Identify and monitor where new roadworks are likely to bring benefits. For example, creating attenuation ponds or soakaways will benefit water quality through filtration and create opportunities for wildlife.
- Undertake environmental impact assessments and WFD assessment to identify potential pollution or flooding risks and implement measures to mitigate these risks through adequate drainage design.
- Manage winter salt and gritting operations to minimise polluting runoff and impacts on the water environment.
- Storage of leaf litter in road lay bys.
- Work closely with Natural Resources Wales and Fire & Rescue Service to control pollution risk from accidental spillages of fuels, chemicals or other polluting materials on highways or incidents.
- Store materials at local authority highways depots to avoid pollutants entering surface water drains.
- Follow good practice when using pesticide and herbicide alongside roads to avoid impacts on water quality and water body ecology.
- Attenuation ponds should be installed for all surface water drainage.
- Staff trained in the use of spill containment kits on highways and highways depots.

## **Case Study: Conwy County Borough Council (Conwy CBC), North and Mid Wales Trunk Roads Agency (TRA) and Natural Resources Wales (NRW) working together to prevent deterioration of river quality**

### **Issue**

In December 2015, high flows in the Afon Iwrch in the Conwy catchment scoured the bridge embankment on the main A5 trunk road and urgent work was needed to safeguard the road and keep transport links open.

### **Background**

The Afon Iwrch is an important salmon and sea trout spawning tributary of the River Conwy. NRW monitoring surveys had identified that fish numbers were poor and identified it as a priority to get good status in the first Water Framework Directive, 2009 Western Wales River Basin Management Plan. A series of farm visits by NRW and collaborative work with local landowners and the Conwy Clwyd and Gwynedd Rivers Trust to improve spawning habitat within the river resulted in an improvement of the fish status of the river improving from poor to good by 2015.

The Afon Iwrch is an “ordinary watercourse”. This means that Conwy CBC are the Lead Local Flood Authority (LLFA) for this river since 2012, when responsibility for determining applications for Consent under Section 23 of the Land Drainage Act 1991 became the responsibility of Lead Local Flood Authorities (LLFAs).

### **Solution**

As these were high risk emergency works, Conwy CBC contacted NRW in January 2016. A site meeting took place to discuss potential options with Gwynedd Consultancy, the designer and project manager working on behalf of the North and Mid Wales TRA. The initial option proposed was to divert the river channel through a gravel bar on a meander just upstream of the bridge which would have temporarily changed the river channel and protected the bridge. However, it would have also dried up an area of fish spawning habitat which at that time of year would have been catastrophic for fish eggs.

Through on-site discussion and option appraisal, a temporary working method was agreed with short term protection to prevent further erosion on the bridge without drying out the spawning channel. This allowed more time to plan a detailed scheme, with new piling and bridge supports which could be carried out in the summer when flows were lower and fish eggs in the gravel had hatched.

This also demonstrated the need to think about a longer stretch of river when considering in- river works. The initial option, without additional work to the channel upstream, could have resulted in the river meandering back towards the exposed bridge pillar in the next flood.

### **Outcome**

Conwy Council recognised that this was an important section of river and because the operation was high risk they contacted NRW. By contacting NRW prior to starting work we could work together to ensure that the road bridge was protected without impacting valuable fish spawning habitat of the Afon Iwrch, thereby preventing deterioration under the Water Framework Directive.

Photograph from A5 road bridge showing erosion adjacent to the Afon Iwrch in January 2016



Work to put temporary solution in place, keeping spawning habitat wetted and preventing deterioration



Photo Credits Conwy County Borough Council

## **2.4 Environmental Health and Pollution Control**

Local Authorities have a major role to play in promoting water environment benefits through environmental health and pollution control functions.

### **What can you do?**

- Engage with businesses to stimulate behaviour change to reduce risks of pollution. For example: advise catering establishments not to dispose of food waste directly to surface water drains, and encourage the safe storage of oils and hazardous substances.
- Raise public awareness of drainage misconnections and water efficiency. Misconnections include both dirty water entering drains which discharge and pollute watercourses, and also rainfall run-off which ends up in sewers when better sustainable drainage alternatives exist or can be constructed. See the [Connect Right](#) campaign for more information.
- Tackle the health implications associated with poor management of private sewage treatment systems (septic tanks and cesspits).
- Provide data and information, for example at bathing waters and use planning and statutory nuisance duties to prevent unauthorised activity that can contribute to water pollution, for example car washing. Raise awareness of the need for the correct disposal of rubbish and dog waste.
- Prevent and tackle illegal fly tipping and littering of waters.
- Local Authorities, as beach controllers, are required to erect signs giving a summary of the bathing water profile and current classification of bathing waters.
- Local authorities are responsible for dealing with most types of small scale fly-tipping on publicly owned land including roads and lay-bys.

## **2.5 Estates including green space and buildings**

As significant land and property owners, local authorities play an important role in protecting and improving the water environment. Below are some examples of actions that teams who are responsible for Local Authority landholdings and buildings can take. Local Authority and Natural Resources Wales operational teams need to work together to discuss and identify potential opportunities and how these can be realised.

### **What can you do?**

#### **Land & Green space**

- Design and maintain drainage schemes on Local Authority sites and land to provide valuable flood management, water quality, ecological and amenity benefits.
- Manage mowing regimes: by reducing the frequency of mowing, the rates of surface water run-off can be reduced, thereby reducing sediment loading and risks of polluting substances entering watercourses. Longer grass areas have a greater capacity for water retention and infiltration, and buffer zones alongside water courses also help to filter out potential pollutants and provide bankside habitat and wildlife. .
- Use trees and shrubs as buffer strips which can dramatically increase rain infiltration rates into the ground. Additionally, planted as shelter belts trees can have major impacts on wind chill on exposed houses, as well as improving biodiversity and connectivity, air quality and visual amenity and provide shade.
- Manage Invasive Non Native species including Himalayan Balsam, Japanese Knotweed, Floating Pennywort and Giant Hogweed. These can have significant impacts on watercourse ecology by suppressing the growth of native flora, damaging habitat for insects and fish, impeding water flow and increasing flood risk. Responsibility for dealing with invasive weeds rests with individual landowners, including Local Authorities. Controlled efforts to help reduce the spread of invasive non-native species are especially successful when conducted using as a catchment

wide co-ordinated approach. Ensure the Local Authority has Biosecurity plan for its own staff & functions and for any events held on Local Authority land. Further information on management and control techniques can be found via the GB National Non-Native Species Secretariat's website -

<https://secure.fera.defra.gov.uk/nonnativespecies/checkcleandry/index.cfm> - and in documents such as the Environment Agency publication '*Managing invasive, nonnative plants in or near freshwater.*

<http://www.environmentagency.gov.uk/homeandleisure/wildlife/31350.aspx>

- Use pesticides and herbicides appropriately: poor management of pesticide and herbicides can have serious effects on water quality and water body ecology. Training of spray operators and adoption of good practice such as in the Amenity Forum's briefing note on '*Pesticides and water protection for sprayer operators*' helps to minimise potential impacts on the water environment.
- Ensure Council owned land and holdings meet legal regulatory requirements and promote compliance with Welsh Governments Code of Good Agricultural Practice to Protection of Water Soil and Air where ever possible.

## **Buildings**

- Manage buildings to avoid pollution arising from drainage misconnections, spillages, chemical storage, preventing polluting substances going down surface water drains and vehicle washing. Divert rainwater from sewers to sustainable drainage alternatives such as soakaways or swales.
- Raise awareness of misconnections, and water pollution and water efficiency issues amongst Local Authority tenants (domestic and business tenants). These can dramatically reduce costs through cutting sewage charges and where rainwater drainage is removed from sewers the rainwater rebate can be applied to bills. Promote good practice through tenancy agreements.
- Ensure effluent from public toilets is treated and disposed of adequately.
- Ensure that private sewage treatment systems are kept in good working order. Package treatment plants and septic tanks pollute the environment if not maintained correctly, contributing to poor water quality and can contaminate private water supplies from wells, boreholes and springs. Depending on the sensitivity of the local environment, a private sewage treatment system must either be registered as an exemption or permitted under the Environmental Regulations 2016. Further information can be found here:

<https://naturalresources.wales/permits-and-permissions/water-discharges/register-your-septic-tank-package-sewage-treatment-plant/?lang=en>

<https://naturalresources.wales/permits-and-permissions/water-discharges/register-your-septic-tank-package-sewage-treatment-plant/?lang=en>

- Implement sustainable features in buildings such as rainwater harvesting, woodfuel heating system and waste management schemes.
- Implement water efficiency measures: in (e.g. buildings and green space management) and also encourage water efficiency practices amongst local residents and businesses. This can reduce water charges, and where properties are metered it will reduce sewerage charges too. In addition, Natural Resources Wales and Energy Saving Trust provide advice and information to water users on efficiency measures.
- Ensure Building Regulations inspections of new buildings and extensions or refurbishments include checks on drainage connections (under Part G of the Building Regulations) to identify and rectify any misconnection problems. This includes ensuring that grey water drainage is not connected to surface water drainage, but also that rainwater drainage from roofs and pathways is not disposed of into sewers if soakaways or surface water drainage options are available.

- Promote efficient use of water in new buildings and refurbishment. Include rainwater collectors as good practice.

## **2.6 Partnership and awareness**

Local Authorities play an important role as community leaders in educating, advising and integrating communities and alongside their Public Services Board partners, making communities more resilient which can also support the delivery of WFD objectives. The Public Services Boards and their Well-being plan provide an opportunity to consider where and how they can support the delivery of WFD outcomes.

### **What can you do?**

- **Community led improvements**, including access improvements, habitat improvements, litter clean ups, recreation and education activities; this can often be done by working with partners such as, water companies, voluntary sector organisations, community groups and Natural Resources Wales.
- **Tackle misconnections** - work with Natural Resources Wales, water companies, community groups, plumbing and building businesses to raise awareness of and tackle drainage misconnections where foul water from washing machines, bathrooms etc. is wrongly connected to surface water drains rather than to the foul sewer. Similarly roof water should run off to soakaways or surface water drains.
- **Work with businesses** to reduce the risk of water pollution. Encourage businesses to ensure that their buildings and assets (e.g. vehicle yards) have correct drainage connections and procedures for storage of chemicals and potentially polluting substances. Pollution incidents can arise from poor control of spillages and storage of oils and chemicals, pouring detergents and oils down surface water drains and dirty water from vehicle washing going down the drain. Clean rainwater from roofs etc should be harvested and stored in attenuation ponds etc or could be used for toilet flushing etc.
- **Promote public awareness** via campaigns, such as the Yellow Fish Campaign to raise awareness of pollution entering surface water drains, which ultimately end up in local streams and rivers.
- **Work with others**, such as NHS Trusts, and Fire and Rescue Services to help integrate water environment issues into their work. For example:
  - Integrate water environment issues into Local Authority services delivered by third parties, such as management of biodiversity, green space delivered by voluntary and private sector contractors and local communities
  - Work with others to raise awareness of the local economic value of a good quality water environment, water resources and the importance of "bluegreen" infrastructure in underpinning economic growth. See case study on Lower Swansea Valley.
  - Record all measures that help improve the water environment and report to NRW to include in the Progress Report report to Europe.

### **Case Study: Reconnecting Green and Blue Infrastructure**

The Lower Swansea Valley, in the Tawe flood plain, was an area of extensive industrial activity between the 18<sup>th</sup> and 20<sup>th</sup> centuries. Today, it is redeveloped and is now home to a large retail and commercial estate of regional significance to the Welsh economy.

The Lower Swansea Valley flood risk management scheme was located 2 miles north of Swansea City Centre and reduces the risk of flooding to some 300 businesses and homes. Over a 4km reach, the River Tawe's capacity has been increased by creating more space for water to flow, removing restrictions to flow and raising low spots along the river banks. The flood embankments have been set back from the river to create a 6 hectare natural wetland habitat (see picture). Protecting and restoring wildlife habitats is an important issue for the WFD. There were also specific creation targets, including new areas of wet grassland, wildflower meadow and wet woodland.

The work was developed through a collaborative partnership with the City and County of Swansea and completed in 2014. As the major landowner and stakeholder, the local authority helped to ensure that the scheme not only delivered the flood defence objectives but would also enhance the environment and landscape.

The creation of a natural wetland provides the necessary environmental requirements to enhance the ecological status of the River Tawe. This demonstrates how WFD can deliver integrated solutions to improve the environment for people, the economy and wildlife of Wales. For further information contact [Mark Davies](#)



Naturalised Wetland , photo credit Mark Davies

### **3. Good Practice**

As well as good practice in integrating WFD issues into the different Local Authority functions, some examples of steps that Local Authorities have taken are shown below:

- ✓ Establish a lead Cabinet Member or senior manager (e.g. from drainage, planning policy or environmental strategy teams) with overarching responsibility for ensuring that water environment and WFD issues are effectively integrated into different local authority functions and progress is monitored.
- ✓ Establish a small officers group within the Local Authority, with representatives from relevant functions. This group should identify key actions to complete and promote cross-functional working on WFD and water environment issues.
- ✓ Use a simple checklist for assessing and monitoring how WFD issues are being integrated into the work of the Authority
- ✓ Build good working relationships with external partners. For example, organising training sessions for officers on topics such as the WFD, river restoration and new SuDS roles and in delivering actions.

### **4. Guidance**

Natural Resources Wales must ensure compliance with the requirements of the WFD and other obligations; when undertaking its own operational activities, issuing consents or licences for activities, or when advising other decision makers. Natural Resources Wales have published updated guidance relating to WFD compliance and no deterioration, these explain what is considered deterioration (in light of recent case law), which can be used when assessing new activities or projects, or for identifying a deterioration at element/water body scale between cycles. It also sets out the process for addressing deterioration and how to record actions taken. The compliance assessment guidance includes a suggested 3 stage approach to WFD compliance assessment – screening, scoping and detailed assessment. In the event that an activity may prevent the water body achieving good status or cause deterioration then it may be allowed to proceed if it meets the requirements of Article 4.7.

The recent Court of Justice (CJEU) ruling (Weser judgment/Bund case) highlighted the importance of completing a WFD assessment at the planning stage.

Points to note: WFD should be considered at an early stage in project planning and included in pre-application discussions to ensure avoidance, mitigation and/or improvement measures are built in to the project where appropriate to minimise costs for the applicant and to provide the best environmental outcome.

The Directive does not specify the format or process to follow for WFD assessments. This allows a flexible and proportionate approach to be undertaken.

The WFD assessment must consider:

- all activities carried out; and,
- each stage of the activity, for example construction, operation, maintenance and decommissioning.

### **5. Timeline**

The timetable for the consultations required under WFD are shown in figure 5 for the second cycle.

The final RBMP plan will be published in 2027.

**Figure 5 Timeline**  
**Timetable for River Basin Management Plans (2015-2021)**

Stage	Date and Duration	Purpose
Working Together Statutory consultation	Consultation: 22 June 2018 to 22 December 2018  6 Months Duration  Response document published March 2019	'How should we all work together to update the river basin management plans?' <ul style="list-style-type: none"> <li>• Asking how you want to be involved.</li> <li>• Explaining the key steps in the river basin management planning process for cycle 3.</li> <li>• Establishing a network of contacts for cycle 3 planning.</li> </ul>
Challenges and Choices Statutory consultation  Significant Water Management Issues	Consultation: 22 June 2019 to 22 December 2019  6 Months Duration  Response document published March 2020	'What are the significant water environment issues and what can be done about them?' <ul style="list-style-type: none"> <li>• Improving and sharing evidence collected through the 2nd cycle of river basin planning.</li> <li>• Seeking views on solutions.</li> <li>• Developing who we should be working with to achieve environmental outcomes.</li> </ul>
Draft updated River Basin Management Plan Statutory consultation	Consultation 22 June 2020 to 22 December 2020  6 Months Duration  Response document publish date March 2021	'Does the draft plan set out the right level of ambition for the water environment and a commitment to deliver?' <ul style="list-style-type: none"> <li>• Predicting water body status in 2021 and 2027</li> <li>• Draft water body objectives</li> <li>• Measures to deliver including ownership of local and strategic actions</li> <li>• How we deliver at a local scale (catchments)</li> </ul>

Stage	Date and Duration	Purpose
Published updated River basin Management Plans	Publish date December 2021	<p>'The plan will address the issues'</p> <ul style="list-style-type: none"> <li>Approved by Government as statutory plans</li> <li>Measures prioritised based on realistic application of measures and affordability principles</li> <li>Provide a framework for significant environmental improvement to 2021 and towards 2027</li> </ul>
Report to Europe	March 2018	<ul style="list-style-type: none"> <li>Natural Resources Wales is required to report progress to the European Commission.</li> </ul>
Risk Assessments	December 2019	<ul style="list-style-type: none"> <li>To update the assessment of pressures and impacts on surface water and groundwater bodies.</li> </ul>

## 6. Sources of Support and Further Information

For further information, contact: [Jean-Francois Dulong](#) Flood & Water Officer, Welsh Local Government Association or [Jill Brown](#) WFD Communications Officer, Natural Resources Wales.

**Figure 6 WFD Products: Where to find information**

System	Information available	Link / contact
<a href="#">Water Watch Wales (external)</a>	<p>The following data for every water body in Wales is available on Water Watch Wales:</p> <ul style="list-style-type: none"> <li>Classification results</li> <li>Reasons for not achieving good status</li> <li>Water body objectives</li> <li>Reasons for alternative status objectives</li> <li>Monitoring networks</li> <li>Measures required to improve water bodies to good status</li> <li>Protected Areas</li> </ul>	<a href="#">Water Watch Wales</a>
<a href="#">River Basin Management Plan (external)</a>	Summary of the main risks and pressures for each River Basin District (RBD), along with a Programme of Measures. Also includes Infographics	<a href="#">second cycle RBMPs</a>

System	Information available	Link / contact
	and Catchment Management Summaries.  Planning to meet the requirements of the WFD and the role of the Liaison Panels.	<a href="#"><u>Working with others</u></a>
Lle <a href="#"><u>(external)</u></a>	<a href="#"><u>Conservation</u></a> area boundaries, biodiversity and habitat <a href="#"><u>networks</u></a> information including: <ul style="list-style-type: none"><li>• Terrestrial / <a href="#"><u>Intertidal Phase 1 habitat survey</u></a></li><li>• <a href="#"><u>Biodiversity Action Reporting System</u></a></li><li>• WFD Classification results (use cycle 2 information)</li><li>• <a href="#"><u>Areas affecting Bathing Waters</u></a></li></ul>	<a href="http://lle.gov.wales/home">http://lle.gov.wales/home</a>
NBN Gateway <a href="#"><u>(external)</u></a>	<a href="#"><u>Information about protected habitats and species</u></a>	<a href="https://data.nbn.org.uk/">https://data.nbn.org.uk/</a>
Catchment Data Explorer. <a href="#"><u>(external)</u></a>	Classification information for water bodies in England	<a href="http://environment.data.gov.uk/catchment-planning/">http://environment.data.gov.uk/catchment-planning/</a>
Protected Area Register <a href="#"><u>(external)</u></a>	Objectives for each protected area	<a href="#"><u>Protected Area Register</u></a>
WFD Newsletter (External)	The newsletter promotes examples of work being delivered to improve Wales' water environment by partners and other groups.	<a href="#"><u>WFD Newsletter</u></a>

## 7. Glossary

The following list aims to provide a brief explanation of many of the words, phrases and acronyms that relate to WFD.

Term	Explanation
Artificial water body	See Heavily Modified Water Body
Bathing Waters Directive	European Community legislation – (76/160/European Economic Community (EEC) which requires Member States to take all necessary actions to ensure identified bathing waters meet certain quality standards prescribed for the protection of the environment and public health. The "new" Bathing Water Directive 2006/7/EC replaced the former Directive 76/160/EC in Wales in 2014.
Biological element	A collective term for a particular characteristic group of animals or plants present in an aquatic ecosystem (for example phytoplankton; benthic invertebrates; phytobenthos; macrophytes; macroalgae; angiosperms; fish).
Biological indicators	A parameter that can be monitored to estimate the value of a biological quality element. Indicators may include the presence or absence of a particularly sensitive species.

Biological quality element	A characteristic or property of a biological element that is specifically listed in Annex V of the Water Framework Directive for the definition of the ecological status of a water body (for example composition of invertebrates; abundance of angiosperms; age structure of fish).
Catchment	The area from which precipitation contributes to the flow from a borehole spring, river or lake. For rivers and lakes this includes tributaries and the areas they drain.
Chemical Status (surface waters)	The classification status for the surface water body. This is assessed by compliance with the environmental standards for chemicals that are listed in the Environmental Quality Standards Directive 2008/105/EC, which include priority substances, priority hazardous substances and eight other pollutants carried over from the Dangerous Substance Daughter Directives. Chemical status is recorded as good or fail. The chemical status classification for the water body, and the confidence in this (high or low), is determined by the worst test result.
Chemical Status (groundwater)	An expression of the overall quality of the groundwater body. The classification status for a groundwater body against the environmental criteria set out in the Water Framework Directive and the Groundwater Directive (2006/118/EC), as set out in Common Implementation Strategy (CIS) guidance document No 18. All five of the component tests for chemical status must be assessed as good or poor and the overall chemical status and the confidence in this (high or low) is determined by the worst test result.
Classification	Method for distinguishing the environmental condition or “status” of water bodies and putting them into one category or another.
Co-deliverer	Agencies and institutions with statutory powers or who have it in their power to deliver actions needed to implement River Basin Management Plans.
Competent Authority	An authority or authorities identified under Article 3(2) or 3(3) of the Water Framework Directive. The Competent Authority will be responsible for the application of the rules of the Directive within each river basin district lying within its territory.
Cost effective	In the context of the Water Framework Directive, it describes the least cost option for meeting an objective. For example, where there are a number of potential actions that could be implemented to achieve Good Ecological Status for a water body, Cost Effectiveness Analysis is used to compare each of the options and identify which option delivers the objective for the least overall cost.
Diffuse pollution	Pollution resulting from scattering or dispersed sources that are collectively significant but to which effects are difficult to attribute individually.

Ecological potential	The status of a heavily modified or artificial water body measured against the maximum ecological quality it could achieve given the constraints imposed upon it by those heavily modified or artificial characteristics necessary for its use. There are five ecological potential classes for Heavily Modified Water Bodies/Artificial Water Bodies (maximum, good, moderate, poor and bad).
Ecological status	Ecological status applies to surface water bodies and is based on the following quality elements: biological quality, general chemical and physico-chemical quality, water quality with respect to specific pollutants (synthetic and non synthetic), and hydromorphological quality. There are five classes of ecological status (high, good, moderate, poor or bad). Ecological status and chemical status together define the overall surface water status of a water
Ecosystem	Ecosystems are communities of living organisms (including everything from microorganisms, through fungi, plants, animals to people), their non-living surroundings (rocks, soils, air, sea, water etc.), and all the interactions that take place between them. Human activities are part of ecosystems and can have a strong influence on them.
Ecosystem Services	Ecosystem services are defined as “the benefits that people obtain from ecosystems” They can be divided into 4 categories: <ul style="list-style-type: none"> <li>• <b>Supporting system and services</b> necessary for the production of all other ecosystem services, such as soil formation, nutrients cycling and primary production.</li> <li>• <b>Provisioning services</b> such as crops, fish, timber and genetic material.</li> <li>• <b>Regulating services</b> such as water purification, biological control mechanisms, carbon sequestration, pollination of commercially valuable crops etc.</li> <li>• <b>Cultural services</b> providing a source of aesthetic, spiritual, religious, recreational or scientific enrichment.</li> </ul>
Environment Agency	EA is an executive non-departmental public body, sponsored by the Department for Environment, Food & Rural Affairs in England.
Floods Directive	The purpose of the European Union Directive on flooding (2007/60/EC) is to establish a framework for the assessment and management of flood risks aiming at the reduction of the adverse consequences on human health, the environment, cultural heritage and economic activity associated with floods in the Community. It requires member states to undertake flood risk assessments, flood risk mapping and produce flood risk management plans. The Directive was published in early November 2007 and must be transposed into United Kingdom law by 26 November 2009. (CHECK THIS)

Good chemical status (surface waters)	Means that concentrations of chemicals in the water body do not exceed the environmental standards specified in the Environmental Quality Standards Directive 2008/105/EC. These chemicals include Priority Substances, Priority Hazardous Substances and eight other pollutants carried over from the Dangerous Substance Daughter Directives.
Good chemical status (groundwater)	See chemical status (groundwater). Means the concentrations of pollutants in the groundwater body do not exceed the criteria set out in Article 3 of the Groundwater Daughter Directive (2006/118/EC).
Good ecological potential	Those surface waters which are identified as Heavily Modified Water Bodies and Artificial Water Bodies must achieve „good ecological potential“ (good potential is a recognition that changes to morphology may make good ecological status very difficult to meet). In the first cycle of river basin planning good potential may be defined in relation to the mitigation measures required to achieve it.
Good ecological status	The objective for a surface water body to have biological, structural and chemical characteristics similar to those expected under nearly undisturbed conditions.
Good quantitative status (groundwater)	See quantitative status (groundwater). Means the level of groundwater in the groundwater body meets the criteria set out in Annex V (2.1.2) of the Water Framework Directive.
Good status	Is a term meaning the status achieved by a surface water body when both the ecological status and its chemical status are at least good or, for groundwater, when both its quantitative status and chemical status are at good status.
Greywater	Wastewater from sinks, baths, showers and some domestic appliances before it reaches the sewer (or septic tank system)
Groundwater	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Heavily Modified Water Body	A surface water body that does not achieve good ecological status because of substantial changes to its physical character resulting from physical alterations caused by human use, and which has been designated, in accordance with criteria specified in the Water Framework Directive, as „heavily modified“.
High ecological status	Is a state, in a surface water body, where the values of the hydromorphological, physico-chemical, and biological quality elements correspond to conditions undisturbed by anthropogenic activities.

Invasive Non Native Species	Non-native species. Many species of plants and animals have been introduced to this country since Roman times. Several of these non-native species are invasive and have been causing serious problems to the aquatic and riverine ecology and environment. Problems include detrimental effects on our native species, deoxygenation of water causing fish mortalities, blocking of rivers and drainage channels, predation and competition with our native species, and in some cases pose health risks to the public or livestock.
Liaison Panels	A panel consisting of around 15 representatives of strategic codeliverers including bodies with statutory powers and others who will need to put measures into action for the River Basin District. The panel represents all key interests within the River Basin District and is the primary focus for engagement at the River Basin District level.
Macroalgae	Multicellular algae such as seaweed.
Measure	This term is used in the Water Framework Directive and domestic legislation. It means an action which will be taken on the ground to help achieve Water Framework Directive objectives.
Mechanisms	The policy, legal and financial tools which are used to bring about actions (measures). Mechanisms include for example: legislation, economic instruments; codes of good practice; negotiated agreements; promotion of water efficiency; educational projects; research; development and demonstration projects.
Misconnections	Misconnections of foul sewage into surface water drains are a significant source of urban diffuse pollution in those areas where a separate drainage system is used. Misconnections happen when domestic plumbing has been connected into surface water drains instead of the foul sewer. This means untreated dirty water goes directly into rivers/waterways without receiving treatment.
National Assembly for Wales	The National Assembly for Wales consists of 60 Members elected throughout Wales. The Assembly has delegated many of its powers to the First Minister, who leads the Welsh Assembly Government. The Assembly decides on its priorities and allocates the funds made available to it from the Treasury. Within its powers, the Assembly develops and implements policies that reflect the particular needs of the people of Wales.
Natura 2000 sites	Protected Areas established for the protection of habitats or species under the Birds Directive (79/409/EEC) (Special Protection Areas) and the Habitats Directive (92/43/EEC) (Special Areas of Conservation).
No deterioration (in water body status)	None of the quality elements used in the classification of water body status deteriorates to the extent that the overall status is reduced.

Non-hazardous pollutant	Any substance that is not a hazardous substance but is liable to cause pollution in significant quantities.
Non-native species	See Invasive Non Native Species
Objective (surface waters)	<p>Three different status objectives for each water body. These are:</p> <ul style="list-style-type: none"> <li>• Overall status objective</li> <li>• Ecological status or potential objective; and</li> <li>• Chemical status objective</li> </ul> <p>These are always accompanied by a date by when the objective will be achieved.</p> <p><u>Ecological status (or potential) objectives</u> will be derived from the predicted outcomes for the biological elements and physicochemical elements, plus any reasons for not achieving good ecological status (or potential) by 2021.</p> <p><u>Chemical status objectives</u> will be derived from the predicted outcomes for the chemical elements plus any reasons for not achieving good chemical status by 20121. <u>Overall status objectives</u> will be derived from the ecological status and chemical status objectives.</p>
Objective (groundwater)	<p>There are three status objectives for each groundwater body:</p> <ul style="list-style-type: none"> <li>• Overall status objective;</li> <li>• Quantitative status objective; and</li> <li>• Chemical status objective.</li> </ul> <p>These are always accompanied by a date by when the objective will be achieved.</p> <p><u>Overall status objectives</u> will be derived from the quantitative status and chemical status objectives</p> <p>In addition to status objectives there are also additional environmental objectives: to prevent deterioration of status, to prevent or limit the inputs of pollutants to groundwater and to reverse any significant and sustained upward trends in pollutant concentrations.</p>
Phytobenthos	Bottom-dwelling multi-cellular and unicellular aquatic plants such as some species of diatom.
Phytoplankton	Unicellular algae and cyanobacteria, both solitary and colonial that live, at least for part of their lifecycle, in the water column.
Pollutant	Any substance liable to cause pollution.
Pollution	The direct or indirect introduction, as a result of human activity, of substances or heat into the air, water or land which: (i) may be harmful to human health or the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems; (ii) result in damage to material property; or (iii) impair or interfere with amenities and other legitimate uses of the environment.
Predicted outcome	The future status of a quality element or water body based on groups of practical and justified measures and the date when this status will be achieved.

Pressures	Human activities such as abstraction, effluent discharges or engineering works that have the potential to have adverse effects on the water environment.
Priority substances	A pollutant, or group of pollutants, presenting a significant risk to or via the aquatic (surface water) environment that has been identified at Community level under Article 16 of the Water Framework Directive. They include „priority hazardous substances”.
Protected Areas	Areas that have been designated as requiring special protection under Community legislation for the protection of their surface water and groundwater or for the protection of habitats and species directly depending on water.
Quality element	A feature of an aquatic (surface water) ecosystem that can be described as a number for the purposes of calculating an ecological quality ratio, such as the concentration of a pollutant; the number of species of a type of plant.
Quantitative status (groundwater)	An expression of the degree to which a body of groundwater is affected by direct and indirect abstractions. The classification status for a groundwater body against the environmental criteria set out in the Water Framework Directive and as set out in Common Implementation Strategy Guidance Document No 18. All four of the component tests for quantitative status must be assessed as good or poor and the overall quantitative status and the confidence in this (high or low) is determined by the worst test result.
Risk	The likelihood of an outcome (usually negative) to a water body or the environment, or the potential impact of a pressure on a water body.
Risk assessment	The analysis that predicts the likelihood that a water body is at significant risk of failing to achieve one or more of the Water Framework Directive objectives.
River basin	A river basin is the area of land from which all surface run-off and spring water flows through a sequence of streams, lakes and rivers into the sea at a single river mouth, estuary or delta. It comprises one or more individual catchments.
River Basin District	A river basin or several river basins, together with associated coastal waters.
River Basin Management	The management and associated planning process that underpins implementation and operation of the Water Framework Directive. It is both an overarching process in terms of existing processes and also defines new sub-processes such as those for hydromorphology. The river basin management plans are plans for river basin management.
River Basin Management Plan	For each River Basin District, the Water Framework Directive requires a River Basin Management Plan to be published. These are plans that set out the environmental objectives for all the water bodies within the River Basin District and how they will be achieved. The plans will be based upon a detailed analysis of the pressures on the water bodies and an assessment of their impacts. The plans must be reviewed and updated every six years.

Site of Special Scientific Interest	An area of land notified under the Wildlife and Countryside Act 1981 by the appropriate nature conservation body (Scottish Natural Heritage in Scotland) as being of special interest by virtue of its flora and fauna, geological or physiogeographical features.
Source Protection Zone	A zone around a well, borehole or spring where groundwater is abstracted for human consumption (for example drinking water or food production. Zone 1 (SPZ1) is the area closest to the abstraction, representing the highest risk to the source. Zones 2 and 3 are progressively larger. Risk-based Policies to prevent pollution are applied within these zones.
Spatial planning	Spatial planning is wider ranging than land-use planning based on regulation and control of land, and aims to ensure the best use of land by assessing competing demands. Social, economic and environmental factors are taken into account in producing a decision that is more conducive to sustainable development.
Special Area of Conservation	Natura 2000 sites that are designated under the Habitats Directive.
Special Protection Area	Natura 2000 sites that are designated under the Birds Directive.
Specific Pollutant	A substance considered as being discharged to the aquatic environment in significant quantities at the national level and for which Environmental Quality Standards have been established. As part of the ecological classification criteria, and in places where these pollutants are monitored, these standards must be met, in order for a surface water body to be classified as good ecological status.
Sustainable Drainage Systems	A system of management practices and control structures designed to drain surface water in a more sustainable fashion than some conventional techniques.
Water body	A manageable unit of surface water, being the whole (or part) of a stream, river or canal, lake or reservoir, transitional water (estuary) or stretch of coastal water. A „body of groundwater“ is a distinct volume of groundwater within an aquifer or aquifers.
Water Framework Directive	European Union legislation – Water Framework Directive (2000/60/EC) – establishing a framework for European Community action in the field of water policy.
Water Framework Directive objectives	The objectives set out in Article 4 of the Water Framework Directive together with objectives set out in paragraphs 2 and 3 of Article 7 of the Directive and which are required to be met.
Water table	The upper limit of the saturation zone.
Water use	Water Services together with any other human activity identified as having a significant impact upon the status of water.

Weight of evidence	A weight of evidence approach integrates results or evidence from several data sources, weighted appropriately, to make risk based decisions.
Welsh Government	The devolved government in Wales.
Welsh Technical Advice Notes	<i>Planning Policy Wales</i> (2002) sets out the land use planning policies of the Welsh Government (the Assembly Government). It is supplemented by a series of topic based Technical Advice Notes (Wales). Technical Advice Notes may be material to decisions on individual planning applications and will be taken into account by the National Assembly for Wales and planning inspectors in the determination of called-in planning applications and appeals.

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