

A close-up photograph of a bumblebee with a bright yellow and black body, perched on a cluster of purple flowers. The background is a soft, out-of-focus green and purple. The text is overlaid on the bottom left of the image.

DOING THE RIGHT THING FOR NATURE

2022

AN UPDATE ON DŴR CYMRU WELSH WATER'S
STATUTORY REPORT TO MEET OUR
BIODIVERSITY DUTY UNDER SECTION 6
OF THE ENVIRONMENT (WALES) ACT 2016

FOREWORD



At Welsh Water we are proud to provide water and wastewater services to over three million customers – we depend on the environment in order to deliver those services. As a responsible company we recognise the potential impact our activities can have on the environment and so it is vital that we work hard to protect this valuable and critical resource.

Through our customer feedback we understand that customers now more than ever want us to invest, to innovate and to work in partnership to look after the natural environment for the long term. Here in Wales we also have a legal duty under the Environment Act (2016) to maintain and enhance biodiversity and to promote the resilience of ecosystems. And as part of our Welsh Water 2050 we support the delivery of the Well-being of Future Generations (Wales) Act 2015 which aims to improve the social, economic, environmental and cultural well-being of Wales.

“ WE AIM TO PROVIDE A TRULY WORLD CLASS, RESILIENT AND SUSTAINABLE SERVICE AND TO PROTECT THE ENVIRONMENTAL LEGACY WE LEAVE FOR GENERATIONS TO COME. ”

Earlier this year we published our brand new biodiversity strategy which sets out our high level mission, vision, aims and objectives for biodiversity and ecology across the company. An action plan, 'Making Time for Nature' published every three years (last published in 2020), works alongside the strategy ensuring that we have clear delivery plans for the medium term (2030) and can also work towards delivering the longer term objectives of our 2050 vision and beyond. The 30 commitments in our biodiversity plan support many workstreams across the organisation. These include by way of example our journey to Net Carbon Zero 2040, and our ongoing improvements to sustainable procurement.

We are experiencing a biodiversity crisis in Wales as declared by the Welsh Government and widely documented alongside the climate emergency. As a company owned on behalf of its customers, we are committed to doing the right thing when looking after the environment, not least because it contributes to the well-being of the communities we serve. As a result, we are investing over £800m in the environment in the five years to 2025.

This Biodiversity report reflects the continuing commitments from the previous biodiversity plan 'Making time for Nature' which was published in 2020. It outlines the progress we have made and the ambitions we have moving forward in order to meet the expectations of our customers and to safeguard our environment for future generations to come.

Peter Perry
Chief Executive Officer

WHO ARE WE?

Dŵr Cymru Cyfyngedig (Dŵr Cymru) is the statutory water and sewerage undertaker that supplies over three million people in Wales and some adjoining parts of England. We are owned by Glas Cymru, a single purpose company with no shareholders, run solely for the benefit of customers.

We provide essential public services to our customers by supplying their drinking water and then carrying away and dealing with their wastewater. In this way we make a major contribution to public health and to the protection of the Welsh environment. Our services are also essential to the sustainable economic development in Wales.



WHY DO WE NEED A REPORT?

Earlier this year Dŵr Cymru Welsh Water published its brand new [biodiversity strategy](#) which set out our high level mission, vision, aims and objectives for biodiversity and ecology across the company.

Our mission, which is reflected in our 2050 vision and biodiversity plan is 'to maintain and enhance biodiversity within the fulfilment of our functions for the wellbeing of current and future generations'. This report is an update on Dŵr Cymru Welsh Water's statutory report to meet our biodiversity duty under Section 6 of the Environment (Wales) Act 2016. Not only does it update progress on our biodiversity plan but it also demonstrates how we embed goals and visions in a wider context such as that of the UN sustainability goals and Wellbeing and Future Generations (Wales) act 2015. In addition, the report reflects on how we work to our regulators policies such as State of Natural Resources Report (SoNaRR) for Wales and Area Statements. Going forward, we are also exploring how to embed the output of the Welsh Governments Biodiversity Deep Dive into our approach.

“
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”
Under Section 6(7) of the Environment (Wales) Act 2016 most public authorities in Wales, including Welsh Water, are required to prepare and publish a report every three years to demonstrate what they have achieved to meet the biodiversity duty within the respective reporting window. This is Dŵr Cymru's second report under section 6(7) of the 2016 Act and covers the period 2019 to 2022. Commitments reported against it were set out in our Biodiversity Plan 'Making time for nature' in 2020 which outlined what we planned to do to comply with the duty under Section 6(1) to "seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions."

Further to this report, we will amend our biodiversity plan 'Making time for nature' to reflect the progress we have made. In line with our biodiversity strategy published in early 2022 the next plan will highlight our ongoing commitment to enhancing and maintaining biodiversity in the fulfilment of our functions as well as incorporating outputs from the Welsh Government Deep Dive and further legislation published within the drafting window. The forthcoming biodiversity plan will be published by December 2023.



WHO IS THE REPORT FOR?

Similar to our most recent biodiversity plan, we anticipate that this report will be of interest to several audiences, including:



Our regulators and anyone who wants to find out how Welsh Water is working towards our mission and vision as set out within the biodiversity strategy; as well as UN, UK and Welsh legislation such as the Wellbeing and Future Generations (Wales) Act 2015; and how Welsh Water is meeting its strengthened duty under Section 6 of the Environment (Wales) Act 2016.



Organisations, for example, voluntary sector and community groups, looking for opportunities to work in partnership with Welsh Water in the delivery of initiatives that will help biodiversity going forward.



Colleagues throughout Welsh Water who are keen to further learn about our role in supporting biodiversity and, in particular, want to understand how we can all make time for nature as we go about our daily work of delivering essential water and wastewater services to our customers.



Most importantly, this report is for our customers. We will continue to be open and honest in our approach to biodiversity and ecology and look forward to understanding in greater detail what our customers' expectations are for biodiversity, ecology as well as sustainability and the climate change emerging risk which will help Welsh Water's forward planning.

HOW DO WE REVIEW OUR BIODIVERSITY PERFORMANCE?

Currently our biodiversity performance is measured on progress made towards the 30 commitments as set out in our biodiversity plan 'Making time for nature', as reported in this statutory report. Our Board and Executive, as well as our colleagues, continue to take an active interest in the environment and our commitment to improving biodiversity. They receive interim reports on progress as well as project updates and position statements. The Board also approve this plan before its publication. In addition to the Board, our Independent Environmental Advisory Panel (IEAP)* continue to receive regular updates on biodiversity progress with members offering advice, opportunities for biodiversity enhancement, as well as challenging the progress we make towards our biodiversity duty.

We also have a number of biodiversity commitments which are driven through our National Environmental Programme (NEP) in Wales and Water Industry National Environmental Programme (WINEP) in England. These are a regulatory requirement and must be reported to the respective regulator on the date agreed during the price review (PR) process. From the previous price review process which took place in 2019 (PR19) to determine our Asset Management Planning (AMP) 7 programme (Investment between the years 2020–2025) we have a number of biodiversity commitments which include biodiversity baseline studies, Invasive Species investigations and more.

Our Biodiversity Strategy (published in early 2022) continues to explore ways in which we can capture our biodiversity performance. We are currently working on the following and will still continue to look for additional methods to capture our progress in accordance with our biodiversity duty:



We are currently undertaking our PR24 programme planning which will determine Ofwat approved funding for the next AMP (Asset Management Planning) cycle, AMP8 which begins in 2025 to 2030.

This will determine our NEP and WINEP obligations and will help in prioritising our biodiversity ambitions and regulatory requirements for the next AMP. Reporting measures will vary between each programme of work but we are looking to introduce SMART (specific, monitored, achievable, recorded and timely) targets where possible to measure quantitative benefits through percentage gain or similar.



Within England, biodiversity is measured using the DEFRA tool to measure Biodiversity Net Gain. Within Wales an equivalent tool is in development by Welsh Government and NRW.

Until the Welsh tool is available, we will continue to use the English Biodiversity Metric 3.1 (version correct at time of print) for all biodiversity baseline studies and net gain assessments. We will also incorporate NRWs DECCA (Diversity, Extent, Condition, Connectivity and Aspects of ecosystem resilience) approach where possible.



Another tool the business is currently using in its decision making is Multi Capital accounting, which essentially values the natural capital associated with our projects and investments.

We will continue to use this tool to inform our decision making for all projects including for biodiversity.

This report has highlighted a number of commitments with finite deadline dates as well as those with no deadline stated. Next year we will publish our next biodiversity plan – looking forward 3+ years. Within this plan we will reassess our current commitments and look to update these in line with our new biodiversity strategy (published in 2022) and PR programme. All the targets will be SMART going forward.

***Our Independent Environmental Advisory Panel (IEAP) consists of the following members:**

The Wye & Usk Foundation, Cardiff University, Coed Cymru, Welsh Government, Country Land Association, RSBP, Afonydd Cymru, Elan Valley Trust, The Coal Authority, Brecon Beacons National Park, Business in the community Cymru, WLGA, Sustain Wales, FUW, Natural Resources Wales, Snowdonia National Park, Marine Conservation Society, Natural England, NFU Cymru, National Trust, Canal & River Trust, Consumer Council for Water, Keep Wales Tidy, Aberystwyth University, Warp Cymru, defra, National Botanic Garden of Wales, Wildlife Trusts Wales, PD Partnerships, Centre for Ecology & Hydrology, Pembrokeshire Coast National Park, Sustainable Soils.

You can find out more about IEAP here:

corporate.dwrcymru.com/en/community/environment/helping-the-environment/independent-environmental-advisory-panel

EMERGING THEMES FROM THIS REPORTING PERIOD

This reporting period has been one of significant change and challenges. However we have continued to deliver our core functions as a water company – to supply clean water, remove and treat wastewater and to protect the environment.

With our Vision in mind we have continued to deliver our biodiversity duty as set by Welsh Government through Section 6 of the Environment (Wales) Act 2016. As a water and sewerage undertaker, our main interaction with the natural environment is through our abstractions and discharges. The biodiversity duty applies in the exercise of our function and within this reporting period we have seen biodiversity planning incorporated into many of the statutory plans across the business such as the Water Resources Management Plan, the Drainage and Wastewater Management Plan (DWMP) and our approach to Sustainable Management of Natural Resources (SMNR). In this way our biodiversity efforts underpin much of our Vision as well as meet our various legislative duties, and are essentially integral to our work.

Whilst the pandemic has dominated this reporting period we have continued to make progress with the 30 commitments as set by our most recent Biodiversity Plan 'Making time for nature – our revised plan' published in 2020. This will be our second report submitted as part of our Section 6 duty, which applies to all public authorities in Wales. In 2023 we will publish our third forward looking biodiversity plan which will continue to set out how we will meet the Section 6 duty which is based on NRW's Nature Recover Plan for Wales (NRAP) and supported by both the Environment (Wales) Act and Wellbeing Act. It will also incorporate the outputs from the Welsh Government's Biodiversity Deep Dive where possible.

There have been two significant events during this reporting period which have shone an important light on biodiversity and the natural environment. First, in 2021, the Welsh Government declared a biodiversity crisis, the first of its type within the UK through its [Nature Recovery Action Plan for Wales 2020–21](#). COP26 was also held in Glasgow during this reporting period which again highlighted the importance of protecting and conserving our natural environment for future generations to come.

We have raised awareness during this reporting period by updating internal systems, producing more guidance and also hosting 'lunch and learns' for colleagues within the business. However, we still have much to learn. We continue to educate our operational teams to ensure we avoid unnecessary damage to the environment when delivering our core functions. We are also, at the same time driving forward proposals to enhance it, and where we have made mistakes, we are quick to undertake remediation work and share the learning from those errors to mitigate any future risks.

HOW WE ARE MAKING TIME FOR NATURE

To encourage small scale enhancements to, and promote biodiversity across our sites, we launched our biodiversity care packages in 2022. This award winning innovation project has already distributed these enhancements across our operational sites for additional enhancement...

- ↘ 29.5kg wildflower seed
- ↘ 39 bat boxes
- ↘ 2 bug hotels
- ↘ 65 bird houses
- ↘ 200 bulbs

And continues to grow as more teams get involved!



Biosecurity measure across our visitor attraction sites to promote the national 'Clean, Check and Dry' campaign

Delivery progress:
Complete



As part of our biosecurity measures, new messaging boards have been created and distributed across the business especially at our visitor attraction sites promoting the national campaign to 'Clean, Check and Dry' all equipment. In addition to this all rangers and activity instructors have received additional training in biosecurity measures to promote good practice and also effectively challenge any bad practice.

Our internal source system is also up to date with biosecurity and invasive species guidance to which all colleagues have access.

Establishing extent of Zebra mussels at Llandegfedd Reservoir

Delivery progress:
Ongoing, on track



Whilst the currently recognised distribution of zebra mussels in Wales is limited, populations are recognised as present in Llandegfedd reservoir. However, their distribution within the rest of the Usk catchment is not fully understood. Therefore, we are working with APEM to provide evidence and recommendations on the management of zebra mussels within Welsh Water's catchment area. Zebra mussels are highly invasive, causing extensive environmental damage and presenting significant operational issues to water companies, so this work aims to provide distribution understanding and options appraisal for management going forward. Llandegfedd is also a drinking water catchment which adds an additional dimension in the method used to control the species.

This study has also identified crassula at the site. As we have caught this sighting relatively early we will act quickly to stop further spread at the site.

Find out more about Invasive Species and the work ongoing in Wales to tackle these species: biodiversitywales.org.uk/
[Invasive-Non-Native-Species-Group](#)

WaterSource

Delivery progress:
Ongoing



Water Source Conference 2022:

Enabling Effective Collaborations

In November the latest WaterSource conference was hosted including teams from Welsh Water, Welsh Government, third sector parties, Regulators and local authorities to discuss Enabling Effective Collaborations. Our drinking water sources face unparalleled challenges from land use pressures and climate change the key themes from the conference included:



How to realise our 2050 ambition of 'Safeguarding drinking water through catchment management'.



How do we work as "Team Wales" so we can achieve multiple benefits beyond drinking water security that will help us to address the Nature and Climate Emergencies.



This event was the first opportunity to take forward the recommendations of the Biodiversity Deep Dive Core Group, chaired by the Minister for Climate Change, Julie James MS, published on 3rd October 2022.



To create a roadmap to deliver effective and timely action at scale. The WaterSource22 Report will be published to share the outcomes of this event.

PestSmart

Since 2015, we have successfully worked with the farming industry to tackle the emerging pesticide issue in targeted catchments. These trials illustrated the scale of the risk, and the opportunity to take a proactive and collaborative approach. Funding awarded by Welsh Government from the European Agricultural Fund for Rural Development (EAFRD) has allowed us to expand our scope. We have upscaled our pesticide disposal scheme, which to date has collected approximately 25,000kg of unwanted, out of date or unlicensed pesticides. We have also developed further campaigns with the amenity sector and domestic users.

Find out more about our PestSmart campaign:
corporate.dwrcymru.com/en/community/environment/our-projects/watersource/pestsmart

Brecon Beacon Mega Catchment project (BBMC)

The BBMC programme team continue to work with a wide range of stakeholders to explore opportunities for increased engagement and developing collaborative on-the-ground trials throughout the Beacons. We believe we can achieve more by coordinating our resources, than we could by working alone. One early example has been the successful establishment of the Taf Fechan Landscape and Community Project based at the Pontsticill catchment to target improvements to private water and septic tank systems, as well as working with the community to undertake a number of activities to improve the local environment for the benefit of nature and people – this includes collaborating with the Brecon Beacons Local Nature Partnership to boost biodiversity value at a number of community green spaces around the village. Results of this establishment phase will be used to support the local community in the continued development of a catchment vision.

Find out more about the Brecon Beacon Mega Catchment work:

corporate.dwrcymru.com/en/community/environment/our-projects/watersource/brecon-beacons-mega-catchment

Green hay spreading at Llys-y-Frân reservoir

Delivery progress:
Complete



Green hay, sourced from National Botanical Gardens of Wales wildflower meadows, was spread on one of Llys-y-Frân's meadow areas earlier this year to improve it. The meadow will be surveyed next season and the cut from this meadow will then be spread onto another area next year

Volunteers from Pembrokeshire Coast National Park teamed up with Llys-y-Frân rangers and the biodiversity team to support the spreading of the green hay. This is the first project to be undertaken with volunteers at Llys-y-Frân since the site re-opened to the public in 2021.

Seed collection by the National Botanic Gardens at Llwyn-Onn reservoir

Delivery progress:
Ongoing partnership working



Small water pepper (*Persicaria minor*) and corn spurrey (*Spergula arvensis*) were abundant in Llwyn-Onn reservoir this year. To help conservation of these rare native species, Welsh Water organised access to the site for The Botanic Garden who are working with the Millennium Seed Bank, to collect seeds of these species. These seeds will now be stored with both the Botanic Garden and Millennium seed bank as part of their UK Threatened Flora project.

“ SEEDS FROM THE PROJECT WILL BE STORED AS PART OF THE UK THREATENED FLORA PROJECT. ”

Understanding the Ospreys at Llyn Brenig

Delivery progress:
Ongoing



To continue our understanding and conservation of the Ospreys at Llyn Brenig we have undertaken several studies within this reporting period. The latest was to determine the impact caused by human activity to nesting Ospreys at Llyn Brenig. The team will continue to work with external stakeholders to implement any mitigation required and necessary conservation measures.

Llys-y-Frân and Cog Moors Agrisound Installation

Delivery progress:
Complete



In addition to the green hay spreading at Llys-y-Frân we installed a brand new innovative technology 'AgriSound' which monitors the presence of pollinators (bees, butterflies etc) as well as captures data on temperature, humidity, luminosity and acoustics every 60 minutes. We have also placed control devices in areas where we have not undertaken enhancement work, in order to be able to compare the two datasets and establish the benefit of the enhancement work for pollinator activity.

This technology has also been installed at Cog Moors AD treatment works to establish how effective it is.

We will monitor the trends from the devices on a monthly basis to establish if any trends can be seen. We will then review the effectiveness of the devices after 12-18 months of installation and assess the outcomes going forward to determine whether we continue to install across sites within the business.

Wetland and fish passages

Delivery progress:
Ongoing

As part of Welsh Water's AMP7 Fish Passage programme it has delivered 54.8km of river habitat improvements. Going forward an ambitious Fish and Eel passage programme is planned for AMP8.

As part of our wetlands programme 7 wastewater treatment works (WwTW) are progressing through feasibility studies, to understand if they would support a wetland solution to the water quality parameters required at site. A partnership wetlands framework is being advanced to enable Welsh Water to collaborate with catchment partners and deliver multiple benefit solutions. All PR24 Nutrient investment drivers are being screened for Nature Based Solutions (NBS), as we aim to embed NBS as a business as usual option for us.

Our 1st collaborative wetlands in Herefordshire received flows in September 2022. This wetland is owned and managed by Herefordshire Council to deliver nutrient credits to the development sector. The scheme has been a multisector collaboration, and the first of its kind.

Find out more:

dwrcymru.com/en/our-services/wastewater/river-water-quality/combined-storm-overflows/hereford



Stop the Block

Delivery progress:
Ongoing



There has been significant continued engagement around the 'Stop the Block' campaign during this reporting period, on both a national and localised scale. Not only does this campaign highlight the damage from sewer misuse within the home, it also raises awareness of what damage blockages and misuse can do to the environment and biodiversity from bursts and misconnections.

“
RAISING AWARENESS
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”

Environment Fund

Delivery progress:
Ongoing, on track



Menai Rivers project was successful in attaining the funding from Welsh Water's environment fund. This project encompasses a number of initiatives across the Menai catchment including:

- ↳ Monitoring of Invasive Non-Native Species (INNS).
- ↳ Protecting and raising awareness and understanding of two Environment (Wales) Act S7 priority species, water voles and otters.
- ↳ Encouraging the Communities surrounding the target catchments of the project to take part on a voluntary basis and form part of a 'River Custodian Network'.

This project is due to complete in March 2024.

Find out more about our environment fund:
corporate.dwrcymru.com/en/community/environment/our-projects/biodiversity-fund

Friends of Cardiff Reservoirs: volunteer group

Delivery progress:
Ongoing



Stone wall training programme with volunteers, delivered by Dry Stone Wall Association, started the creation of a woodland wildlife corridor with mitigation for grass snakes and amphibians.

Native bluebell seed harvesting took place at Ruperra Conservation Trust with our ranger team and volunteers. The seeds will be sown around the reclaimed ponds at the reservoirs to support the enhancement of the native woodland ground flora. The activity also provided a knowledge transfer opportunity as the team also learnt about the fantastic work that has taken place to conserve and restore the ancient woodland.

CABI collaboration project at Llanelli Wetland Centre

Delivery progress:
Ongoing



Reports of *Crassula*, an invasive species, are starting to increase and its presence has been confirmed at Llanelli Wetlands. As part of a collaboration project between Welsh Water, CABI and Llanelli Wetland Centre we are working to control the plants using biological controls – an innovation from CABI who have tailored a population of mites specifically to this crassula infestation.

To date, the mites have been released at only this site in Wales. The mites were released at Llanelli Wetland Centre in summer 2019 with additional releases taking place in 2020 and 2021. The mites were found to have overwintered in small numbers at the site in spring 2020 and in 2021. An opportunistic site visit showed further promising results, with successful overwintering and spread outside the release area. Further releases and monitoring will continue going forward as well as discussions to try this method at additional sites.



Globally important fungi species found

Delivery progress:
Ongoing

Lisvane & Llanishen reservoirs in Cardiff is a unique natural resource of significant ecological value designated a SSSI for overwintering birds and for waxcap fungi. Waxcaps are a fantastic indicator of old undisturbed grassland habitat, which is important in the fight against climate change because it stores a third of the world's land-based carbon. Since purchasing the site in 2016, we have been working closely with NRW to enhance the grassland habitat for waxcap fungi and have introduced a new grass cutting regime.

Our last Fungi Survey recorded a total of 27 species of waxcaps, far in excess of the SSSI selection criteria (19). Several species of fungi were recorded on site for the first time, including two species of *Dermoloma*, both of which are extremely rare. *D. magicum* is a globally threatened species with very few British records. Another *Dermoloma* was also found and confirmed by DNA bar-coding to be an unnamed species, only found once before in the world (in Turkey)! A third notable new addition to the fungi flora is a brown species of earthtongue in the *Microglossum olivaceum* group, which has a high value for nature conservation.

Invasive Non-Native Species (INNS)

Delivery progress:
Complete



As part of our internal awareness campaign we updated the 2017 INNS guidance booklet this year (2022) to include more emerging risks than the previous iteration. As part of the campaign we hosted three 'lunch and learn' sessions in collaboration with APEM, which were well attended and received good feedback about the level of content and interesting delivery. This has helped embed the guidance within a wide range of teams around the business.

Escalation of bitterweet nightshade

Delivery progress:
Complete



Our Biodiversity Champions are a group of passionate individuals with a keen interest in Ecology, biodiversity and conservation. When out on site one of our champions noticed a plant which looked similar to a chilli plant they have recently grown at home. However, this was bitterweet nightshade which, although not an INNS, it has poisonous berries that can cause a rash if they contact bare skin. The sighting was escalated to the site supervisor to cordon off, and was removed and disposed of correctly. The issue was logged in to our internal health and safety system (assure) and the area marked to check for regrowth in the future.

Community days

Delivery progress:
Complete



New biodiversity signage

Delivery progress:
Complete



On 4th November 2022, Dŵr Cymru – Welsh Water hosted an Open Day. Members of the local community were invited to visit our Wastewater Treatment Works in Llanfoist, Mold, Llanelli, Parc y Splott and Treborth to meet our colleagues and see how we keep things flowing.

In addition to seeing how wastewater is treated, our customers were also invited to look at the inside of a sewer with our Wastewater Networks CCTV Crews. Our Flow Client Team and Wastewater Asset Team were on hand to provide information on what Welsh Water is doing to improve the quality of our rivers.

“

THE LOCAL COMMUNITY
WERE INVITED TO MEET
OUR COLLEAGUES AND
SEE HOW WE KEEP
THINGS FLOWING.

”

Have you seen our new biodiversity signs promoting wildflower meadows across our sites?

Feedback from site supervisors was that they want to do the right thing for nature, but are worried about the reputational damage of a customer complaint regarding the 'tidiness' of a site that has been left to grow. To address this we have produced new signage which are displayed on all of these sites.

This is alongside the grounds maintenance regime changes that have been put in place to allow greater growth between cuts on site, to allow greater species diversity to thrive, and cause less damage and disturbance to established populations.

Bats at Llandegfedd move up the property ladder

Delivery progress:
Complete



Working with the Capital Alliance we recently needed to carry out work in an overflow culvert at Llandegfedd. The area we needed to work in was also home to a bat roost. As our work would disturb the roost, the team had to apply for a bat license. To ensure the bats had a new home, the team got to work on designing and building a new artificial bat roost. The new roost is a fantastic upgrade for the bats and was specifically designed for the needs of the lesser horseshoe bat – they're cave dwellers that prefer gaps that provide uninterrupted flight. This new addition will provide protection and shelter for many years to come and will be a great place for the bats to hibernate in comfort.

Community Fund

Delivery progress:
Complete



Castle View Community Group

The funding was used to add some large planters with perennial shrubs to further enhance the community group area. Benches, planted wildflower beds and a butterfly garden were already established in the area, which is widely used by the residents of the estate and includes a ponded area.

Porth community school

This project was to utilise the grassed off areas of the school yard to grow wildflower meadows, which will encourage bees and butterflies to thrive. The community fund also helped to purchase planters and compost for the children to see up close how important bees and butterflies are for the environment.

Peterston super Ely C/W Primary School

Further to developing the use of the pond for outdoor education, allowing the pupils to study the biodiversity in this area, the fund contributed to biodiversity kits.

Community Woodland Project

Delivery progress:
Complete



“ WE WILL BE ENGAGING WITH NEIGHBOURING RESIDENTS TO RAISE AWARENESS OF THE NEED TO DISPOSE OF GARDEN WASTE CORRECTLY AND NOT DISPOSE OF IT WITHIN THE WOODLAND.

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Heritage Lottery funding (part of the Welsh Government and National Lottery Heritage Community Woodlands fund) was successfully secured for the Gwern-y-Bendy woods and part of the Rhyd-y-Penau complex, which sits within the site of Lisvane and Llanishen reservoirs. The grant has been used to restore and enhance the woodland so that it can flourish for decades to come.

Key enhancements to date include:



Learning Zone

Unmanaged and neglected woodland cleared of waste and prepared to enable the creation of a learning zone and forest school on site.



Control of INNS on site

Cherry Laurel removal throughout Rhyd-y-Penau Complex woodlands.

Support local knowledge by organising a Community Engagement Week, which gave us a chance to showcase the work that we had completed to date. The ranger team explained the work undertaken to enhance and regenerate the woodland, whilst explaining the ecological sensitivities and the measures we are taking to balance opening to the public and preparing areas of sanctuary for Cardiff's wildlife.

As we move into autumn and winter, we will be picking up on our woodland management work. This season we will be concentrating on our ancient woodland, Gwernybendy Woods. Control and removal of non-native species will be our top priority. We will also be engaging with neighbouring residents to raise awareness of the need to dispose of garden waste correctly and not dispose of it within the woodland – highlighting the environmental risk of spreading invasive species that threaten to dominate and prevent our native wildlife and nature from flourishing.

WELSH WATER'S CONTRIBUTION TO MULTI-MILLION-POUND PROJECTS TO CONSERVE WELSH RIVERS AND BOGS

FOUR RIVERS FOR LIFE

Supported through the EU's LIFE Programme and match funded by the Welsh Government and Welsh Water, £13.8 million will be invested into urgent conservation challenges over the next five years.

More than £9 million will be invested into bringing four Welsh rivers into good condition – the Teifi, Cleddau, Tywi and Usk with an estimated 500km of river improved. In addition to this over £4.5 million will be invested to conserve quaking bogs. Areas targeted will include Crymlyn Bog on the outskirts of Swansea as well as St David's in Pembrokeshire and on the Llŷn Peninsula. Not only will this project restore the peat land but also help preserve very rare species – including Britain's largest spider, the great fen raft spider at Crymlyn and the marsh fritillary butterfly in Pembrokeshire and Gwynedd.

These projects have a multi stakeholder approach to help deliver multiple benefits within Wales, working closely with local landowners, communities and partner organisations. Four Rivers for LIFE will be run by NRW in partnership with the Brecon Beacons National Park Authority, River Restoration Trust, Coleg Sir Gâr and the Woodland Trust, with additional financial support from Dŵr Cymru / Welsh Water. NRW's LIFE Quaking Bogs partners are the National Trust and the Snowdonia and Pembrokeshire Coast National Park Authorities.

Output for Four Rivers for LIFE will include an improvement to river habitats and conditions for migratory fish as well as working with farmers to protect river corridors and reduce sediments and nutrients from entering rivers. This will have the added benefit of safeguarding important drinking water supplies.

LIFE Quaking Bog outputs will include the restoration of seven Special Areas of Conservation, four of which are National Nature Reserves, by getting the water level right for quaking bogs' specialised plantlife and wildlife, controlling scrub and non-native invasive species that can smother the natural habitat and improving access so that more people can experience and enjoy nature at its best.

“ THIS IS EXACTLY THE SORT OF PROJECT WE ARE KEEN TO CO FINANCE AND DELIVER FOR OUR CUSTOMERS – FANTASTIC VALUE, GREAT POSITIVE IMPACT.

LIFE DEE RIVER

WELSH WATER'S CONTRIBUTION TO HELP TRANSFORM THE RIVER DEE AND ITS CATCHMENT

LIFE Dee River is a £6.8m project funded through multiple stakeholders, including Welsh Water, to transform the River Dee and its catchment by restoring the river and its surroundings back to their natural state. The Dee is the largest river in North Wales and is a highly regulated river as well as being designated as a Special Area of Conservation (SAC).

The project which started in 2019 and is due to complete in December 2024 will look to remove the constraints to fish migration and improve wider ecological connectivity, restore or improve physical features along river banks, improve agricultural and forestry land management practices to reduce the input of nutrients and sediment entering the SAC, as well as establish and build long-term positive relationships with key stakeholders during and beyond the life of the project. The project will also initiate conservation management for the critically-endangered freshwater pearl mussel.

Find out more:

naturalresources.wales/about-us/our-projects/nature-projects/life-dee-river-project/?lang=en&utm_medium=email&utm_source=govdelivery

MEET OUR BIODIVERSITY CHAMPIONS

We currently have 12 Biodiversity Champions within Welsh Water and we will continue recruiting to grow our network further. Our champions are passionate individuals who all have a shared vision for biodiversity and ecology within Welsh Water. They come from all regions and teams across the company and are in operational and support roles. Not only do they support colleagues with biodiversity queries, they also help raise awareness of internal campaigns as well as look for opportunities for enhancement across our operational sites. Here is what a few of our champions have to say about the volunteering role they bring so much passion to.



GEMMA

What sparked your interest in becoming a Welsh Water Biodiversity Champion?

I studied Civil and Environmental Engineering at university so have always had an interest in infrastructure and protecting and enhancing the environment. My role in the dam safety team has exposed me to a number of environmental challenges, so becoming a Biodiversity Champion has helped to expand my knowledge and share learning with others.

What do you enjoy most about being a Biodiversity Champion?

I enjoy finding out about how the business is enhancing biodiversity, new initiatives and learning from the other champions about the ways they are improving their areas.

Have you been involved in any biodiversity projects or have anything planned?

I am currently looking at incorporating more biodiversity features at our north Wales dam sites. This includes planting bulbs, native wildflower seeds, bat and bird boxes and 'bug hotels'.



DAVID

What sparked your interest in becoming a Welsh Water Biodiversity Champion?

I have always been interested in Wildlife and the Countryside and I have an Environmental Science Degree with a bias towards ecology and biodiversity.

What do you enjoy most about being a Biodiversity Champion?

I enjoy building Bird Boxes, Hedgehog houses and Insect homes and hotels. I also enjoy spending time outdoors with nature.



RHODRI

What sparked your interest in becoming a Welsh Water Biodiversity Champion?

My passion for nature and with mankind's misuse of it. Becoming a Welsh Water Biodiversity Champion, I hope to make a difference using our sites to work on and enhance biodiversity.

What do you enjoy most about being a Biodiversity Champion?

It gives me an opportunity to focus on something I really care about, with aim to get others onboard and actively create biodiversity habitats / food source, on our sites.

Have you been involved in any biodiversity projects or have anything planned?

Pre-covid I'd been involved in some group tasks such as planting wildflowers / building bug hotels, as well as working with local wildlife trusts on certain areas of land to enhance wildlife.



REBECCA

What do you enjoy most about being a Biodiversity Champion?

I have only recently become a champion but I enjoy being part of a community of like minded people and having the opportunity to try and enhance biodiversity across Welsh Water.

Have you been involved in any biodiversity projects or have anything planned?

I have been working to coordinate within the Energy Team to ensure we are managing our solar sites to enhance biodiversity as far as possible.



ELLIE

What do you enjoy most about being a Biodiversity Champion?

I enjoy using my GIS skills to analyse different datasets relating to biodiversity and conservation whilst being involved in helping Welsh Water have a positive impact on the natural environment.

Have you been involved in any biodiversity projects or have anything planned?

I have undertaken spatial analysis work and GIS data extracts revolving around Welsh Water above ground assets, habitat types and protected areas.



CHRIS

What sparked your interest in becoming a Welsh Water Biodiversity Champion?

I have always been passionate about the environment and in particular biodiversity, I studied Marine Geography at university where I specialised in ecology and conservation science. I was very lucky to undertake research projects in Wales, Malta and Spain as part of my degree and have since worked for two different cetacean conservation charities in West Wales and for the Bimini Biological Field Station (Sharklab) in the Bahamas – I wish I could go back!

What do you enjoy most about being a Biodiversity Champion?

I love being able to work for a not for profit company that performs so many critical functions for the people of Wales and beyond, whilst also getting involved in the conversation around environmental stewardship and biodiversity enhancement – it excites me to think what we can potentially achieve as a business with biodiversity in mind.

Have you been involved in any biodiversity projects or have anything planned?

As part of my graduate placement I undertook a project to analyse the potential for biodiversity enhancement within Water Production, I hugely enjoyed putting my past experiences into practice within Welsh Water and it's something I'm hopeful to do more of.



GEMMA

What sparked your interest in becoming a Welsh Water Biodiversity Champion?

My masters thesis was on invasive species and my degrees have had a strong focus on biodiversity and conservation. My current role involves working with the natural environment so I have a genuine interest in working with nature and improving it.

What do you enjoy most about being a Biodiversity Champion?

So far I have enjoyed getting to know the challenges in other areas around the business and what they are working on.

What is your vision for biodiversity within Welsh Water? What would you like to see?

I would like to see some research where innovation and a circular economy can connect and reduce raw water quality risk which in turn will benefit the environment, the business and customers.

PROGRESS UPDATE ON OUR 'MAKING TIME FOR NATURE 2020' COMMITMENTS

OUR CORE SERVICES – DRINKING WATER SUPPLIES

Commitment 1

Following the publication of the Water Resources Management Plan in 2019, we will continue to explicitly take account of our biodiversity and ecosystems resilience duty when we undertake our next full review of our Water Resources Management Plan for 2024.

2020 plan delivery commitment:
2024

Status & Update

We are on track to submit the final Water Resources Management Plan in 2024. As part of this plan biodiversity continues to be included as part of the forward planning process.

Action going forward for next Biodiversity Plan 2023 onwards

Look for more opportunities for biodiversity as well as continue with all INNS and biosecurity work including that of the Raw Water Transfer research project.

Progress update:
Ongoing, on track

Commitment 2

We will continue to work with our regulators to improve our understanding of the potential for our practices to spread invasive non-native species and the potential cost implications.

2020 plan delivery commitment:
Ongoing

Status & Update

We successfully claimed INNS AMP 7 outputs which included raising awareness of invasive species, our investigations into Raw Water Transfers with the Water Resources team and continued participation on the Wales Resilient Ecological Network (WaREN) project board to influence action towards INNS control and mitigation at a Pan-Wales level.

For more information on Wales Resilient Ecological Network (WaREN):
biodiversitywales.org.uk/Invasive-Non-Native-Species-Group

Action going forward for next Biodiversity Plan 2023 onwards

Continue with INNS work working towards a catchment based approach to controlling INNS and Raw Water Transfers.

Progress update:
Actions for 2019–22 Plan completed

Commitment 3

Following our WaterSource Approach we will continue to collaborate and engage with our stakeholders in the third sector. This will be as part of our programme of work for our 23 Safeguard Zones, so that we can work together toward a common agenda, to reduce levels of contaminants such as levels of pesticides and ammonia in the environment, to protect our water supplies and to benefit wildlife.

2020 plan delivery commitment:
Ongoing

Status & Update

We continue to use a 'WaterSource' approach to catchment management. This includes:

- Working with partners and stakeholders.
- Developing action plans for our 23 Safeguard zones.
- PestSmart – continuation of pesticide disposal schemes, and amenity and domestic awareness campaigns.
- Brecon Beacons Mega Catchment – ongoing development of a programme of proactive land management and engagement trails to improve water quality entering our reservoirs and rivers from which we abstract water.

For more information on our WaterSource project:
corporate.dwrwymru.com/en/community/environment/our-projects/watersource

Action going forward for next Biodiversity Plan 2023 onwards

Going forward look to update the commitment to progress Catchment work to improve raw water quality, and where possible improve carbon and biodiversity at the same time.

Progress update:
Actions for 2019–22 Plan completed

Commitment 4

We will continue to collaborate with our stakeholders to ensure that forest and woodland design and management will secure land from erosion and landslip as well as deliver multi-benefits. In selecting the species to plant, we will consider how to maximise biodiversity gain.

2020 plan delivery commitment:

Ongoing

Status & Update

To help Welsh Water achieve its potential tree planting initiatives for Welsh Water Carbon Net Zero plan we have developed a native seed bank project. This will continue into AMP8 and beyond to promote a healthy circular economy for native trees, wildflowers and potentially aquatic plants for wetlands.

We continue to work with a multi stakeholder group to deliver the Celtic Rainforest project in two woodland pockets at Elan Valley. This project looks at woodland management to bring these specific areas into favourable conditions as well as INNS management particularly of rhododendron across the estate.

We have delivered a number of tree planting schemes in our strategically important drinking water catchments. These include at Talybont and Cantref. Going forward we will continue to work with our stakeholders to deliver more schemes, which will include potential tree planting initiatives as part of Welsh Waters Carbon Net Zero plan published in 2021.

Action going forward for next Biodiversity Plan 2023 onwards

Explore opportunities for woodland management, research and promoting native species planting within Wales so as to improve biodiversity, sequester carbon, and improve water quality.

Progress update:

Ongoing, on track

Commitment 5

We will look for new opportunities at our Visitor Centres to support nature and to engage the public with the natural environment.

2020 plan delivery commitment:

On target

Status & UpdateOsprey project

2022 has been a successful breeding year with 2 fledged chicks, a male (KA9) Gelert and female (X6) Olwen, named by Ysgol Pant Pastynog. Ahead of nesting season, a new pole, platform and nest was installed, with help from Openreach and donations from the public. To protect the nesting birds, night time security patrols from G4S have operated through the season; 2 x PID systems "Daleks" have continuously monitored the site for intruders; and Qioptic loaned us night vision equipment for covert surveillance. A Conservation plan has been written and monitoring has taken place, which found that the existing buffer zone is acceptable and human disturbance is not considered an issue. RSPB have run the hide all year, offering the opportunity to see the birds at 140m.

Find out more:

llynbrenig.com/ospreys-llyn-brenig

Peatland restoration pilot project

The project was funded by a combination of £30k NRW funding and £40k Welsh Water funding and will be delivered by the end of March 2023. Main outcomes are to convert (as a pilot) 11ha of ex-forestry back to a condition that could sustain bog forming species going forward. That involves stump grinding, ground levelling, and creation of banded cells. The area will be inoculated / seeded with bog species, and monitored for ground water levels and water quality. The information will inform the next phase, including a plan that NRW are expecting as part of the grant funding.

We have also installed 1 barn owl box with 1 more due this winter, as well as 2 red squirrel boxes and a pine marten box. We have also seeded BV206 ponds with wetland species to convert them to wildlife areas, as part of a future nature trail.

Action going forward for next Biodiversity Plan 2023 onwards

Continue to look for opportunities to understand and enhance biodiversity, carbon sequestration and water quality improvement, at our visitor

Commitment 5
continued

attraction sites as well as involve the local community using our Friends of Initiatives.

Progress update:
Complete

OUR CORE SERVICES – TREATMENT OF WASTEWATER AND MANAGEMENT OF SURFACE WATER

Commitment 6

We will complete our current 2015–2020 programme of £60 million investment agreed with Natural Resources Wales to improve our discharges at 13 wastewater treatment works by, for example, reducing levels of phosphorus to benefit the ecology in the receiving waters.

2020 plan delivery commitment:
March 2021 – on target

Status & Update

Delivered and outputs claimed

The AM7 P Programme originally consisted of the following 13 sites in the NEP from 2020, with 3 further sites also in the NEP from 2015 which were planned for delivery in AMP7:

1. Eign (delivery March 2024)
2. Rotherwas (delivery March 2024)
3. Leominster (delivery March 2024)
4. Kingstone & Madely (delivery March 2025)
5. Weobley (delivery March 2023)
6. Builth Wells (delivery March 2023)
7. Pontrilas (delivery March 2025)
8. No Man's Heath (delivered Dec 2022)
9. Malpas (delivery March 2025)
10. Tattenhall (delivery March 2025)
11. Rhayader (delivery March 2030)
12. Llandrindod Wells (delivery March 2030)
13. Whitchurch (delivery March 2027)
14. Presteigne (delivery March 2023)
15. Clyro (delivered Dec 2021)
16. Norton (delivered Dec 2021)

There were 2 further schemes that were 'amber' on the NEP which have since been progressed for delivery which are:

17. Spittal
18. Llanarth

The grand total investment in AMP7 for P removal at current LBE (Latest Best Estimate) is £89m. Note we are also investing a further £60m this AMP, to deliver some AMP8 P removal schemes early.

Action going forward for next Biodiversity Plan 2023 onwards

Look to develop a new commitment going forward which will also be linked to our PR24 plans. Also look to how we can incorporate more biodiversity enhancement through these schemes.

Progress update:
Complete

Commitment 7

We will continue to research into the effectiveness of some new treatment processes to reduce phosphorus in our discharges.

2020 plan delivery commitment:
Ongoing

Status & Update

Welsh Water's main focus for this commitment is on wetland and Nature Based Solutions (NBS). Construction in progress in Luston and negotiations at seven other sites on the Lugg with Hereford council.

Pre-feasibility at Tremeirchion WwTW completed for SMNR pilot.

Find out more: [corporate.dwrcymru.com/en/community/environment/sustainable-management-of-natural-resources](https://www.welshwater.com/en/community/environment/sustainable-management-of-natural-resources)

Unlike the guidance available within England, Welsh Water are currently working with consultants and NRW to draft a policy on phosphorus within Wales. Currently if our EnTrade phosphorous offsetting trials are successful later this year, there is no regulatory platform available to offset Phosphorous loadings between the water and agricultural sector.

We continue to remain actively involved with national research groups on phosphorus removal.

Action going forward for next Biodiversity Plan 2023 onwards

Look to update commitment going forward.

Progress update:

Ongoing, on track

Commitment 8

We will complete our current programme of investigations into our impact at 76 inland water bodies. Where we are confirmed as the main reason why a water body is not achieving Good Ecological Status we will (by 2019) agree a programme of improvements we should make during 2020-2025. Further to this completion we will continue this work through other investigations.

2020 plan delivery commitment:
Complete

Status & Update

Investigations have been completed and improvements built into AMP 7 programme. Ongoing negotiations with NRW on how to deal with non cost beneficial schemes. In these cases we are proposing improvements to deliver a combination of some improvement at our works in combination with catchment improvements.

Future Water Framework Directive (WFD) investments will all be agreed with NRW and set out in our AMP8 business plan. These will be based on both our and NRW's river water quality monitoring data, and will be reflected in NRW's WFD River Basin management plans. As we implement prioritised up stream and downstream monitoring for CSOs in AMP8, we will find assets which impact on the status of our rivers and these will need to be improved also as agreed with our regulators.

Find out more:

corporate.dwrcymru.com/en/community/environment/our-projects/water-framework-directive-schemes

Action going forward for next Biodiversity Plan 2023 onwards

Create a new commitment going forward to reflect this work.

Progress update:

Complete

Commitment 9

We will continue to look for opportunities to educate our customers about the damage that sewer misuse can cause, including to marine wildlife.

2020 plan delivery commitment:
Ongoing

Status & Update

Stop the Block campaign continues to raise awareness of sewer misuse. The aim of our Stop the Block campaign is to ensure customers in Wales and parts of Hereford receive the message that throwing the wrong things down the sewer will result in blockages, damaging their homes, their communities and the wider environment. This year we also want to target frequent sewer misuse offenders using a localised activity approach.

Find out more: dwrcymru.com/en/stop-the-block

Ongoing programme which has been refreshed with our customers. We are campaigning with Welsh Government for a ban on single use plastics including those used in wet wipes.

Find out more: corporate.dwrcymru.com/en/news-media/2020/plastic-wet-wipes-ban-has-majority-public-support

Adopt a CSO campaign running internally.

Action going forward for next Biodiversity Plan 2023 onwards

Look for opportunities to integrate biodiversity into these existing and new campaigns.

Progress update:

Complete

Commitment 10

We will continue to work with Natural Resources Wales and Environment Agency to encourage concerted action to be taken to address all pressures affecting particular water bodies, including our impacts.

2020 plan delivery commitment:
Ongoing

Status & Update

We proposed catchment permits as part of our integrated response to the First Minister's phosphorus summit at the Royal Welsh Show. We are developing supportive proposals for catchment based permitting to share with NRW for discussion.

Find out more:

corporate.dwrcymru.com/en/news-media/2022/welsh-water-to-invest-extra-100-million-pounds-before-the-end-of-2025-to-improve-river-water-quality

Action going forward for next Biodiversity Plan 2023 onwards

Update commitment going forward to reflect this work.

Progress update:

Ongoing, on track

Commitment 11

We will continue to work with the Welsh Government, including Welsh Local Government Association, Ofwat and Natural Resources Wales to look for ways to overcome regulatory obstacles that may inhibit our adopting more nature-based approaches to some treatment processes and surface water management.

2020 plan delivery commitment:
Ongoing

Status & Update

We are using some of the additional CSO's funding to bolster our Rainscape programme. This will include a coordinators role and regional liaison officers to build up partnership relationships in each area with the aim of facilitating partnership surface water management projects across Wales.

Find out more: corporate.dwrcymru.com/en/community/environment/our-projects/rainscape

We have also established river liaison roles to coordinate with stakeholders and partners in each area to deliver more sustainable and effective water quality improvements.

We measure the effectiveness of the river liaison roles through a number of activities. We must be mindful that setting targets may prove challenging due to the dependency on third party participation. Our role and the role of these posts is to lead as well as facilitate these changes. These measures include but are not limited to:

- Leveraged WG and UKRI funding for river and water quality improvements
- Citizen Science contributions to the evidence base
- A number of Nature Based Solutions (NBS)
- Strength and depth of relationships with communities and stakeholder groups
- Water quality and biodiversity improvements to river habitats as tracked by the WFD

Action going forward for next Biodiversity Plan 2023 onwards

New commitment needed to reflect development of this project. Also explore how can we increase biodiversity and biosecurity within this work stream.

Progress update:

Complete

EDUCATION**Commitment 12**

We will continue our role in educating future generations about the importance of the water environment, including its flora and fauna.

2020 plan delivery commitment:
Ongoing

Status & Update

Face-to-face delivery has been impacted by Covid-19 from March 2020–April 2022, but continued via virtual delivery.

The Education Centre at Cilfynydd re-opened in April 2022, with school and pupils once again frequently visiting to receive free outdoor environmental education sessions with our team of Seconded Teachers. Since April 2022, 669 pupils have visited the centre, accounting for 90 hours of direct delivery, across 23 schools. Topics covered through these

visits are mainly linked to the environment. This is in addition to 5,232 pupils that visited a centre between April 2019 & March 2020, before Covid first emerged.

The total number of participants that visited an outdoor environmental education centre and/or received an outreach school visit (whether virtual, live Teams delivery during Covid or face-to-face) from January 2019–current is 152,518. This accounts for 3,470 hours in the company of the next generation. Whilst these cover a range of key campaign messages, environmental issues is a feature of many sessions.

Our strategy includes frequent collaborative initiatives with Keep Wales Tidy, which involves the simultaneous streaming of live Teams sessions into classrooms. The most successful of these was a session to mark COP26, which was presented to over 6k pupils.

The Education Team are supporting Groundwork on school outreach visits in Nant-yr-Aber in September 2022.

Conversations on how the Education Team can support in future SMNR school engagement in Tremeirchion & Henllan, as and when it is appropriate, have been discussed with the North Wales Programme Lead.

To find out more about our education work or to look at booking a visit for your local school find out more here:

corporate.dwrcymru.com/en/community/education

Community fund update

Between April 21–March 22 we supported 41 Biodiversity projects through the Community Fund, with a total of £14,300 going to the projects.

Action going forward for next Biodiversity Plan 2023 onwards

Going forward, commitment to continue working with the education team to raise awareness.

Commitment to remain as part of community fund for small scale environmental and biodiversity enhancements.

Progress update:

Complete

CLIMATE CHANGE

Commitment 13

We will continue to look for opportunities to increase our renewable energy generation capacity and improve the energy efficiency of our existing operations.

2020 plan delivery commitment:

Ongoing

Status & Update

As part of our site biodiversity enhancement programme we will as standard promote these sites as wildflower meadows where safe and practical to do so.

We will continue to look for opportunities to increase our renewable energy generation capacity and improve the energy efficiency of our existing operations.

Generation update 2021/22

Solar: We have installed solar on Linea, Glaslyn (additional array), Clydach offices and on Bolton Hill WTW and Ponthir WwTW (additional array). We started installation at Chester WwTW and Llanelli WwTW.

Hydro: We have built two new hydro generation stations in 2021/22, one at Cantref WTW and another one at Grwyne Fawr reservoir.

To reduce energy consumption we installed new blowers at Cardiff WwTW and are in the process of installing new blowers at Cog Moors.

Commitment 13 continued

New blowers for 7 additional sites have been identified to be installed over the next two years. We also completed a energy efficient lighting and heaters program this year, which meant that most of are sites are now equipped with smart heating & lighting systems, which reduce energy consumption.

Planning and environmental constraints continue to constrain hydro and on shore wind in particular. Potentially the next significant change for us could be floating solar on our reservoirs, as these can have a number of benefits, and are being trialled at scale by some of the other water companies.

Action going forward for next Biodiversity Plan 2023 onwards

Update commitment to reflect ongoing and planned work to enhance biodiversity at these sites eg Llanelli Solar PV park.

Progress update:

Complete

Commitment 14

We will research the impact that climate change is likely to have on the environment and ecosystems by 2050 and set out our research ambitions for 2020–25 in our next business plan.

2020 plan delivery commitment:
Ongoing

Status & Update

We have updated our innovation and research strategy in 2022 and will do so again in 2027. This will continue to detail our research priorities. We will also publish our DWMP in 2027 which will specifically highlight the challenges of climate change with regards to drainage and waste water services.

We have a number of research programmes proposed for AMP 8 for both biodiversity and INNS in relation to impact from climate change. There is comparatively little research on the impacts of climate change on aquatic ecosystems and soil management which will be critical for understanding Water Quality and preparing for emerging risks. We will leverage our relationships with academia here but it will be equally important to make sure our specific research needs are covered if academia don't pick these up via UKRI. We already know that the temperature rise in waters may mean the end of Salmon in many of our rivers by 2050. This type of change may in turn impact on environmental designations and standards, which is why it is so important we understand it.

The Energy team have published Welsh Water's targets and strategy to reduce our contribution to climate change and reduce emissions to zero by 2040, with an intermediate target of reducing emissions by 90% by 2030, compared to a 2010 baseline.

Welsh Water's ReThink climate change group continues to meet monthly to discuss opportunities and risks around climate change and sustainability. By inviting key speakers from around the business the group can determine opportunities to collaborate but also gain better understanding of internal pressures faced and how these have been planned for. Active projects underway including establishing how we may recycle the plastics screened at WwTWs; how to recycle PPE into useful products such as dog coats; developing an educational tool to help colleagues learn about the environment; advising and challenging colleagues on green transport issues.

Welsh Water's innovation team continue to lead on research opportunities including projects involving climate change.

Two ongoing projects are as follows:

Research Project with Bangor University

On Predicting flood risk, It's looking at coastal erosion that could affect our assets on the east side of the country, which we believe is linked to climate change.

WATR Sensors

A series of sensors have been deployed in the River Usk and in final effluent flows measuring DO, pH, Ammonia and Turbidity. Over long periods of monitoring these may help by showing potential changes due to climate change. With more intense and frequent rainfall patterns, we could see spikes of impacts on the watercourses for these determinants – this could be extrapolated out to 2050 if we see the climate predictions across Wales and potentially highlight impacts on watercourses and the coast from storm discharges, linking back to the environment and ecosystems.

Action going forward for next Biodiversity Plan 2023 onwards

Update commitment to reflect progress of project from planning to implementing.

Progress update:

Complete

LOOKING AFTER PROTECTED SITES**Commitment 15**

We will continue to use Natural Resources Wales' "Actions Database" to identify and address issues in the Sites of Special Scientific Interest that we own.

2020 plan delivery commitment:

On hold / closed

Status & Update

NRW database still unavailable. We at Welsh Water are currently working on our own internal database to support our baseline studies and work towards biodiversity net gain.*

As part of our AMP 7 NEP outcomes we are establishing Welsh Water's relationship with designated sites as well as section 7 protected species that may be near these sites. We will look for opportunities to enhance on and around our sites to increase connectivity corridors where possible.

Where possible we will use databases to establish information about SSSI sites. NRW have developed a new database which will help towards this work.

Protected sites baseline assessment 2020 created by NRW can be found here:

naturalresources.wales/evidence-and-data/research-and-reports/protected-sites-baseline-assessment-2020/?lang=en

*Biodiversity net gain is an English tool using the Defra Biodiversity metric 3.1. We still do not have a tool available in Wales – it is currently being developed and is likely to differ from the English version as a biodiversity net benefit approach.

Action going forward for next Biodiversity Plan 2023 onwards

New commitment needed to reflect new direction required by Welsh Water and to incorporate new tools and metrics going forward. Welsh Water continues to monitor designated sites and look for opportunities for improvement.

Progress update:

Complete – superseded

Commitment 16

Continuing to work with Natural Resources Wales, we will initiate investigations into the condition of Sites of Special Scientific Interest that we own and develop an enhancement programme, so far as consistent with the exercise of our functions.

Status & Update

This will be achieved through our biodiversity baseline studies which are already underway with first 100 sites being reported in September. All designated sites will be surveyed within the next round of baseline studies. We are waiting for further clarity of Ofwat proposal to make biodiversity baseline studies standard practice on a 4 year cycle with annual reporting.

Enhancement programmes have been developed for AMP 8 including woodlands and our assets that fall within designated areas. It is worth

Commitment 16

continued

2020 plan delivery commitment:

Ongoing

noting that Welsh Government are current revising the list of priority species which may impact our assessments/ approach going forward (list may exceed 3000 species).

SSSI Ricardo report is now available to help decision making in 4 of our SSSI catchment areas and site specific action plans will be developed to implement changes to bring these sites back into favourable conditions. Welsh Water will host a workshop in November 2022 to discuss this action with NRW and how we approach this going forward.

Action going forward for next Biodiversity Plan 2023 onwards

Commitment to be updated to reflect next steps.

Progress update:

Complete**WORKING IN PARTNERSHIP****Commitment 17**

We will continue to invite applications from non-profit organisations for funding for projects that will deliver positive outcomes under the Water Framework Directive where water bodies not achieving Good Ecological Status will benefit and where there is a substantive link to Dŵr Cymru's operations and interests.

2020 plan delivery commitment:

Ongoing**Status & Update**

Applications received during this reporting period have been low but this can be attributed to the pandemic and also not quite fulfilling the qualifying criteria.

To date £148K has been awarded with a further £84K allocated to the end of this AMP. We are still open to applications and encourage those interested to apply.

Some of the successful projects have been included and more information can be found in our case studies showcased in the beginning of this report:

- Hereford Waterworks museum
- Rivers for Life
- Mentermon Menai Rivers
- Agrisound technology installed at Llys-y-Frân
- Brenig peatland restoration

Application are still welcome – find out how to apply here:

corporate.dwrcymru.com/en/community/environment/our-projects/biodiversity-fund

Action going forward for next Biodiversity Plan 2023 onwards

Look to merge this commitment with similar commitments.

Progress update:

Ongoing, on track**Commitment 18**

Continue to explore the role of "Friends of" and other community groups who might adopt and help us to manage some of our sites.

2020 plan delivery commitment:

Ongoing**Status & Update**

Established in Lisvane and Llanishen. Next site will be Llys-y-Frân (start campaign in Sept).

Friends of Cardiff Reservoirs: volunteer group

Since May 2020 Welsh Water has been engaging with the community local to Lisvane & Llanishen reservoirs to support the formation of a Friends of Group. In July 2021 the community met at the reservoir site to formally constitute the Friends of Cardiff Reservoirs. This is Welsh Water's first Friends of volunteering group, which has enabled us to strengthen supportive relationships with the community, whilst delivering volunteer projects to prepare the site before opening to the public, raise the awareness of the site's sensitive ecology, whilst also enhancing local biodiversity.

Key projects to date include

Stone wall training programme with volunteers, delivered by Dry Stone Wall Association, started the creation of a woodland wildlife corridor. The stone wall will provide additional habitat for grass snakes and amphibians, and attract various wildlife such as butterflies and birds. Native bluebell seed harvesting took place at Ruperra Conservation Trust with our ranger team and volunteers. The seeds have been sown around the reclaimed ponds at the reservoirs to support the enhancement of the native woodland ground flora. The activity also worked as a knowledge transfer opportunity as the team also learnt about the fantastic work that has taken place to conserve and restore the ancient woodland.

Action going forward for next Biodiversity Plan 2023 onwards

Develop commitment further to deliver volunteering opportunities that support biodiversity enhancement.

Progress update:

Complete

Commitment 19

We will continue to invite applications from not for profit organisations for funding toward projects that will help to prevent, reduce, eradicate or manage the risk of non-native species where there is some link to Dŵr Cymru's operations.

2020 plan delivery commitment:
Ongoing

Status & Update

Menai Rivers project was successful in attaining funding from Welsh Water's environment fund. This project encompasses a number of initiatives across the Menai catchment.

We have also launched several investigations to establish the extent of certain INNS across our sites including Zebra Mussels at Llandegfedd which has also identified Crassula.

Action going forward for next Biodiversity Plan 2023 onwards

Link up with commitment 17.

Progress update:

Complete

OUR PEOPLE**Commitment 20**

We will continue to give all colleagues the opportunity to learn about the legal conservation obligations that Dŵr Cymru has.

2020 plan delivery commitment:
Completed

Status & Update

We have achieved this commitment through the following actions:

- Biodiversity source page updated.
- Frequent correspondence through internal comms Friday Fix to raise awareness eg bats, INNS
- E-Learning available (will be updated in AMP 8 if not before)
- Alliance partners and internal teams – frequent awareness sessions
- Environmental handover sessions now in place to make site operators / assets owners aware of the legal obligations held from ongoing licensing and monitoring agreements.

We still have room for improvement as we have had a number of breaches during this reporting period for example the correct licence may not have been obtained before entry into a designated area. We will continue to update procedures and raise awareness so these practises embed into the business as usual.

Action going forward for next Biodiversity Plan 2023 onwards

Update commitment to reflect further work required to continue.

Progress update:

Ongoing, on track

Commitment 21

We will continue to look for opportunities (e.g. through internal communications and competitions) to harness the enthusiasm of our colleagues to help nature as they go about their day jobs of supplying water and sewerage services.

2020 plan delivery commitment:
Ongoing

Status & Update

We have achieved this commitment through the following actions:

Internal and external communications will be focused on sharing good news and any learning from our initiatives, so as to enhance the efficient use of both our resources and those of external third parties.

Milestone planner created with all key biodiversity dates to help stop duplication of work each year.

New INNS ID guidance available as well as new guidance on peat land mitigation, grass land management and protected species. Continue to update guidance when needed with various topics that arise.

Attend team meetings to raise awareness about biodiversity and our section 6 duty.

Biodiversity ice breaker game is a fun way to get teams involved after covid working.

Sustainable Management of Natural Resources (SMNR) methodology is being developed. It has been proposed that the principles of SMNR are embedded into our code of conduct.

Action going forward for next Biodiversity Plan 2023 onwards

Update commitment to reflect further opportunities.

Progress update:
Complete

Commitment 22

We continue to raise the awareness of our contractors of our biodiversity duties through our contract arrangements and procurement process and will encourage our contractors to play their part in supporting the delivery of our duty while they are working on our behalf.

2020 plan delivery commitment:
Ongoing

Status & Update

The biodiversity team are actively involved with tender process with procurement including major and minor framework for civil, electrical and mechanical contracts as well as further sustainability work with the team All contractors aware of Section 6 duty, biodiversity culture, biodiversity strategy and plan (as part of tender process and contracts).

Action going forward for next Biodiversity Plan 2023 onwards

Update this commitment to incorporate procurement into the process further to get the greatest benefits for biodiversity.

Progress update:
Complete

Commitment 23

We will continue to communicate an "Invasive Non-Native Species Identification Guide" to our colleagues which will include seasonal updates.

2020 plan delivery commitment:
Complete

Status & Update

Revised version of INNS guidance launched in May 2022 with three supporting lunch and learn sessions.

New ID guides available on source for additional information INNS internal reporting system streamlined and available via an app early 2023.

Action going forward for next Biodiversity Plan 2023 onwards

Update commitment and look to linking in with additional INNS commitments.

Progress update:
Complete

<p>Commitment 24 Expand our Biodiversity Champions to across the entire business. Encourage champions to continue with great work as well as look for new opportunities to support nature.</p> <p>2020 plan delivery commitment: Ongoing</p>	<p>Status & Update 12 new Biodiversity Champions from all across the business now in post from all areas of the business (Waste, clean and support). Only now starting back due to covid restrictions our champions already have some fantastic small scale enhancement schemes ongoing or planned. We are always looking to recruit more champions and look to do this going forward.</p> <p>You can meet some of our Champions earlier on in this report!</p> <p>Action going forward for next Biodiversity Plan 2023 onwards Update commitment to reflect champion ambitions.</p> <p>Progress update: Complete</p>
<p>Commitment 25 We will review all the substantive ideas that emerged from the biodiversity workshop to assess their practicality; potential value; and priority.</p> <p>2020 plan delivery commitment: Ongoing</p>	<p>Status & Update This exercise needs to be repeated in light of all the new challenges to ensure our action plan is ambitious enough to meet our customer and stakeholder expectations. Look to arrange workshops as part of strategy action plan launch and to gain information for the next Biodiversity Plan 2023. We will also look to arrange further workshops for various topics related to biodiversity including our approach to baseline studies and updating our strategy. We will host a baseline study workshop with our regulators in November to establish the best method for baseline studies in Wales going forward.</p> <p>Action going forward for next Biodiversity Plan 2023 onwards Update commitment to reflect new approach to workshops</p> <p>Progress update: Ongoing, on track</p>
<p>Commitment 26 In procuring our next grounds maintenance contracts, we will encourage those submitting tenders to consider biodiversity benefits and encourage best practise to maintain and enhance biodiversity at our sites.</p> <p>2020 plan delivery commitment: Ongoing</p>	<p>Status & Update New grounds maintenance contract in effect from early October 2022. We continue to work closely with procurement for best practise to promote biodiversity across our sites, embed a new culture for 'hairy' sites (left to grow) where safe to do so and also focus on INNS control and eradication.</p> <p>Action going forward for next Biodiversity Plan 2023 onwards Commitment to be amended to add more emphasis on procurement and ground maintenance enhancing biodiversity across our assets as business as usual.</p> <p>Progress update: Complete</p>
<p>Commitment 27 We will continue to review our procedures (in-house and with our Alliance Partners) to formalise how potential biodiversity gains (including combatting climate change) should be considered when capital schemes are being designed and, if relevant, their on-going maintenance.</p> <p>2020 plan delivery commitment: Ongoing</p>	<p>Status & Update Working closely with Capital Delivery Alliance (CDA) it has been agreed that we will have no net loss in this AMP as the teams work towards embedding the processes for net gain in AMP 8 (or before if possible). The CDA have developed a tool to help record Biodiversity Net Gain for capital schemes for use with larger schemes. If biodiversity net gain cannot be simply recorded for smaller schemes, we will pursue minor enhancements at such sites. We will review this approach once Welsh Government have confirmed the metric to be used within Wales.</p>

Commitment 27 continued

Environmental handovers are now standard practise for all handovers been CDA and Welsh Water so that roles and responsibilities around environmental licencing and monitoring are understood. A central database is required to record all of these agreements going forward.

CDA have produced a biodiversity and carbon strategy which supports Welsh Water's ambitions

Action going forward for next Biodiversity Plan 2023 onwards

Review commitment to allow for further procurement work to be developed. Also reflect any progress with biodiversity metrics (English and Welsh) going forward.

Progress update:

Ongoing, on track

Commitment 28

Further to our biodiversity trial at a number of our operational sites to showcase how nature can be supported while not undermining the operational purpose of sites or the health and safety of our colleagues we will develop site specific Biodiversity Management Plans.

2020 plan delivery commitment:

Ongoing

Status & Update

Biodiversity baseline studies commissioned across 100 WwTW using the Defra Biodiversity metric tool 3.1. were completed in 2022. These will inform our approach to the next round of studies in AMP8. Our approach will need to be reviewed once Welsh Government has confirmed the new biodiversity metric to be used within Wales.

Site specific biodiversity management plans available for 7 sites.

Environmental information boards will be made available for all assets from the baseline studies – this will inform if the site is within a designated area, any protected species and also areas set aside for biodiversity enhancement work.

Interactive mapping tool as part of the biodiversity baseline studies

Award winning innovation project – Biodiversity care packages already distributed across our operational sites for additional enhancement...

- 29.5kg wildflower seed
- 39 bat boxes
- 2 bug hotels
- 65 bird houses
- 200 bulbs

Action going forward for next Biodiversity Plan 2023 onwards

Review commitment to develop and implement findings going forward.

Progress update:

Complete

Commitment 29

We will continue to collate the ecological information, such as surveys, that we already hold to help inform our future plans to maintain and enhance biodiversity at our sites. As part of this we will look for evidence of the presence of the species or habitats in Biodiversity Lists published under section 7 of the Environment (Wales) Act 2016.

2020 plan delivery commitment:

Ongoing

Status & Update

Central databases currently being developed for use within Welsh Water:

- Licensing and monitoring data base
- Assets within or within close proximity to designated sites data base (SSSI, SAC, SPA sites)
- Section 7 awareness and location in relation to assets (for example, Dormice, Bats, Great Crested Newts)
- Biodiversity baseline 'scores'

Action going forward for next Biodiversity Plan 2023 onwards

Identify with further databases need to be developed going forward.

Progress update:

Ongoing, on track

Commitment 30

Further to working with our regulators, we have included biodiversity and nature based solutions in the scheme options that were considered when we develop our 2020–2025 investment programme. As part of this, we identified potential opportunities for biodiversity-driven projects linked to the exercise of our functions, and will review the investment case in time for the finalisation of our 2020–2025 business plan.

2020 plan delivery commitment:
Ongoing

Status & Update

We continue to embed biodiversity as part of these programme of works.

Sustainable Management of Natural Resources (SMNR)

A methodology is in progress to embed into the business. We continue to work with the team to look for opportunities for biodiversity within the pilot study areas.

Find out more about our approach to SMNR:

corporate.dwrcymru.com/en/community/environment/sustainable-management-of-natural-resources

Drainage and Wastewater Management Plan (DWMP)

A customer-driven plan that will focus on tackling the future challenges of population growth, urban creep and climate change on our drainage and wastewater systems from 2025 to 2050. Its first draft has been to consultation. We continue to work with the team to establish opportunities for biodiversity and embed them into the plan.

Find out more about DWMP:

dwrcymru.com/en/our-services/wastewater/drainage-and-wastewater-management-plan

Natural capita accounting – Multi capital accounting is being developed for general use by asset planning. Several discussions on how to add value to biodiversity given Welsh Government may use a different metric to the DEFRA 3.1 tool.

Action going forward for next Biodiversity Plan 2023 onwards

Review commitment with each programme lead to develop biodiversity opportunities further.

Progress update:

Complete

GOING FORWARD – WHAT HAPPENS NEXT?

Further to this report, under section 6(8) of the Environment (Wales) Act 2016, we must now review our forward looking biodiversity plan (Making Time for Nature – our revised plan, 2020). Our third biodiversity plan, which will be published by December 2023 will review all 30 commitments to ensure they are still fit for purpose in our ambitions to meet and exceed our biodiversity duty. The new plan will also allow us to align with our biodiversity strategy published earlier in 2022 and specifically link to our investment plans and aspirations for AMP8 as set out in our AMP8 business plan and National Environment Programme for Wales.

We hope to host a workshop to develop our new plan involving key stakeholders, regulators and all relevant internal teams within Welsh Water. The next reporting window will be between 2023–2025 which will conclude this current AMP cycle of funding. We continue to look for opportunities to collaborate with our partners to maximise the potential benefits to nature.

We welcome your thoughts and suggestions as well as opportunities to collaborate now and in the future. Please contact us via biodiversity@dwrcymru.com



CLOSING THOUGHTS



It is great to see the passion and commitment of colleagues and partners alike in helping us to conserve, protect and enhance the natural environment. Particularly in the face of recent challenges such as the pandemic, rising costs of living and construction materials, and the distractions of international affairs.

Despite these, we have made solid progress to both improve our environment, and to encourage, educate and support those with a passion for making a difference.

At a European level, a host of new and refreshed environment laws have and continue to be passed, all of which support the UN Sustainable Development Goals. This year the European Parliament recognised that if society is to pollute the environment less, this has to start with those who produce pollutants funding improvements, and so incentivise industry to formulate less harmful chemicals and pharmaceutical products. In Wales, we have also been driving forward legislative change, with the improved control of single use plastics and new frameworks to encourage and support sustainable agricultural processes.

It remains essential for the whole water and environment sector to work together in partnership, each playing their role so we can efficiently deliver the changes that society demands and that will be needed if we are to hand to the next generation a natural environment in which they can thrive. Such partnerships will involve a multitude of organisations, including government, regulators, environmental NGOs, industry and of course customers. The work will take investment, which will need to be funded and supported by everyone. To that end we will set out our investment proposals, and in particular how we intend to maintain and enhance the natural environment by December 2023 in the hope that our customers will support such work. In December of that year we will be able to confirm our forward looking plan for biodiversity enhancements. We look forward to these catalysing further partnerships and the leveraging of other available funds to enable us to deliver our Biodiversity Vision and Mission to continue.

“ ————— ”

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————— ”

Lastly, I would just like to thank all those who have contributed to the progress we have made and will continue to make. It is only through your passion energy and support that we have any hope of success and delivering an environment which we are proud to hand to the next generation. I very much look forward to continuing to work with you all in this important work.

Tony Harrington
Director of Environment

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