

Doing the right thing for nature

Dŵr Cymru Welsh Water's statutory report on what we have done to meet our biodiversity duty under Section 6 of the Environment (Wales) Act 2016



December 2019

Cover photograph

Dŵr Cymru's peatland habitats restoration in Black Mountains Site of Special Scientific Interest, surrounding Grwyne Fawr Reservoir. This is part of the Black Mountains Land Use Partnership, which has been supported by Welsh Government's Sustainable Management Scheme.

Foreword

For Dŵr Cymru, earning the trust of our customers is at the heart of everything we do. We know from surveys and other engagement exercises that our customers want us to look after the natural environment. We are pleased to respond to that agenda.

Here in Wales we are under a stronger biodiversity duty than most of the water sector by virtue of section 6 of the Environment (Wales) Act 2016. We want that duty to be the catalyst for Dŵr Cymru becoming an industry-leading exemplar of environmental responsibility.

The introduction of the strengthened biodiversity duty coincided with an increasing recognition within Dŵr Cymru that if we are to be a more resilient business, we need to work with nature, not against it. For example, actions we take to protect our raw water sources against the threats posed by pesticides not only make our water supplies more resilient, they also have significant benefits for nature. In the wastewater business, we are increasingly receptive to alternative approaches that offer wider environmental benefits as compared to conventional "concrete pouring" solutions: this supports the Welsh Government's sustainable management of natural resources agenda.

Our first step in meeting our strengthened biodiversity duty was the production in 2017 of our statutory biodiversity plan, "Making time for nature: Dŵr Cymru Welsh Water's plan for maintaining and enhancing biodiversity". We were very pleased with the positive feedback our plan received both internally and externally.

This report offers us the opportunity to take stock and reflect on whether "Making time for nature" has made the impact on the ground that we had hoped. I am pleased to report that, while there is still more to do, worthwhile progress has been made against all 30 of the commitments we made in that Plan. Perhaps the most far-reaching change has been an increased awareness within Dŵr Cymru of the need to protect and enhance biodiversity while we go about our "day-job" of being a water and sewerage undertaker.

The next statutory step after the publication of this report will be a review of "Making time for nature". I am confident that we will be able to build on the strong progress we have already made, so that supporting biodiversity becomes an increasingly routine part of our activities.

Dŵr Cymru is a long term business. We are indebted to previous generations for their foresight in providing many of the assets on which we still rely today, such as the great Victorian and Edwardian era reservoirs. I hope that our legacy will include a sense of pride in our stewardship of nature, so that future customers will inherit from us a thriving and biodiverse natural environment.



Chris Jones
Chief Executive

Who are we?

Dŵr Cymru Welsh Water 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 company limited by guarantee. We provide essential public services to our customers by supplying their drinking water and then carrying away and dealing with their wastewater in a sustainable manner, one which protects our environment and the biodiversity it supports. 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 of the areas we serve.



Why do we need a biodiversity report?

As a Wales based statutory water undertaker, we are under a strengthened biodiversity duty. It includes a specific requirement to report on how we have maintained and enhanced biodiversity.

Dŵr Cymru is, first and foremost, a supplier of public water and sewerage services. Our top priority will always be the supply of high quality services at a cost that our customers can afford.

However, we are always mindful that these services are very dependent on a high quality Welsh aquatic environment. It follows that it is in our interest to try to ensure that our activities are carried out in a way that respects the environment, including the flora and fauna it supports.

We therefore welcomed the introduction of section 6 of the Environment (Wales) Act 2016 which placed a strengthened biodiversity and ecosystem resilience duty on public authorities in Wales which, for this purpose, includes statutory water undertakers such as Dŵr Cymru. Specifically, we must "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".

Section 6(6) of the Act requires us to publish a forward looking plan setting out how we intend to meet the duty. We met this obligation in 2017 when we published, "Making time for nature: Dŵr Cymru Welsh Water's plan for maintaining and enhancing biodiversity".

Section 6(7) of the Act requires that, from 2019 onwards, we must publish reports every three years on what we have actually done to meet our biodiversity and ecosystem resilience duty. This is Dŵr Cymru's first report under section 6(7) of the 2016 Act and covers the period 2017 to 2019.

In producing this report, we are aware that we are under a number of other nature-related duties that apply in the exercise of our functions as a water and sewerage undertaker. These include the Natural Environment and Rural Communities Act 2006 which requires us to have regard to conserving biodiversity, a duty that applies to our activities in England. We also have particular responsibilities, for example under the Water Industry Act 1991, for the protection and enhancement of Sites of Special Scientific Interest, both on our land and elsewhere. A range of species-specific laws also apply to us, such as the Badgers Act 1992, as well as the requirement on us to have regard to the species listed under section 7 of the Environment (Wales) Act 2016.



How have we reviewed our biodiversity performance?

Our first step was to review the progress we have made against each of the 30 specific commitments we gave in, "Making time for nature: Dŵr Cymru Welsh Water's plan for maintaining and enhancing biodiversity". We can report that worthwhile progress has been made.

Our Board has taken an interest in how we are meeting our biodiversity duty: it received an interim update last year on progress in meeting our commitments and has approved this report prior to its publication. We also welcome the role of our Independent Environmental Advisory Panel (IEAP) whose members continue to challenge us on how we are meeting our biodiversity duty.

The progress we have made against each of the 30 commitments listed in "Making time for nature" is reported in the Annex on page 11. It may, though, be helpful to draw out some emerging themes.

The biodiversity duty applies in the exercise of our functions. As a water and sewerage undertaker, our main interaction with the natural environment is through our abstractions and discharges.

Our biodiversity duty therefore needs to be factored into the delivery of these functions. For example, the primary purpose of our statutory Water Resources Management Plans is to identify the best ways of ensuring that we can meet customer demands for our water supplies for the next 25 years or so. But our latest Plan (published in 2019) also acknowledges the strengthened biodiversity duty we are now under including, for example, by looking for ways to minimise our impact on Wales' many waterbodies designated for their nature conservation importance.

Improving our understanding of our impact on the natural environment has been a priority during this plan period.

For example, we retain the services of teams of external ecologists who we call upon at short notice to undertake relevant surveys and suggest mitigation measures should the need arise. As well as informing individual projects, these surveys add to our knowledge of the presence on our sites of the species listed under section 7 of the Environment (Wales) Act 2016, species to which we are required to have regard in the exercise of our biodiversity duty.

Another way that we can improve our baseline information (commitment 29) is through the network of Local Environmental Records Centres in Wales, so we agreed a contract enabling us to access their local ecological data to inform, for example, plans for capital schemes.

In a separate project, and in close liaison with Natural Resources Wales (NRW), we are investigating the condition of Sites of Special Scientific Interest (SSSIs) we own to help us target future investment (commitment 15). During 2020-2025, we hope to follow up these investigations with a small programme of improvements, although much depends on the outcome of the current Ofwat-led review of our water charges.



Also working closely with our regulators, we commissioned investigations into the impact that some of our wastewater assets have on compliance with the requirements of the Water Framework Directive. At the Directive's heart is the ambition to restore water bodies to Good Ecological Status, with the wider benefits to biodiversity that promises. We investigated our impact on 62 water bodies and, as a direct result, we have proposed a number of upgrades of our assets during 2020-2025.

It has been encouraging to witness the extent of customers' support for our actions to support nature.

This was, perhaps, best demonstrated by the consultation we undertook in 2017 on our "Welsh Water 2050" document which identified the potential challenges and opportunities that Dŵr Cymru will face in the longer term. In response to feedback received from many stakeholders, our finalised "Welsh Water 2050" incorporated "Supporting ecosystems and biodiversity" as one of our company's strategic responses. This, in turn, meant that biodiversity became a recurrent theme running through our draft Business Plan for 2020-2025.

We continue to look for opportunities to engage and collaborate with others, embracing the ways of working that underpin the Well-being of Future Generations (Wales) Act 2015.

If the decline in biodiversity is to be reversed, everyone will have to play their part. That includes the public and private sectors, as well as voluntary groups and individual citizens. We therefore have a number of outreach or collaborative initiatives to promote wider engagement.

For example, our education programme fosters an appreciation of nature in the next generation. We have four "Discovery Centres" where school children learn about the water cycle. This year we passed the milestone of having reached half a million children since the programme's launch in 2001, a milestone that we marked by announcing plans to expand the programme.

Our network of visitor centres offers opportunities for the public to engage with the natural environment, whether through organised activities (such as expert-led walks on the special flora or fauna the sites support) or just through an informal enjoyment of the countryside. We are also working with local groups to encourage them to help us to take care of some of our sites through, for example, the establishment of "Friends of Groups".



We commissioned specialist consultants to assess the best way to improve the current status of fish and eel populations within the Afon Cefni, including upstream of Llyn Cefni. The survey concluded that there was limited suitable habitat available upstream of the reservoir. In agreement with NRW, we are funding the Royal Society for the Protection of Birds to undertake works on its land

to improve the available eel habitat in neighbouring catchments which we hope will have a better overall effect upon population numbers. This project is due for completion in March 2020 and will include an annual maintenance programme to ensure the benefits continue to be realised into the future.



To help us find new ways to support nature, in 2018 we organised a series of biodiversity workshops at our flagship annual Innovation Event to encourage stakeholders to share their ideas with us.

We have provided funding to enable non-profit organisations to undertake their own projects to enhance biodiversity where there is some link to our activities. The projects include:

- a wetlands biodiversity enhancement project in Llanelli;
- the restoration by a local community group of a large pond in Castle Meadows, Abergavenny;
- a scheme to encourage fishery owners and community groups to adopt a tributary of the River Tywi;
- improving access of migratory fish to stretches of the Conwy and Clwyd;
- the conservation of the river Cynon for future generations; and
- supporting the purchase of equipment to maintain some SSSIs on the Gower.

Under the umbrella of Dŵr Cymru's Community Fund, we have also supported a number of smaller but worthwhile projects. Examples include funding the planting of native bluebells at various sites in Cardiff; supporting the efforts of a Haverfordwest scout troop to design rainwater gardens reducing their impact on surface waters and to attract pollinators; and helping a wildlife group in Herefordshire to reconnect local children with the natural world.

Since 2017, we have raised the awareness of colleagues of the importance of biodiversity and harnessed their enthusiasm to help.

We have, for example, produced in-house training to alert staff about our nature related obligations (commitment 20). At the suggestion of colleagues (commitment 25) we have produced a series of short fact sheets, giving ideas on how they can make their sites more nature friendly. Leaflets have also been published to help colleagues identify invasive non-native species (commitment 23).



A small internal budget was established to help colleagues acquire equipment. This has been used to buy items such as hedgehog boxes, native wildflowers, cameras, bird boxes etc. The budget also enabled colleagues to buy kit to reduce the risk of wildlife being injured or dying on site, while not impacting on operational activities.



Several teams have used the construction of facilities for nature, such as bug hotels, as team building exercises, while many others have been involved in litter picks, often in collaboration with partners, such as Keep Wales Tidy.



Although, in isolation, the benefits of these sorts of measures may seem comparatively minor, they can in combination make a real difference. Many colleagues are very passionate about nature, so these activities can also bring motivational benefits and engender a sense of pride in our sites.

A notable success has been the network of biodiversity champions established in the wastewater business (commitment 24). Twelve biodiversity champions volunteered. Their efforts have included planting of native trees, bulbs and seeds, segregation of land allocated for 'wild growth' within operational sites and construction of habitats to encourage nesting and breeding of birds, insects and other wildlife. Some have worked with local schools to encourage planting of flowers at wastewater sites, and others have involved bodies such as RSPB, Bug Life and Woodland Trust. In this way, they have also become our nature ambassadors within and outside the wastewater business. Thanks to the champions' enthusiasm and commitment, much has been achieved in a short time and some of our wastewater assets may soon start to make a real contribution to biodiversity.

A series of initiatives have encouraged colleagues to try to reduce the volumes of plastics reaching the environment, thus reducing the impact on aquatic fauna. Examples include issuing all staff with reusable cups; supporting the UN's Clean Seas Pledge; and encouraging water refill. We are also taking a leading role in research to improve the sector's understanding of plastics in our processes at UKWIR.

Sometimes things have gone wrong

For example, while our overall environmental performance assessed by NRW has improved in the last year, Dŵr Cymru was responsible for a couple of pollution incidents during 2018/19 (one near Swansea and the other near Wrexham) which, very regrettably, involved fish kills. In both cases, we engaged in rapid remedial works at the site and have worked with NRW to ensure we take steps to prevent such accidents in future. We have apologised for our failure to prevent these two incidents and for their impact on local ecology.

There have also been occasions when we have given enforcement undertakings to our regulators to make restitution following other incidents associated with our assets. Since June 2017, NRW has accepted a total of 5 undertakings from us, under which NRW accepted our offers of a total of almost £235,000 toward projects intended to help restore the natural environment.

It was very distressing that despite our efforts to provide an artificial new sett for badgers in advance of a capital project at one of our sites (in compliance with an NRW licence), the badgers fell prey to baiting, an abhorrent illegal activity. We will continue to look for ways to protect wildlife on our sites against deliberate persecution.

We continue to learn lessons

For example, in close collaboration with our Alliance partners, we have introduced a system of environmental 'near miss' reporting. This encourages staff to record incidents where damage or legal breaches were narrowly avoided, so that we can look for ways to improve our processes in the future.

We also need to ensure that our grounds maintenance contractors respect the actions, such as tree planting, carried out by operational staff to support biodiversity.

Another important lesson is that measures to support biodiversity can save money. For example, some of the biodiversity champions are rewilding part of their sites, where there are no operational impacts or implications for site safety. Rewilding sites or reducing the frequency of grass mowing can reduce maintenance costs.

What happens next?

Under section 6(8) of the Environment (Wales) Act 2016, we must now review our biodiversity plan ("Making time for nature") in the light of this report.

The review will provide an opportunity for us to consider whether "Making time for nature" remains fit for purpose or whether it should be updated. In particular, we may want to refresh the list of 30 commitments given in "Making time for nature" as a significant proportion have now been completed.

That said, and as noted at various points in this report, much will depend on the outcome of Ofwat's determination of our price limits for the next five years (2020-2025). In particular, we are awaiting its decision on whether to make allowance within our price limits for a number of specific projects that we are hoping to progress that promise benefits to biodiversity.

Dŵr Cymru is keen to collaborate with our partners to maximise the potential benefits to nature. In the light of the final determination by Ofwat in December 2019, we will consult members of our IEAP for their views on our revised Plan, which we look forward to publishing in 2020.

Annex

Measuring and reporting on our commitments

Commitments from "Making time for nature"

No.	Commitment	Delivery deadline	Comments/Progress
1	We will explicitly take account of our biodiversity and ecosystems resilience duty when we undertake our next full review of our Water Resources Management Plan	2019	Completed Our Final Water Resources Management Plan 2019 was published on the 11th April. The Plan identifies the linkages with the delivery of our statutory biodiversity duty. We consulted our IEAP on the plan and received its support.
2	We will work with our regulators to improve our understanding of the potential for our practices to spread invasive non-native species (INNS) and the potential cost implications.	On-going	On-going We support the "Check, Clean, Dry" campaign at relevant sites. We continue to be a proactive member of the Wales Biodiversity Partnership's INNS Group. In November 2018, we held a stakeholder workshop to explore options to address INNS issues in a more efficient and sustainable way. We helped develop the pan-Wales project to address INNS, 'Wales Resilient Ecological Network', and are a member of its project board. We are contributing to a number of large scale partnership projects to address INNS issues in Wales, including the Celtic Rainforest project (recently awarded funding from the EU Life fund). Our IEAP is fully aware and supportive of our work on INNS. Our internal communication campaign 'INNS of the Month' has improved awareness amongst staff. The e-learning module (see commitment 20) includes an element about INNS relevant to our assets and operations.

No.	Commitment	Delivery deadline	Comments/Progress
3	Under the 'WaterSource' banner, we will continue to explore the potential for collaborating with the third sector so that we can work together toward a common agenda, such as reducing levels of pesticides and ammonia in the environment, to protect our water supplies and to benefit wildlife.	On-going	<p>Ongoing</p> <p>Our 'WaterSource' approach to catchment management continues to work with partners and stakeholders (including IEAP) to co-create an extensive innovative programme of land management.</p> <p>Our work on pesticides with the agricultural community has established the Dŵr Cymru-led 'Pesticide Partners' group. Members include farming unions, NRW, Farming Connect, National Sheep Association, Voluntary Initiative and others. This group remains active and acts as advisors to our PestSmart project which was awarded almost £1 million by Welsh Government's Rural Development Programme. Our pesticide disposal scheme has had over 400 registrations and we have engaged with our stakeholders on our WaterSource approach at over 20 events.</p> <p>We are an active member of NRW's Wales Land Management Agricultural Pollution sub group which works collaboratively across the agricultural sector on initiatives to reduce agricultural pollution across Wales.</p> <p>We have taken a lead role in working with many communities to establish projects to address local challenges that also affect biodiversity.</p> <p>Our work with land managers in Pendine has been central to establishing a group which is looking at innovative ways to reduce the risk of pollution and improve nutrient management.</p> <p>As part of our Brecon Beacons Mega Catchment project, we have looked for best international practice in catchment management and applied this to our partnership approach with the agricultural community. Our work with local farmers has led to a 'Beacons Water Group'. This farmer-led council is developing on-the-ground solutions to improve economic resilience while safeguarding raw water quality and establishing a group to explore innovative, multi benefit opportunities in the Beacons. In addition we have appointed a Project Manager to develop the partnership through a Welsh Government ENRaW grant</p>

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4	We plan to plant trees in suitable areas within some of our drinking water catchments in order to secure land from erosion and landslip. In selecting the species to plant, we will consider how to maximise biodiversity gain.	2019	<p>On target</p> <p>We have delivered a number of tree planting schemes in our strategically important drinking water catchments. For example:</p> <p>Talybont Forest Redesign – We collaborated with NRW to redesign forest management plans which will protect raw water quality, deliver a high quality ecosystem service and build resilience into this strategically important drinking water catchment. It is cited as an exemplar Sustainable Management of Natural Resources approach. We believe this holistic, evidence-based approach is the first silviculture (woodland management) project to be delivered at a catchment scale in the UK. It also created a new Total Ecosystems Delivery model. It will provide Dŵr Cymru with the evidence we need to upscale our approach to catchment management at a landscape scale and looks at potential models for Payments for Ecosystem Services post Brexit.</p> <p>Cantref – Our partnership work with NRW, National Trust and the Brecon Beacons Commons Association in the Cantref catchment focusses primarily on soil stabilisation but also delivers many biodiversity benefits. Our programme of work will run to March 2020 and will plant 10,000 willow whips in areas of high landslip risk. Whips are sourced from the nearby Coed Taf forest where they are routinely removed as part of NRW's annual estate management programme.</p> <p>To date, 6,000 trees have been planted. Early establishment of over 60% of the whips is providing the evidence we need to develop future planting plans – for example; establishing trees on common land, uptake rates of unguarded samplings, potential for landslip protection and encouragement of greater biodiversity. This project won two categories at the 2017 Welsh Area Institute of Water Annual Innovation Awards – Environment Project of the Year and Overall Innovation winner.</p>

No.	Commitment	Delivery deadline	Comments/Progress
5	We will look for new opportunities at our Visitor Centres to support nature and to engage the public with the natural environment.	2019	<p>On target</p> <p>Examples of progress include:</p> <ul style="list-style-type: none"> – Elan Valley – £3.3m Elan Links project: 26 projects are being delivered from 2018 -2023 under four themes: <ol style="list-style-type: none"> 1. Celebrating heritage – Protecting and restoring historic sites and archiving people's histories and stories. 2. Enjoying Elan – Increasing access, recreation and learning opportunities for visitors. 3. Experience and education – Providing opportunities to experience the Elan Valley through volunteering, as well as education and training. 4. Enhancing nature and wildlife – Restoring and enhancing natural environments. – Llys Y Fran – new Activity Centre, extended and refurbished visitor centre, interpretation and trails as part of £4m makeover due to open in summer 2020. – Lisvane & Llanishen – working with partners and collaborators to develop plans for a new visitor hub at our reservoir site in Cardiff. – Llandegfedd – the team has put up 25 new bird boxes and will be putting bat boxes up in the near future. New conservation events to educate visitors about the natural habitats that surround the water have been introduced: Hawk Walks and Ecotivity Day making bug hotels – Llyn Brenig – Osprey project: we have successfully attracted a pair of breeding Osprey. This year a second chick has been hatched. Following a Facebook poll, our osprey chick has been named Roli, from the character in "One Moonlit Night" by Caradog Pritchard. Roli fledged on the 14th July. TAIS funding has been secured to enable live streaming. – Lliw reservoirs – Our TAIS funding application for visitor enhancements was unsuccessful. However the Gower Society is funding access improvements to make the site more accessible for wheelchair users – A Volunteering framework is being piloted at visitor attraction sites from 2019.

No.	Commitment	Delivery deadline	Comments/Progress
6	We will complete our current 2015-2020 programme of £60 million investment agreed with Natural Resources Wales to improve our discharges at 13 waste water treatment works by, for example, reducing levels of phosphorus to benefit the ecology in the receiving waters.	2020	<p>On target</p> <p>To date we improved our discharges from three wastewater treatment works (WWTW) by reducing levels of phosphorus. We are working to improve another eight by 2020.</p> <p>As regards the remaining WWTWs, we have agreed changes with NRW in the light of the investigations carried out as part of commitment 8 below. We will undertake further monitoring and modelling to identify the best options to reduce our impacts on these catchments. Whilst this has changed the total number of improvements at individual discharges to be completed within our current 5 year programme, the overall result will enable more sustainable, long term benefits for the ecology of the receiving waters.</p>
7	We will complete and report on our research into the effectiveness of the some new treatment processes to reduce phosphorus in our discharges.	2018	<p>On target</p> <p>Working with university academics, we are nearing the completion of a chemical free pilot trial moving away from ferric dosing.. The optimisation work involved our biological nutrient removal plant without chemical dosing. We reviewed two innovative technologies and have now installed a further different technology and are currently putting in a demo plant for electrocoagulation, and continue monitoring for efficacy. This work has been used for phosphorus schemes currently in delivery, and we will be monitoring tertiary solids removal technologies to support lowering phosphorus in our discharges.</p> <p>We are near completion on a chemical free pilot trial moving away from ferric dosing with university academics. We joined a collaborative project which reviewed alternatives to our current coagulant dosing which was promising and has given us sufficient confidence to look to trial the product at pilot scale (Rare Earth). We also continue to utilise our university academics through SMART and other projects.</p> <p>Work has also been undertaken to optimise existing technologies and assets to enable improved performance and improve permit compliance.</p> <p>Looking ahead, we are developing a new approach on waste water to reduce phosphorus in the river body through catchment management in AMP7 (2020-2025). This approach could have multiple socio, economic and environmental benefits and enhance biodiversity through integrated solutions to environmental needs.</p>

No.	Commitment	Delivery deadline	Comments/Progress
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 agree a programme of improvements we should make during 2020-2025.	2019	<p>On target</p> <p>Our Water Resources Team have completed investigations at 10 water bodies, the results of which have been agreed with NRW. Outputs from these will go forward for delivery in 2020-2025.</p> <p>On the wastewater side of the business, we have completed 62 investigations, which have been agreed and signed off by NRW. Four investigations are awaiting regulatory sign-off. With agreement of the NRW, we have extended investigations on the Clwyd for an additional year to allow for the whole Clwyd catchment to be reviewed. We are also working with our regulators to finalise the investigation for Worthenbury Brook. Some of the investigations have led to improvement schemes scheduled for completion during 2020-2025, but others may have to wait for future investment programmes.</p>
9	We will continue to look for opportunities to educate our customers about the damage that sewer misuse can cause, including to marine wildlife.	On-going	<p>On-going</p> <p>Our "Let's stop the Block" campaign is aimed at reducing sewer blockages that can cause flooding, as well as pollution incidents that can damage the environment. The campaign has been running since 2013, so we recently completed a major review. Working with behavioural change experts, we have developed new campaign materials that use more impactful language to encourage customers to change their behaviours. They also have stronger images that show the true consequences of flushing wipes, while also addressing the misleading branding around so-called "flushable wipes".</p> <p>Dŵr Cymru has also been closely involved in the development of a new water industry 'flushability' standard and in encouraging continued press interest (fatbergs etc.) in the damage caused by sewer misuse, such as by flushing wet wipes.</p>
10	We will work with Natural Resources Wales to encourage concerted action to be taken to address all pressures affecting particular water bodies, including our impacts.	On-going	<p>Ongoing</p> <p>We continue to support Welsh Government and NRW on this agenda through:</p> <ul style="list-style-type: none"> — attendance at Water Framework Directive related meetings; — catchment efforts on both clean and wastewater sides of the business; — proposing sustainable management of natural resources trials during 2020-2025; and — responses to consultation papers, such as those on 'Brexit and our land'.

No.	Commitment	Delivery deadline	Comments/Progress
11	We will work with the Welsh Government, 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.	2019	<p>On target</p> <p>We continue to work with Welsh Government et al; for example, we have promoted this message through:</p> <ul style="list-style-type: none"> – our responses to Welsh Government consultation papers on the implementation of sustainable drainage; SMNR; and Brexit and our land; – our IEAP provides another venue for promoting this issue with regulators and other stakeholders; and – supporting NRW's efforts to design a workable nutrient off-setting approach.
12	We will continue our role in educating future generations about the importance of the water environment, including its flora and fauna.	On-going	<p>On-going</p> <p>67,300 pupils engaged through our Environmental Discovery Centres or school outreach programme in the 2017/18 academic year.</p> <p>Pupils continue to enjoy interactive outdoor lessons delivered at our Environmental Discovery Centres by seconded professional teachers. Pupils are able to explore nature whilst learning about the importance of water in a safe environment. We have recently celebrated over 500,000 pupils through the education programme with the Environment Minister, Lesley Griffiths AM, pupils and over 30 seconded teachers at the Senedd.</p>
13	We will continue to look for opportunities to increase our renewable energy generation capacity and improve the energy efficiency of our existing operations.	On-going	<p>On-going</p> <p>17% of our energy consumption in 2018/2019 was met by our own renewable generation. The latter dropped compared to the previous year due to the exceptionally dry weather, affecting power consumption and hydro generation levels. The remainder of our energy is sourced from Ørsted, who supply us with 100% REGO (Renewable Energy Guarantee of Origin) backed, renewable power.</p> <p>Highlights last year include the commissioning of a new hydro-turbine at Bryn Cowlyd Water treatment works and several new rooftop Solar PV installations. Main energy consumption reduction measures have been the installation of energy efficient lighting, energy efficient pumps and blowers and implementation of automated process control.</p> <p>In financial year 2018/2019 Welsh Water invested in total £1.9 million on energy efficiency and renewable generation projects.</p>

No.	Commitment	Delivery deadline	Comments/Progress
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	2019	<p>Completed</p> <p>Research by consultants has been completed.</p> <p>Understanding and responding to climate change, including its impact on biodiversity, is one of the themes of "Welsh Water 2050" published in March 2018. In the light of "Welsh Water 2050", research needs have now been developed into sunshine maps covering water and waste water respectively.</p> <p>The impact of climate change will for the first time be accounted for in our sewerage designs through the development of Drainage and Wastewater Management Plans by Dec 2022.</p>
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.	On-going	<p>Replaced</p> <p>NRW's Actions database is off line. We understand that the regulator is working on a replacement.</p> <p>However, we continue to work with NRW to review and deliver, where applicable, actions that may be required on our land. The research project referred to in commitment 16 has been undertaken to ensure that only necessary and well-targeted actions are required of Dŵr Cymru.</p>
16	Working 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.	2019	<p>On target</p> <p>A research project was commissioned to improve our understanding of the SSSIs within our landholdings.</p> <p>Phase 1 has been completed and has delivered a tool that will enable us to identify and prioritise actions to protect and enhance our SSSIs. The tool is the first of its kind to incorporate the ecosystem resilient attributes specified under the Environment (Wales) Act 2016 within a decision making tool. We are sharing our learning with our regulator.</p> <p>Phase 2 of the project is on-going. Using the prioritisation tool, four of our SSSIs have been subject to ecological assessment to improve our understanding of their condition and to provide evidence to support our discussions with NRW on actions we might take to conserve and enhance the sites, so helping bring them up to 'favourable condition' status. This Phase of the research is due to be completed by December 2019.</p> <p>An investment line relating to our SSSIs was included within the National Environment Programme prepared with NRW and included within our draft Business Plan for 2020-2025 submitted to Ofwat. We hope that allowance will be made to enable us to implement some of the actions recommended by our SSSI research.</p>

No.	Commitment	Delivery deadline	Comments/Progress
17	We will continue to invite applications from non-profit organisations for grant 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.	2019	<p>On target</p> <p>Four awards made since July 2017 totalling contributing £122,500 toward projects with a total value of £321,500. As these projects complete, it is clear that they are attracting strong press coverage, and also are making real improvements to the ecology of waters (at a far cheaper price than conventional engineering solutions)</p>
18	Subject to adequate insurance and licencing arrangements, we would like to explore the role of "Friends of" and other community groups who might adopt and help us to manage some of our sites.	2019	<p>On target</p> <p>Good progress including:</p> <ul style="list-style-type: none"> – Volunteering framework being piloted at visitor attraction sites from 2019 – ENRAW Partnership Manager currently being recruited (externally funded, 2 year fixed term) to develop volunteering infrastructure and partnerships at Lisvane and Llanishen reservoirs – Pilot includes: a 'community adoption' at Swiss Valley by Llanelli RDC; supporting the creation of a Friends of Group and working with 'partner group volunteers' at Lisvane & Llanishen through the ENRAW project; recruiting volunteer rangers and working with Powys County Council volunteers at Elan Valley; and recruiting volunteer watersports instructors at Llandegfedd. – Ongoing conversations with local stakeholders about community involvement at Lliw reservoirs and Llyn Alaw underway. – Awarded grant to Silver Slashers to undertake path restoration at Llyn Alaw.

No.	Commitment	Delivery deadline	Comments/Progress
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 and there is some link to Dŵr Cymru's operations.	2019	<p>Completed</p> <p>Dŵr Cymru made funding available to support the delivery by the voluntary sector of projects that aim to address issues of concern related to INNS within our operational area. Projects funded by the scheme help to optimise the benefits of Dŵr Cymru's own efforts in tackling INNS and contribute toward wider efforts to address the threat to biodiversity from INNS.</p> <p>Projects supported under the scheme are;</p> <ul style="list-style-type: none"> – The Dee INNS project, led by the North Wales Wildlife Trust; – The 'Giving up the Weed' project, led by the Wye & Usk Foundation; – The biological control trial on Himalayan Balsam, led by the North Wales Wildlife Trust; – The EU Life Celtic Rainforests, led by Snowdonia National Park Authority; and – The pan-Wales INNS project, part funded by the Welsh Government.
20	We will give all colleagues the opportunity to learn about the legal conservation obligations that Dŵr Cymru has.	2018	<p>Completed</p> <p>E-learning on conservation duties was rolled out across the business.</p> <p>Tailored training has been provided to Alliance partners and capital teams.</p>
21	We will 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.	On-going	<p>On-going</p> <p>We have progressed a number of internal initiatives which include:</p> <ul style="list-style-type: none"> – a message to all staff from the Chief Executive encouraging them to "rise to the challenge of our strengthened biodiversity duty"; – articles on "INNS of the month" to help colleagues identify invasive non-native species; – one-off articles, such as on our involvement in a partnership in the Black Mountains to restore and protect natural peatlands; – reminders of the RSPB's annual birdwatch weekend; and – "how to" guides on supporting birds, wildflower meadows and SSSIs at our sites.

No.	Commitment	Delivery deadline	Comments/Progress
22	We will 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	On-going	<p>Ongoing</p> <p>Training tailored has been provided to Alliance partners and capital teams.</p> <p>A design alert has been issued to all working in the Capital Alliance to ensure that wildlife protection and environmental matters are taken into account as part of capital project delivery.</p> <p>Our Biodiversity Plan is being shared with contractors as part of our standard tender documentation.</p> <p>Individual Procurement Initiation Documents have been updated to include any specific biodiversity actions and desired outcomes on a project specific basis.</p>
23	We will produce for colleagues an "Invasive Non-Native Species Identification Guide"	2017	<p>Completed</p> <p>Welsh and English language versions published in 2017.</p> <p>In our in-house magazine, Dŵr, we also ran a campaign highlighting an 'INNS of the Month', intended to inform staff of Invasive Non-Native Species posing risks to our assets and operations.</p>

No.	Commitment	Delivery deadline	Comments/Progress
24	Starting with our waste water business, we will trial the role of Biodiversity Champions based in each catchment. The Champions will be encouraged to look for opportunities to support nature and be provided with modest budgets to help them fulfil this role	2018	<p>Ongoing</p> <p>The Wastewater Biodiversity Champion initiative has been a great success. While also undertaking their busy operational 'day jobs' in the wastewater business, our local Champions have tried to make time for nature by delivering various projects to help Dŵr Cymru meet its biodiversity duty.</p> <p>12 champions volunteered. Several workshops have been held to enable them to exchange their ideas and to learn from each other. Guest speakers have also attended, such as from Buglife, the RSPB, and the Woodland Trust.</p> <p>The Champions have been involved in a wide variety of initiatives. Amongst many examples of their efforts:</p> <ul style="list-style-type: none"> – At Rotherwas Wastewater Treatment Works in Hereford, planters have been installed with wild flowers, attracting pollinators. This site is now in the process of designating a 'back to nature' area which will include installation of bird feeders and provide an environment for wildlife and wildflowers. – The work of the Champions has been showcased during Dŵr Cymru's Community Works Open Days, when sites are opened to the public. For example, on Dŵr Cymru's November 2018 Open Day, the Champions linked up with a local school, who participated in bulb planting at Llanberis Wastewater Treatment Works. – Discarded pallets and packing boxes have been converted into bird boxes, insect houses, bat boxes and hedgehog houses. Hedge planting has been completed at numerous sites in North Wales. – With the support of the local Champion, the team at Llangoed Wastewater Treatment Works was encouraged to apply for funding – which they received – to install replacement kit to reduce the risk of ducklings from being drowned on site. <p>Our aim is to recruit additional champions into the wastewater business as it is recognised that more support is needed to help the existing network of champions realise their goals.</p>

No.	Commitment	Delivery deadline	Comments/Progress
25	We will review all the substantive ideas that emerged from the biodiversity workshop to assess their practicality; potential value; and priority	2018	<p>Complete</p> <p>Review completed. Workshop recommendations that have been acted upon include:</p> <ul style="list-style-type: none"> – The creation of a small internal funding scheme to help colleagues who proposed projects to support nature at their sites, such as wildflower planting for pollinators; – A sustained campaign of nature related news stories in our in-house company newsletter "Dŵr" to raise the profile of biodiversity; and – The production of a series of leaflets to give colleagues practical suggestions for making the most of their site. <p>Given the value of many of the ideas that emerged at our first pan-company workshop, we will probably host another one to encourage new ideas for inclusion in our refreshed biodiversity plan.</p>
26	In procuring our next grounds maintenance contracts, we will encourage those submitting tenders to consider biodiversity benefits	2018	<p>On target</p> <p>The updated scope of works will include information regarding our biodiversity responsibilities and high level objectives. The change will be delivered by the contractor and our site controllers identifying specific sites and tasks that will deliver biodiversity improvements. The contractor will be responsible for capturing and reporting these requirements to us and our contract manager will be responsible to ensure the agreed targets have been met the supplier. Targets are not yet developed but will be by the commencement of contracts in 2019/20.</p>

No.	Commitment	Delivery deadline	Comments/Progress
27	We will 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.	2018	<p>Completed</p> <p>Regular training sessions are provided to staff in our Alliance partners on our biodiversity duties and ecological mitigation.</p> <p>Through the Integrated Solution Team of the Capital Alliance, guidance on ecological matters has been developed and communicated. Through its reporting system, project teams are encouraged to identify positive environmental interventions and measures to enhance biodiversity.</p> <p>Approaches to cataloguing biodiversity gain are also being explored with our Alliance partners, which should drive efficiencies in programme delivery.</p> <p>An environmental checklist has been introduced and continuously improved. It enables capital delivery teams to identify and address environmental risks and opportunities at an early stage of project development. The checklist is updated throughout the project and can influence positive change. Early involvement of environmental and sustainability professionals in both the project design and construction phase has led to a number of projects implementing environmentally sustainable solutions.</p> <p>A new project handover process is being developed to ensure that environmental obligations are appropriately recorded and accepted by operational teams. Some of these obligations will enable biodiversity enhancement as part of on-going operational activities.</p>
28	We will develop a biodiversity trial at one or two 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	2019	<p>On target</p> <p>A biodiversity trial at Cardiff Waste Water Treatment Works has been completed and a revised ground maintenance regime is now part of routine site management.</p> <p>A trial to develop site specific Biodiversity Management Plans (BMPs) at seven Waste Water Treatment Works has been initiated and is due to be completed by November 2019. The BMPs are intended to enable local operational staff to incorporate practical biodiversity enhancement actions into their day-to-day job, thus supporting the delivery of the company's section 6 duty.</p>

No.	Commitment	Delivery deadline	Comments/Progress
29	To inform our future plans to maintain and enhance biodiversity at our sites, we will start to collate the ecological information, such as surveys, that we already hold. 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.	2018	<p>On target</p> <p>A new Service Level Agreement has been let with Aderyn, the network of four Welsh Local Environmental Records Centres. This enable us to have direct and instant access to the most up-to-date ecological data, supporting early identification of ecological risks and opportunities.</p> <p>An internal company-wide project has been initiated and is on-going to improve the way environmental survey and report information is recorded and made available throughout the business. The hope is that a GIS tool will be developed providing a single point of access for the business to view geographically relevant environmental data, thus saving time and costs for its retrieval.</p>
30	Working with our regulators, we will seek to include biodiversity and nature based solutions in the scheme options that we consider when we develop our 2020-2025 investment programme. As part of this, we will try to identify one or two 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.	2018	<p>Complete</p> <p>Many investment proposals benefitting biodiversity, such as by reducing nutrients, have been included in the National Environment Programme prepared with NRW submitted to Ofwat in our draft Business Plan in September 2018. We are grateful to NRW for working with us to identify four catchments (the Afan, Teifi, Conwy and Alyn) where, during 2020-2025, we intend to trial the sustainable management of natural resources approach to improving overall environmental outcomes: we are hoping that this will enhance the potential benefits for nature. Assuming funding is allowed by Ofwat, this is likely to form one of the initiatives in our next biodiversity plan.</p>

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A field of bee orchids and oxeye daisies at a biodiversity enhanced area, Cardiff Wastewater Treatment Works

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Staff from Dŵr Cymru and its Capital Alliance partners volunteering time to Wuan Fignen Felin Blanket Bog Restoration, a partnership project in Brecon Beacons National Park

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Staff building a bug hotel at Dŵr Cymru headquarters.



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