

Making time for nature:

Dŵr Cymru Welsh Water's
plan for maintaining and
enhancing biodiversity.



WWENV 0001

Part of what
makes Wales
special is
its wonderful
natural
environment.

As well as enriching the lives of those of us who are lucky enough to live here, the natural environment attracts thousands of visitors every year, visitors who make a vital contribution to the Welsh economy.

We all share the Welsh environment with a wide variety of other creatures and plants who also make their home here. As described in this document, Dŵr Cymru Welsh Water is already helping to support nature through the operation of our assets and in various other ways. For example, we are playing a major role in helping more of Wales' rivers achieve Good Ecological Status.

In our "Welsh Water 2050" vision document published for consultation in May 2017 we have set out the long term context within which Dŵr Cymru will operate in the years ahead. This includes a number of planned actions which will directly support biodiversity and ecosystem resilience.

In this way, our "Welsh Water 2050" vision aligns very well with the priorities of the Welsh Government and National Assembly for Wales, who have used the Environment (Wales) Act 2016 to place Dŵr Cymru and many other organisations in Wales under a strengthened biodiversity duty. This shared duty reinforces the message that helping nature to thrive will require concerted action by a range of organisations in Wales, including the Welsh Government itself, Natural Resources Wales and other government agencies, as well as regulated businesses like ourselves.

Dŵr Cymru is a company that is committed to doing the right thing. I believe that Dŵr Cymru can – and should – look for opportunities to do what we can to support Wales' biodiversity in the short and longer term, while we carry out our 'day job' of maintaining essential services for our customers at a price they can afford.

We know from our on-going customer engagement surveys that customers across our supply area expect us to enhance biodiversity and the environment in general, not least as this contributes to the well-being of the communities we serve. We are also very mindful of the environmental legacy we will leave for future generations, as demonstrated in our "Welsh Water 2050" vision document.

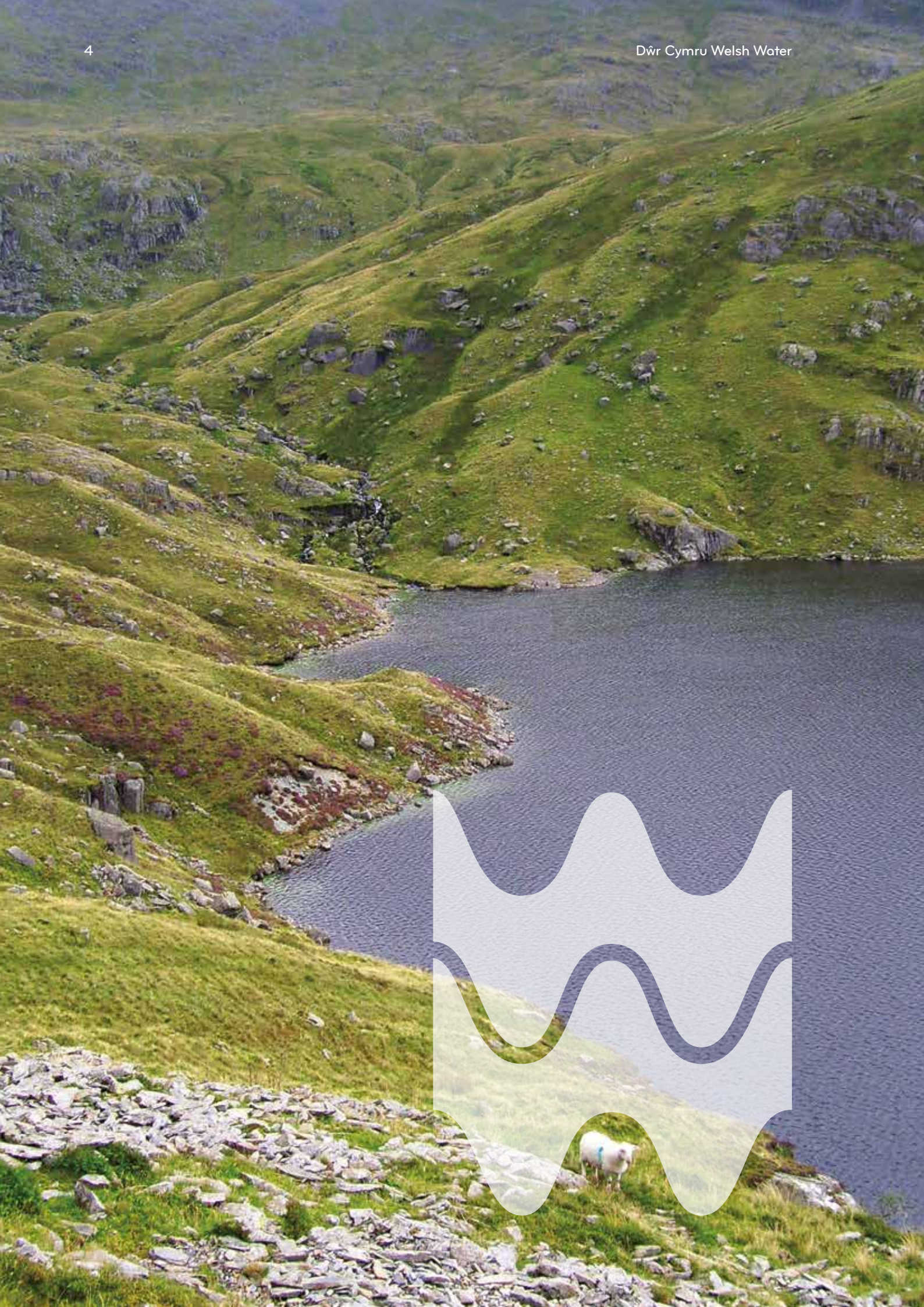
This is our first statutory plan published under section 6 of the Environment (Wales) Act 2016. It signposts what we will do between now and the end of 2019.

This Plan commits us to a programme of actions, including measures on the ground as well as investigations, all of which will help us work toward the common goal of supporting a biodiverse natural environment.

Our top priority must always be the supply of high quality drinking water and wastewater services to our customers at an affordable price. But I want Dŵr Cymru to rise to the challenge of this new duty to see if we can carry out our functions in a more nature friendly way and play our full part in ensuring that the Wales we hand on to future generations supports a rich variety of wildlife and plants for them to celebrate and cherish in their turn.



Chris Jones, 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 sustainable economic development in Wales.

Why do we need a plan?

Our “Welsh Water 2050” vision document, published for consultation in May 2017, describes the long term context within which Dŵr Cymru will operate in the years ahead. This includes a number of actions which will directly support biodiversity and ecosystem resilience. Our long term vision therefore aligns well with the delivery of our strengthened biodiversity duty under Section 6(1) of the Environment (Wales) Act 2016ⁱ.

The 2016 Act requires under section 6(6) that most public authorities in Wales, including Dŵr Cymru, prepare and publish a plan setting out what they propose to do to comply with their strengthened duty 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.”

Although the Environment (Wales) Act 2016 placed us under a stronger biodiversity duty, Dŵr Cymru has been under nature related duties for many years. Some are quite broad, such as Section 40 of the Natural Environment and Rural Communities Act 2006ⁱⁱ which requires us to have regard to conserving biodiversity so far as is consistent with the proper exercise of our functions (a duty that remains in place in England, including those parts served by Dŵr Cymru). Other duties are more specific, such as those relating to particular species, like the Protection of Badgers Act 1992ⁱⁱⁱ. Therefore, Dŵr Cymru does not see the biodiversity duty placed on us by the 2016 Act as a new requirement: the new duty does, instead, build on existing obligations that we were already required to meet.

The strengthened duty also helps us to deliver our ambitions to earn the trust of our customers and to do the right thing. Through the “Have your say” survey that

we undertook last year, our customers told us that they want us to do more to help the environment and communities, so we hope that they will support our efforts to enhance biodiversity.

This is Dŵr Cymru's first Plan under the Environment (Wales) Act 2016. We are pleased to have the opportunity to explain how we already help nature as we go about our day-to-day work as a water and sewerage service provider.

The preparation of this Plan has also prompted us to review whether we might carry out functions in a more nature-friendly way: some of our ideas for additional actions we propose to take are explained in this Plan.

Who is the plan for?

We hope that this Plan will be of interest to various audiences, including:

- 1 Anyone who wants to find out how Dŵr Cymru is meeting its strengthened duty under Section 6 of the Environment (Wales) Act 2016;
- 2 Organisations, for example, voluntary sector and community groups, looking for opportunities to work in partnership with Dŵr Cymru in the delivery of initiatives that will help biodiversity; and
- 3 Colleagues throughout Dŵr Cymru who are keen to learn about our role in supporting biodiversity and, in particular, want to know how we can all make time for nature as we go about our daily work of delivering essential water and waste water services to our customers.

What does our Plan aim to deliver?

We will use this inaugural statutory Plan to:

- 1 Improve internal and external understanding of how our business interacts with nature, for example the wider benefits of the improvements we are making to reduce, still further, the impacts of our discharges and abstractions;
- 2 Raise awareness of colleagues within the business about Dŵr Cymru's nature-related obligations and their role in meeting them, as well as looking for ways to harness their enthusiasm and ideas for supporting the natural environment;
- 3 Identify some actions to be undertaken by 2019;
- 4 Look for ways to encourage biodiversity impacts and opportunities to be considered routinely when Dŵr Cymru plans for the future, including when we put together our environmental improvement programme for 2020–2025; and
- 5 Help us to play our part in reversing the overall decline in biodiversity in Wales identified by Natural Resources Wales in its State of Natural Resources Report^{iv} and so contribute to the delivery of the overarching ambition of the Welsh Government's Nature Recovery Plan^v, **"To reverse the decline in biodiversity, for its intrinsic value, and to ensure lasting benefits to society."** There does, for example, continue to be evidence that the wildlife that relies on Welsh rivers is under pressure: in 2016 Natural Resources Wales^{vi} reported a dramatic decrease in the numbers of salmon fry in several Welsh rivers, including the Usk, Tywi and Clwyd.

Dŵr Cymru is well aware that we cannot reverse biodiversity decline on our own. For example, the Welsh Government and its agencies will need to lead by example. Opportunities must also be found to harness the enthusiasm and commitment of the environmental charitable sector as well as community groups wanting to do more to look after their local environment. Dŵr Cymru continues to be keen to work in partnership with others toward the shared goal of a sustainable natural environment.

When will it be delivered?

All our commitments have a deadline for delivery between now and 2019. We will review our progress annually and report to our company Board.

Some of the commitments in this Plan look further ahead, for example commitment 30 which says that, by 2019, we will consider biodiversity in scheme options when our investment programme for 2020–2025 is being put together.

Before the end of 2019 and every third year thereafter we must (under Section 6(7) of the 2016 Act) publish a report on what we have done to comply with our strengthened duty under Section 6(1). At that time, we must review our Plan, although we are allowed to revise the Plan at any time. We will take the opportunity to undertake a thorough review of the actions contained in this plan, our success in delivering them, their effectiveness and potential areas where we might make new commitments to take future action.

How will we know it's working?

We will review its effectiveness when we prepare our statutory report in 2019.

Key concepts



Biodiversity

'Biodiversity' is shorthand for biological diversity. The 2016 Act defines "biodiversity" ("bioamrywiaeth") as meaning **"the diversity of living organisms, whether at the genetic, species or ecosystem level"**. Given its relevance to biodiversity, we have also specifically considered the variability of habitats when interpreting this duty. As well as being important for its own sake, people can derive great pleasure and a sense of well-being from interacting with nature, including its diverse ecosystems.

Ecosystem resilience

Resilience is the capacity to adapt to, or recover from, adverse circumstances. In a world of change and constant human pressures on the environment, the preservation of biodiversity and healthy ecosystems is likely to be dependent on the resilience of species populations, habitats and ecosystems to such change. The new legislation has identified five inter-related aspects of ecosystem resilience:

- **Diversity between and within ecosystems** — a simple measure of this would be the number of native species within a given area, such as a Dŵr Cymru site, or Wales as a whole.
- **The connections between and within ecosystems** — this acknowledges the interdependence between different species and different habitats, such as the impact that landscape and land use may make on riverine species within a catchment. Rivers can provide connectivity between and within ecosystems.

- **The scale of ecosystems** — extent of habitats and species distributions. For example, our supply area has a high proportion of rivers that support or should support salmon and trout populations — an indication of their comparatively high quality.
- **The condition of ecosystems (including their structure and functioning)** — a simple measure of a water body's condition would be whether it is classified by Natural Resources Wales as of Good or High Ecological Status under the EU's Water Framework Directive^{vii}, as that classification encompasses various elements relevant to the biological health of different types of water bodies.
- **The adaptability of ecosystems** — is similar to 'resilience', and therefore a result of the other four attributes.

Many of the actions included in this Plan will promote aspects of ecosystems resilience. For example, Dŵr Cymru is helping to ensure that conditions in our water environment are able to support fish, invertebrates and other species, including their movement within rivers, thus increasing connectivity between ecosystems. As more and more stretches of river improve towards the conditions required by the Water Framework Directive, river environments as a whole should be better able to adapt to change such as climate and land use. Other examples include our Invasive Non-Native Funding Scheme that encourages landscape scale projects and our biodiversity trials on operational sites that will support ecological connectivity for pollinators.

'Priority' species and habitats

All native species and habitats are important, in terms of their contribution to biodiversity, ecosystem function and their inherent right to exist. However, for the purposes of targeted biodiversity conservation, experts have prioritised those species and habitats that are considered to be rare or suffering from marked decline in number, extent and/or distribution; in other words, those that are under threat and therefore require us to act now. These are species and habitats of principal importance for the purpose of maintaining and enhancing biodiversity, and they are listed under Section 7 of the Environment (Wales) Act 2016 (for Wales) and Section 41 of the Natural Environment and Rural Communities Act 2006 (for England). Some species and habitats are also legally protected under separate Acts and Regulations. In this Plan, we shall refer to all of them simply as 'priority' species and habitats.

In preparing our Plan we have had regard to the list of species published by the Welsh Ministers (under section 7 of the Environment (Wales) Act 2016); the State of Natural Resources Report published by Natural Resources Wales (under section 8 of that Act); and Ministers' interim guidance. We have not had regard to the Area Statements (section 11 of the Act refers) as they have yet to be published.

We have also had regard to the Welsh Government's Nature Recovery Plan and, toward the end of this document, we have cross referenced most of our commitments to outcomes and actions listed in Part 2 of the Welsh Government's Plan.





What are we doing for biodiversity?



Our core services

As a statutory water and sewerage undertaker, Dŵr Cymru's core activities are driven by two overarching aims: public health and environmental protection. Our relationship with the natural environment is a vital part of our business, and so ensuring that we act in a responsible and sustainable way is an essential part of how we work. The many ways that our business interacts with nature is one of the recurring themes in our "Welsh Water 2050^{viii}" vision document, through which we set out the long term context within which Dŵr Cymru will operate in the years ahead.

Drinking Water Supplies

Supplying over 800 million litres of high quality tap water to our customers every day is our most important responsibility.

Our drinking water supplies are sourced mainly from surface waters – rivers and lakes – around Wales. We are fortunate that these water bodies are generally of high quality. Their quality means that they also support a healthy variety of flora and fauna. A significant proportion are designated under national and international law in recognition of their nature conservation importance. We work closely with our regulators, Natural Resources Wales and the Environment Agency, as they set the licences that allow us to remove water from these waterbodies, taking account of the impact on the flora and fauna.

Some of our licences allow us to take water from rivers and lakes that are Special Areas of Conservation, a designation made under the EU Habitats Directive^{ix}. These Areas form part of a pan-European ecological network of "Natura 2000" sites to protect specific priority species and habitats. Under an exercise called the "Review of Consents", our regulators have previously

reviewed our existing abstraction licences to make sure that our activities continue to have no significant adverse impact on the environment. For example, we have modified our abstractions on the Rivers Usk and Wye to ensure greater river flows during critical fish migration periods.

Through our statutory Water Resources Management Plans we look ahead 25 years to try to identify how best to maintain resilient supplies for our customers while respecting the nature that also relies on the water bodies from which we source our water. Compliance with the EU Habitats Directive is one of the key issues we consider when we weigh the various options open to us. We consult on our statutory Water Resources Management Plans, prior to submitting them to the Welsh Ministers for formal approval.

Commitment No. 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).

By transferring water from one area to another for storage prior to treatment we risk enabling the spread of invasive non-native species, which is a potential threat to biodiversity.

Commitment No. 2

We will 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 (on-going).

Our public drinking water supplies — a key ecosystem service — are sourced from 120 predominantly rural catchments covering almost 11,000km², most of which is not in our ownership.

Dŵr Cymru is increasingly using catchment management as the first line of defence for the protection of our drinking water supplies. This is translating into a number of targeted, practical actions in the catchments from which we abstract our raw water. Amongst these is our flagship "PestSmart"^x initiative, which builds on our award winning "Weed Wiper"^{xi} initiative.

Under the "PestSmart" banner, we are collaborating with the farming community and supply chain to reduce levels of pesticides. Such an approach should enable us to use fewer chemicals and less energy to treat drinking water, which would be good news for our customers as well as for the environment and its flora and fauna.

Commitment No. 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 in the environment, to protect our water supplies and to benefit wildlife (on-going).



PestSmart

The quality of public drinking water supplies is tightly regulated. Our monitoring of the catchments from which we source our supplies shows that levels of pesticides are increasing, which hampers our ability to meet the stringent legal standards that apply to public drinking water supplies.

Dŵr Cymru has launched an initiative – PestSmart – to encourage farmers, growers and landowners in targeted areas to consider 'smarter' ways of weed, pest and disease control that do not impact on people, water or wildlife. To help improve raw water quality before it reaches our water treatment works, this joint initiative between Dŵr Cymru and Natural Resources Wales and supported by the Welsh Government as well as the agriculture and environment sectors, is intended to encourage people to consider the way they manage their land.

Part of the initiative enabled unwanted, out of date or revoked pesticides and sheep dip to be collected free of charge and disposed of safely and confidentially in six catchments across Wales (the Teifi, Upper Wye, Towy, Pendine, Cefni and Alaw Reservoir catchments).

In its State of Natural Resources Report, Natural Resources Wales refers to the multiple benefits that increased woodland cover offers to maintaining and enhancing the resilience of ecosystems.

Commitment No. 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 (by 2019).

Dŵr Cymru recognises that access to nature can enhance a sense of well-being and supports the wider well-being agenda led by the Welsh Government. While always giving top priority to the health and safety of our staff and the public, we encourage visitors to enjoy our assets, such as our series of reservoirs in the Brecon Beacons.

Amongst our land holdings are our four flagship visitor centres by our reservoirs at Elan; Llys-y-Fran; Brenig; and Llandegfedd. All these sites are significant habitats in their own right – they are all Sites of Special Scientific Interest in recognition of their conservation importance. We try to manage the sites in a way that is sympathetic to nature so, for example, we close part of Llandegfedd for a few months each year to protect over wintering wildfowl.

We encourage the many members of the public who come to our visitor centres to learn about the natural environment so these sites host a range of activities for all ages and abilities such pond dipping, bird watching and guided nature walks.

Commitment No. 5

We will look for new opportunities at our Visitor Centres to support nature and to engage the public with the natural environment (2019).



Elan Nature & Wildlife

Owned by Dŵr Cymru, our Elan estate covers about 180 square kilometres. Its moorland, bog, woodland, river and reservoir habitats are of national importance, each supporting their own ecosystems. It is leased by the Elan Valley Trust, which was established by Dŵr Cymru in 1989 as a charitable trust to promote conservation, appropriate public access and disseminate information about the estate.

Most of the Elan Estate is covered by 12 separate Sites of Special Scientific Interest. Within the Estate is the Claerwen National Nature Reserve, 800 hectares of upland plateaux with gently rolling hills covered with acid grassland and in parts, blanket bog on a mantle of peat.

The estate is managed by the Trust in a way that is sympathetic to nature so, for example, grazing has been reduced on the reserve to protect species like bog mosses, bog rosemary, cotton grasses and heather. It is one of the most important areas for land birds in Wales and the majority of the estate has been designated as a Special Protection Area under the EC Directive on Wild Birds^{xii}. Of the 110 species "Amber Listed" (declining, some now uncommon) by the Royal Society for the Protection of Birds and British Trust for Ornithology, 21 breed regularly here and a further 47 have been seen on the Estate. The estate's importance extends beyond birds: for example, 27 species of butterflies and over 200 species of moth have been seen on the Elan Estate as well as 17 kinds of dragonfly and damselfly.

During the year a series of events takes place at Elan designed to educate and engage visitors of all ages about the natural environment, such as wildlife tracking; birdwatching safaris; pond dipping; managing wildflower meadows; moth and bee identification.

Treatment of Waste Water and Management of Surface Water

A large part of our work involves the treatment of waste water and management of surface water before releasing it back into inland and coastal waters. This is not just to keep people safe from contaminated water and flooding, but also to protect wildlife and help it thrive in its natural environment. We will continue to strive to meet the permits that our regulators have set governing our discharges. We will also work toward the elimination of pollution incidents caused by our activities. If we do make a mistake, we will look for ways to restore the damage and/or find other constructive outcomes for the environment.

Many of the rivers and seas around Wales are highly protected. For example, some 70% of Wales' inshore waters are designated in recognition of their conservation importance. Under the "Review of Consents" exercise, our regulators have previously reviewed our consents and permits to make sure that our activities have no significant adverse impact on such sites.

In recent decades, Dŵr Cymru has invested our customers' money on many schemes to reduce the impact of our discharges on the receiving waters – inland, estuarine and coastal; we estimate that we have spent over £1 billion on coastal waters alone.

The main measure of the aquatic environment is the classification system introduced under the EU Water Framework Directive, which provides a comprehensive measure of quality, including of ecological health: a water body classified as High or Good Ecological Status should support a healthy ecosystems. The most recent classification results published by Natural Resources Wales showed that 39% of Wales' surface waterbodies were at Good Ecological Status in 2015.

Dŵr Cymru still contributes to some of the failures of water bodies to achieve Good Ecological Status. For example, the level of phosphorus or ammonia in some of the water we release into inland waters can contribute to receiving water bodies not reaching required standards for wildlife. In the light of findings of investigations we undertook in liaison with Natural Resources Wales during 2010–2015, our current five year programme (2015–2020) includes a £60m programme of improvements which we estimate will benefit over 130 kilometres of rivers.

Commitment No. 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 (by 2020).

Commitment No. 7

We will complete and report on our research into the effectiveness of the some new treatment processes to reduce phosphorus in our discharges (by 2018).



Blue Pro

In the years ahead the phosphorus standards we must meet in our discharges may continue to tighten to give further protection to the flora and fauna in the receiving rivers and lakes. Traditional dosing systems for removing phosphorus can make it difficult to control the levels of iron in our effluent. With this in mind, we have trialled a new technology to help us achieve lower levels of phosphorus. Blue Pro, an innovative technology which seeks to achieve ultra-low phosphorus levels has been trialled at our Llanberis Wastewater Treatment Works. Our trial has had very promising results, removing 90% of total phosphate, with low total iron levels.

We are undertaking further investigations to understand our impact on the water environment. For example, we are investing over £8 million on a programme of investigations around the Welsh coastline. These investigations will enable the development of new, bespoke computer models, describing how coastal waters move under the influence of tides, wind and river flow and how pollution is dispersed and diluted in the marine environment. The models will allow Dŵr Cymru to target future investment where it can achieve greatest benefit in terms of water quality at bathing and shellfish waters. We will also make the models and data available to regulators, providing a resource for ourselves and our regulators, including the means to assess the impact of other sectors as well as our own, and to investigate other challenges such as climate change, coastal development and population growth.

In liaison with Natural Resources Wales, Dŵr Cymru is undertaking a further programme of investigations during 2015–2020 at inland water bodies where we may be a significant contributor to failures of water bodies to achieve Good Ecological Status.

Where our adverse impact is confirmed, we will consider jointly with Natural Resources Wales options for reducing our impact as part of our 2020–2025 investment programme if a solution is technically feasible and not disproportionately expensive.

Commitment No. 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.

Our customers also have a role to play. For example, putting inappropriate items such as wet wipes and fats into our sewers can cause blockages and, in turn, pollution incidents. Small items, including plastics and microplastics, that enter our sewers can find their way into the aquatic environment, including the sea.

Commitment No. 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).



But if many inland and coastal water bodies are to be brought up to Good Ecological Status, the pressures from a variety of other sectors will need to be tackled too: Dŵr Cymru cannot deliver Good Ecological Status on our own.

For example, local land use may be contributing significant quantities of phosphorus undermining the value of our reducing the levels of phosphorus in our discharges.

Commitment No. 10

We will 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 (on-going).

The Welsh Government wants us to adopt nature-based solutions to the treatment of waste water and surface water drainage, such as reed beds and sustainable drainage. These sorts of options undoubtedly offer wider benefits for the environment including, for example, by providing new habitats, often in an urban setting. We are very receptive to such ideas.

However, these technologies are intrinsically less predictable than conventional, hard engineered treatment processes and networks. We would like Natural Resources Wales to recognise these limitations when it sets and enforces the standards with which we must comply. Often such investments need to be made well in advance of when they are required, in some cases more than one 5 year investment period ahead of

more conventional solutions, if they are to be given a real chance to succeed, which again requires our regulator to adopt a flexible approach and share regulatory risk.

Our flagship "RainScape" initiative has made us one of the sector leaders in sustainable drainage. This supports the delivery of one of the key priorities identified in the State of Natural Resources Report published by Natural Resources Wales last year to support ecosystem resilience, i.e. "Increased green infrastructure in and around urban areas, (including urban trees and sustainable drainage)".

We continue to work with the Welsh Government to look for ways to overcome legal obstacles inhibiting the more widespread use of sustainable drainage options, particularly uncertainties surrounding long term maintenance.

Commitment No. 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 (by 2019).



RainScape^{xiii}

At Dŵr Cymru, we are leading the way in developing and using new, innovative solutions to manage the amount of surface water entering our combined sewers in some locations. We have called this approach RainScape. It will help to reduce the risk of sewer flooding and pollution, whilst also helping to increase capacity in our sewer network and its resilience to climate change. We plan to invest around £80 million up to 2020 on RainScape schemes, some of which should create new habitats for nature, including in urban environments. Examples include Llanelli; and the partnership "Greener Grangetown" project led by Cardiff City Council.

Education



Dŵr Cymru believes in educating our future generations about the importance of protecting the environment.

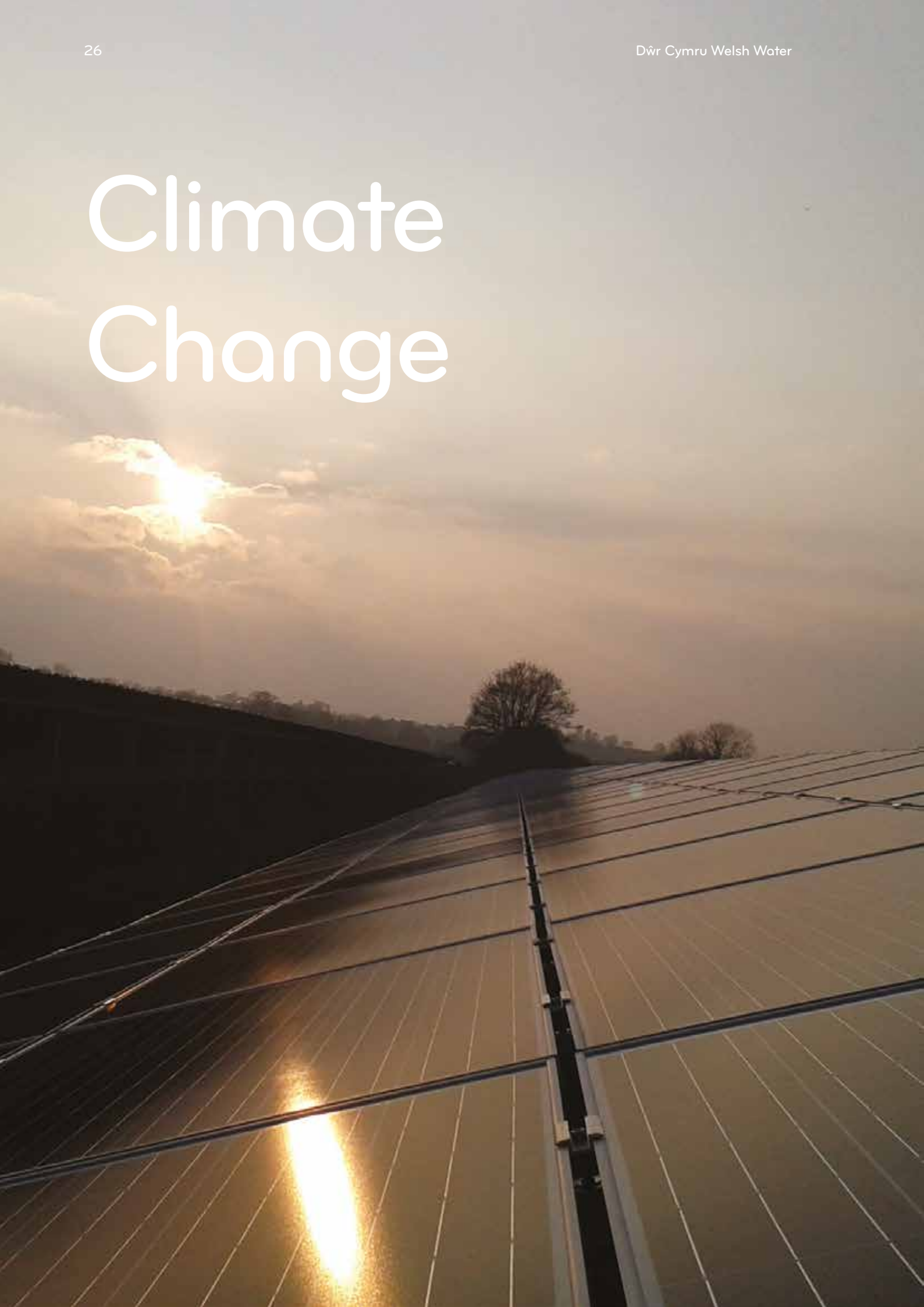
We have developed a programme of activities for children, to encourage them to be responsible citizens. These activities, designed by educational experts, are linked to the National Curriculum and give primary and secondary school children the chance to understand the water cycle and the vital role that water plays in our everyday lives.

Since launching our Education Strategy, hundreds of thousands of children have visited our educational Discovery Centres (Cog Moors and Cilfynydd in South Wales, Brenig in North Wales and Elan Valley in Mid Wales) or have benefited from our outreach assemblies and workshops delivered in schools. The programme is delivered by full-time, seconded teachers or environmental rangers, and gives children the opportunity, free of charge, to learn about the importance of water and to take part in practical activities relating to the water cycle, water efficiency, biotic index, climate change, pond-dipping and river studies.

Commitment No. 12

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

Climate Change



In the years ahead, nature will be impacted by a changing climate. Our commitment to reduce our carbon footprint is an important contribution to mitigating climate change.

Dŵr Cymru is working to reduce our greenhouse gas emissions through the generation of renewable energy at our sites. We have significantly increased the amount of energy we have generated at our sites in recent years, up from just 6GWh in 2007–08 to nearly 100GWh now – enough to power nearly 20,000 homes.

During 2016, we undertook some research to understand better the impact of climate change on the environment in which we operate. This has identified some critical ecosystems which we need to research further to understand their resilience and the impact on our future operations.

Commitment No. 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).

Commitment No. 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).

Looking after protected sites

Some of our operational sites and landholdings are within Sites of Special Scientific Interest, so they are protected under the Wildlife and Countryside Act 1981^{xiv} because they contain flora, fauna, geological or land features that are of special importance.

It is for our regulator, Natural Resources Wales, to determine the condition of such sites. To help organisations such as ourselves identify the significant issues that should be addressed as they would otherwise cause site features to be in unfavourable condition, Natural Resources Wales maintains a web-based "Actions Database". Dŵr Cymru regularly monitors the Database to ensure that we address any issues that Natural Resources Wales has identified at our sites.

Commitment No. 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).

Commitment No. 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).



Black Mountains SSSIs

As a major landowner in Wales, Dŵr Cymru is involved with a number of landscape scale initiatives. One example is the Black Mountains Land Use Partnership which was formed in 2015 with funding from the Welsh Government's Nature Fund. Dŵr Cymru works alongside Natural Resources Wales, Brecon Beacons National Park Authority and representatives of land owners and managers in the Black Mountains Site of Special Scientific Interest to restore the habitat within this iconic, cross-border Site. To build on the work undertaken so far, the Partnership has made a bid to the Welsh Government's Sustainable Management Scheme for support toward further work, including on bracken control, improvement of peat habitats with the potential to explore a system of carbon offsetting, as well as visitor management and education, training to encourage more responsible tourism, local engagement and business development.

A separate project is taking place at Waun Figlen Felen, situated within Mynydd Du SSSI, which has suffered from peat erosion. It has recently seen significant recovery through habitat restoration interventions led by the Brecon Beacons National Park Authority. Dŵr Cymru has been working with the Park Authority, Natural Resources Wales and other stakeholders on the Management Forum to deliver actions on the ground. Through our current (2015–2020) business plan, we were able to commit funding to deliver further outputs at this site by the end of 2020.

Working in Partnership

The enhancement of biodiversity in Wales will require concerted action by many organisations. Dŵr Cymru therefore wants to foster good relationships with other organisations and to work in partnership where there are worthwhile opportunities to do so and where it fits in with our functions as a water and sewerage undertaker.

Dŵr Cymru plays an active role in various groups that have an important role in supporting the natural environment. For example, we are members of the Wales Biodiversity Partnership; we are represented on, and give financial support toward, the Welsh Groups that encourage collaboration amongst the Relevant Authorities established under the Habitats Regulations^{xv} that have a direct interest in Marine Protected Areas; and we have established an Independent Environmental Advisory Panel to provide Dŵr Cymru with advice and to act as a 'critical friend'.

We are also able to give limited financial support toward some projects by not-for-profit organisations, if there is a link with our activities.

For example, Dŵr Cymru's Water Framework Directive funding scheme provides financial contributions to not-for-profit organisations for projects that will deliver improvements to Welsh rivers, lakes and waterways. The aim is to create a more vibrant and healthy environment for people and wildlife.

Commitment No. 17

We will (by 2019) 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.

Examples of projects we have supported under the Water Framework Directive funding scheme include:

Loving our Lake — working with Snowdonia-Active aims to reduce phosphates in Llyn Padarn;

Monmouthshire Olway and Trothy — project of the Wye & Usk Foundation aims to reduce the adverse impact of agriculture in the catchments;

Upper Tywi Catchment Restoration — project led by Carmarthenshire Rivers Trust involved regular lime dosing to mitigate the impacts of acidification;

Alun and Chwiler Living Landscapes — project of the North Wales Wildlife Trust aims to increase the connectivity between habitats;

Middle Dee Diffuse Pollution Project — of the Welsh Dee Trust aims to prevent and reduce the levels of diffuse pollutants entering into the Worthenbury and Wych Rivers;

Improving Maize Practices — enables the Wye and Usk Foundation to encourage farmers to adopt innovative solutions to reducing the environmental impact of maize farming; and

An investigative trial on returning gravel to the Elan system — is another Wye and Usk Foundation led project to provide suitable spawning sites for salmon and trout.



Independent Environmental Advisory Panel (IEAP)

Established in 2012, the purpose of the IEAP is to support Dŵr Cymru to (i) maximise the value of its investment programme for customers and the environment, and (ii) to secure a safe and sustainable future for our environment; one able to support the economy and quality of life for generations to come.

To do this, as well as environmental considerations, the IEAP takes into account the social and economic consequences of any advice or proposal, including the impact they may have on 'affordability' (i.e. on customers' bills). Its members are drawn from key stakeholders including environmental non-governmental bodies; representatives of forestry and farming sectors; academia; local government; the Welsh Government and its regulators.



Healthy Rivers programme

The Healthy Rivers programme is one of the projects that attracted financial support from Dŵr Cymru under our Water Framework Directive funding scheme. The project run by Groundwork Wales aims to improve river habitats in parts of South East Wales so that they can support greater populations of native fish such as salmon, trout, eels and bull heads.

The fish populations in many of the South East Wales rivers have depleted due to historic pollution and man-made modifications to river channels that prevent fish accessing all the available river habitats. As a result, they are failing to achieve Good Status under the Water Framework Directive. The Healthy Rivers programme is removing many man-made barriers to fish migration and creating new in-stream habitats. Healthy Rivers aims to involve people in their local rivers by offering volunteer opportunities, community river care days and training. The hope is that by engaging local communities in this way, they will look after their local rivers in the future. Healthy Rivers also works with local primary schools to deliver knowledge of salmon and eels in the classroom: this type of engagement helps children understand the river habitats and conserve them in the future.

The Healthy Rivers programme received funding from various sources. These included Natural Resources Wales, Dŵr Cymru, Caerphilly County Borough Council, Staedtler and Western Power. Environmental improvements are being made to the following rivers:

- River Rhymney and its tributaries: Nant Bargoed, Nant yr Aber, Nant Cylla and Nant Twyn Harris
- Afon Llwyd and its tributary: Dowlais Brook.
- River Ebbw and its tributaries:
River Sirhowy and Nant Melyn

The project was shortlisted as a finalist for the 2017 UK Rivers Award, and won the Urban Project Category.



There are a number of groups who would like to work with us to help us maintain local sites, e.g. through litter picking. We would very much welcome the involvement of local communities in this way, although we are mindful of the health and safety of staff and volunteers alike, as well as the need to ensure that the operational capability of our assets is not compromised in any way.

We are actively looking into the possibility of establishing "Friends of" groups at particular sites, including their potential role, e.g. maintaining facilities for nature such as bird boxes, as well as arrangements for their supervision. We are also in discussion with some existing community groups and organisations who have expressed an interest in working with us to enrich the biodiversity potential of some of our smaller sites by, for example, planting pollinator friendly flowers.

Commitment No. 18

Subject to adequate insurance and licensing 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 (by 2019).

Non-native species are foreign animals and plants that have been introduced into Britain by people and have colonised our natural environment. There are many non-native species in the UK: most are fairly harmless, but around 10–15% cause environmental, economic and social challenges which need to be addressed. These are Invasive Non-native Species and they are a major threat to biodiversity as they flourish at the expense of our native species.

Some threaten our operational activities: for example, non-native zebra mussels which fix to solid surfaces, and can block pipes, filters, and other water supply structures and impede flow of water, have been found at Llandegfedd reservoir and Court Farm Water Treatment Works.

Dŵr Cymru has set aside some funds to support community and voluntary groups who propose projects to curb the growth and spread of invasive non-native species which pose a threat to indigenous plants and animals, however we firmly believe that all actions need to be coordinated at a catchment level to reduce recolonisation.

Commitment No. 19

We will (by 2019) 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.



Zebra mussels attached to structures
at Llandegfedd Reservoir



The INNS funding schemes

The Invasive Non-native Species (INNS) Funding has funded two projects to date; the Dee INNS project led by the North Wales Wildlife Trust and the 'Giving up weed' project led by the Wye and Usk Foundation. Both projects take a landscape scale approach, delivering outcomes that support habitat enhancement and species recovery for the whole catchments. They rely on partnerships between stakeholders, including Natural Resources Wales, land owners and managers, local community and volunteers groups and charitable organisations.

The Dee INNS project aims to deliver three main outcomes:

- Coordinated implementation of management plans for riparian, terrestrial and freshwater INNS within the catchment.
- Biosecurity good practice promoted to target groups and the general public to reduce the introduction and spread of INNS.
- Engaging with local communities and the public to control and record INNS

The 'Giving up weed' project led by the Wye and Usk Foundation aims to achieve total eradication of invasive weeds within the Wye and Usk catchments, by dealing with the issue across the Wales and England border.

Our People



As a company, our greatest asset is our team of employees whose dedication and enthusiasm are key to the delivery of our vision, to “Earn the trust of our customers every day”.

We need to ensure that our people and our contractors are aware of the biodiversity and nature conservation duties that Dŵr Cymru is under.

In response to our strengthened biodiversity duty, Dŵr Cymru has arranged for all staff to be given the opportunity to receive training through an in-house e-Learning course that will be rolled out this year. We will look for other ways to raise awareness of our employees at all levels, such as through environmental team building exercises.

Commitment No. 20

We will give all colleagues the opportunity to learn about the legal conservation obligations that Dŵr Cymru has (by 2018).

Commitment No. 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).

Through our supply chain we can influence others to give greater weight to biodiversity. We have become a member of sustainable supply chain school, which aims to improve knowledge and performance of supply chains on environmental and sustainability matters.

Commitment No. 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).

Colleagues across the business need to be aware of invasive non-native species and know what to do about them, so a company-wide Biosecurity Position Statement and Framework to help colleagues has already been produced.

We have therefore produced a booklet called 'Invasive Non-Native Species Identification' to help our colleagues identify these species whilst carrying out their roles and give them guidance on how they can report them.

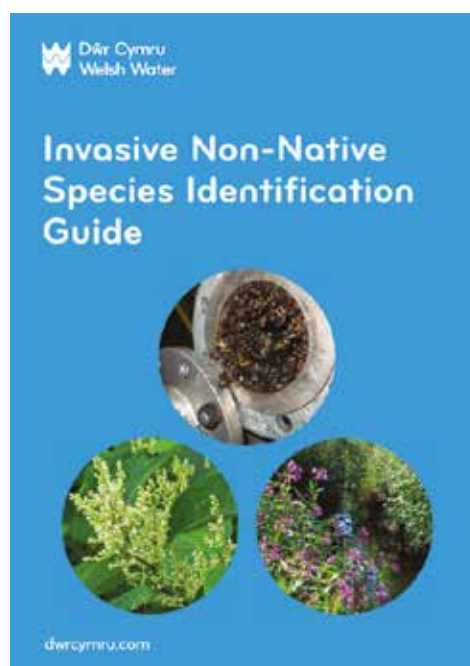
Commitment No. 23

We will produce for colleagues an "Invasive Non-Native Species Identification Guide" (by 2017).

Many of our operational sites — which range from large works covering several acres (such as Five Fords near Wrexham) to very small sites (such as local pumping stations) — offer opportunities for us to introduce small scale but worthwhile measures to support nature. While we must ensure that our sites are safe — so, for example, ensure that our people have safe and easy access to manholes etc. — we believe these sites may offer opportunities, such as by planting pollinator friendly flowers, or the siting of bird boxes, or other nature-friendly measures.

Commitment No. 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 (by 2018).



In February 2017 Dŵr Cymru held an internal biodiversity workshop to gather ideas and examples of good practice to go into this biodiversity plan. The event attracted a wide range of delegates from across the business and was opened by our Chief Executive, Chris Jones, who spoke about, "...the importance of protecting the environment so that flora and fauna can thrive". The workshop was a great success, and ideas ranged from small scale initiatives, such as encouraging wild flowers, to larger scale thoughts about internal capital delivery processes.

Commitment No. 25

We will review all the substantive ideas that emerged from the biodiversity workshop to assess their practicality; potential value; and priority (by 2018).

There are some ideas that emerged at the workshop that we will take forward in the shorter term. They are:

Commitment No. 26

In procuring our next grounds maintenance contracts, we will encourage those submitting tenders to consider biodiversity benefits (by 2018).

Commitment No. 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 (by 2018) and, if relevant, their on-going maintenance.

Commitment No. 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 (by 2019).

Commitment No. 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 (by 2018).

Commitment No. 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).

Measuring and reporting on our commitments

Commitment No.	Commitment	Delivery deadline	Nature Recovery Plan Pt 2 Relevant Policy
	Our core services – Drinking Water Supplies		
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	1.1 1.2
2	We will 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.	On-going	4.2
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 in the environment, to protect our water supplies and to benefit wildlife.	On-going	4.3
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	4.3 4.4
5	We will look for new opportunities at our Visitor Centres to support nature and to engage the public with the natural environment.	2019	1.3
	Our core services – Treatment of Waste Water and Management of Surface Water		
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	4.1.1
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	4.1.1
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	4.1.1 5.4

Commitment No.	Commitment	Delivery deadline	Nature Recovery Plan Pt 2 Relevant Policy
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	1.3
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	4.1.1
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	4.3.1
	Education		
12	We will continue our role in educating future generations about the importance of the water environment, including its flora and fauna.	On-going	1.3.2
	Climate Change		
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	
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	
	Looking after protected sites		
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	3.1
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	3.1

Commitment No.	Commitment	Delivery deadline	Nature Recovery Plan Pt 2 Relevant Policy
	Working in Partnership		
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.	2019	3.2.1 4.1.1
18	Subject to adequate insurance and licensing 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	3.2.1
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.	2019	3.2.1
	Our People		
20	We will give all colleagues the opportunity to learn about the legal conservation obligations that Dŵr Cymru has.	2018	1.3; 2.1
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	1.3
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	1.1 1.2.1
23	We will produce for colleagues an "Invasive Non-Native Species Identification Guide".	2017	1.3
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	1.3

Commitment No.	Commitment	Delivery deadline	Nature Recovery Plan Pt 2 Relevant Policy
25	We will review all the substantive ideas that emerged from the biodiversity workshop to assess their practicality; potential value; and priority.	2018	1.3
26	In procuring our next grounds maintenance contracts, we will encourage those submitting tenders to consider biodiversity benefits.	2018	1.1 1.2
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	1.1 1.2
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	1.3 2.3
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	2.4
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	1.1 1.2 2.4 4.3.1



Stonechat at Usk Reservoir



Common Purple Orchid at Llanishen

Biodiversity is the diversity of living organisms whether at the genetic, species or ecosystem level.



Dormouse



Grass snake at Llanishen



Wheatear at Elan



Primroses at Nelson

Some closing thoughts from our Environment Director

Readers of this Plan will see that Dŵr Cymru is seeking to be an exemplar organisation that supports biodiversity as we go about our functions of supplying drinking water and dealing with waste water. Dŵr Cymru wants to create an environment we are proud to hand on to future generations – and protecting and enhancing nature must be a key part of that objective.

But many of the changes that will be needed to reverse the overall decline in biodiversity reported by Natural Resources Wales in its State of Natural Resources Report will require multi-stakeholder involvement. Dŵr Cymru will play our part but everyone must also play theirs if our actions are to deliver their potential impact and benefit.

For example, other public authorities will be producing their own statutory Biodiversity Plans over the coming months and we hope that they will acknowledge the potential inter-dependency of all the Plans. We would like Natural Resources Wales and Ofwat to recognise the need to share some of the regulatory risks associated with adopting nature based alternatives to some processes.

We also want other groups to use this Plan to inform their own ideas and to look for opportunities to work in partnership with us. This includes community and non-governmental environment groups (eNGOs). We hope that our Plan will support the delivery of many of the ambitions described in the "Blueprint for the 2019 Price Review in Wales^{xvi}" produced by the Wales Environment Link coalition of Welsh eNGOs.

This is our first Biodiversity Plan. In 2019 we will be reporting on the progress we have made in complying with our strengthened biodiversity duty and we will take that opportunity to review this Plan. In the meantime, we would welcome any comments you might have on this Plan and, in particular, suggestions on how it might be improved: your feedback will be taken into account when we review the Plan in 2019.



Tony Harrington,
Director of Environment

References

ⁱ **Environment (Wales) Act 2016**

<http://www.legislation.gov.uk/anaw/2016/3/contents>

ⁱⁱ **Natural Environment and Rural Communities Act 2006**

<http://www.legislation.gov.uk/ukpga/2006/16/introduction>

ⁱⁱⁱ **Protection of Badgers Act 1992**

<http://www.legislation.gov.uk/ukpga/1992/51/contents>

^{iv} **The State of Natural Resources Report, Natural Resources Wales, 2016**

<https://naturalresources.wales/evidence-and-data/research-and-reports/the-state-of-natural-resources-report-assessment-of-the-sustainable-management-of-natural-resources/?lang=en>

^v **"The Nature Recovery Plan for Wales – Setting the course for 2020 and beyond",
Welsh Government, December 2015**

<http://gov.wales/docs/desh/publications/160225-nature-recovery-plan-part-1-en.pdf>

^{vi} **Salmon stocks threatened by decline in fry numbers, NRW press release**

<https://naturalresources.wales/about-us/news-and-events/news/salmon-stocks-threatened-bydecline-in-fry-numbers/?lang=en>

^{vii} **Directive 2000/60/EC establishing a framework for Community
action in the field of water policy**

http://eur-lex.europa.eu/resource.html?uri=cellar:5c835afb-2ec6-4577-bdf8-756d3d694eeb.0004.02/DOC_1&format=PDF

^{viii} **Welsh Water 2050**

<http://www.dwrcymru.com/en/Company-Information/Business-Planning/Welsh-Water-2050.aspx>

^{ix} **Council Directive 92/43/EEC of 21 May 1992 on the conservation
of natural habitats and of wild fauna and flora**

<http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:31992L0043&from=EN>

^{*} **More information on "PestSmart"**

<http://www.dwrcymru.com/en/WaterSource/PestSmart.aspx>

^{xi} **More information on "Weed Wiper"**

<http://www.dwrcymru.com/en/WaterSource/MCPA-Weedwiper.aspx>

^{xii} **Directive 2009/147/EC on the conservation of wild birds**

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0147&from=EN>

^{xiii} **More information on "RainScope"**

<http://www.dwrcymru.com/en/My-Wastewater/RainScope.aspx>

^{xiv} **Wildlife and Countryside Act 1981**

<http://www.legislation.gov.uk/ukpga/1981/69/contents>

^{xv} **Regulation 6 of The Conservation of Habitats and Species Regulations 2010, SI 2010, No 490**

http://www.legislation.gov.uk/uksi/2010/490/pdfs/uksi_20100490_en.pdf

^{xvi} **Blueprint for the 2019 Price Review in Wales, Wales Environment Link**

http://www.waleslink.org/sites/default/files/blueprint_for_the_2019_price_review_in_wales.pdf

