Protecting & Enhancing Biodiversity

Wales & West Utilities
2019

WALES&WEST UTILITIES

Contents

1.0 Introduction

Wales & West Utilities is committed to be an environmentally ambitious company. We want to deliver best practice and lead environmental innovation. By doing this we will demonstrate the benefit to companies and society of protecting and enhancing the environment.

We working with a range of stakeholders to develop sustainable, innovative and affordable energy. Our role is to contribute to the environment and to the quality of life and wellbeing of the customers and communities we serve.

Our environmental ambition is supported by our commitment to the United Nations Sustainable Development Goals 15 (Life on Land) and 14 (Life Below Water).

The following report reviews our actions and confirms our future plans to conserve natural capital. We will focus on biodiversity, the resilience of ecosystems and supporting ecosystem services.

In accordance with the Environment Act (Wales) 2016 has been submitted to National Resources Wales (NRW). It will be updated every third year thereafter. This biodiversity plan forms part of our ambitious overarching Environmental Action Plan (EAP) which can be can be found on our website[1].

[1] https://www.wwutilities.co.uk/

2.0 About us

Wales & West Utilities is a regulated gas distribution business with around 35,000 kilometres of gas pipes covering Wales and the south west of England.

Our head office is situated in Newport, South Wales and our extensive network reaches from the mountains of North Wales to the cliff tops of Cornwall.

We cover one sixth of the UK, taking care of 2.5 million gas supply points in homes and businesses, covering a catchment area with a population of 7.5 million people.

We provide a 24 hour a day, seven days a week service, 365 days a year; which:

- connects 11,000 new customers to our network every year;
- responds to over 80,000 gas emergencies every year;
- manages and maintains a network of 35,000km of pipes;
- invests £2 million every week in the maintenance and replacement of our network; and
- employs more than 1,600 skilled and experienced colleagues.

As a natural monopoly, we are closely regulated by Ofgem, the energy regulator, who is responsible for determining how much revenue we can have to continue to deliver our safe and reliable gas network.

3.0 Context

3.1. Biodiversity Obligations

Biodiversity is valuable in its own right but it is also essential to the success of the ecosystem services on which we depend.

The importance of protecting biodiversity and natural resources has been reinforced by the recent surge in policy and accompanying legislative drivers, including The Environment Act (Wales) 2016 and DEFRA 25 Year Environment Plan where the government has highlighted the importance of biodiversity through its intention to mandate biodiversity net gain (BNG).

The Environment Act (Wales) 2016 defines the sustainable management of natural resources as:

> ***"…using natural resources in a way and at a rate that maintains and enhances the resilience of ecosystems and the benefits they provide. In doing so, meeting the needs of current generations without compromising the ability of future generations to meet their needs, and contributing to the achievement of the well-being goals set out in the Well-being of Future Generations Act."***

For England, 2012 saw the publication of both Biodiversity 2020 (The England Biodiversity Strategy) and the Natural Environment White Paper being issued, calling for action to do more to halt the loss of biodiversity, including;

- working at a landscape scale with an emphasis on multi-functional benefits,
- better protection of important habitats, and
- betterconnections between protected areas.

Targets were set including

- the maintenance of UK priority habitats, and
- Sites of Special Scientific Interest (SSSIs) in good biological condition.

For Wales, as required by the Environmental (Wales) Act 2016, 2016 saw the publication of the State of Natural Resources Report (SoNaRR). SoNaRR is an evidence base to provide information on the current state of Welsh natural resources. It makes available the information needed to set priorities for action at the national level (National Natural Resource Policy (NNRP).

WWU has a responsibility to conserve biodiversity whilst managing a gas distribution network.

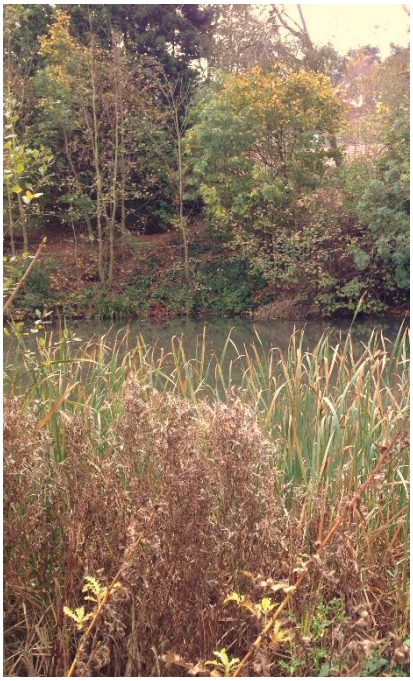
3.2. Biodiversity within our network

Natural resources can be defined as:

- Animals, plants and other organisms;
- Air, water and soil;
- Minerals;
- Geological features and processes;
- Physiographical features; and
- Climatic features and processes.

These individual components work together in many ways and at many scales. They impact upon biodiversity and provide us with materials and ecosystem services from which we benefit. The National Ecosystem Assessment (NEA) groups separate habitat types into the UK Broad Habitats or ecosystems.

Our network area is home to over 10 National Parks/Forests and to a significant number of both legally protected sites and Biodiversity Action Plan (BAP) habitats. These are vital components to regional, national and international ecosystems::



- Protected sites:
  - 19 Ramsar treaty sites
  - 192 Special Protection Areas (SPAs) and Special Areas of Conservation (SACs)
  - 106 National Nature Reserves (NNRs) and 233 Local Nature Reserves (LNRs)
  - 1,861 SSSIs
- BAP Broad Habitats:
  - Urban
  - Woodland
  - Natural and Semi-Natural Grassland
  - Mountains, Moors and Heaths
  - Freshwater
  - Costal Margins
  - Enclosed Farmland
  - Marine

Also, in compliance with Section 41 of the NERC Act, English Ministers have published a list of species and habitats. These species and habitats are of principal importance for conserving biodiversity in England..

Welsh Ministers are required to publish up to date lists of organism and habitats that are of key significance in Wales. These lists are currently under review, but in the interim we are using the list produced for Section 42 of the NERC Act.

3.3. What are the main threats to biodiversity?

Nature and people are having a direct and indirect impact on biodiversity.

Major threats to biodiversity in our network include:

- habitat loss from increased urbanisation, intensive agriculture and deforestation;
- increase in pollution levels in air, water and land;
- invasive non-native species out competing our native species; and
- rapid climate change does not allow ecosystems and species to adapt.

A wide breadth of impacts influence biodiversity, globally and within our network. So, taking a holistic approach to the protection and enhancement of the environment and natural capital is essential to maximising the benefits to biodiversity.

4.0 How have we been doing?

Protecting natural capital and biodiversity part of our business processes for many years. Protecting and enhancing biodiversity form a fundamental part of our environment policy.

Focus on biodiversity has been centred on minimising our impact and ensuring legal compliance. Our independently accredited (ISO 14001) environmental management system (EMS) drives our environmental improvement. It has contributed to the protection and enhancement of natural capital and biodiversity by developing policies and procedures which:

- set high standards for the sustainable development and asset management;
- minimise our environmental impact and protect against pollution;
- improve land quality and return unused land assets back to beneficial use; and
- engage with employees to increase their understanding of
    - their impact, and
    - our environmental ambition.

Examples of some of the important work we have been doing is presented below.

4.1. Cultivating a lasting bio-legacy

While delivering our statutory contaminated land obligations at Abercarn Gasworks in 2015, we demonstrated our commitment to deliver both environmental and community benefits.

In addition to the remediation work, we worked with the local residents, local authority and specialist sub-contractors to improve the biodiversity at the site. The design was delivered to respects the integrity of the area and enhances the local ecosystem to its full potential. Ecological appraisals were undertaken, some potential constraints identified, and mitigation proposed to limit our impacts. The following compensation/enhancements were delivered:

- **Additional shrub planting and wildflower seeding** – specifically along the river corridor, a mix of native species, of local provenance, such as field maple, hawthorn, blackthorn and occasional hazel, spindle, dog rose and holly. This increased the floral diversity on site which in turn is expected to increase foraging opportunities for a number of invertebrates, mammalian and bird species as well as growing a thriving resident reptile population.

- **Installation of additional bat roosting features** – target bat species included brown long-eared bat, daubenton's bat, natterer's bat, noctule bat, common pipistrelle bat and whiskered/brandt's bat, all of which we identified as Caerphilly BAP Priority Species. The increase in foraging and installed roosting habitats will optimise the site for any passing species.
- **Installation of additional bird roosting and foraging features** – the site itself holds potential for two Caerphilly BAP bird species, song thrush and tree sparrow, so appropriate nest boxes were installed in keeping with the respective species' requirements. Additionally, an artificial foraging perch was installed along with a nest box suitable for the white throated dipper, who may use the river corridor.

Blue tits in our installed birdboxes.

- **Enhancements for reptiles** – there were little natural refugia present on site for reptiles. Therefore, a subterranean hibernaculum was created to generate increased foraging habitat in the spring and summer as well as offering a suitable rest site for winter hibernation. The hibernaculum was built primarily from materials obtained during selective thinning of the woodland canopy. This not only generated the required material for its construction, but also created sunny glades within the woodland suitable for basking.
- **Enhancements for terrestrial invertebrate species** – there was no habitat or potential for any Welsh species of principal importance or Local BAP invertebrate species on site, however many of these species would benefit either directly or indirectly from increased invertebrate populations. In addition to increasing the floral biodiversity on site, the constructed reptile hibernaculum will also double as a refuge for a wide variety of saproxylic invertebrate species which are dependent on dead or decaying wood. A series of natural invertebrate "hotels" were also created from a range of materials including natural stone, deadwood and tree root balls. Bee species have also benefited from an artificial hive and an increase in nectar producing wildflowers.
- **Mammal enhancements** – the reptile hibernacula will provide suitable resting and foraging habitat for wood mouse and vole species alike. Log pile

arrangements will also serve as a refuge and foraging site for hedgehogs; a species which is declining rapidly in many areas of Wales.

Despite the essential remedial works which took place, the potential of this small site was maximised through targeted, ecologically functional enhancements aimed at achieving a net biodiversity gain. With the allocated enhancement zone being adjacent to a live gas compound containing regionally critical energy infrastructure, the biodiversity improvements will be secure and managed over the long term.

This work culminated in the project winning Best Biodiversity Enhancement award at the Brownfield Briefing Awards.

4.2. Community Engagement

When we work in communities, we try to do what we can to leave a sustainable, lasting legacy. After we finish gas main replacement work in towns and villages, our teams go the extra mile to make a positive impact for affected communities.

Volunteers from our operational and office based teams have completed litter picks in towns, on beaches and in parks, helping to improve the local environment and part of our commitment to support the communities we serve.

For example, dozens of colleagues went to Bishops Childs Primary School in St Mellons in collaboration with Business in the Community's Give & Gain Day. After a long day's work, the school gained a refurbished pond and wildlife area, access and seating area. Supported by a specialist ecologist, who ensured the protection and enhancement of the pond habitat, litter was cleared, paths re-established, fences built and hedges trimmed. Lewis Cook, a member of our Customer Service Team, was proud that:

"…what we've done will help the pupils in their learning for years to come and further benefit the school's status as an eco-school"

Our volunteers at work in our communities, including workers at Bishops Childs School (bottom)

4.3. Future of energy

Over the past few years we have worked hard to identify and deliver solutions to the energy trilemma. This will not only secure an affordable, reliable energy supply but will significantly contribute to the decarbonisation of a whole energy system. Our decarbonisation vision will see us limiting the effect climate change has on us and the natural environment that we live in.

- **We have worked hard to connect biomethane plants to our network.** We now have 19 of these plants connected, capable of providing energy to over 120,000 homes.
- **We feel it's important to make sure that decisions on the future of energy are taken from a customer's point of view.** So, to underpin our work, we developed an industry first whole system energy simulator that forecasts future energy supply and demand – we've worked with external parties to adopt this modelling to support their own decision making on delivering decarbonisation affordably.
- **Across Wales and south west England, over 30 flexible generation gas fire power stations have been connected to our network.** These plants

can generate electricity very quickly; supporting renewable energy when the wind doesn't blow or the sun doesn't shine.

- **Working with our fellow gas networks, we are part of the H21 hydrogen innovation project**, where we demonstrated that converting parts of the existing gas network, to hydrogen, in the UK could deliver significant reductions in carbon emissions.
- **We have delivered the first trial of smart-controlled hybrid heating systems in 75 homes in Bridgend** – a solution that can be easily retrofitted to existing gas central heating, which involves the addition of an air source heat pump. The smart control switches between the gas boiler and heat pump based on cost and carbon.
- **We have been supporting alternative fuelled transport options.** Compressed methane gas buses and HGVs are already in use in Swindon, Bristol and Plymouth: improving air quality as well as reducing carbon emissions.

4.4. Operations

Delivery of our operational activities and capital delivery projects are carefully managed to minimise our impact on the environment.

Management interventions employed have included:

- **Habitat piles**; where appropriate, all trees that we fell for essential pipeline protection are left stacked and brash left on to create habits.
- **Installation of frond mats in rivers**, such as River Lynher and Conwy, to naturally increase the depth of cover over pipelines, protecting their integrity into the future also have the benefit of increasing the provision of habitats within which fish can shelter.
- **Maximising the amount of recycled aggregate in our excavations** to limit the requirement for use of virgin aggregate.
- **Undertaking comprehensive ecology assessments and**

Slow worms collected, by licensed ecologists, from our network site to be safely relocated before the start of work.

mitigation works, which can include extensive reptile translocation and habitat re-instatement.

- **Tackling invasive non-native species** by proactively spraying sites, within the growing season, affected by knotweed.

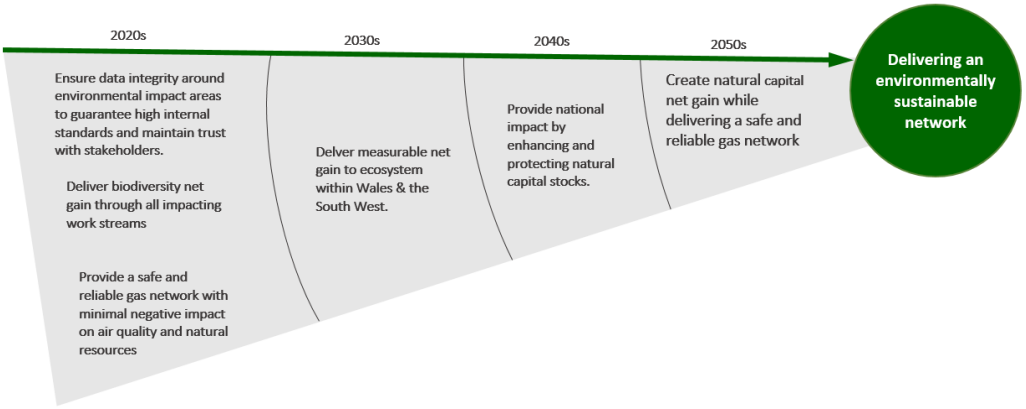
Dwarf growth of Japanese Knotweed being successfully treated on a former gasworks site.

In addition, we have been working hard to reduce our business carbon footprint by improving efficiency and replacing our old leaky metal pipes. As a result, we have reduced our business carbon footprint by over 18% since 2013.

5.0 Our ambition for the future

In the future we want to build on our existing environmental performance to drive greater improvements for the benefit of nature, our stakeholders and consumers.

Our employees tell us that focusing on environmental improvement should be important to us and, with strategic support from government and Ofgem, we will deliver our long-term environment ambition for natural capital, shown below.



We will review our ambition regularly to ensure we continually improve, take onboard stakeholder feedback and maximise the influence we have on others to embrace the protection of natural capital and biodiversity as part of business as usual.

Our overall plan will see a clear approach to the management of natural capital and biodiversity at Wales & West Utilities, including;

- the identification of the risk and opportunities that our work has on natural capital and biodiversity within our land holdings and through our operational and development activities.
- the identification of strategies and procedures that need to respond to current and future legislative development in England and Wales with respect to the protection of natural capital.

Details of plan to protect and enhance biodiversity is presented below.

5.1. Understanding and improving our direct impact on biodiversity

Our long-term ambition is to achieve biodiversity net gain across all our activities by 2039 with interim ambitions to help us meet this target of achieving no net loss on designated projects within between 2021 and 2026 (our regulatory price control period) and achieving biodiversity net gain on our projects from 2026

To achieve our ambition, we are committed to making a measurable net gain contribution (BNG). We will trial appropriate processes and metrics to ensure we can deliver a reliable and accurate measure of our impact. Whilst understanding our impact we will also, embed BNG principles into our policies, strategies and every day business activities. Fundamental best practice principles will be applied to our approach to BNG, including applying the mitigation hierarchy[2];

In addition, we will begin to look at our long-term assets to identify and implement biodiversity and ecosystem service enhancements that will have a quantifiable benefit by restoring degraded ecosystems, providing ecological refuges within urban and rural areas.

To ensure the integrity of the network we are sometimes required to remove trees which represent a risk to the pipeline and (therefore) the communities in which we work. We recognise that this has a negative impact on biodiversity within our network. **As such we are committed addressing this impact by collaborating with stakeholders within Wales and the South West to support afforestation across the network in long term managed schemes. We are committed to planting 5 trees for every tree we cut down.**

In collaboration with Local Authorities and schools we hope to engage with communities to plant trees within their urban environment. We think is an excellent opportunity to increase biodiversity, engage children (and by extension their families)

[2] Biodiversity Net Gain: Good practice principles for development © CIEEM, CIRIA, IEMA, 2016

in the scientific benefits of nature, such as, improvements in air quality, carbon sequestering, health and quality of life.

5.2. Building biodiversity into business as usual

Whilst measuring our biodiversity impact we will also re-enforce our approach to operational activities by incorporating best practice biodiversity principles into each stage of project delivery.

For example:

- Opportunity stage – using existing high level environmental constraint data to identify the presence of high value biodiversity.
- Project design assessment – use our development BNG metric to understand the value of biodiversity affected by the project.
- Engagement – engage with stakeholders, including Local Authorities, wildlife groups, ecologists to determine the most effective application of the mitigation hierarchy.
- Project delivery – re-assess the BNG metric and project plan considering any project variances.
- Report – report on the success of any works undertaken and provide information to help inform future management plans.

We will continue with our mains replacement programme, to reduce gas loss to atmosphere from leaky pipes by 10% by 2026.

Whilst delivering our safe and reliable gas network we will drive down our consumption of renewable and non-renewable resources by embedding circular economy principles, which champions the restorative imperative, to exceed regulatory requirements and maximises benefits to biodiversity.

5.3. Managing invasive weed

We will continue to tackle invasive species within our network, specifically, Japanese Knotweed which is abundant in South Wales.

5.4. Improving air quality

Poor air quality can have a detrimental effect on biodiversity. We are committed to understanding and reducing our impact on air quality.

We will be utilising specialist support to produce a robust evidence base to drive improved process and decision making in the future. Planned improvements to the environmental performance of our vehicle fleet will make significant improvements to our impact on local air quality.

5.5. Improving soil and water quality

By maintaining our ISO14001 EMS accreditation we will continue to build upon our high environmental standards limiting our impacts and maximising our environmental benefits.

We will continue to deliver our award-winning land management programme that cleans up historical gasworks sites we inherited from our predecessor companies. This will reduce impacts to soil and groundwater from our former gasworks sites and provide opportunities to increase biodiversity and bring sites back to beneficial use for the communities within which they are located.

5.6. Tackling climate change through the decarbonisation of heat

We're committed to delivering a Net Zero-ready gas network by 2035 and to playing our part in delivering a green 'whole energy system'.

To meet this ambition, we will:

- continue working with the Welsh Government and others to understand what a large scale roll out of smart hybrid systems could look like in practice to fully decarbonise home heating.
- work to ensure that we can provide the infrastructure where hydrogen supplies develop to switch domestic consumers away from fossil fuels and enable the decarbonisation of heavy industry.

5.7. Engaging with communities and stakeholders

Every year we will publish a report on how we are doing against our ambition to lead the way in protecting and enhancing the environment.

We will continue to listen to the opinions and needs of our customers and stakeholders. We will act on opportunities and take full advantage of the benefits to society, as well as the environment, of our initiatives to protect and enhance biodiversity within the communities we are proud to serve.

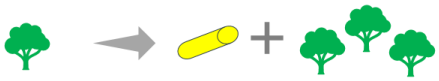
Glossary

Biodiversity- is a measure of the variety and variability of living things.

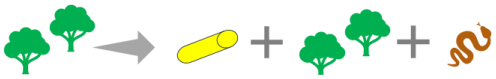
Biodiversity Net Gain (BNG) – seeks to avoid, minimise and restore nature that suffers negative impacts from development. Restoration should compensate for the negative impact (no net loss) or deliver additional gains in biodiversity (net gain).

Net Loss – Activities destroy habitats

No Net Loss – Habitats are avoided / protected / restored.



Net Gain (1) – Habitats are avoided / protected / restored & enhanced



Net Gain (2) – Habitats are avoided / protected / restored & enhanced via local compensatory habitat creation

Compensation can be at the development location or at other locations within the area.

Carbon Sequestering - is the process which removes carbon dioxide from the atmosphere and stores it in a solid or liquid form.

Ecosystem Services - are the benefits that humans gain from the natural environment. Such ecosystems include, for example, agro-ecosystems, forest ecosystems, grassland ecosystems and aquatic ecosystems

Energy Trilemma - is the challenge of meeting energy needs securely, affordably and sustainably.

Frond mats - are placed in water bodies to protect to buried structures against the scouring effect of flowing water.

Hibernaculum – is a shelter or place in which animal can seek safety. A subterranean hibernaculum is below ground.

Invertebrates (saproxylic) - are animals without a backbone or bony skeleton. Saproxylic invertebrates are dependent on dead or decaying wood to survive.

Natural Capital - is the world's stock of natural resources, which includes geology, soils, air, water and all living organisms. Natural capital provides people with free goods and services is often called ecosystem services.

Natural Resources - are materials or substances that are produced by the environment.

Physiographical features - describe an area based upon its physical characteristic. This could include, rock type, landscape and landforms.

Refugia - describes an area where organisms can survive during period of unfavourable conditions.