Cyfoeth Naturiol Cymru
Natural Resources Wales

Carbon Positive Project

NRW becoming an exemplar in carbon management and sharing best practice for use across the Welsh public sector

Project Update Summer 2017

About the project

The Carbon Positive Project is evaluating NRW's net carbon status, accounting for both greenhouse gas emissions and carbon sequestration across the whole of our estate. It is identifying mitigation opportunities to reduce our carbon impact as an organisation and deliver projects to demonstrate these measures. The project will also put in place a plan for future implementation of mitigation measures, embedding carbon management across the organisation and facilitating NRW becoming an exemplar in carbon management. Through sharing our approach and experiences, the Carbon Positive Project will help to disseminate best practice in carbon management across the Welsh public sector. For more background to the project see our Autumn 2016 Update.

Our work to date

The Project has calculated NRW's carbon status, identifying which of the organisation's activities have the greatest greenhouse gas impact, and the contribution of habitats on the estate to carbon sequestration and storage. In 2015/16 the organisation emitted over 41,000 tonnes of carbon dioxide equivalents (CO_2e) from its operations. Our Scope 1 & 2 emissions, e.g. fuel and electricity use, accounted for 12% of the total; 88% of emissions were indirect (Scope 3), for example, procurement of goods and services accounted for 55% of emissions and our staff's commute and homeworking was 7%. Figures on carbon sequestration are now being finalised and indicate that the organisation is net carbon positive, storing more carbon annually than it is releasing through its operations. Building upon the net carbon status calculation, we are evaluating opportunities to reduce emissions, increase sequestration and protect carbon stocks in four key areas: Buildings, Transport, Land and Assets, and Procurement.

Demonstration Projects

Alongside our evaluation of mitigation options, we have been delivering a suite of demonstration projects to showcase the opportunities available and to deliver action on our carbon impact now. Here are some of the projects being delivered in collaboration with colleagues from across the organisation:

Buildings

LED lighting is being installed in ten NRW buildings, which will result in a saving of 43.6 tonnes CO_2e each year.

Coed y Brenin Visitor Centre's new **biomass boiler** has saved approximately 25 tonnes of CO_2e in six months.

Planned installation of **solar PV** to provide renewable energy for nine of our buildings is predicted to save 50 tonnes of CO_2e per year.

Solar PV at NRW offices are predicted to save 50 tonnes CO_2e per year

Transport

In May 2017, we introduced three **electric cars** into our fleet and installed six **charging points** – four at our offices and two at visitor centres: Coed y Brenin and Bwlch Nant yr Arian.

Our three electric cars are predicted to save 2 tonnes CO_2e per year

As well as reducing carbon emissions, the electric vehicles reduce noise pollution, have zero emissions of harmful air pollutants and save NRW money. A strategic fleet review has been undertaken to identify opportunities to reduce emissions further.

Land & Assets

Woodland – we have completed three projects planting new native mixed broadleaved woodland, including 4 hectares planted at Gethin Forest, Merthyr Valley, which will store around 2,000 tonnes CO_2e each year. Additional benefits include:

- remediation of post-industrial spoil
- improved health and wellbeing for the local community
- expanding an Ancient Semi-Natural Woodland.

Peatland – we have completed four projects restoring over 60 hectares of degraded peatland habitat, at Tywi Forest, Cors Caron and Cors Fochno. This will protect stored carbon, reduce flood risk, and provide a home for wildlife.

Operational Assets – work is underway to retrofit Cifrew gauging station with solar panels to generate over 900kWh of renewable electricity per year to power it.

Woodland planting at Gethin Forest, storing around 2,000 tonnes CO_2e per year

Procurement

An analysis of NRW's **supply chain emissions** (based on spend data) indicated that forestry harvesting and haulage activities by contractors are a significant source of emissions. We have since carried out a case study to refine forestry operations emissions estimates, and provide the evidence base we need to work with forestry colleagues to identify opportunities to reduce emissions.

We are **trialling a carbon planning tool** to address carbon in our civil engineering contracts. Other organisations and their contractors have achieved over 40% carbon emissions reductions in the construction of major flood defence schemes using the tool. Key staff in NRW's procurement and projects delivery teams have now been trained in its use.

Coming up

- installation of further LED lights and solar PV panels
- expanding use of solar PV on our flood risk assets and river level monitoring stations
- investigating further opportunities for renewable energy generation on NRW land and assets
- delivering behaviour change campaigns to reduce energy use in our buildings and promote sustainable travel for work
- provision of secure bike lockers at offices to promote cycling to work
- developing an online sustainable transport hub for staff

Next steps

Planning future implementation – the Carbon Positive Project is evaluating the costs, carbon savings and wider benefits of measures that reduce carbon emissions, increase sequestration or protect carbon stocks. These results will be used to produce a costed and prioritised programme of delivery for NRW.

Sharing our approach – we will be sharing our experience and learning from the project through a range of publications and events in late 2017. This will aim to encourage acceleration of decarbonisation across the Welsh public sector.

Contact us

If you'd like to know more about the Carbon Positive Project, please contact us at the project mailbox: carbonpositiveproject@naturalresourceswales.gov.uk or visit us at www.naturalresources.wales/carbonpositive