Sustainability and carbon reduction success stories in York

Transport

First bus are leading the way in zero-emission buses. First Bus has committed to achieve a zero-emission bus fleet nationally by 2035 and by then they estimate services will emit just 3% of their current carbon dioxide emissions. The progress towards this goal means that over a quarter of their fleet (27%) is now either zero or low-emission.

In York, they were early adopters of electric buses when they began using vehicles on the York Park & Ride in 2014, which is operated in a joint partnership with City of York Council. This is now the largest zero-emission Park & Ride bus fleet in the country and was completed in May 2021 with a total investment of £9.3m. This saves 1,600 tonnes of carbon every year.

The depot on James Street in the city was among the first in First Bus to be adapted with charging infrastructure for electric buses and they continue to investigate how the site can be further enhanced to meet the requirements for power supply as more vehicles come into the fleet.

First Bus support to City of York Council in securing more government funding in 2022 for all-electric buses will see a further 44 vehicles introduced into the city, with First York providing investment of £10m. This combines with successful funding bids elsewhere in the UK with other local authorities which will lead to the continued transformation of the First Bus fleet with a further 200 electric buses and electrification of depots around the country.

They have also installed clean technology to some 1,500 older diesel buses, including those in York, to upgrade to Euro VI standard, the best possible, which reduces NOx emissions by up to 95% compared to older generation engines.

Modernisation of depots to manage zero-emission buses will see many develop into hubs of sustainability as they look at other ways to reduce carbon. For instance, Caledonia in Glasgow is the UK's largest EV charging hub, capable of charging 300 buses. At Hunslet Park in Leeds they use battery technology to store unused power from bus charging and supply this to the local Grid.

York is undertaking a large scale project with the construction of two high quality, high speed electric vehicle HyperHubs in the York will help the City support the next generation of EV chargers. Each HyperHub site will consist of solar PV canopies which will generate green electricity (100kWp), battery energy storage (348kW/507kWh), 4 Rapid and 4 Ultra Rapid EV chargers.

York has been trialling E-Scooters and E-Bikes for residents to move around the city in a more sustainable way. Based on the success of the trial, the Council has extended a 12-month trial to offer residents, commuters and visitors.

As part of the Active Travel Fund, the City of York Council is encouraging more walking and cycling as a long-term method for commuting as we emerge from the pandemic, and to address the current capacity constraints on public transport. To support residents, the Council has proposed to improve the cycle and pedestrian route between York Station to the north side of the river.

The University of York is actively encouraging its students and staff to use more sustainable travel modes. The University is promoting sustainable transport by offering over 5,500 cycle spaces which include accessible bays, installing electric vehicle charging points and providing free bus trips between campuses.

Twelve new refuse trucks have been bought by the council, two of which are fully EV, while the other ten meet Euro 6 Lower Emission Standards. The trucks are expected to reduction pollution output by roughly 16%.

In 2020, to support the decarbonisation of transport York launched a Clean Air Zone across the city which regulated buses. Funding from DEFRA and the Department for Transport was used to upgrade or replace existing buses using fossil fuels. All buses regularly using the city centre are now electric or use Euro 6 diesel.

Waste

Allerton Waste and Recovery Park provides a solution for treating waste from York and North Yorkshire councils, and turns it into a resource through mechanical treatment, anaerobic digestion and from the steam produced from burning waste. The plant is expected to save 30,000t/year from harmful emissions and produce enough energy to power 4,000 homes.

The University of York is making significant changes to help reduce its waste footprint. The University has a 53% recycling rate and provides 25 coffee cup recycling bins to reduce single-use waste. 2 tonnes of plastic from the University's laboratories have also been diverted from landfill to recycling by switching to recyclable products and decontaminating in-house after being used.

The University also promotes reuse schemes, with a furniture and materials reuse scheme, Warp It, saving over 43 tonnes of carbon and £10,000. Other schemes includes Yorcup with over 7,000 participants, which provides reusable coffee cups that can either be kept and refilled, or returned to be cleaned and reused.

The housing development at Lowfield Green is working with the Bio-based and Circular Construction Yorkshire (BaCCY) project. The project brings together companies, community groups, education providers and local government to create circular, local value chains in Yorkshire, enabling wider use of UK made zero-carbon, healthy, bio-based construction products.

Natural Environment

Understanding the importance of protecting the natural environment, City of York council is creating an extensive community woodland on 194-acres of land to the West of York with the ambition to plant 50,000 trees by 2023. The project will allow carbon capture, increase biodiversity, wildlife habitats and protect endangered species, enhance York's active travel network and create opportunities for green jobs, green skill development and volunteering opportunities.

The Treemendous York initiative has set out an ambitious target to plant 50,000 trees. Over 40,000 trees and 2,500m of hedgerow trees have been plated to date which have played a key role in offsetting York's carbon emissions.

City of York council is responsible for approximately 30,000 public trees across the city, some of which are in conservation areas or tree preservation order areas. The continued maintenance and protection of these trees will be important residents and the local environment.

The University of York's campus grounds have been awarded the Green Flag Award. The University promote their natural environment through numerous interactive trails, including a nature walk, tree trail and Yoractive trail. Biodiversity is also supported across the grounds, including wildflower meadows, which provide a "Living Lab" for biodiversity studies teaching.

Energy

The City of York Council is taking steps to reduce its own carbon footprint by switching to purchasing 100% renewable electricity in 2020, which will save 2,900tCO_2 a year.

The Hazel Court Eco Depot office development in York is water and energy efficient as it incorporates renewable energy and rain water harvesting. Since March 2018, the office has generated 379,459kWh of renewable energy. It's also made with a timber frame and the walls are made from straw bales.

Buildings

Derwenthorpe is a sustainable community of 481 homes developed by Joseph Rowntree Housing Trust. Homes are designed to low energy standards and connected to a biomass & gas district heating system. Some homes also feature domestic battery storage and solar PV. Wider environmental issues are addressed using a Sustainable Urban Drainage scheme (SUDs), whilst sustainable transport solutions including car clubs, cycle paths and a bus service reduce the reliance on the use of private cars.

The City of York are planning to build Britain's biggest Zero-Carbon Housing Project, which will consist of 600 new homes built to the highest environmental standards and following Passivhaus principles.

Organisations

York Community Energy has partnered with Solar for Schools, a social enterprise, to provide solar panels and an educational programme about electricity and renewable energy for the city's schools and students.

Planet Food York opened in January 2019 with a Mission to make surplus food accessible to all and reduce carbon emissions and a Vision to reduce the environmental and social injustice of food waste by feeding bellies not bins. They intercept and redistribute surplus food in York. In the first 3 years they have intercepted 745.5 tonnes of food which is equivalent to 1.1 million meals and a CO_2 saving of 2200 tonnes.

York Gin are powered by 100% renewable energy from Green Energy and have been from the very start. Their still has been powered by electricity rather the more common gas because it uses less energy. Out of four company cars, three are electric and one is hybrid (the hybrid is for longer journeys when recharging may prove problematic.) Many items are reused including pallets, railway sleepers and other used wood by local upcyclers PurePallets who have made fittings for the shop as well as keyrings, gin racks, fridge magnets and other products from re-used wood. They encourage

customers to donate their old bottles for other customers to reuse as lights, containers, candle holders, etc. All bottles and gift sets are 100% plastic free. York Gin use local suppliers where possible including bottles, packaging and labels produced in Yorkshire. Their neutral grain spirit is made in Yorkshire from grain grown on Yorkshire farms. The only parts of the process that are from further afield are the botanicals that flavour the gin - but these are still sourced from an ethical supplier.