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Annex B

# York Climate Change Strategy



## York's Current Emissions Profile

In 2018, York's emissions totalled **936 ktCO<sub>2</sub>e**. The majority resulted from buildings & facilities (61.9%) and transport (27.9%).

This emissions profile covers emissions generated within the city and follows the same reporting boundaries set out by UK Government.

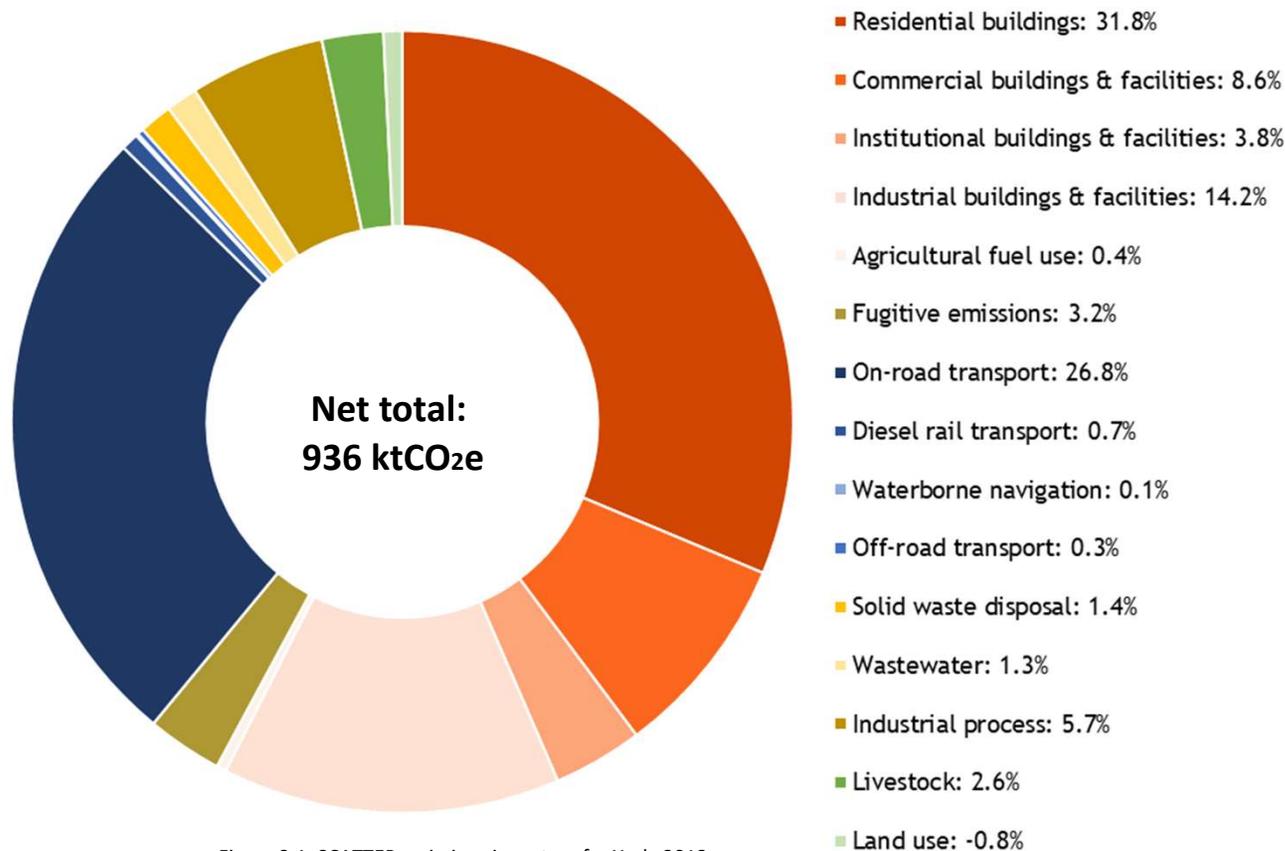
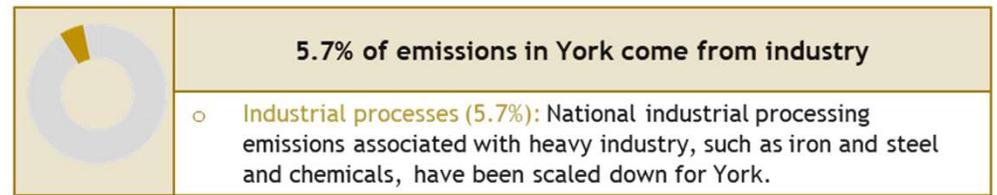
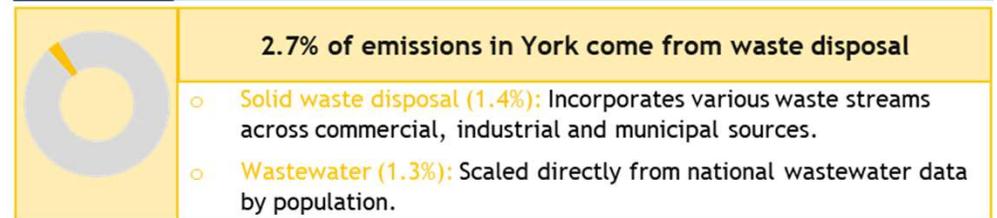
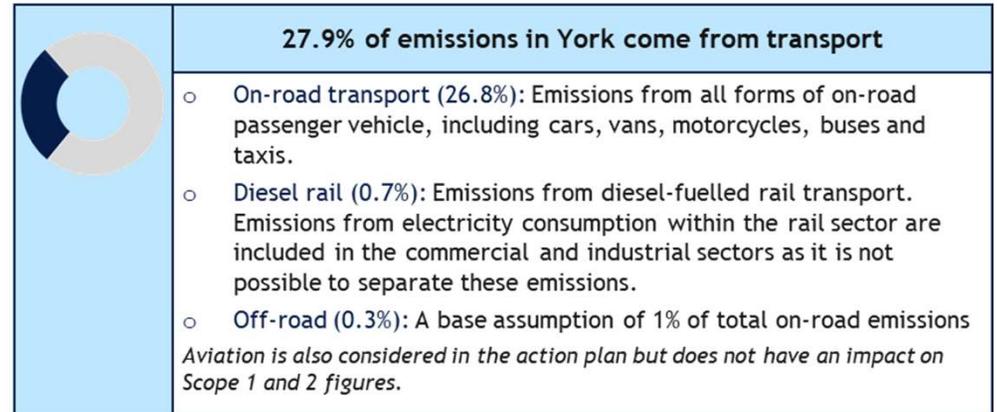
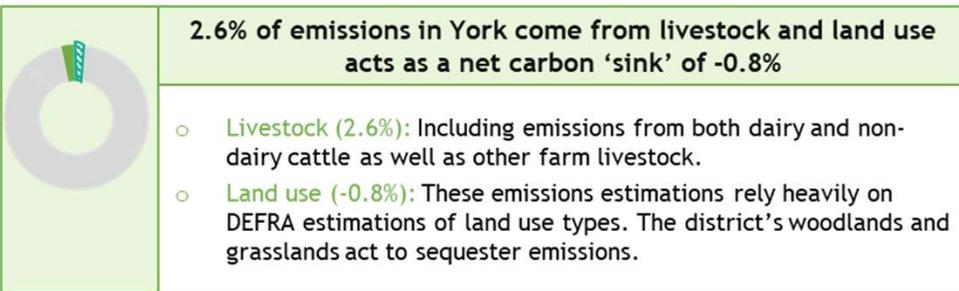
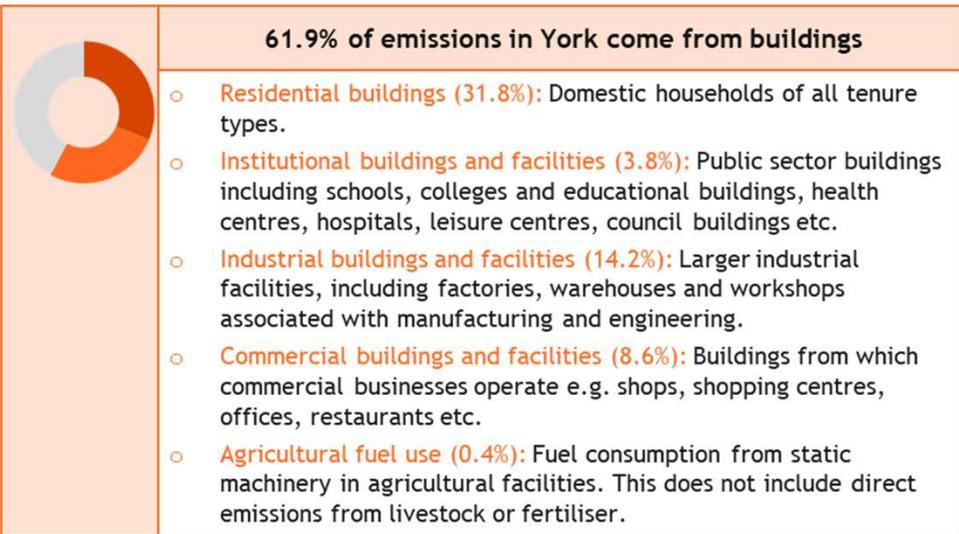


Figure 2.1: SCATTER emissions inventory for York, 2018.

# York's Emissions Subsectors

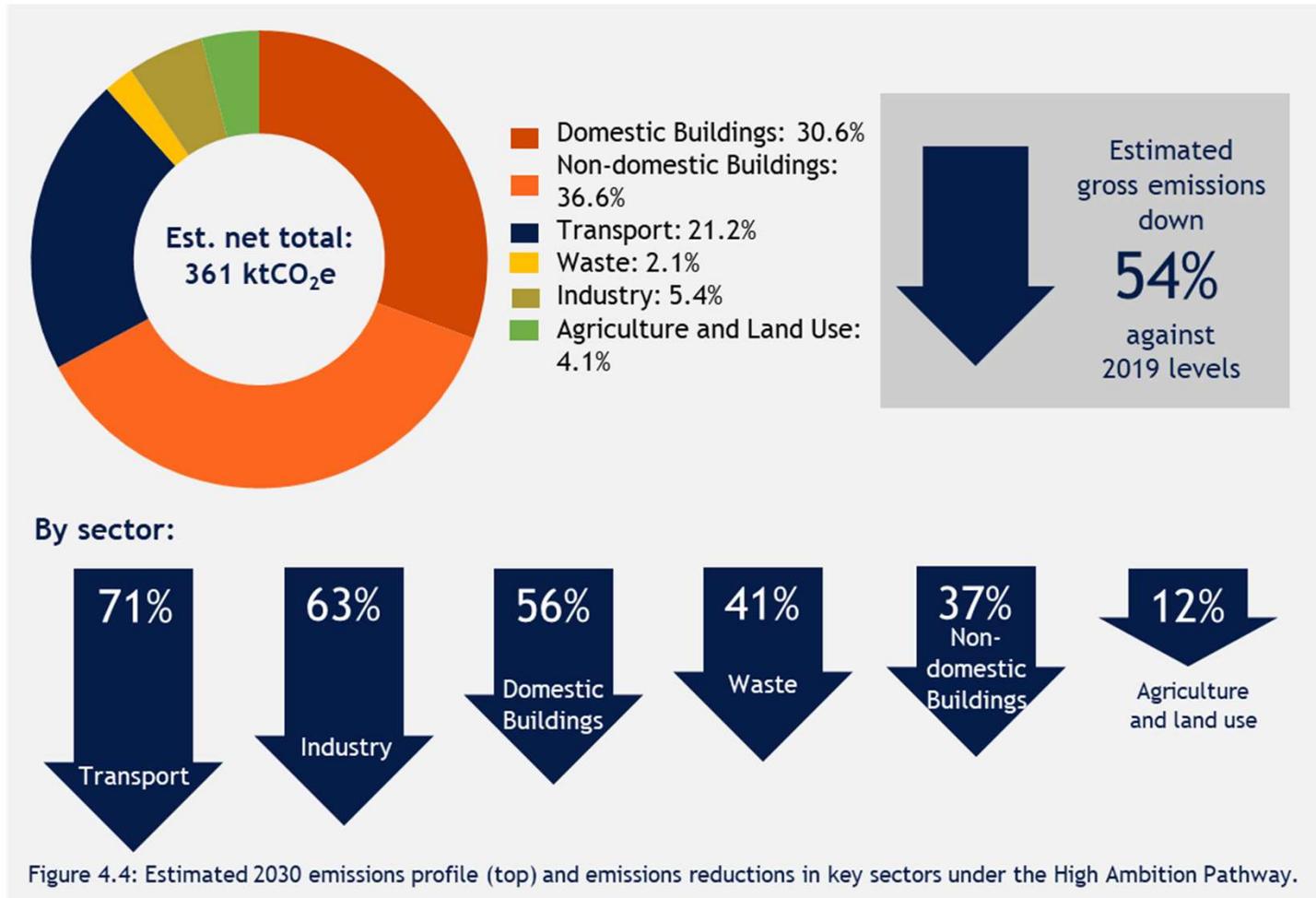


\*Due to rounding, emissions sectors may not add up to exactly 100%.

# Sectoral Emissions Reduction

By 2030, the emissions profile for York will look very different from today.

Emissions from buildings continue to dominate the 2030 profile, whilst reductions in fossil fuel consumption in our transport and energy systems show significant decreases in the sector's emissions.



## Cumulative Carbon Savings 2018 - 2030

Over the next 10 years, over 1.7 million tonnes of carbon dioxide could be avoided across York.

The largest savings potential is found within the buildings and transportation sectors.

Actions associated with on-road transportation and building energy efficiency offer the biggest potential carbon savings





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# Core Principles



# Core Principles

Inclusive,  
healthy &  
sustainable  
communities

Creating new  
employment  
and  
investment  
opportunities

Adapting to  
change

Increasing  
collaboration  
and  
cooperation

Good  
Governance

1. We will **increase collaboration and cooperation** by working in partnership; encouraging changes in the way we live, behave and do business by listening to the views of our residents, businesses and visitors.
2. We will **adapt to change**; taking bold action to reduce emissions and making sure our city is resilient to the impacts of climate change. We will work at pace to meet the scale of the challenge ahead and be pragmatic in our approach, focusing on reducing emissions within our immediate control and prioritising actions that deliver best value.
3. We will **build inclusive, healthy and sustainable communities** by promoting the positive social, environmental and economic benefits of climate action and by supporting individuals who need it the most. In addressing climate change, we will improve the wellbeing of our residents and aim to mitigate the impact of climate change on those who are most vulnerable to the change; recognising climate justice for all.
4. We will **create new employment and investment opportunities**, strengthening the economy through our work with local suppliers to building local “green” skills. We will proactively seek alternative funding streams and attract new investment.
5. **Good governance** will guide our actions. Through assigned responsibilities, we will all take accountability for delivering actions. We will provide accurate information, sharing plans and data to take more informed decisions. We will regularly review and publish emissions data to track whether we are meeting our target and updating our action plan in response.

# Stakeholder Perspectives



# Buildings

## Stakeholder Perspective

### Challenge areas



#### Technical

- Technologies that have reached maturity are now trusted and widely accepted (e.g., PVs), newer technologies still treated with scepticism and suffer from high cost. Heat pumps need financial subsidy to stimulate market until economies of scale drive down price.
- Complicated systems that underperform can generate negative reactions. Only appropriate solutions should be specified with local demonstrators/pilots to showcase new technology.



#### Policy

- Approach to decarbonisation of conservation/heritage assets is insufficient and inconsistent. National policy (NPPF) needs to reflect climate emergency priorities, local policy (The Local Plan) needs to provide standards and guidance for heritage retrofit and planning practice needs a consistent, joined up approach.
- Need to balance decarbonisation with reducing fuel poverty and recognise the role of demand reduction.



#### Financial

- Government subsidies for low carbon heating solutions have not been effective. Gas is too cheap and so a greater financial incentive is needed switch to electricity.
- Financial offers can be complicated, and initial capital outlay may be prohibitive for some organisations/households. Role for specialist independent advice.



#### Community

- Broad awareness of need for change has increased significantly, but there is an evident behavioral gap when it comes to uptake.
- Inconvenience, lack of simple independent information, complicated list of suppliers and pricing all add hassle factors to retrofit. There is a need for an independent and trusted brokerage service and local pilot/demonstrators.



#### Delivery

- Limited availability of specialist consultants (particularly for heritage buildings). Highly skilled project co-ordinators/managers also needed in construction sector. Potential for area-based skill sharing schemes for Clerk of Works/Building Inspectors.
- Need to provide suitable training, skills and market development but high level of inertia in trainers/education. National curriculum change will be slow so need to promote local apprenticeships and integrate into purchasing policy of local organisations.

# Transport Stakeholder Perspective

## Challenge areas



### Technical

- There are many concerns regarding the lack of infrastructure surrounding the support of the transitions to EVs from a technical perspective; such as the lack of charging infrastructure and a gap in the data to help estimate the required change need to meet the growing demand.
- Central hub is needed to connect more than one mode of transport e.g., one app connecting all journeys with different modes and influence decision making with costs per mode and carbon cost.



### Policy

- Long term security of policy is impossible due to change in political parties' agendas.
- Clarification on policy on EV charging demand.
- Historic nature of the city - how to accommodate infrastructure that is compliant with guidance.
- Members of the Council may not live in the inner-city areas - who they represent may limit York's activities.



### Financial

- Funding schemes are short term - no finance in the medium/long term e.g., in 7-8 years.
- Limited finance to pay for new bus networks/improvements.
- Need funding to encourage residents to switch and enact that behaviour change and ensure offers are affordable.
- How to make roads safer to increase cyclist confidence, speed reduction, large vehicle restriction - limited space.
- 73% of survey respondents listed that an efficient and affordable public transport system should be a key objective of York's Climate Change Strategy.



### Community

- Lack of education on cost of an EV - Council should encourage people to think about switching to EV through more educational opportunities.
- Encourage co-creation - discuss solutions with members of the community.
- Engagement with community when encouraging shorter distances.
- Ethical considerations are important - fair and just transition to consider all communities.
- Direct engagement with communities to challenge conceptions and drive change.



### Delivery

- Facilitating behavior change by introducing earlier bus schedule.
- Number of residents put pressure on transport and infrastructure - puts more pressure on the NHS.
- Council to develop cycling routes through the city centre which connect to outer areas.
- People don't want to leave the safety of their vehicles, especially with the pandemic and weather is changeable.

# Waste Stakeholder Perspective

## Challenge areas



### Technical

- Need to consider whether there is potential for a waste recovery plant and if it is a long-term solution, as waste is diverted from landfill and is instead generating energy. Potential to utilise existing technology but with additional infrastructure or technology should be explored - e.g. the conversion of the anaerobic digestion site.
- Ongoing technical projects to find single use plastic alternatives through University of York.
- Mycelium packaging assessing technical viability.



### Policy

- Having consistency between households and businesses, as businesses are mandated to do recycling and sort more waste as a result.
- There's a need to be consistent in policy in infrastructure for waste, packaging and producer responsibility alongside any ongoing cost and management of waste.
- Potential policy change could include food waste.



### Financial

- Uptake of Re-biz programme is not as high in certain areas due to a lack of audits and grants.
- 55% of respondents to the Our Big Conversation Residents survey listed cost as a key reason preventing them from reducing their carbon footprint in areas including waste.



### Community

- Need to increase community awareness and business incentives to discourage single use plastic.
- Need for community champions who provide encouragement and education for the smallest businesses.



### Delivery

- The biggest issue with microplastics is their depository in natural areas, their life cycle needs to be managed.
- Time and effort into recycling different plastics and determine what can and can't be recycled.
- Greater emphasis on larger businesses, need to consider whether different language and a different approach is needed.

# Commercial & Industrial Stakeholder Perspective

## Challenge areas



### Technical

- Although technology already exists to capture carbon emissions, such as carbon capture storage (CCS), it is not readily available.
- Consistent demand for energy in industry provides an opportunity for a Power Purchase Agreement.
- Consistent demand for energy in industry may limit the ability to rely on renewable energy without sufficient energy storage.



### Policy

- There is an existing Clean Growth Strategy for the UK, which should be referenced and considered.
- Most policy focused on industry is at larger geographical scales than a local authority, so the influence of CYC may be limited.



### Financial

- COVID Recovery Loan Scheme from government is set to help industries hit particularly hard by the pandemic and provides an opportunity for building back better and driving low-carbon growth and low-carbon infrastructure.
- Development of low-carbon infrastructure can have high associated costs.
- Businesses may not have significant available funds due to COVID-19, and therefore would need financial support to implement changes.
- Funding needs to be made available to businesses of all sizes.
- CCS has high associate costs.



### Community

- Jobs may be created in CCS trials and low-carbon infrastructure.
- May face resistance from industry without support.
- There may be a skills shortage in the local workforce to install low-carbon infrastructure.



### Delivery

- External reporting mechanisms provide guidance and structure to reporting.
- External reporting mechanisms have high credibility and reflect well on the business.
- Knowledge of low-carbon infrastructure and energy efficiency measures to be included in new builds may be limited.
- Heritage and historical importance of York's landscape may limit infrastructure improvements.

# Natural Environment Stakeholder Perspective

## Challenge areas



### Technical

- Tree planting can be used to mitigate the risk of flooding which doesn't have to be within York's boundary and can be tied into local York initiatives.
- Trees offer a nature-based solution to the warming of urban areas by providing shade.



### Policy

- Under the UK's exit from the European Union, policy can move away from the Common Agricultural Policy and provide a change in funding requirements for landowners. The requirements could focus on the public good and there could be more funding options for decarbonisation/afforestation.
- The temporal period is a barrier to tree planting and tree cover reducing carbon emissions. Policy should consider that more mature trees have more significant impact but may not tie into the 2030 timeline.



### Financial

- There are existing funding streams available for urban planting.
- There is an associated cost to the maintenance of trees and green space which needs to be demonstrated.
- The return on investment in the form of carbon sequestration will be more in the long-term.



### Community

- Need to address the public view of the value of trees and how they benefit the city.
- Community engagement is very important and should be viewed as a positive upfront investment.
- Involving the community with green infrastructure initiatives engages people with nature.
- There may be disagreement and resistance to local changes, also known as "Not In My Back Yard"-ism (NIMBYSM), over the location of new trees.



### Delivery

- There are opportunities for rewilding and tree planting in the outer areas of York.
- Tree planting in urban areas can also look at levels of deprivation when deciding on locations to improve local areas.
- Land use availability - land under local authority ownership covers a small percentage of the district, which means that the impact tree planting can be dependent on the engagement and willingness of local landowners.

# Energy Supply

## Stakeholder Perspective

### Challenge areas



#### Technical

- Assessments from the Council should look at all renewable energy options e.g., a heat pump strategy, wind strategy.
- The use of technology should be maximised, e.g., apps that show the amount of money and carbon saved from renewable energy.
- Technology should also be used to amplify good practice e.g., apps to share case studies and tips.



#### Policy

- There is a gap in policy for new-build properties between the Local Plan and the requirements of Passivhaus. There is a need to balance Passivhaus and offering retrofitting such as loft insulation across the city, existing stock should also be focused on.
- Historic and heritage-based policy may conflict with renewable energy installation.



#### Financial

- Energy Service Companies (ESCOs) can benefit SMEs through free or cheap audits, the development of a plan and help accessing finance to invest in upgrades. The payment then comes out of saving made from energy bills. This method is working well in Oxford but does require some initial capital investment. The ability of ESCOs to benefit small businesses may be limited.
- Funding opportunities are predominantly for larger businesses and need to be made available to small businesses.
- Need to provide a financial incentive for people/businesses.



#### Community

- Need to ensure all groups are accounted for and get a say in any transition/conversation.
- Negative view of putting in a planning application for wind turbines to the council due to negative past experiences.
- Opportunity for tying the COVID-19 recovery to initiatives.
- Role of the creative sector to reshape the heritage view of the city to now include renewable options e.g., wind turbines.



#### Delivery

- Solar tiles may be more beneficial than solar panels.
- Implement smart grid technologies e.g., demand-side response to manage renewable energy supply/demand.
- Allocate small portion of new renewables to be community-owned.
- Carbon literacy may help with the missing conversation to promote renewable energy.



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# Case Studies



# University of York

With over 20,000 students, The University of York plays an important part in our city's community. The Russell Group University has over 30 academic departments dedicated to encouraging their students to think critically and change the world through social, economic and environmental knowledge, skills and innovation.

As the institute strives to be a university for public good, 2021 saw the publication of The University of York Sustainability Plan 2021 – 2030. The plan sets out how the university intends to tackle the current and future challenges faced by the local, national, and international community as they play a part in creating a more sustainable world.

The plan embeds sustainability into the university's core functions of teaching and research, whilst also setting ambitious goals for carbon neutrality, building partnerships, reducing consumption and for improving health and wellbeing.

In line with the city-wide target, The University of York has set out a commitment for achieving carbon neutrality by 2030. Guided by the UN Sustainable Development Goals, the university aims to achieve their ambitious goal through ensuring their direct emissions and the management of their campus are environmentally sustainable, whilst simultaneously embedding the principles of sustainability within their teaching.

The University of York is already delivering on a variety of carbon reduction projects. It has secured more than 5,500 cycle spaces across campus, making it a UK Gold Cycle Friendly Employer, they've also installed electric vehicle charging points and provide a free bus service between the East and West campuses

The University has been awarded the Green Flag Award for their open campus grounds, which include a variety of interactive nature trails and a YorActive trail with exercise equipment on route. This excellent green space not only supports the wellbeing of the students but has also become home to rare orchids, otters and wildflower meadows.

An awareness initiative has been set-up by staff and students that awards credits for sustainable behaviours, which can be used on rewards at the end of the year. The Green Impact Sustainability scheme has saved an estimated £92,000 and 289 tCO<sub>2</sub> in 2020/21.

# E-Mobility Trial

York is one of four English cities chosen by the Department of Transport to trial e-scooters. The City of York Council partnered with TIER to launch its first fleet of 50 e-scooters in October 2021. In just over a year, the fleet has grown to over 550 e-scooters, alongside the introduction of 80 e-bikes.

Since the start of the trial, 26,000 riders have completed more than 130,000 journeys, covering around 550,000km. These trips have replaced 16,000 car journeys in the city, amounting to a saving of 6 tonnes of carbon dioxide.

Alongside increasing the number of e-scooters available to people in the city, TIER have also expanded to new routes in recent months, with access to popular tourist destinations, university campuses and York hospital. There are over 90 parking bays around the city to ensure orderly parking.

The success of the scheme has seen the trial extended for a further 8 months with plans to expand to other areas of the city. Its popularity demonstrates the huge potential for micro-mobility in York.

Jessica Hall, Regional Manager North of England

*“Transport in York accounts for over 27% of city-wide carbon emissions and TIER are committed to reducing emissions and improving air quality across the city. This is why it’s essential we help provide as many different, convenient forms of transport to enable residents, commuters and visitors to get around York sustainably.*

*TIER e-scooters and e-bikes have been hugely popular in York since the scheme launched a year ago and are still being embraced by locals and visitors as a greener, more convenient transport option. Our e-scooters and e-bikes have also brought other benefits to York, such as reducing air pollution and easing congestion.”*

# York Gin

York Gin is an independent company making and selling award winning gin based in York. The first bottles of York Gin appeared on 1 March 2018 after a couple of years of preparation and gin has since won national and international awards. The company operates a distillery and two shops in York and is owned and run by locals.

Quality, sustainability, localism and York are at the heart of the company. They operate ethically and do the utmost to be responsible and sustainable.

## **Energy**

From the beginning, York Gin has been powered by 100% renewable energy from Green Energy. The distillery is powered by electricity, rather than more commonly used gas because it uses less energy and as a lower carbon impact. Out of four company cars, three are electric and one is hybrid (the hybrid is for longer journeys when recharging may prove problematic.)

## **Waste**

All bottles and gift sets are designed to be 100% plastic free and customers are encouraged to donate their old bottles for other customers to reuse as lights, containers or candle holders. Working with local upcycler PurePallets, they have turned old pallets, railway sleepers and other used wood into fittings and signage for the shops as well as keyrings, gin racks, fridge magnets and other products.

## **Local First**

A local first approach ensures that the spirit is made in Yorkshire from grain grown on Yorkshire farms. All York Gin bottles are made in Leeds, by Allied Glass, using 40% less glass than their original method and the miniatures are made from a significant proportion of recycled glass. Allied Glass is itself a sustainable company doing a great deal to reduce its carbon footprint. Packaging and labels are also made in Yorkshire. A local supply chain reduces emissions from travel and supports jobs in the area.

# Real Junk Food Project

The Real Junk Food Project was founded in 2015 by Adam Smith. The project, originally in Leeds, was established 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. Since 2015 people all over the world have followed these values and intercepted food to redistribute in hubs and cafes (often on a Pay-As-You-Feel basis to make sure that anyone who needs it can access the food) to stop food going to waste.

Following this initial mission and vision, Planet Food York opened in January 2019 to 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, saving 2,200 tonnes of CO<sub>2</sub>.

Food is collected from supermarkets, restaurants, hotels and independent shops in partnership with Fareshare Yorkshire. Donated items are used in their Pay-As-You-Feel café and stored in Southlands Methodist Church, Southbank. Planet Food have a zero food waste policy, so any food that doesn't get eaten is composted locally.

It is estimated that up to 30% of food is wasted globally, meaning that food waste is responsible for between 8 and 10% of CO<sub>2</sub> emissions. In the UK, around 9.5 million tonnes of food is wasted from households and businesses each year, of which 70% is avoidable. Planet Food York are helping to combat this waste through redistributing food into the community. They are not only reducing emissions but also tackling food poverty, social stigma and providing local employment and training through the work of 2 managers and 24 regular volunteers.

# York Community Woodland

York Community Woodland is an extensive, new community woodland where over 200,000 new trees and shrubs will enable carbon capture, increase open green space, improve health and wellbeing, increase biodiversity, and create enhanced active travel networks, new green jobs, skills and volunteering opportunities.

This represents City of York Council's first venture into creating large-scale community woodland and seeks to be an exemplar for other landowners and local authorities to replicate.

Climate change is a serious concern among residents and the project provides an outlet for a passionate, inspired community keen to join us in this special opportunity. We work with over 500 members of the public, and an Advisory Group of businesses, landowners, members and experts like; White Rose Forest, Forestry Commission, Woodmeadow Trust and Woodland Trust.

York Community Woodland is a woodland for the city and its people. The name itself was decided by a public vote and embodies a collective ownership behind its creation.

The woodland masterplan was created through a community co-design process with over 800 residents contributing to the final design. The woodland will feature nature ponds, wild-flower meadows, extensive broad-leaf woodland, areas for quiet contemplation, an extensive trail network for walking, wheeling and horse riding, and a forestry school.

Jim Lee, Head of Woodland Creation, Forestry England has said;

“We are delighted to have been selected as the preferred delivery partner for York Community Woodland... working closely with City of York Council and the local community as the project moves through the next stages.

“The partnership... is particularly special to us.”

# EV Hyper Hubs

Two new Hyper-Hubs have been created at Monks Cross Park & Ride and Poppleton Bar Park & Ride. The sites provide high quality, high speed electric vehicle charging provision within the city. The project is joint funded with £1m from the European Regional Development Fund (ERDF), £800,000 from Office for Low Emissions Vehicles (OLEV) and a contribution of £400,000 from City of York Council.

The Hyper-Hubs are fitted out with 'Ultra Rapid' and 'Rapid' chargers that will significantly improve the speed of charging in line with latest technologies, and help the region to support the next generation of EVs (which have significantly larger battery capacities and support higher charging speeds).

Each Hyper-Hub has 4 Rapid chargers and 4 Ultra Rapid chargers under a canopy to keep users dry, with 24 hours a day 7 days a week access. Solar canopies and battery storage support the energy grid during peak hours. Each site includes 100 kWp solar PV arrays and 348 kW/507 kWh energy storage.

Each site is estimated to reduce carbon emissions in the city by 83tCO<sub>2</sub> a year by displacing fossil fuels used by combustion engine vehicles. Rapid and Ultra Rapid chargers will cost 25 pence per kWh, making York one of the cheapest places in the UK for Rapid and Ultra Rapid charging.

The Hyper-Hubs are part of a wider push to increase electric vehicle charging capacity across the city. In addition to the EV Hyper-Hubs, the Council are also investing to expand the EV charging infrastructure, as part of their Public EV Charging Strategy, with 350 new Fast charge-points, a minimum of 12 Ultra Rapid chargers and 19 Rapid chargers and replacing the entire existing charging infrastructure.

“York was one of the first cities to introduce a public electric network several years ago which has become really popular. In 2014 there were 1,510 charging sessions, by 2018 that had increased to 13,695. We're a pioneer in the use of innovative green technology. Over recent years, the council has lead the way in providing a range of public charging facilities for electric vehicles to help reduce carbon emissions and improve local air quality thanks to EV's eliminating nitrogen oxide emissions at the point of use.”