

Report of the Assistant Director of Policy and Strategy

## **City of York Council: Annual Carbon Emissions Report 2020/21**

### **1. Summary**

- 1.1 City of York Council (CYC) has set a target to reduce carbon emissions from corporate activity to net zero by 2030. An Annual Carbon Emissions Report will be produced every year to monitor progress against this target and identify areas of improvement.
- 1.2 The data collected covers the council's scope 1 and 2 emissions for 2020/21. The council's corporate emissions account for 3.8% of city-wide greenhouse gas emissions (using city-wide SCATTER data from 2018).
- 1.3 While 2020/21 represents the first year of reporting carbon emissions from our own buildings and operations, in some areas, we have data going back to 2015/16 that can be used for historical comparison.
- 1.4 The Covid-19 pandemic has caused significant changes in the way we work and this is reflected in the emissions data.
- 1.5 Based on the current available data, our fleet and gas consumption account for the majority (98.7%) of our corporate emissions.
- 1.6 Since April 2020, we now purchase 100% renewable electricity, reducing our emissions by approximately 3,800tCO<sub>2</sub>/yr. Electricity consumption, however, still accounts for significant cost and opportunities to reduce demand should still be considered for financial benefits.
- 1.7 The focus of our reporting is Scope 1 and 2 emissions. The reason for this is that scope 1 and 2 emissions are more directly under the control of the council, and because the carbon accounting and management options for these emissions are better developed.

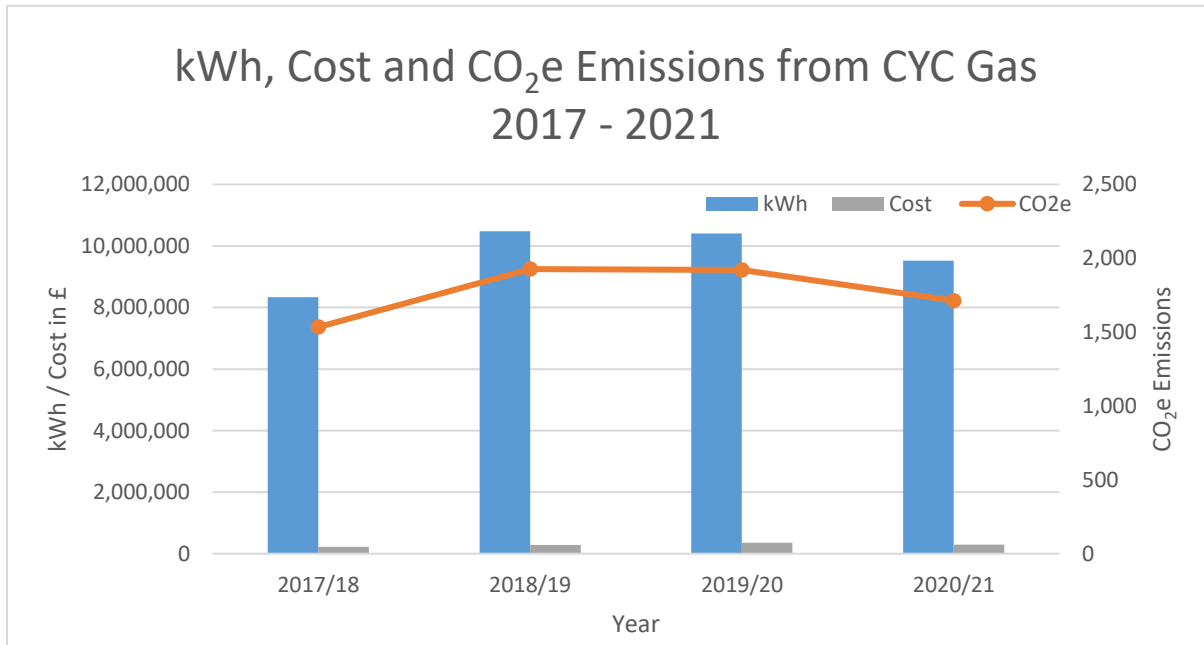
## 2. Annual Emissions 2020/2021

Source	Unit	Total	CO <sub>2</sub> e	Cost (£)
CYC buildings – Electricity	kWh	5,407,807	-	£816,283
Street lighting – Electricity	kWh	6,011,316	-	£894,947
CYC buildings - Gas	kWh	9,518,654	1,713	£289,918
CYC buildings - Water	m <sup>3</sup>	54,559	23	£110,957
Corporate Waste (total)	tonnes	222	5	
Recycling		31	1	
CYC Fleet (total)	ltrs	710,511	1,904	
Gasoil		38,476	103	£699,148
Diesel		672,036	1,801	
Business travel (Total)	miles	NA	12	
Flights		-	-	
Trains		NA	1	
Hotels		NA	2	
Car Club (total)		38,750	10	£166,584
Diesel		749	0	
Unleaded		25,734	8	
Hybrid	12,066	2		
Electric	201	0		
Land use	Trees	230	-22	
<b>Total</b>			<b>3,635</b>	<b>£2,977,837</b>

### 3. Corporate Buildings

#### Gas

- 3.1 Gas use from corporate buildings are responsible for almost half (47%) of total CO<sub>2</sub>e emissions and accounts for annual expenditure of £289,918.

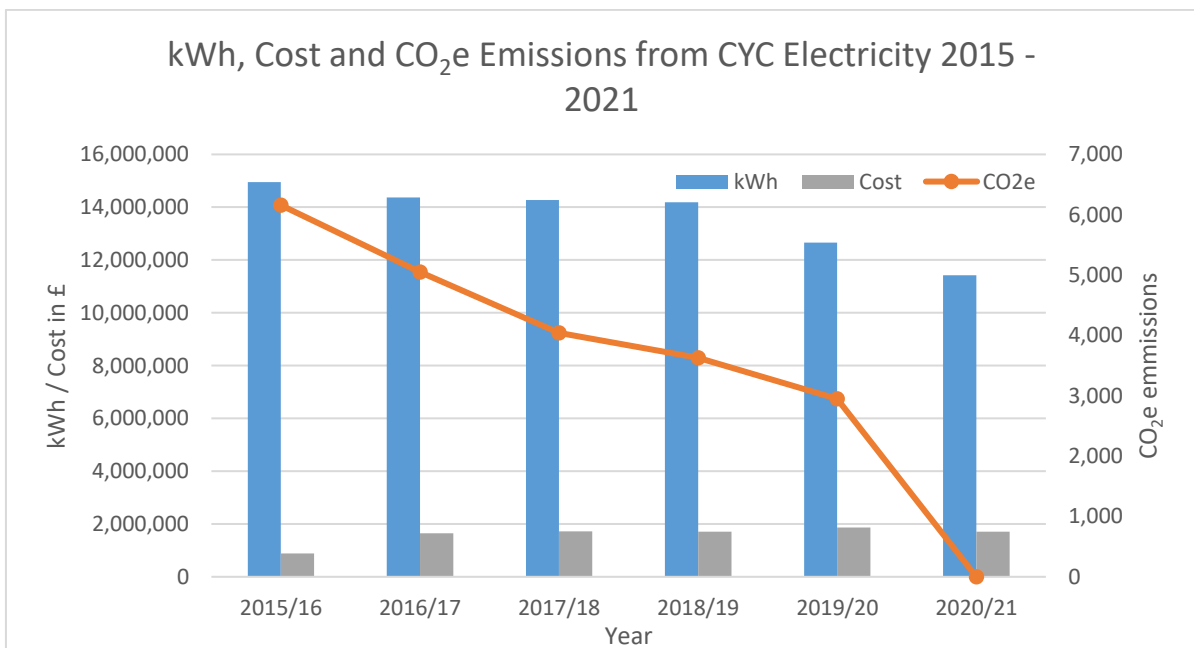


- 3.2 West Offices has consistently been the highest contributor, being responsible for 13% of total gas usage for 2020/21 at a cost of £28,631.87. A biomass boiler system is installed which can be used to generate heat and power for the building; however, this experienced faults in the previous year.
- 3.2 Although most staff were working from home during 2020/21 due to the Covid-19 pandemic, West Office had an increase in gas use (18%) from the previous year. Gas CHP has been used to replace the biomass system when this system had a fault. This has now been repaired and therefore we would expect to see gas usage reduce in the next reporting year.
- 3.3 Most other sites saw a reduction or similar levels of gas use from the previous year. Work carried out by the consultancy WSP (Annex A) has indicated that remote working has a net-positive impact on energy usage and carbon emissions but there is a seasonal variation. In some instances, remote working during the winter can increase emissions if more staff are heating their entire homes during working hours. To overcome this, an internal awareness campaign will encourage hybrid and remote workers to reduce their own emissions through simple behaviour change actions.

- 3.4 Gas usage, emissions and cost can be reduced through building efficiency improvements and transitioning to electrical heating. Asset decarbonisation plans for our highest consuming sites, and a policy of assessing low carbon solutions for all heating replacement schemes, will identify opportunities to reduce emissions.
- 3.5 Public funding is available to support decarbonisation plans and capital works that are installing low carbon solutions in public buildings. We have submitted an application to the Low Carbon Skills Fund to develop a decarbonisation plan for 8 of our corporate sites and 9 of our school sites.

Electricity

- 3.5 Since 2020, electricity purchased by City of York Council is from 100% renewable sources and therefore does not contribute to our annual emissions. However, electricity usage in our buildings costs £816,283.37.
- 3.6 Electricity consumption from buildings has decreased by 2,808,906 kWh (44%) since 2015/16. Some of this reduction is attributed to transferring Museums away from CYC to the Museums Trust, reducing the number of assets CYC is responsible for.



- 3.7 West Offices accounts for our highest share of our building electricity usage (29%). In 2020/21, electricity consumption at West Offices reduced by 26% on the previous year (leading to a cost decrease of 25%) likely due to fewer staff in the building as a result of Covid restrictions.

- 3.8 Efficiency improvements to our buildings will not impact our CO<sub>2</sub>e emissions reporting; however, the potential for cost savings are significant. We will continue to investigate solutions such as LED lighting, voltage optimisation, renewable generation and efficient appliances in our largest consuming sites.
- 3.9 Staff will be encouraged to reduce electricity consumption. It is anticipated that an internal behaviour change campaign could reduce electricity costs by around 10%.

#### **4. Street Lighting**

- 4.1 Street lighting accounted for 53% of total electricity use in 2020/21. The nature of street lighting means this consumption is unmetered and is estimated by our supplier based on the total number of street lamps in use.
- 4.2 Since 2015/16 estimated consumption has decreased by 11%, however costs have increased 46% to £894,946.59. Emissions associated with street lighting reduced to zero in 2018 when we switched our electricity supply to purchase 100% renewable.
- 4.3 Over the last 8 years, CYC has been working on upgrading street lighting to more efficient LED lighting. To date, around 12,000 of 19,000 lamps have been converted to LED which should lead to a reduction in consumption and cost.
- 4.4 We will confirm the information held by our electricity supplier on our unmetered street lighting supply and asset stock and request our unmetered billing is updated accordingly.

#### **5. Water**

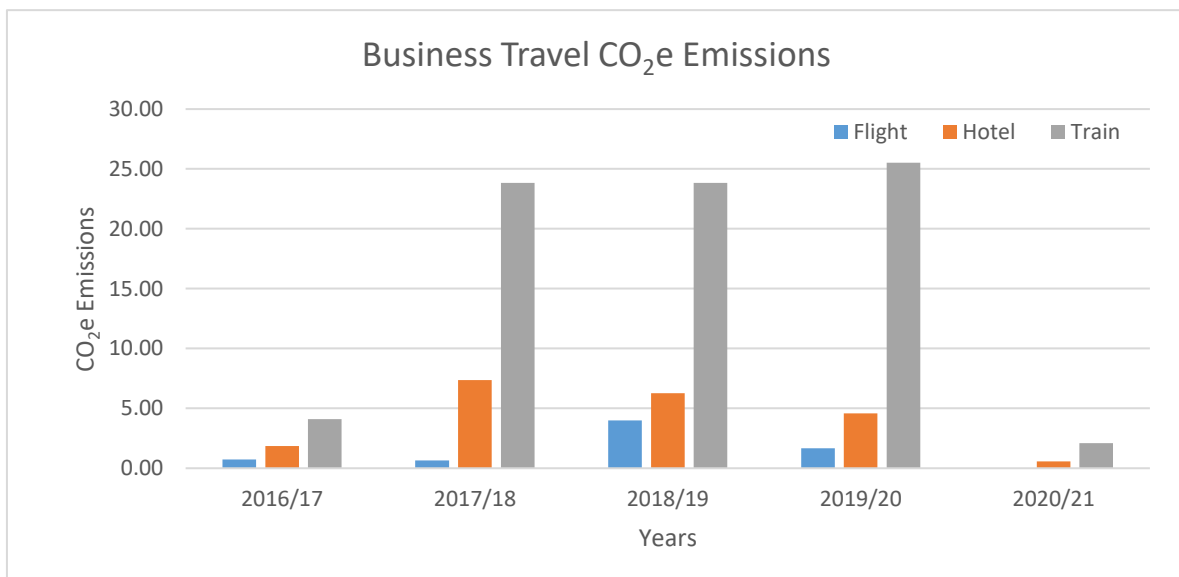
- 5.1 Water consumption at our sites is generally low and accounts for only 0.6% of our total corporate emissions.
- 5.2 Across our corporate sites, Hazel Court, Rowntree Park and West Offices account for almost 30% of water usage.
- 5.3 Options for reducing our water use, including reclaimed grey water (water primarily from rain collection) for watering parks and flushing toilets, rather than fresh water are being explored. We will also continue to encourage reduced water use and education across our sites.

## 6. Fleet

- 6.1 The corporate fleet accounts for over half (52%) of emissions in 2020/2021.
- 6.2 In 2020, CYC developed a 4-year fleet replacement programme. As part of this plan, all combustion engine vehicles up to 3.5t will be replaced by electric vehicles. Once complete, emissions associated with our fleet are expected to reduce by around 800tCO<sub>2e</sub>.
- 6.3 As part of the replacement programme, CYC recently obtained a new fleet for waste collection which included 2 electric vehicles and 10 vehicles with Euro 6 standard engines. Fully electric vehicles cut emissions entirely while Euro 6 standard engines will lower emissions by around 16% a year.
- 6.4 We are also reducing emissions and fuel costs by increasing vehicle efficiency through route planning and driver training.

## 7. Business Travel

- 7.1 Business travel data measures emissions linked to CYC's use of hotels, flights, and trains is also reported. There was significantly less travel around the country and abroad in 2020/21 due to Covid restrictions. Staff have been working and attending meetings remotely with technology making it possible to participate in local, national and international events without the requirement to travel.



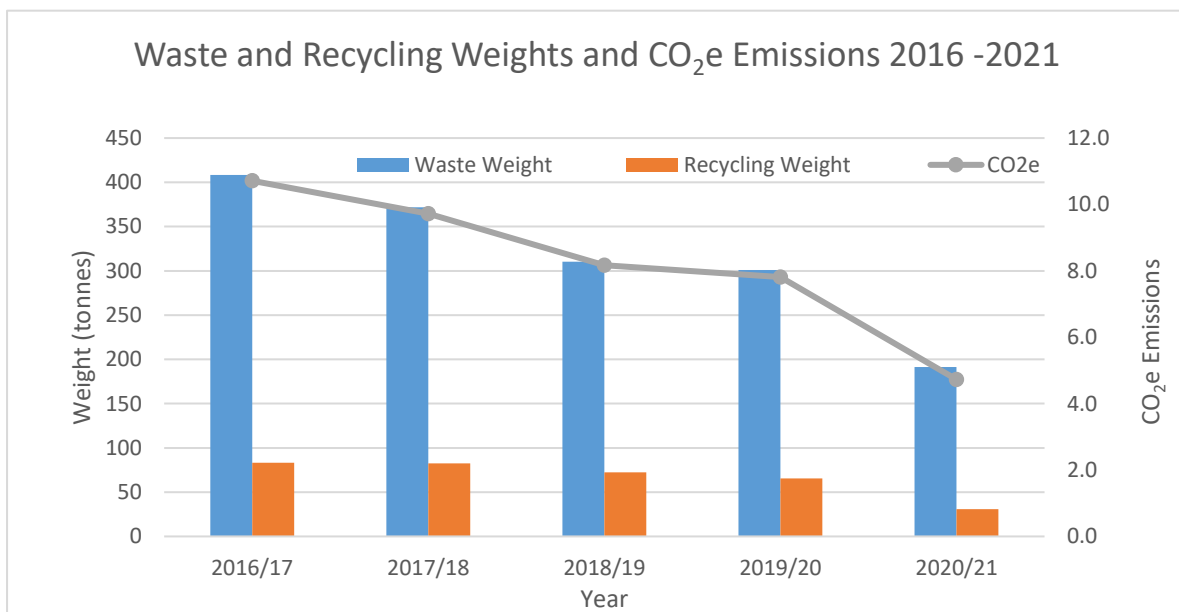
- 7.2 Pre-pandemic, emissions linked to business travel, including flights and hotels has varied year on year, but accounted for an average of 32.6tCO<sub>2</sub>/yr.
- 7.3 It is expected that emissions associated with business travel will increase again next year; however, the remote way of working that has been adopted shows travel is not always necessary. While recognising the benefits of in-person attendance in some situations, we will continue to promote remote event attendance where possible.
- 7.4 While flights are uncommon for business travel, they significantly increase corporate emissions. We will update the Business Travel Policy with more information about carbon reduction, including prioritising sustainable travel, including trains over flights, wherever possible.

## **8. Car Club**

- 8.1 From 2013, CYC began using Enterprise Car Club pool vehicles. The fleet consists of vehicles that run on unleaded petrol, diesel, hybrid electric and full electric.
- 8.2 Between 2016/17 and 2019/20 unleaded petrol cars did the most miles each year out of all vehicles in the car club. The mileage by unleaded cars has decreased each year, coinciding with an increase in miles driven by hybrid cars. Hybrid cars emit lower levels of CO<sub>2</sub>e emissions per mile and is therefore the preferable option over pure fossil fuel powered vehicles.
- 8.3 2020/21 saw a reduction in total miles driven, and also in emissions from all 4 types of vehicles, leading to a 70% decrease in miles and 67% decrease in CO<sub>2</sub>e emissions from car club cars compared to 2019/2020.
- 8.4 Short journeys that were 5 miles or less accounted for over 28,000 miles driven between 2016 and 2021. CYC will continue to encourage shorter journeys that do not require a vehicle to be walked, cycled or commuted via public transport instead, if possible.
- 8.5 To reduce emissions from the fleet, we will look to increase the proportion of hybrid and electric vehicles in the car club fleet, and encourage staff to use electric and hybrid vehicles rather than petrol or diesel.

## 9. Waste/Recycling

- 9.1 Waste from our corporate buildings accounted for 4.7tCO<sub>2</sub>e in 2020/21. Both waste and recycling in CYC buildings are lower than the previous 4 years due to fewer people being in offices.
- 9.2 Pre-pandemic, recycling was consistently low year-on-year with an average of 18% and dropping to its lowest in 5 years at 14% for 2020/21. Both waste and recycling weights have reduced each year between 2016/17 and 2020/21. This overall reduction in waste is positive and disposal has improved (energy is reclaimed from general waste rather than being deposited in landfill).



- 9.3 In the short term, promoting recycling is important but auditing the type of waste that is produced over the long term can help the council reduce waste and emissions associated with waste.

## 10. Procurement

- 10.1 Emissions associated with procured goods and services is not included in this report. However, we are working with the York & North Yorkshire LEP to calculate our Scope 3 emissions.
- 10.2 As part of this work, a template sustainable procurement policy has been produced (Annex B – Section 4.3). This template will be considered in the next review of our procurement policy.



## 11. Actions

11.1 This report provides several actions for reducing our corporate emissions. The Carbon Reduction team will work across the council and with other service areas to:

- Produce a decarbonisation plan for our largest emitting sites to identify improvements in heat generation, building fabric and energy efficiency and renewable generation
- Adopt a policy to consider low carbon heating solutions for all system replacements
- Develop and promote a behaviour change campaign to reduce emissions associated with staff activity
- Promote remote event attendance where possible
- Update the Business Travel Policy with more information about carbon reduction, including prioritising sustainable travel including trains over flights, wherever possible
- Increase the proportion of hybrid and electric vehicles in the car club fleet and encourage staff to use electric and hybrid vehicles
- Review the corporate waste contract and undertake a waste audit
- Incorporate sustainable procurement and circular economy principles into our purchasing decisions
- Work with YNY LEP to develop a methodology to calculate Scope 3 emissions associated with council activity

## 12. Council Plan

12.1 This report satisfies the commitment within The Council Plan to record data on CO<sub>2</sub> emissions from council buildings and operations as part of the “greener and cleaner city” priority outcome.

## 13. Implications

- **Financial** - *The report identifies a number of actions that the carbon reduction team propose to undertake over the coming year. The majority require officer time and can be contained within agreed budgets. There may be occasions where there may need to be a trade-off between cost and emissions. For example the cost of low carbon heating systems tend to be more expensive than traditional systems. It will be important to consider whole life costing to ensure that savings in running costs are included in the evaluation but it is likely that initial capital costs will be higher. This would need to be incorporated into capital budget setting.*
- **Human Resources (HR)** *To be added*
- **Equalities** – *no equalities implications have been identified*

- **Legal** - *no legal implications have been identified*
- **Crime and Disorder** – *no crime and disorder implications have been identified*
- **Information Technology (IT)** - *our server estate is subject the impacts of rationalisation where possible. Our move, like most, to use cloud based services where we can, will reduce our local rates of consumption*
- **Property** - *reduction of carbon emissions will have significant implications for the Council’s property portfolio. Some of them are outlined in this report. Consideration of carbon emission data will be a significant factor when it comes to future rationalisation of property assets.*

*Carbon reduction is already in the process of being considered where items of plant and machinery are coming up for replacement in our operational and commercial properties, particularly in respect of gas fired boilers, where consideration is being given to their replacement with, biomass, electric or heat source pumps where it is practical to do so.*

- **Other**

*Fleet – the agreed fleet replacement programme will make a positive impact on carbon emissions over the next 4 years. Any further emissions reductions to our fleet over 3.5t will be challenging and would require additional resource*

## Contact Details

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**Report Approved**  **Date** 04/10/2021

**Wards Affected:**

**All**

**For further information please contact the author of the report**

## Background papers

None

## **Annexes**

Annex A – WSP Remote Working Carbon Assessment

Annex B – Proposed Sustainable Procurement Policy Template