

**Executive Member for Environment Decision
Session**

9 April 2018

Report of the Director of Economy and Place
Executive Member for the Environment and Deputy Leader, City of
York Council

**Delivering the council's Carbon and Resource Smart Management
objectives 2015–2019**

Summary

1. The report details progress delivering against the council's Carbon and Resource Smart Management objectives (CRSM), with particular reference to carbon reduction, energy use and waste reduction.
2. The CRSM is designed to drive delivery towards a low carbon, resource smart 'One Planet Council' in line with Council Plan commitments to reduce emissions, be resource efficient and 'put sustainability at the heart of everything we do'.

Recommendations

3. The Executive Member is asked to note:
 - I. Progress being made delivering the CRSM and ongoing alignment with the emerging Leeds City Region Energy Plan
 - II. Plans to refresh the carbon baseline in 2019/20

Reason: So that the Executive Member is aware of the progress being made and are able to scrutinise performance in this area.

Headline messages:

4. In 2014/15 the council generated just over 15,000¹ tonnes of carbon dioxide across our corporate estate and street lighting. This baseline

¹ Excluding gas consumption (CYC has been unable to obtain gas consumption for 2014/15 from british Gas due to errors on their side)

will be fully updated again in 2019/20. The council spent over £5 million on energy, water, transport fuel and waste with over 35 per cent of this spend relating to corporate utilities (gas, electricity, water, waste).

5. Forty one of 91 short term projects in the CRSM have been completed. These projects in the areas of corporate utilities, street lighting and school utilities have contributed to a drop in carbon emissions, although quantifying the precise impact is difficult to quantify and some of the sites have since left the council's estate. Four medium and nine long term projects as part of the CRSM are expected to contribute to a further decline in carbon emissions.
6. Since 2010/11, the council's carbon footprint has declined 26% from 25,722 tonnes to 19,003 tonnes in 2016/17. The decline is largely attributed to street lighting refurbishments and changes to building, fleet transport, business travel and waste.
7. CO₂ emissions from buildings utilities have declined 19.3% from 16,663,792 kg CO₂e to 13,443,779 kg CO₂e. This is due to retrofit works such as installation of LED lighting, new energy management systems, improved wall insulation and windows.
8. Electricity consumption has declined significantly. Between 2010/11 and 2016/17 consumption fell 34.3% from 8,755,397 kWh to 5,749,201 kWh. Because of this drop in consumption we are now spending £275,000 a year less than we otherwise would have done.
9. The council will work closely with Leeds City Region to ensure the CRSM is fully aligned to opportunities emerging out of the LCR Energy Review.
10. Total miles travelled by car declined 37.5% from 1,163,857 to 727,513 in 2015/16. Total kilometres travelled by rail declined 7% from 671,957km to 626,663.
11. Corporate waste has declined 20.3%
12. The following details progress within distinct service areas.

Housing

Council homes

13. In 2017/2018 thirty nine properties were installed with glazing, loft insulation and cavity wall insulation and 235 doors were replaced improving the heat insulation in each property.
14. From February 2017 – April 2018 a total of 665 gas boilers were replaced and 29 oil heating systems were replaced with air source heat pumps.
15. In the next year there are projects in place to further improve the energy efficiency of homes. A total of £500k will be spent on various efficiency improvements, including upgrades of commercial boilers across some of our key sheltered housing schemes at Glen Lodge, Barstow House and Lincoln Court.
16. Boiler replacements are currently programmed on a 13 year cycle. Over the next 5 years 600 boilers will be replaced each year at a cost of £6,890,000. The boilers have enhanced performance and maximise energy performance.
17. There are plans to upgrade the energy efficiency of properties with un-insulated tile hung facades with cavity wall and/or loft insulation in the 5 year investment programme at Field View/Haughton Road. This will include re-roofing and insulation, replacement/insulation of hanging tiles and the renewal of overhanging canopies.
18. Between 2019 and 2021 first-generation PVC windows will be replaced at Bell Farm and Chapelfields. In total 382 properties will have their windows upgraded with a total budget of £746,000 in the CRAM bid.
19. There are plans to survey four blocks in Ancress Walk area in order to install cavity and loft insulation where required.

Private sector homes

20. A number of energy efficiency schemes are in place in the private sector to support residents in improving the energy efficiency of their homes. This results in a reduction in carbon, as better insulated homes require less heating.

- 2017/2018 Warm Homes: first time gas central heating systems to private sector fuel poor households with National Grid funding.
- 2016/2018 Local Growth Fund Fuel Poverty Scheme: grants for insulation to private sector fuel poor households and loans for boiler replacement to private sector fuel poor households (Leeds City Region LEP funding).
- Better Homes York: Council-endorsed energy efficiency scheme set up to help homeowners, private tenants and private landlords across the city. The scheme aims to create warmer, healthier homes and to reduce the cost of fuel bills by providing grants to homes with low energy efficiency rating and household incomes less than £35,000 per year.

Buildings & Renewable Energy Generation

21. Overall emissions from buildings utilities have declined 19.3% from 16,663,792 kg CO₂e to 13,443,779 kg CO₂e since 2010/11. This is due to retrofit works such as installation of LED lighting, energy management systems, wall insulation and new windows.

22. Completed projects 2016/17 and 2017/2018 include:

- Piccadilly Car Park – replacement of lighting with LED in a multi storey Car Park including replacing the light fitting, saved 113616kWh
- Community equipment loan store – LED lighting upgrade – flood lighting replaced with LED saving 37443 kWh
- Acomb Primary School – LED lighting upgrade to school – compact fluorescent replaced with LED saving 26514 kWh
- Haxby Hall – Replacement LED lighting scheme – compact fluorescent replaced with LED including new fitting, saving 42065kWh
- Clifton Library – compact fluorescent lighting replaced with LED including a new lighting fitting, saving 10366kWh completed.

23. A full list of projects can be found at Annex A.

24. Planned projects 2018/19 include:

- Huntington school – plans to upgrade various old style lighting with LED lighting

- Various libraries – plans to upgrade current lighting to LED following the success of Clifton Library
- Burnholme Hub – new build/refurbishment, due to be completed in May 2018, includes 100% LED lighting. It is anticipated to generate 13860 kWh per annum
- Former Burnholme School – Sports Centre refurbishment due to commence in Autumn 2018 with improvements to insulation and energy efficiency
- Guildhall – new build/refurbishment due to start Easter 2018 will include new electrics, heating, roof and river source heat pump.

25. Projects currently being explored but not yet commissioned include:

- LED lighting over some of the pools and office buildings at Energise using Salix funding
- LED flood lighting at Hazel Court using £26,795 Salix funding
- LED lighting at Clifton Green Primary School - currently in governors' hands.
- Possible expansion of solar PV at Hazel Court – if £50k is spent on expansion this would generate approximately 28,000kWh in the first year, reducing electricity bills and saving 12,500kg CO₂e.
- York Community Energy (YCE) to fund solar PV at Amy Johnson Way – this does not require any investment from CYC as we lease the roof space to YCE for free or a minimal fee and benefit from cheaper electricity.

Transport

City of York Council Business travel

26. Total miles travelled by car declined by 37.5% from 1,163,857 in 2010/11 to 727,513 in 2015/16. Total kilometres travelled by rail declined by 7% from 671,957km in 2010/11 to 626,663 in 2015/16.

27. There are a few changes at the corporate level which have led to this decline:

- Reduction in fuel allowances given to staff with the intention of encouraging public transport and cycling
- Consolidation of many different offices into West Offices at the start of 2013/14
- Introduction of the council wide pool car service

- Reduction in overall staffing levels

City of York Council Fleet

28. Overall emissions from fleet transport fuel have fallen by 20.5% from 3,164,377kg in 2010/11 to 2,515,276kg in 2016/17.
- Telematic systems are being expanded across all fleet vehicles to help identify uneconomic driving practices and encourage behaviour change.
 - Diesel is being bought in bulk and adblue additive mixed in to reduce nitrogen oxide emissions in order to comply with Euro 6 regulations, 15 new vehicles are due to be added to the fleet in the next 3-9 months and all require adblue.
 - Increase in use of efficient vehicles and decrease in the total number of vehicles used.
 - Parking services are expected to procure at least three electric vans in the coming months.

Transport in Domestic Waste Services

29. Route optimisation has made the domestic waste collection round more efficient and this has resulted in a reduction in the number of recycling collection vehicles which are used to collect recycling in the city.
30. Four old FAME vehicles (caged vehicles) have been replaced with 2 new 'one-pass' recycling vehicles of the latest spec. The new vehicles are bigger than the four they have replaced and are also compacting the recycling.
31. These factors have resulted in a more efficient service utilising vehicles which do not need to be emptied as frequently throughout the working day, so less fuel is consumed making trips to unload.
32. All vehicle/fleet procurement now must include consideration of alternative vehicle/engine types as part of that process, for example electric or dual fuel vehicles.

Highways and Street lighting

33. There are metered and unmetered street lights across the city for which CYC are responsible for paying the electricity bills. This

includes street lights, feeder pillars, pedestrian crossings, variable message signs and traffic lights.

34. Overall electricity consumption and associated emissions have been declining significantly in recent years. Between 2010/11 and 2016/17 electricity consumption fell 34.3% from 8,755,397 kWh to 5,749,201 kWh.
35. Because of this drop in consumption we are now emitting around 1,100 tonnes of CO₂e and spending £275,000 a year less than we otherwise would have been.
36. This drop in consumption over time can be attributed to:
 - Installation of the photo-electric cell unit at the Eco Depot to monitor and assess streetlight switching times enabled a conversion from passive to dynamic half-hourly billing
 - The programme of converting street lighting to LEDs has reduced the council's carbon emissions by a third and remains ongoing
 - Conversion from filament to LED lighting
 - Reduced lighting between 12am and 6am by 60%, up to 75% on arterial roads.
37. These street lighting refurbishments have made a major contribution to the overall decline in the council's carbon footprint in recent years.
38. Recently a £2 million refurbishment programme has been announced. Over the course of the next four years the work to replace sodium lights with LEDs will continue; 2,000 new steel and concrete columns will be installed and maintenance checks will be carried out on 12,000 columns.

Waste Services

Corporate waste

39. Corporate waste has declined by 20.3% in recent years, from 684 tonnes in 2012/13 to 545 tonnes in 2016/17. Of the waste produced in 2018/2017 27% was recycled.
40. This fall in corporate waste over time can be attributed to:
 - Rationalisation of council buildings

- Installation of recycling bins in West Offices for paper, cardboard, glass, plastic and cans
 - Double-sided printing policy in West Offices
41. Waste collected from schools has declined by 28.1% from 1,055 tonnes in 2012/13 to 758 tonnes in 2016/17. 34% of the 758 tonnes of waste collected from schools was recycled.
42. This fall in schools waste is mainly due to academisation but behaviour change and installation of recycling facilities will have also contributed partially.

Domestic waste

43. The new waste processing facility at Allerton Park is now in its commissioning phase. Over the next 12 months we will move away from landfill of residual waste to sending our residual waste through this facility. This includes:
- Mechanical treatment plant receives waste and sorts out metal, paper, card, glass and plastics for recycling
 - An anaerobic digestion plant treats the separated organic waste and produces a biogas which will generate renewable electricity
 - Energy from the waste plant treats the waste which remains after separation of the recyclables and treatment of organic waste, producing steam to feed an electricity generating turbine that will produce enough electricity to supply about 40,000 homes.

Corporate strategy and city partnerships

44. In March 2018 the council signalled its ongoing commitment to carbon reduction and resource efficiency by taking part in Earth Hour. Lights were dimmed or turned off across many landmark buildings including York City Walls, Mansion House, Guildhall, West Offices and Cliffords Tower. This was in partnership with other organisations within the One Planet York network such as York Minster.

Consultation

45. This report is based on updates received by officers in various City of York Council service areas.

Options

46. Not applicable. Report is an update of progress to date and future plans.

Analysis

47. Not applicable. Report is an update of progress to date and future plans.

Council Plan

48. This report shows progress delivering the CRSM that makes a direct contribution to the following corporate objectives:

- **A prosperous city for all** - where local businesses can thrive and residents have good quality jobs, housing and opportunities
- **A focus on frontline services** - to ensure all residents, particularly the least advantaged, can access reliable services and community facilities

Implications

- **Financial:** There are no financial implications associated with this report.
- **Human Resources (HR):** There are no HR implications associated with this report.
- **Equalities:** There are no equalities implications associated with this report.
- **Legal:** There are no legal implications associated with this report.
- **Crime and Disorder:** There are no crime and disorder implications associated with this report.
- **Information Technology (IT):** There are no IT implications associated with this report.
- **Other:** There are no implications associated with this report.

Risk Management

49. No known risks associated with this report

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Director of Economy and Place

**Report
Approved**



Date 29/03/2018

Specialist Implications Officer(s) *Not applicable*

Wards Affected:

All

For further information please contact the author of the report

Background Papers:

Carbon and Resource Smart Management Plan 2015–2019

Annex

Annex A: List of carbon and resource smart projects already completed