MCC Climate Change Action Plan 2016-2020
Annual Metrics Report 2019/20

1. Background

In 2009/10 Manchester City Council set out our commitments to tackle climate change in the Climate Change Delivery Plan and detailed what the Council planned to do over the period 2010 to 2020 to contribute to the city-wide vision to be a green prosperous low-carbon city by 2020. The delivery plan had two aims:

1. To set out how the Council will provide leadership and example in the process of Manchester's transformation into an internationally recognised low carbon city, and contribute to the implementation of *Manchester – A Certain Future*
2. To transform the Council into a leading example and champion deliverer of environmental sustainability in Greater Manchester by embedding low-carbon thinking, behaviour in its culture, processes and the operation of all its services.

In 2009/10 the Council committed to reduce its direct carbon emissions by 41% by 2019/20. Following this, the Council produced a series of action plans which detailed the activities that would be undertaken in order to ensure that our commitments were met. Each year we have monitored our direct emissions to determine progress against this target.

This report monitors the progress against the planned actions set out in the most recent Climate Change Action Plan (CCAP) 2016-20. In 2018/19, data showed that the Council's direct emissions reduced by 48% since the 2009/10 baseline meaning that the 41% target was achieved and surpassed a year ahead of schedule. This was made possible due to a significant reduction in emissions when compared with 2017/18 which was predominantly the result of changes to the UK Emissions Factor for electricity, a reduction in energy consumption in the Council's operational buildings and a reduction in electricity consumption from street lighting.

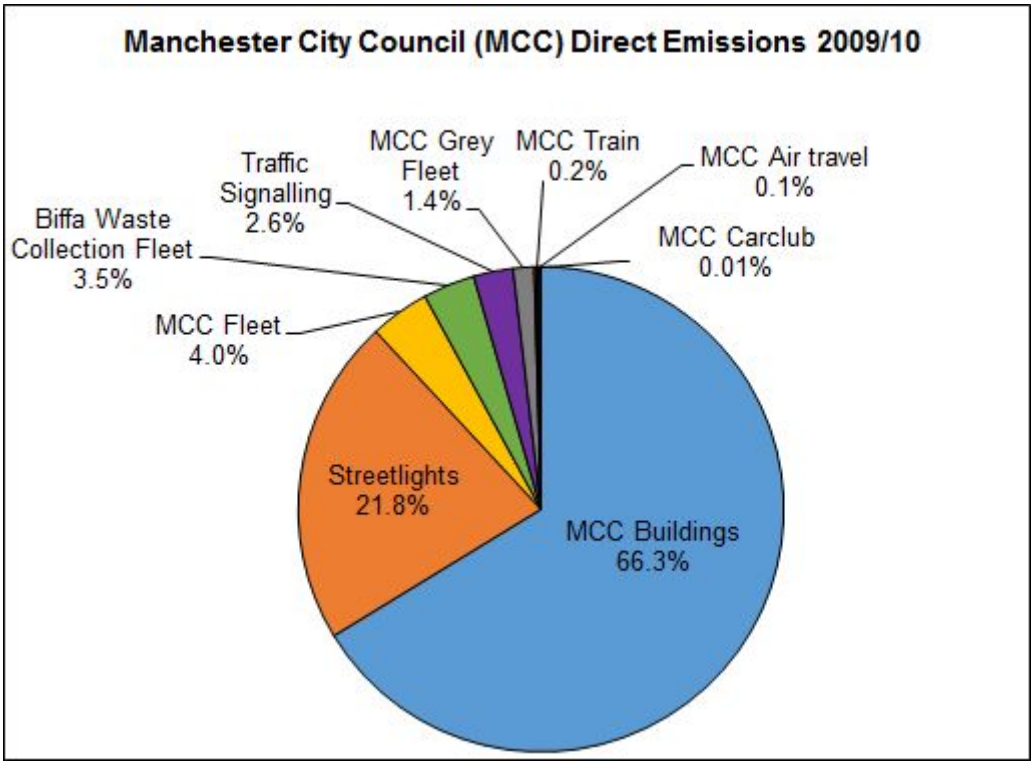
2. Scope of the Report

The scope of the Climate Change Action Plan includes only carbon emissions that the Council is directly responsible for including:

- Our operational buildings estate of approximately 300 buildings;
- Street lighting;
- Traffic signalling;
- Biffa waste fleet;
- Council fleet vehicles;
- Staff business travel including travel by rail, air, taxi, car club or use of personal cars to carry out Council business (grey fleet).

Figure 1 demonstrates the activities included in the baseline and the percentage weighting. It shows that the vast majority of our direct emissions are produced by our buildings estate, followed by streetlights.

Figure 1: Emissions Baseline in 2009/10



3. Emission Factor

In order to produce the annual reports detailing the CO_2 emissions associated with the Council's direct activities, activity data e.g. miles travelled, kilowatt hours of electricity and gas used etc. are converted into carbon emissions using a nationally agreed set of emission conversion factors which are published annually by the UK Government. The emission factor for electricity represents the average CO_2 emission from the UK National Grid per kWh of electricity generated. The electricity emission factor fluctuates each year as the fuel mix consumed in UK power stations and the proportion of net imported electricity changes. These annual changes can be large as the factor depends very heavily on the relative prices of coal and natural gas as well as fluctuations in peak demand and renewables.

Between 2018 and 2019, the emission factor for electricity reduced by 9.75%, effectively reducing emissions from electricity by 9.75%. It is anticipated that the electricity emission factor will continue to decrease as the National Grid becomes greener overtime. The Council already procures green electricity which is contributing to the greening of the National Grid. However, it is important to note that we are unable to make any further emissions saving from this procurement decision beyond using the nationally agreed emission factor for electricity.

4. Revision of 2018/19 emissions

The Council's direct emissions in 2018/19 were reported as 37,417.8 tCO_2. Figures have now been revised to take into account updated buildings, street lighting and staff business travel by rail and air emissions. The revised 2018/19 emissions are 37,565.2 tCO_2, an increase of 147.4 tCO_2. However, the revised figures still represent a 48% reduction in direct emissions compared to the 2009/10 baseline.

Buildings and street lighting snapshot emissions can be subject to change due to billing delays. When the 2019/20 provisional snapshot was provided, the 2018/19 snapshot was rerun which resulted in reporting an additional 92.8 tCO_2 for buildings and 16.2 tCO_2 for street lighting.

The staff business travel by rail and air emissions were re-calculated following the discovery of an error in the 2018/19 figures received from the Council's travel partner. This resulted in reporting an additional 19.8 tCO_2 for rail travel and 18.6 tCO_2 for air travel.

5. Overview of 2019/20 Emissions

The Council aimed to reduce its direct carbon emissions by 41% by 2020 from a 2009/10 baseline. Provisional 2019/20 figures show that the Council's direct emissions have reduced by 11.4% from 2018/19 and by 53.8% since 2009/10. The 2019/20 streetlights emissions are currently provisional due to billing delays and are likely to be overestimated; final 2019/20 figures will be available in late June. Table 1 provides a detailed breakdown of emissions (in tonnes of CO_2) across the different functions of the Council which are included in the direct emissions scope.

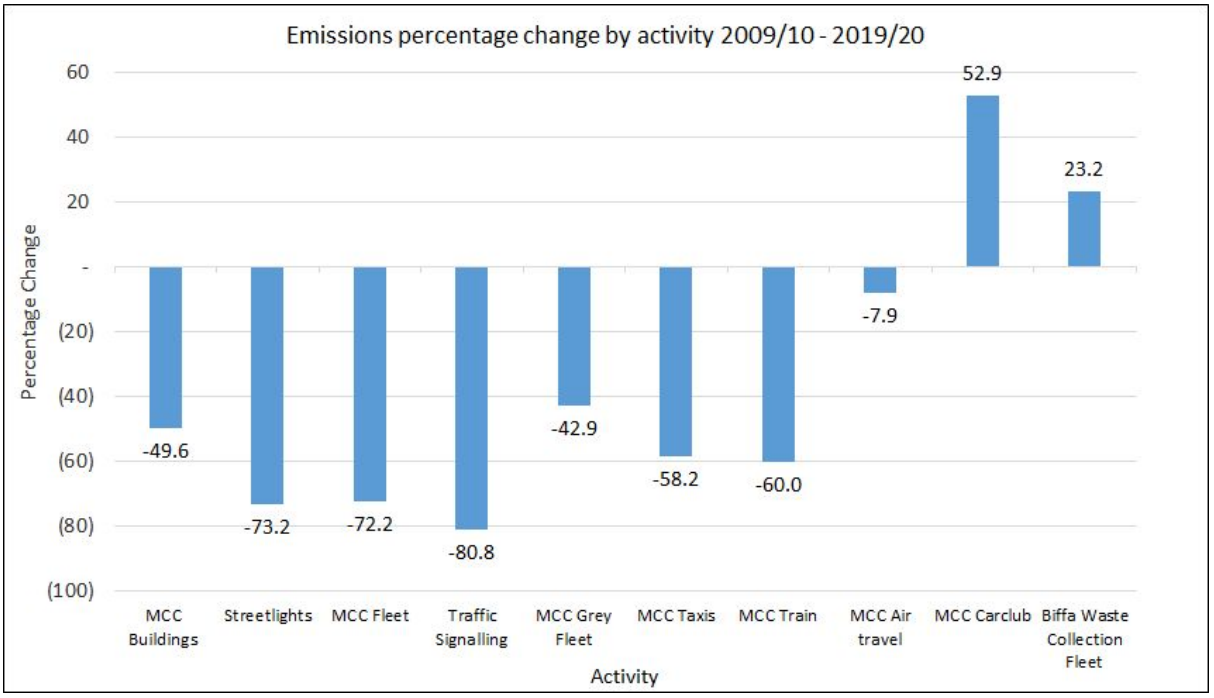
Table 1: Detailed Breakdown of Direct Emissions

Activity	Manchester City Council Direct Emissions (Tonnes CO_2)										
	Baseline 2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20 *
MCC Buildings	47,764	43,892	41,407	43,063	39,650	41,193	38,746	35,375	31,174	25,882	24,071
Streetlights	15,726	15,602	14,717	15,052	14,898	16,292	15,112	13,386	11,310	6,632	4,213
Biffa Waste Collection Fleet	2,496	2,986	2,087	2,054	1,964	1,979	2,579	3,051	3,145	3,089	3,076
MCC Fleet	2,863	2,986	2,590	2,416	1,683	1,702	1,143	1,014	836	844	797
MCC Grey Fleet	1,001	918	625	774	566	588	532	577	566	540	572
Traffic Signalling	1,894	1,662	1,475	1,310	891	733	645	585	490	392	364
MCC Air travel	79	52	61	90	141	90	166	84	79	86	72
MCC Taxis	136	139	114	76	49	51	38	55	54	56	57
MCC Train	110	58	40	44	27	47	47	30	28	37	44
MCC Carclub	5	9	9	9	10	8	8	6	6	8	8
Total (tonnes CO_2)	72,075	68,303	63,124	64,888	59,878	62,683	59,016	54,164	47,688	37,565	33,274
Annual shift (%)		-5.2	-7.6	2.8	-7.7	4.7	-5.9	-8.2	-12.0	-21.2	-11.4
Change from Baseline (%)		-5.2	-12.4	-10.0	-16.9	-13.0	-18.1	-24.9	-33.8	-47.9	-53.8

* Streetlights emissions are provisional and will be finalised in late June

Figure 2 shows the change in total tCO_2 emissions between 2009/10 and 2019/20. Reductions in emissions were noted across all Council activity areas except Car Club and the Biffa Waste Collection Fleet.

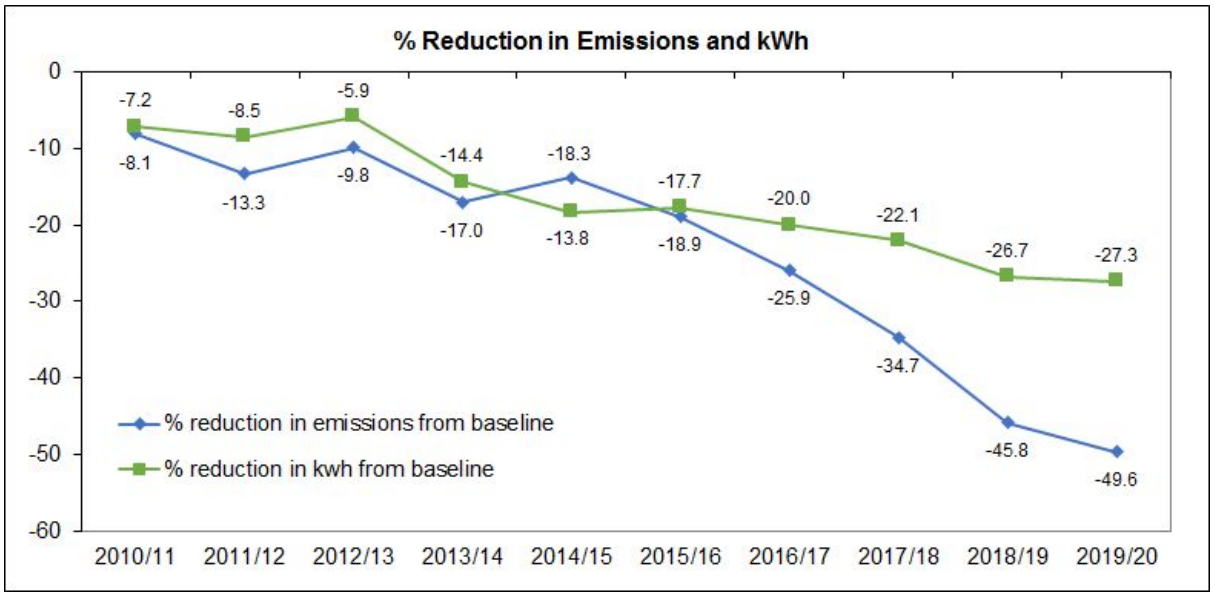
Figure 2: Emissions Percentage Change by Activity between 2009/10 and 2019/20



6. Buildings

Carbon emissions from the Council's operational buildings estate have reduced by 49.6% from the 2009/10 baseline. In this same period, the total energy used in our buildings (kilowatt hours of gas, electricity and oil) has reduced by 27.3%. This demonstrates that while emission factor reductions have undoubtedly had a positive influence on our total emissions, the amount of energy that we have consumed has also decreased as a result of the rationalisation of the Council's estate and improvements to energy efficiency. Energy consumption in buildings also fluctuates by season and is affected by warm and cold weather spells. As such, the emissions will have been impacted by the warmer than average temperatures experienced across the UK during 2019 and particularly during the main heating season.

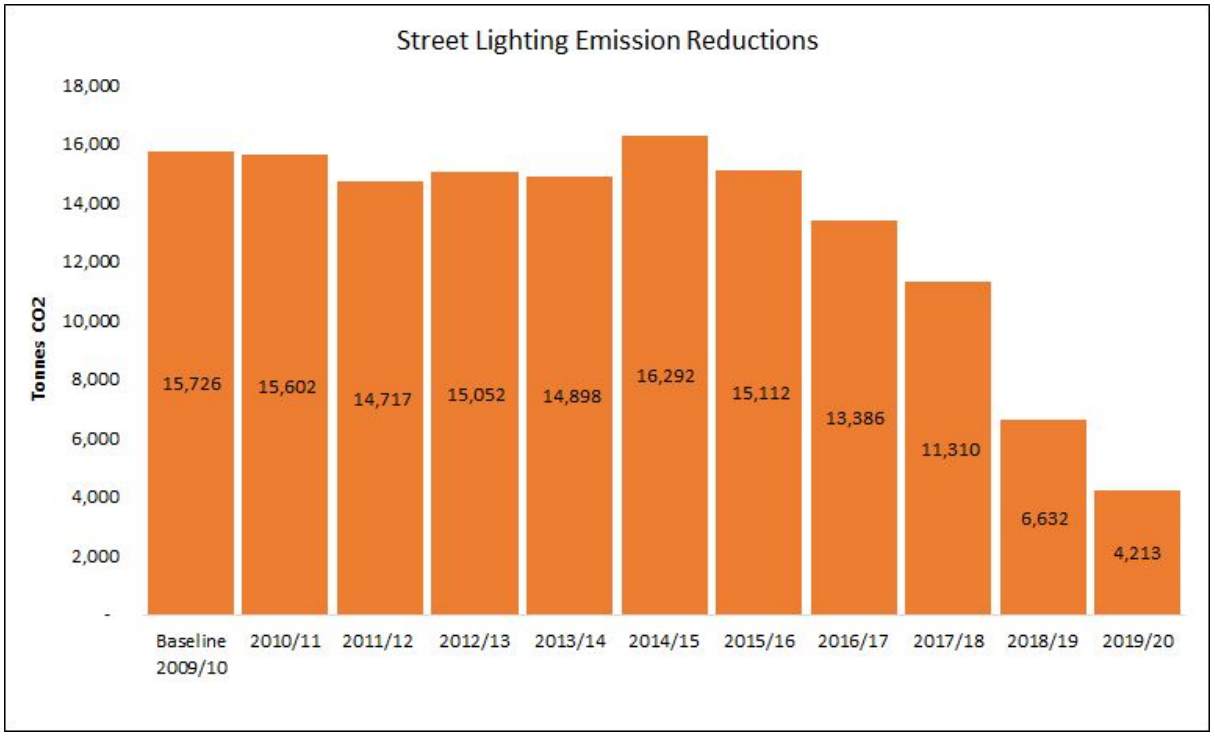
Figure 3: Percentage Reduction in Buildings Emissions and Kilowatt Hours of Energy Used



7. Street Lighting

Figure 4 shows that emissions from street lighting have decreased by 73.2% from 15,726 tCO_2 in 2009/10 to 4,213 tCO_2 in 2019/20 (based on provisional data for 2019/20). This decrease is mainly due to the replacement of incandescent street lighting bulbs with more energy efficient LEDs. By the end of 2020, all of the street lights in Manchester will have been replaced via the completion of a £32.8 million investment programme which is saving over 8,400 tCO_2 per annum and £2 million every year for the Council.

Figure 4: Street Lighting Emissions



8. Biffa Waste Fleet and Council Fleet

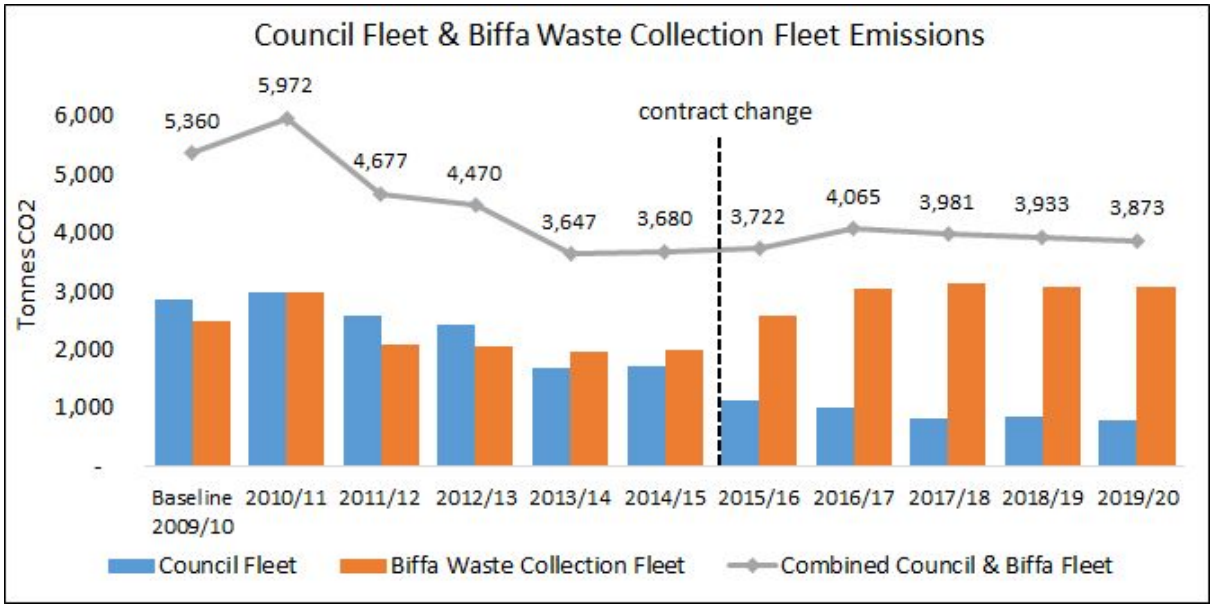
In summer 2015, Biffa took over the running of the Council's household refuse collection service from Enterprise and also began running the Council's Street Cleansing services. This resulted in 28 sweepers and 40 tippers, transferring from the Council to Biffa. This contributed to an increase in emissions from the Biffa waste fleet and a decrease in the Council fleet vehicle emissions as shown in the 2015/16 data in Table 1 and Figure 5.

Since the 2009/10 baseline, emissions from the waste fleet have increased by 23.2% from 2,496 tCO_2 to 3,076 tCO_2. Since the 2015/16 contract change, emissions have increased by 19.3%. This increase has been due to additional vehicles being added to the fleet, longer collection rounds and the use of vehicles with engines that reduce NO_2 emissions to improve air quality but which use more fuel therefore increasing CO_2 emissions.

In 2019, Biffa started to trial the first fully electric Refuse Collection Vehicle in Manchester and the success of this trial has led to the purchase of 27 Electric Refuse Collection Vehicles which will deliver approximately 900 tCO_2 .The trial is the first step in the effort to ultimately end the CO_2 emissions released from diesel fuels during waste collections and to help improve the city's air quality.

As at April 2020, the Council operated 220 fleet vehicles, including 16 electric vans, one electric car, one electric people carrier and three hybrid cars. Since the 2009/10 baseline, emissions from the Council fleet have decreased by 72.2% from 2,863 tCO_2 to 797 tCO_2. Since the 2015/16 contract change, emissions have decreased by 30.3%.

Figure 5: Annual emissions for the Council Fleet and Biffa Waste Collection Fleet

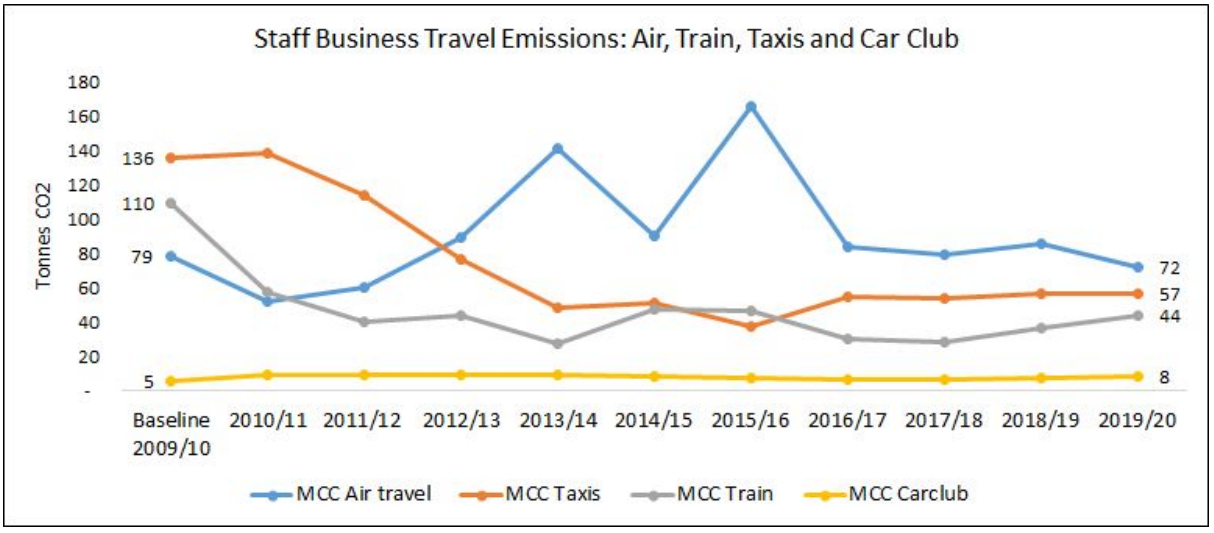


9. Staff Business Travel

Staff business travel accounts for a very small percentage of overall emissions and includes travelling by train, air, taxi, car club or claiming business mileage. Compared to the 2009/10 baseline, emissions have reduced for all staff travel modes except car club, which has increased by 52.9% from 5 tCO_2 in 2009/10 to 8 tCO_2 in 2019/20. The increase may be due to more staff using the car club as an alternative to making a journey by taxi or personal car.

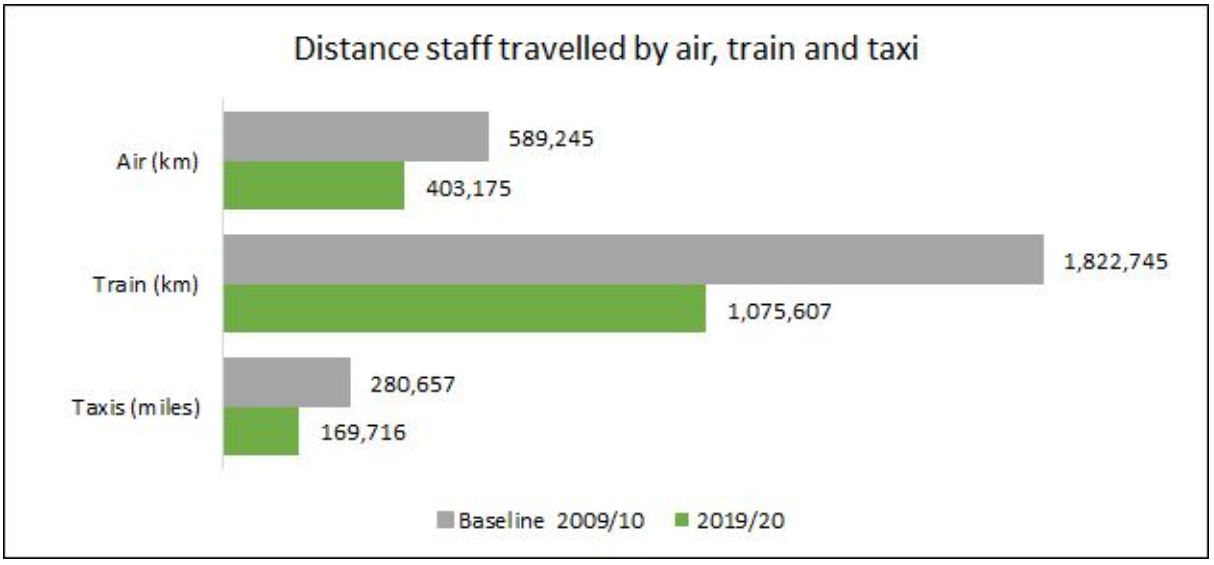
Figure 6 shows that since 2009/10, there has been a considerable decrease in the emissions generated from travel by Taxis (-58%) and Train (-60%) and a smaller decrease in emissions generated from air travel (8%).

Figure 6: Annual Emissions for Staff Business Travel by Air, Train, Taxis and Car Club



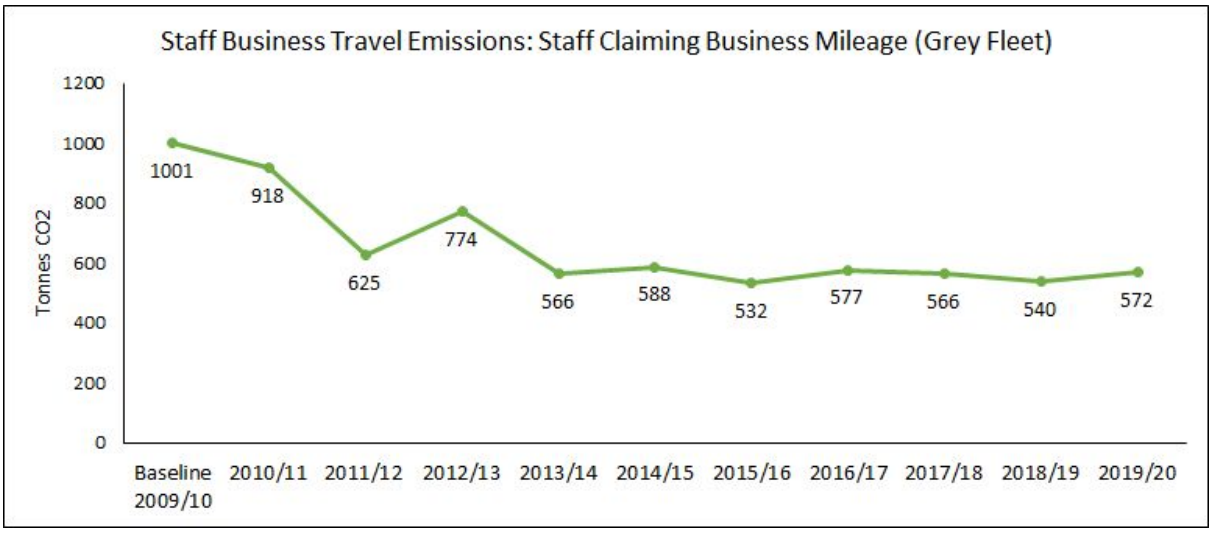
Likewise, Figure 7 shows that the actual distance staff travelled by taxi, train and air has reduced considerably since 2009/10. Although the emissions associated with staff air travel have reduced by only 8%, the total distance travelled by staff has reduced by 32% since 2009/10. There has also been a 41% reduction in the distance travelled by train and a 40% reduction in the distance travelled by Taxi.

Figure 7: Distance staff travelled by air, train and taxi



Since 2009/10 there has been a 42.9% reduction in the emissions associated with staff using their personal cars to carry out Council Business. Figure 8 shows that emissions have remained relatively stable since 2013/14.

Figure 8: Annual Emissions for Staff Claiming Business Mileage (Grey Fleet)



10. Zero Carbon 2038

From April 2020, direct Council emissions will not include traffic signalling as these emissions are included by Transport for Greater Manchester in their emissions accounting. As such the baseline direct emissions total for 2018/19 is 37,173 tCO_2 and the provisional total for 2019/20 is 32,910 tCO_2 (final 2019/20 figures will be available in late June). The Council's Climate Change Action Plan 2020-25 commits to a 50% reduction in emissions over the next 5 years to ensure that the Council plays its full part in supporting the citywide climate change targets set out in the Manchester Climate Change Framework 2020-25.

11. Conclusions

The 2019/20 annual data represents the final year of reporting on the 2016-2020 Climate Change Action Plan and demonstrates that the Council achieved a 53.8% reduction in its direct emissions. Although this reduction is significantly higher than the 41% target, the latest Climate Change Action Plan 2020-25 sets a much more ambitious target to half emissions by 2025. This annual report provides the baseline for the next 5 years of reporting which will continue to be reported publicly on an annual basis.