

Sustainability West Midlands Environmental Impact Report

**Business Carbon Footprint Report for the financial years
April 2019 - March 2021**

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About Sustainability West Midlands

We are the sustainability adviser for the leaders of the West Midlands. We are also the regional sustainability champion body for the West Midlands, as designated by government. We are a not-for-profit company that works with our members in the private, public and third sectors. Our Board is private sector led and has cross-sector representation; they are supported by our team of staff and associates.

Our vision is that the West Midlands is leading in contributing to the national target of net zero greenhouse gas emissions by 2050 whilst addressing health inequality and driving inclusive growth. We play our part by acting as a catalyst for change through our advice to leaders, developing practical solutions with our members, and sharing success through our communications.

www.sustainabilitywestmidlands.org.uk

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1. Executive summary

This aim of this report is to present Sustainability West Midlands' (SWM) carbon footprint in the financial years 2019-20 and 2020-21 and compare it to the footprint of previous years. Due to SWM being a micro-enterprise, it is not required to produce a report into its environmental impact but has reported voluntarily to demonstrate good practice and to find ways to reduce its impact on the environment. This report focuses solely on carbon footprint and does not include data for waste or water use, which have been excluded due to the small physical scale of SWM, and therefore comparably small waste and water use, which would also be challenging to monitor.

The report was written by [Luca Mitchell](#) and [Amy Bostock](#), Volunteer Communications Officers at SWM from June – September 2020 and September 2020 – May 2021 respectively.

1.1 Key findings

1. Total emissions in 2019/20 increased by 44.8% since 2018/19. However, this is mainly as a result of emissions from SWM's office usage. For example, office emissions have increased by 50.5% whereas travel emissions have only increased by 23.7%. Although travel emissions have still increased by a considerable amount, office emissions also account for the greatest source of emissions at a total of 3,447 kgCO₂e whereas travel emissions are responsible for 776.71kgCO₂e.
2. Office emissions have increased by a considerable amount largely due to an anomaly in gas usage from April-July 2019. Due to SWM's office space being in a shared building, it proves difficult to calculate the exact figures of SWM'S share; this is further explained in section 3.2. However, it is also difficult to identify the reasoning behind any anomalous data. Therefore, despite SWM's best efforts to reduce its carbon emissions, this report will show an unexpected increase in gas emissions.
3. During the financial year 2019-20, the impact of lockdown associated with COVID-19 has had a minimal effect on the data included in this report as lockdown restrictions did not come into play until mid-March, i.e. midway through the final reporting month. Therefore, this report will include the transport and emissions data for the financial year 2019-20 reflected in tables and graphs as similar to the previous financial years.
4. During the financial year 2020-21, all SWM staff were based at home during the reporting period due to Government guidelines, and meetings and events were restricted to virtual only. SWM staff did not, therefore, use the office or travel for work. Therefore, this report will not include any data from the financial year 2020-21. However, recommendations in section 6.2 will discuss the environmental impact of videoconferencing and working from home in a little more detail. It is also important to acknowledge that although this report shows zero emissions for the financial year 2020-21, SWM staff would have increased their domestic emissions working from home. For example, there will have been an increase in electricity and heating use in SWM colleagues' households. However, due to the difficulty and impracticality in calculating these emissions, they have not been considered within this report.
5. An extra layer of complication arises in that SWM has also moved office premises in April 2021, owing to the landlord selling the previous building. SWM only lets a small part of the new offices too, but it must investigate how it can continue to monitor its environmental footprint once office-working becomes the norm again.

2. Scope of this report

The Companies Act 2006 (Strategic Report and Directors' Reports) Regulations 2013 requires quoted companies to report on their greenhouse gas (GHG) emissions. The Regulations distinguish between three 'scopes' of emissions:

- **Scope 1: (Direct Emissions).** Emissions from activities owned or controlled by your organisation that releases emissions into the atmosphere. This includes emissions from combustion from owned or controlled boilers, furnaces or vehicles. It is mandatory that they are reported.
- **Scope 2: (Energy Indirect).** Emissions released into the atmosphere associated with your consumption of purchased electricity, heat, steam or cooling. These are indirect emissions that are consequences of your organisation's activities but are from sources you do not own or control. They are also subject to mandatory reporting.
- **Scope 3: (Other Indirect).** Emissions that are consequences of your organisation's activities but are from sources you do not own or control and do not fall under scope 2. For example, business travel, waste disposal and purchased materials. Scope 3 emissions are usually reported by businesses on a voluntary basis.¹

Although this is a voluntary report, it will follow the scopes outlined in the Regulations as follows:

- **Scope 1:** emissions from the building's boiler to heat SWM's office space
- **Scope 2:** emissions related to generating electricity for SWM's office space
- **Scope 3:** emissions related to business travel for employees. This does not include emissions as a result of regular day to day commuting or emissions arising from third parties travelling to meetings.

3. How emissions have been measured

3.1 Business travel emissions

Travel emissions are calculated from expenses claims. Claims list the mode of transport used, the estimated distance and the cost of travel.

The Department of the Environment, Food and Rural Affairs (DEFRA) manages an online tool which allows organisations to calculate greenhouse gas (GHG) emissions for transport per kilometre travelled.² This tool accounts for all GHGs and uses a standardised measure of 'equivalent kilogrammes of CO₂' (kgCO₂e).³ Using information from the travel expense claims, this tool allows for estimates of emissions from each business travel journey made. Transport is categorised according to the mode of transport used (car/taxi, rail, bus, cycling and air).¹

3.2 Office administration emissions

Estimating office emissions is more difficult because of SWM's relationship with its previous landlord. It has one office, which it rents, in a larger building where other businesses also rent office space. SWM cannot control the heating or lighting in its own office space or in the many communal areas and it is responsible for the procurement of only a small number of office supplies.

To find a best estimate of emissions for 2019-20, SWM's energy use has been calculated as a proportion of the building's total emissions, considering what percentage of building users are SWM staff or volunteers. This method is far from perfect, but no other calculation was found that would give a more accurate result. This remains the most significant source of error in this report, despite having made every reasonable effort to mitigate it.

In the financial year 2020-2021, due to Government guidelines, SWM staff have not used the office during this period. The office would still have been heated, but this is outside of SWM's control. Moreover, the landlords moved out the building and it stood empty since January 2021, which not only means it would have affected energy use within the building, but we would have had no means of obtaining the data that allows us to monitor heating and electricity use. We have, therefore, had to class our emissions as zero for financial year 2020-21, for estimating a total would be almost impossible to do.

¹ DEFRA, "Guidance on how to measure and report your greenhouse gas emissions" <https://bit.ly/3ALp6JD> page 13.

² <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

³ CO₂e measure which accounts for all GHGs and not just CO₂. Although CO₂ is a major greenhouse gas, it is not the only one. Others, while often emitted in smaller amounts, may have a larger impact. For instance, methane has a 'greenhouse effect' 25 times larger than CO₂, so 1kg of methane would be equivalent to 25 kg of CO₂- i.e. 25kgCO₂e.

4. Carbon emissions

4.1 Summary: breakdown of emissions

Table 1: Summary of SWM's emissions in 2019-20

Source of Emissions	kgCO ₂ e
Natural gas (Scope 1)	2319.9
Electricity (Scope 2)	1127.4
Travel: Car and taxi (Scope 3)	414.1
Travel: Rail, tram and tube (Scope 3)	355.9
Travel: Bus (Scope 3)	6.7
Travel: Flight (Scope 3)	0.0
Total office energy emissions (Scope 1 & 2)	3,447.3
Total travel emissions (Scope 3)	776.7
Total Gross emissions (All)	4,224

As discussed above, emissions were classed as zero in 2020-21.

4.2 Business travel

Table 2: Travel breakdown for 2019/20 by distance, emissions, cost and emissions/£

Type of Journey	Estimated Distance (Km)	CO ₂ Emissions (KgCO ₂ e)	Total Cost (£)	KgCO ₂ e/£
Bus	64.3	6.7	15.3	0.4
Car & Taxi	2295.7	414.1	698.5	0.6
Cycle	86.1	0.0	9.9	0.0
Train	8841.4	355.9	1,356.7	0.3
TOTAL	11,287.5	776.7	2,080.4	N/A

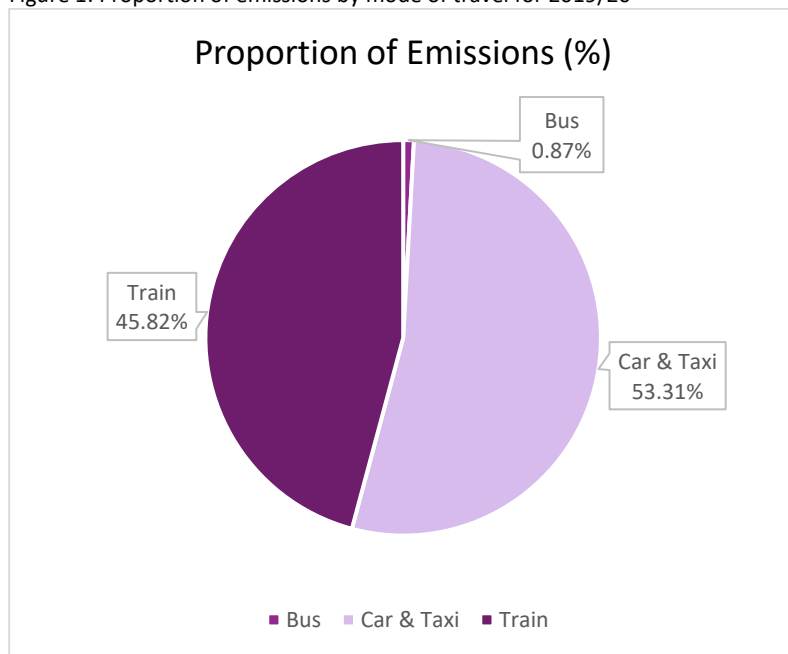
As discussed above, emissions were classed as zero in 2020-21.

Table 3: Proportion of distance, CO₂ emissions and total cost of mode of travel for 2019/20

Type of Journey	Proportion of Distance (%)	Proportion of CO ₂ Emissions (%)	Proportion of Cost (%)
Bus	0.6	0.9	0.7
Car & Taxi	20.3	53.3	33.6
Cycle	0.8	0.0	0.5
Train	78.3	45.8	65.2

As discussed above, emissions were classed as zero in 2020-21.

Figure 1: Proportion of emissions by mode of travel for 2019/20



2019/20 Key Travel Trends

- Travel by car and taxi accounted for the most emissions at 53.3%, this was followed closely by travel by train at 45.8%. Travel by bus accounted for a small percentage of total emissions at 0.9%.
- Train travel continues to account for the greatest distance travelled as it accounts for 78.3% of journeys, however it does not account for the greatest emissions which highlights the environmental impact of car travel.
- Despite car and taxi emissions accounting for the greatest amount, emissions for them have decreased by 2.1% since 2018/19.
- Overall, travel emissions have increased by 23.7% from the financial year 2018/19. However, distance travelled has increased by 50.1%. Therefore, an increase in emissions was expected.
- SWM staff did not travel for work in the financial year 2019-20 as a result of the COVID-19 related lockdown, therefore emissions are zero.

4.3 Office emissions

As highlighted in section 3.2, calculating office emissions proves difficult for SWM due to the nature of the building. Therefore, SWM’s energy use has been calculated as a proportion of the building’s total emissions. This was done by using SWM’s FTE, which was 3.6 for the financial year 2019-20, and calculating a proportion using the buildings total FTE staff which was estimated to be 40. Therefore, we concluded that SWM’s percentage of emissions were to be 9% of the building’s total emissions.

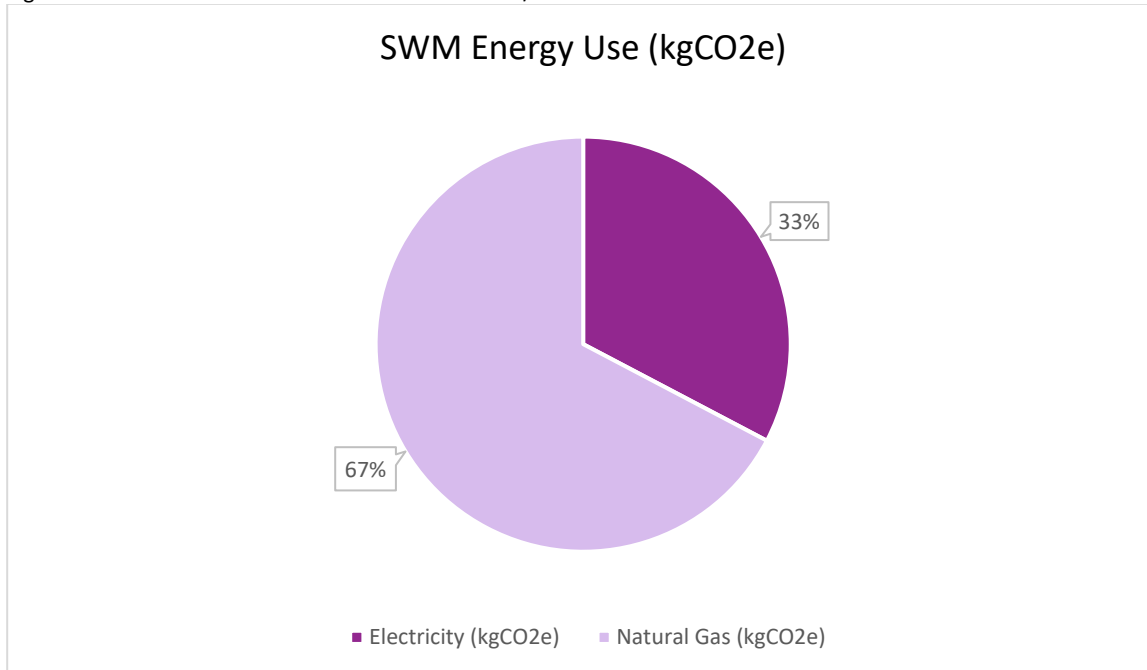
Despite SWM’s attempt to mitigate the need for any estimations, it is inevitable that certain estimations have been required to obtain office data. Therefore, there may be a certain degree of error in calculating office emissions. However, the method used will still provide SWM with the most accurate results that are able to be obtained.

Table 4: SWM Office emissions breakdown for 2019/2020

Electricity (kWh)	Natural Gas (kWh)	Electricity (kgCO2e)	Natural Gas (kgCO2e)	Combined Energy Use (kgCO2e)
4,835.6	12,617.1	1,127.4	2,319.9	3,447.3

As discussed above, emissions were classed as zero in 2020-21.

Figure 2: SWM Office emissions breakdown for 2019/2020



2019/20 Key Office Trends

- Office emissions account for 81.6% of total emissions. This is similar to the financial year 2018/19, where office emissions accounted for 78.5%, as both travel and office emissions increased. However, the absolute total emissions from the office are much higher this year compared to 2018-19 and have increased by 50.5%.
- As expected, gas continues to account for a greater quantity of emissions than electricity. However, as described in section 1.1, there has been a higher than normal gas usage from April-July 2019. Due to SWM's office space being in a shared building it proves difficult to identify the reasoning behind any anomalous data.

5. Trends, comparisons and discussion for the period 2011/12 - 2019/20

5.1 Travel emissions

Figure 3: Emissions from each mode of transport from 2011/12-2019/20

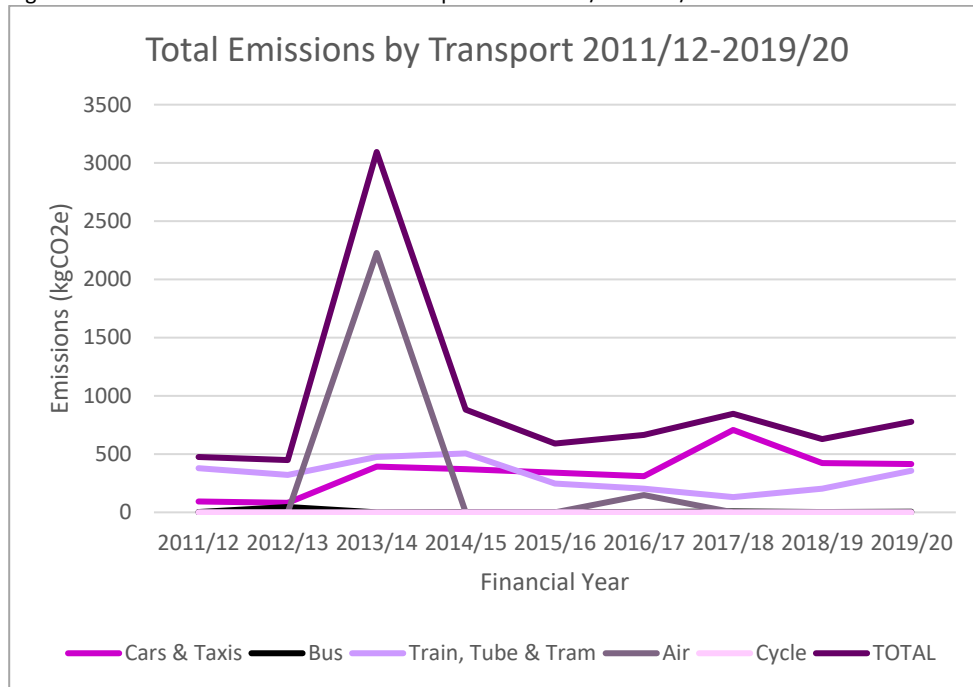
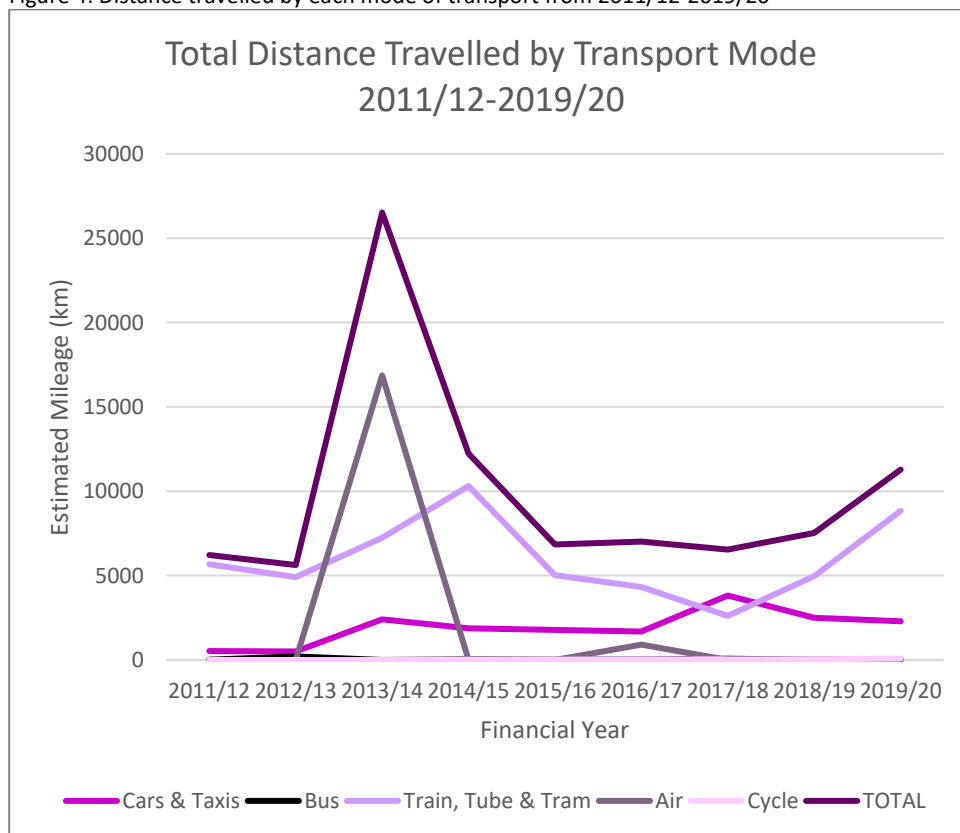


Figure 4: Distance travelled by each mode of transport from 2011/12-2019/20



As to be expected, cars and planes have an enormous impact on SWM’s travel emissions. Air travel is uncommon and the business has only made two flights since 2011 (one to China in 2013/14 and one to Amsterdam in 2016/17). Even so, the impact is clearly visible in the emissions data for these years.

Since 2016/17 travel by car continues to amount for the greatest cause of emissions. However, this has decreased in recent years. In 2019/20, the downwards trend of emissions caused by cars and taxis has continued to decrease. This decrease has been especially successful for SWM as there has been an 50.1% increase in distance travelled. Therefore, this highlights SWM’s adherence to recommendations made in 2018/19. This was to only use travel by car and taxis when absolutely necessary. This is also supported by the fact that distance travelled by train, tube and tram (figure 4) has increased significantly since the last financial year. Therefore, this highlights SWM’s choice to use alternatives to car and taxi travel.

Travel then reduced to zero in the financial year 2020/21 as a result of the lockdown associated with the COVID-19 pandemic. We will learn lessons from this and also count the year as an anomaly, and instead we will analyse how our travel behaviours will change longer-term as a result of the pandemic.

5.2 Office and travel emissions: a comparison

The lease SWM had with the landlord makes it difficult to measure and control other environmental impacts. The only aspect that SWM has control over is ensuring office IT equipment is turned off when not in use and the heating in the office is not set too high. The staff are very conscientious on these matters, but it is unclear whether any impact can be seen in the electricity usage data because of the lack of accurate staff and usage information available. SWM upgraded its computers and removed its server to a cloud-based platform in 2019-20, which is likely to have made a minor positive difference to our electricity usage, such any such difference is absorbed by the significant increase in gas usage that was beyond our control.

Figure 5: Office energy use between 2011/12 – 2019/20

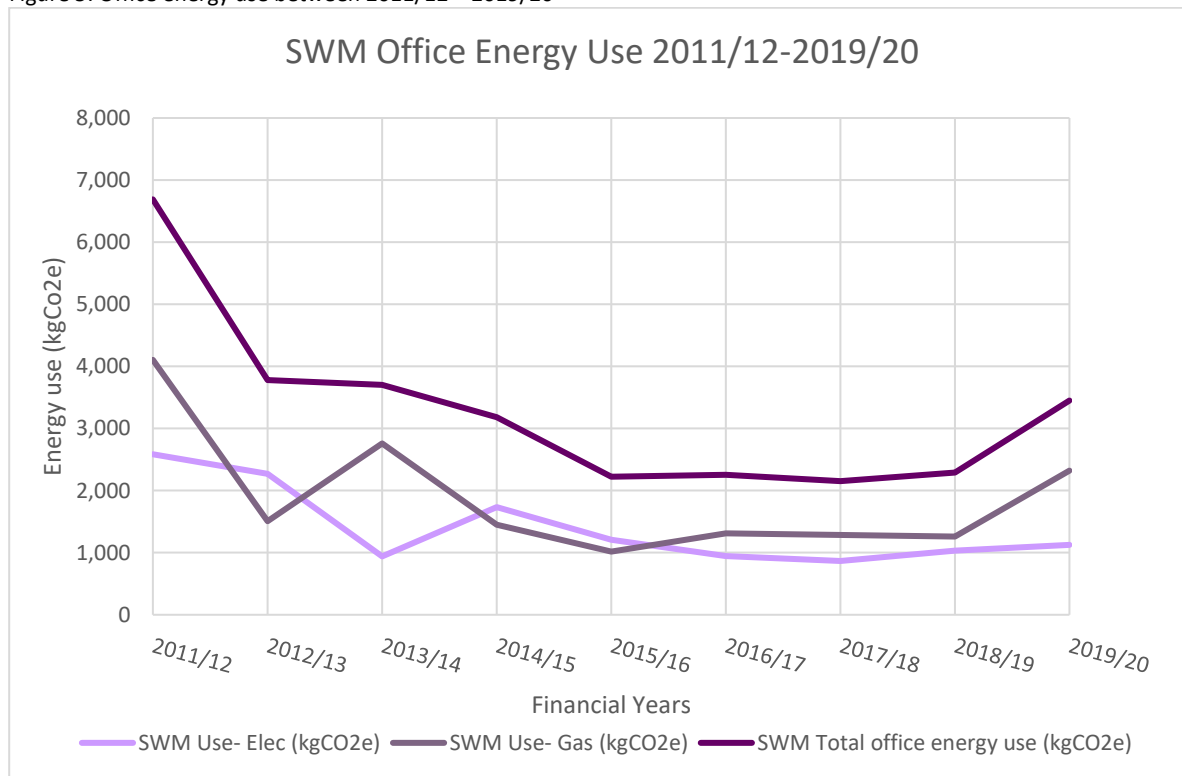
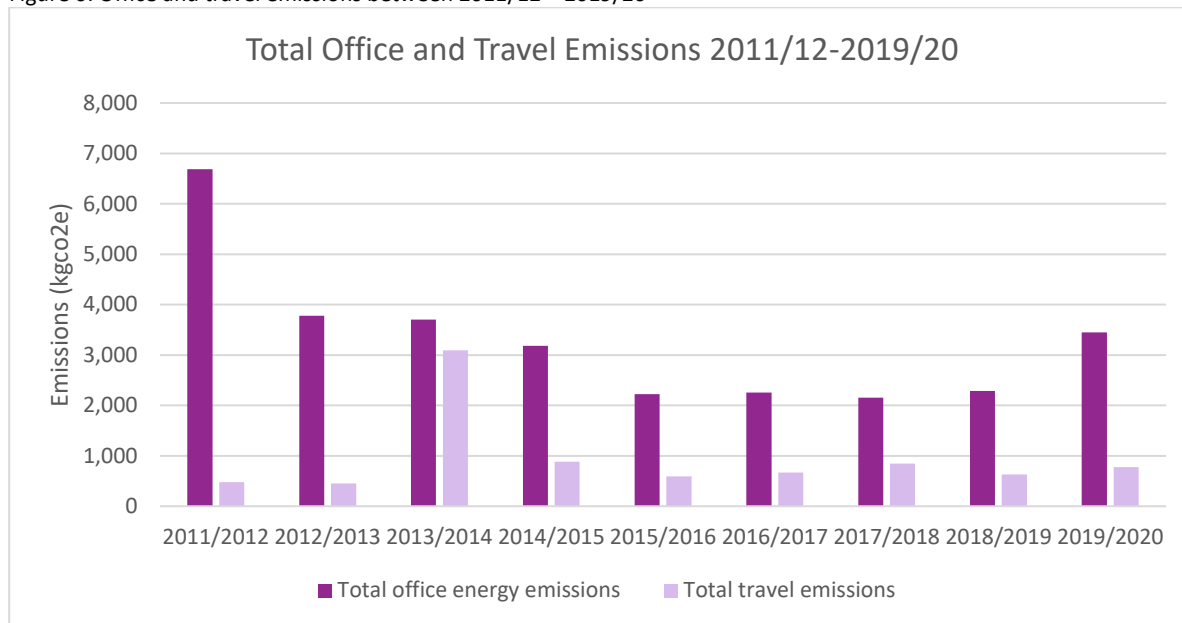


Figure 6: Office and travel emissions between 2011/12 – 2019/20



Figures 5 and 6 emphasise that there has been a significant increase in gas emissions for this financial year. As outlined previously, there has been an anomaly this year in gas usage from April-July 2019. Despite SWM’s best efforts to identify the reasoning behind this, it has been unsuccessful. Therefore, this has been a significant cause in the increased emissions of SWM for the financial year 2019-20.

Electricity use remains considerably less than gas use and therefore continues to account for fewer emissions. However, it has increased by 9% since 2018/19. Although this is not an alarming amount, it is worth trying to pinpoint why this might be the case. The lockdown associated with COVID-19 may have rendered this unnecessary in any case.

Table 5: Comparison of office and travel emissions, in kgCO₂e (graph) and as percentage of annual total emissions

	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Office Emissions (% of total emissions)	93.3	89.4	54.5	78.3	79.0	77.2	71.8	78.5	81.6
Travel Emissions (% of total emissions)	6.6	10.6	45.5	21.7	21.0	22.8	28.2	21.5	18.4

Table 5 shows that office emissions continue to account for a greater proportion of emissions than those caused by travel. (In 2020-21, the figures for both within SWM control were zero).

5.3 Carbon intensity (normalised data)

For large organisations, it is common to normalise emissions data by comparing it against factors such as full-time equivalent (FTE) staff, turnover or office space. This is because changes in total emissions might be caused by changes in the business (for example, more staff). Normalising helps to see if emissions really are going up or down per staff member or relative to turnover.

Emissions data between 2011/12- 2019/20 has therefore been normalised below. SWM’s office space has not changed since 2011/12, so there is no benefit to normalising on this measure. The following graphs show total emissions by number of employees and by turnover.

Figure 7: Emissions data normalised by FTE 2011/12-2019/20

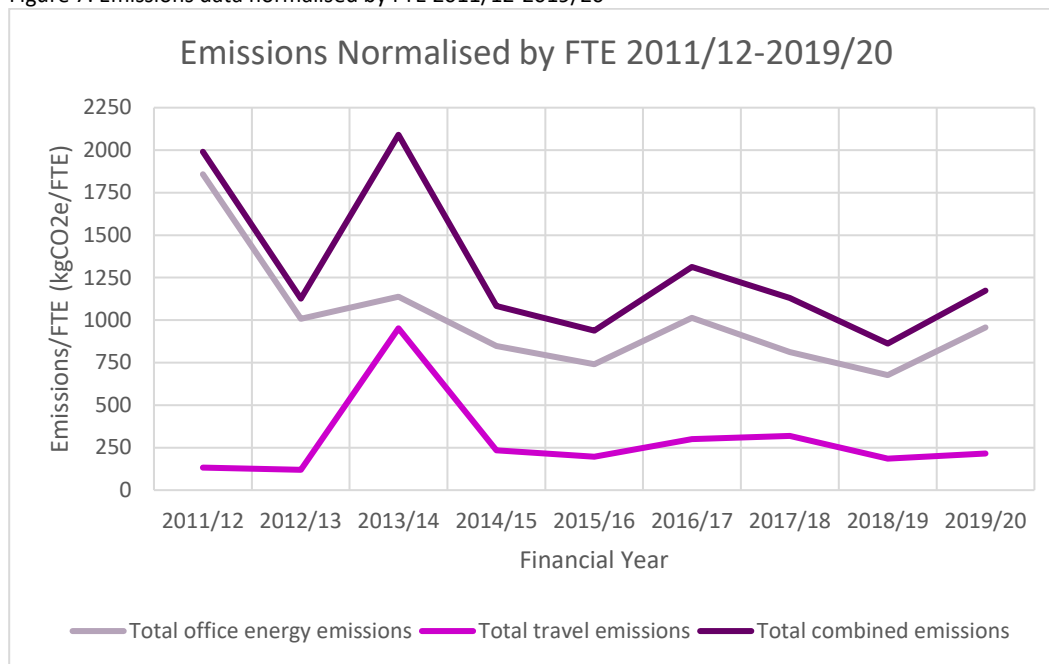
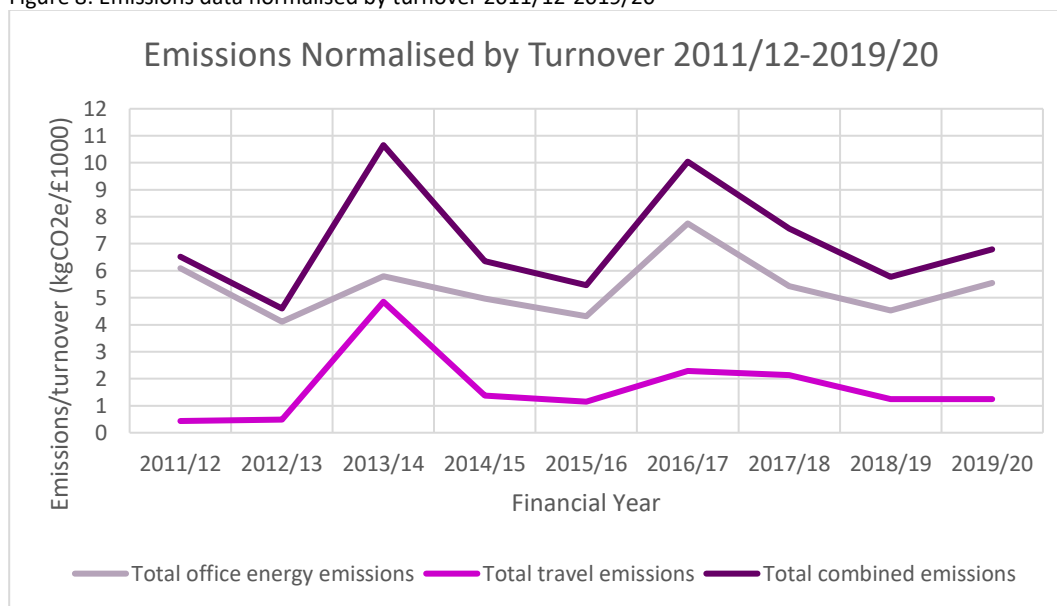


Figure 8: Emissions data normalised by turnover 2011/12-2019/20



Both these graphs show that, although there has been a rise in SWM’s actual emissions, they have recently reduced relative to both staff numbers and turnover. This suggests that the business may be becoming more efficient in its energy use. In other words, in 2018-19 it generated more income for each kgCO₂e emitted and used less energy per staff member or volunteer.

There are also pronounced spikes in 2013/4 and 2016/17 in travel emissions on both graphs, suggesting that, financially, the air travel in these years was not worth the extra emissions it caused.

5.4 Comparisons with other organisations

Reporting GHG emissions is not mandatory for small companies in the UK. As a result, very few SMEs publish reports on their environmental impacts. For a comparison with SWM to be meaningful, it needs to be against

an organisation of a similar size, in terms of office space and staff numbers and to be in a similar industry. No publicly available environmental reports from such companies were found. If SWM would like to make comparisons in the future, one way to do this might be to promote the benefit of environmental reporting to SMEs in its networks and share best practice to help those businesses produce their own reports that can be compared to SWM's.

6. Recommendations

Previous reports made recommendations for different ways that SWM could reduce its environmental impacts. These recommendations are summarised in section 6.1 with progress against them outlined. New recommendations, or reiterated ones, have been made for 2021/22 and beyond in section 6.2.

6.1 Previous recommendations

In previous years, SWM has made the following recommendations to reduce its environmental impact. The below table outlines SWM's progress to targets made in previous years.

Previous Recommendations	Progress
Ensure car and taxi travel is only ever used as a genuine last resort with a target to reduce car travel in actual terms and as a proportion of overall business travel.	SWM has continued to assess when car travel is absolutely necessary. This change of behaviour was suggested in 2017/18, and since then emissions by car and taxi have decreased year on year. As outlined in section 5.1, car emissions have even decreased this year despite total distance travelled increasing by 50.1%. This highlights SWM's choice to use alternatives to car and taxi travel.
SWM is likely move to a new office location in 2019/20. When selecting a new office location, SWM should use building energy efficiency, public transport links and use of renewable energy tariffs as selection criteria.	SWM did not move to a new office in the financial year 2019-20 and 2020-21. However, in April 2021 SWM have selected a new office to move to that is central to Birmingham and its associated transport links. It is also a more modern facility that is highly likely to be more efficient in energy usage. As yet, the office has seldom been used by SWM staff due to the lockdown associated with COVID-19, but it will be important, when this changes, to monitor the effect the new office space has on emissions.
Use videoconferencing where practical and possible to reduce travel emissions.	Due to the lockdown, the use of videoconferencing has increased rapidly. Although this was more apparent towards the end of the 2019/20 financial year, it still meant there was a decrease in emissions caused by SWM staff. This is something that has continued throughout the financial year 2020-21 which has resulted in travel being unnecessary.

6.2 Recommendations for the future

Office

- SWM has moved into new offices which should be more efficient and are slightly closer to major public transport links. Therefore, when staff begin to return to the office, this should result in a reduction in emissions. The first step is to liaise with the new building landlords to ascertain how SWM can measure its proportionate emissions, which is likely to still be challenging but nevertheless important to keep track on its environmental footprint.
- Work will also have to be done to determine if SWM's office emissions can be compared to previous years, and we should also investigate how much control we have on electricity (lighting) and gas (heating) use. The greater control, the more confident we can be in measuring our emissions and, therefore, seeing actual reductions.
- SWM should also investigate more accurately calculating the extra emissions its staff has used at home as a result of the lockdown, and also whether emissions from certain practices, such as upgrading our ICT, should be calculated separately. This may provide a more accurate picture of our work-related emissions, rather than deeming them to be zero just because they cannot be measured.

Travel

- SWM increased its travel use between 2018-19 and 2019-20, but this then fell to zero in 2020-21 because of the lockdown associated with the COVID-19 pandemic. Working at home and video conferencing has now become the norm. While some travel to meetings and the office will be unavoidable post lifting of lockdown, it is important to continue to use the video conferencing facilities which are now familiar to everyone for meetings where face-to-face is not required. This will ensure emissions from travel are kept to a minimum.
- Converse to this is the use of public transport. At the time of writing, public transport use is still not encouraged and SWM must be aware not to switch many of its business miles from train/bus travel to the car. Again, asking whether the travel is required at all is important. If it is, cycling or walking wherever realistic should be considered.
- Implementing incentives/dis-incentives for green/non-green travel respectively may be an effective way of encouraging all staff, when they do have to travel, to do so as sustainably as possible.

Appendices: Data sets

Appendix 1: Business Travel Summary

Type of Journey	Estimated Distance (km)								
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Cars & Taxis	525	504	2,399	1,875	1,778	1,681	3,820	2502	2296
Bus	19	209	0	32	25	42	71	18	65
Train, Tube & Tram	5,676	4,913	7,253	10,306	5,027	4,331	2,610	4,970	8,841
Air	0	0	16,872	0	0	917	0	0	0
Cycle	0	0	0	23	18	44	43	30	86
TOTAL	6,220	5,626	26,525	12,236	6,848	7,015	6,543	7,520	11,288
Change in total (%)	N/A	-9.55%	+371.47%	-53.87%	-44.03%	+2.44%	-6.73%	+14.93%	+50.11%

Type of Journey	Calculated Yearly Cost (£)								
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Cars & Taxis	232.80	224.00	716.37	577.20	554.36	498.80	1,089.00	810.00	698.49
Bus	6.50	54.60	0.00	11.80	6.40	8.00	14.10	9.20	15.30
Train, Tube & Tram	1,096.70	824.95	1,275.30	2,146.75	745.35	542.30	410.70	699.00	1356.72
Air	0.00	0.00	1,214.65	0.00	0.00	95.99	0.00	0.00	0.00
Cycle	0.00	0.00	0.00	2.90	2.20	5.88	5.28	-3.80	9.90
TOTAL	1,336.00	1,103.55	3,206.32	2,738.65	1,308.31	1,150.97	1,519.08	1,514.40	2080.41
Change in total (%)	N/A	-17.40%	+190.55%	-14.59%	-52.23%	-12.03%	+31.98%	-0.31%	+37.38%

Type of Journey	Calculated Yearly Cost/km (£)								
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Cars & Taxis	0.44	0.44	0.30	0.31	0.31	0.30	0.29	0.32	0.30
Bus	0.34	0.26	0.00	0.37	0.26	0.19	0.20	0.51	0.24
Train, Tube & Tram	0.19	0.17	0.18	0.21	0.15	0.13	0.16	0.14	0.15
Air	0.00	0.00	0.07	0.00	0.00	0.10	0.00	0.00	0.00
Cycle	0.00	0.00	0.00	0.13	0.12	0.13	0.12	0.13	0.12
AVERAGE	0.21	0.20	0.12	0.23	0.19	0.16	0.23	0.22	0.18
Year on year % change in total	N/A	-4.76%	-40.00%	+88.93%	-16.19%	-13.65%	+41.49%	-5.05%	-18.34%

2013/4 is skewed by air travel, which is 37% of the travel distance but much cheaper per km

Type of Journey	Calculated Yearly Emissions/£								
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Cars & Taxis	0.40	0.37	0.55	0.64	0.62	0.62	0.65	0.52	0.59
Bus	0.62	0.84	0.00	0.34	0.47	0.50	0.52	0.20	0.29
Train, Tube & Tram	0.35	0.39	0.37	0.24	0.33	0.37	0.32	0.29	0.26
Air	0.00	0.00	1.83	0.00	0.00	1.54	0.00	0.00	0.00
Cycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVERAGE	0.36	0.41	0.96	0.32	0.45	0.58	0.56	0.41	0.38
Year on year % change in total	N/A	+14.20%	+137.17%	-66.63%	+40.26%	+28.09%	-3.77%	-25.38%	-8.36%

Appendix 2: Office emissions summary

Type of Energy	Office Energy Use								
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Whole Building-Elec (kWh)	111210	108656	51,899	77,752	73,158	57,355	55,768	53724	53,729
Whole Building-Gas (kWh)	427490	174961	369230.77	157475	138224	166563	131887	91363	140,190
Whole Building-staff (FTE)	69	80	80	75	75	52	50	45	40
SWM staff (FTE)	3.60	3.75	3.25	3.75	3.00	2.22	2.65	3.38	3.6
SWM Use- Elec (kWh)	5802.26	5093.25	2108.41	3887.60	2926.32	2451.93	2955.70	4040.04	4835.6
SWM Use- Gas (kWh)	22303.83	8201.30	15000	7873.75	5528.96	7120.57	6990.01	6870.50	12617.1
Electricity Conversion factor	0.44548	0.44548	0.44548	0.44548	0.412	0.38443	0.29294	0.2556	0.23314
Gas conversion factor	0.18404	0.18404	0.18404	0.18404	0.18399	0.18416	0.18396	0.183	0.18387
SWM Use- Elec (kgCO2e)	2,585	2,269	939	1,732	1,206	943	866	1,033	1,127
SWM Use- Gas (kgCO2e)	4,105	1,509	2,761	1,449	1,017	1,311	1,286	1,257	2,320
SWM Total energy use (kgCO2e)	6,690	3,778	3,700	3,181	2,223	2,254	2,152	2,290	3,447
Change in SWM Elec Use (%)	N/A	-12.22%	-58.60%	+84.39%	-30.38%	-21.82%	-8.14%	+19.26%	+8.41%
Change in SWM Gas Use (%)	N/A	-63.23%	+82.90%	-47.51%	-29.80%	+28.91%	-1.94%	-2.22%	+45.80%
Change in SWM Total Energy Use (%)	N/A	-43.52%	-2.08%	-14.03%	-30.12%	+1.39%	-4.53%	+6.42%	+33.57%

Appendix 3: Normalised data summary

Normalised Data by FTE									
Type of Energy (KgCO ₂ e)	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
SWM Staff (FTE)	3.60	3.75	3.25	3.75	3.00	2.22	2.65	3.38	3.60
SWM Electricity Emissions	718.00	605.05	289.00	461.83	401.88	424.02	326.73	305.15	313.06
SWM Gas Emissions	1140.22	402.50	849.42	386.42	339.09	589.89	485.24	371.54	644.44
SWM Car and Taxi Emissions	25.83	21.87	120.92	99.20	114.00	139.90	266.99	124.94	115.03
SWM Train, tube and Tram Emissions	105.28	85.60	145.85	134.93	82.00	91.32	49.45	60.10	98.86
SWM Bus Emissions	1.11	12.27	0.00	1.07	1.00	1.80	2.74	0.54	1.87
SWM Flight Emissions	0.00	0.00	685.23	0.00	0.00	66.58	0.00	0.00	0.00
Total Office Energy Emissions	1858.22	1007.55	1138.42	848.25	740.97	1013.91	811.97	676.70	957.5
Total Travel Emissions	132.22	119.73	952.00	235.20	197.00	299.60	319.18	185.57	215.75
Total Combined Emissions	1990.44	1127.28	2090.42	1083.45	937.97	1313.50	1131.15	862.27	1173.25

Data by Turnover									
Type of Energy (KgCO ₂ e)	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Turnover (£1,000s)	305.027	245.007	196.209	170.635	171.656	130.806	149.625	149.500	172.666
SWM Electricity emissions	2.35	2.47	1.47	2.71	2.34	3.24	2.18	2.04	1.81
SWM Gas emissions	3.74	1.64	4.33	2.26	1.98	4.51	3.24	2.49	3.73
SWM car and taxi emissions	0.08	0.09	0.62	0.58	0.66	1.07	1.78	0.84	0.67
SWM rail and tube emissions	0.35	0.35	0.74	0.79	0.48	0.70	0.33	0.40	0.57
SWM bus emissions	0.00	0.05	0.00	0.01	0.01	0.01	0.02	0.00	0.01
SWM flight emissions	0.00	0.00	3.49	0.00	0.00	0.51	0.00	0.00	0.00
Total office energy emissions	6.09	4.11	5.80	4.97	4.32	7.75	5.43	4.53	5.55

Total travel emissions	0.43	0.49	4.85	1.38	1.15	2.29	2.13	1.24	1.25
Total combined emissions	6.53	4.60	10.65	6.35	5.46	10.04	7.56	5.77	6.79