Our Carbon Statement 2023/24

Progress through partnership

07 October 2024

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Executive summary

This is the second carbon statement MOSL has produced. It sets out the annual calculation of MOSL's Scope 1, 2 and 3 Greenhouse Gas (GHG) emissions. Our calculations are based on the UK Government's Greenhouse Gas Conversion factors – a commitment in the 'Our Business' section of the 2024/25 Sustainability Plan.

Our carbon emissions for the financial year 2023/24 are 90.15 t CO_2e. This is a 28% decrease from 2022/23.

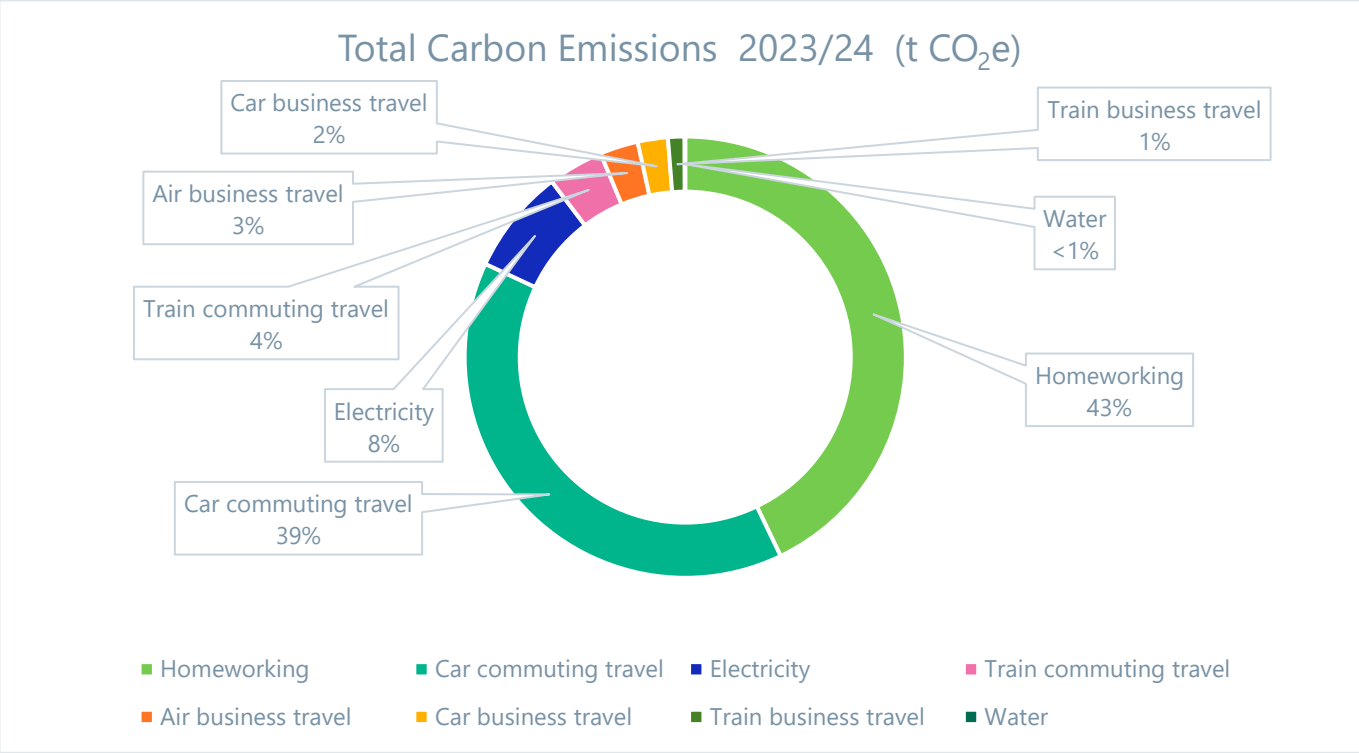


Figure 1: Total carbon emissions for MOSL in 2023/24

This year we have seen a decrease in our overall carbon emissions. We want to focus on making our carbon accounting calculations as accurate and consistent for future statements. This is our second time calculating our footprint; as such, we have improved the accuracy and identified minor errors in our initial reporting, which we reference in this year's report.

We have seen the greatest difference in our emissions in our commuting car travel data. The reason for this improvement is that better data on how colleagues travel for work purposes is being received, i.e., no longer assuming all colleagues use a large car, but now segmenting car travel into three distinct size and fuel categories. For a comparison of carbon emissions of all scopes, see Appendix A. Overall, the UK Government's Greenhouse Gas Conversion factors for 2023 have risen since 2022, leading to more emissions produced.

Building on the activities and progress made in 2023/24, we will continue focusing on making decisions in the best interests of the environment. In addition to awareness-raising activities, there will be an increased focus on gathering more granular data from colleagues and external suppliers to build a more detailed picture of our carbon footprint.

We will also clearly state our position on sustainability in our Environmental Policy which will be published in autumn 2024. The policy will act as the springboard for collaboration with external suppliers, actively encouraging sustainable behaviours in the organisations we work with. It will also ensure we hold ourselves to account in working with responsible businesses.

MOSL is a small, medium-sized enterprise (SME) with circa 83 employees. We lease one and a half floors (approximately 4,825 ft^2) in the White Building, Southampton. As we have leased premises, we do not have any Scope 1 emissions. Our water is charged based on the square footage of the building. Smart meters are installed on each floor to calculate electricity consumption. It should also be noted that our offices rarely operate at full capacity, so our actual water and carbon usage is likely to be significantly lower. However, this report aims to provide an accurate view of our carbon emissions based on available data.

Introduction

Climate change represents a significant challenge to our society. As a responsible business, we must do our part to reduce our carbon footprint and establish a sustainable future for people and our natural environment. In 2022/23, we carried out the necessary research to baseline our carbon footprint and report on our emissions for the first time.

This is the second carbon statement MOSL has produced, and it sets out the annual calculation of MOSL's Scope 1, 2 and 3 Greenhouse Gas (GHG) emissions and signposts future recommendations. As with everything we do, we must embed our values of expertise and clarity, so this year, our key aim was to improve our understanding of our carbon usage, improve the accuracy of our reporting and make recommendations for improvements.

Though not all areas of Scope 1, 2 and 3 are included, we have expanded our accounting in two key areas - electricity emissions and train travel for commuting and business. In last year's report, we recognised that our carbon emissions could increase as a result of our improved reporting. However, we have seen a 28% decrease in our total emissions (t CO_2e).

Our 2024/25 Sustainability Plan remains aligned with the UN Sustainable Development Global Goals to ensure we understand our priorities and the environment and industry in which we operate. Our carbon footprint benchmarking focuses on UN Global Goal 13 (SDG13): Climate Action. As part of SDG 13, scientists encourage everyone to take urgent action to combat climate change to limit and reverse global warming. Whilst we are not legally required to report our GHG emissions, we choose to do so as part of our commitment to being a responsible business.

MOSL's 2023/24 Carbon Footprint

MOSL's carbon footprint for 2023/24 is 90.15 t CO_2e and is primarily from Scope 3 emissions. Our research shows that only 7.75% of our footprint can be attributed to the office. Colleague commuting and homeworking still accounts for most of our carbon footprint.

The 2023/24 report states that heating and air conditioning contribute to 39% of our Scope 2 emissions. Refining our colleague travel survey to include vehicle size and type, saw our emissions for colleague

commuting by car reduce by 44.11 t CO_2e. Incorporating train journey calculations also meant that we reported a significant increase in kilometres by train for business travel. Similarly, the total distance travelled by air has risen. Colleague numbers and office attendance both increased, along with our water consumption. Despite this, our overall emissions have decreased from last year even though UK Government's Greenhouse Gas Conversion factors have increased. This is due to the increased accuracy of our reporting.

According to the Carbon Trust, the average SME generates around 15 tonnes of CO_2e annually, making up 50% of the total UK non-household emissions. However, considering an SME could have 50 to 250 employees, it is difficult to gauge whether our 90.15 t CO_2e footprint is excessive. Our calculations also include home working and commuting, which some SMEs may exclude. See our reported categories in Table 1.

Category	**Scope 1 (t CO_2e)**	**Scope 2 (t CO_2e)**	**Scope 3 (t CO_2e)**	**Total**
Homeworking			38.66	**38.66**
Commuting travel • Car • Train			 35.22 3.67	**38.89**
Electricity		6.95		**6.95**
Business travel • Air • Car • Train			 2.53 1.99 1.09	**5.61**
Water			0.04	**0.04**
Total	**0.00**	**6.95**	**83.2**	**90.15**

Table 1: Breakdown of carbon categories reported in Carbon Statement 2023/24

White Building improvements

In spring 2024, the White Building underwent significant upgrades to achieve an EPC "A" certification and was awarded the BREAM Excellent accreditation. The renovations included installing solar panels on the roof, which should significantly impact the electricity imported into the building. Lighting has been changed to low-wattage LEDs and uses REGO-certified green energy tariffs. New windows have been installed to prevent heat loss and we expect to see a small reduction in our bills and energy usage next year due to these upgrades.

Carbon Footprint

Reminder of our 2024/25 commitment

Climate Change: Take action to understand our carbon footprint and reduce it through science-based targets.

We will undertake greater and more targeted data collection across the business to understand our carbon output for 2023/24. This will include a remodelled colleague travel survey to increase the accuracy of our Scope 3 calculations. Applying the lessons learned and recommendations from our first Carbon Baseline Report for 2022/23, we will analyse the year-on-year comparison and outline clear actions to improve our carbon footprint.

Our three-year objectives

- Calculate and publish MOSL's Scope 1, 2, 3 GHG emissions on a bi-annual basis using UK Government conversion factors
- Improve the accuracy of emissions calculation over time
- Increase the scope of emissions reporting over time
- Identify opportunities to reduce our emissions
- Embed the impact of GHG emission in our procurement and tendering strategy

Our Approach

Last year we decided to calculate our carbon footprint in-house. We committed to using specific calculations and data points to stay consistent across the coming years. Accordingly, we used the 2023 GHG conversion factors to calculate our consumption for this report. Our approach, therefore, remains aligned with the UN greenhouse gas (GHG) protocols, grouping emissions under the appropriate scope.

Scope

The scope of our carbon footprint includes:

- Office electricity use
- Colleague commuting and business travel by car and train (mileage)
- Business travel: flights (mileage)
- Colleague homeworking
- Office water use

For 2023/24, the following emissions were out of scope for our calculations:

- Purchased services
- Office equipment and services
- Transport of goods
- IT services
- Waste disposal

Environmental Impact

Overall MOSL's carbon emissions are 90.15 t CO_2e with over 92% from Scope 3.

Scope 1 - Direct Emissions

Due to the nature of MOSL's business - we lease office space from The Ashville Group – we do not have any Scope 1 carbon emissions.

Scope 2 - Indirect Emissions

Emissions falling under scope 2 originate from the generation of energy that has been purchased.

Electricity

MOSL's air conditioning and heating are powered by electricity purchased from The Ashville Group and provided by Pozitive Energy. A breakdown of the fuel consumption is available in Appendix 1.

MOSL's office is located in a multi-tenant facility, but our electricity usage is calculated and charged quarterly using the exact consumption from our floor space within the White Building. All electricity is purchased for our own use and no renewable energy is used.

In our 2022/23 Carbon Baseline Report, we stated that heating and air conditioning were included in our Scope 2 emissions. However, after further research, we have discovered that these factors were not incorporated. The electricity used for air cooling and heating is broken out into different sections in our electricity reports: main and condenser. We were not aware of this a year ago, but since working more closely with Ashville Group, we have a clearer understanding of our electricity bills and the components they refer to. Our heating and air conditioning consumption will be disclosed and analysed in future statements to improve the accuracy of emissions calculation.

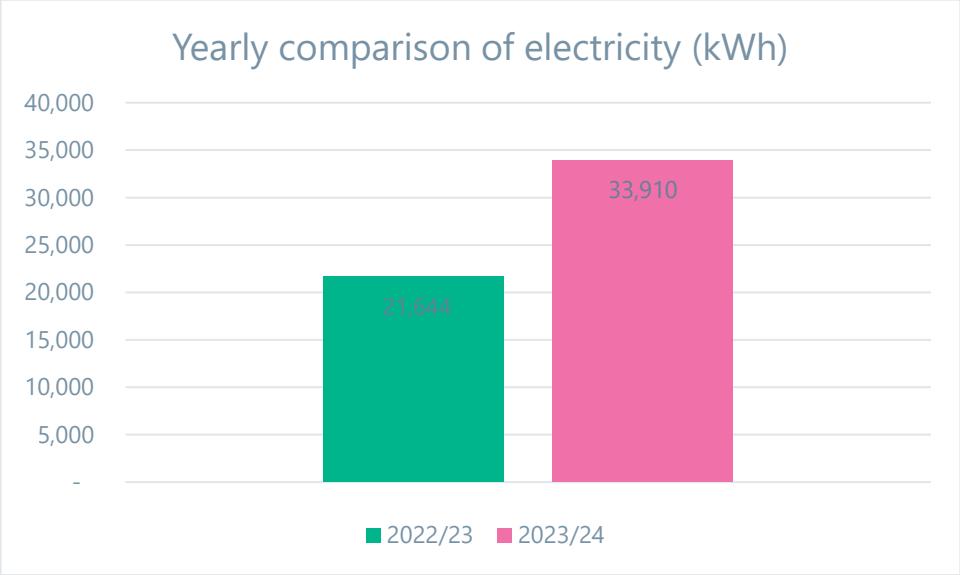


Figure 2: Yearly electricity kilowatts per hour comparisons

The total electricity usage for MOSL in 2023/24 is 33,910 kWh (see figure 2) which is equivalent to 6.95 t CO_2e (see figure 3).

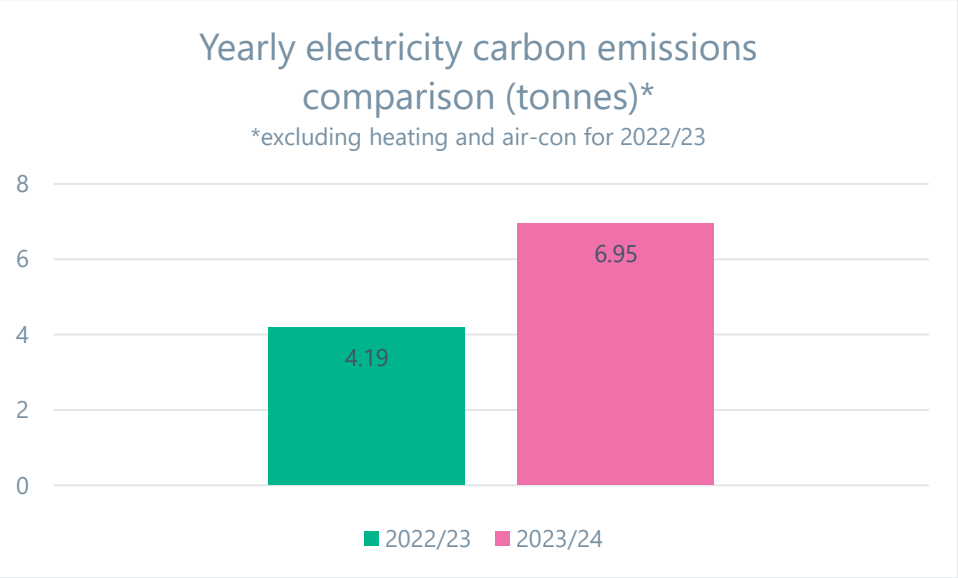


Figure 3: Yearly electricity carbon emissions comparisons

It is important to note that MOSL operates a hybrid working pattern and colleagues work mostly from home. For further information on homeworking emissions see page 14.

This year, we have seen an increase in the number of colleagues working from the office. An average of 128 people attended the office per month in 2022/23, which has risen to 134 people per month in 2023/24. See Appendix 2 for more details from our online booking system, Condeco.

When analysing the yearly comparison of electricity in MOSL's office, excluding heating and air conditioning (see figure 4), we have seen a 5.43% decrease in usage despite an increased office attendance. Although there are plans to raise awareness of electricity usage in the future (see page 16 for Switch It Off Campaign), we can observe that coworkers are becoming more mindful of turning off appliances.

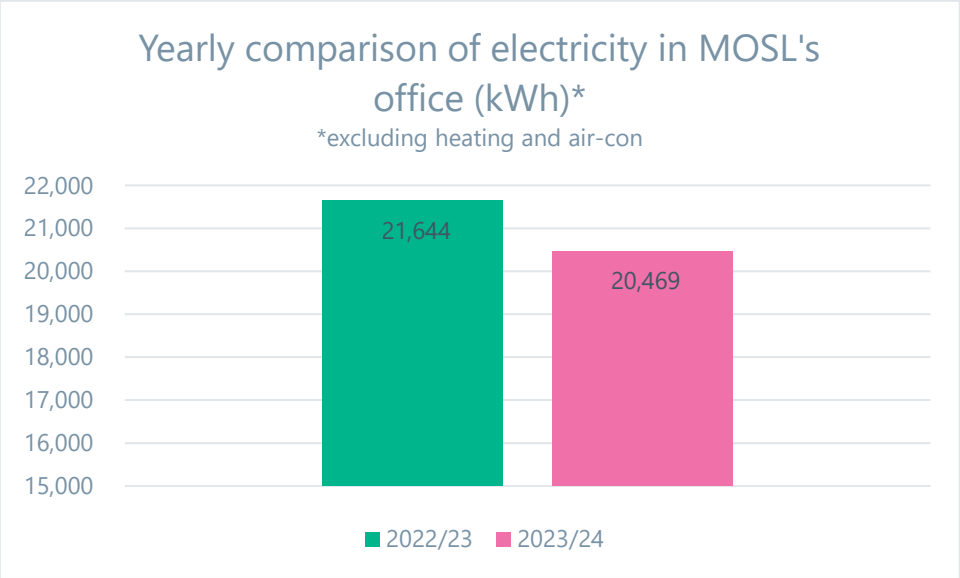


*Figure 4: Yearly comparison of electricity in MOSL's office (kWh) *excluding heating and air conditioning*

As illustrated in figure 4, 20,469 kWh (or 4.24 t CO_2e) of this consumption excludes electricity usage for heating and air cooling. We have calculated the difference between these totals to determine how much the CO_2 emissions from heating and air conditioning contribute to this scope. We found this equated to around 2.76 t CO_2e, or approximately 40% of our Scope 2 carbon emissions in 2022/23, if we assume the same kWh of electricity, excluding heating and air conditioning, was the same for both years.

You can find further analysis and comparison to our 2022/23 report in Appendix 1.

Scope 3 – Indirect Emissions

Scope 3 encompasses emissions not produced by the company itself and are not the result of activities from assets owned or controlled by them but by those indirectly responsible for them up and down its value chain.

Our Scope 3 emissions include colleague homeworking and commuting, business travel by car, train and flight, and office water use. Currently, we recognise that our main emissions output is from our top supplier, CGI, for our digital services, including the Central Market Operating System (CMOS). However, we do not have access to the data to provide us with an accurate carbon account for the cloud storage used and, hence, have not reported on this yet.

Colleague commuting

In May 2024, 84% of MOSL employees took part in a colleague travel survey, which sought to collect data on colleague commuting and gain further insight into modes of transport.

In the 2022/23 colleague travel survey, we did not ask for the size and type of vehicle colleagues used for commuting to the office. We rectified this for 2023/24. The data showed a significant discrepancy between last year's calculations of 79.09 t CO_2e for commuting by car and a result of 34.98 t CO_2e this year, representing a 55.8% difference (see Table 2 and Figure 5).

Reasons

- Last year's calculations were based on every colleague having a 'large car' (defined by the UK Government's carbon factors)
- This year large cars account for only 29% of commuting emissions
- This year's colleague travel survey asked how many times colleagues come into the office per month whereas, last year's survey asked per week. In doing so, this has provided more accurate data.
- The 2022/23 survey did not consider the total number of colleagues, only the ratio of those that responded to the travel survey. Calculations for this year's survey have been adjusted to account for this.

	2022/23	2023/24	Percentage Difference
t CO_2e	79.09	34.98	-55.80%
Average km per month	27686	16404	-40.80%
Average colleagues per month	79	83	5.10%
Average km per month per one colleague	350.4557	197.6386	-43.60%

Table 2: The data collected from the colleague travel survey for colleagues commuting by car for 2024/23

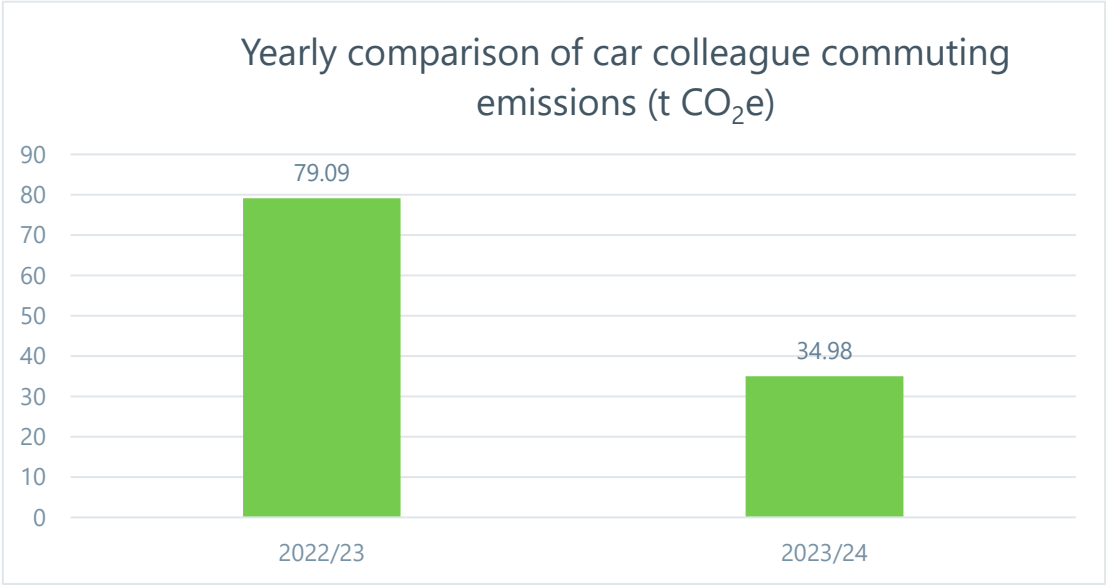


Figure 5: Yearly comparison of car colleague commuting emissions (t CO_2e)

Additionally, within the 2023/24 colleague travel survey, we collected train commuting emissions from colleagues (see Table 3). This data was unavailable for MOSL's 2022/23 Carbon Baseline Report; therefore, there is no data to compare this year's findings, causing a discrepancy in total CO_2 emissions

between both statements. Whilst collecting the data from the travel survey, an assumption was made that a direct train from the office address to the colleague's home address was made. As such, within our data, the distance travelled for journeys has been calculated as the most direct route.

Collecting data on train commuting has allowed us to better understand our colleague's commuting emissions. We now know that 25.3% of MOSL employees typically travel to the office by train.

Commuting travel	per month (km)	Total - one way (km)	Total - return (km)
National Train	**4,360**	**52,328**	**104,656**
Total CO_2e	**0.153**	**1.83**	**3.67**

Table 3: The data collected from the travel survey for colleague commuting by train for 2024/23

Business travel

This year colleagues travelled 39,046 kilometres for business purposes (see Table 4 for breakdown).

We monitor business travel through MOSL's expense process. This year, MOSL's business travel emissions from cars, trains and flights have increased by 7% from 5.22 t CO_2e in last year's Carbon Statement to 5.61 t CO_2e this year. Business travel refers to travel expensed by colleagues for non-commuting journeys, such as in-person conferences, training events and trading party site visits. Despite this 7% increase, equating to 0.39 t CO_2e, the total mileage travelled saw a much larger increase of 75%, with an additional 24,449 km recorded. This can be seen by Figures 6 and 7 below.

Table 4, below, indicates the travel information we gathered based on MOSL's current expense form.

Mode of transport	Distance (Kilometres)	No. of journeys
Car	12,009.60	101
Flight	13,676.21	6
Train	31,159.80	169

Table 4: Table indicating the travel information we gathered based on MOSL's current expense form

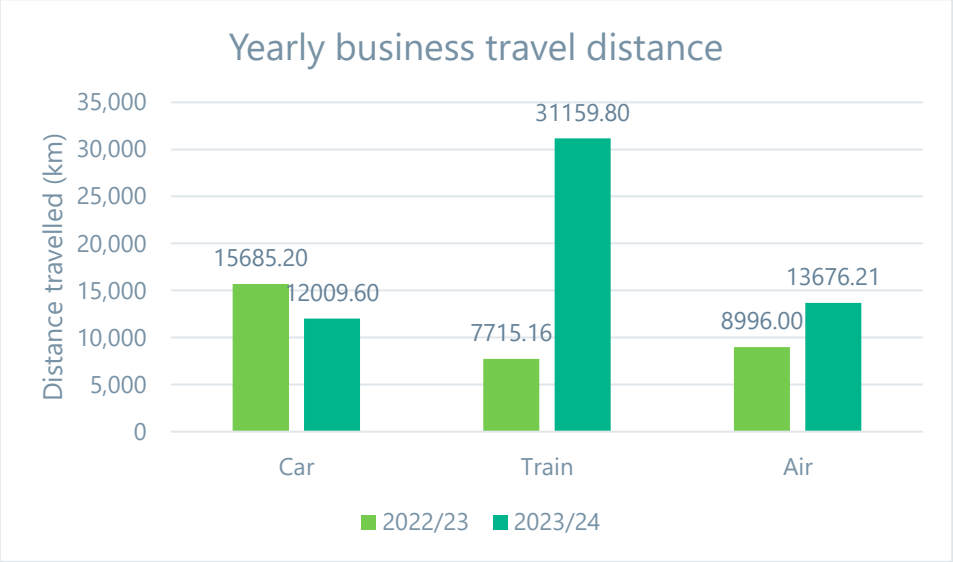


Figure 6: Yearly distance travelled (km) for business travel in 2023/24

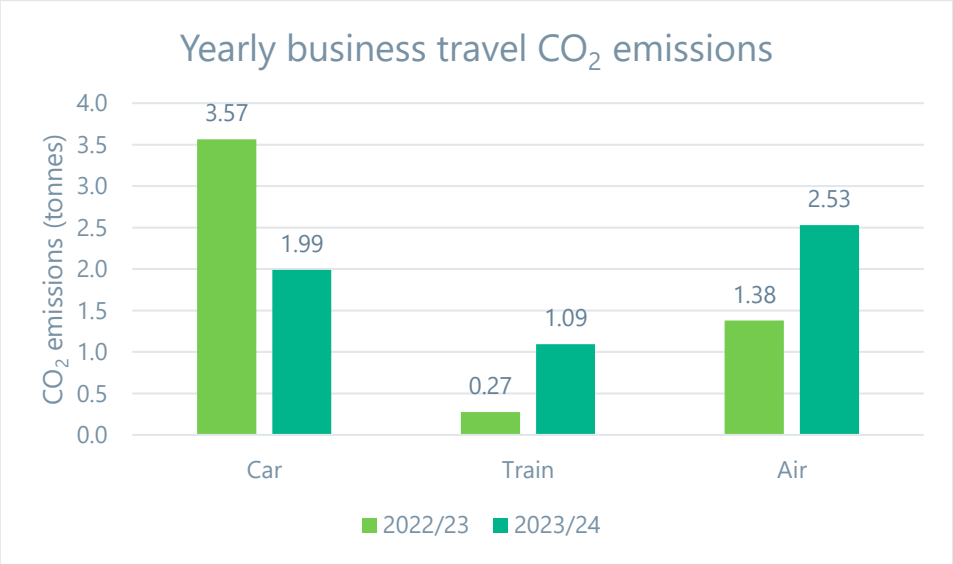


Figure 7: Yearly t CO_2e business travel for 2023/24

Car business travel

To better represent MOSL's driving population emissions for business and commuting, we took the average kilometres per month per colleague and the proportion of colleagues who drive. Last year, we assumed all colleagues used a large car when submitting a business travel expense by default. This year, we have used the proportion of colleagues who commute to work by car from the colleague travel survey for our calculations which resulted in a significant decrease in our carbon emissions.

The total car business travel distance decreased by 3,676 kilometres this year. Combined with more accurate reporting of car types, this led to a significant reduction in our emissions from 3.57 t CO_2e to 1.99 t CO_2e. See the graphs in figures 6 and 7 above.

Train business travel

Reported train travel increased by 23,445 kilometres this year, as seen in figure 6, resulting in total emissions of 1.09 t CO_2e, as seen in figure 7. The 304% increase in kilometres by train and associated spike in total emissions can be attributed to more in-person meetings held in London, which were previously virtual, and encouragement for colleagues to attend networking and industry events. This trend is expected to continue next year, but it is positive that the increase is in a public transport method rather than more carbon-intensive car travel.

While reviewing last year's dataset, we cannot guarantee all returned train trips were reported. This year, we have had a thorough dataset provided to us which evidently included returned trips. We had 70 reported business train travel last year, compared to 170 reported this year.

Air business travel

This year there has been notable growth in air travel relating to an increase in the number of visits to the CGI office in Warsaw, Poland. During this time, MOSL renegotiated our contract with CGI, our biggest digital partner. The total distance travelled by air has risen by 52%, which translates to an additional 4,680 kilometres. This increase in air travel distance equates to an additional 1.15 t CO_2e and has significantly impacted air travel emissions by 83%. This considerable rise in both air travel distance and emissions highlights the growing environmental impact of flying.

Homeworking

As a hybrid workplace, MOSL colleagues predominantly work from home, which minimises carbon emissions from commuting, but still has an impact on our overall carbon footprint. Homeworking accounts for 42.9% of MOSL's carbon footprint, which factors in heating and electricity usage.

Using the data collected from the colleague travel survey, we calculated this year's homeworking CO_2 emissions to be 38.66 t CO_2e - a 3.45% decrease from 2022/23 (see figure 8). This decrease is likely due to more colleagues going into the office every month (see Appendix 2), with in-person meetings being encouraged more for collaboration.

Last year, we did not exclude annual leave and bank holiday hours to calculate the total homeworking hours. Upon review, we have corrected this for our 2023/24 carbon footprint and can see the reduction of emissions despite an increase in colleagues.

These homeworking calculations assume that if a colleague is not in the office, they will be working from home. Remote (i.e. neither in the office nor from home) working has not been factored into this analysis. We recognise that some colleagues occasionally work from a train or a coffee shop, however, the Government Greenhouse Gas Reporting framework does not include a remote working factor, so we have been unable to attain a more granular view of non-office working.

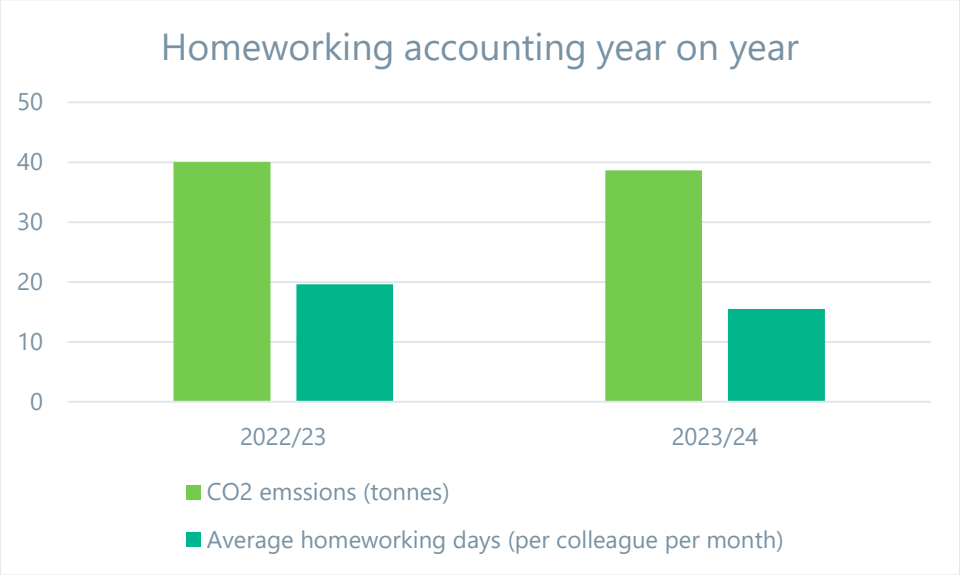


Figure 8: MOSL's carbon accounting for homeworking comparisons

Water

MOSL encourages water-saving behaviours and shares sustainable insights regularly. We have continued to better understand our water consumption and actions.

As outlined in last year's statement, MOSL operates as part of a multi-occupied building, and as such, our water is charged as a percentage of the total building consumption. Since the building has one water meter and is a shared premises, our water bill is calculated within a service charge. Due to this fact, our actual usage is unknown.

However, using Central Market Operating System (CMOS) data for our supply point, we have found this to be a more accurate way to measure our consumption. This year our water consumption for 2023/24 is estimated as 215.61 cubic meters, considering MOSL occupies 9.63% of the White Building. The calculations can be found in Appendix 3.

Figure 9 below represents the increase in water consumption and carbon emissions from 2022/23 to 2023/24. There has been an increase of 30% in water consumption (m^3) for MOSL, however since our water bills are split by square foot across the multi-occupancy site, this could be due to an overall increase throughout the building itself. Our carbon emissions (t CO_2e) have also increased by 52% for our water usage, which could be a result of the new carbon conversion factors from the UK Government.

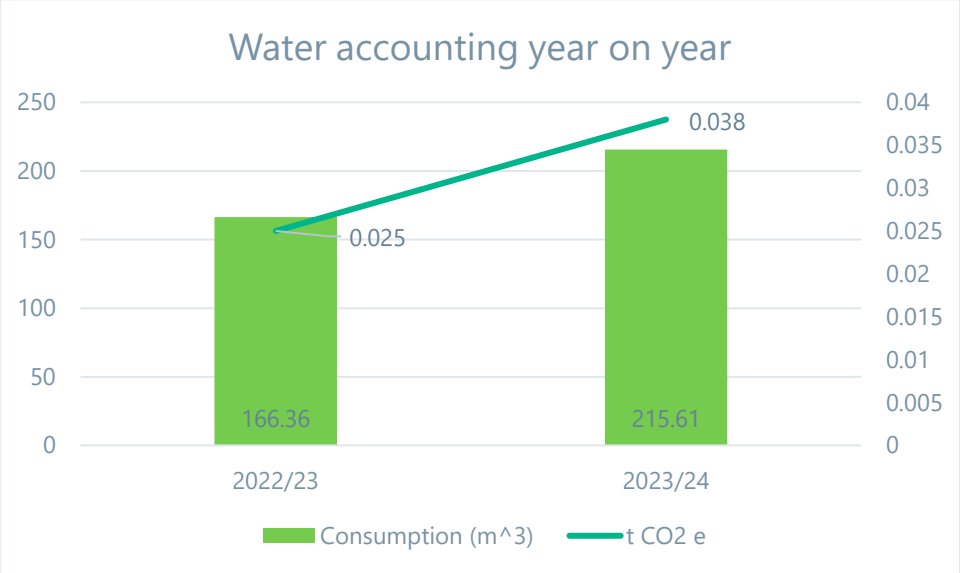


Figure 9: MOSL's water accounting comparisons

Recommendations

Carbon Improvements

Our focus for 2024/25 will be on driving environmentally friendly decision-making at MOSL. This will encompass awareness-raising activities such as a 'Switch It Off' campaign, as well as the introduction of a tool that will enable colleagues to record their carbon footprint when travelling for work via the new expense system.

Externally we are looking to achieve increased clarity and granularity in relation to Scope 3 for inclusion in future carbon statements. We must address our Scope 3 emissions to make a significant impact on climate change, as these emissions often make up more than 70% of a company's carbon footprint.
In 2024/25 we will:

- Identify MOSL's suppliers who have contracts over £20,000
- Engage with each supplier to:
    - Outline our approach to sustainability and raise awareness of our Environmental Policy
    - Set out our expectations in relation to sustainability as an organisation
    - Gain a better understanding of where each supplier is on their sustainability journey
    - Work with each supplier to identify the business benefits of becoming a more sustainable organisation
    - Develop a questionnaire that all suppliers with contracts over £20,000 will be expected to complete for us to give consideration to any tender
    - Introduce a sustainability clause for new contracts or an annual spend of over £20,000.

Environmental Policy

The MOSL Environmental Policy was approved by the MOSL Board in July 2024.

The policy, along with MOSL's Sustainability Plan, represents our position on sustainability and the practices that we, as an organisation, encourage our suppliers and stakeholders to apply in conducting business.

Next Steps

Following the publication of this report, we will define a small number of key performance indicators (KPIs), which will be published by the end of the financial year as part of our sustainability commitment. These will not form part of MOSL's quarterly report or core service KPIs but will be monitored as part of our sustainability commitments.

Appendices

Appendix A

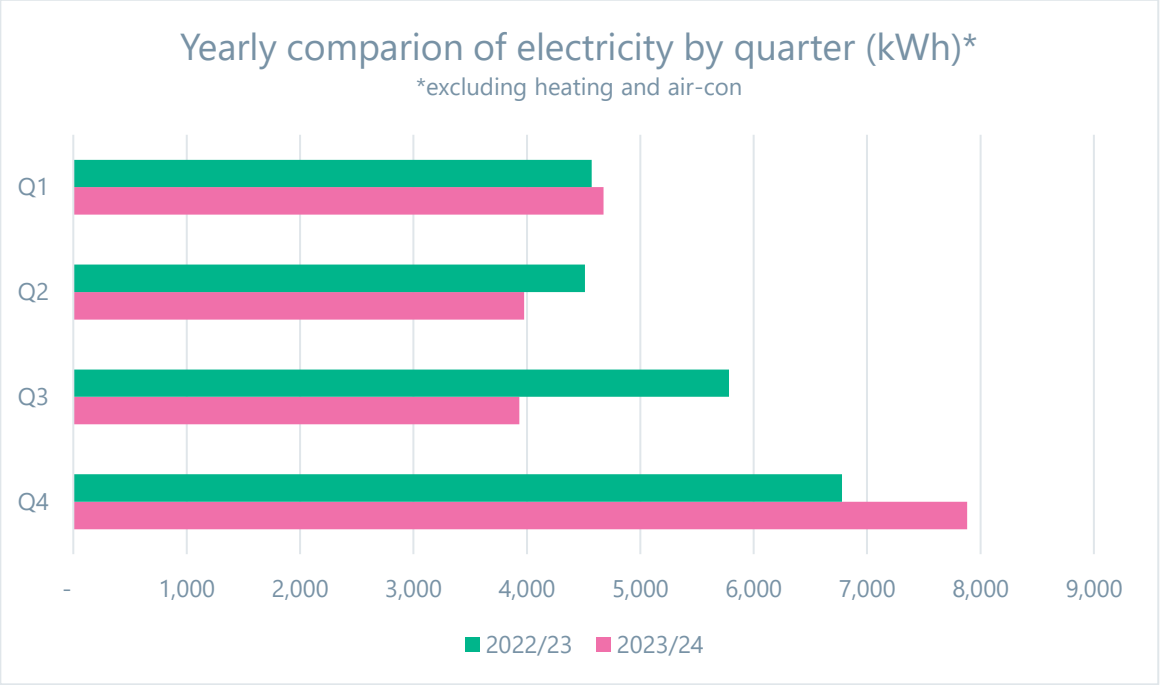
The breakdown of our carbon statement for 2023/24 compared to our baseline. This provides insight into which categories have seen accuracy improvements.

Scope	2022/23 t CO_2e	2023/24 t CO_2e
Scope 1	0.00	0.00
Scope 2 Electricity	4.19	6.95
Scope 3 Commuting travel • Car • Train	75.53	 35.22 3.67
Homeworking	40.04	38.66
Business travel • Car • Air • Train	3.57 1.38 0.27	1.99 2.53 1.09
Water	0.02	0.04
Total	**125.00**	**90.15**

Table 5: A breakdown of the measurable categories MOSL can account for our carbon footprint

Appendix 1

The graph below is aggregated by the financial quarter and shows some interesting, skewed patterns. Currently, we are unable to shed any light as to why the electricity usage almost doubled from quarter three to quarter four in 2023/24, or why quarter three used sufficiently less kWh in 2023/24 than in 2022/23. However, it is evident that throughout the financial year our electricity usage increased. This will be due to simply using the office facilities over the year more frequently, but investigations are ongoing.



Appendix 2

The Condeco figures across the first two years of carbon accounting are:

Year	Total colleagues in the office	Average colleagues per month in the office *(18.87 average business days in a month)*
2022/23	1540	128.33
2023/24	1615	134.58

Appendix 3

Table showing the breakdown of MOSL's water consumption for 2023/24. For further information see our first Carbon Baseline Report.

2023/24	
Cubic meters per year	2238.9551
MOSL office (%)	9.6301
MOSL Cubic meters per year	215.6136151
Mega litres per year	0.215613615
GHG t CO_2e	**0.03810**