

VMI CARBON AUDIT REPORT

2023 FINANCIAL YEAR
MARCH 2024

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INTRODUCTION

This report outlines VMI's annual carbon footprint measuring operational activity for the financial year running from 1st Jan 2023 to 31st December 2023. Ongoing measurement provides a basis from which to assess current short-term and long-term emission reduction goals as part of VMI's wider sustainability strategy.

A Carbon Footprint is measured in 3 Scopes:

Scope 1: direct emissions that come from fuel burned on site such as gas used for heating.

Scope 2: indirect emissions that come from energy purchased from other sources, such as electricity.

Scope 3: indirect emissions from everything else across the business from up and down the value chain. It's measured in 15 categories (as applicable), such as business travel, waste, purchased goods and services, staff commuting etc.

To accurately reflect the emissions that VMI has direct control over – in line with the Science-Based Target Initiative and GHG Protocol guidelines for SMEs - this report shows the emissions with and without capital expenditure and using both the operational control boundary and the market-based approach.

The total footprint is measured in tonnes of CO₂e (carbon dioxide equivalent); CO₂e is the collective unit of measurement of Greenhouse Gases including carbon dioxide, methane, nitrous oxide and water vapours. The footprint was calculated using Climate Essentials, with supporting evidence provided by Barry Bassett of VMI.

EXECUTIVE SUMMARY

Total Carbon Footprint

VMI's total footprint, over the period 1st January to 31st December 2023, was **307.2tCO₂e**. This figure includes capital expenditure purchases.

What does 307.2tCO₂e look like in real terms?

307.2tCO₂e is the equivalent of:

900 return economy class flights from London to Barcelona,

OR driving a petrol car around the earth 99 times,

OR someone existing in the UK for 23.5 years.

Including CapEx, Scope 1 and 2 make up 8.9% and 1.1% respectively. The largest emissions come from Scope 3 (90%); The largest areas are CapEx, specifically items such as batteries (for hire, not consumables), film equipment, lighting equipment; purchased goods & services outsourced such as IT, accounting and advertising and employee commuting.

VMI has reduced their footprint, incl CapEx, by 41% compared to 2022 (514.5tCO₂e) and has increased their footprint by 32% compared to the 2019 baseline (231.6tCO₂e¹). It is important to note that VMI expanded their scope of measurement from 2021 to include more areas of £spend and more accurate employee data, so this particular 2019-2023 comparison is not like for like.

Total Carbon Footprint excluding CapEx

VMI's footprint, including all other relevant scope 3 emissions but without Capital Expenditure is **77.8tCO₂e**.²

What does 77.8tCO₂e look like in real terms?

77.8tCO₂e is the equivalent of:

153 return economy class flights from London to Barcelona,

OR driving a petrol car from Lands End to John O'Groats and back 114 times,

OR the average person living in the UK for 6 years.

¹ 231.6tCO₂e is the total measured emissions for 2019 incl CapEx, as listed in Climate Essentials.

² 77.83tCO₂e is the figure excluding CapEx items listed as 'Capital Goods' on Climate Essentials. This is in line with the methodology used for the 2019 baseline figure (123.7tCO₂e).

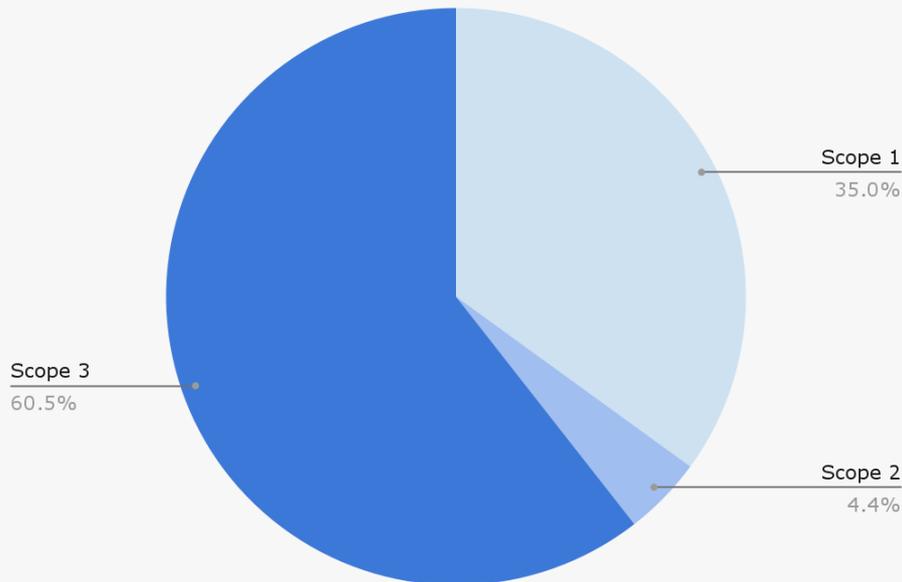
The largest emission areas are services employed such as IT, accounting and advertising (32%), transport from diesel vans (25.1%) and employee commuting and home working (23.4%).

VMI has reduced their footprint, excluding CapEx, by 37% compared to the 2019 baseline figure (123.7tCO₂e) and a 36% saving compared to 2022 (121.4tCO₂e).

**VMI'S OPERATIONAL
CARBON FOOTPRINT
HAS REDUCED BY
36% SINCE 2022.**

2023 CARBON FOOTPRINT BREAKDOWN

VMI's carbon footprint, excluding CapEx, across both London and Bristol sites is **77.83tCO₂e** and is broken into Scopes as follows:



A pie chart showing breakdown of scopes by percentage across both VMI sites.

Scope 1 | 35% | 27.26tCO₂e - Diesel vans, AC refrigerants.

Scope 2 | 4.4% | 3.45tCO₂e - Electricity for EVs.³

Scope 3 | 60.5% | 47.13tCO₂e - Purchased goods & services, fuel and energy related activities, freight, waste, employee commuting and home working.⁴



9.9tCO₂e per full-time employee

The largest emission areas are; purchased goods and services such as outsourced IT, accounting and advertising (32%), transport from diesel vans (25.1%) and employee commuting and home working (23.4%). Climate Essentials removes all emissions associated with gas use if the reporting company has a 'green gas tariff', which VMI does. Gas is not a renewable energy. A 'green gas tariff' is fossil fuels which have had their emissions offset. Whilst it is important to recognise offsetting, avoiding fossil fuel use at the outset is the priority. If this was not selected, VMI's total footprint would increase by 7.6% (5.9tCO₂e)⁵.

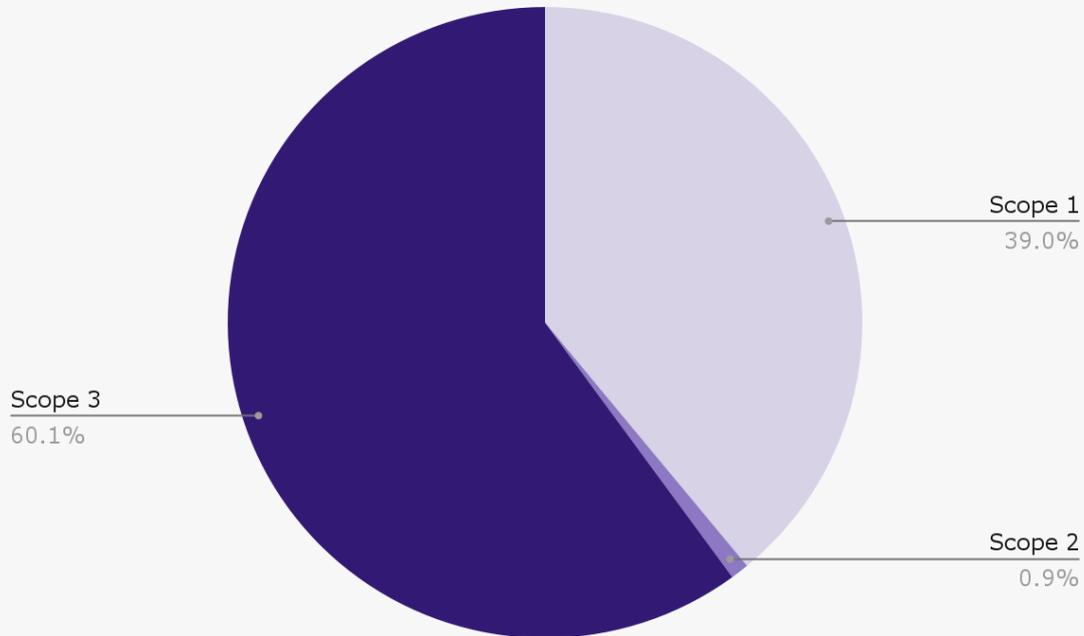
³ There is no mechanism on the Climate Essentials platform to differentiate the energy tariff with which these vehicles were charged.

⁴ These are the Scope 3 emission categories as listed in Climate Essentials. No business travel emissions were created in 2023.

⁵ Creative Zero best practise is to disclose all created emissions. However, in keeping with previous methodology used with VMI and the Climate Essentials platform, these figures have been recorded as excluded due to being 'offset'.

2023 VMI CARBON FOOTPRINT BREAKDOWN | LONDON

VMI's carbon footprint, excluding Capex, in London is **66.7tCO₂e**, making up 86% of the total 2023 footprint. It is broken into Scopes as follows:



A pie chart showing breakdown of scopes by percentage for London.

Scope 1 | 39% | 26.02tCO₂e - Diesel vans, AC refrigerants.⁶

Scope 2 | 0.9% | 0.62tCO₂e - Electricity for electric cars from commuting.

Scope 3 | 60.1% | 40.05tCO₂e - Purchased goods & services, fuel and energy related activities, freight, waste, employee commuting and home working.



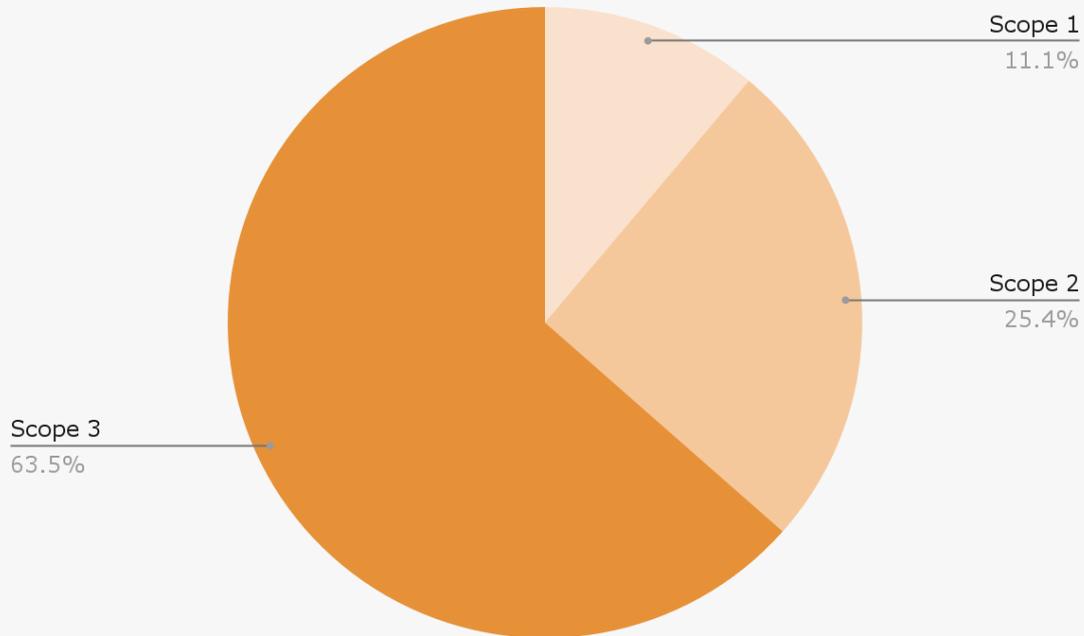
11.4tCO₂e per full-time employee.

The largest contributors in London are Purchased goods and services (33%), diesel vans (27%), employee commuting (24%) and AC refrigerants (12%). These are in line with the largest contributors across both sites in the total footprint.

⁶ 5.7tCO₂e would be included in Scope 1 emissions if VMI were not on a 'green gas tariff'. These are still fossil-fuel caused emissions but they have been offset by the gas supplier.

2023 VMI CARBON FOOTPRINT BREAKDOWN | BRISTOL

VMI's carbon footprint, excluding CapEx, in Bristol is **11.1tCO₂e**, making up 14% of the total 2023 footprint. It is broken into Scopes as follows:



A pie chart showing breakdown of scopes by percentage for Bristol.

Scope 1 | 11.1% | 1.24tCO₂e⁷ - Diesel vans.

Scope 2 | 25.4% | 2.83tCO₂e - Electricity for electric vans.

Scope 3 | 63.5% | 7.07tCO₂e - Purchased goods & services, fuel and energy related activities, waste, employee commuting and home working.



2.2tCO₂e per full-time employee.

The largest contributors to the footprint total in Bristol are Electricity for company-owned electric vans (25%), purchased goods and services (24%) and employee commuting and home working (20%). Emissions from charging VMI owned vans are calculated through mileage. If vans were only charged onsite at VMI, this figure would be nil. However, there isn't evidence to guarantee this and Climate Essentials doesn't provide a mechanism to record it.

⁷ 0.2tCO₂e would be included in Scope 1 emissions if VMI were not on a 'green gas tariff'. These are still fossil-fuel caused emissions but they have been offset by the gas supplier.

ENERGY USE | MARKET-BASED, LOCATION BASED APPROACHES AND ON-SITE ENERGY GENERATION

VMI has opted to report on both location and market-based approaches for completeness and a willingness to adhere to best practice advised by GHG Protocol, although it is not a requirement for the size of the organisation.

The market-based method calculates emissions from electricity that companies have either intentionally selected or have been limited to. Emissions are determined by the electricity emissions associated with contractual agreements based on the company's electricity providers. This method is important to recognise when the provider exclusively uses 100% renewable energy sources, which VMI's does.

The location-based method employs the average emissions intensity of a country to determine emissions and doesn't account for Renewable Energy Certificates or Guarantees of Origin (REGOs) supplied by energy providers. The average UK grid carbon intensity factor for the reporting year is used. This is an important method to use as it acknowledges the actual electricity reaching VMI and that businesses play a role in advocating for the decarbonisation of the national grid as a whole.

When reporting using the location-based approach, VMI's electricity-related emissions increase from 3.45tCO₂e to 11.91tCO₂e.

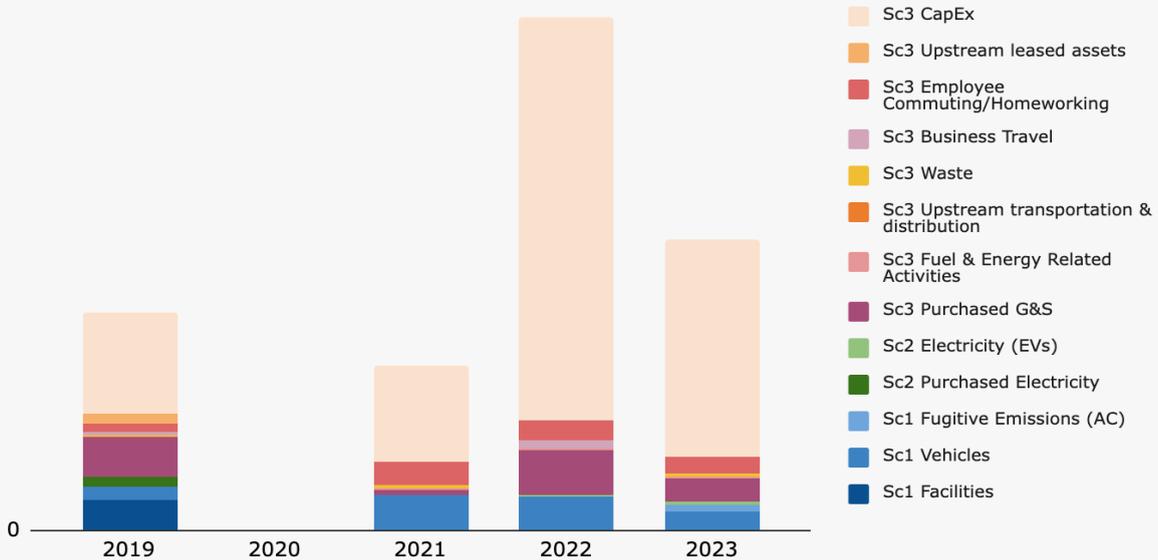
This report also includes, in both the market and location-based figures, the 15,724kWh of onsite energy generated across both sites bolstered by the expansion of solar panels to 55KW in 2023. VMI were net exporters of energy thanks to solar in both May and June of the reporting period.

**VMI HAS ACHIEVED
A 47% REDUCTION
IN SCOPES 1 & 2
EMISSIONS SINCE
2019.**

YEAR ON YEAR COMPARISON | REDUCTION PATHWAY

YoY Comparison | Including CapEx

The graph below illustrates distribution of emissions created by VMI through the years of reporting including CapEx for completeness.

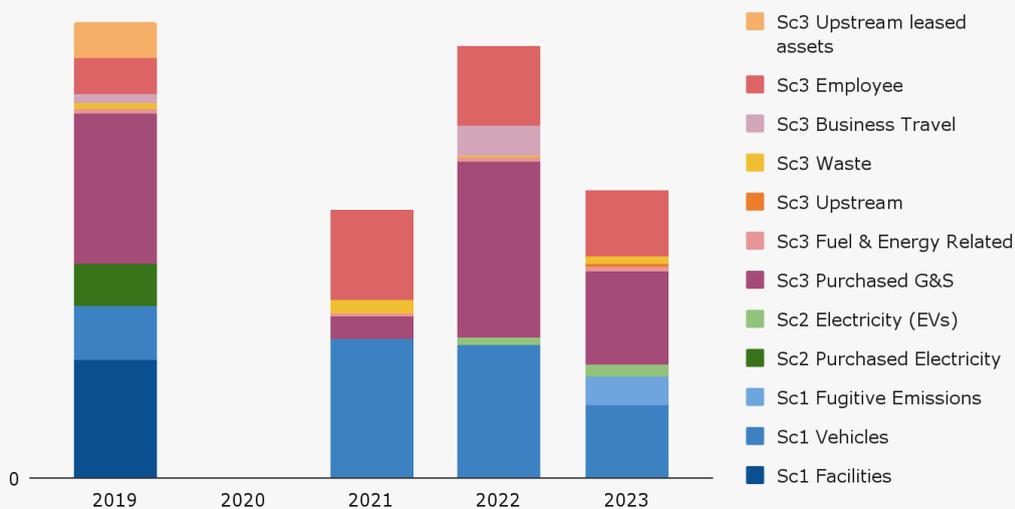


YoY Comparison | Excluding CapEx

VMI's footprint is 77.8tCO₂e.

VMI has reduced its footprint by 37% compared to the 2019 baseline figure (123.7tCO₂e) and a 36% saving compared to 2022 (121.4tCO₂e).

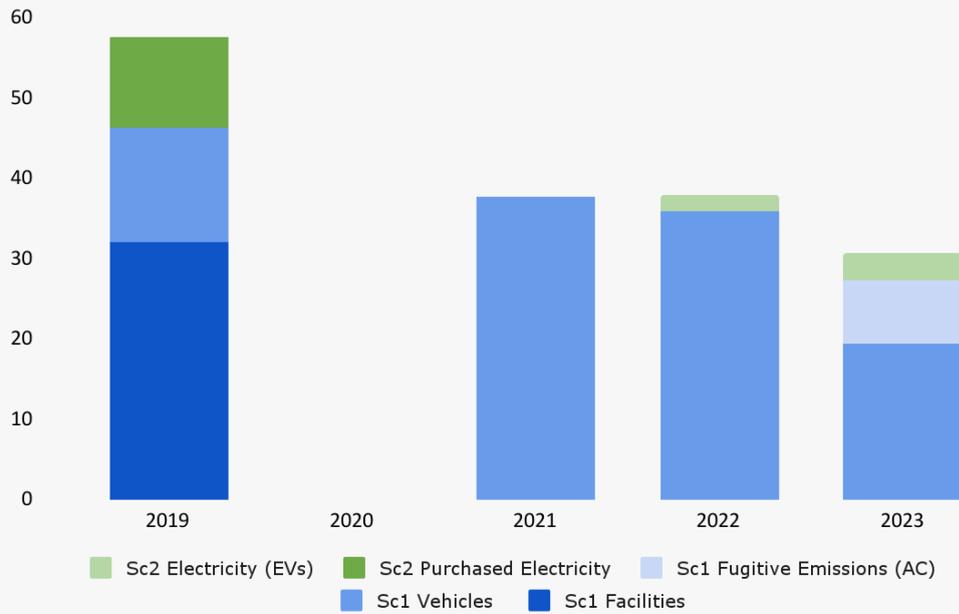
The graph below illustrates distribution of emissions created by VMI through the years of reporting excluding CapEx.



YoY comparison | Scopes 1 & 2 Exclusively

The graph below illustrates continued and significant reductions in VMI's Scope 1 and 2 emissions since 2019.

- Total reduction of 47% in Scopes 1 & 2 since 2019.
- Scope 1 reduced from 46.4tCO₂e to 20.2tCO₂e.
- Scope 2 reduced from 11.28tCO₂e to 3.45tCO₂e.
- A 20% reduction in Scopes 1 & 2 since 2022.



REDUCTION RECOMMENDATIONS & NEXT STEPS

INTRODUCTION

This section outlines recommendations based on the largest contributors to VMI's Carbon Footprint. These recommendations should be included in VMI's strategy to create positive environmental impact throughout the business. They are aligned with UK Government legislation of net-zero by 2050, the [Mayor of London's plan](#) for a net zero London by 2030 and Bristol City Council's [Mission Net Zero](#).

If these recommendations are accepted as near and far targets for VMI, we can add them to the Net Zero Pathway in next year's reporting.

A NOTE ON CAPITAL EXPENDITURE

Capital Expenditure has been measured and figures included for completeness in this audit, however VMI has little to no control or influence over the emissions created in the making of products they purchase as Capital Expenditure. VMI can not create or implement policies to directly reduce these emissions and the amount of these products that VMI needs to purchase to stay in business is largely determined by their clients. Further, the significant size of VMI's CapEx emissions skews graphing and analyse to the point of making these charts unuseful. By excluding, VMI can see, with further clarity, where they can make the most direct and fruitful reduction actions.

It is recommended that VMI still engage with its upstream suppliers, prioritising by based on top spend, and apply any influence they have, requesting these suppliers to reduce and offset/inset/carbon-remove their emissions. In addition, VMI should ensure they maximise the life of all CapEx purchases. Requesting product-level emissions data for its Capital Expenditure in future years will allow VMI's CapEx emissions to be mapped more accurately, the request for this data is likely a good mechanism to market-signal to these manufacturers that hire companies, like VMI, are going to be making CapEx choices partially based on emissions in the near future.

STAFF ENGAGEMENT

Staff engagement and communication will be a vital part of the success of a sustainability strategy. It is recommended that employees are sent this document and space is given to report back with suggestions and questions of how to make best use of the information in their departments. Staff commuting and homeworking are a significant part of shared emissions. These are difficult to tackle from solely a business angle because of intersectional and personal impacts on staff. If staff are engaged in the

conversation and have a role in business adaptations, these conversations often become easier rather than feeling ‘top-down’. Reviewing commuting vs homeworking on a case by case basis is likely needed for decarbonisation, and solutions will likely need equity rather than equality.

Staff can also likely be pivotal in reducing purchased goods & services and CapEx emissions. Simple measures such as good care and repair of equipment and ensuring full use of basics before replacing (pens, cleaning supplies, etc) can all be great emission-reducers.

SCOPE 1 | DIRECT EMISSIONS FROM FUEL BURNED ON SITE

Business-owned transport

Diesel accounts for 25% of VMI’s footprint. Reviewing the Avoid - Improve - Shift model for transport is suggested⁸.

- **Avoiding** fuel use at the outset, e.g. prioritising electric vehicles and vans, would remove these emissions.⁹ VMI could also consider space for more EV charging stations where possible.
- When that is not possible, **shifting** to alternative drop-in fuels is the next best step. By replacing diesel across the fleet with HVO, emissions are reduced by up to 90% when compared to diesel, as well as reduced air pollution benefits.¹⁰
- VMI could consider using a telematics system to **improve** insight into fuel use. It is also suggested to have regular low-emission driving training with staff to encourage **improved** practices - this would help reduce overall fuel consumption.

Fossil fuel-based facility heating

The installation of a ground or air-source heat pump could reduce natural gas use and emissions (5.6% of the total footprint had they been counted on the Climate Essentials platform) and could boost cost-saving. Using the [Boiler Upgrade Scheme](#), VMI could apply for a grant of up to £6,000 to help with the installation of a biomass or heat pump. Ensuring significant energy efficiency, for instance, heating insulation and window upgrades, may be required when making this decision.

⁸ Read more about the use of Avoid, Improve Shift for film & tv supplier’s in [The Fuel Report](#).

⁹ VMI has begun the endeavour to electrify the fleet. Bristol is 1 year diesel-free at the time of writing. The delay in this initiative is due to the current lack of manufacturing of EVs for large carry capacity.

¹⁰ Read more about the benefits for film & TV equipment hire companies of HVO use in PixiPixel’s [HVO Case Study](#) showing a 87% climate impact reduction in fuel consumption in one year.

SCOPE 2 | INDIRECT EMISSIONS FROM PURCHASED ELECTRICITY

To further reduce both Scope 1 & 2 emissions, it is suggested VMI carry out a facilities energy audit, and as a result, outline an Energy Management System (EMS) to reduce overall energy use. This may also support emissions reductions and lower utility bills. This may include reviewing and assessing all recommended changes that have been listed on EPC Recommendation Reports. EPC calculations will change in 2025 so these will need to be reviewed and further changes based on that.

NB: Although renewable energy is used throughout VMI sites, energy efficiency measures remain crucial to ensure distribution of renewable energy as the global supply is not entirely renewable - yet!. Each kWh used in renewables is another piece of coal somewhere else.

SCOPE 3 | INDIRECT EMISSIONS FROM OTHER ACTIVITIES

Scope 3 accounts for all other indirect emissions from business-related activities. As VMI doesn't have direct control over these emissions, it is crucial to use and communicate company policies to employ purchase power in reduction efforts. A culture where climate-impact is prioritised in decision making empowers staff and demonstrates to clients that VMI are committed to supporting the industry's transition to low-carbon. Suggestions include:

Internal Communications

- Conduct an employee home working analysis; Analyse the difference in emissions impact between energy used homeworking or office working and energy used in commutes across both sites and adjust policies accordingly.

Suppliers

- Use your purchase power: Create a procurement programme which asks what suppliers are doing to measure and reduce their emissions, and engages with them to ensure they have the help and collaboration needed on their own pathways to decarbonisation. Switch where possible, to local suppliers of goods to reduce transport emissions.
- Prioritise these efforts by starting with suppliers you spend the most with.
- Financial investments, including pensions, reviewed and if necessary, moved from institutions investing in arms, coal, oil and natural gas. (Not yet acknowledged in carbon footprinting)
- Further the transition of client consumables into rental/reuse; phasing out consumables.

External Assessment

VMI has made significant decarbonisation progress. It may be a good time to consider assessing the company against an external metric or certification such as the United Nations Sustainable Development Goals, BCorp Impact Assessment or EcoVadis. These would include reviewing the company's social and environmental efforts, and would offer VMI a thorough review along with a third party accolade to use in communication. VMI could consider signing up to [Race 2 Zero](#) to access their resources and showcase their commitment to reaching net zero.

New London Premises

Review the feasibility of installing LED lighting, loft and wall insulation, solar panels (PV), MVHR system, Reverse Cycle Heat system (with electric boiler for water), window replacement and eco toilets at the new London facility, preferably while it's being built to avoid retrofitting which often creates extra cost and waste.

IMPROVEMENTS FOR MEASUREMENT

Scope 2 emissions

All Scope 2 emissions were created through EV charging. Recording how any company-owned vans were charged e.g. on-site using 100% renewable energy or tracking off-site charging would allow further confirmed reductions. EVs used by staff are already associated with home energy use; 100% of EV owners also had renewable energy at home. However, Climate Essentials has no mechanism to account for this. It is suggested this is brought to the platform's attention.

Scope 3 emissions

Simplifying and streamlining suppliers throughout VMI, for example using a single provider for each service where feasible, such as couriers. This will help with collecting information such as account reports from suppliers including product-level emissions data where possible.

Waste emissions (2% of the total footprint) were averaged across a number of collections and assumed all at full weight. They have been included in this footprint for completeness as there is no option on the platform to select for 'zero to landfill' guaranteed.

NET ZERO REDUCTION PATHWAY

INTRODUCTION

Below is a list of key milestones from VMI's journey to Net Zero so far and key goals VMI has set for the future; with associated estimated carbon savings. All emissions savings are approximate and estimated using 2023 audit figures and provide a base from which VMI can conduct further emission reductions.

KEY MILESTONES

2018 Achievements

- All electricity is 100% renewable.

2019 Achievements

- First carbon audit undertaken. Benchmark set for further carbon reduction.
- Became a verified London Living Wage Employer.

2021 Achievements

- Bristol's energy changed to Octopus, a renewable energy company creating and supporting UK renewable energy and not reliant on REGOS.
- Web and cloud hosting using a 100% renewable energy provider.

2022 Achievements

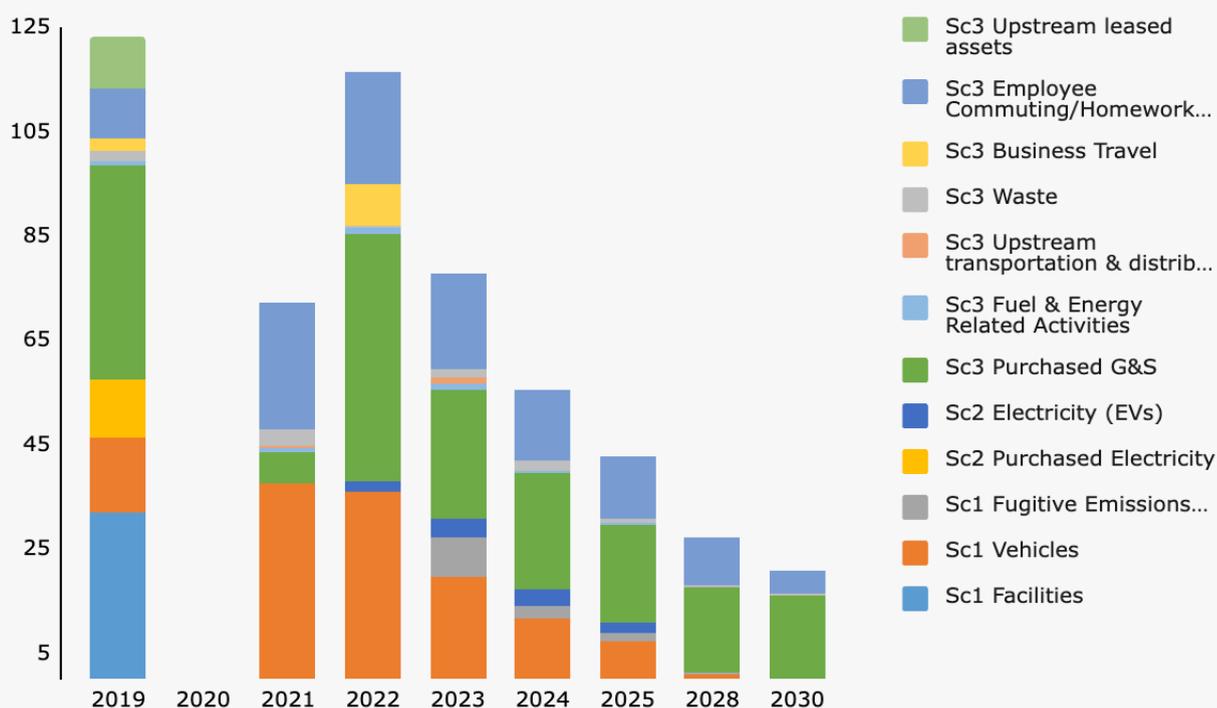
- VMI is Certified Carbon Neutral; using albert's off-setting scheme, Ecologi.
- Bristol office fitted with solar photovoltaic panels, ceiling insulation, wall insulation, double glazing and LED lighting.
- Catering policy created: all meals and drinks paid for by the company are either low-meat (London) or vegetarian (Bristol). This was decided by polling all staff.
- Internal travel policy created: minimising air and road travel and promotes video conferencing, rail travel, and discriminates, where possible, between airlines based on fuel and fleet efficiency.
- All employees are given an extra day holiday when travelling by rail instead of air for personal holidays.
- Waste Audit completed through Collect My Waste.

2023 Achievements

- 47% carbon footprint reduction achieved in Scopes 1 & 2 emissions and a 37% reduction overall compared to 2019!
- Bristol celebrates 1 year diesel-free!
- VMI is a net exporter of solar energy during some summer months.

NET ZERO PATHWAY

Below is an outline of a Net Zero Pathway for VMI. It is based on the measures outlined on the following page. In accordance with the Science Based Targets Initiative's (SBTi) SME reporting standards, VMI must report its Scope 1 and Scope 2 emissions. VMI has chosen to include wider Scope 3 emissions and to set near- and long-term reduction targets, as listed at the bottom of this document. This goes beyond what is required of a company of its size.



2024 Goals | 70% reduction in Scopes 1 & 2 emissions compared to 2019.

- 40% of the vehicle fleet are EVs by the end of 2024; *saving approx 8tCO₂e.*
- All local courier and subcontractor transport supply will be procured from electric or human powered vehicles; *saving approx 1tCO₂e.*
- Continued staff engagement efforts means a 25% increase in renewable energy at home; *saving approx 1.5tCO₂e.*
- VMI goes entirely paperless; *saving approx 1tCO₂e.*

2025 Goals | 75% reduction across Scopes 1, 2 & 3 = 53.25tCO₂e remaining.

- Natural gas dependency removed from Bristol; *saving approx 0.2tCO₂e. At the time of writing, VMI reviewed the feasibility of removing gas from London which was not deemed practical.*
- 80% of the vehicle fleet are EVs by the end of 2025; *saving approx 12tCO₂e.*

- Product-level data available for suppliers through continued engagement; a 25% reduction in emissions; *saving approx 3tCO₂e.*

2026 Goals

- London moves premises and is no longer reliant on natural gas; *saving approx 5.6tCO₂e.*

2028 Goals

- 100% electric vehicles at VMI. All charging of VMI vehicles takes place on site. Because of solar panels this energy is 100% self-generated and renewable; *saving approx 23tCO₂e.*
- Solar Panels pay off capital investment meaning from now VMI - Bristol largely is electricity cost-free and has possibly created a profit-centre as may be paid for supplying excess generated electricity to the national grid.

2030 Goals | Net Zero reached in Scopes 1 & 2. 50% reduction in Scope 3 emissions (excl CapEx) = 32.8tCO₂e remaining.

- Working with the supply chain, both up and downstream to further reduce Scope 3 emissions as much as possible.

2035 Goals

- Continual carbon auditing and residual carbon reductions and offsetting.
- Look to become a Carbon Positive Company by continuing to offset at our 2019 carbon baseline levels and by creating more renewable electricity than the company needs, further decarbonising the national grid.

2040 Goals

- Continual carbon auditing and residual carbon reductions and offsetting.

2050 Goals

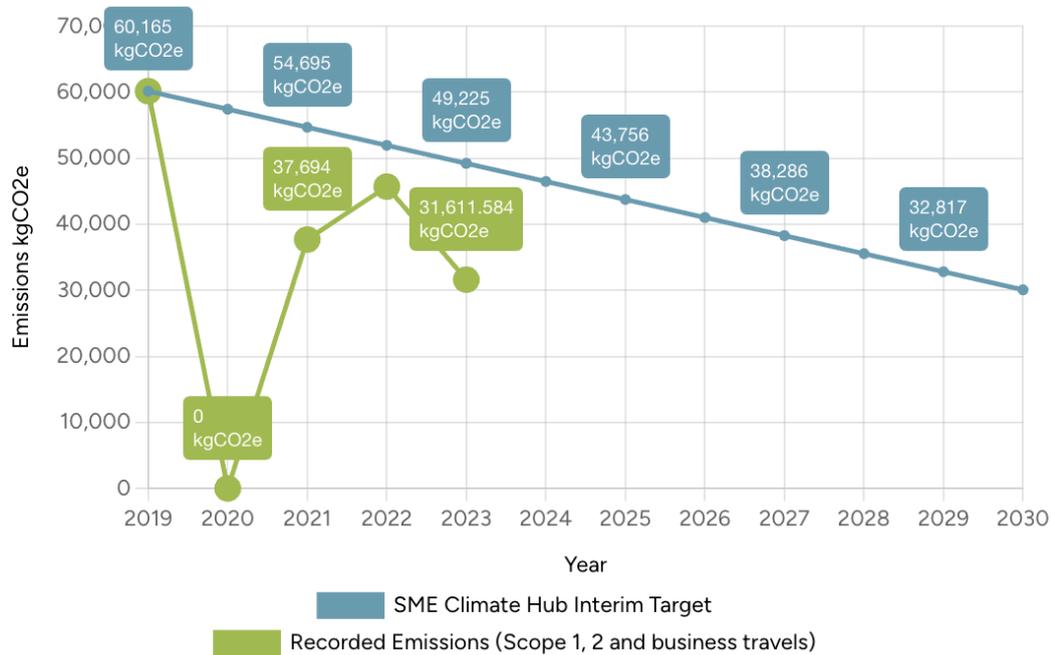
- Celebrate 20 years of continual Net Zero!

SME CLIMATE HUB INTERIM TARGET

The SME Climate Hub is a non-profit global initiative that empowers small to medium sized companies to take climate action and build resilient businesses for the future. The Hub is an initiative of the We Mean Business Coalition, the Exponential Roadmap Initiative and the United Nations Race to Zero campaign in collaboration with Normative and the Net Zero team at Oxford University.

When mapping VMI against the SME Climate Hub's suggested reduction pathway for Scopes 1, Scope 2 and business travel emissions VMI is already ahead at just 0.7tCO₂e above the 2030 target in 2023!

SME Climate Hub: Interim Target



A graph illustrating VMI's progress against the SME Climate Hub's Interim Target from Climate Essentials.

METHODOLOGY, RESOURCES & REFERENCES

METHODOLOGY

See Climate Essential's [Methodology Document](#) for emissions calculations methodology. All evidence was provided by Barry Bassett of VMI and reviewed by Kati Hall of Creative Zero.

Please see full breakdown of carbon emissions, including categories, as provided by Climate Essentials [HERE](#). All calculations use kgCO₂e but this report uses tCO₂e.

Further methodology resources

[BEIS](#) - UK Government carbon emissions factors and methodology.

[Climatig](#) - global emissions factors database.

[EPA Greenhouse Gas Equivalencies Calculator](#) - US Government factors.

[Atmosfair](#) - used to calculate flight emissions.

[Earth's diameter](#) calculation. (equatorial 7,926miles)

[GHG Protocol](#)

[SBTi](#)

RESOURCES

[Climate Essentials platform](#) (VMI login details needed) including further information about methodology, emissions factors and calculations.

PixiPixel and Creative Zero's [HVO vs Diesel Procurement Study](#), demonstrating the emission reductions of switching to HVO.

[How Bad Are Bananas](#) - recommended reading for 'humanising' carbon by relating it to everyday activities.

[Bristol City Council Climate Emergency Action Plan 2022-2025](#)

[Bristol Net Zero by 2030 - Centre for Sustainable Energy](#)

[Bristol One City Climate Change](#)

FURTHER READING

Information about Energy Efficiency grants for businesses:

[Ofgem](#)

[Energy Savings Trust](#)

[The Fuel Report](#), authored by Creative Zero and Film London.

[Climate Change Committee Report](#) - role of SMEs and businesses to achieve net-zero by 2050.

[People Power!](#) - report demonstrating the roles of individuals.

[The Generator Project](#) - Mapping generator usage in London with a resource page for suppliers of alternative energy generators in the UK.

8 R'S OF WASTE PHILOSOPHY

REFUSE	Don't do the thing or buy the thing in the first place. Don't do it the old way. No more "that's how it's done". Look for innovation.
REUSE	Don't buy new. Use what's on hand. Make do.
REPAIR	Fix what's broken. Bring it somewhere to to be fixed if you can't do it yourself
REHOME	Don't put something usable in the bin, find a new home for it. Instead of buying new, find what you need from someone getting rid of it.
RECYCLE	Take back what you can and turn it into something new. Upcycle. If you can't recycle internally, use facilities.
REPLACE	If something isn't sustainable, replace it with sustainable alternatives; power sources, materials, a job flow.
ROT	Ensure what you create can go back into nature. There's no "waste" in nature, business should follow suit.
RESPECT	New ideas can be hard to share, hear and understand. A culture of respect for people and the planet is necessary for transition.

NET ZERO DEFINITION

To qualify as 'Net Zero', companies must reduce emissions from their baseline year by 90-95% and only then offset the remainder. This is in line with Science Based Targets.

The SBTi defines net-zero emissions for companies as reaching a state of no impact on the climate resulting from the company's GHG emissions. Reaching a status of science-based net-zero emissions implies the following two conditions:

- Achieving a scale of value chain **emissions reductions** consistent with the depth of abatement at the point of reaching global net-zero in pathways that limit warming to 1.5°C with no or low overshoot.
- Neutralising the impact of any source of any residual emissions by **permanently removing** an equivalent volume of atmospheric CO₂.

CARBON NEUTRAL DEFINITION

Carbon neutrality is defined by an internationally-recognised standard – [PAS 2060](#) – which sets out requirements for the quantification, reduction and offsetting of greenhouse gas emissions.

In this standard, the definition of a carbon neutral footprint is:

'a condition in which during a specified period there has been no net increase in the global emission of greenhouse gases to the atmosphere as a result of the greenhouse gas emissions associated with the subject during the same period'.

Carbon neutrality relates to the balance between emitting carbon and absorbing carbon from the atmosphere in carbon sinks. In general, when companies claim carbon neutrality they are counterbalancing [CO₂ emissions](#) with [carbon offsets](#) without necessarily having reduced emissions by an amount consistent with reaching net-zero at the global or sector level. This may conceal the need for deeper emissions reductions that are in line with what the science requires for the world to keep global warming to [1.5°C](#).

REPORT COMPILED BY

Kati Hall, Consultant & Co-Director - Creative Zero.

Reviewed by Roxy Erickson, Consultant & Co-Director - Creative Zero.



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