Carbon Footprint Target Setting
for
Medhurst Communications Ltd

Based on data from Assessment Period:
1st November 2023 – 31st October 2024

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Executive Summary

Carbon Footprint Ltd has completed a forecast of the greenhouse gas (GHG) emissions of Medhurst until 2050 from the baseline year assessment (based on data from the period 1st November 2023 – 31st October 2024), and on market-based emissions totals.

Key Outcomes

Passive and Active emission reductions have been modelled for Scope 1, 2 & 3 (with and without Supply Chain Cat 3.1 emissions)

The modelling shows that Medhurst Communications Ltd can become Net Zero by 2040 across all scopes by reducing emissions by at least 90% and using carbon removal type offsets for the remaining 10%. By 2050, absolute emissions could be reduced much nearer to zero.

Based on an active approach we would recommend setting the following Targets:

- **Near Term Target**: 50% reduction in emissions per £M turnover and absolute market-based emissions by 2030
- **Long Term Target**: 90% reduction in emissions per £M turnover and absolute market-based emissions by 2040.
- **Net Zero Target**: by 2040, using carbon removal type carbon offsets for any remaining.

The targets and actions detailed in this report should become a key part of Medhurst Communications carbon management plan. Carbon Footprint recommends that this is aligned to the ISO 14068-1 international standard on Climate Change Management, which covers topics such as transition to net zero and carbon neutrality.

Scope	Metric	Baseline year (2024)	2035 active reductions (tCO_2e)/% difference to baseline year	2050 active reductions (tCO_2e)/% difference to baseline year
Supply Chain	Market-based absolute emissions	3,140.28	**863.58 / -72.5%**	**0.00 / -100.0%**
	Market-based emissions per £M turnover	190.20	**52.3 / -72.5%**	**0.00 / -100.0%**
Scope 1, 2 & 3 (excluding Supply Chain)	Market-based absolute emissions	226.66	**68.74 / -69.7%**	**0.66 / -99.7%**
	Market-based emissions per £M turnover	13.73	**4.16 / -69.7%**	**0.03 / -99.7%**
Combined	Market-based absolute emissions	3,366.94	**932.31 / -72.3%**	**0.66 / -99.9%**
	Market-based emissions per £M turnover	203.93	**56.47 / -72.3%**	**0.04 / -99.9%**

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Quality Control

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1. Introduction

As the world grapples with the consequences of climate change, it is becoming more important for businesses and other organisations to not merely adapt but to lead transformative change. Setting ambitious yet achievable carbon reduction targets is the compass guiding organisations towards a more sustainable and resilient future.

This report explores the key opportunities for carbon reduction for Medhurst Communications and suggests carbon reduction targets to set and measure themselves against.

This report serves as a roadmap for Medhurst Communications and explores the meaning of net zero targets and the critical interplay between emission reduction and carbon offsetting.

1.1. Medhurst Communications Limited

Medhurst is an IT management company based from one office in Hampshire. The company offers a range of services such as IT support, cloud-based communication systems, network design and the selling of both new and used IT equipment.

1.2. Baseline Emissions

Medhurst assesses its greenhouse gas emissions on an annual basis, with its most recent assessment completed covering the period 1st November 2023 to 31st October 2024. The table below shows the baseline emissions for Medhurst covering this period. Please note that the total carbon numbers have changed between the below table and the most recent report[1] provided due to an issue with employee-owned grey fleet vehicles WTT calculation which has been rectified.

[1] 2025_02 CFP Report Medhurst v1.0

Table 1 : Breakdown of baseline Emissions (2024) for Medhurst Communications

Scope	Emission Source	Location-Based (tCO_2e)	Market-Based (tCO_2e)
1	Natural Gas	12.68	12.68
	Owned Vans	8.62	8.62
	Company vehicles (fuel)	4.23	4.23
1	**Scope 1 Total**	**25.53**	**25.53**
2	Electricity	14.17	15.13
	Company vehicles (EV) charging	3.67	7.38
2	**Scope 2 Total**	**17.84**	**22.51**
3.1	Purchased goods and services	3,140.28	3,140.28
	Paper	0.22	0.22
	Water	0.04	0.04
3.2	Capital goods	4.68	4.68
3.3	Scopes 1 and 2 WTT	9.22	9.22
	Transmission & Distribution	1.52	1.52
	Company EV vehicles T&D	0.39	0.39
3.5	Wastewater	0.05	0.05
	Waste	0.04	0.04
3.6	Grey Fleet (fuel)	41.27	41.27
	Flights	19.89	19.89
	Hotel Stays	6.37	6.37
	Rail	0.09	0.09
3.7	Commuting	93.77	93.77
	Home-working	1.08	1.08
3	**Scope 3 Total**	**3,318.90**	**3,318.90**
All	**Tonnes of CO_2e**	**3,362.27**	**3,366.94**
	Tonnes of CO_2e per employee	**42.03**	**42.09**
	Tonnes of CO_2e per £ million turnover	**203.64**	**203.93**

We recommend targets are set either on an absolute basis and/or against a growth metric, to account for changes in the size of the business. For Medhurst, we recommend setting the reduction target on emissions per £M turnover, to allow comparison with future emissions, when the company may have grown. This also shows increases in efficiency of overall revenue.

2. Net Zero Target Setting

At an organisational level, net zero is widely considered to be a commitment to reduce emissions to a residual level and offset any remaining emissions via certified carbon removal projects[2]. At this stage, an organisation has effectively balanced the amount of greenhouse gases it emits with an equivalent amount removed from the atmosphere, ultimately resulting in a net emissions level of zero.

In the context of carbon reductions, it is crucial for businesses to achieve net zero by 2050 or sooner, in order to mitigate the most severe impacts of climate change. A net zero commitment signifies an organisation's dedication to minimising its carbon footprint and actively contributing to global efforts to combat climate change.

2.1. Significant 'Science-based' Emission Reductions

One key component of a net zero target is a substantial reduction in GHG emissions. Targets should be science-based to align with scientifically endorsed global climate change targets.

A science-based target is a GHG emissions reduction target that demonstrates alignment in line with the expectations of the Paris Agreement to limit global warming to well-below 2°C above pre-industrial levels, striving for 1.5°C. This aligns emission reduction efforts to the latest climate science (i.e. that published by the Intergovernmental Panel on Climate Change (IPCC)) to ensure action is effective and impactful. Organisations are encouraged to aim to halve their greenhouse gas emissions by 2030 and aim for a reduction of at least 90% by 2050 on their baseline GHG inventory.

Aligning to a science-based target is a strategic decision and demonstrates your commitment at an organisational level to addressing the urgency of climate change.

2.2. Offsetting Remaining Emissions

While striving for a 90% or greater reduction in emissions is commendable, achieving absolute zero emissions may be challenging for some industries or processes. In these circumstances, and where emissions are unable to be reduced further (i.e. are at a residual level), organisations can offset the remaining emissions to achieve net zero. On the pathway to achieving net zero, organisations are also encouraged to offset any emissions caused, alongside annual GHG emission reduction efforts.

Organisations can offset their emissions by supporting projects that either avoid or actively remove carbon dioxide (CO_2) from the atmosphere. Carbon removal projects include afforestation initiatives, carbon capture technologies, or investments in sustainable practices that contribute to carbon sequestration. Once an organisation has achieved net zero, any carbon offsetting carried out should be done via removals projects only (i.e. not carbon avoidance projects).

To fulfil the offsetting aspect of a net zero target, organisations must engage in activities that go beyond emissions reduction within their own operations (also termed as Beyond Value Chain Mitigation by the Science-based Targets Initiative (SBTi)). Supporting carbon removal projects is an

[2] ISO14068-1: Climate change management – Transition to net zero, Part 1: Carbon neutrality

essential step towards balancing unabated emissions, ensuring that the organisation is actively contributing to the restoration and preservation of the global carbon balance. This not only addresses the organisation's environmental impact but supports local communities and biodiversity, creating a holistic and sustainable approach to carbon reduction. High-quality carbon offsetting credits will address one or more of the United Nations's Sustainable Development Goals (SDGs).

2.3. ISO 14068-1

The ISO 14068-1: Climate change management – Transition to net zero (Part 1: Carbon neutrality) provides guidance on carbon neutrality and stresses the importance of making carbon reductions in line with the latest climate change science.

This standard describes how carbon neutrality and net zero are related. Carbon neutrality is achieved on the pathway to net zero by following a carbon hierarchy of reduction, removal and offsetting on an annual basis, until an organisation reaches a residual level of emissions and offsets any remaining emissions via carbon removal credits only.

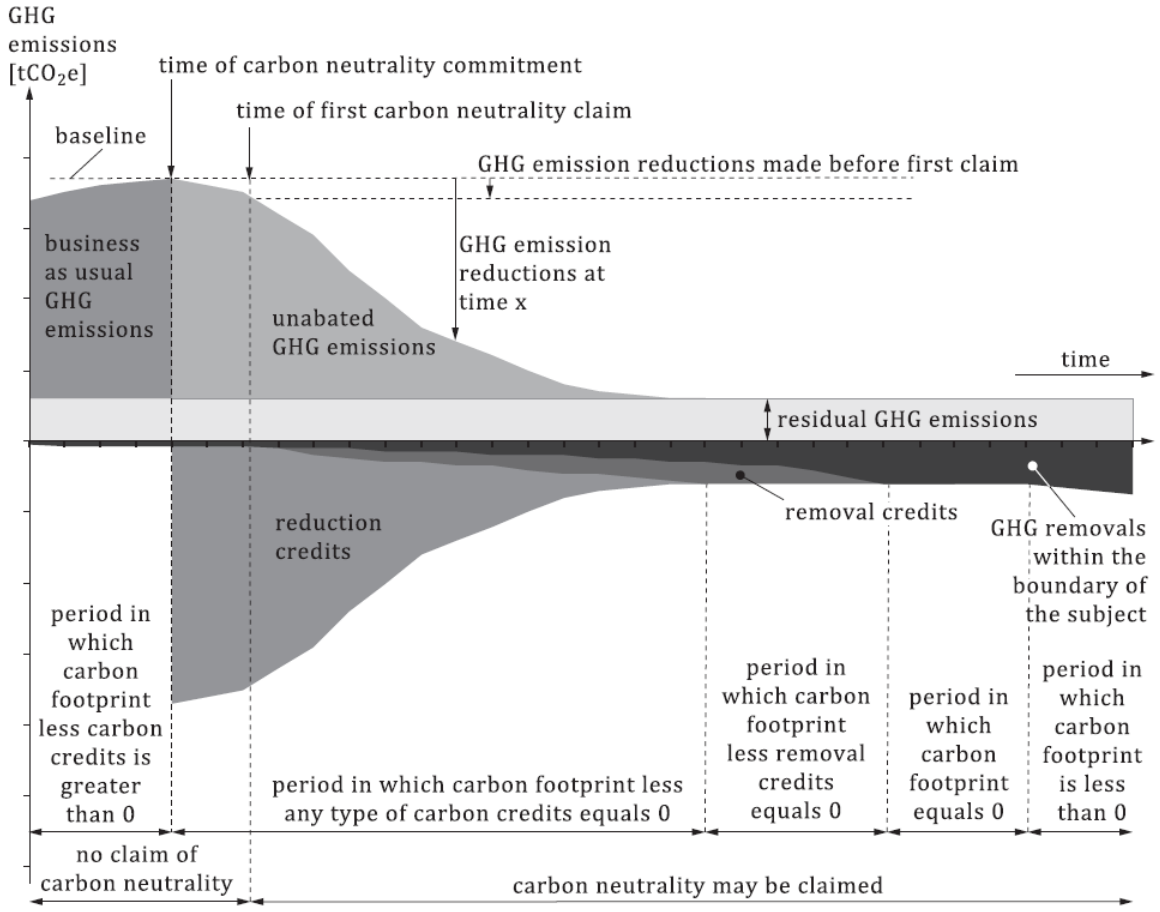

Figure 1: Carbon neutral pathway as defined by ISO14068-1

3. Modelling Future Carbon Reduction

3.1. Carbon reduction categories

Within the forecast modelling there are four distinct categories of carbon dioxide reductions to consider:

1. **Passive Reductions** – these are carbon reductions that would happen without any action needed by the company e.g., the decarbonisation of the electricity grid will gradually reduce the carbon emissions associated with the electricity you use and purchase.
2. **Active Reductions** – these are achieved by making technological, behavioural, and operational changes within the business, e.g., choosing to reduce the number of miles driven in cars; choosing to put a limit on the number of flights people make; investing in new technology to reduce energy consumption.

3.2. Forecasting Emission Reductions

Figure 2 shows the approaches described above applied to Medhurst combined emissions to 2050. Carbon Footprint Ltd recommends targets are set between the passive and active reduction lines, as this represents an appropriate level of ambition whilst ensuring targets are achievable.

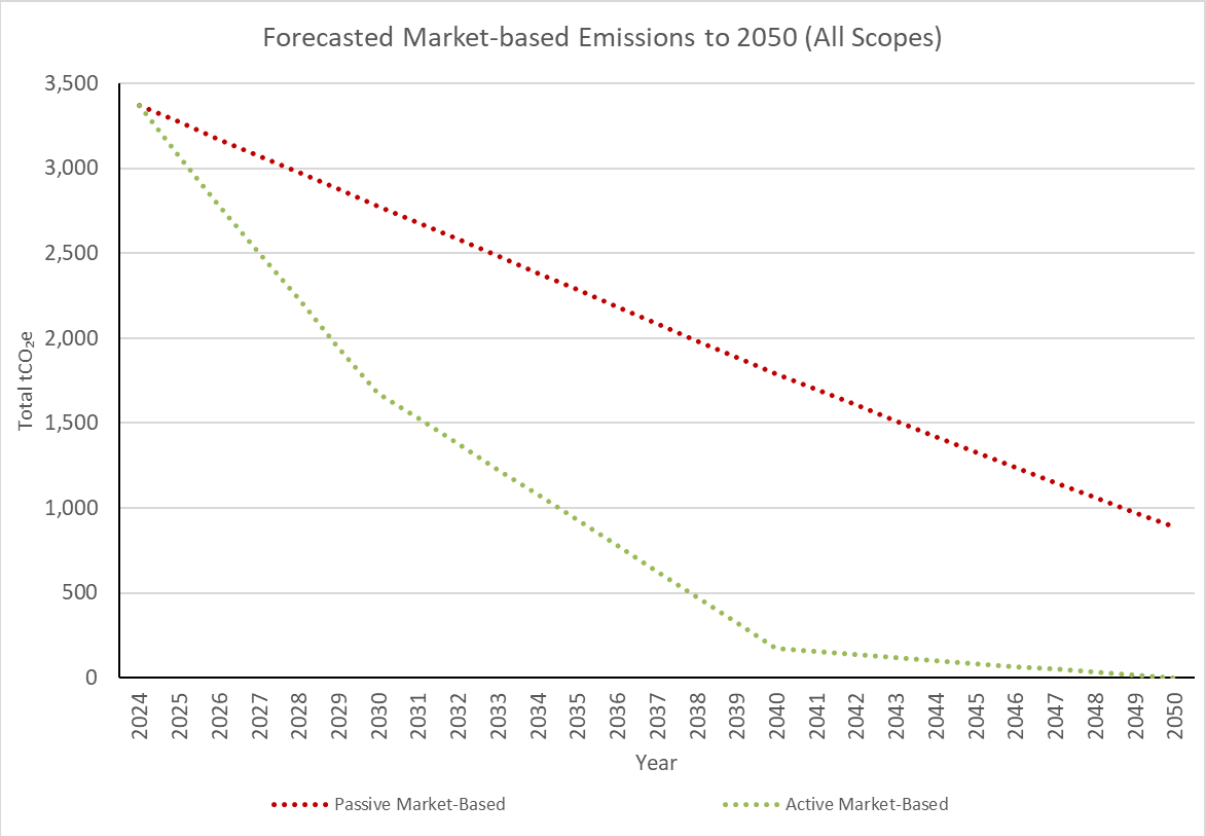

Figure 2: Combined emissions forecast for Medhurst until 2050

3.1. Forecasting Emission Reductions – Scope 1, 2 & 3 (excluding supply chain)

Figure 3 shows the approaches described below applied to Medhurst's scope 1, 2 & 3 emissions (excluding supply chain) to 2050.

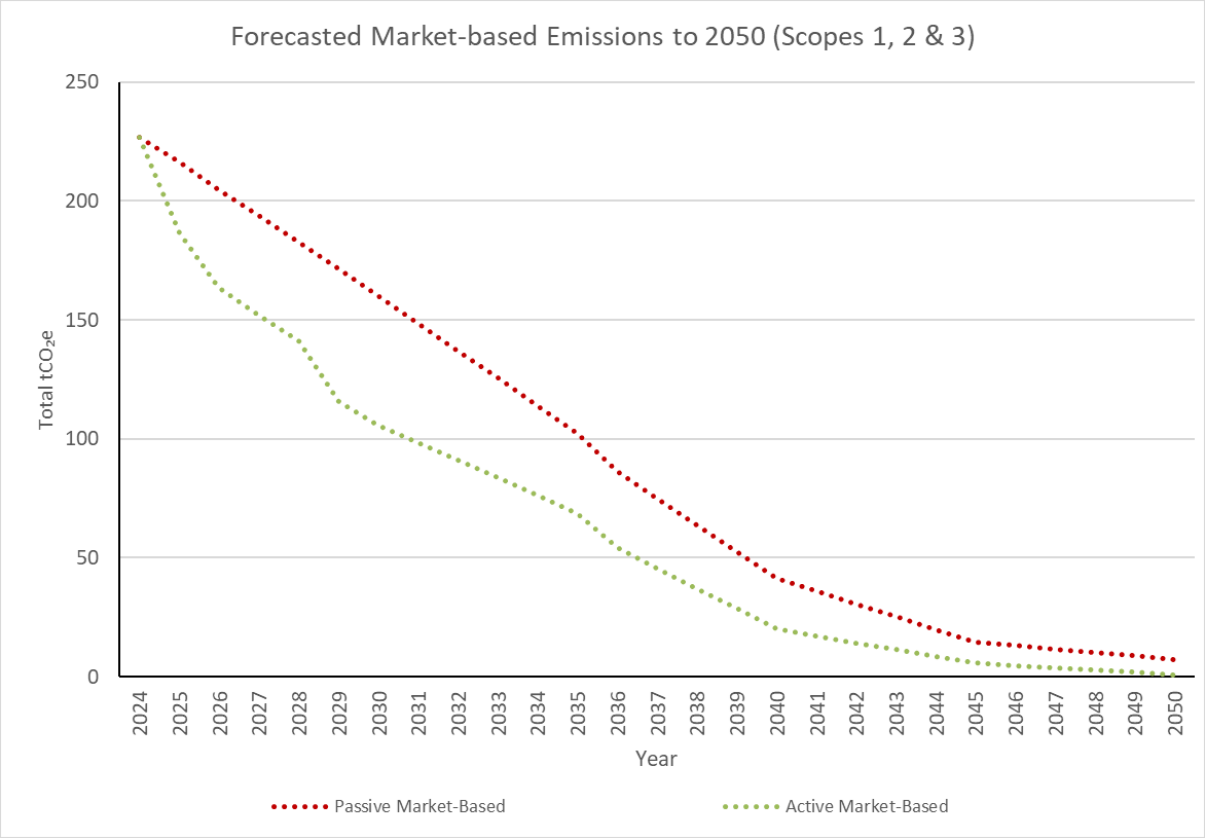

Figure 3: Scope 1, 2 & 3 e*missions forecast for Medhurst until 2050*

The Scope 1, 2 & 3 **Passive Reductions** assume the following:

- Electricity Grid emissions will reduce linearly to zero by 2035 (which is the UK's target to achieve zero carbon emissions electricity grid). This is also assumed for all electricity associated with home-working. Note: the grid emissions have reduced by approximately 50% over the last 5-6 years on a tCO_2e per kWh basis.
- Natural gas used on site will transition to a zero-carbon solution by 2040 onwards. This is expected based on government incentives for domestic and commercial heating systems to transition away from traditional natural gas boilers. However, in 2050 the UK is expected to use 25% of the total gas usage compared to 2022 levels[3]. Natural gas usage from home working is expected to transition to a zero-carbon solution from 2045 onwards (again reduce home working emissions).
- Owned vans have a UK target of a 70% reduction in tailpipe emissions by 2030 in line with UK government projections and 100% of all new vans to be sold from 2035 are to be 100% zero emissions at the tailpipe. A 5-year grace period has been extended to this date also to allow for a full transition of company vehicles used in Medhurst's logistics.

[3] Net zero transformation: Industry and Regulators Committee report - House of Lords Library

- Company owned cars are mandated for the transition to being 100% electric vehicles (EV) from 2035. As Medhurst have five out of seven vehicles already electric this is not expected to be delayed.
- Water emissions are forecast to decrease inline with the UK government targets for 2030. The main emission sources from water is the movement of water between treatment and end user[4].
- Grey Fleet and Cash-Opt-Out vehicles will transition to being 100% electric vehicles (EV) from 2040 onwards (as combustion cars will no longer be sold after 2035). The emissions are forecasted to reduce by 50% by 2035 based on a switch to EV's for employees and once combustion engine vehicles are no longer able to be sold a 100% switch to EV's is to be adopted by 2045 as domestic owned vehicles have a lifespan ranging up to 10 years for majority of vehicle types.
- Emissions from commuting are expected to reduce in line with the general public vehicle emissions reducing as internal combustion engines are banned from being sold as new from 2035. As per other employee-owned vehicles a 10-year grace period has been applied to allow for a 100% transition to new EV models.
- For employee homeworking & hotel stays the government percentage reduction for both the electricity grid and natural gas has been combined to assume the homeworking rate remains the same across the business.
- Air travel had an anomalous year during 2023/24. This is not detailed in the passive assumptions and assumes that this year is in trend. A 10% reduction between 2024 and 2030 is forecast based on additional sustainable aviation fuels (SAF's) to be included in aircraft fuel. From 2030 a 90% reduction to 2050 is forecast inline with the UK government targets for all aviation[5].

In addition to the passive assumptions stated above, the **Active Reductions** for scope 1, 2 & 3 assume the following:

- Medhurst have signed a 100% renewable electricity tariff at its UK site to switch on 1st June 2025. This has been included in the forecast and has been forecast to continue until 2050.
- Natural gas supply to be 100% Renewable Energy Guarantee of Origin (REGO) by the end of the 2027/28 assessment period to eliminate net GHG emissions from the usage of natural gas at site. Medhurst are currently in a contract until 2027 but will switch supplier for this purpose. In addition, Medhurst have 2 large gas boilers that run throughout the year, these are looking to be replaced by air con, heat pumps etc. in the medium term.
- The company owned vans are not forecast to decrease until 2035 as these vans are crucial in Medhursts movements across the country. Between 2035 and 2040 there is a reduction to zero emissions at the tailpipe once new combustion engine vans can no longer be purchased.
- Medhurst currently operate 7 company owned vehicles during this assessment period. Five are EV's, these are due to switch across by the government mandated date of 2035 as long-distance driving is a main part of Medhursts role to its clients.
- As flights is an anomalous year for Medhurst, the active trend follows previous assessment periods. This shows a significant reduction between 2023/24 and 2024/25 to normal trends and then follows the passive assumptions stated above for air travel.

[4] Water-UK-Net-Zero-2030-Routemap.pdf
[5] Sky's the limit as UK sets out strategy to reach net zero aviation and deliver guilt-free flying - GOV.UK

- The following elements have been forecasted to follow the passive assumption set out in the above text:
    - Water (and wastewater)
    - Paper
    - Waste
    - Taxi
    - Rail
    - Homeworking
    - Employee commuting
    - Hotel Stays

3.2. Forecasting Emission Reductions –(Supply chain)

Figure 4 shows the approaches described below applied to Medhurst's supply chain emissions to 2050.

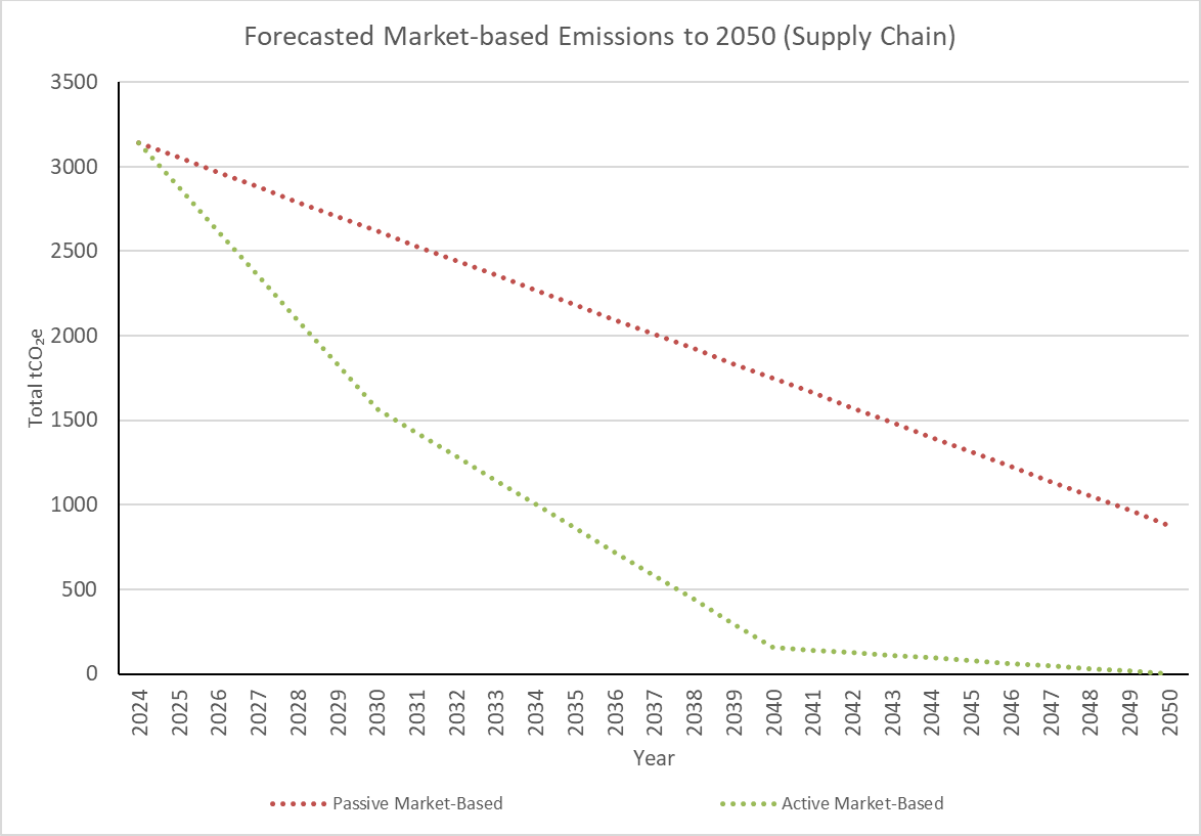

Figure 4: Supply Chain e*missions forecast for Medhurst until 2050*

The Supply Chain **Passive Reductions** assume the following:

Category 3.1 Purchased Goods and Services:

- All of the organisations that Medhurst trades with will reduce their GHG inventories by 72% by 2050. This is inline with various global Intergovernmental Panel on Climate Changes recommendation of between a 41 – 72% reduction in GHG emissions from baseline levels by

2050[6]. It is further noted that only 16% of the world's largest 2,000 companies are currently on track to reach a net-zero target by 2050 with the science-based definition.

Category 3.2 Capital Goods:

- All capital goods purchased by Medhurst will linearly reduce to zero emissions by 2050. This includes computer and electronic equipment, electrical equipment and machinery. This reduction is likely to take place due to the embodied carbon within products is to reduce with manufacturing switching to lower carbon sources and zero carbon sources along with a circular economy by 2050.

In addition to the passive assumptions stated above, the **Active Reductions** assume the following:

Category 3.1 Purchased Goods and Services:

- Medhursts main supplier of all computer purchases, which are then provided to customers is Aruba Networks which have been acquired by Hewlett-Packard (HP). All purchases through this supplier are assumed to follow their net zero targets which are publicly available[7]. HP have a carbon net zero target of 50% reduction by 2030 & 90% reduction by 2040. Following this all emissions for HP products are assumed to be zero by 2050 due to all other suppliers maintaining their carbon targets.
- All other UK based suppliers will achieve net zero in line with the UK government's target (77% reduction from baseline levels by 2035 and 90% reduction by 2050).

Category 3.2 Capital Goods:

- All of Medhursts Capital Goods are computer products used internally within Medhurst. This follows Aruba and HP's net zero targets of 50% reduction by 2030 & 90% reduction by 2040.

3.3. Forecasting Emission Reductions – Combined targets

According to the Science Based reductions stated in section 2.1 of this report, organisations are encouraged to aim to halve their greenhouse gas emissions by 2030, from their baseline year and aim for a reduction of at least 90% by 2050 on their baseline GHG inventory. The table below shows how Medhurst's forecast reaches this goal. Both the near term and the long-term net zero goals are achieved through the methods stated above for Medhurst organisational scope 1, 2 & 3 emissions and Supply Chain.

Table 1 shows that Medhurst can reduce their scope 1, 2 & 3 organisational emissions and supply chain emissions above the science-based recommendations of a 1.5°C warming above pre industrial levels by 2050 for both the short term and long term. Medhursts organisational scope is on track to achieve both near term (2035) and long term (2050) emissions reductions.

[6] Starting-at-the-source-Sustainability-in-supply-chains.pdf

[7] https://www.hp.com/us-en/newsroom/press-releases/2021/hp-inc-announces-ambitious-climate-action-goals.html

Table 1: Market-based GHG emission reductions by 2035 and 2050

Scope	Metric	Baseline year (2024)	2035 active reductions (tCO_2e)/% difference to baseline year	2050 active reductions (tCO_2e)/% difference to baseline year
Supply Chain	Market-based absolute emissions	3,140.28	**863.58 / -72.5%**	**0.00 / -100%**
	Market-based emissions per £M turnover	190.20	**52.3 / -72.5%**	**0.00 / -100%**
Scope 1, 2 & 3 (excluding Supply Chain)	Market-based absolute emissions	226.66	**68.74 / -69.7%**	**0.66 / -99.7%**
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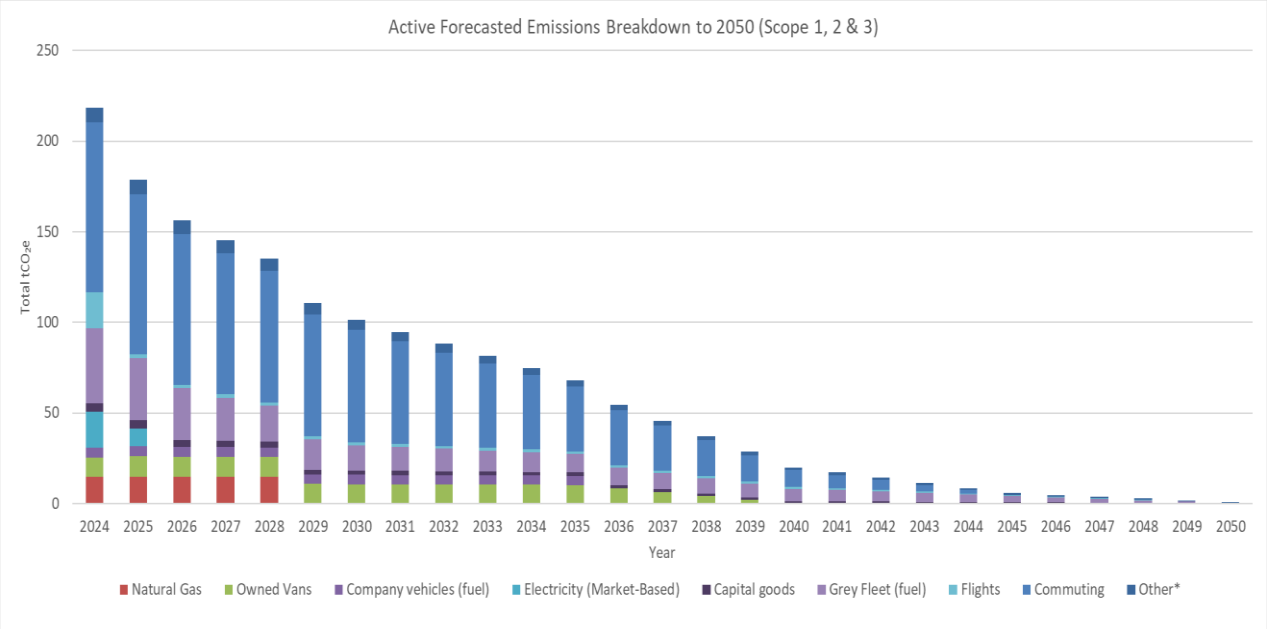
Combined	Market-based absolute emissions	3,366.94	**932.31 / -72.3%**	**0.66 / -99.9%**
	Market-based emissions per £M turnover	203.93	**56.47 / -72.3%**	**0.04 / -99.9%**

Figure 5 forecasts the estimated breakdown of Medhurst's future scope 1, 2 & 3 organisational market-based emissions, based on an active approach. The main reductions between 2024 and 2040 are from the reduction of all vehicles, (both company-owned and employee-owned,) site electricity and natural gas emissions. In addition, due to the anomalous flight emissions for this period this has been forecast to be in line with the previous assessments showing an instant reduction.



Other includes water (and wastewater), paper, company EV vehicles T&D, waste, rail, hotel stays and homeworking (market-based)*

Figure 5: Scope 1, 2 & 3 *emissions forecast for Medhurst until 2050*

4. Target Setting Recommendations

Taking into account the previous analysis and forecasting, we recommend Medhurst set the following market-based targets:

Combined (All Scopes) including Supply Chain (Cat 3.1 & 3.2) & Organisational Scope 1, 2 & 3

- **50% reduction in emissions per £M turnover and absolute market-based emissions by 2030.**
- **90% reduction in emissions per £M turnover and absolute market-based emissions by 2040.**

All targets set should be reviewed regularly (e.g., on an annual basis) and amended accordingly (i.e., target increased if it is met ahead of schedule). As a minimum, organisations should review the targets and associated actions every 5 years to ensure these are aligned to the organisation's strategy in the future, and the latest climate science. This will prevent complacency if the target set was too conservative from the onset.

An action plan should be developed to set out how the targets will be met, and an employee should be allocated the responsibility for carrying out the plan.

5. Conclusion

A forecast of Medhurst's emissions has been modelled from a 1st November 2023 – 31st October 2024 baseline. The forecast shows GHG emission reductions can be achieved in line (and even ahead) of what the scientific community is recommending if we strive to limit global warming to a 1.5°C scenario. This will require your organisation to take actions to mitigate its GHG emissions and develop a carbon reduction plan, reviewed on a regular basis to monitor progress.

Whilst on the pathway of GHG reductions, Carbon Footprint recommends your organisation continues to offset all unabated emissions, by supporting certified carbon offsetting projects that support the global societal net zero goals and consider aligning Medhurst's carbon management plan to ISO 14068-1.