

CARBON FOOTPRINT REPORT FOR PEAK SCIENTIFIC INSTRUMENTS

Client: Peak Scientific Instruments

Date: 15/06/2023

Prepared for:

Prepared by:

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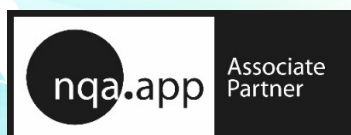
Martene Coe,
Carbon Accountant



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Auditels Credentials – Verification Bodies



Company Information

Company Details	
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Company Number	SC175368
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Summary of the Organisation

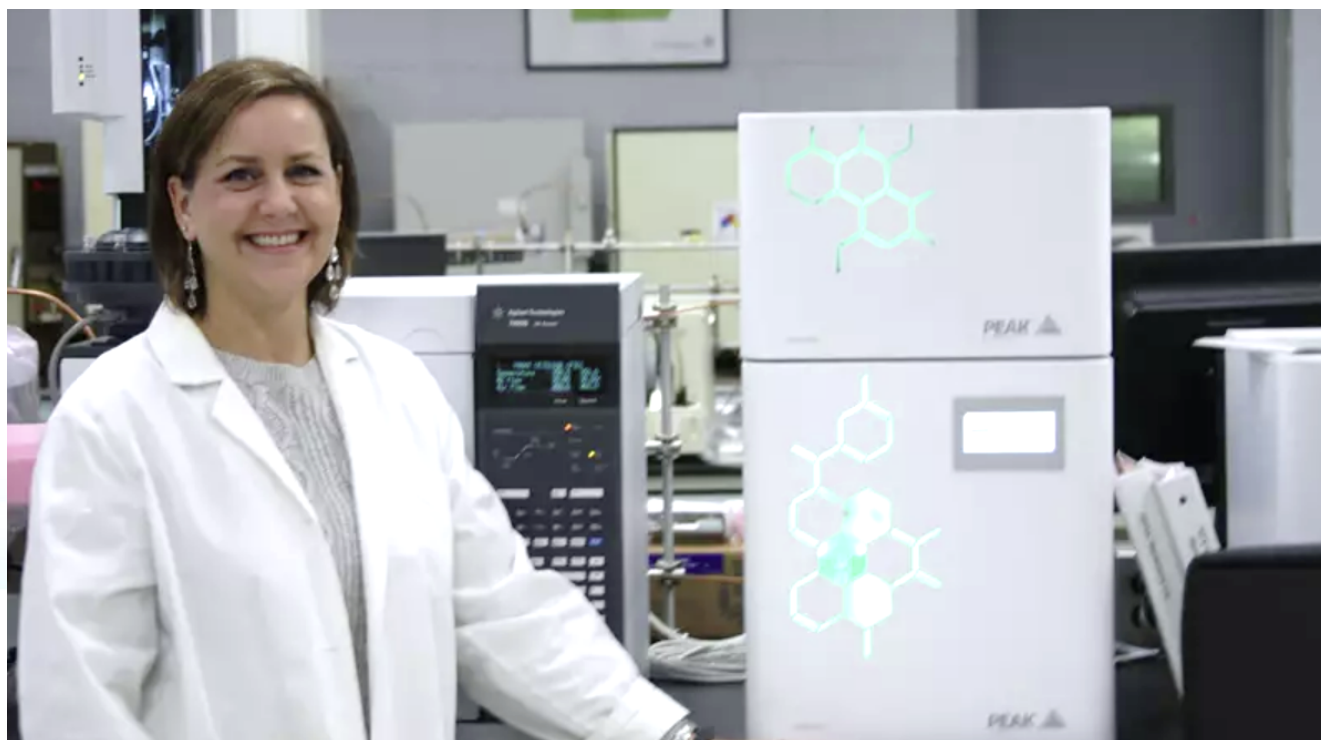
Peak Scientific is a leading nitrogen generator manufacturer and also a global expert in high-performance gas generator systems (nitrogen and hydrogen). Peak Scientific Instruments Ltd has its HQ in Inchinnan, Scotland. There are multiple group companies across Europe (5 sites), Africa (1 site), Asia (11 sites), North America (1 site), Oceania (1 site) and South America (2 sites).

Peak provide highly reliable and robust solutions, validated by the world's leading instrument manufacturers, for many laboratory applications. This is achieved through exceptional and innovative product design, manufacture and direct global on-site support which is unique in this industry.

They have service centres and an extensive network of PEAK-certified field service engineers across the globe who deliver support and excellent service over the life of the PEAK products.

Peak Scientific Instruments is a family-owned business and it has a brand, values and culture which are all intrinsically linked. They are all driven by Peak Scientific Instrument's commitment to always "do the right thing". Peak are aware of the impact that lab equipment can have on the environment and they recognise that they have responsibility. They have already embarked on new initiatives to help create a more sustainable, and environmentally friendly, future.

In conjunction with Auditel, Peak Scientific Instruments Ltd have been working on reporting their carbon emissions through a full carbon footprint journey and consequent carbon reduction plan for each site separately, with a baseline reporting year of 2021.



Methodology

This report follows the GHG Protocol Corporate Accounting and Reporting Standard methodology.

As with financial accounting and reporting, generally accepted GHG accounting principles are intended to underpin and guide GHG accounting and reporting to ensure that the reported information represents a faithful, true, and fair account of a company's GHG emissions.

GHG accounting and reporting practices are evolving and are new to many businesses; however, the principles listed below are derived in part from generally accepted financial accounting and reporting principles. They also reflect the outcome of a collaborative process involving stakeholders from a wide range of technical, environmental, and accounting disciplines.

Carbon Footprint and reporting shall be based on the following principles:

Relevance

Ensure the Carbon Footprint appropriately reflects the GHG emissions of the company and serves the decision-making needs of users – both internal and external to the company.

Completeness

Account for and report on all GHG emission sources and activities within the chosen boundary. Disclose and justify any specific exclusions.

Consistency

Use consistent methodologies to allow for meaningful comparisons of emissions over time. Transparently document any changes to the data, inventory boundary, methods, or any other relevant factors in the time series.

Transparency

Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.

Accuracy

Ensure that the quantification of GHG emissions is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

Executive Summary

Background

- The need for taking immediate and bold action on climate change is being increasingly recognised by businesses, government, and the general population
- The amount of action that needs to be taken, and the speed at which this must be done has been recognised by the UK through its ratification of the Paris climate agreement – to limit global temperature rise to well below 2°C.
- Consequently, the UK has declared a climate emergency, and the independent committee on climate change has laid out what needs to be done for the UK to become net-zero carbon by 2050.
- Peak Scientific Instruments has acknowledged their role in the need to act and have themselves decided to develop a strategy to achieve net zero carbon emissions.

Drivers

Climate Change Act

- This act commits the UK government to reducing emissions by at least 80% in 2050 compared to 1990 levels. The 80% target includes GHG emissions from the devolved administrations, which currently accounts for around 20% of the UK's total emissions.

Leadership

- Taking strategic action towards reducing carbon emissions will ensure that Peak Scientific can lead the way in developing effective mechanisms to tackle climate change. This will help stimulate low carbon transitions across their supply and value chain and beyond. Peak Scientific want to be a forefront on climate action and encourage their suppliers and customers to do likewise.

Cost Savings

- With increasing pressure on all businesses to cut costs, reducing the amount spent on energy bills is a key driver for lowering our energy consumption.

Reputation

- With stretching national targets, there is increasing pressure on businesses to be seen as "doing their bit" and playing a leadership role on climate change action. Failure to act could lead to reputational risks and adversely affect the company's public image.



The Plan

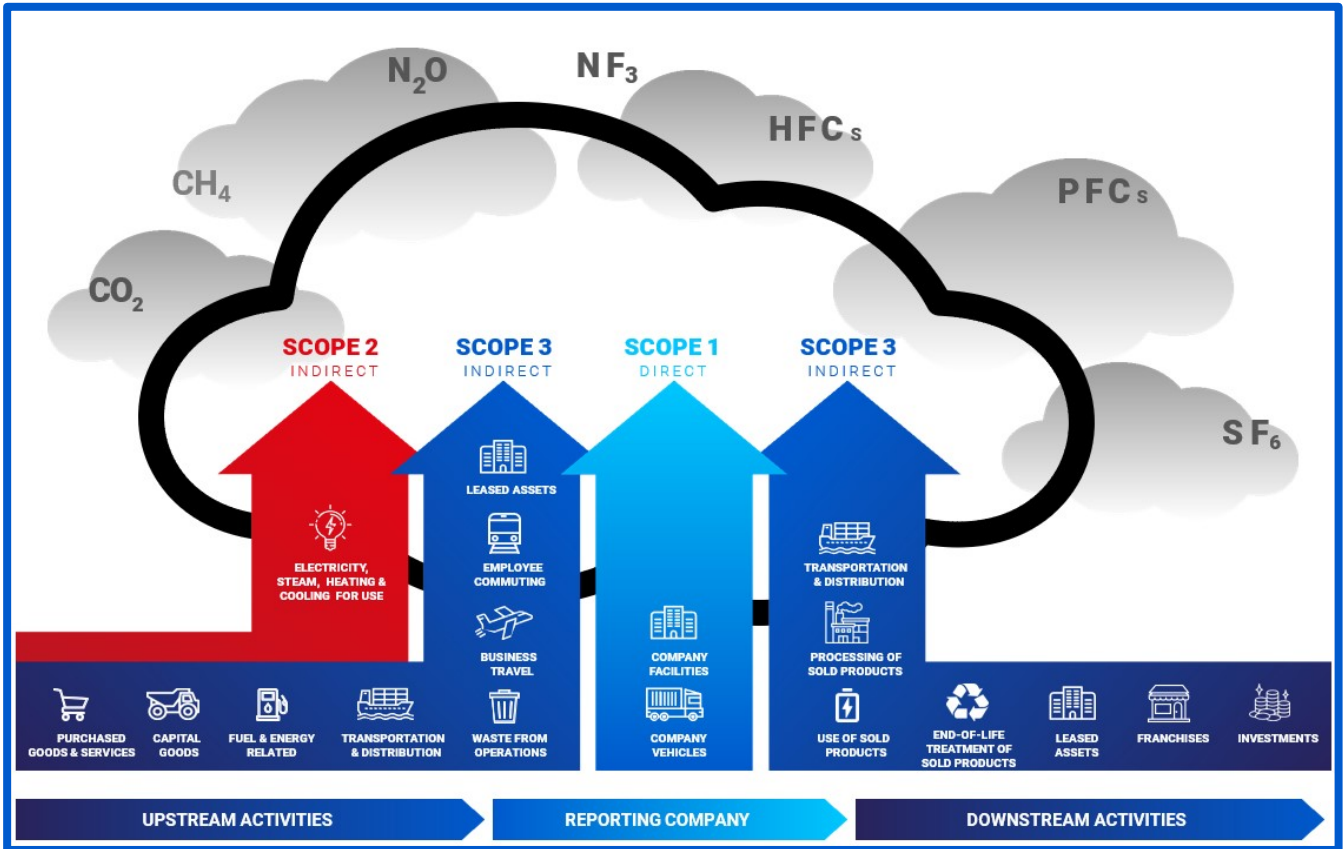
- Peak Scientific Instruments needs a plan to show how the business will meet its social, economic, and environmental needs.
- A fundamental part of developing a plan is gathering evidence to then direct strategy.
- A key driver for undertaking this project is the need for trusted, independent, and clear evidence to feed into the sustainability appraisal and strategic environmental assessment to develop the plan.
- The results from this work will form a key part in ensuring that Peak Scientific Instruments have sustainability, reducing emissions, and climate change as a core element of their strategic plans for years to come.

Proposal

- Auditel have been contracted by Peak Scientific Instruments to support the first stage of their journey: to complete a comprehensive carbon footprint of their direct and indirect carbon emissions (scope 1, 2 and 3) for the calendar year 2021.
- Creating a carbon footprint is an essential first step in developing a carbon reduction strategy and is key to understanding the scale of the challenge focussing efforts on the most impactful activities.
- This Carbon Footprint has been calculated in line with the Greenhouse Gas (GHG) Protocol emission Scopes; these are set out as follows:
 - Scope 1:** Direct emissions from combustion of gas and other fuels.
 - Scope 2:** Emissions resulting from the generation of electricity and other energy purchased (but generated elsewhere).
 - Scope 3:** Emissions made by third parties in connection with operational activities.
- All activities within this report have been undertaken by the criteria set out by the British Standards Institute PAS2060:2014, in line with the Green House Gas Protocol.

GHG Protocol & Boundary

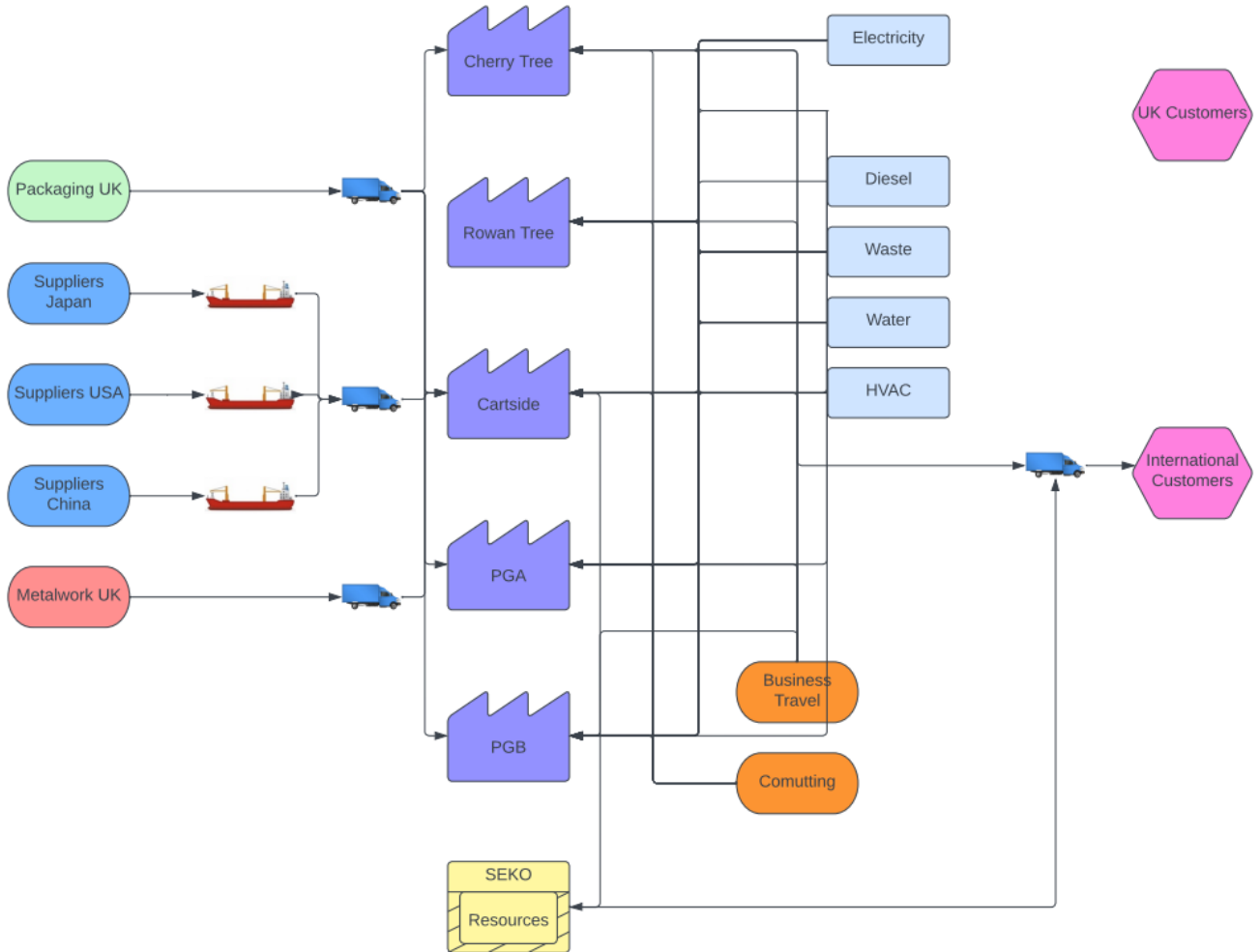
GHG Protocol



Emissions Boundary

Emissions								
Scope 1		Scope 2	Scope 3					
Gas	Fleet	Electricity	Purchased Goods & Services	Fuel and Energy Related Activities	Waste Generated from Operations	Business Travel	Employee Commuting & Homeworking	Downstream Transport & Distribution

Value Chain Map



Emission Sources

Table of Included Emissions

Scope	Category	Source
1	Gas for Heating	Gas usage data from energy supplier where available.
	Fleet	Vehicle fleet - mileage data.
2	Electricity	Electricity usage data from energy supplier.
3	Purchased Goods and Services	Supplier data where available.
	Fuel and Energy Related Activities	Transmission and Distribution (T&D) electricity losses and Well-To-Tank (WTT) fuel emissions.
	Waste from Operations	Water usage data from water supplier. Non-hazardous waste logs from waste contractor.
	Business Travel	Expense claim data for travel and accommodation where available (see below for elements excluded).
	Employee Commuting & Homeworking	Employee survey.
	Downstream Transport & Distribution	Transport Partner Data where available for outgoing shipments.

Table of Excluded Emissions

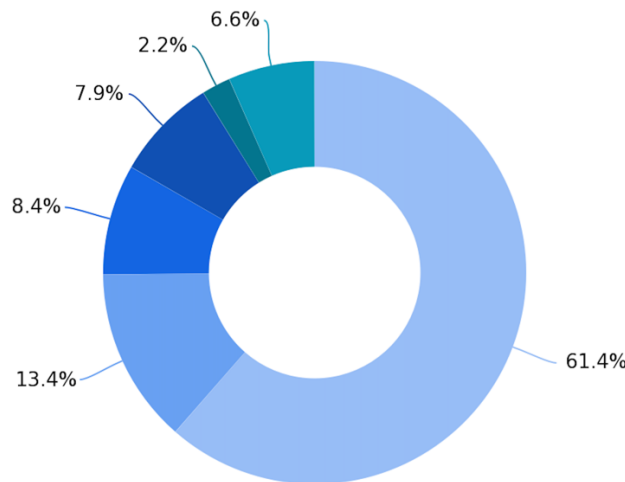
Scope	Category	Reason for exclusion
2	Steam, Heat and Cooling	Not-applicable
3	Capital goods	Considered low carbon impact.
	Waste from Operations	Non-hazardous waste: Insufficient data available.
	Upstream Transport & Distribution	Insufficient or poor-quality data from suppliers
	Business Travel	Insufficient data for grey fleet, claimed taxi journeys, car rental fuel, train journeys.
	Upstream leased assets	Considered low carbon impact.
	Downstream leased assets	None associated with the business.
	Processing of sold products	The cost versus benefit of acquiring and processing this data was prohibitive.
	Use of sold products	The cost versus benefit of acquiring and processing this data was prohibitive.
	End-of-life treatment of sold products	The cost versus benefit of acquiring and processing this data was prohibitive.
	Franchises	None associated with the business.
Investments	None associated with the business.	

Carbon Footprint Breakdown

2021 Emissions

The total Green House Gas emissions for Peak Scientific Instruments, in the calendar year 2021, according to the data provided and the use of the Government conversion factors for the same year are:

3,212.74 tonnes carbon dioxide equivalent (tCO₂e)



● Downstream Transport ● Commuting & Homeworking ● Electricity ● Gas ● Business Travel ● Other

Intensity Metrics



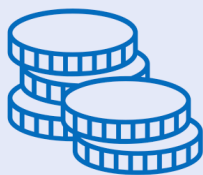
3,212.74

Total tonnes of carbon dioxide equivalent



0.33

Total tonnes of carbon dioxide equivalent per square metre



49.71

Total tonnes of carbon dioxide equivalent per £1M turnover



10.74

Total tonnes of carbon dioxide equivalent per employee

Emissions by Scope

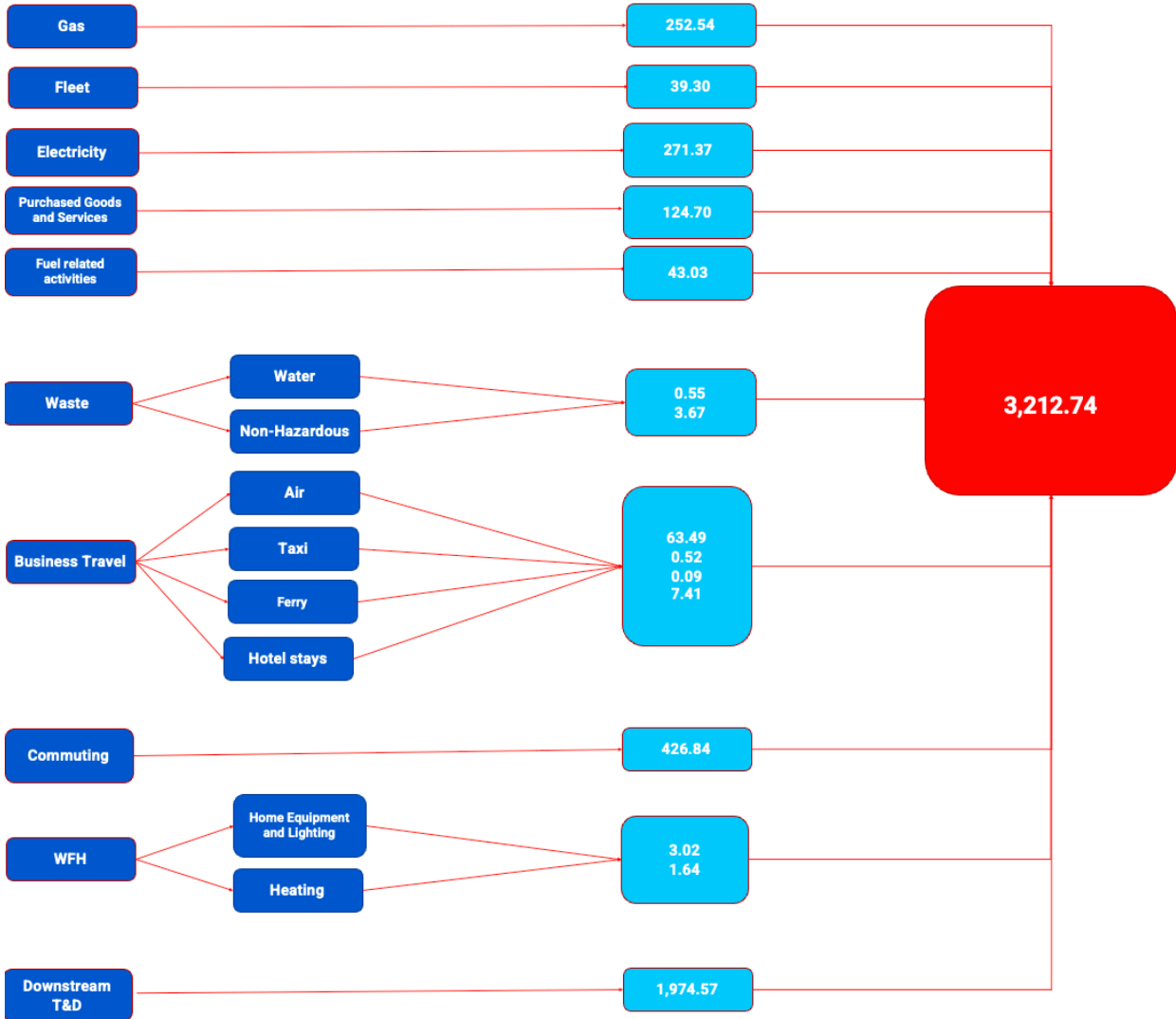
Scope 3 emissions accounted for the majority (82.5%) of the total carbon footprint. These predominately came from downstream transport and distribution (61.46%), and employee commuting/homeworking (13.44%). Scope 2 emissions accounted for 8.4% and 9.1% of emissions came from scope 1 sources.

Scope Category	tCO ₂ e	Contribution to total footprint (%)
1	291.84	9.1
2	271.37	8.4
3	2,649.53	82.5
Total	3,212.74	100.00%

Emissions by Individual Scope Category

Scope Category	tCO ₂ e	% of total emissions
Gas	252.54	7.86
Fleet	39.30	1.22
Electricity	271.37	8.45
Purchased Goods & Services	124.70	3.88
Fuel Related Activities	43.03	1.34
Waste from Operations	4.22	0.13
Business Travel	71.51	2.23
Employee Commuting & Homeworking	431.50	13.44
Downstream Transport & Distribution	1,974.57	61.46
Total	3,212.74	100.00

Emissions Map



Scope Data Breakdown

Scope 1

Gas for heating

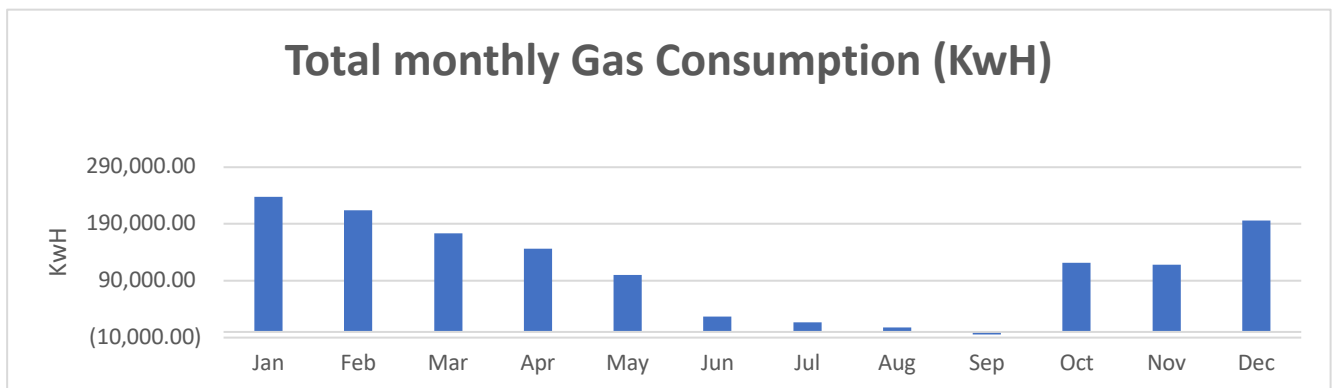
There were 6 supplies using 2 suppliers during the reporting period.

The data for the main supplier (5 supplies) has been harvested using bills from the supplier. 97% of the reported supply is based on actual consumption with the remaining 3% being based on an assumption that has been applied to estimates to ensure the conservative principle.

The data for one legacy supplier (1 supply) is not available due to a historical dispute. However, due to lower activity at this site, the consumption is expected to be low and therefore it is a low risk of being material.

A recommendation has been made that all meter readings should be taken each month and recorded with the supplier.

On-site gas consumption is shown below and follows the expected seasonal pattern.



Fleet

The business has a mix of purchased and leased vehicles:

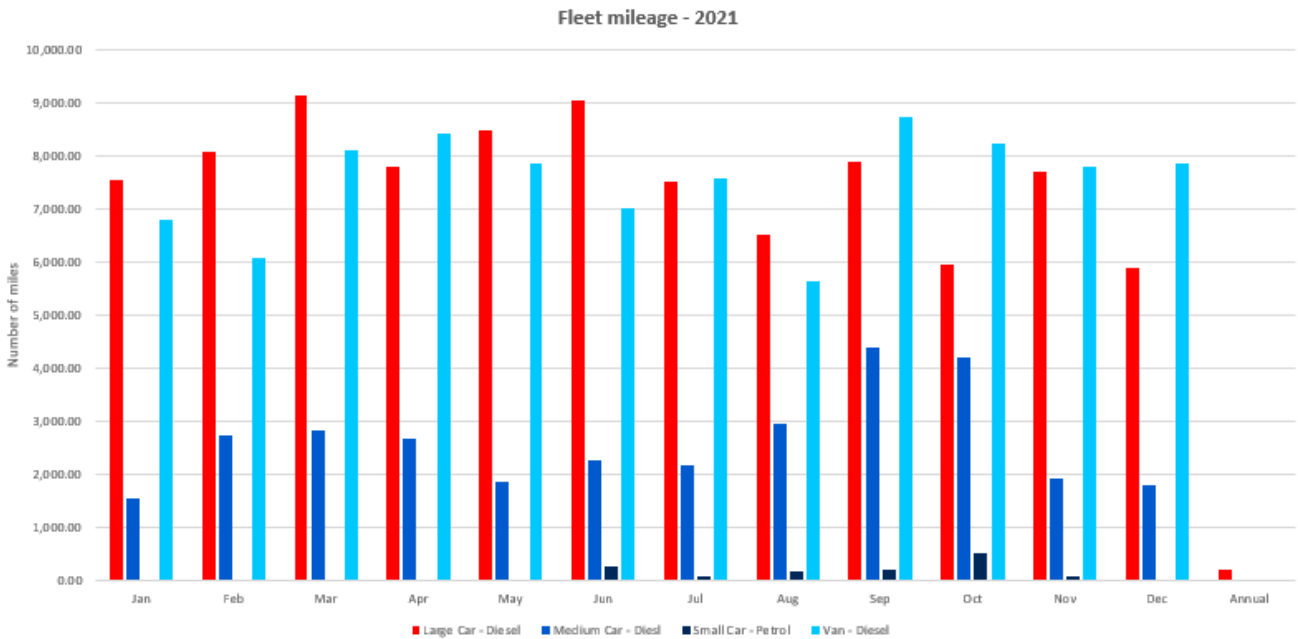
- 10 leased vehicles are assigned to individuals as a tool to carry out their role.
- 4 pool cars are used for transporting between sites.
- 2 pool vans are used for deliveries, collections and transferring parts and materials between sites.

The methods to pay for the company vehicle fuel in 2021 included the use of a personal credit card (claimed back through expenses) or a company credit card. It isn't possible to obtain the primary data (type of fuel, volume consumed). However, the business keep records of the mileage on an excel log. For the engineers and sales team this is tracked by the Service Delivery Manager. For the pool vehicles the mileage is tracked using movolytic trackers and the data has been checked back to these reports.

It is noted that the mileage for the sales team totals 213 miles for the year (total). On discussion with the Facilities Manager this was due to alternative methods being used in 2021, travel was voluntary (not forced) for the sales team.

It is also noted that the rented van has no record of mileage during 2021. However, on discussion with the Facilities Manager, the two vans (one rented and one owned) operate using mirrored journeys (ie one is taken to site B and the other is brought back to site A). As the owned van is fitted with a tracker, with known mileage, the same mileage has been assumed and recorded for the rented van.

In addition there are 5 Fork lift trucks which are leased and run on electricity which is covered in Scope 2 below.

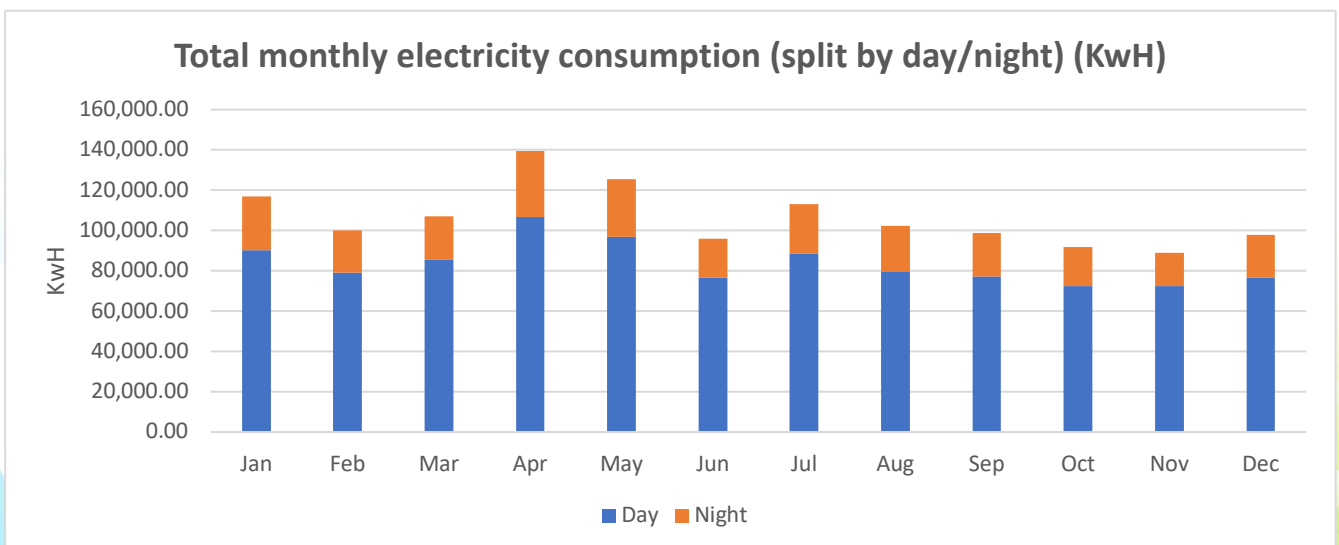


Scope 2

Electricity

There were 6 supplies using 2 suppliers during the reporting period. All data has been harvested using actual bills from the supplier.

On-site electricity usage is shown below and follows the expected pattern.



Scope 3

Purchased Goods & Services

Tier 1 suppliers were identified by one of the client Category Managers. They were contacted directly with a link to a survey requesting data that would be relevant for this CFR.

Only the data for 2 suppliers was available and robust (the relevant SECR reports for one supplier and the details of packaging supplies from the only packaging supplier). This data has been included in the reported calculations.

Fuel and Energy Related Activities

Emissions included in this category were those associated with electricity losses during transmission and distribution (T&D). Carbon calculations were made for both T&D from on-site electricity usage and Well-To-Tank emissions for fuel usage.

Upstream Transport & Distribution

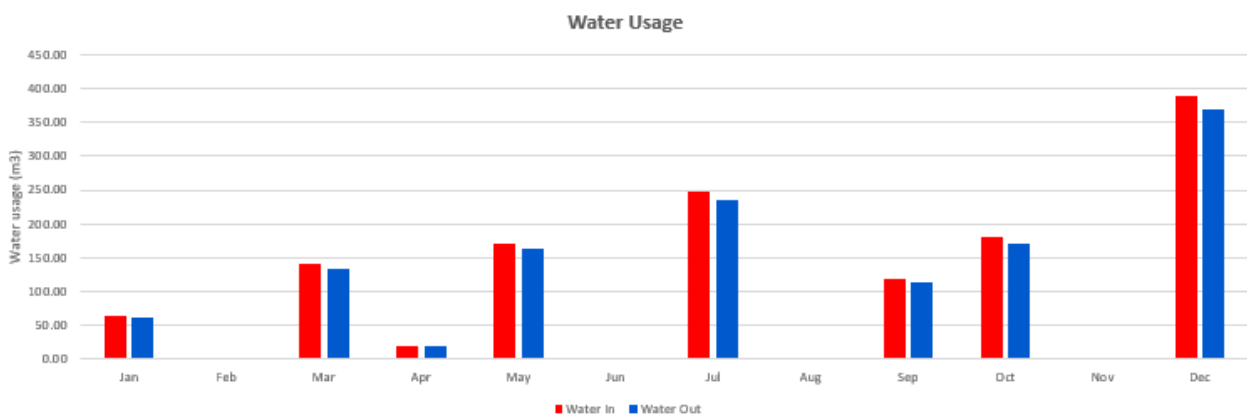
Peak requested upstream transport data from 126 suppliers and 3 logistics companies. The client contacted and communicated with the suppliers / transportation partners directly.

There was a mixed response of both data supplied and data quality. Despite multiple requests, the responses were poor resulting in **high uncertainty** for this category.

Waste from Operations

Water

There are 12 supplies included although 7 of these supplies are noted to indicate no/insignificant consumption (below 3 m³ for the year). The data has been challenging for this reporting period. A process of consolidation has subsequently taken place. The amount of waste produced in 2021 was minimal with an assessment of low carbon impact.



Non-Hazardous Waste

Waste collection data was produced by the waste management company. For 63.9% of the total waste collected (by weight) the data was based on estimated approximate weight. On discussion

with the waste management company, this estimate is based on industry standard maximum weights (with the exception of one category – loose cardboard – where the estimated weight is based on average cardboard FEL weights, due to this being bulky boxed material). This is in line with the conservative principle.

Business Travel

There are numerous sources of carbon associated with business travel. Data was obtained from a variety of sources including invoices from the Travel Management Company (flights only), the system which logged all business-related travel/accommodation claims (Concur) and an internal report supporting report for more detail. Where data was available, the following table summarises the percentage split of sub-categories accounted for:

Sub-category	CO2e (t)	% Contribution
Flights	63.49	88.8%
Hotels	7.41	10.4%
Taxis – local firm	0.52	0.7%
Ferrys	0.09	0.1%
Total	71.51	100.00

The carbon associated with rail travel, rental car fuel and taxis claimed on expenses was minimal. It has not been possible to assess the impact of grey fleet.

It has noted as a required improvement for future years to either create a mandatory field in the expense system (Concur) or to implement a reporting process which is reconciled to a Concur report to ensure that the required detail is available for future years.

Employee Commuting & Homeworking

Our commuting and homeworking survey showed that during 2021 there were a mixture of employees who worked fully on-site, fully off-site or hybrid. 74.9% of the employees responded to the survey (122 site only responses, 12 off-site only responses, 90 hybrid responses). The responses were extrapolated in proportion with the type of employee as noted above, to cover the full employee population of 299 employees.

An annual commuting distance was calculated using the responses provided. Annual commuting distance was then grouped by vehicle type. In total, commuting was responsible for 426.84 tonnes of carbon dioxide equivalent during 2021.

An annual number of days worked at home was calculated using the responses provided. In total, employees worked an estimated 9,979 days at home during 2021, equating to 4.66 tonnes of carbon dioxide equivalent.

Downstream Transport & Distribution

Peak requested downstream transport data from the 4 logistics companies that they use. The client contacted and communicated with the suppliers / transportation partners directly.

Where data was available, each part of the journey for the deliveries have been split by transport type to use the appropriate BEIS conversion factors (international air freight, UK air freight, roll-on roll-off freight, and road freight).

It has been recommended that Peak communicate with the transportation companies to identify the data that is needed for future years. This data should be collected more regularly to ensure that data can be queried on a timely basis.



Monitoring & Reporting

One of the most fundamental follow-on activities for an organisation that has completed a carbon footprint is monitoring and reporting.

It is imperative that an organisation aims to complete a carbon footprint at regular intervals to demonstrate progress in carbon reduction. Auditel recommend an annual report.

As an organisation becomes increasingly familiar with the process required to complete a carbon footprint and can demonstrate a strong data collection framework, they can begin to look to expand their footprint to cover all emission sources and revisit existing sources to make them more accurate and less reliant on proxies.

Scope 3 Foot printing

Although we have identified a baseline for future reports, the adding of more scope 3 emission sources is the right thing to do as more accurate data becomes available, reporting on like for like baselines is the key. Moving forward we would look to add more scope 3 emissions and reset the baseline so that we can report against the extended baselines annually.

Conclusion

- 🔍 During 2021, Peak Scientific's total carbon footprint was 3,212.74 tonnes of carbon dioxide equivalent.
- 🔍 The company's largest source of reported carbon emissions was Downstream transport, which accounted for 61.46% of the total footprint.
- 🔍 The second largest source of carbon emissions was employee commuting and homeworking.
- 🔍 Emissions from upstream transport, electricity and gas was also significant.
- 🔍 A much smaller proportion of emissions came from fleet, purchased goods & services, fuel and energy related activities, waste from operations and business travel.
- 🔍 The quality of data used to build this carbon footprint was medium/high, with some assumptions made.
- 🔍 In the future, Peak Scientific Instruments should aim to improve the accuracy, completeness and availability of requested data, in particular for upstream transport, business travel and downstream transport.
- 🔍 Achieving this will involve communicating with suppliers and maintaining records more regularly.

About Auditel

The Cost, Procurement & Carbon Solutions Company

Auditel is a leading Cost, Procurement & Carbon Solutions Company. We help organisations reduce their carbon emissions whilst also reducing their costs. In the current challenging economic climate, organisations are battling with the desire to drive growth and profitability, whilst investing in low carbon emitting technologies to reduce their carbon footprint and speed up their journey to achieving Net Zero.

Since 1994, we've built a strong network of over 100 procurement and carbon specialists. Our specialists come from a broad range of professions and industries, giving our clients access to an unrivalled level of knowledge and expertise in procurement and decarbonisation. Using Auditel's simple 4 step process, we can deliver solutions that will enable your organisation to achieve independent verification of carbon neutrality in the short-term.

Auditel provide a comprehensive procurement service, covering over 100 cost areas across all sectors. When engaged at the right time, such as when negotiating prices and contracts with suppliers, independent external help that works alongside your existing operational teams, can level the playing field thereby ensuring you receive value for money from your suppliers.

Due to this procurement expertise, we can potentially self-fund your net zero journey, or even make it more profitable through cost removal and cost transformation. By blending Auditel's carbon solutions with our cost management and procurement expertise, you can feel confident that you are helping save the planet as well as making your business fit for the age of net zero.

At Auditel we believe passionately that effective procurement can save your organisation thousands of pounds and make you more competitive. We also know that being Carbon Neutral doesn't need to COST the EARTH

With a strong presence in the energy field, we have been producing SECR and ESOS reporting for our clients for many years, this led us into Carbon Neutrality and Net Zero, with a wealth of experience in our Carbon division it seemed like the next sensible step in how our business evolves. In 2021 we became partners to The British Standards Institute and train our Carbon Consultants to BSI Associate Consultant status, this enables us to take clients through BSI PAS2060:2014 in line with ISO14064 and ISAE3000.

Cost, Procurement & Carbon Solutions



CARBON SOLUTIONS

- Carbon Footprint Reporting
- BSi Carbon Neutral Certification
- Carbon Reduction Planning
- Offset Purchasing Sourcing



PROCUREMENT SOLUTIONS

- Spend Analysis
- Tender Management
- Supplier Selection
- Implementation



COST SOLUTIONS

- Cost Reduction
- Cost Management
- Cost Transformation
- Cost Removal

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Peak Scientific Summary Carbon Footprint Report



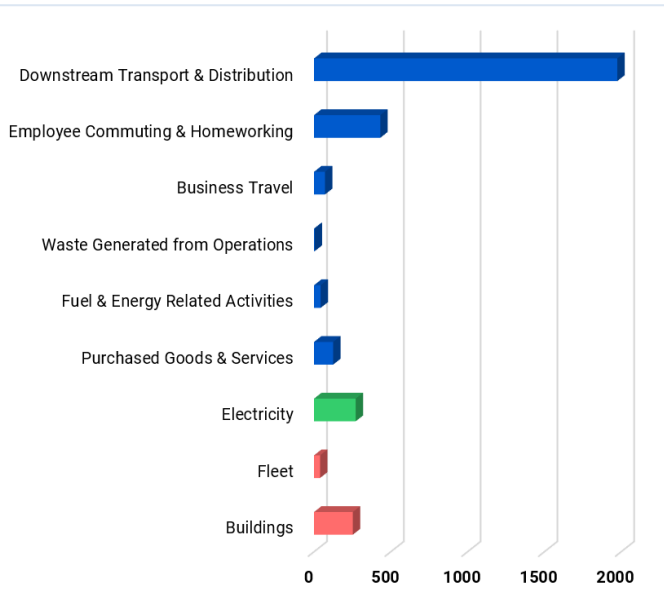
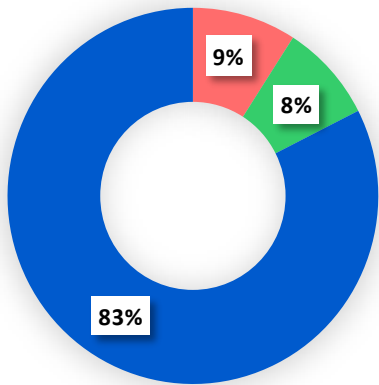
This is a summary of the Carbon Inventory and subsequent Footprint Report produced on behalf of Peak Scientific by Auditel for the reporting period of 01/01/21 – 31/12/21. The inventory work and reporting was carried out in line with the GHG Protocol Corporate Accounting and Reporting Standard and represents a faithful, true, and fair account of Peak Scientific GHG emissions from the data available. The full report should be considered when reading the summary and can be obtained at: info@peakscientific.com

TOTAL EMISSIONS AND INTENSITY METRICS

3212.74	49.71	10.74	0.33
Total tCO ₂ e	tCO ₂ e Per 1M Turnover	tCO ₂ e Per Employee	tCO ₂ e Per Sq Metre

TOTAL EMISSIONS BY SCOPE

Scopes	tCO ₂ e
Scope 1	291.84
Scope 2	271.37
Scope 3	2649.53



Source	Scope	tCO ₂ e
Buildings	1	252.54
Fleet	1	39.30
Electricity	2	271.37
Purchased Steam, Heat & Cooling	2	n/a
Purchased Goods & Services	3	124.70
Capital Goods	3	No material capital purchases within reporting period
Fuel & Energy Related Activities	3	43.03
Upstream Transport & Distribution	3	Excluded due to insufficient data
Waste Generated from Operations	3	4.22
Business Travel	3	71.51
Employee Commuting & Homeworking	3	431.50
Upstream Leased Assets	3	There were none to be found associated with the business in the reporting period
Downstream Transport & Distribution	3	1974.57
Processing of Sold Products	3	Excluded on Cost Vs Benefit
Use of Sold Products	3	Excluded on Cost Vs Benefit
End of Life Treatment of Sold Products	3	Excluded on Cost Vs Benefit
Downstream Leased Assets	3	There were none to be found associated with the business in the reporting period
Franchises	3	There were none to be found associated with the business in the reporting period
Investments	3	There were none to be found associated with the business in the reporting period
		3212.74

Verifier's Statement - Peak Scientific Instruments Ltd

Auditel is a management consultant that is suitably qualified in carbon emissions measurement and verification.

The verification is conducted using the accepted methodology, by approved verifiers. Those approved to conduct verifications are recorded by Auditel (UK) Limited. This process is transparent and is conducted to the requirements **ISO14064 -3: 2019 Specification with guidance for the verification and validation of greenhouse gas statements.**

Auditel has been appointed to measure and evaluate carbon emissions from 1/1/21 to 31/12/21 and to prepare a Carbon Footprint Report for **2021**

Auditel is also retained to verify the report and the disclosures made in this report, Carbon Footprint Report for (2021), conform with the methodology given by Green House Gas Protocol, Corporate Accounting and Reporting Standard and is verified **with comments.**

The following Reporting Principles have been met - Completeness, consistency, accuracy, transparency, relevance. Materiality level applied for verification is 5%

Scopes	Verified GHG Emissions
1	291.84
2	271.37
3	2,649.53

The gas data is incomplete, the tCO₂e quoted however covers all but one supply. Business travel is incomplete, the figure is verified based on the data submitted.

The use of an uncertainty grading, detailed in a separate methodology report, is used to compile the report and this is acceptable. Data included as other than low uncertainty are not verified. Where indirect data sources have been used, this is identified in the report.

Any achieved Carbon Reductions after this is the baseline year of any decarbonisation project. Achieved carbon reductions will be relative to the stated emissions of this report and any targets set. Subsequent verification statements will address progress regarding this.



Martene Coe

Report Author
Auditel



Huw Williams

Independent Verifier
Auditel / UK Analytics Ltd