Carbon Reduction Plan

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Document information

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Change history

Version	Date	Author	Notes
1.0	04 Jan 2024	Kyle Bradburn	Initial version
1.1	04 Jan 2024	Art Malinowski	Updated format, branding and dates
1.2	25 Jan 2024	Kyle Bradburn	Baseline
1.3	25 Feb 2025	Kyle Bradburn	Clarified wording on 4
1.4	06 Jan 2025	Kyle Bradburn	Updates to section 7
1.5	18 Jan 2026	Martin Braburn	Updated Results from Jan 2026
1.6	19 Jan 2026	Kyle Bradburn	Redacted information and updated document classification to public
1.7	20 Jan 2026	Art Malinowski	Text amendments and formatting

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1 Introduction

1.1 Commitment to achieving Net Zero

This Carbon Reduction Plan sets out Pea Soup Hosting's commitment to reducing its environmental impact and contributing to the UK's transition to a low-carbon economy. As a responsible organisation, we recognise the importance of managing and reducing greenhouse gas (GHG) emissions associated with our operations, supply chain, and service delivery.

The purpose of this document is to provide transparency around our current carbon footprint, outline our emissions reduction targets, and describe the practical measures we have implemented—or plan to implement—to achieve Net Zero emissions. This plan supports informed decision-making by our customers and stakeholders and demonstrates our alignment with government sustainability objectives.

This Carbon Reduction Plan has been prepared in accordance with the requirements of Procurement Policy Note (PPN) 06/21 and the UK Government's guidance on reporting carbon emissions. It will be reviewed and updated annually to ensure continued accuracy, relevance, and improvement.

2 Baseline Emissions Footprint

Baseline emissions are a record of greenhouse gases that have been produced in the past and were produced prior to the introduction of any strategies to reduce emissions.

Baseline Year: [12 months up to the end Jan 2024]

Emissions Source	Total Emissions
Scope 1	Zero
Scope 2	18.31 tCO_2e / 4.59 $kgCO_2e$ per TB
Scope 3	158.56 tCO_2e
Total Baseline Emissions	**176.87 tCO_2e**

3 Current Emissions Reporting

Baseline Year: [12 months up to the end Jan 2026]

Emissions Source	Total Emissions
Scope 1	Zero
Scope 2	24.52 tCO_2e / 4.32 $kgCO_2e$ per TB
Scope 3	240.81 tCO_2e
Total Baseline Emissions	**265.33 tCO_2e**

4 Interpretation

4.1 Scope 1

PeaSoup has no direct fuel combustion sources or company-owned vehicles. As such, Scope 1 emissions are assessed as zero.

4.2 Scope 2

Scope 2 emissions arise from purchased or explicitly measured sampled electricity consumed by colocation facilities and office locations, measured in kilowatt-hours (kWh) or purchased in Amps and converted using UK Government emission factors.

Whilst providing IaaS, DRaaS and Storage the commonality across all three products is storage, hence the measurement of $kgCO_2e$ per TB per year. The calculated 4.3 $kgCO_2e$ per TB per year is materially below typical enterprise and public cloud storage benchmarks based on our work with Immersion Cooling Technology.

Industry benchmarks indicate that enterprise and public-cloud storage platforms typically operate in the range of approximately 8–30 $kgCO_2e$ per TB stored per year, depending on utilisation, cooling efficiency, and energy source. PeaSoup Cloud's reported carbon intensity is calculated using measured Scope 2 electricity consumption and average stored capacity.

Benchmark ranges are indicative and provided for contextual comparison only.

4.3 Scope 3

Scope 3 emissions include indirect emissions across the value chain, including colocation services (including backup power generation), electricity transmission and distribution losses, business travel, and purchased goods and services. Where primary supplier data is not yet available, emissions are estimated using conservative, recognised methodologies.

While absolute Scope 3 emissions increased between the baseline and reporting period, this increase reflects business growth and supplier price inflation, not reduced operational efficiency. Over the same period, PeaSoup achieved substantial reductions in travel-related emissions through electrification and behavioural change.

Future reporting periods will focus on reducing emissions intensity per unit of service delivered and continuing supplier engagement to improve data quality.

5 Emissions Reduction Targets

To progress towards Net Zero, PeaSoup has adopted the following targets:

- Reduce Scope 2 emissions by 65 % by 2030
- Reduce Scope 3 emissions by 40 % by 2035
- Achieve Net Zero emissions by 2040

6 Carbon Reduction Initiatives

The following environmental management measures and projects are in place or planned:

6.1 Energy and Buildings

- Transition to 100% renewable electricity tariffs
- Improve building insulation and energy efficiency
- Replace lighting with LED technology

6.2 IT and Digital Services

- Server virtualisation and cloud efficiency optimisation
- Power management policies on end-user devices
- Hardware lifecycle extension and responsible recycling

6.3 Travel and Transport

- Reduce business travel through remote collaboration tools
- Encourage low-emission and public transport travel

6.4 Procurement and Supply Chain

- Engage suppliers on sustainability and carbon reporting
- Prioritise low-carbon and recycled materials
- Reduce single-use products

6.5 Waste and Water

- Increase recycling rates and reduce landfill waste
- Implement paperless processes
- Improve water efficiency

7 Improvements to date

7.1 Site

The ultimate goal is to transition the entire cloud infrastructure estate (services) to a liquid immersion cooling solution, which will reduce our server power consumption further and minimise water wastage in the data centre. Additionally, this solution will enable the recycling of heat for other purposes, such as hot water heating or usable hot water for on-site shower facilities. For example, as the Reading site scales, hot water will eventually be deliverable to local businesses such as hotels. Liquid immersion also has a massive impact on the life cycle of hardware, reduces vibration and heat cycles, and adds years to the expected lifespan.

7.1.1 Head Office

- All head office windows replaced from single to triple glazed
- Partitions added to create "climate zones" reducing energy on temperature controls
- Water filtering systems installed to reduce water wastage and reduce time taken to boil kettle from limescale build up.
- Energy efficient lighting installed and proximity sensors installed into partitioned zones. Time delay on lighting reduced.

7.1.2 Datacentre (London Site)

- Mounting plates installed
- Consolidated and decommissioned storage units
- Consolidated and decommissioned servers to a standby mode

7.1.3 Datacentre 2 (Gatwick Site)

- Liquid immersion platform - Upgraded server PSU's to further improve efficiency.

7.1.4 Datacentre 3 (Reading Site)

- Liquid Immersion platform

8 Governance and Measurement

- Carbon data is reviewed annually by senior management
- Emissions are calculated using the UK Government GHG Conversion Factors
- Progress is monitored and improvement actions identified
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9 Declaration

This Carbon Reduction Plan has been reviewed and approved by the senior management of Pea Soup Hosting

Signed: _____

Name: Martin Bradburn - CEO

Date:

10 Annex A - Calculations

Some sections below are redacted for security purposes. If you require access to the uncensored confidential of our carbon reduction plan please contact us directly.

10.1 Emissions scope overview

PeaSoup has no direct fuel combustion sources or company-owned vehicles. As such, Scope 1 emissions are assessed as zero.

Scope 2 emissions arise from purchased or explicitly measured sampled electricity consumed by colocation facilities and office locations, measured in kilowatt-hours (kWh) or purchased in Amps and converted using UK Government emission factors.

Scope 3 emissions include indirect emissions across the value chain, including colocation services (including backup power generation), electricity transmission and distribution losses, business travel, and purchased goods and services. Where primary supplier data is not yet available, emissions are estimated using conservative, recognised methodologies.

10.2 Scope 2 Power Usage

London consumption is calculated based on the extremely low overage charges that are incurred on some months, providing the knowledge the usage is always at or just under the capacity purchased

Gatwick consumption is calculated from measured 24-hour average IT power, scaled to the deployed server count. Contracted A+B power capacity is higher to provide resilience and headroom, it is also the minimum allocated based on the floor space used.

The Office usage has been estimated from the itemised bills from the landlord separating the power away from other charges

The Reading DC is Metered and included the PUE calculations

10.2.1 Power Usage 12 months to Jan 2024

Site	Contracted Power	Contracted Energy (kWh/yr)	Measured Avg IT Power (kW)	Actual IT Energy (kWh/yr)	PUE	Facility Energy (kWh/yr)
Gatwick	16A on each A+B (230V)	**REDACTED**	**REDACTED**	**REDACTED**	1.2	**REDACTED**
London	52A across A+B (230V)	**REDACTED**	**REDACTED**	**REDACTED**	1.5	**REDACTED**
Office	N/A	N/A	N/A	**REDACTED**	1	**REDACTED**

10.2.2 Power Usage 12 months to Jan 2026

Site	Contracted Power	Contracted Energy (kWh/yr)	Measured Avg IT Power (kW)	Actual IT Energy (kWh/yr)	PUE	Facility Energy (kWh/yr)
Gatwick DC	16A on each A+B (230V)	**REDACTED**	**REDACTED**	**REDACTED**	1.2	**REDACTED**
London DC	52A across A+B (230V)	**REDACTED**	**REDACTED**	**REDACTED**	1.5	**REDACTED**
Office	N/A	N/A	N/A	**REDACTED**	1	**REDACTED**
Reading DC	4 KWh	**REDACTED**	**REDACTED**	**REDACTED**	1	**REDACTED**

10.3 Greenhouse Gas Calculations

Electricity emissions have been calculated using UK Government greenhouse gas conversion factors for electricity consumption ($kgCO_2e$ per kWh), with results expressed in tonnes of CO_2 equivalent.

10.3.1 Power Usage 12 months to Jan 2024

Site	Energy Facility (kWh/yr)	Storage in TB	Factor ($kgCO_2e/kWh$)	Emissions (tCO_2e)
Gatwick	**REDACTED**	**REDACTED**	0.177	3.52
London	**REDACTED**	**REDACTED**	0.177	13.9
Office	**REDACTED**	-	0.177	0.89
Total	**REDACTED**	**REDACTED**		**18.31**

10.3.2 Power Usage 12 months to Jan 2026

Site	Energy Facility (kWh/yr)	Storage in TB	Factor ($kgCO_2e/kWh$)	Emissions (tCO_2e)
Gatwick	**REDACTED**	**REDACTED**	0.177	3.52
London	**REDACTED**	**REDACTED**	0.177	13.91
Office	**REDACTED**	-	0.177	0.89
Reading		**REDACTED**	0.177	6.2
Total	**REDACTED**	**REDACTED**		**24.52**

Tonnes of CO_2e = kilowatt-hours consumed × electricity emission factor ÷ 1,000 (to convert kg to tonnes).

10.4 Storage Comparison

10.4.1 Intensity table (kgCO_2e per TB stored)

Year	Total Scope 2 Emissions (tCO_2e)	Average TB Stored	kgCO_2e per TB
Baseline	18.31	**REDACTED**	4.59
Current	24.52	**REDACTED**	4.32
Change			**-0.26**

PeaSoup's storage platform operates at approximately 4.3 kgCO_2e per TB per year, materially below typical enterprise and public cloud storage benchmarks based on our work with Immersion Cooling Technology.

Industry benchmarks indicate that enterprise and public-cloud storage platforms typically operate in the range of approximately 8–30 kgCO_2e per TB stored per year, depending on utilisation, cooling efficiency, and energy source. PeaSoup Cloud's reported carbon intensity is calculated using measured Scope 2 electricity consumption and average stored capacity.

Benchmark ranges are indicative and provided for contextual comparison only.

10.5 Scope 3 Greenhouse Gas Emissions Calculations

10.5.1 Scope 3 definition

Scope 3 emissions are indirect greenhouse gas emissions that occur across the organisation's value chain and are not directly controlled by PeaSoup. These include emissions associated with business travel, employee commuting, and purchased goods and services.

Where primary supplier emissions data is unavailable, PeaSoup applies recognised UK Government (DEFRA) spend-based and activity-based conversion factors, in line with PPN 06/21 guidance and common UK SME reporting practice.

10.5.2 Methodology and assumptions

General assumptions

- UK Government GHG Conversion Factors applied
- Spend-based method used where activity data is unavailable
- Activity-based method used where mileage or travel patterns are known
- Walking journeys assumed zero-emission
- Electric vehicle travel treated as zero tailpipe emissions (location-based)
- Working year assumed to be 46 weeks

Key conversion factors used

Item	Factor
Petrol car (average)	0.278 $kgCO_2e$ / mile
Rail travel (spend-based)	0.035 $kgCO_2e$ / £
Services (spend-based)	0.00022 tCO_2e / £
Software / ICT (spend-based)	0.00015 tCO_2e / £
Goods / hardware (spend-based)	0.00035 tCO_2e / £

Mileage reimbursements were converted using a proxy rate of £0.45 per mile, consistent with HMRC advisory mileage rates where detailed mileage logs are unavailable.

10.5.3 Scope 3 – Business Travel

Baseline (up to end Jan 2024)

Mode	Activity	Emissions (tCO_2e)
Petrol car	**REDACTED**	**REDACTED**
Rail	**REDACTED**	**REDACTED**
Total Business Travel 2024		**REDACTED**

Reporting period (up to end Jan 2026)

Mode	Activity	Emissions (tCO_2e)
Electric car	**REDACTED**	0
Petrol car	**REDACTED**	**REDACTED**
Rail	**REDACTED**	**REDACTED**
Total Business Travel 2026		**REDACTED**

Result: Business travel emissions reduced by ~86%, driven by a shift from petrol vehicles to electric vehicles.

10.5.4 Scope 3 – Employee Commuting

Baseline (end Jan 2024)

Mode	Annual Activity	Emissions (tCO_2e)
Electric car	Multiple patterns	0
Rail	3× weekly	0.05
Petrol car	Multiple patterns	1.87
Total Commuting 2024		1.92

Reporting period (end Jan 2026)

Mode	Annual Activity	Emissions (tCO_2e)
Electric car	Majority of journeys	0
Rail	Fortnightly	0.01
Petrol car	Limited use	0.38
Walking	Regular	0
Total Commuting 2026		0.39

Result: Employee commuting emissions reduced by ~80%, reflecting increased EV adoption and reduced petrol usage.

10.5.5 Scope 3 – Purchased Goods & Services

Baseline (up to end Jan 2024)

Category	Spend (£)	Emissions (tCO_2e)
Services	**REDACTED**	11.29
Software	**REDACTED**	36.64
Goods (hardware/equipment)	**REDACTED**	110.63
Total Purchased 2024		158.56

Category	Spend (£)	Emissions (tCO_2e)
Services	**REDACTED**	12.57
Software	**REDACTED**	87.09
Goods (hardware/equipment)	**REDACTED**	141.15
Total Purchased 2026		240.81

10.5.6 Explanation of software cost increase

The increase in Scope 3 emissions associated with purchased software between the baseline and reporting period is primarily price-driven rather than usage-driven.

This increase is largely attributable to significant supplier price rises following the acquisition of VMware by Broadcom. These increases reflect changes in licensing and commercial terms rather than increased software consumption or demand.

In line with Scope 3 accounting principles, these costs remain included within purchased goods and services emissions, with explanatory narrative provided to ensure transparency and methodological integrity.

PeaSoup continues to actively evaluate alternative platforms and architectures to mitigate both financial and carbon impacts over future reporting periods.

10.6 Scope 3 totals summary

Year	Business Travel	Commuting	Purchased Goods and Services	Total Scope 3 (tCO_2e)
Baseline (Jan 2024)	3.63	1.92	158.56	164.11
End Jan 2026	0.51	0.39	240.81	241.71