

# **Oxwash Carbon Reduction Plan 2024**

Revision No. : 1

Date: 29 February, 2024

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Approved by : <u>Ewen McN</u>	lulty	

### **Revision History**

Revision Date	Description	Sections Affected	Revised By	Approved By

Commitment to achieving Net Zero

Oxwash is committed to achieving Net Zero emissions in Scope 1 and 2 by 2025 and Scope 3 by 2027.

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### **Baseline Emissions Footprint**

Baseline emissions are a record of the greenhouse gases that have been produced in the past and were produced prior to the introduction of any strategies to reduce emissions. Baseline emissions are the reference point against which emissions reduction can be measured.

Baseline Year: 2021

Additional Details relating to the Baseline Emissions calculations.

Oxwash has established Net Zero targets that have been validated by the Science-Based Target Initiative. Oxwash aims to achieve Net Zero in Scope 1 and 2 by 2025, and in Scope 3 by 2027. Oxwash has set its baseline year as 2021 for scopes 1, 2, and 3. Oxwash's goal is to reduce both absolute emissions and the intensity of CO2e per kilo processed and per £ of revenue.

While Oxwash's total scope 1 and 2 emissions have increased between 2021 and 2023, the CO2e emissions per kilo washed have decreased from 0.5 kilos of CO2e to 0.13 kilos of CO2e per kilo washed. Oxwash has achieved this by swapping all energy to renewable energy, including swapping from natural gas and LPG in 2023 which immediately resulted in a 78% reduction.

Oxwash is on track to achieve 0.04 kilos of CO2e per kilo washed, which is a 90% reduction from baseline, achieving Net Zero status by the end of 2024. Oxwash is projected to emit only 3 tonnes of CO2e in 2024, achieving Net Zero also in absolute terms with a 95% reduction from baseline.

Baseline year emissions:

EMISSIONS	TOTAL (tCO₂e)
Scope 1	41.8
Scope 2	3.7
Scope 3	129.9

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# **Carbon Reduction Plan**

(Included Sources)	
Total Emissions	175.5

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# **Current Emissions Reporting**

Most recent reporting Year: 2023		
EMISSIONS	TOTAL (tCO <sub>2</sub> e)	
Scope 1	96.2	
Scope 2	3.1	
Scope 3 (Included Sources)	1114	
Total Emissions	1213.9	

# **Emissions Reduction Targets**

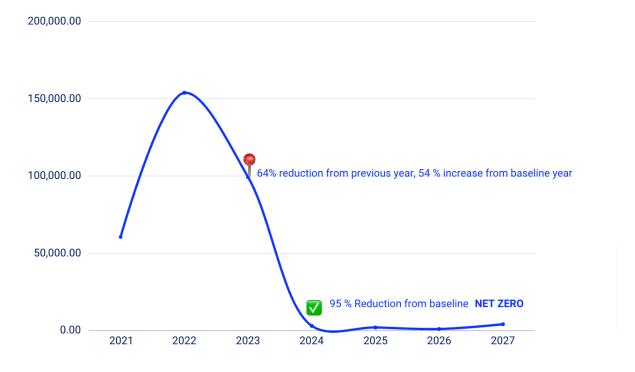
In order to continue our progress to achieving Net Zero, we have adopted the following carbon reduction targets.

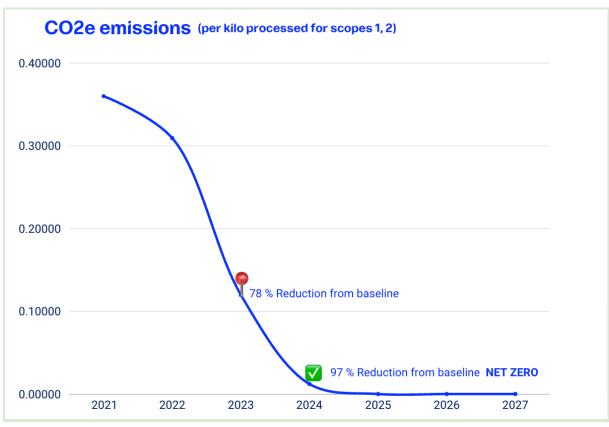
We project that carbon emissions will decrease over the next five years to 3 tCO $_2$ e by 2025. This is a reduction of 95%

Progress against these targets can be seen in the graph below:

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### CO2e emissions (total for scopes 1, 2)





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### **Carbon Reduction Projects**

### Completed Carbon Reduction Initiatives

The following environmental management measures and projects have been completed or implemented since the 2021 baseline. The carbon emission reduction achieved by these schemes equates to  $57tCO_2e$ , a 97% reduction against the 2021 baseline and the measures will be in effect when performing the contract.

#### 1. Renewable Energy Transition and Biogas Implementation

Oxwash has undertaken a comprehensive carbon reduction project to align its operations with sustainable practices. To achieve this, the company shifted from conventional natural gas and Liquefied Petroleum Gas (LPG) to renewable energy sources, with a primary emphasis on biogas. This transition has lowered greenhouse gas emissions by 78% to date and demonstrated Oxwash's commitment to cleaner energy alternatives.

Additionally, Oxwash has invested in state-of-the-art washing machines that consume less energy than the industry average. On average, Oxwash utilises 1.15 kWh of energy per kilogram processed, while the industry average is 3.5 kWh per kilogram processed.

#### 2. SBTI Commitment

Oxwash is committed to achieving Science-Based Targets Initiative (SBTI) and has made changes to its policies to accomplish these targets. Oxwash has primarily focused on renewable energy to achieve these targets in Scope 1 and 2.

In Scope 3, Oxwash has taken actions to identify the majority of emissions that originate from its suppliers. The company has also put in place a strategy to reduce unnecessary travel and flights, encourage remote meetings, and utilise video conferencing technology to minimise the carbon footprint associated with travel. To reduce employee commuting emissions, Oxwash has implemented an electric car scheme and a cycle-to-work scheme. Unavoidable emissions are removed using carbon removals (see below).

In order to continue reducing carbon emissions, Oxwash is planning on implementing several measures in the future:

#### 3. Biodiesel adoption for delivery vehicles:

Currently, Oxwash uses electric vehicles for deliveries. However, as the company grows, it may not be feasible to continue with electric vehicles due to their limitations of volume. To address this issue, Oxwash plans to use biodiesel in its delivery trucks, which will help to reduce carbon emissions significantly compared to traditional diesel.

#### 4. Carbon removal

Oxwash is investing in carbon removal technologies as a key component of its Carbon Reduction Plan. Carbon removal involves innovative processes that actively remove carbon dioxide from the atmosphere, helping to mitigate the impacts of unavoidable emissions. Oxwash is exploring various technologies, including Direct Air Capture (DAC), biochar production, and enhanced weathering.

Direct Air Capture (DAC) involves capturing CO2 directly from the atmosphere and storing it underground, effectively reducing atmospheric carbon levels. Biochar is a form of charcoal produced from organic waste through pyrolysis. When applied to soil, it sequesters carbon while also enhancing soil fertility. Enhanced weathering accelerates the natural process of mineral weathering, helping certain minerals react with CO2 to form stable carbonates, thus locking away CO2 for the long term.

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These carbon removal investments not only complement Oxwash's emission reduction strategies but also contribute to offsetting any residual emissions, helping Oxwash achieve its net-zero carbon goals for Scope 3. Carbon removals differ from traditional offsetting as they actively remove CO2 from the atmosphere, rather than just compensating for emissions by funding projects that reduce future emissions, like renewable energy. These technologies, such as Direct Air Capture and biochar, are significantly more expensive, often costing up to ten times more than traditional offsetting methods, due to their complexity and the early-stage development of the technologies involved.

#### 5. Implementation of new machinery:

To further improve energy efficiency and reduce emissions, Oxwash will be installing hyper-efficient tunnel washers. These machines are designed for continuous operation, which eliminates the need for repeated starts and stops, optimising energy use.

#### 6. Reverse osmosis:

Oxwash is planning to implement a reverse osmosis (RO) system in its laundry operations. This advanced water purification process filters out contaminants at the molecular level, ensuring that the water used in the laundry processes is of high quality. This reduces the need for excessive water usage and contributes to water conservation. Additionally, the reverse osmosis system allows Oxwash to recover heat from the same hot water that is circulated in the system, eliminating the need to reheat it and saving energy.

#### 7. Heat recovery systems:

Lastly, Oxwash is implementing heat recovery systems to capture excess heat generated during the drying process. The captured heat is then redirected and reused in other parts of the laundry operations, such as preheating incoming water or providing supplemental heating. This reduces the demand for additional energy sources, resulting in a more sustainable and efficient operation.

## **Declaration and Sign-Off**

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard and uses the appropriate Government emission conversion factors for greenhouse gas company reporting<sup>2</sup>.

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard<sup>3</sup>.

<sup>&</sup>lt;sup>1</sup> https://ghgprotocol.org/corporate-standard

<sup>&</sup>lt;sup>2</sup> https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting

<sup>&</sup>lt;sup>3</sup> https://ghgprotocol.org/standards/scope-3-standard

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# **Carbon Reduction Plan**

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This Carbon Reduction Plan has been reviewed and signed off by the board of directors (or equivalent management body).

Signed on behalf of the Oxwash:

Michelle Urvall-Ashraf

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Head of Sustainability

Date: 29/02/2024