



Universal Fabrications Carbon Reduction Plan 2024

1. Executive Summary

Universal Fabrications is committed to achieving a 30% reduction in its Carbon Footprint by 2025.

Reducing our Greenhouse Gas (GHG) emissions brings significant benefits to us our customers, suppliers and the wider community.

This Carbon Reduction Plan (CRP) will cover Universal’s baseline year information 2023, setting clear targets for reducing GHG emissions within the year 2024. Our aim is to ensure this plan has the highest levels of engagement across the business.

To support the achievement of the targets Warwickshire County Council has produced a Resource Efficiency Report which will serve as the measurable baseline for the savings and targeted improvements. The report was produced on 12th March 2024 by assessor Johnathan Howl.

2. Meeting the Reporting Requirements

This Carbon Reduction Plan will be reviewed and updated annually in line with the Universal Fabrications Management Meeting Report.

3. Commitment to achieving a reduced carbon footprint by 30% by Dec 2025

Universal is fully committed to a 30% reduction in its GHG emissions and has released significant funding to facilitate the infrastructure changes that are necessary. This will yield significant financial savings over time and contribute to the UK Governments 2050 Net Zero target.

4. Carbon Footprint Methodology

Universal’s carbon footprint methodology is largely based on the assumption that it is a single site manufacturer and the majority of its carbon impact is based on the use of power, primarily electricity to power its machinery. Of the 40,000 sq ft of premises approximately 2000 sq ft is office space. The carbon footprint benchmarking therefore will be based on the electricity consumption data, with the consumption targeted to reduce through key improvement actions

5. Baseline Carbon Emissions – 1st Jan ‘23 – 31st Dec ‘23

Utility	Consumption (kWhs)	Carbon Footprint (Tonnes CO2)
Electricity	963,625.20	216.81
Gas	12,292.26	2.21
Fuel Oil	20,700.00	5.77
Total	996,617.46	224.79

6. Carbon Reduction Projects

LED Lighting – Replace 40 x 250w hi bay lighting fittings with LED equivalents					
Energy Saving (kWh/yr)	18,179.00	Carbon Saving (Tonnes CO2)	4.09	Saving Type	Electricity
Destratification Fans - Working in conjunction with the existing heaters in place, increase efficiency by blowing the warm air towards ground level. This has the effect of reducing the amount of air that is heated.					
Energy Saving (kWh/yr)	17,422.45	Carbon Saving (Tonnes CO2)	3.9	Saving Type	Gas, Fuel oil & electricity
Roller Shutter Doors - By installing new rapid closing & insulated shutter doors, heat loss can be minimised. Carbon Trust recommendations state that efficiency gains of up to 15% can be achieved.					
Energy Saving (kWh/yr)	13,066.83	Carbon Saving (Tonnes CO2)	2.92	Saving Type	Gas & Fuel oil
Transformer/Voltage Optimisation/Distribution Board replacement - The site is classed as a 'high intensity' business, with energy consumption of over 750,00kWh per annum. By introducing voltage optimisation and power factor correction to the power supply, significant ongoing efficiency savings can be made. Carbon Trust recommendations state that VO (voltage optimisation) can increase efficiency by 10%, and PFC (power factor correction) by 5%.					
Energy Saving (kWh/yr)	144,543.75	Carbon Saving (Tonnes CO2)	32.52	Saving Type	Electricity
Energy Management – Behavioural Changes					
<ol style="list-style-type: none"> 1) Ensure all lights are switched off when not in use 2) Ensure external doors are closed when not in use 3) Move equipment away from radiators as equipment acts as a heat soak. 4) Monitor thermostatic radiator valve settings 'TRVs' and reduce settings in unoccupied spaces. 5) Ensure all PCs and monitors are switched off when not in use (at the plug). 6) Switch drinks fridges off fully at the plug when not required (a timer switch could be installed to bring the contents back up to temperature when required for customers). 7) Monitor data to check the switch off procedures are being carried out and that 'out of hours' usage is as expected. 					
Energy Saving (kWh/yr)	99,661.74	Carbon Saving (Tonnes CO2)	22.47	Saving Type	Electricity, gas & fuel oil
Solar Panels – Installation of solar panels to the roof of the main factory. Transformer upgrade is a precursor to this implementation.					
Energy Saving (kWh/yr)	205,709	Carbon Saving (Tonnes CO2)	59.91	Saving Type	Electricity

7. Carbon Reducing Plans Summary with Timeline

In Year targeted savings of 307,844.39 kWh's yielding a Carbon Reduction of 30.89% which represents 77.68 Tonnes.

	Total kWh/year	Energy Saving (kWh/yr)	Carbon Saving (Tonnes CO2)	Implementation	In Year Benefit	% in Year Carbon Reduction
LED Lighting		18,179.00	4.09	Q1 2024	3.07	
Destratification Fans		17,422.45	3.9	Q2 2024	1.95	
Roller Shutter Doors		13,066.83	2.92	Q2 2024	1.46	
Transformer/Voltage Optimisation/Distribution Board replacement		144,543.75	32.52	Q1 2024	24.39	
Energy Management		99,661.74	22.47	Q1 2024	16.85	
Solar Panels		205,709	59.91	Q2 2024	29.96	
Total	996,617.46	498582.77	125.81		77.68	30.89%

Signed:

Date: 16th March 2024

Carl Smith

Carl Smith

Managing Director