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Carbon Reduction Plan

Supplier name: **Ortho Solutions UK Ltd**

Publication date: **16th Feb 2024**

Commitment to achieving Net Zero

Ortho Solutions UK Ltd is committed to achieving Net Zero emissions by 2050.

Emissions Calculations

Baseline Year: 2022

Additional Details relating to the Emissions calculations.

Significant 12-month period activity (2023):-

- **Opening of new Sheffield Prototype Site:** Natural gas supplied to site for heating – Scope 1 contribution
- **Company-owned vehicles:** No company owned vehicles at time of reporting – Zero scope 1 contribution

*Emission Factors from:- [Greenhouse gas reporting: conversion factors 2022](#)
- [GOV.UK \(www.gov.uk\)](#)*

*EEIO factor:-
[Department for Environment, Food and Rural Affairs](#)
["Table 13" Indirect emissions from the supply chain](#)*

*Mileage calculations from:- [Route Planner | Directions, traffic and maps | AA](#)
[\(theaa.com\)](#)*



2023 Emission Calculations:

EMISSIONS	TOTAL (tCO ₂ e)
Scope 1	<ul style="list-style-type: none"> • Gas use: Total m³ used from gas bills = 78 m³ <ul style="list-style-type: none"> ◦ 0.16 Tonnes CO₂e @ Sheffield Site
Scope 2	<ul style="list-style-type: none"> • Electricity use: Total kilowatt-hours used from electricity bills = 123,777 Kwh <ul style="list-style-type: none"> ◦ 23.94 Tonnes CO₂e @ Maldon Site ◦ 0.73 Tonnes CO₂e @ Sheffield Site
Scope 3 (Included Sources)	<ul style="list-style-type: none"> • Employee passenger travel: Employee distance calculation websites to obtain flight, rail, and road distances. <ul style="list-style-type: none"> ◦ Flights = 22.33 Tonnes CO₂e ◦ Rail = 0.43 Tonnes CO₂e ◦ Taxi = 0.62 Tonnes CO₂e ◦ Business Mileage = 76.98 Tonnes CO₂e (Includes travel to and from customer & supplier venues) • Employee commuting: Employee travel to and from fixed site locations. <ul style="list-style-type: none"> ◦ 36.60 Tonnes CO₂e • Homeworking: emissions associated with company staff working from home <ul style="list-style-type: none"> ◦ 1.78 Tonnes CO₂e • Water supply: Total water supplied in cubic metres from water bills. <ul style="list-style-type: none"> ◦ 200 m³ = 0.03 Tonnes CO₂e @ Maldon Site ◦ 6 m³ = 0.00 Tonnes CO₂e @ Sheffield Site • Water treatment: Total water treated in cubic metres from water bill. <ul style="list-style-type: none"> ◦ 185.8 m³ = 0.05 Tonnes CO₂e @ Maldon Site ◦ 5.7 m³ = 0.00 Tonnes CO₂e @ Sheffield Site



	<ul style="list-style-type: none"> • Waste disposal/recycling: Third party disposal and treatment of waste:- <ul style="list-style-type: none"> ○ Tonnes of waste-to-landfill = Zero Tonnes. ○ Recovery or recycling = 0.98 Tonnes Cardboard, 1.30 Tonnes plastics; ○ Waste to energy = 1.30 Tonnes; ○ 0.08 Tonnes CO2e • Upstream transportation and distribution: See downstream comments below. • Downstream transportation and distribution: Removed from total emissions calculation following advice from Inenco operating with Doncaster and Bassettlaw Trust towards Greener NHS programme for new zero emissions by 2040. <ul style="list-style-type: none"> ○ Including downstream distribution double counts Ortho Solutions scope 3 with courier operator scope 1 CO2e
Total Emissions	0.16+23.94+0.73+22.33+0.43+0.62+76.98+36.60+1.78+0.03+0.05+0.08 = 163.73 Tonnes CO2e



Current Emissions Reporting

Reporting Year: 2023				
Emissions Source	2022 (Base Year)	2023	Share %	Y O Y %
Scope 1	0.00	0.16	0.10%	100%
Scope 2	22.95	24.67	15.07%	8%
Scope 3 (Included Sources)	315.92	138.90	84.83%	-56%
Total Emissions (tCO ₂ e)	338.87	163.73		-52%

Emissions reduction targets

Progress review against 2023 carbon reduction initiatives.

Scope 2 Initiatives		
Item	2023	Progress
1	Replacement of fluorescent tubing with LED panels. Marketed at 30% improved energy consumption	Partial implementation 2023. 50% of office areas implemented. To continue as programme into 2024
2	Replacement of fluorescent tubing with clear panels to allow natural light to filter into the office	Completed as planned. Staff welfare improved with increased natural light. Not enough natural light to enable light panels to be turned off in open plan office environment
3	Turn off devices not in use to avoid 'stand-by' usage	Actioned but not monitored. Unknown net result
Planned Reduction	6%	50% Implementation



Scope 2 Initiative Commentary:

2023 increased Scope 2 greenhouse gas emissions by 8% despite focus on lighting projects for a reduction of 6%. Contributing factors are the implementation of a new prototyping facility and a net increase of headcount.

Scope 3 Initiatives		
Item	2023	Progress
1	Offset passenger travel by selecting carbon neutral options at point of purchase	Offsetting greenhouse gas emissions at the point of travel purchase has proven difficult to monitor and report. New software implemented for carbon footprint contribution monitoring for full year 2024 period
2	Encourage staff to hybrid driving or electric vehicles	2023 has seen the introduction of staff members using hybrid vehicles
3	Car-pooling arrangements (incentivisation?)	No firm arrangements documented. Lots of informal and ad-hoc arrangements which are difficult to monitor and report. Room to consider improvements in 2024
Planned Reduction	20%	15% Implementation

Scope 3 Initiative Commentary:

2023 decreased Scope 3 greenhouse gas emissions by 56%! Thus, achieving the 2030 target within 1 year. Not quite a true statement when considering the removal of upstream and downstream transport and distribution contributions. However, when adding the 2022 CO₂e generated from these elements, there has still been a net decrease in Scope 3 green house gas emissions. An excellent result when considering the factors impacting Scope 2 emissions: the addition of a new prototype facility and net increase in headcount.

Scope 3 initiatives, whilst proposed with good intent, have faltered in the capture of data. The switching-on of new Carbon Footprint monitoring software within the organisations expense management system will aid such capture. Moving forwards, greenhouse gas reduction proposals ideas should also be appraised upon the ability to log the required information.



Scope 3 Initiative Commentary Continued:

Looking at the larger green house gas contributors within Scope 3: Business milage and commuting; Ortho Solutions would benefit from focus in these areas. Thus the original 2023 initiatives were the correct direction; Ortho Solutions needs to be able to capitalise in these carbon footprint contributors.

Carbon Reduction Projects 2024

Continued or new 2024 carbon reduction initiatives.

Scope 2 Initiatives	
Item	2024
1	Continued programme of replacement LED panels from 2023
2	Alternative warehouse heating / cooling
3	Turn off devices not in use to avoid 'stand-by' usage
Planned Reduction	3% (Outstanding 2023 projection)

Scope 3 Initiatives	
Item	2024
1	Offset passenger travel by selecting carbon neutral options at point of purchase
2	Utilise new software implemented for carbon footprint contribution monitoring for full year 2024 period.
3	Car-pooling arrangements (incentivisation?)
Planned Reduction	17% (Outstanding 2023 projection)



Future Carbon Reduction Initiatives:

1. Investigate solar panel installation for Unit 5 to negate electricity provision for the entire site;
 - Investigated and quoted for Maldon Site. The cost is a significant figure for Ortho Solutions, but the payback was shorter than expected at 3.5 years (however using 2023 high energy costs within the calculations). By placing solar panels onto just one of the units would provide enough electrical power for all 3 units and possibly provide electrical spill-over into localised car charging facilities.
 - This option would eliminate the Maldon Site Scope 2 emissions of **23.94 Tonnes CO2e** and via the car chargers, could contribute towards reducing the Scope 3 emissions for those staff members that switch to PHEV or fully electric vehicles.
2. Investigate a low emissions car policy for those taking car benefit employment options;
 - There is now potential to capture data using the new Carbon Footprint monitoring software within the organisations expense management system to appraise such a policy decision.
3. Investigate a third party operated project scheme to carbon neutralise Ortho Solutions footprint:
[Our Climate Solutions | Earthly](#)
[Become Climate Positive with Ecologi® | Ecologi](#)
 - Investigated at a cost of £6086 per annum based on 2022 CO2e calculations and 2023 market rates.
 - Further investigation required.



Declaration and Sign Off

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard¹ and uses the appropriate Government emission conversion factors for greenhouse gas company reporting².

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) Standard³.

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

Signed on behalf of the Supplier:

Date: 16/FEB/2024

¹<https://ghgprotocol.org/corporate-standard>

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

³<https://ghgprotocol.org/standards/scope-3-standard>