

LCA: Air Flip Table

Product Embodied Carbon Declaration

PAS 2050:2011

DOCUMENT DETAILS	
Description	Life Cycle Assessment Report
Product	Air Flip Table
Declared Unit	1 unit (dimensions: 1600mm × 800mm)
Functional Unit	1 conference table used for 20 years in an office setting
For Period	Jan 2024 to Dec 2024
System Boundary	Cradle to grave lifecycle assessment
Company	Workbench
Consultants	Martyn Bromley
Dated	15 th July 2025
Version	1



01 introduction

This report details the “Cradle to Grave” life cycle assessment (LCA) of the Workbench Air Flip Table including the embodied carbon and estimated environmental impacts across all life cycle stages. The LCA has been conducted using OpenLCA software and methodology aligned with,

- PAS 2050:2011
- Green House Gas (GHG) Protocol Product Life Cycle Accounting and Reporting Standard
- EN 15804 standard using the Ecoinvent database
- ISO 14040
- ISO 14044

02 goal and scope definition

The purpose of this LCA is to estimate the cradle-to-grave greenhouse gas emissions (in kg CO₂e) of the Air Flip Table furniture unit.

System boundary: Cradle to grave

Life cycle stages included:

- Design, project management and administration
- Raw material acquisition
- Upstream transport
- Manufacturing & Assembly
- Downstream transport
- Use phase including refurbish (based on 20-year assumed lifespan)
- End-of-life (recycling, landfill)

03 system boundaries

The system boundary includes raw material extraction, transportation, manufacturing, assembly, maintenance, and end-of-life processing. Transport modes include road and sea freight. Maintenance includes two lacquer recoats during the product’s life.

04 greenhouse gases considered

Emissions include CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆, expressed as kg CO₂e using IPCC AR5 GWP values.

05 material content embodied carbon

A summary of embodied carbon in the material component of the Air Flip Table are shown in Table 1 and Figure 1.

Air Flip Table Lifecycle Analysis				
Process / Component	Material	Quantity	Unit	Kg CO ₂ e
Base Material	steel	13.00	kg	20.93
Cross Rail & Pull	steel	3.59	kg	5.78
Core Table Material	MDF	21.20	kg	18.15
Veneer	veneer	1.50	kg	0.18
Coating	lacquer	0.60	kg	2.28
Brackets & Castors	steel	7.00	kg	11.27
Total				58.60

Table 1: Embodied Carbon Content for Workbench Air Flip Table

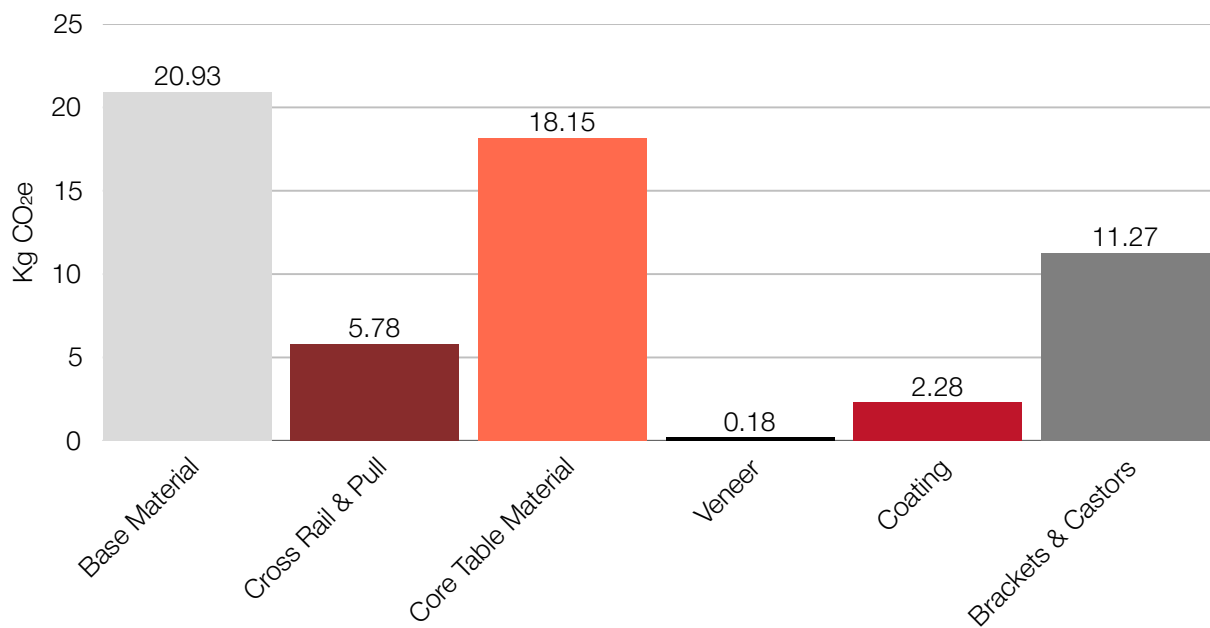


Figure 1: Embodied Carbon Content for Workbench Air Flip Table

06 carbon footprint inventory analysis

A summary of the main activity data and assumptions used to estimate emissions are shown in Table 1 and Figure 1.

Air Flip Table Lifecycle Analysis				
Process	Material	Quantity	Unit	Kg CO ₂ e
Design & Admin Energy		24.31	kWh	4.94
Assembly Energy		135.00	kWh	28.47
Upstream Transport		65.64	tonne km	2.44
Base Material	steel	13.00	kg	20.93
Cross Rail & Pull	steel	3.59	kg	5.78
Core Table Material	MDF	21.20	kg	18.15
Veneer	veneer	1.50	kg	0.18
Coating	lacquer	0.60	kg	2.28
Brackets & Castors	steel	7.00	kg	11.27
Assembly Waste	MDF	3.78	kg	0.00
Downstream Transport		4.69	tonne km	0.77
Use Phase		0.50	kg	0.06
End of Life		41.20	kg	0.03
Total				95.30

Table 2: Embodied Carbon Content for Workbench Air Flip Table

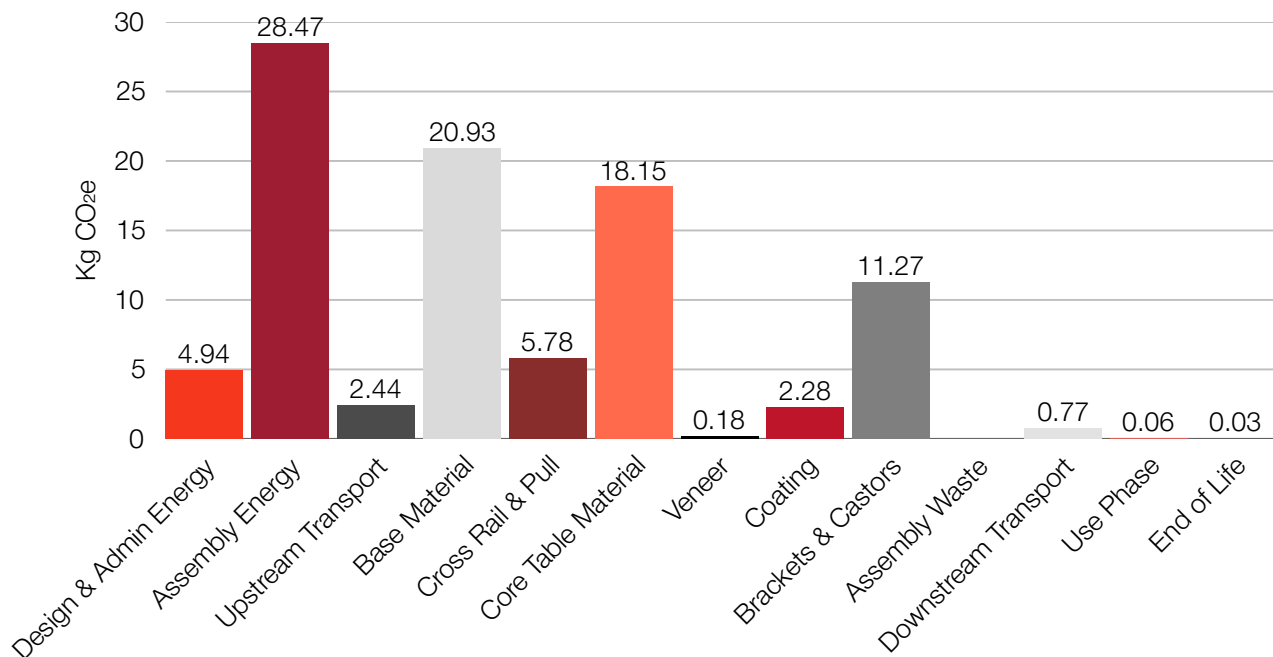


Figure 2: Embodied Carbon Content for Workbench Air Flip Table

07 interpretation

The primary contributors to emissions are material inputs and transport. Assembly and maintenance have smaller impacts.

08 assumptions and data quality

Data for design, administration and assembly, material content and location of sources, was provided to Carbon Lens Ltd by Workbench. Some estimates were required for transport, use phase, and end of life disposal. Details are in table.

Assumptions of Data Quality			
Process/Component	Data Provided	Assumptions	Data Quality
Design & Admin Energy	Hours per unit	Based on 25 units	Very good
Assembly Energy	Hours per unit	Based on 25 units	Very good
Upstream Transport	Region of source of raw material	Road & sea transport	Fair
Base Material	Material type, weight & dimensions	Data used as provided	Very good
Cross Rail & Pull	Material type, weight & dimensions	Data used as provided	Very good
Core Table Material	Material type, weight & dimensions	Data used as provided	Very good
Veneer	Material type, weight & dimensions	Data used as provided	Very good
Coating	Material type, weight & dimensions	Data used as provided	Very good
Brackets & Castors	Material type, weight & dimensions	Data used as provided	Very good
Assembly Waste	Percentage of material wasted	Data used as provided	Good
Downstream Transport	Average data	Average road transport	Fair
Use Phase	Average data	2 Refurbishments	Fair
End of Life	Description of fate of waste	Metal: recycle, MDF: Landfill	Good
Total			

Table 3: Assumptions & Data Quality for Workbench Air Flip Table

09 flow chart

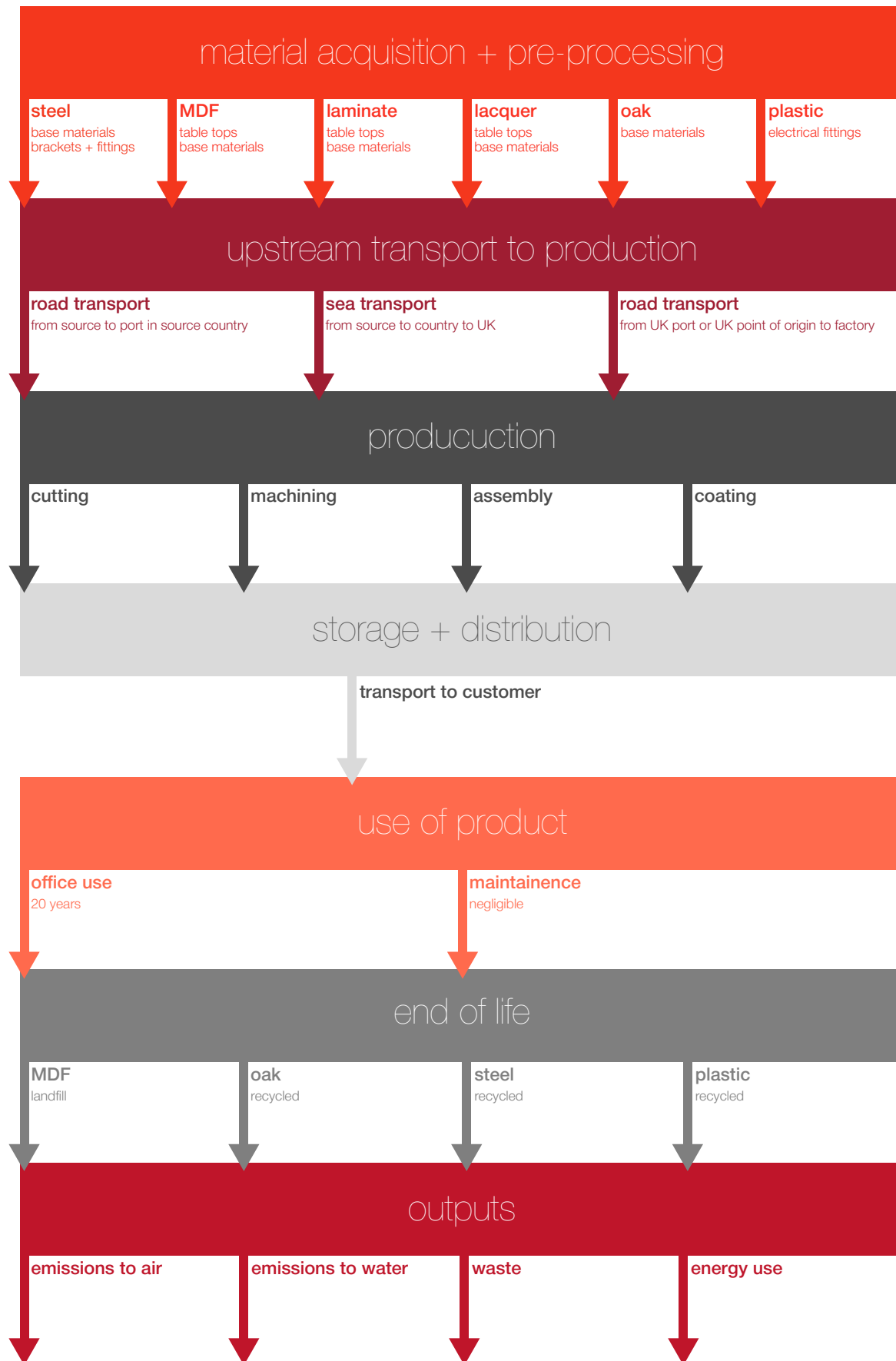


Figure 3: Embodied Carbon Content for Workbench Air Flip Table

10 verification

This declaration has been prepared verified by Carbon Lens Ltd and is based on product data and material specifications provided by Workbench.

Verified by: Martyn Bromley, Director. Carbon Lens Ltd

Signed:



Date: 15th July 2025

Declaration by Workbench

The undersigned confirms that the information provided is complete and accurate to the best of their knowledge.

Signed:



Date: 15th July 2025