# Statement of Verification

BREG EN EPD No.: 000728 Issue 01

This is to verify that the

**Environmental Product Declaration**

provided by:

**SBFI Group**

BRE Global Verified EPD

is in accordance with the requirements of:

**EN 15804:2012+A2:2019**

and

**BRE Global Scheme Document SD207**

This declaration is for:

**1 unit of the Aspect N-series 1500 workstation Pod (EU), weighing 120 kg per desk, with an estimated service life of 19 years**

## Company Address

SBFI Group
2nd Floor Landmark House,
69 Leadenhall Street,
London
EC3A2DB

| | | |
|---|---|---|
| Signed for BRE Global Ltd | Hayley Thomson<br>Operator | 19 September 2025<br>Date of this Issue |
| 19 September 2025<br>Date of First Issue | | 18 September 2030<br>Expiry Date |

BRE Global Verified EPD

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ECO PLATFORM EPD VERIFIED

# Environmental Product Declaration

EPD Number: **000728**

## General Information

| EPD Programme Operator | Applicable Product Category Rules |
|---|---|
| BRE Global<br>Watford, Herts<br>WD25 9XX<br>United Kingdom | BRE Environmental Profiles Product Category Rules for Type III environmental product declaration of construction products to EN 15804+A2 PN 514 Rev 3.1<br><br>EN 50693:2019 - Product category rules for life cycle assessments of electronic and electrical products and systems |
| **Commissioner of LCA study** | **LCA consultant/Tool** |
| SBFI Group<br>2nd Floor Landmark House,<br>69 Leadenhall Street,<br>London<br>EC3A2DB | Bala Subramanian/ BRE LINA A2 |
| **Functional Unit** | **Applicability/Coverage** |
| 1 unit of the Aspect N-series 1500 workstation Pod (EU), weighing 120 kg per desk, with an estimated service life of 19 years | Other (please specify). Product specific |
| **EPD Type** | **Background database** |
| Cradle to Gate with options | Ecoinvent 3.8 |

| Demonstration of Verification |
|---|
| CEN standard EN 15804 serves as the core PCR [a] |
| Independent verification of the declaration and data according to EN ISO 14025:2010<br>☐Internal ☒ External |
| (Where appropriate [b]) Third party verifier:<br>Roger Connick |
| a: Product category rules<br>b: Optional for business-to-business communication; mandatory for business-to-consumer communication (see EN ISO 14025:2010, 9.4) |

| Comparability |
|---|
| Environmental product declarations from different programmes may not be comparable if not compliant with EN 15804:2012+A2:2019. Comparability is further dependent on the specific product category rules, system boundaries and allocations, and background data sources. See Clause 5.3 of EN 15804:2012+A2:2019 for further guidance |

## Information modules covered

| Product | | | Construction | | Use stage | | | | | | | End-of-life | | | | | Benefits and loads beyond the system boundary |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Related to the building fabric | | | | | Related to the building | | | | | | | |
| A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | | D |
| Raw materials supply | Transport | Manufacturing | Transport to site | Construction – Installation | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | Deconstruction demolition | Transport | Waste processing | Disposal | | Reuse, Recovery and/or Recycling potential |
| ☑ | ☑ | ☑ | ☐ | ☐ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | | ☑ |

Note: Ticks indicate the Information Modules declared.

## Manufacturing site(s)

SBFI Group
Hawthorne Estate
Avis Way
Newhaven BN9 0DJ

# Construction Product:

## Product Description

Aspect is a height adjustable workspace, designed especially for the demands of critical environments with heavy technology loads. The product comprises of a standard kit of parts which can be assembled and reconfigured for a modern and dynamic environment.

Key features include carefully developed heat management, spacious IT and services compartment, and integral height adjustment.

The technical functionality is carefully balanced with strong ergonomic values, which enables storage of multiple Workstation sized PCs, without compromising user legroom or seated and standing positions for a full demographic of users.

Height adjustment is achieved using two robust, telescopic actuators with built-in safety features to prevent material damage in case of a collision with a solid object. The combination of integrated Piezo hardware and a Gyroscopic sensor works to maintain a long service life and safeguards the adjustable desk. The worksurface height is adjusted using a programmable, Bluetooth controller with digital readout and pre-set height options.

Aspect upholds strong ergonomic values, and as such, the desk exceeds the requirements of British and European furniture standards and is certified for Ergonomic Excellence. Full legroom is provided across the width of the desk, a minimum of 1200mm wide x 800mm deep is clear of all obstacles.

The internal frame meets the mechanical safety requirements of BS EN 527, and there are no protruding legs, except for support feet on a single desk.

Power and Data services are critical to our environment, so as cables rise from the floor grommet and enter the desk, they are protected behind a removable metal shield. A local M6 stud gives a connection point (by others) to the building earthing.

PCs are stored inside the desk, in a protected compartment which rises and falls with the worktop. This provides a natural modesty panel to opposite users and creates a comfortable height to work on the computers for IT technicians. It is easy and quick to access front and rear of PCs, to add or remove cables. A natural ventilation

method draws ambient air in through perforated areas and exhausts it out through the centre spine away from the users. Upgrades with Fans and Water-cooled Fan Coils are available.

Worksurfaces and other joinery items are constructed with an FSC MDF core and high-pressure laminate faces. A polyurethane finish is applied to sides of the worksurface, including an anti-spill upstand to the rear and partially to the sides and a soft finger grab rail under the nosing.

Flatscreen support is a significant feature of the product, and it utilises the “tool-free” Axiom Monitor Arm. This is a stable but fully articulating (double jointed) arm and provides a rigid attachment of screens to the desk structure, whilst facilitating adjustment in all planes.

Screens can be easily moved forwards or backwards according to preference, rotated 360-degree or moved with horizontal angle adjustment, allowing outer screens to be directed inwards to form a cock-pit shape. In addition, a pre-torqued friction joint allows the user to tilt the upper screens downwards. All adjustment to the monitor can be achieved above the worksurface, with no need to undo from underneath.

## Technical Information

| Property | Value, Unit |
|---|---|
| Type | Height adjustable desk/console |
| **Standard dimensions** | |
| Width | 1500mm –2000mm* |
| Depth | 800mm –1000mm* |
| Worksurface height | 650mm to 1300mm from floor |
| Level adjustment | 4 no. M10 adjustable feet |
| **Lift** | |
| Range | 650mm |
| Collision mitigation | Piezo and Gyroscope |
| Thrust per column | Option 700N / 1200N |
| Desktop loading | 100kg as BS EN 527-2<br><br>NOTE: The system will support at least an additional 60kg of evenly distributed equipment subject to final configuration of desk. |
| Duty Cycle | 10% or 2 minutes at full load with 18-minute pause |
| Operating environment | Indoor, 10°C to 40°C |
| Power (2 leg lift) | Idle 0.1W<br>Max 200W<br>(typically, 165W up and 65W down) |
| Monitor arm loading | Axiom Post 40kg Axiom Post arm 25kg<br>Axiom Slatwall arm 10kg Arc monitor arm 10kg |
| Reference service life | 19 years |
| **Fan Coil Unit (when applicable)** | |
| Duty | Up to 3kW, depending on final site conditions and configuration |

| Property | Value, Unit |
|---|---|
| Communication | BACnet |
| Water supply | Above dew point for environment |
| Typical desk weight per user | 120 kg** |
| Electrical | Power by third part suppliers Earth bonding to BS 6396, earth stud on End frame |

*Note: Data sourced from product technical data sheet. Please contact the SBFI technical team for more information*

## Main Product Contents

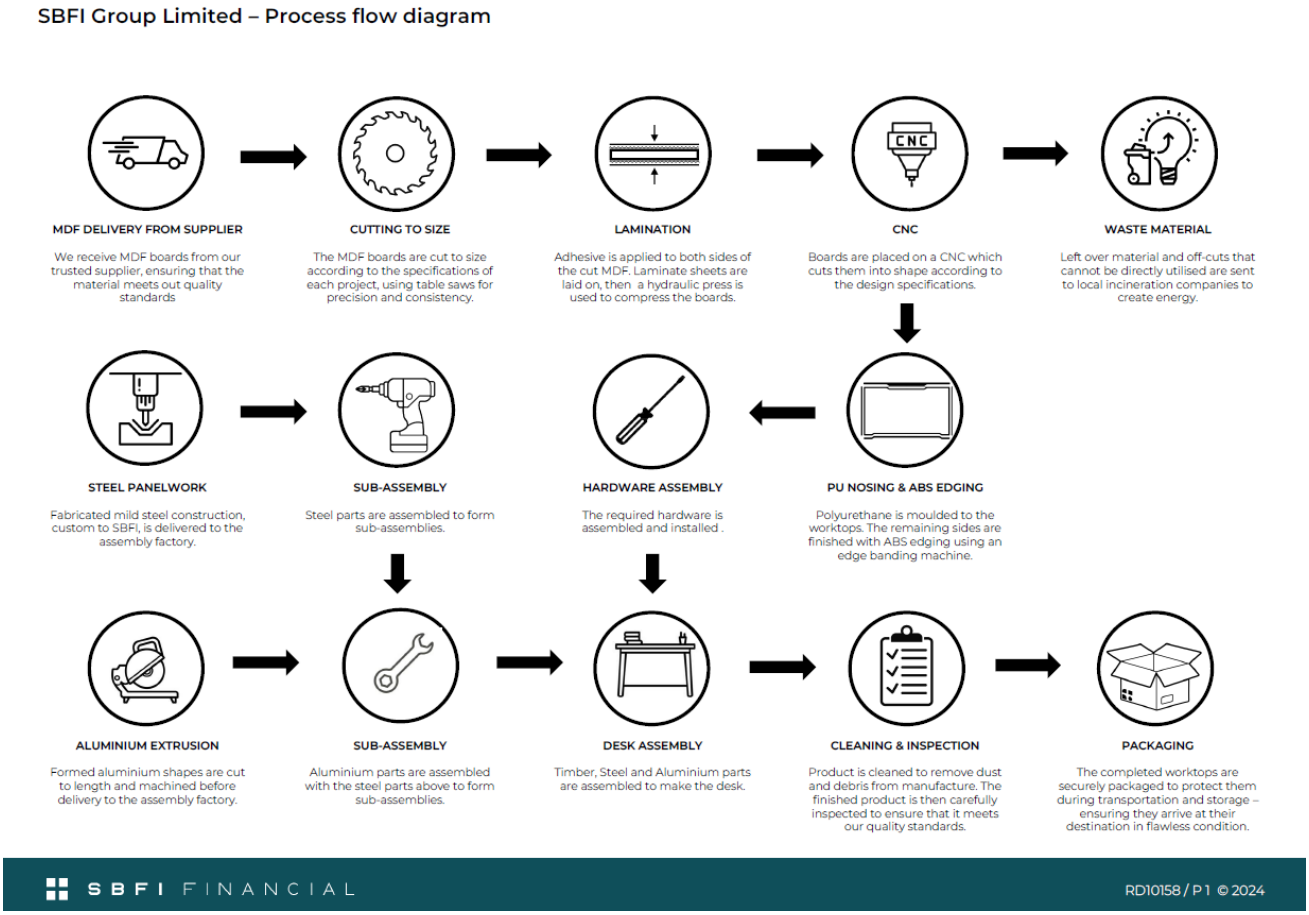
| Material/Chemical Input | % |
|---|---|
| Steel, unalloyed | 45 – 50% |
| Medium Density board | 35 - 40% |
| Aluminium | 5-10% |
| Others | 5-10% |

## Manufacturing Process

The process begins with the delivery of MDF boards from our trusted supplier, meeting our stringent quality standards. These boards are meticulously cut to size according to project specifications using precision table saws. Both sides of the cut MDF are then coated with adhesive before being layered with laminate sheets and compressed using a hydraulic press. Next, CNC machines shape the boards to exact design specifications, while leftover material and off-cuts are responsibly disposed of through local incineration for energy generation. Worktops are then finished with polyurethane and ABS edging, and necessary hardware is expertly assembled and installed. Custom mild steel constructions are delivered and assembled to form sub-assemblies; alongside

aluminium parts cut to length and machined before integration. The final step involves the meticulous assembly of timber, steel, and aluminium components to create the finished desk product, which undergoes thorough cleaning and inspection to ensure superior quality. Finally, the completed worktops are meticulously packaged to safeguard them during transportation, ensuring they reach their destination in impeccable condition.

## Process flow diagram




## Use stage

The Aspect IN-series 1500 workstation pod is designed to support both individual and collaborative work in open-plan office environments. It includes separate workspaces within a shared structure and can be reconfigured to suit different layout requirements. The workstation includes an optional electronic height-adjustable feature, allowing users to alternate between sitting and standing.

For this LCA analysis, operational energy use during the use stage has been estimated based on a scenario in which a standard Single N-Series desk was set up with a pair of DL19 legs. A combination of steel weights and spare actuators was placed on both the worksurface and the technology pod to simulate a typical load. It is assumed that the workstation was installed in the UK, therefore the UK electricity grid dataset has been used to calculate the B6 operational energy impacts. The GWP carbon footprint for using 1 kWh of electricity, GB kWh is 0.239 kgCO2e/kWh.

**Measurement:** The desk power was wired through a Shelly PM Mini Gen 3 This allows recording of power usage.

**Cycles:** The desk was run at two full cycles a day for the weekdays over a 7-day period, the rest of the time it was left fully powered.

**Result:** After 7 days the Shelly PM was accessed and the Power Consumption recorded. This was then calculated as an average Power

- Consumption = 8.1 Wh
- Time = 7 day
- Power = Consumption/ time = 0.048 W

to convert 8.1 Wh to kWh:

- 7 days =8.1 Wh /1000=0.0081 kWh

The total energy consumption per day = 0.00116 kWh

The estimated service life of the product is 19 years; therefore, the total energy consumption is 8.025 kWh per position (seat).

For more information, please contact the SBFI technical team

Once the product is installed, it does not require any maintenance; therefore, there are no impacts associated with B2 (Use Stage – Maintenance).

## End of Life

Once the product reaches it end of life, the workstation desk will be removed from the building and sent to waste processing facility. As the desk is made out of the components like steel, aluminium, and MDF board and these components can be recycled therefore, according to BRE PCR 3.1, 95% of the product will be recycled and 5% send to landfilling

# Life Cycle Assessment Calculation Rules

## Functional unit description

1 unit of the Aspect N-series 1500 workstation Pod (EU), weighing 120 kg per desk, with an estimated service life of 19 years.

## System boundary

This is a cradle-to-gate with options EPD, covering the upstream processing stages (A1–A3), Use (B1), Maintenance (B2), Repair (B3), Replacement (B4), Refurbishment (B5), Operational energy use (B6), and Operational water use (B7), end-of-life stages (C1–C4), and Module D for the Aspect N-series 1500 Workstation Pod (EU), manufactured by the SBFI Group in the United Kingdom. The EPD follows the modular structure defined in EN 15804:2012+A2:2019, BRE 2023 Product Category Rules (PN 514 Rev 3.1), and following EN 50693:2019 - Product category rules for life cycle assessments of electronic and electrical products and systems.

## Data sources, quality, and allocation

The datasets are derived from Ecoinvent v3.8, and the LCA tool used was BRE LINA A2. The LCA analysis is conducted for the 1 unit of Aspect N-series 1500 workstation Pod (EU), and it includes the total amount of MDF boards, aluminium profiles, steel frames, and ancillary materials used to assemble the Aspect N-series 1500 workstation pod over the period of one year (from 01/01/2022 to 31/12/2022).

In addition to the Aspect N-series 1500 workstation Pod, other products are manufactured in the production facility. Therefore, the allocation to electricity, fuel, waste, ancillary, packaging, non-production waste, water consumption, and discharge are required. This allocation has been done according to the provisions of BRE PCR and EN15804+A2, using the “unit” production quantity. Site wide values for energy, water, waste and wastewater have been taken from bills. Figures for the raw materials, ancillary materials and packaging were from actual usages. Manufacture has confirmed that the MDF waste from the production process is calculated directly, since all the MDF boards are ordered based on the production output.

Secondary data has been obtained for all other upstream and downstream processes that are beyond the control of the manufacturer (i.e. raw material production) from the ecoinvent 3.8 database. All ecoinvent datasets are complete within the context used and conform to the system boundary and the criteria for the exclusion of inputs and outputs, according to the requirements specified in EN 15804:2012+A2:2019.

| ISO14044 guidance. Quality Level | Geographical representativeness | Technical representativeness | Time representativeness |
|---|---|---|---|
| Very Good | Data from area under study. | Data from processes and products under study. Same state of technology applied as defined in goal and scope (i.e., identical technology). | There is approximately 1-2 years between the Ecoinvent LCI reference year, and the time period for which the LCA was undertaken. |

Specific European datasets have been selected from the ecoinvent LCI for this LCA. Manufacturer uses the national grid electricity for production, so therefore the national grid electricity dataset has been used for the LCA modelling (Ecoinvent 3.8). The GWP carbon footprint for using 1 kWh of electricity, GB kWh is 0.239 kgCO2e/kWh and for the UK natural gas carbon footprint for using 1 kWh is 0.232 kgCO2eq. The quality level of time representativeness is also Very Good as the background LCI datasets are based on Ecoinvent v3.8 which was compiled in 2021. Therefore, there is less than 5 years between the Ecoinvent LCI reference year and the time period for which the LCA was undertaken

## Cut-off criteria

All raw materials and energy input to the manufacturing process have been included, except for direct emissions to air, water, and soil, which are not measured. The inventory process in this LCA includes all data related to raw material, packaging material and consumable items.

## LCA Results

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

| Parameters describing environmental impacts | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | GWP-total | GWP-fossil | GWP-biogenic | GWP-luluc | ODP | AP | EP-freshwater |
| | | | kg $CO_2$ eq | kg $CO_2$ eq | kg $CO_2$ eq | kg $CO_2$ eq | kg CFC11 eq | mol $H^+$ eq | kg $(PO_4)^{3-}$ eq |
| Product stage | Raw material supply | A1 | 3.77E+02 | 4.39E+02 | -6.31E+01 | 7.41E-01 | 2.42E-05 | 2.49E+00 | 1.68E-01 |
| | Transport | A2 | 3.15E+01 | 3.14E+01 | 1.08E-02 | 1.82E-02 | 6.70E-06 | 6.12E-01 | 1.51E-03 |
| | Manufacturing | A3 | 7.83E+01 | 1.81E+01 | 6.02E+01 | 1.64E-02 | 1.84E-06 | 5.33E-02 | 2.78E-03 |
| | Total | A1-3 | 4.87E+02 | 4.89E+02 | -2.93E+00 | 7.76E-01 | 3.27E-05 | 3.15E+00 | 1.72E-01 |
| Use stage | Use | B1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Maintenance | B2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Repair | B3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Replacement | B4 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Refurbishment | B5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Operational energy use | B6 | 1.92E+00 | 1.90E+00 | 1.72E-02 | 1.99E-03 | 1.44E-07 | 4.21E-03 | 2.59E-04 |
| | Operational water use | B7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| End of life | Deconstruction, demolition | C1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Transport | C2 | 9.98E-01 | 9.97E-01 | 8.50E-04 | 3.92E-04 | 2.31E-07 | 4.05E-03 | 6.42E-05 |
| | Waste processing | C3 | 7.45E+01 | 3.78E+00 | 7.07E+01 | 9.21E-04 | 7.33E-07 | 4.87E-02 | 5.78E-04 |
| | Disposal | C4 | 6.80E-01 | 6.78E-01 | 1.10E-03 | 1.72E-04 | 3.27E-08 | 1.14E-03 | 3.48E-05 |
| Potential benefits and loads beyond the system boundaries | Reuse, recovery, recycling potential | D | -3.18E+02 | -3.45E+02 | 2.72E+01 | -3.73E-01 | -1.31E-05 | -2.00E+00 | -1.14E-01 |

GWP-total = Global warming potential, total;
GWP-fossil = Global warming potential, fossil;
GWP-biogenic = Global warming potential, biogenic;
GWP-luluc = Global warming potential, land use and land use change;

ODP = Depletion potential of the stratospheric ozone layer;
AP = Acidification potential, accumulated exceedance; and
EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment

## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

| Parameters describing environmental impacts | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | EP-marine | EP-terrestrial | POCP | ADP-mineral &metals | ADP-fossil | WDP | PM |
| | | | kg N eq | mol N eq | kg NMVOC eq | kg Sb eq | MJ, net calorific value | $m^3$ world eq deprived | disease incidence |
| Product stage | Raw material supply | A1 | 4.90E-01 | 5.09E+00 | 1.77E+00 | 2.45E-03 | 5.09E+03 | 1.85E+02 | 3.58E-05 |
| | Transport | A2 | 1.54E-01 | 1.71E+00 | 4.51E-01 | 7.36E-05 | 4.36E+02 | 1.51E+00 | 1.77E-06 |
| | Manufacturing | A3 | 1.98E-02 | 1.93E-01 | 5.10E-02 | 9.61E-05 | 4.61E+02 | 7.96E+00 | 4.05E-07 |
| | Total | A1-3 | 6.64E-01 | 6.99E+00 | 2.27E+00 | 2.62E-03 | 5.99E+03 | 1.95E+02 | 3.79E-05 |
| Use stage | Use | B1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Maintenance | B2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Repair | B3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Replacement | B4 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Refurbishment | B5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Operational energy use | B6 | 1.26E-03 | 1.40E-02 | 3.44E-03 | 1.18E-05 | 5.03E+01 | 1.15E-01 | 2.92E-08 |
| | Operational water use | B7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| End of life | Deconstruction, demolition | C1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Transport | C2 | 1.22E-03 | 1.33E-02 | 4.08E-03 | 3.47E-06 | 1.51E+01 | 6.78E-02 | 8.61E-08 |
| | Waste processing | C3 | 2.21E-02 | 2.41E-01 | 6.51E-02 | 3.76E-06 | 5.17E+01 | 1.25E+00 | 9.99E-07 |
| | Disposal | C4 | 1.05E-01 | 3.99E-03 | 1.24E-03 | 4.56E-07 | 2.88E+00 | 1.18E-01 | 1.94E-08 |
| Potential benefits and loads beyond the system boundaries | Reuse, recovery, recycling potential | D | -3.65E-01 | -3.88E+00 | -1.30E+00 | -4.99E-04 | -3.45E+03 | -6.50E+01 | -2.76E-05 |

EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment;
EP-terrestrial = Eutrophication potential, accumulated exceedance;
POCP = Formation potential of tropospheric ozone;
ADP-mineral&metals = Abiotic depletion potential for non-fossil resources;
ADP-fossil = Depletion potential of the stratospheric ozone layer;
WDP = Water (user) deprivation potential, deprivation-weighted water consumption; and
PM = Particulate matter.

## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

| Parameters describing environmental impacts | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | IRP | ETP-fw | HTP-c | HTP-nc | SQP |
| | | | kBq $U^{235}$ eq | CTUe | CTUh | CTUh | dimensionless |
| Product stage | Raw material supply | A1 | 2.01E+01 | 1.36E+04 | 1.87E-06 | 1.29E-05 | 5.24E+03 |
| | Transport | A2 | 2.11E+00 | 3.04E+02 | 1.58E-08 | 2.65E-07 | 1.79E+02 |
| | Manufacturing | A3 | 1.28E+01 | 2.42E+02 | 1.94E-08 | 1.75E-07 | 1.53E+02 |
| | Total | A1-3 | 3.51E+01 | 1.42E+04 | 1.90E-06 | 1.33E-05 | 5.57E+03 |
| Use stage | Use | B1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Maintenance | B2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Repair | B3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Replacement | B4 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Refurbishment | B5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Operational energy use | B6 | 1.66E+00 | 2.18E+01 | 6.16E-10 | 1.45E-08 | 1.88E+01 |
| | Operational water use | B7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| End of life | Deconstruction, demolition | C1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Transport | C2 | 7.75E-02 | 1.18E+01 | 3.81E-10 | 1.23E-08 | 1.04E+01 |
| | Waste processing | C3 | 3.22E-01 | 3.79E+01 | 1.55E-08 | 6.22E-08 | 7.50E+00 |
| | Disposal | C4 | 1.60E-02 | 3.66E+02 | 9.54E-11 | 2.45E-09 | 5.64E+00 |
| Potential benefits and loads beyond the system boundaries | Reuse, recovery, recycling potential | D | -8.76E+00 | -9.15E+03 | -8.43E-07 | -7.19E-06 | -2.47E+03 |

IRP = Potential human exposure efficiency relative to U235;
ETP-fw = Potential comparative toxic unit for ecosystems;
HTP-c = Potential comparative toxic unit for humans;
HTP-nc = Potential comparative toxic unit for humans; and
SQP = Potential soil quality index.

## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

| Parameters describing resource use, primary energy | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | PERE | PERM | PERT | PENRE | PENRM | PENRT |
| | | | MJ | MJ | MJ | MJ | MJ | MJ |
| Product stage | Raw material supply | A1 | 2.51E+02 | 8.59E+02 | 1.11E+03 | 4.72E+03 | 3.37E+02 | 5.05E+03 |
| | Transport | A2 | 4.52E+00 | 0.00E+00 | 4.52E+00 | 4.26E+02 | 0.00E+00 | 4.26E+02 |
| | Manufacturing | A3 | -4.32E+02 | 5.23E+02 | 9.13E+01 | 4.87E+02 | 8.56E+01 | 5.73E+02 |
| | Total | A1-3 | -1.77E+02 | 1.38E+03 | 1.21E+03 | 5.63E+03 | 4.23E+02 | 6.05E+03 |
| Use stage | Use | B1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Maintenance | B2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Repair | B3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Replacement | B4 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Refurbishment | B5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Operational energy use | B6 | 1.21E+01 | 0.00E+00 | 1.21E+01 | 6.65E+01 | 0.00E+00 | 6.65E+01 |
| | Operational water use | B7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| End of life | Deconstruction, demolition | C1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Transport | C2 | 2.12E-01 | 0.00E+00 | 2.12E-01 | 1.48E+01 | 0.00E+00 | 0.00E+00 |
| | Waste processing | C3 | -6.15E+02 | 6.15E+02 | 3.77E-01 | 4.80E+01 | 0.00E+00 | 0.00E+00 |
| | Disposal | C4 | 9.91E-02 | 0.00E+00 | 9.91E-02 | -1.50E+02 | 1.52E+02 | 0.00E+00 |
| Potential benefits and loads beyond the system boundaries | Reuse, recovery, recycling potential | D | -1.36E+02 | -3.60E+02 | -4.96E+02 | -3.38E+03 | -4.77E+01 | -3.43E+03 |

PERE = Use of renewable primary energy excluding renewable primary energy used as raw materials;
PERM = Use of renewable primary energy resources used as raw materials;
PERT = Total use of renewable primary energy resources;

PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials;
PENRM = Use of non-renewable primary energy resources used as raw materials;
PENRT = Total use of non-renewable primary energy resource

## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

| Parameters describing resource use, secondary materials and fuels, use of water | | | | | | |
|---|---|---|---|---|---|---|
| | | | SM | RSF | NRSF | FW |
| | | | kg | MJ net calorific value | MJ net calorific value | $m^3$ |
| Product stage | Raw material supply | A1 | 2.07E+01 | 0.00E+00 | 0.00E+00 | 4.50E+00 |
| | Transport | A2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.74E-02 |
| | Manufacturing | A3 | 5.63E-02 | 3.27E-04 | 0.00E+00 | 2.49E-01 |
| | Total | A1-3 | 2.07E+01 | 3.27E-04 | 0.00E+00 | 4.78E+00 |
| Use stage | Use | B1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Maintenance | B2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Repair | B3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Replacement | B4 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Refurbishment | B5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Operational energy use | B6 | 5.66E-03 | 4.38E-05 | 0.00E+00 | 1.10E-02 |
| | Operational water use | B7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| End of life | Deconstruction, demolition | C1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Transport | C2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.68E-03 |
| | Waste processing | C3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.97E-02 |
| | Disposal | C4 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.79E-03 |
| Potential benefits and loads beyond the system boundaries | Reuse, recovery, recycling potential | D | 0.00E+00 | 0.00E+00 | 0.00E+00 | -1.63E+00 |

SM = Use of secondary material;
RSF = Use of renewable secondary fuels;
NRSF = Use of non-renewable secondary fuels;
FW = Net use of fresh water

## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

| Other environmental information describing waste categories | | | | | |
|---|---|---|---|---|---|
| | | | HWD | NHWD | RWD |
| | | | kg | kg | kg |
| Product stage | Raw material supply | A1 | 7.46E+01 | 6.75E+02 | 9.10E-03 |
| | Transport | A2 | 5.30E-01 | 6.61E+00 | 2.91E-01 |
| | Manufacturing | A3 | 8.03E-01 | 4.77E+01 | 3.54E-03 |
| | Total | A1-3 | 7.60E+01 | 7.29E+02 | 3.04E-01 |
| Use stage | Use | B1 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Maintenance | B2 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Repair | B3 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Replacement | B4 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Refurbishment | B5 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Operational energy use | B6 | 6.78E-02 | 1.17E+00 | 4.30E-04 |
| | Operational water use | B7 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| End of life | Deconstruction, demolition | C1 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Transport | C2 | 1.66E-02 | 2.95E-01 | 1.02E-04 |
| | Waste processing | C3 | 3.10E-01 | 4.53E+01 | 3.08E-04 |
| | Disposal | C4 | 1.48E-02 | 8.00E+00 | 1.58E-05 |
| Potential benefits and loads beyond the system boundaries | Reuse, recovery, recycling potential | D | -5.59E+01 | -5.09E+02 | -4.86E-03 |

HWD = Hazardous waste disposed;
NHWD = Non-hazardous waste disposed;
RWD = Radioactive waste disposed

## LCA Results (continued)

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

| Other environmental information describing output flows – at end of life | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | CRU | MFR | MER | EE | Biogenic carbon (product) | Biogenic carbon (packaging) |
| | | | kg | kg | kg | MJ per energy carrier | kg C | kg C |
| Product stage | Raw material supply | A1 | 0.00E+00 | 9.92E-03 | 3.22E-05 | 0.00E+00 | -7.71E-01 | 0.00E+00 |
| | Transport | A2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Manufacturing | A3 | 0.00E+00 | 1.50E+00 | 2.51E-06 | 2.63E-01 | 0.00E+00 | -1.70E-05 |
| | Total | A1-3 | 0.00E+00 | 1.51E+00 | 3.47E-05 | 2.63E-01 | -7.71E-01 | -1.70E-05 |
| Use stage | Use | B1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Maintenance | B2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Repair | B3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Replacement | B4 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Refurbishment | B5 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Operational energy use | B6 | 0.00E+00 | 7.60E-04 | 3.24E-07 | 3.50E-02 | 0.00E+00 | 0.00E+00 |
| | Operational water use | B7 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| End of life | Deconstruction, demolition | C1 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Transport | C2 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | Waste processing | C3 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.62E+00 | 0.00E+00 |
| | Disposal | C4 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Potential benefits and loads beyond the system boundaries | Reuse, recovery, recycling potential | D | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

CRU = Components for reuse;
MFR = Materials for recycling

MER = Materials for energy recovery;
EE = Exported Energy

## Scenarios and additional technical information

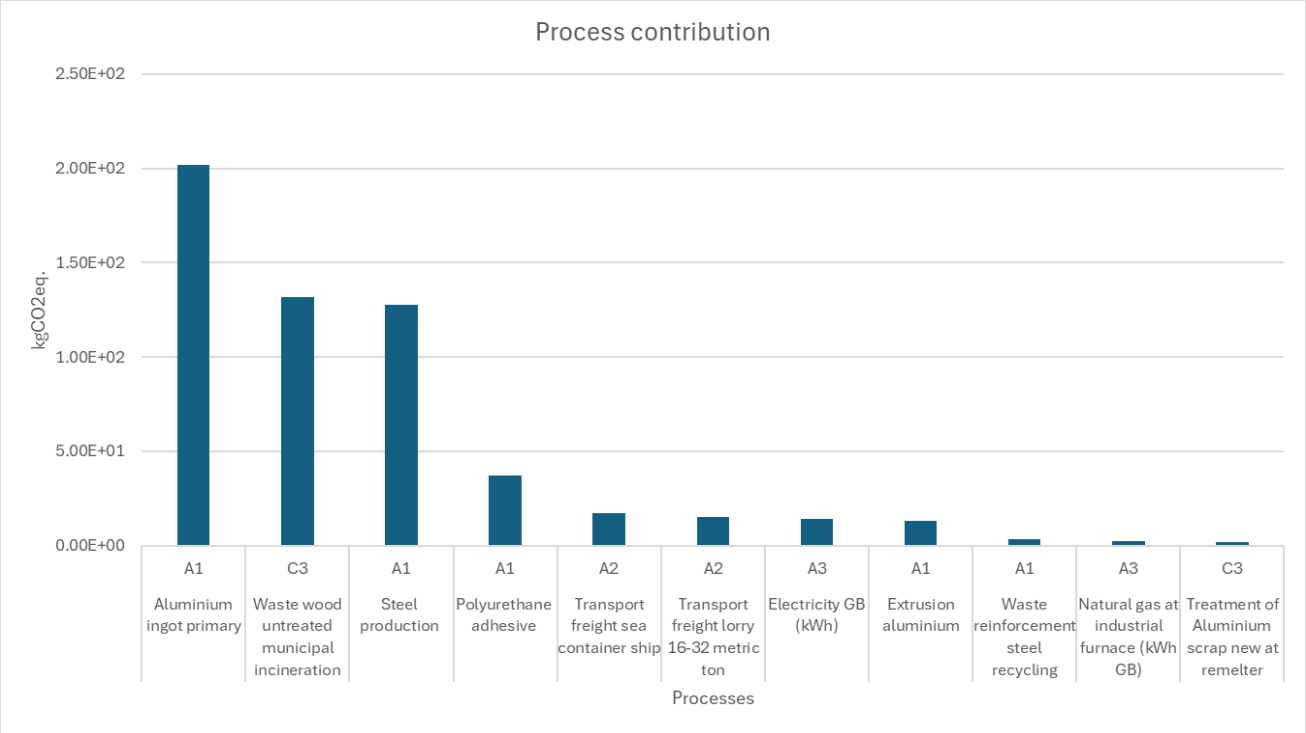
| Scenarios and additional technical information | | | |
|---|---|---|---|
| Scenario | Parameter | Units | Results |
| Service life | 19 years | | |
| B1 - Use | Once the product is installed, no emission to air, water, and soil. | | |
| B2 – Maintenance<br>B3 – Repair<br>B4 – Replacement<br>B5 – Refurbishment | Once the product is installed, it does not require any maintenance, repair, replacement, and refurbishment; therefore, there are no impacts associated with these modules. | | |
| B6- Operation energy use | Measurement: The desk power was wired through a Shelly PM Mini Gen 3 This allows recording of power usage.<br><br>Cycles: The desk was run at two full cycles a day for the weekdays over a 7-day period, the rest of the time it was left fully powered.<br><br>Result: After 7 days the Shelly PM was accessed and the Power Consumption recorded. This was then calculated as an average Power<br><br>• Consumption = 8.1 Wh<br>• Time = 7 day<br>• Power = Consumption/ time = 0.048 W<br><br>to convert 8.1 Wh to kWh:<br>• 7 days =8.1 Wh /1000=0.0081 kWh<br><br>The total energy consumption per day = 0.00116 kWh<br><br>The estimated service life of the product is 19 years; therefore, the total energy consumption is 8.025 kWh per position (seat). | | |
| B7 – Operational water use | No operational water use is required | | |
| C1 - Deconstruction | The estimated service life of the workstation is 19 years and once it reaches the end of its life, the workstation desk will be removed from the building and send to waste processing facility. The workstation is made out of the components like steel, aluminium, and MDF board and these components can be recycled. It is assumed as 100% of the waste desk is recovered and send to preprocessing unit. | | |
| C2 - Transportation | 50km by road has been modelled for module C2 as a typical distance from the demolition site to the recycling site. However, end-users of the EPD can use this information to calculate the impacts of a bespoke transport distance for module C2 if required. | | |
| | Road transport | km | 50 |

| Scenarios and additional technical information | | | |
|---|---|---|---|
| Scenario | Parameter | Units | Results |
| C3 – Preprocessing | The Aspect N-Series is composed of MDF, aluminium, steel, Formica, and polyurethane components. Once the product reaches the waste processing stage, it is dismantled and treated according to the end-of-life scenarios of each material.<br><br>In line with BRE PCR EN15804+A2 3.1:<br><br>55% of the MDF boards are assumed to be recycled, while 45% are incinerated for energy recovery.<br><br>Metals such as steel and aluminium are 95% recycled, with the remaining 5% sent to landfill as unrecovered waste.<br><br>Minor materials like Formica and polyurethane are considered natural losses during processing and are assumed to end up in landfill.<br>As the workstation is made up of 95% recycled materials such as aluminium, steel, and MDF, it will be dismantled and recycled at the pre-processing site, and the remaining 5% will be sent to landfill. | | |
| | Steel waste | kg | 54.58 |
| | Aluminium waste to recycling | kg | 10.75 |
| | MDF board to recycling | kg | 24.19 |
| | MDF board to incineration | kg | 19.79 |
| C4 – Disposal | 5% of workstation will be considered as a natural loss during the pre-processing, therefore they will be end up in landfilling | | |
| | Formica waste to landfill | kg | 2.28 |
| | Polyurethane waste to landfill | kg | 4.97 |
| | Steel waste to landfill | kg | 2.87 |
| | Aluminium waste to landfill | kg | 0.57 |
| Module D | In the calculating the benefits of recycling of the waste products, the pre-existing recycled content (Secondary material) has been avoided and benefits calculated only for virgin content. | | |
| | Benefits due to recycling MDF Board waste | kg | 23.97 |
| | Benefits due to incineration of MDF board | Kg | 19.61 |
| | Benefits due to recycling Aluminium waste | kg | 10.48 |
| | Benefits due to recycling Steel waste | kg | 45.96 |

## Interpretation of results

The bulk of the environmental impacts and primary energy demand are attributed to the manufacturing phase, covered by information modules A1-A3 of EN15804:2012+A2:2019. Out of the total mass of input materials, Steel, unalloyed makes up 48%, Medium Density board 37%, Aluminium extruded makes up 10%, followed by polyurethane and Formica of 5%.

The chart illustrates the relative contributions of various processes to overall greenhouse gas emissions, measured as global warming potential. It highlights that material production, particularly of metals and adhesives, has the highest environmental impact, with primary aluminium production standing out as the most significant contributor. Waste treatment processes, such as incineration, and traditional steel manufacturing also play major roles. Transportation and energy use contribute moderately, while processes involving recycling and secondary treatment exhibit comparatively lower impacts. Overall, the chart underscores the importance of material choice and waste management in reducing carbon emissions across the lifecycle.



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