BISLEY

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025

Desks & Drawers | LIVING BY BISLEY

The environmental impacts of this product have been assessed from cradle to grave. This Environmental Product Declaration has been verified by an independent third party.

An EPD should provide current information, and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com.

Declaration Number: S-P-05033
Issued on: 2022-01-19
Valid until: 2027-01-17

Programme Operator: EPD International AB

EPD®
THE INTERNATIONAL EPD® SYSTEM

INTRODUCTION

This EPD provides environmental performance indicators for bedroom furniture manufactured by FC Brown under the brand name "Living by Bisley". This is a cradle-to-grave EPD, based on a life cycle assessment (LCA) study which used production data for 2019 from Bisley's manufacturing facilities in Newport, Wales, UK. Background data were taken from the ecoinvent database (v3.6).

The EPD presents details of the LCA, a description of the product life cycle it covers, values for relevant environmental indicators and a brief explanation of those results.

Desk & Drawer Units | Living by Bisley	
Product names	**See appendix**
EPD programme	**The International EPD® System**
EPD programme operator	**EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden info@environdec.com | www.environdec.com**
EPD owner	**Bisley, Caswell Way, Reevesland Industrial Estate, Newport, Gwent NP19 4PW, UK | www.bisley.com**
Product Category Rules (PCR)	**PCR Furniture, except Seats and Mattresses (UN CPC 3812/3813/3814) 2012:19, Version 2.01 - 2019-08-18 Product Category Classification: UN CPC 3812/3813/3814**
PCR review conducted by	**The Technical Committee of the International EPD® System Chair: Mr Filippo Sessa, Quantis; contact via info@environdec.com**
Verification	**Independent third-party verification of this EPD and data, according to ISO 14025/2006: ☐ EPD process certification ■ EPD verification**
Third party Verifier	**Ugo Pretato, Studio Fieschi & soci Srl Approved by: The International EPD® System**
Procedure for data follow-up during EPD validity	**Involves third party Verifier: ☐ yes ■ no**
Declaration No	**S-P-05033**
Date of publication / valid until	**2022-01-19 / 2027-01-17**
EPD geographical scope	**Worldwide**
LCA conducted by	**EuGeos Limited, UK - +44 (0)1625 434423 www.eugeos.co.uk**
LCA software	**openLCA**
Background data	**ecoinvent 3.6**
System boundaries	**Cradle to grave**
Reference year for data	**2019**

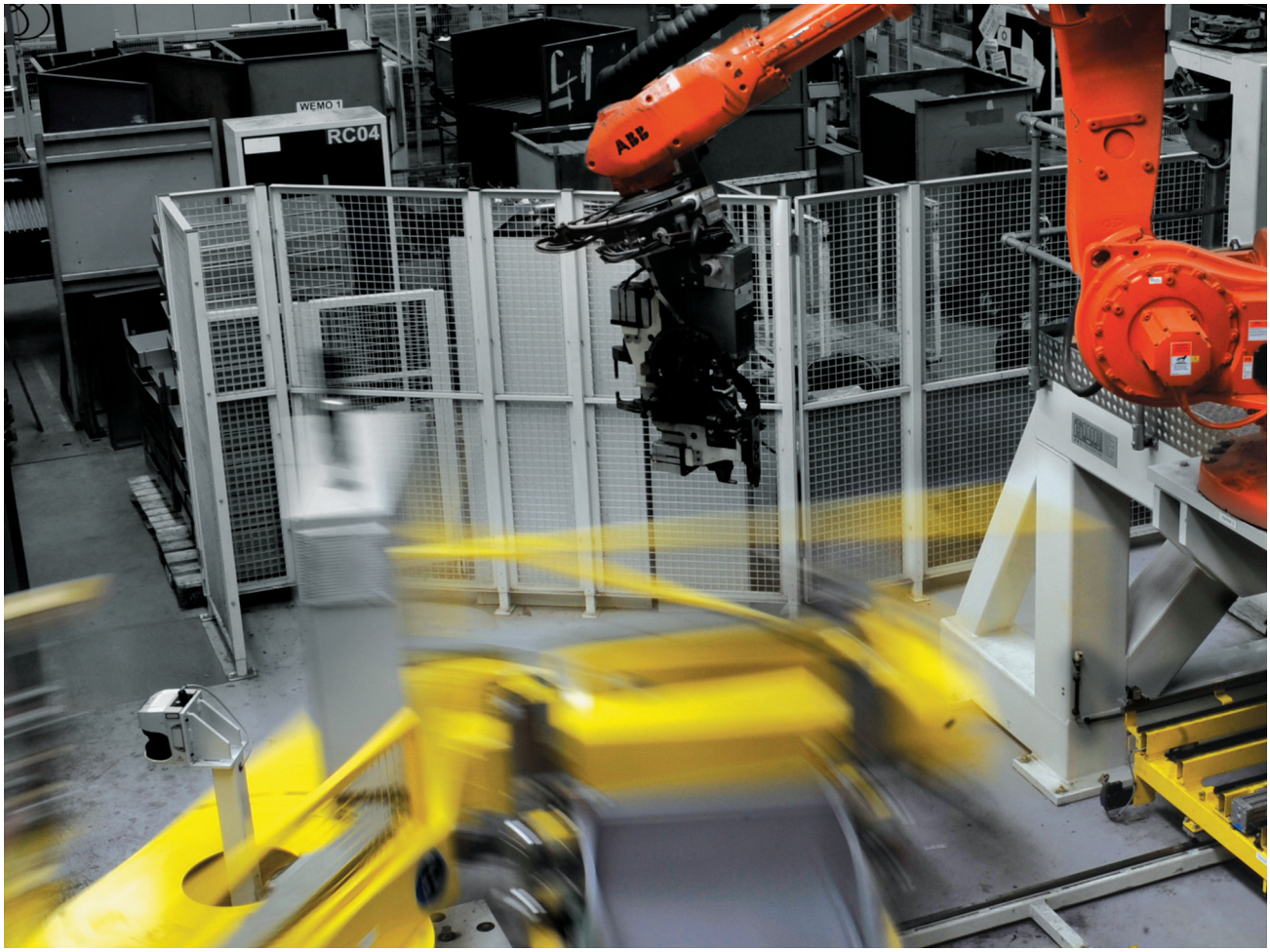
The EPD owner has the sole ownership, liability and responsibility of the EPD. EPDs within the same product category but from different programmes may not be comparable.

ABOUT BISLEY

Since launching the iconic MultiDrawer in 1958, Bisley has pioneered innovative storage that meets the challenges of the time and stays relevant, decade after decade. When it comes to creating working environments, Bisley is the name people in over 50 countries turn to for quality they can trust.

Bisley produces 15,000 items each week from its factory in Wales and makes over 4,000 world-wide deliveries every month via its 10 international offices. Through continued production investment and acquisition, Bisley can combine the strength and durability of steel with the pleasing aesthetic qualities of wood to provide a unique choice of solutions for an extensive range of markets.

The product is manufactured at Bisley's facility in Newport, Gwent, Wales.



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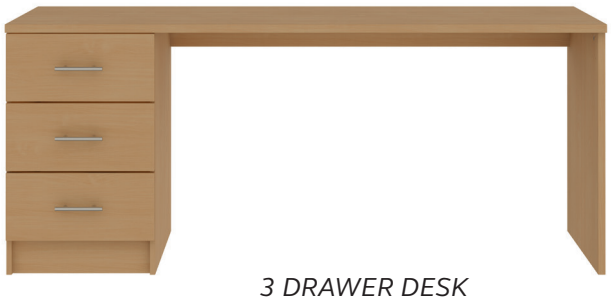
PRODUCT INFORMATION

This EPD applies to desk and drawer units in the Living by Bisley range. Living by Bisley is a brand-new collection of wooden, single-living furniture, with storage at its heart, designed to withstand the daily wear and tear of everyday life. Developed by our specialist team of wood manufacturers, harnessing over eighty years of Bisley's design and manufacturing expertise.

One can specify a project with choice of practical, easy-clean wood finishes and closures. The design-led, contract grade collection has the flexibility to furnish a variety of sectors including student and military and care homes.

All Living by Bisley products are classified CPC 3812 under the UN CPC classification system v2.1.



3 DRAWER DESK

4 DRAWER CHEST

5 DRAWER CHEST

This EPD applies to desk and drawer units, comprising of pedestals and chest of drawers, in the 'Living by Bisley' range. In this EPD, environmental performance is declared for the smallest, a medium-sized and the largest product of the type, without optional accessories. Chest of drawer units are available in either 4 drawer or 5 drawer configurations with heights of 932mm and 1133mm respectively. Pedestals are available at a standard width of 500mm and height of 730mm and three drawers. Desk pedestals offer the same options with the addition of a desktop in a range of widths between 1200mm and 2000mm.

Manufacturing

Bisley operates a factory at Newport in Wales, UK, where its steel and wood-based products are manufactured. Wood-based and steel products are made in separate units within the facility.
The main parts of the products are cut from panels of melamine-faced chipboard (MFC). After the main parts are finished, they are combined with small parts such as handles, locks and cabinet feet in final product assembly.

Packing

Each unit is wrapped in plastic film (LDPE) for protection, with cardboard reinforcement at key points particularly susceptible to damage (e.g. corners); this packaging remains in place until the product reaches the point of use. Packed products are palletised for transport to customers. Wastes are segregated by Bisley and many streams consigned to recycling. Most pallets used have been returned to Bisley from its customers or subsidiaries.

Transportation
Bisley products are sent to Bisley's own distribution subsidiaries, or directly to large customers and major projects, by road or by road and sea.

Product Use and Maintenance
Bisley wood products carry a 5-year warranty. They require no energy or water inputs to function. Under normal use conditions, no replacement parts or maintenance are required during that period. Bisley guidance to customers is that products should be cleaned periodically with mild detergent and warm water.

End-of-life
When the user has no further use for Bisley furniture items, they may be reused by others, recycled or disposed of as non-hazardous waste. Reuse is recommended, but if no route for reuse is available, the product should be recycled or sent for recovery with other wood-based goods. When they become waste, Bisley's wood furniture items are classified with EWC code 03 01 05.

Further Product Information
Detailed product information and datasheets can be found:
- on our website https://www.bisley.com
- or by contacting Customer Service by telephone: 01633 637383
- or by email: info@bisley.com

CONTENT DECLARATION

The material composition of Living by Bisley products covered by this EPD is shown below:

MATERIAL	%	ENVIRONMENTAL PROPERTIES
steel	1-3	recyclable
particleboard	91-96	FSC-certified virgin wood content
aluminium & other non-ferrous metals	<1	recyclable
ABS polymer	1-5	

No substance included in the Candidate List of Substances of Very High Concern for authorisation under the REACH Regulations is present in the furniture, either above the threshold for registration with the European Chemicals Agency or above 0.1% (wt/wt).

Packaging
Approximately 0.1kg cardboard and 0.1kg plastic film is used per product. The weights of wooden pallets used to distribute products vary. Re-used or reclaimed pallets are used wherever possible: Bisley purchased no new pallets in 2019.

Recycled Material
Particleboard used by Bisley contains c.25% post-consumer recycled material and 37% pre-consumer recycled material. Steel components are assumed to contain 25% recycled content which is typical of steel goods overall. Cardboard is assumed to have a recycled content of approx. 75% based on the information in the background LCA database. Distribution packaging varies according to the destination, but products are always distributed on wooden pallets; all pallets used by Bisley in 2019 had been used at least once before.

TECHNICAL DATA

Key technical properties and certifications are shown in the table below; consult the Living by Bisley Technical Data Sheet for a comprehensive specification.

TECHNICAL PROPERTIES (TESTS)	ALL SIZES	
	VALUE	UNIT
BS EN 16121(2013) + A1:2017 Non-domestic Storage Furniture (Requirements for safety, strength, durability and stability)	**Pass**	**N/A**

PHYSICAL DATA				
	LIVING BY BISLEY			
	UNIT	4 DRAWER CHEST (small unit)	5 DRAWER CHEST (medium unit)	3 DRAWER DESK (large unit)
Dimensions (height, length, depth)	**mm**	**932 x 800 x 600**	**1133 x 800 x 600**	**730 x 2000 x 600**
Volume	**m^3**	**0.447**	**0.54**	**0.88**
Mass (approx.)	**kg**	**62.3**	**73.8**	**101.3**

Residual Risks and Emergencies

There are no residual risks associated with the normal day-to-day use of Bisley's bedroom furniture. Care must be taken to follow the guidance for safe use in the product information documents for the Living by Bisley range is available from www.bisley.com/resources/product-information/.

ENVIRONMENTAL PERFORMANCE RELATED INFORMATION

LCA INFORMATION

This section of the EPD records key features of the LCA on which it is based.

Scope

This cradle-to-grave EPD is applicable globally; end-of-life scenarios are based on European statistics for waste management. For the presentation of results, and reflecting the different sources of data used, the life cycle of products is divided into three different stages:

- Upstream processes (from cradle-to-gate)
- Core processes (from gate-to-gate)
- Downstream processes (from gate-to-grave)

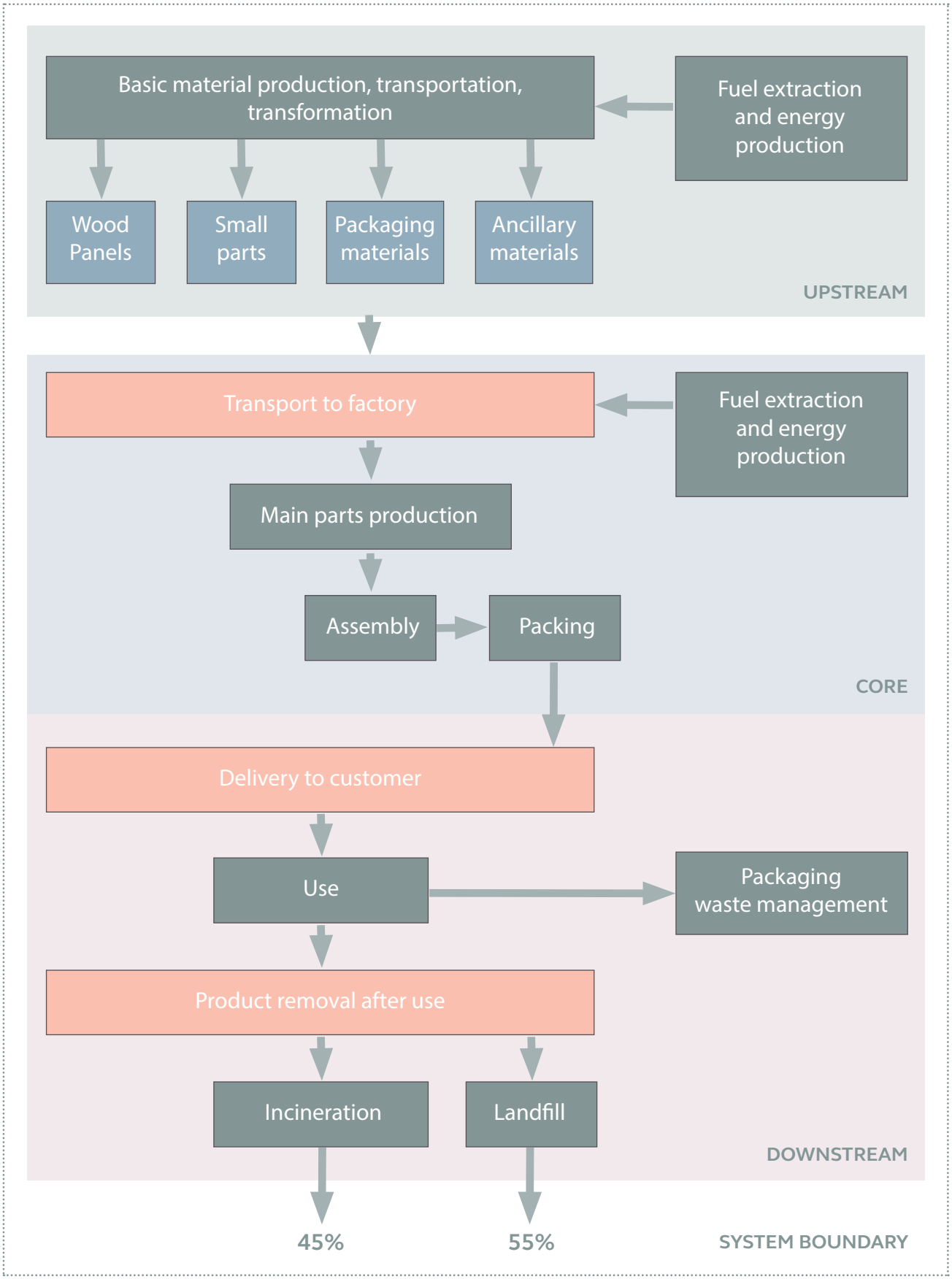
System Boundaries

The system boundary of the EPD is defined using a modular approach reflecting the three life-cycle stages . Storage furniture is used in buildings, therefore the equivalence of the modules covered by this EPD to the modules defined in EN 15804 is also presented (see table below).

Those modules included in the LCA are denoted by v; those not declared by ND: those not relevant by NR.

UPSTREAM PROCESSES						CORE PROCESSES					DOWNSTREAM PROCESSES			
Raw material extraction & production	Transport	Manufacturing (main parts)	Electricity and fuel use	Manufacturing (auxiliary products, packaging)	Waste treatment	Transport	Manufacturing/Assembly	Maintenance (equipment)	Waste treatment	Electricity and fuel use	Distribution transport	Use	Product end-of-life	Packaging end-of-life
V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
EN 15804 MODULES														
A1	A1	A1	A1 A3	A1	A1	A2	A3	A3	A3	A1 A3	A4	B1-B7	C1-C4	A5

The product life cycle covered by this EPD is illustrated below.



PRODUCT LIFE CYCLE (CRADLE-TO-GRAVE)

Functional Unit

The functional unit is 1 item of bedroom furniture in use for 15 years, including its packaging and maintenance (one annual cleaning with water and mild detergent) during use.

Cut-off Criteria

The collected data covered all raw materials, consumables and packaging materials; associated transport to the manufacturing site; process energy and water use; direct production wastes; emissions to air and water.

According to the PCR, flows can be omitted (cut off) from a core process in the LCA up to a maximum of 1% of the total mass of material inputs or 1% of the total energy content of fuels and energy carriers; small components such as plastic washers, small screws and wooden items amounting, in combination, to <1% of total input materials were omitted from the LCA underpinning this EPD. This is consistent with requirements of the PCR and General Programme Instructions.

Data Sources and Data Quality

Data characterising the core processes (furniture manufacture, assembly and packing) were collected for the calendar year 2019. Therefore the producer-specific data used in LCA calculations are based on 1 year averaged data. The data have been updated within the last 5 years. These data were checked to ensure that sufficient materials and water are included within the inputs to account for all products, wastes and emissions.

Background (generic) data were taken from the ecoinvent database (v3.6); thus generic data used in the LCA have been updated within the last 10 years.

Data quality has been reviewed for processes that contribute significantly to the overall LCA. Other data were judged fit for purpose. Proxy data were used in the LCA only to represent an adhesive. These proxy data account for <1% of the indicator values obtained in all categories.

Bisley purchase electricity on a low-carbon tariff; the fuel mix notified by the supplier was used to model electricity supply to the Newport factory.

Allocation

In the background data, the ecoinvent default allocation is applied to all processes except those in which secondary materials are used, where the “cut-off” allocation is applied. This ensures that secondary materials are free of upstream burdens that arise prior to their reaching the “end of waste” state; this is in accordance with the PCR.

Following ISO 14044, the overall process is subdivided as far as possible, so that flows dedicated to a particular product type are fully assigned to that product type and the need for allocation is minimised. Utility, packaging and ancillary material inputs to the production facility have been allocated across all products manufactured at the facility, including those not covered by this EPD.

Assumptions and Estimates

Inputs to and outputs from the system are accounted for over a 100-year time period; long-term emissions are therefore omitted from the impact assessment part of the LCA.

The "primary energy used as material" indicators (PERM; PENRM) are calculated using - as characterisation factors - published values for constituent materials which can yield energy on combustion, where available, and from published calorific values where PEM values are not available. Calculations of PE(N)RM are based on a feedstock energy content of 16MJ/kg for urea-formaldehyde resin, 40MJ/kg for ABS, 48MJ/kg for other polymers, 16MJ/kg for wood and 14MJ/kg for cardboard.

“Primary energy as fuel” indicators (PENRE, PERE) are calculated as the total primary energy demand minus primary energy used as material.

The secondary material indicator counts scrap steel, recycled polymer and other recycled material inputs to the product and its constituent components, re-used wooden packaging and recycled paper/board inputs to packaging manufacture.

SCENARIOS:
Transport to the customer, product maintenance, transport to waste management of packaging and product at end-of-life, and management of end-of-life product and waste packaging are characterised using scenarios.

Under normal use conditions, no replacement parts or maintenance are required during the warranty period of 5 years. Product maintenance, which comprises cleaning according to the manufacturer's instructions, is assumed to consume 1l water and 5g detergent per year. No other inputs or outputs are required for use of the product. The default product lifetime specified in the PCR is applied, so that one product fulfils the functional unit.

The effective mass per unit volume of the product is obtained by dividing the reported mass by volume, applying the values in the "Technical Data" section above. Other relevant parameters for transport are shown in the table below:

SCENARIO PARAMETERS, TRANSPORT		
PARAMETER AND UNIT	VALUE & UNIT	
	TO CUSTOMER	TO END-OF-LIFE MANAGEMENT
Fuel type and consumption	**road: diesel - 0.3 l/km sea: fuel oil - 2.5 g/tkm**	**diesel: 0.2 l/km**
Distance	**road: 560 sea: 890**	**road: 50**
Capacity utilisation (including empty returns) %	**58**	**28**
Volume capacity utilisation factor	**1**	**1**

The proportions of each waste management method assumed for packaging materials and for products are shown in the table below, based on data for Bisley's major European markets (source: eurostat).

WASTE MANAGEMENT				
MATERIAL/PRODUCT	PERCENTAGE TO:			
	RE-USE	RECYCLING	INCINERATION WITH ENERGY RECOVERY	LANDFILL
Wood-based furniture	**0**	**0**	**55**	**45**
Plastic packaging	**0**	**42**	**34**	**24**
Wood (pallets)	**0**	**47**	**27**	**26**
Cardboard packaging	**0**	**85**	**9**	**6**

ENVIRONMENTAL INDICATORS AND INTERPRETATION

This EPD contains environmental information about the specified products, in the form of quantitative indicator values for a number of parameters, which encompass calculated environmental impact potentials, resource and energy use, and waste generation.

Environmental indicator results are shown in the following tables for the declared unit of 1 item of bedroom furniture in use for 15 years.

4-DRAWER CHEST | LIVING BY BISLEY (small unit)

Potential environmental impacts	Abbr.	Unit	Upstream Processes	Core Processes	Down Processes	Total
Climate change GWP100 biogenic	GWP-bio	kg CO_2 eq	-5.41E+01	3.99E+00	4.94E+01	-7.38E-01
Climate change GWP100 fossil	GWP-fsl	kg CO_2 eq	7.28E+01	8.58E+00	1.96E+01	1.01E+02
Climate change GWP100 landuse	GWP-luluc	kg CO_2 eq	1.45E-01	9.10E-04	5.24E-02	1.99E-01
Climate change GWP100 total	GWP-total	kg CO_2 eq	1.88E+01	1.26E+01	6.91E+01	1.00E+02
Acidification potential - fate excluded	AP(fx)	kg SO_2 eq	3.56E-01	9.00E-03	3.76E-02	4.02E-01
Eutrophication - generic	EP	kg PO_4^{3-} eq	1.29E-01	2.18E-03	9.77E-02	2.29E-01
Photochemical oxidant formation potential	POFP	kg NMVOC eq	3.58E-01	9.70E-03	3.61E-02	4.04E-01
Depletion of abiotic resources - elements, ultimate reserves	ADPE	kg Sb eq	1.68E-02	3.35E-05	2.10E-04	1.71E-02
Depletion of abiotic resources - fossil fuels	ADPF	MJ	1.14E+03	1.35E+02	1.22E+02	1.40E+03
Water scarcity potential	WSP	m^3-eq	3.44E+03	7.39E+01	1.13E+02	3.62E+03
Land use	LU	species.yr	4.05E-07	4.48E-10	3.37E-09	4.09E-07
Fresh water ecotoxicity	FWE	PAF.m3.day	1.87E+06	2.43E+04	8.42E+04	1.98E+06
Human toxicity - cancer impacts	HTC	cases	1.61E-05	9.81E-08	5.90E-07	1.68E-05
Human toxicity - non-cancer impacts	HTNC	cases	3.10E-05	5.24E-07	5.80E-06	3.73E-05

Resource use	Abbr.	Unit	Upstream Processes	Core Processes	Down Processes	Total
Renewable primary energy as energy carrier	PERE	MJ	3.25E+02	8.27E-01	3.27E+00	3.29E+02
Renewable primary energy resources as material	PERM	MJ	7.54E+02	0.00E+00	0.00E+00	7.54E+02
Total renewable primary energy use (sum of the two	PERT	MJ	1.08E+03	8.27E-01	3.27E+00	1.08E+03
Non-renewable primary energy as energy carrier	PENRE	MJ	1.30E+03	2.46E+02	1.27E+02	1.67E+03
Non-renewable primary energy resources as material utilisation	PENRM	MJ	1.58E+02	0.00E+00	0.00E+00	1.58E+02
Total non-renewable primary energy use (sum of the two parameters above)	PENRT	MJ	1.45E+03	2.46E+02	1.27E+02	1.83E+03
Use of secondary material	SM	kg	1.41E+01	0.00E+00	0.00E+00	1.41E+01
Use of renewable secondary fuels	RSF	MJ	2.89E+00	3.14E-02	6.31E-02	2.98E+00
Use of non-renewable secondary fuels	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water	FW	m^3	1.56E+00	2.41E-02	5.19E-02	1.64E+00

Waste	Abbr.	Unit	Upstream Processes	Core Processes	Down Processes	Total
Hazardous waste disposed	HWD	kg	7.74E+00	8.85E-02	4.88E-01	8.31E+00
Non-hazardous waste disposed	NHWD	kg	1.28E+02	4.74E+00	7.59E+01	2.09E+02
Radioactive waste disposed	TRWD	kg	3.48E-03	4.69E-05	8.10E-04	4.34E-03

Output flows	Abbr.	Unit	Upstream Processes	Core Processes	Down Processes	Total
Components for re-use	CFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	MFR	kg	3.82E+00	1.67E-02	5.59E-02	3.89E+00
Materials for energy recovery	MER	kg	3.04E-02	3.20E-04	3.01E-03	3.37E-02
Exported energy - electricity	EEE	MJ	0.00E+00	9.35E+00	3.42E+02	3.52E+02
Exported energy - thermal	EET	MJ	0.00E+00	1.09E+01	6.19E+01	7.28E+01

5-DRAWER CHEST | LIVING BY BISLEY (medium unit)						
Potential environmental impacts	**Abbr.**	**Unit**	**Upstream Processes**	**Core Processes**	**Down Processes**	**Total**
Climate change GWP100 biogenic	GWP-bio	kg CO_2 eq	-6.39E+01	3.99E+00	5.83E+01	-1.58E+00
Climate change GWP100 fossil	GWP-fsl	kg CO_2 eq	8.74E+01	8.77E+00	2.31E+01	1.19E+02
Climate change GWP100 landuse	GWP-luluc	kg CO_2 eq	1.73E-01	9.80E-04	5.30E-02	2.27E-01
Climate change GWP100 total	GWP-total	kg CO_2 eq	2.37E+01	1.28E+01	8.15E+01	1.18E+02
Acidification potential - fate excluded	AP(fx)	kg SO_2 eq	4.26E-01	9.51E-03	4.44E-02	4.80E-01
Eutrophication - generic	EP	kg PO_4^{3-} eq	1.55E-01	2.28E-03	1.15E-01	2.73E-01
Photochemical oxidant formation potential	POFP	kg NMVOC eq	4.28E-01	1.02E-02	4.25E-02	4.81E-01
Depletion of abiotic resources - elements, ultimate reserves	ADPE	kg Sb eq	1.92E-02	3.88E-05	2.50E-04	1.95E-02
Depletion of abiotic resources - fossil fuels	ADPF	MJ	1.37E+03	1.38E+02	1.44E+02	1.65E+03
Water scarcity potential	WSP	m^3-eq	4.10E+03	7.67E+01	1.33E+02	4.31E+03
Land use	LU	species.yr	4.79E-07	5.18E-10	3.86E-09	4.84E-07
Fresh water ecotoxicity	FWE	PAF.m3.day	2.27E+06	2.52E+04	9.90E+04	2.40E+06
Human toxicity - cancer impacts	HTC	cases	1.99E-05	1.04E-07	6.95E-07	2.07E-05
Human toxicity - non-cancer impacts	HTNC	cases	3.76E-05	5.50E-07	6.84E-06	4.50E-05

Resource use	Abbr.	Unit	Upstream Processes	Core Processes	Down Processes	Total
Renewable primary energy as energy carrier	PERE	MJ	3.87E+02	8.68E-01	3.61E+00	3.92E+02
Renewable primary energy resources as material	PERM	MJ	8.89E+02	0.00E+00	0.00E+00	8.89E+02
Total renewable primary energy use (sum of the two	PERT	MJ	1.28E+03	8.68E-01	3.61E+00	1.28E+03
Non-renewable primary energy as energy carrier	PENRE	MJ	1.55E+03	2.49E+02	1.50E+02	1.95E+03
Non-renewable primary energy resources as material utilisation	PENRM	MJ	1.85E+02	0.00E+00	0.00E+00	1.85E+02
Total non-renewable primary energy use (sum of the two parameters above)	PENRT	MJ	1.74E+03	2.49E+02	1.50E+02	2.14E+03
Use of secondary material	SM	kg	1.66E+01	0.00E+00	0.00E+00	1.66E+01
Use of renewable secondary fuels	RSF	MJ	3.45E+00	3.29E-02	7.42E-02	3.55E+00
Use of non-renewable secondary fuels	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water	FW	m^3	1.86E+00	2.43E-02	5.63E-02	1.94E+00

Waste	Abbr.	Unit	Upstream Processes	Core Processes	Down Processes	Total
Hazardous waste disposed	HWD	kg	9.46E+00	9.15E-02	5.74E-01	1.01E+01
Non-hazardous waste disposed	NHWD	kg	1.54E+02	4.94E+00	8.95E+01	2.49E+02
Radioactive waste disposed	TRWD	kg	4.16E-03	4.69E-05	9.50E-04	5.16E-03

Output flows	Abbr.	Unit	Upstream Processes	Core Processes	Down Processes	Total
Components for re-use	CFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	MFR	kg	4.72E+00	1.77E-02	6.60E-02	4.80E+00
Materials for energy recovery	MER	kg	3.62E-02	3.40E-04	3.13E-03	3.97E-02
Exported energy - electricity	EEE	MJ	0.00E+00	9.35E+00	4.04E+02	4.13E+02
Exported energy - thermal	EET	MJ	0.00E+00	1.09E+01	7.31E+01	8.40E+01

3-DRAWER DESK | LIVING BY BISLEY (large unit)						
Potential environmental impacts	**Abbr.**	**Unit**	**Upstream Processes**	**Core Processes**	**Down Processes**	**Total**
Climate change GWP100 biogenic	GWP-bio	kg CO_2 eq	-9.35E+01	3.99E+00	8.56E+01	-3.91E+00
Climate change GWP100 fossil	GWP-fsl	kg CO_2 eq	9.64E+01	9.25E+00	3.12E+01	1.37E+02
Climate change GWP100 landuse	GWP-luluc	kg CO_2 eq	2.21E-01	1.16E-03	5.44E-02	2.77E-01
Climate change GWP100 total	GWP-total	kg CO_2 eq	3.14E+00	1.32E+01	1.17E+02	1.33E+02
Acidification potential - fate excluded	AP(fx)	kg SO_2 eq	4.92E-01	1.08E-02	6.11E-02	5.64E-01
Eutrophication - generic	EP	kg PO_4^{3-} eq	1.67E-01	2.52E-03	1.65E-01	3.35E-01
Photochemical oxidant formation potential	POFP	kg NMVOC eq	5.17E-01	1.13E-02	5.87E-02	5.87E-01
Depletion of abiotic resources - elements, ultimate reserves	ADPE	kg Sb eq	1.91E-02	5.17E-05	3.40E-04	1.95E-02
Depletion of abiotic resources - fossil fuels	ADPF	MJ	1.59E+03	1.45E+02	1.97E+02	1.93E+03
Water scarcity potential	WSP	m^3-eq	5.28E+03	8.35E+01	1.81E+02	5.54E+03
Land use	LU	species.yr	6.89E-07	6.90E-10	5.06E-09	6.95E-07
Fresh water ecotoxicity	FWE	PAF.m3.day	2.21E+06	2.75E+04	1.34E+05	2.37E+06
Human toxicity - cancer impacts	HTC	cases	1.44E-05	1.17E-07	9.48E-07	1.55E-05
Human toxicity - non-cancer impacts	HTNC	cases	3.54E-05	6.16E-07	9.37E-06	4.53E-05

Resource use	Abbr.	Unit	Upstream Processes	Core Processes	Down Processes	Total
Renewable primary energy as energy carrier	PERE	MJ	5.15E+02	9.70E-01	4.43E+00	5.21E+02
Renewable primary energy resources as material	PERM	MJ	1.30E+03	0.00E+00	0.00E+00	1.30E+03
Total renewable primary energy use (sum of the two	PERT	MJ	1.82E+03	9.70E-01	4.43E+00	1.82E+03
Non-renewable primary energy as energy carrier	PENRE	MJ	1.79E+03	2.57E+02	2.05E+02	2.25E+03
Non-renewable primary energy resources as material utilisation	PENRM	MJ	2.15E+02	0.00E+00	0.00E+00	2.15E+02
Total non-renewable primary energy use (sum of the two parameters above)	PENRT	MJ	2.00E+03	2.57E+02	2.05E+02	2.47E+03
Use of secondary material	SM	kg	2.43E+01	0.00E+00	0.00E+00	2.43E+01
Use of renewable secondary fuels	RSF	MJ	4.29E+00	3.65E-02	1.01E-01	4.43E+00
Use of non-renewable secondary fuels	NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water	FW	m^3	2.40E+00	2.49E-02	6.61E-02	2.49E+00

Waste	Abbr.	Unit	Upstream Processes	Core Processes	Down Processes	Total
Hazardous waste disposed	HWD	kg	7.91E+00	9.89E-02	7.96E-01	8.80E+00
Non-hazardous waste disposed	NHWD	kg	1.64E+02	5.44E+00	1.29E+02	2.98E+02
Radioactive waste disposed	TRWD	kg	5.15E-03	4.69E-05	1.31E-03	6.51E-03

Output flows	Abbr.	Unit	Upstream Processes	Core Processes	Down Processes	Total
Components for re-use	CFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	MFR	kg	3.25E+00	2.02E-02	9.15E-02	3.36E+00
Materials for energy recovery	MER	kg	4.49E-02	3.80E-04	3.43E-03	4.87E-02
Exported energy - electricity	EEE	MJ	0.00E+00	9.35E+00	5.93E+02	6.02E+02
Exported energy - thermal	EET	MJ	0.00E+00	1.09E+01	1.07E+02	1.18E+02

Interpretation

For many environmental indicators, for example eutrophication (EP), fossil fuel depletion (ADPF), net use of fresh water (NFW), the upstream stage is the most significant part of the life cycle. For the climate change category, the scale of biogenic CO2 uptake associated with wood panel production in the upstream processes is similar to the scale of fossil greenhouse gas emissions. A large fraction of the absorbed biogenic carbon is released again in the downstream processes in the LCAmodel applied here, because it assumes disposal of products at the end of their lives or incineration with recovery of the energy content of the materials.

Indicator values obtained for human toxicity, ecotoxicity, land use and water scarcity should be used with caution; all are subject to uncertainties in data or method which limit the scope for their use as the basis for comparisons.

ADDITIONAL ENVIRONMENTAL INFORMATION

At Bisley, we take our impact on the environment very seriously. In 2015, The Furniture Makers' Guild awarded Bisley with the prestigious Manufacturing Guild Mark, which observes excellence in sustainability and production. We are members of the Furniture Industry Sustainability Program (FISP), Confederation of British Metal Formers (CBM) and the British Contract Furniture Association (BCFA).

We strive to ensure that the company adheres to and exceeds all environmental regulation, continuously evaluating the impact of our product and processes, in addition to guaranteeing that the physical products are safe and worthy of use.

All our products are precision engineered and built to last at our facility in Newport which is certified to ISO 9001, ISO 14001 and ISO 45001. We encourage users to recycle as much material as possible when our products come to the end of their natural lifespan.

REFERENCES

- ecoinvent database (v3.6) - www.ecoinvent.ch

- Eurostat - European Packaging waste by waste management operations and waste flow, for France, Germany, the Netherlands, UK, Ireland and Spain. From www.eurostat.eu

- General Program Instructions, Version 3.0, 2017-12-11 - The International EPD® System - EPD International AB

- ISO 14001:2015 - Environmental management systems – Requirements with guidance for use

- ISO 14025:2009-11: Environmental labels and declarations - Type III environmental declarations - Principles and procedures

- PCR Furniture, except Seats and Mattresses (UN CPC 3812/3813/3814) 2012:19, Version 2.01 - 2019-08-18

- Wood-based furniture LCA: Report for Bisley - EuGeos Limited, November 2021

GLOSSARY

The International EPD® System: a programme for Type III environmental declarations, maintaining a system to verify and register EPDs as well as keeping a library of EPDs and PCRs in accordance with ISO 14025. (www.environdec.com)

Life cycle assessment (LCA): LCA studies the environmental aspects and quantifies the potential impacts (positive or negative) of a product (or service) throughout its entire life. ISO standards ISO 14040 and ISO 14044 set out conventions for conducting LCA.

REACH Regulation: REACH is the European Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals. It entered into force in 2007, replacing the former legislative framework for chemicals in the EU.

ANNEX: APPLICABLE PRODUCT CODES

This EPD applies to desk and drawer units in the Living by Bisley collection with the codes listed below:

DESKS , PEDESTALS, BEDSIDE CABINETS AND CHESTS OF DRAWERS			
BC454860DR3T	BC454860DROD	DP146073RD3DL	DP186073LD3OL
BC454860DR3TL	BC454860DRODL	DP146073RD3O	DP206073RD3T
BC454860DR3D	BC454860DROO	DP146073RD3OL	DP206073RD3TL
BC454860DR3DL	BC454860DROOL	DP146073LD3T	DP206073RD3D
BC454860DR3O	BC454860ORDTA	DP146073LD3TL	DP206073RD3DL
BC454860DR3OL	BC454860ORDDA	DP146073LD3D	DP206073RD3O
BC454860DRRDTA	BC454860ORDOA	DP146073LD3DL	DP206073RD3OL
BC454860DRRDTAL	BC454860ORDTB	DP146073LD3O	DP206073LD3T
BC454860DRRDDA	BC454860ORDDB	DP146073LD3OL	DP206073LD3TL
BC454860DRRDDAL	BC454860ORDOB	DP166073RD3T	DP206073LD3D
BC454860DRRDOA	BC454860OLDTA	DP166073RD3TL	DP206073LD3DL
BC454860DRRDOAL	BC454860OLDDA	DP166073RD3D	DP206073LD3O
BC454860DRRDTB	BC454860OLDOA	DP166073RD3DL	DP206073LD3OL
BC454860DRRDTBL	BC454860OLDTB	DP166073RD3O	CD8060932D4T
BC454860DRRDDB	BC454860OLDDB	DP166073RD3OL	CD8060932D4TL
BC454860DRRDDBL	BC454860OLDOB	DP166073LD3T	CD8060932D4D
BC454860DRRDOB	BC454860O	DP166073LD3TL	CD8060932D4DL
BC454860DRRDOBL	DP126073RD3T	DP166073LD3D	CD8060932D4O
BC454860DRLDTA	DP126073RD3TL	DP166073LD3DL	CD8060932D4OL
BC454860DRLDTAL	DP126073RD3D	DP166073LD3O	CD80601133D5T
BC454860DRLDDA	DP126073RD3DL	DP166073LD3OL	CD80601133D5TL
BC454860DRLDDAL	DP126073RD3O	DP186073RD3T	CD80601133D5D
BC454860DRLDOA	DP126073RD3OL	DP186073RD3TL	CD80601133D5DL
BC454860DRLDOAL	DP126073LD3T	DP186073RD3D	CD80601133D5O
BC454860DRLDTB	DP126073LD3TL	DP186073RD3DL	CD80601133D5OL
BC454860DRLDTBL	DP126073LD3D	DP186073RD3O	P5060730D3T
BC454860DRLDDB	DP126073LD3DL	DP186073RD3OL	P5060730D3TL
BC454860DRLDDBL	DP126073LD3O	DP186073LD3T	P5060730D3D
BC454860DRLDOB	DP126073LD3OL	DP186073LD3TL	P5060730D3DL
BC454860DRLDOBL	DP146073RD3T	DP186073LD3D	P5060730D3O
BC454860DROT	DP146073RD3TL	DP186073LD3DL	P5060730D3OL
BC454860DROTL	DP146073RD3D	DP186073LD3O	