

DUM

sustainability report 2022

about

Wiebe Boonstra and Marc van Nederpelt are the names behind Amsterdam-based furniture brand DUM. We both graduated from Design Academy Eindhoven in 1994 and have worked together ever since, eventually founding DUM in 2013. In 2019 Marco van Gool joined us, focussing on design and product development.

DUM is therefore a design-oriented company in its DNA. Even more so, it is a financially independent company that, out of conviction, puts people and nature ahead of profitability.

sustainability by nature

The majority of DUM's pieces are made of beech wood. Wood is a bio-based material and therefore a circular material. The choice for wood is a no-brainer for that matter. It is sourced from sustainably managed European forests, more than 92% of our furniture is now PEFC certified.

Not only is beechwood a hard timber perfectly suited to steam bending and other furniture-making methods, but its lack of knots and irregularities ensures minimal material loss during processing. What's more, unlike oak and ash, whose supplies are significantly strained, beechwood is a readily available resource.

Wood has a profound impact on our well-being as well. As a natural material, wood can help to provide all the benefits of biophilic experiences: reducing stress, improving cognitive function and enhancing mood and creativity.

water based colours

DUM's water-based lacquer and stain colours contain no heavy metals, and ten times fewer volatile organic compounds (VOCs). This means that they are ten times less damaging for the environment than conventional more cheaper solvent lacquers.

Beechwood has an unique inherently light, fresh colour – a tone that can be left to shine in its natural state or easily stained or lacquered to suit any palate.

technique

DUM focuses on technique. Impossible to make without industrial manufacturing methods, our furniture combines modern technologies with traditional crafts. DUM has developed a sustainable, efficient and flexible local production chain that not only contributes to reducing our CO2-footprint, but enables us to quickly cater for clients' individual wishes.

upholstery

Knitted textiles are produced mostly locally by Kvadrat Febrik in Tilburg in the Netherlands, add an extra dimension of colour and comfort to DUM's upholstered pieces.

Always on the look-out for improvement we recently introduced an unique woolen upholstery which contains 70% recycled post-consumer wool.

durability

To guarantee their lifespan, products are subjected to strict NEN tests piece by piece. These costly invest-

“In 2023 we want all our products to be PEFC or FSC certified”

– DUM

ments are first made in the furniture that is exposed to the most stress.

design approach

People are a part of nature too. Therefore DUM takes a human-centric approach to the contract market, promoting playfulness and colour in offices and hospitality projects. Design and material should have a relative connection to us as human beings.

Design shouldn't be stand-offish; it must be made with human interaction in mind. Robust and solid, DUM furniture has slightly extra-large dimensions. They are therefore more in tune with human nature than sleek, delicate design pieces. Logically, they are also a bit sturdier. And the greater presence also makes it ideal for use in larger spaces and structures

Furniture design should have a long lifespan, it should not be a short-lived fashion statement. All DUM chairs, tables, stools and armchairs are designed as one collection, one family. They are all based on geometric derivatives of a circle. These shapes do not go out of fashion and are therefore an important part of longevity. It also ensures that all furniture designs can be easily combined with each other.

From 8-m-long desks inspired by design studios where people collaborate on large surfaces, to sitting and standing tables and privacy chairs: the DUM collection offers a landscape of typologies to support a healthier working environment.

future

There are numerous certificates and requirements for sustainability available on the market. Some are useful, some are not applicable, some are just a revenue model. As an independent company, we choose the ones that are most meaningful and applicable to us.

For example, the NEN endurance tests are important to guarantee the lifespan, and the PEFC certification guarantees the correct origin of wood. As soon as possible, investments are made in Life Cycle Analyzes (LCA) so that products can be compared with each other via a neutral benchmark.

Marc van Nederpelt, Wiebe Boonstra
owners DUM

“We continue testing our products for durability through NEN level 1 and 2 tests”

– DUM

DUM

“We never can’t recycle our way out of the plastic crisis”

– report World Life Fund

starting points

If you mention sustainability, materials, production methods, packaging, transport, recycling and disposal must be taken into account.

Sustainable product development starts with sustainable principles. At DUM, the basic material is beech wood. Wood is currently the only serious biobased, circular and carbon-neutral material for furniture production. All other biobased materials are often experimental or composites or both.

When wooden products are damaged or come to the end of their life cycle, the knowledge of wood disposal or repair is widespread, simple and easy. In such cases, other materials than wood require much more knowledge and often special equipment or are simply impossible to repair or recycle.

An important contribution that DUM can make to sustainability is the design and manufacture of products with a long lifespan. Any sustainable product that is unaffected by fleeting trends and manufactured in excellent quality reduces the impact on the environment. DUM’s ambition is to subject the entire product line to NEN level 1 or 2 durability testing.

Mostly all the wood DUM processes is PEFC certified. As a result of compliance with official certification programmes like PEFC, DUM ensures that the materials purchased meet its corporate conditions in regard to human rights, good working conditions and environmental standards.

DUM uses as few different materials as possible. The main material is beech wood, because it offers so many possibilities in terms of processing, sustainability and circularity. So almost every furniture part can be made out of wood. This mono-material approach is very help full when it comes to recycling or disposal.

Choosing is also excluding something, these are the no go’s for DUM.

We use as little plastic as possible. Despite all the efforts, worldwide only 5% of plastic is recycled, 14% is collected separated. Products containing recycled plastic often have to be supplemented with virgin plastic to meet the required quality. This keeps the plastic cycle going. So we never can’t recycle our way out of the plastic crisis.

Steel production is polluting and emits a lot of CO2 and other greenhouse gases. Each ton of steel produced results in an average of 1.9 tons of CO2 emissions. That is why we limit the use of steel to a minimum. The advantage is that steel is recycled for almost 95%. The disadvantage is that reprocessing it costs a lot of energy.

We do not offer leather upholstery. It is a myth that leather is a by-product of the meat industry. In fact, leather accounts for about 10% of the animal’s total value, making it the most valuable component, pound for pound.

DUM

“Leather is not a by-product of the meat industry”

– PETA

materials

The most commonly used material at DUM is beech wood. Beechwood sourced from sustainably managed European forests is used for the majority of DUM’s pieces.

Not only is it a hard timber perfectly suited to steam bending and other furniture-making methods, but its lack of knots and irregularities ensures minimal material loss during processing.

What’s more, unlike oak and ash, whose supplies are significantly strained, beechwood is a readily available resource. More than 92% of the wood in our furniture is PEFC certified.

Our aim is to use as much biobased materials as possible and to keep materials like steel and plastics to a minimum. We redesigned even the seating of the Beech Stool making instead of moulded wood to solid wood.

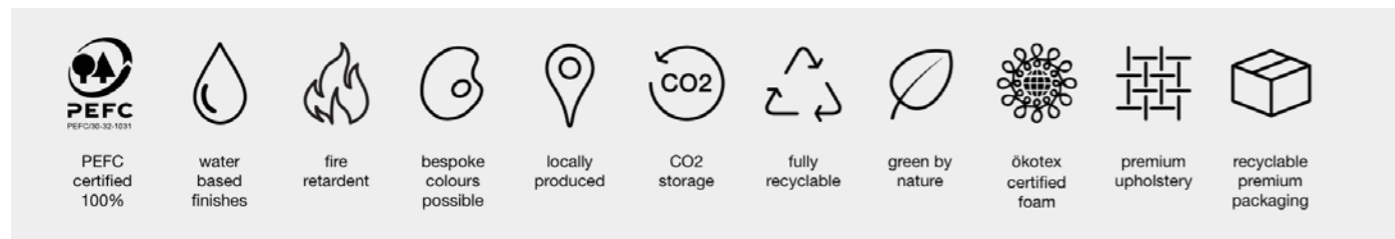
We have deleted our HPL table-tops from our collection, they are only available in solid wood or veneered MDF. Making it circular and totally bio-based.

The MDF we use in our table tops comply with the most regulations regarding sustainability and safety. The meets the european E05, the Californian CARB Phase 2 and the TSCA Title VI.

All of our products have a material passport on our website, together with certificates and product characteristics.

material passport

All of our products have a material passport on our website. This is an example of a material passport of the DUM Beech Sticks 75 Soft together with certificates and product characteristics.



“92% of the wood in DUM furniture is PEFC certified - excellent status”

– report PEFC

beech wood

Beechwood sourced from sustainably managed European forests is used for the majority of DUM’s pieces. More than 92% of the wood in our furniture is PEFC certified. Excellent, according to the PEFC organisation.

With PEFC, DUM cares for forests globally and locally. PEFC works to protect our forests by promoting sustainable forest management through certification. This means we can all benefit from the many products that forests provide now, while ensuring these forests will be around for generations to come.

As an umbrella organization, PEFC endorses national forest certification systems that have been developed through multi-stakeholder processes and tailored to local priorities and conditions.

Forests play a critical role for the global environment, population and economy. Besides alleviating the effects of climate change and natural disasters, they represent some of the richest biological areas on Earth. They also provide food, renewable raw materials for many of our products, and livelihoods for millions of people.

Forest certification is a voluntary, market-based instrument, implemented through two separate but linked processes: sustainable forest management certification and chain of custody certification.

Every year there is an audit that strictly monitors the chain of custody, in which the entire administration of DUM is screened, including all our suppliers.



Beech Tree

DUM

composite wood

The composite wood MDF we use in our table tops comply with the most strict regulations regarding sustainability and safety like the European E05, the Californian CARB Phase 2 and TSCA Title VI standard.

EUROPEAN FORMALDEHYDE EMISSION CLASSES

In Europe, an E standard is used for sheet material. This stems from the EN 120 standard and measures the amount of Volatile Organic Compounds (VOC/VOC), including formaldehyde, present in the boards.

E1

Various standardized test methods can be used to determine the amount of formaldehyde. A commonly used method is the European chamber method EN 717-1. The emission is measured for 28 days in a controlled environment. In Europe, all materials must meet the E1 standard, which means ≤ 0.1 ppm (0.12 mg/m^3) with this test method.

E05

Since 2020, however, even stricter requirements have been in force in Germany. In practice, this means that products may only emit a maximum of 50% formaldehyde emissions of the E1 emission standard. So a halving. You will see E05 on products that meet this strict standard.

CARB Phase 2 / TSCA Title VI

TSCA is actually the successor to CARB2. As of June 2018, wood products throughout the US must comply with guidelines outlined in Title VI of the EPCA (Toxic Substance Control Act), published by the Environmental Protection Agency (EPA).

Chapter VI of the Toxic Substance Control Act (TSCA) was established to regulate chemical emissions generated by three major composite wood products. This standard is closely related to the strict rules previously established by the California Air Resources Board (CARB).

DUM

upholstery

“DUM wool contains
70% recycled wool”

– DUM

Most of the upholstery of DUM furniture is Kvadrat Fabrik. Kvadrat is for instance certified for the EU Ecolabel, ISO 14001 and Greenguard. Making it one of the most sustainable fabric suppliers in the market. Their products have an LCA and EPD that make their environmental impact transparent and calculable. More information can be found on their site [kvadrat.dk](https://www.kvadrat.dk).

DUM introduced in 2022 DUM recycled wool. Wool is often confused as being animal friendly, which in fact isn't, due to mulesing and shearing. Therefore recycling wool is a quite a good thing. DUM recycled wool contains 70% fully recycled post-consumer wool and 30% synthetics for durability.

All the polyurethane foam used in DUM's furniture is Okotex proven. More environmental alternatives for PU-foam are still in development and not available yet on a commercial basis.

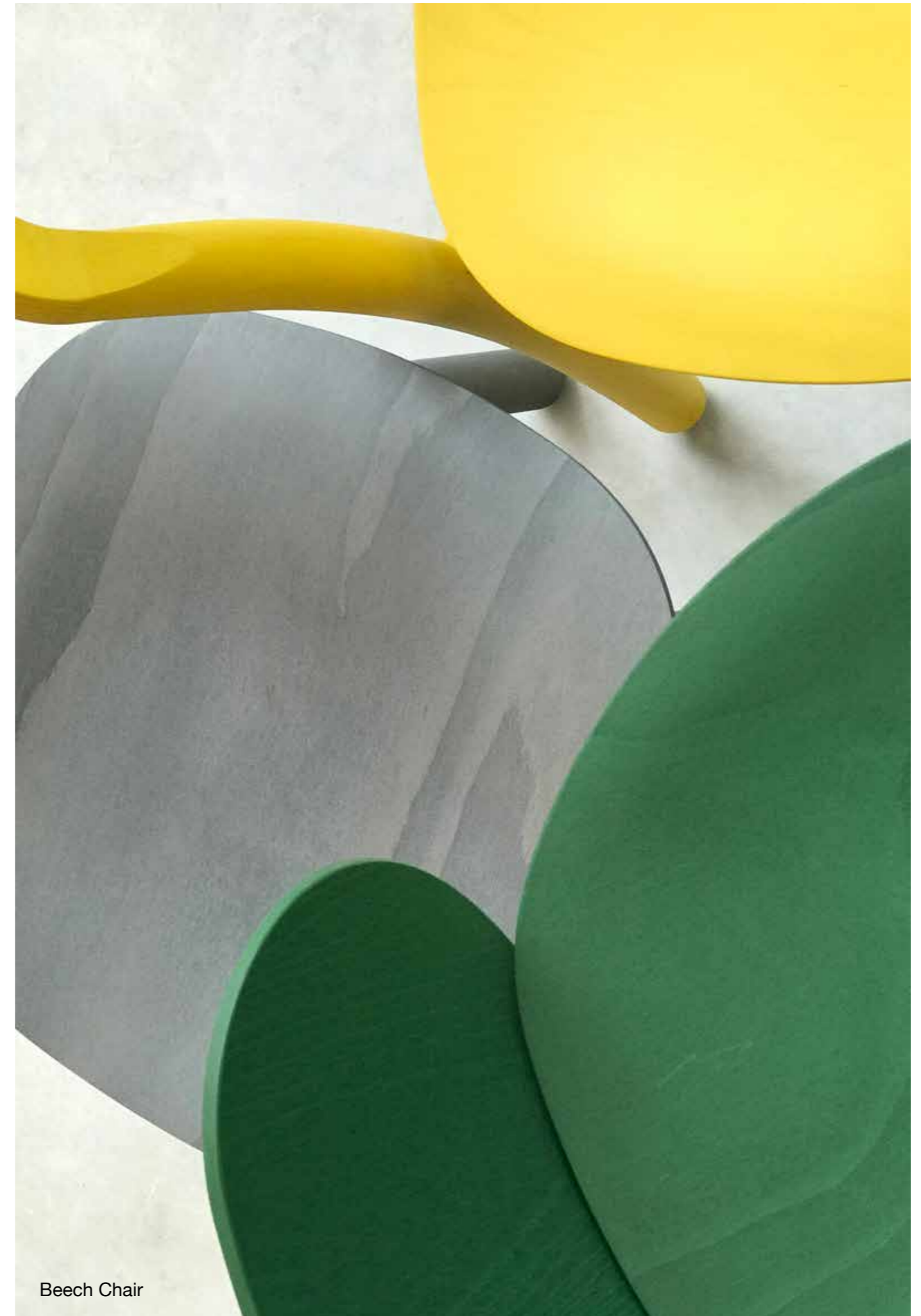
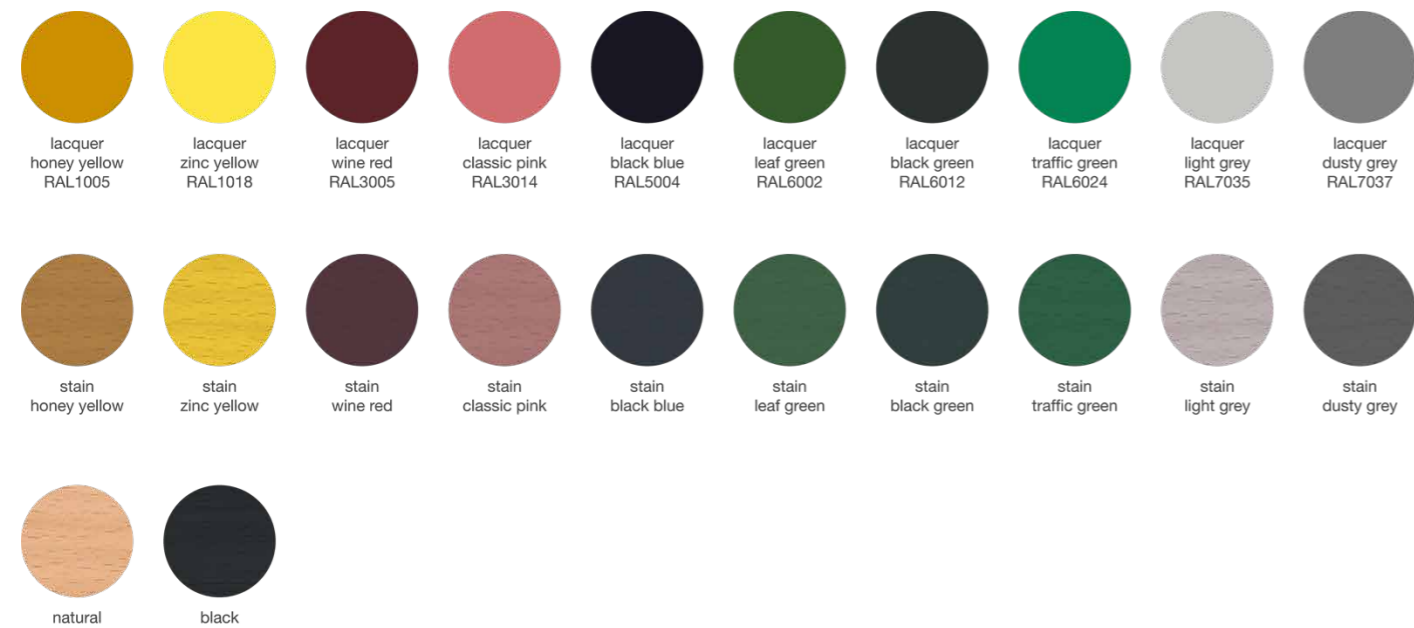
water-based finishes

DUM's water-based lacquer and stain colours contain no heavy metals, and ten times fewer volatile organic compounds (VOCs). This means that they are ten times less damaging for the environment than conventional lacquers.

The colors associated with sustainability are often beige, brown and dull. Because color plays an important role in any good interior design, DUM also has an extensive color palette as standard in addition to a sustainably produced collection.

Featuring ten colours in addition to natural and black, the palette runs the gamut of greens – from traffic green to leaf green to black green. You'll find classic pink and wine red, light grey and dusty grey, black blue, and – of course – two variations of yellow: zinc yellow and honey yellow. The colours are deep and bold. Sometimes bright, sometimes subdued. But never boring.

Getting technical for a moment. The water-based lacquers and stains comply with the highest standards for scratch resistance, chemical resistance and fire safety. They even passed the extremely stringent Toy Safety Standard EN71-3:2013 with flying – ahem – colours.



Beech Chair

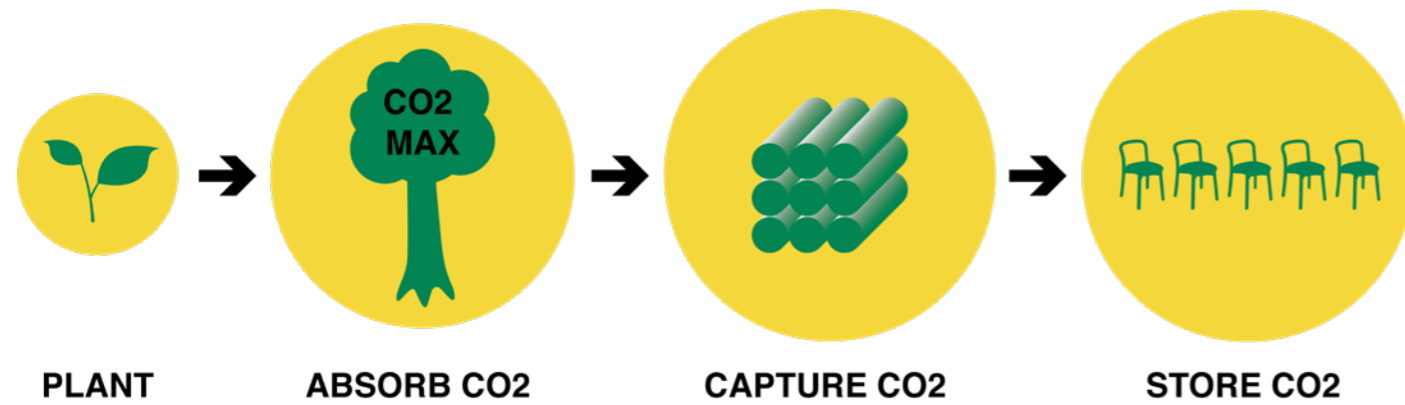
DUM

“the more wood we use, the more forestation we create”

– PEFC

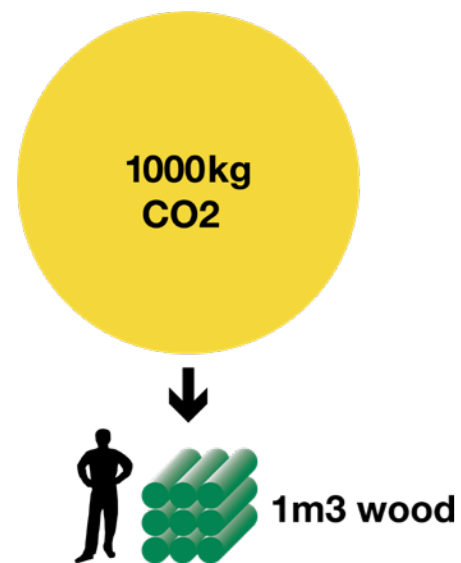
wood and CO2

To get a bit technical, trees absorb CO2 as they grow. This happens through the process of photosynthesis, which stops when they mature. If we harvest mature trees and replant saplings in their place, which will soak up more CO2, we can maintain the carbon cycle.



Using wood to build furniture and buildings creates a long-term carbon store (1000kg of CO2 is stored in every m3 of wood) and reduces the use of pollutive and high-energy materials.

Furthermore, the more wood we use, the more demand we create – a revolution that can lead to large-scale reforestation of the planet. The CO2 revolution.



DUM

“wood feels good”

wood and well-being

Beech wood is good for you and for the planet. It’s not just free from toxins and produces no harmful emissions, but it actually improves air quality. As a natural material, wood can help to provide all the benefits of biophilic experiences: reducing stress, improving cognitive function and enhancing mood and creativity.

Through its remarkably positive impact on the indoor climate of a building, wood can contribute to the overall health and productivity of those who live and work there.

Studies in countries such as Japan, Finland, Canada and Austria, for instance, indicate wood’s calming effect on the nervous system, leading to greater emotional and physical wellbeing.



Beech Chair

bill of materials

Our bill of materials shows an overview of all our products with the corresponding certificates and the processed material at a glance. We thus offer complete insight into what our products are made of and which requirements they meet.

For upholstery, we refer to the relevant supplier. But we only use brands and fabrics that have high standards in terms of sustainability.

Our goal for the future is to continue to invest in making our collection even more sustainable.

	Materials	Certificate	Status
Beech Chair			
Frame	solid beech wood 100% PEFC	SCS-PEFC-COC-000652-ID	registration number
Finish	aquatopstar EM3009-0015	EM3009-0015	specification
		EN71-3 certification ARTI	specification
		DIN EN 12720 EM3009-0015 DUM	specification
Seat	beech plywood 100% PEFC	SCS-PEFC-COC-000652-ID	registration number
Finish	aquatopstar EM3009-0015	EM3009-0015	specification
		EN71-3 certification ARTI	specification
		DIN EN 12720 EM3009-0015 DUM	specification
Beech Bench			
Frame	solid beech wood 100% PEFC	SCS-PEFC-COC-000652-ID	registration number
Finish	aquatopstar EM3009-0015	EM3009-0015	specification
		EN71-3 certification ARTI	specification
		DIN EN 12720 EM3009-0015 DUM	specification
Beech Stool / Sticks			
Frame and seat	solid beech wood 100% PEFC	SCS-PEFC-COC-000652-ID	registration number
Finish	aquatopstar EM3009-0015	EM3009-0015	specification
		EN71-3 certification ARTI	specification
		DIN EN 12720 EM3009-0015 DUM	specification
Beech Shell			
Frame	solid beech wood 100% PEFC	SCS-PEFC-COC-000652-ID	registration number
Finish	aquatopstar EM3009-0015	EM3009-0015	specification
		EN71-3 certification ARTI	specification
		DIN EN 12720 EM3009-0015 DUM	specification
Seat	beech plywood 100% PEFC	SCS-PEFC-COC-000652-ID	registration number
Finish	aquatopstar EM3009-0015	EM3009-0015	specification
		EN71-3 certification ARTI	specification
		DIN EN 12720 EM3009-0015 DUM	specification
Test (L2 extreme use)		NEN-EN 16139:2013, 16139/C:1 2013	NEN class
Beech Boy			
Frame	solid beech wood 100% PEFC	SCS-PEFC-COC-000652-ID	registration number
Finish	aquatopstar EM3009-0015	EM3009-0015	specification
		EN71-3 certification ARTI	specification
		DIN EN 12720 EM3009-0015 DUM	specification
Seat	beech plywood 100% PEFC	SCS-PEFC-COC-000652-ID	registration number
Finish	aquatopstar EM3009-0015	EM3009-0015	specification
		EN71-3 certification ARTI	specification
		DIN EN 12720 EM3009-0015 DUM	specification
Test (I2 extreme use)		NEN-EN 16139:2013, 16139/C:1 2013	NEN class
Beech Basics / Connect / Large			
Frame	solid beech wood 100% PEFC	SCS-PEFC-COC-000652-ID	registration number
Finish	aquatopstar EM3009-0015	EM3009-0015	specification
		EN71-3 certification ARTI	specification
		DIN EN 12720 EM3009-0015 DUM	specification
Top	MDF core	E1 E05 CARB Phase 2 / TSCA Title VI	formaldehyde-emission class
Finish	beech premium veneer		
	aquatopstar EM3009-0015	EM3009-0015	specification
		EN71-3 certification ARTI	specification
		DIN EN 12720 EM3009-0015 DUM	specification
Beech Board			
Frame	solid beech wood 100% PEFC	SCS-PEFC-COC-000652-ID	registration number
Finish	aquatopstar EM3009-0015	EM3009-0015	specification
		EN71-3 certification ARTI	specification
		DIN EN 12720 EM3009-0015 DUM	specification
Beech Club / Island / Wagner			
Frame	solid beech wood 100% PEFC	SCS-PEFC-COC-000652-ID	registration number
Finish	aquatopstar EM3009-0015	EM3009-0015	specification
		EN71-3 certification ARTI	specification
		DIN EN 12720 EM3009-0015 DUM	specification
Foam	cold foam / polyether foam	Ökotex class 1 App 6 2018 new	Ökotex class
Beech Private			
Frame	solid beech wood 100% PEFC	SCS-PEFC-COC-000652-ID	registration number
Finish	aquatopstar EM3009-0015	EM3009-0015	specification
		EN71-3 certification ARTI	specification
		DIN EN 12720 EM3009-0015 DUM	specification
Foam	cold foam / polyether foam	Ökotex class 1 App 6 2018 new	Ökotex class

DUM

procurement

As a result of compliance with official certification programmes like PEFC, DUM ensures that the materials purchased meet its corporate conditions in regard to human rights, good working conditions and environmental standards.

The company only purchases from suppliers locally in Europe and so comply with relevant requirements, such as the European chemicals regulation like REACH.

In 2022, nearly 92% of DUM's suppliers were from the Netherlands and 8% were based in Germany. DUM started in 2022 in Slovenia prototyping a new stackable chair.



- The Netherlands 92%
- Germany 8%
- Slovenia 0%



production site Borculo

DUM

“our production location in Borculo is affiliated with nature organizations”



production

Besides being a place dedicated to the presentation of design and architecture, a social meeting point and a point of sale and product advice, the DUM office in Zaandam is DUM's head office.

Production takes place at our partners with whom DUM already maintains a long-term relationship. Based on trust, reliability and transparency. Over the years, they have introduced many environmental measures in its manufacturing plants and adopted a responsible approach to nature and natural resources and measures to safeguard occupational safety.

All DUM's production facilities take measures in the field of circularity, sustainability and energy savings. And are of course they are all PEFC and FSC™ certified.

The Dutch partners are affiliated with the Koninklijke CBM, the trade association for the interior and furniture industry. CBM is committed on behalf of employers to conclude a collective labor agreement together with the social partners. This prevents competition in terms of employment conditions. CBM ensures a level playing field for all entrepreneurs in the interior design and furniture industry.

production site Borculo [NL]

The plant for manufacturing the wooden furniture exists for more than over 110 years. It was no coincidence that the factory was founded in the east of the Netherlands, surrounded by forests offering enough material for the manufacturing process. This motivates them also to contribute to nature conservation organizations such as Staatsbosbeheer and Natuurmonumenten.

Deeply rooted in Dutch chair making traditions, they have developed special skills for generations with a deep understanding of wood. Steam bending wood is one of their unique techniques we still use since 1906. Today the factory is still located in exact the same place as 110 years ago. Specializing in 3D solid woodworks, they continue to develop our knowledge and expertise, combining traditional techniques with latest technology and designs.

Waste flows from wood processing are captured to generate energy to heat the production areas.



combining tradition with the latest technology



production site Winterswijk

“our German production location is a certified ÖKOPROFIT company”



production site Winterswijk [NL]

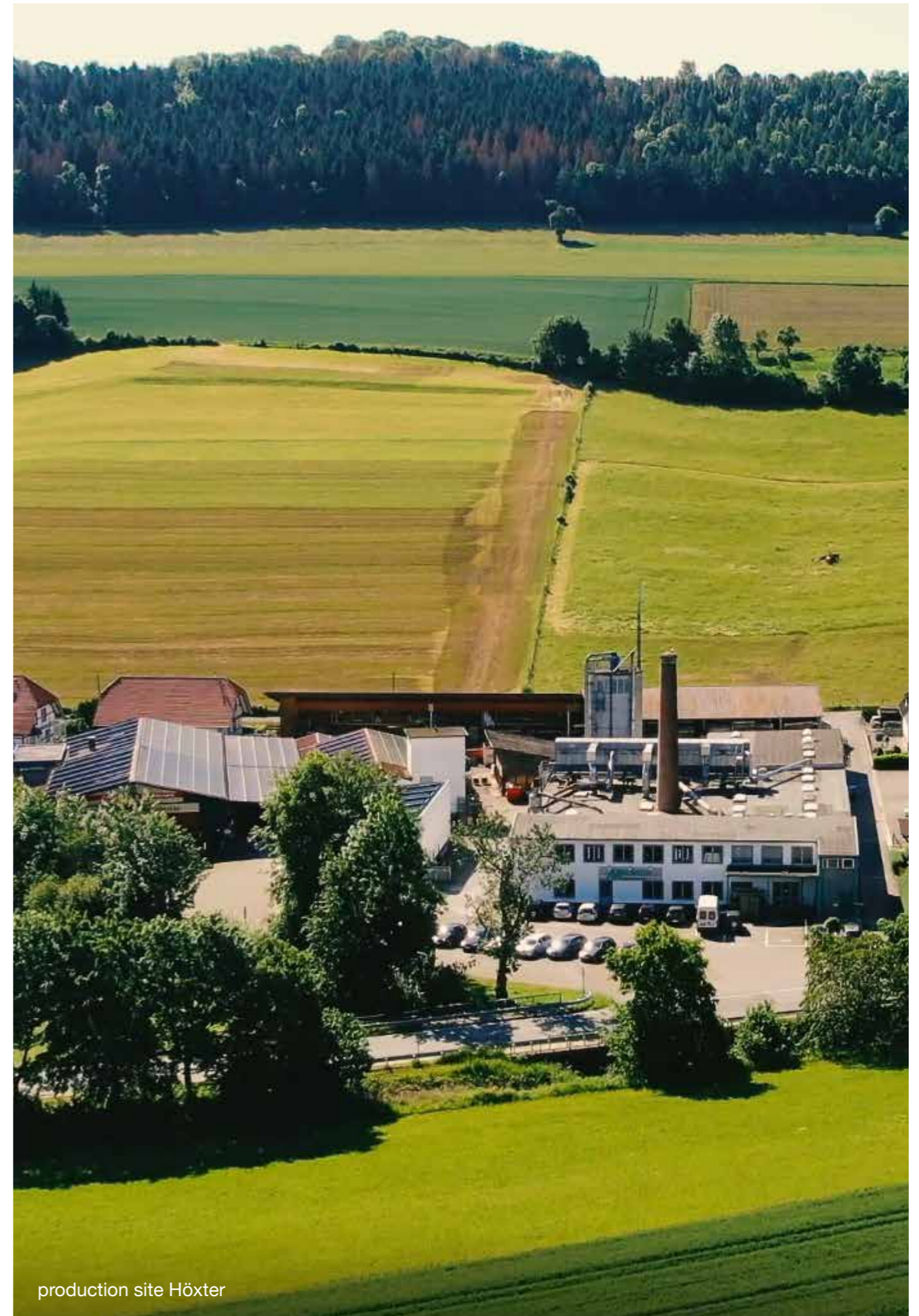
At the upholsterer they work with modern CNC machines with which make it possible to cut and nest efficiently and work faster and more sustainably. The upholstered seats for the Beech Sticks and Beech Stool are no longer stapled but only tightened. This makes them much easier to reupholster. All small details that serve to improve sustainability.

The work requires a lot of precision and that is why they train their employees themselves. The passion for their profession is reflected in the result, in the details that have been processed.

The modern production hall is flooded with natural daylight, energy is generated by solar panels, cutting remains of the fabric are collected and processed circularly.

production site Höxter-Ovenhausen [D]

The German production location of solid wood parts combines a passion for craftsmanship and state-of-the-art machinery, such as their 5-axis CNC milling machine. In their environmental guidelines, they have undertaken to conserve resources. This includes, among other things, using energy- and material-saving technologies and production processes. They produce part of their electricity via solarpanels. And with the wood offcuts, they can completely meet the heating requirements of all their production facilities. All their environmental performances make them a certified ÖKOPROFIT company.



production site Höxter

DUM

“a space-saving light-weight pallet system”

– DUM

packaging and transport

The packaging of DUM products should provide proper protection during transport with a minimum amount of material.

DUM uses a space-saving lightweight pallet system which makes transport far more efficient. The main material for transport is a sturdy premium quality cardboard, to avoid damage during transport. Single-use material like plastic as a packaging material is avoided as much as possible.

DUM's transport logistics are organised in such a way that lorries follow a route according to a scheduled service so that trucks are loaded as efficiently as possible. Special transports are avoided whenever possible.

DUM's logistic partner Kuehne&Nagel is guided by commitments to be the first to the science-based targets to decarbonize the logistics sector to help reach the goals of the Paris Agreement. More information on [kuehne-nagel.com](https://www.kuehne-nagel.com).



history

2008

first introduction of products designed by the DUMOFFICE design studio

2011

introduction of the first modular communal table for the contract market, the Beech Connect

2013

introducing the brand DUM
start of a strategic cooperation with a wooden furniture factory with turn around ambitions
green by nature - defining the starting points for sustainability through a radical choice for beech wood as the base material

2014

strategic focus on the contract market only which is leading in achieving sustainability goals

2017

change legal status to DUM BV

2018

implementation of a waterbased painting system
purchase of new head office at Hembrug, start of renovation and sustainable measurements

2019

PEFC and FSC™ certification
first NEN certification for strength, durability and stability [NEN-EN 16139]
move from the center of Amsterdam to the Hembrugterrein in Zaandam

2020

start of expert meetings on sustainability and design with architects and interior designers
introducing the all solid wood Beech Sticks family of bar-stools
introducing a circular innovation with quick release-upholstery for soft-pads

2021

introducing the sustainable redesign of a totally solid Beech Stool
introducing DUM wool upholstery with 70% post consumer recycled wool

2022

start with EPD and LCA procedures
first sustainability report 2022



DUM Zaandam

DUM

“90% of commuter traffic
takes place by bicycle”

– DUM

working

DUM devotes particular attention to work conditions and an environment that are inspiring and therefore productive.

Therefore in 2020 DUM acquired their new showroom and office in Zaandam. It is beautifully situated in a wooded area that used to be a former industrial area of the Ministry of Defense. DUM has renovated and made the dilapidated building more sustainable. DUM keeps investing in energy-saving measures. DUM's energy supplier only supplies green electricity and forest-compensated gas.

It was recognized by the municipality of Zaandam as a wonderful example of repurposing.

It is more than just an office, it's somewhere to visit, to meet others and to view the DUM collection. The inspirational Hembrugterrein is a verdant oasis just a short distance from Amsterdam. This also makes it easy to commute by bike from home. More than 90% of commuter traffic therefore takes place by bicycle.

Food is an important part of life. The kitchen therefore has a central place in the office. DUM spends time and care on a joint lunch of organic origin and with little meat.

DUM

diversity

DUM makes no distinction when hiring staff, hired work or suppliers on the grounds of religion, belief, political opinion, race, gender, nationality, sexual orientation, marital status, disability or age.

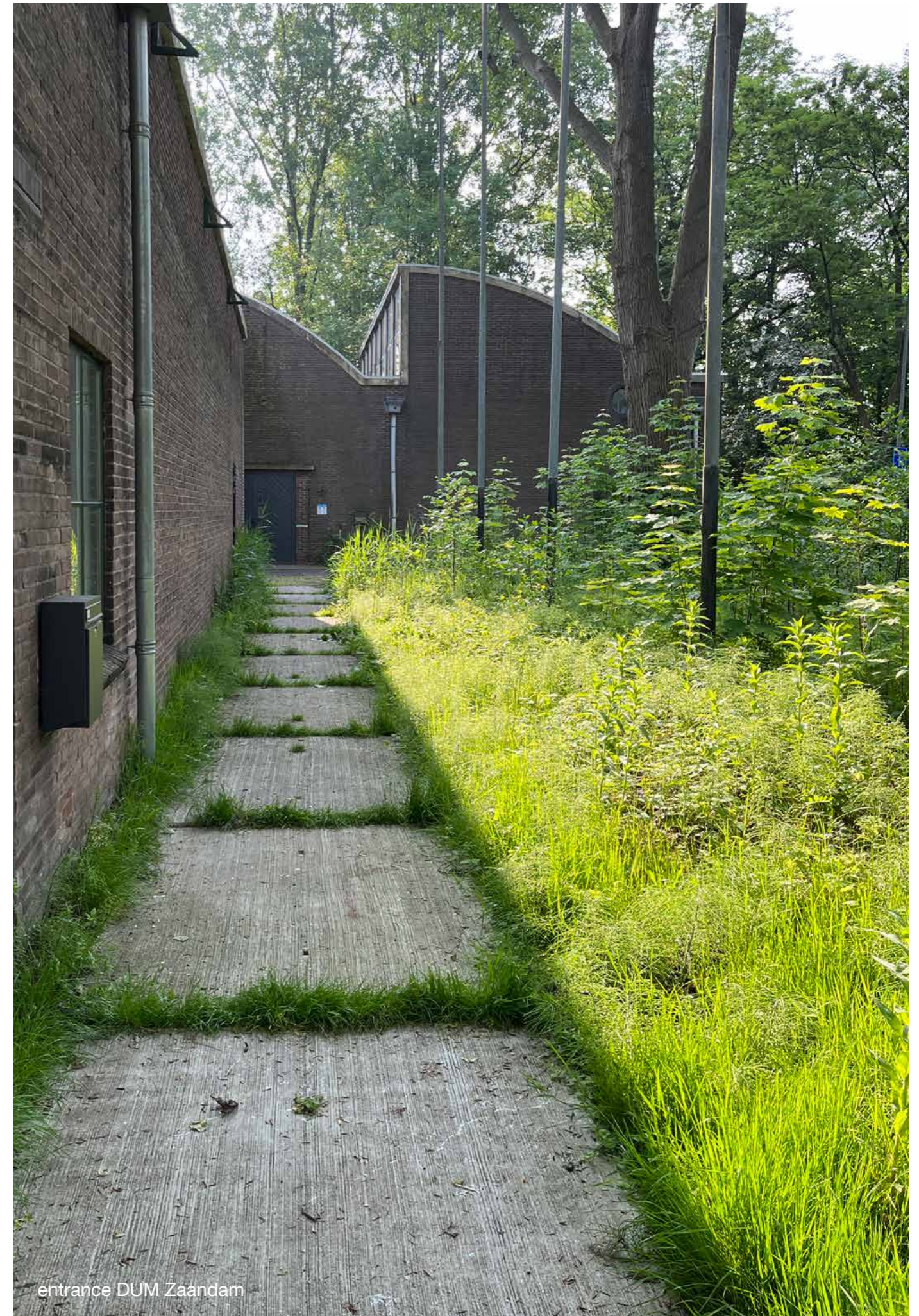
DUM is convinced that the best results are achieved through teamwork, cooperation with colleagues with diverse educations, backgrounds and interests. The people DUM works with are a reflection of this principle. Only due to the modest size of the staff, no internal diversity policy can be applied.

biodiversity

The PEFC organization is committed to responsible forest management and biodiversity. As a result, our production also contributes to improving the quality of forests.

Forests cover more than 30 percent of the Earth's surface and, in addition to providing food security and shelter, they are key to combating climate change and protecting biodiversity. Thirteen million hectares of forest are lost every year, while the persistent degradation of drylands has led to the desertification of 3.6 billion hectares. Even though up to 15% of land is currently under protection, biodiversity is still at risk. By protecting forests, we will also be able to strengthen natural resource management and increase land productivity.

Practice what you preach, but on a much smaller scale, DUM convinced others at the Zaandam site to stop mowing and use leaf blowers. Ultimately, garden maintenance is kept to a minimum. This creates an animal-friendly living environment with safe sheltered places and sufficient foraging opportunities and gives wild and native plants room to prosper.



DUM

contact

This report features key topics relating to DUM's understanding of sustainability. It is published annually each year, sharing the latest data and progress from the previous year.

A company's sustainable development relies on dialogue with an interested public. You may contact us at info@dumoffice.com. We look forward to hearing from you.

DUM BV
Draaibank 10
1505 RN Zaandam
+31 [0]20 489 0104
info@dumoffice.com
www.dumoffice.com