

RENOVATION
FLOOR

FOR A BRIGHTER
FUTURE

HARD FACTS THAT STRENGTHEN OUR PASSION

RENOVATING INSTEAD OF REPLACING

For years Bona has enjoyed seeing the resource saving benefits of properly maintaining and renovating floors. The environmental effects of renovating rather than replacing are clear, however there have been few studies quantifying and verifying the positive effects. Until now. That's why, last year Bona initiated an ambitious project together with the IVL Swedish Environmental Research Institute, to find out the hard facts. The results show immense savings of energy and reduced carbon footprint when comparing refinishing versus replacing floors.

Renovation not only offers long-term benefits for the environment, but also cost savings, as well as increased floor hygiene. Furthermore, modern innovations from Bona provides total design freedom, making it possible to create a new expression when renovating a floor, without the need to replace it. All to create a brighter floor future.



CLIMATE & ENERGY SAVINGS



COST SAVINGS



DESIGN POSSIBILITIES

SAVING **CLIMATE** AND **ENERGY** FOR THE FUTURE



ENERGY FOR 9000 HOUSES

By renovating a floor rather than installing a new one, the energy savings are as high as 95%*. Let's take Bona's yearly production of floor finishes and calculate the m² of floors they cover. If new floors were installed instead on same amount of floor surface, the energy use would have been 1.8 billion kWh more*! In comparison, these savings correspond to the yearly energy use of 9,000 households** or a small Swedish town!

9600 FLIGHTS AROUND THE GLOBE

Floor renovation saves up to 90%* in reduced carbon footprint vs installing a new floor. If we look at Bona's yearly production of floor finishes and calculate the m² of floors they cover, the carbon footprint reduction per m² vs. new floors is 108,000 tonnes CO₂. This is equal to CO₂ emissions from 9,600 flights around the world***.



* Calculations based on the IVL-report and will be explained further later in the brochure

** , *** See back for explanations of the calculations.





SUBSTANTIATED AND VERIFIED FACTS

INDEPENDENT REPORT FROM IVL

Floor owners and other stakeholders in the industry do not always recognize that floor refinishing is a viable alternative to installing new flooring. Perfectly good floors are thrown out and replaced with new, sometimes inferior floors, resulting in waste of materials and resources. In the modern world where resources and energy are becoming scarcer and impact on the climate is increasing, the full extent of the consequences – in terms of cost, energy use and climate effects – needs to be methodically evaluated and taken into consideration. To quantify these effects was the aim of this ambitious study conducted by IVL, an independent Swedish Environmental research Institute.

THE STUDY

The purpose of the IVL study was primarily executed to generate data for different stakeholders in the Swedish flooring and construction industry regarding resource efficiency and the impact on climate change when undertaking floor refinishing. Also, to show what impact the different choices in the process have in terms of sustainability. The study was divided into two parts, the first being a Life Cycle Assessment (LCA) and the second part a roadmap, suggesting possible actions based on the findings in the LCA.

PART 1 - THE LIFE CYCLE ASSESSMENT

The first part of the report reviews the environmental impact from refinishing hardwood and resilient flooring by performing a life cycle assessment. The LCA maps out the impact that various processes have on a product level. It determines if there could be a differentiation in carbon footprint and energy resources spent when comparing the production and installation of a new floor with a refinishing of an existing floor. This includes evaluating all life cycle stages including; material production, manufacturing, use and maintenance, and end-of-life.

PART 2 - A ROADMAP FOR SUSTAINABLE FLOORING

A roadmap was also conducted in order to take the industry from the current to the desired situation i.e. reducing greenhouse gas emissions and improving resource use by increasing the number of floors that are refinished. This was done by identifying several barriers and factors in the surrounding environment that affect the business. The roadmap outlined areas for further development and concretized actions that stakeholders in the industry need to work on together to continue the journey towards a resource efficient and circular future.

THIS IS THE LIFE CYCLE ASSESSMENT (LCA)

The LCA studies and evaluates the environmental impact related to a product or a system during its whole life cycle – from cradle to grave. This includes evaluating energy and resource use as well as emissions like CO₂, generated from all life cycle stages including; material production, manufacturing, use and maintenance, and end-of-life.

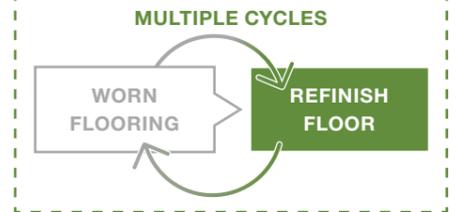


CRADLE TO GRAVE

INSTALLATION



REFINISHING



THE RESULTS - RENOVATION MAKES A DIFFERENCE

The LCA clearly shows that the floor renovation process uses significantly less energy resources and has a much lower environmental impact compared to floor replacement, in relation to both carbon dioxide footprint and in energy use. Up to 90% savings in carbon dioxide footprint and up to 95% savings in energy resources consumed in favour of the refinishing process compared to ripping out the old floor and installing a new one. The result is used as proof of concept that floor refinishing can reduce the impact on climate change and minimize resource use compared to producing and installing new flooring.

Only one cycle was considered in the refinishing part, as well as in the installation part, of the different processes. It means one re-installation of an existing floor or one refinishing of an existing floor. The number of times a floor can be refinshed was not considered in the IVL study, nor aspects of maintenance that can prolong the life expectancy of the floors.

DIRECT AND INDIRECT COST SAVINGS

When you add it up, renovation makes a significant difference, from many perspectives. As the calculations show, in addition to supporting the planet by reducing carbon dioxide footprint and use of energy resources, there are also cost advantages to be gained from renovating rather than replacing a floor.

60%
TIME
SAVING

41%
COST
SAVING

Renovating also allows you to restore the existing floor to its initial beauty or give it a whole new look, based on modern flooring trends. Finally, renovation even makes your floor more hygienic, as the monolithic surface ensures an easy cleaned and maintained floor, preventing build-up of microorganisms.

CALCULATION WOODEN FLOORS

When comparing costs for renovated floor with a new installation, it is important to consider all actions involved. The square metre cost of new floor is only one part of an installation calculation, so to make a fair calculation comparison you need to include labour costs for ripping out the existing floor, preparation of subfloor, removing and re-mounting skirting boards etc. Plank-by-plank, a renovation of a wood floor works out to be at least 40% less expensive compared to installing a new floor to replace the existing one.

+40%
COST SAVINGS

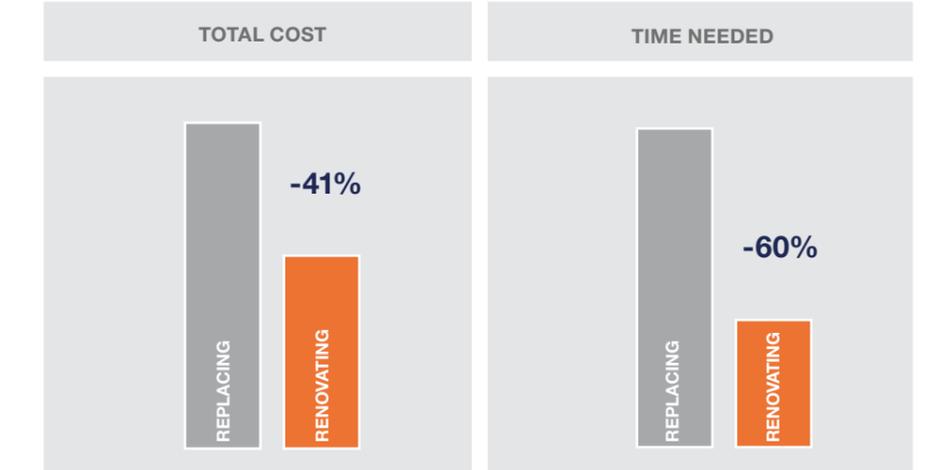


*Renovation made with Bona wood solutions

CALCULATION RESILIENT FLOORS

The same cost savings applies to resilient floors, when comparing costs for actions that need to be considered for both renovation and installation, in order to make a relevant cost comparison. In terms of resilient floors, the total cost is reduced by at least 41%. There is also a saving of roughly 60% in time, which means that profitability for the contractor increases by an impressive 70%!

+41%
COST SAVINGS



*Renovation made with Bona Resilient solutions



TAKING CARE OF AN INVESTMENT

RENOVATION DELIVERS LONG TERM EFFICIENCY

For long term efficiency, floor ownership should be seen as an investment that should be taken care of and maintained, like all other parts of a building. Ensuring efficient and long-term performance is possible and even desirable.



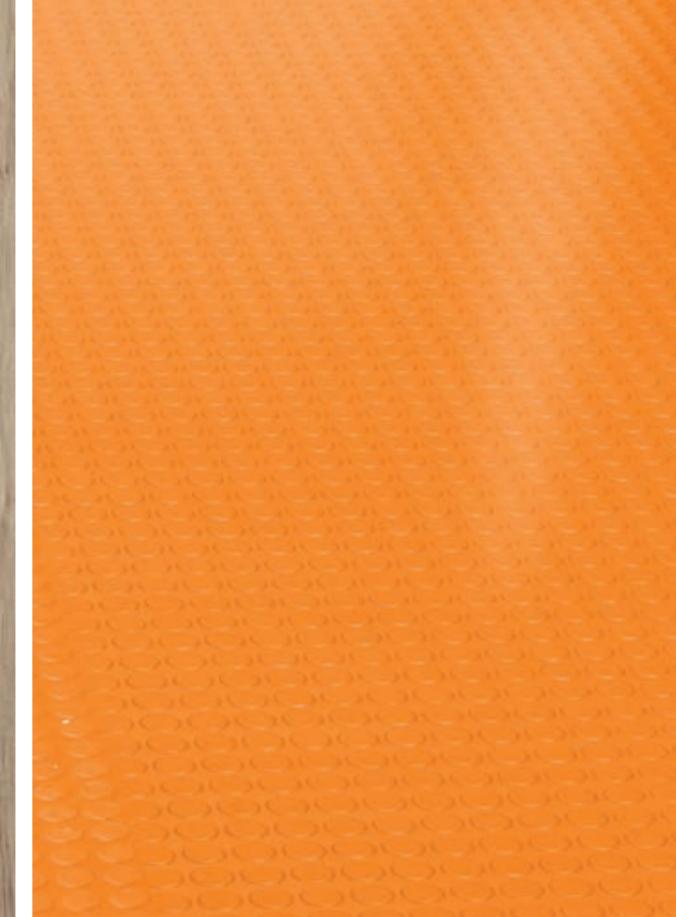
EXTENDING THE LIFE CYCLE PERFORMANCE

Modern maintenance and renovation technologies developed by Bona enables less downtime, minimized costs and a longer floor life. Not just because of increased durability, but also thanks to new design possibilities for existing surfaces, giving you the freedom to use surface characterisation and colouring treatments on your existing floor.



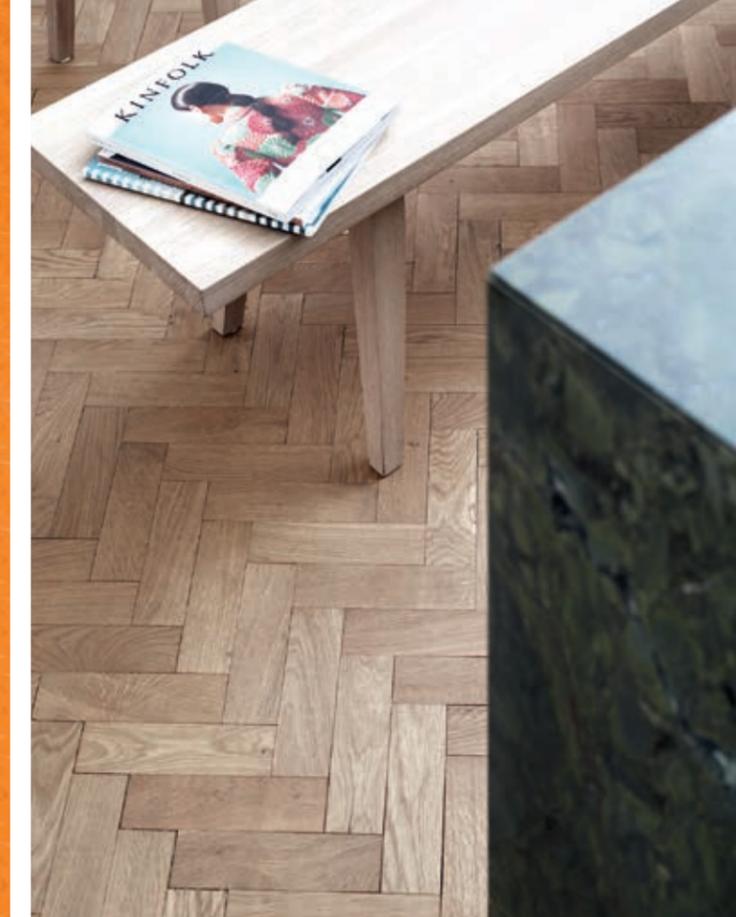
WOODEN FLOORS

It is easy to judge a wooden worn floor as unrepairable. However, a wooden floor can be transformed to look like new with the right methods, as well as giving it a life expectancy of up to 60 years if maintained properly. At the same time, reducing environmental impact and costs are positive benefits that you can't argue with.



RESILIENT FLOORS

For resilient floors that are damaged or heavily worn, replacement is the traditional answer. However, there is a fast, effective and sustainable alternative which restores their original beauty, keeps them healthy and prolongs their life. Refinishing will give you a completely new floor without the hassle of a full renovation, as well as saving the environment and costs.



DESIGN POSSIBILITIES

Create the floors of your dreams! Modern techniques enable floors not only to be restored to their original look, but they can also be completely redesigned in terms of colour, texture, sheen and protection level. The possibilities are endless.

WOODEN FLOORS

CONFIRMING EVIDENCE OF RENOVATION BENEFITS

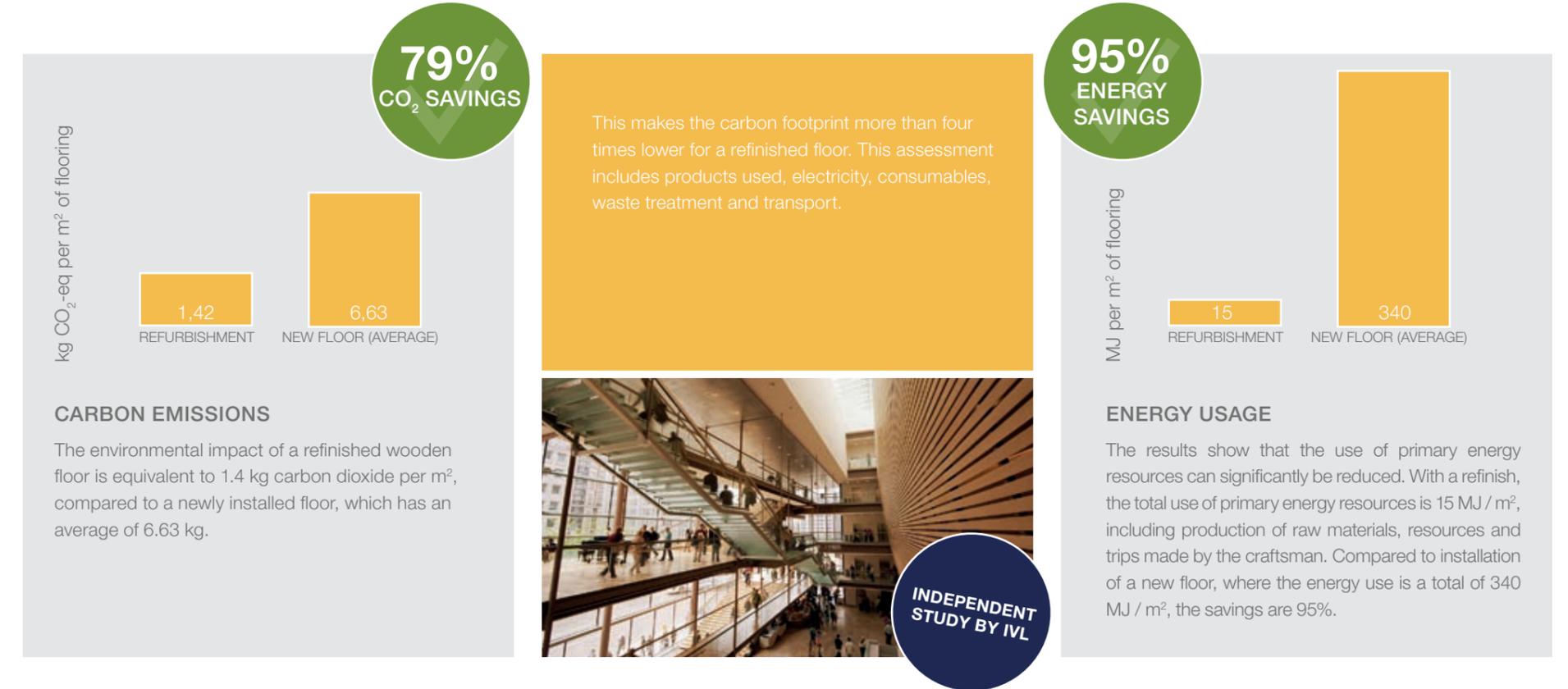
A wooden floor can last more than centuries if maintained properly. The impact on climate change is considerably reduced by renovating a wooden floor, rather than installing a new one. When maintained properly, the time between renovations can also be greatly extended. To put it simply, the environmental and cost benefits attributed to renovating a wooden floor is striking. In addition, modern techniques enable wooden floors not just to be restored to their original beauty, but also to be completely redesigned in terms of colour, texture, sheen and protection level.

A properly maintained refinished wooden floor will last longer and extend the time between renovations, as well as providing endless possibilities to bring your floor vision to life.

- ✓ ENVIRONMENTAL BENEFITS
- ✓ LESS TIMES OF DOWNTIME
- ✓ EXTENDED THE LIFETIME

SUSTAINABILITY

The IVL study makes a clear case for the extensive sustainable benefits to be gained by refinishing existing floors rather than replacing them with new ones. Refinishing contributes to both reduced greenhouse gas emissions and the use of primary energy resources, since refinishing allows continued use of already available flooring material. However, if refinishing is not possible, make sure to use a quality floor with long lifetime that enables renovation.



LESS DOWNTIME

With proper maintenance and cleaning of a wooden floor, the need for full renovation will be less frequent. With maintenance plans specially designed for wooden floors, you can prolong the life of the floor and postpone the costs and hassle of full scale, bare wood renovation. Therefore, refinishing enables you to restore the beauty and prolong the life of your floor, with less downtime and cost.

EXTENDS THE LIFETIME

A wooden floor is expected to last for about 15 years before it needs to be refinished or replaced. However, a wooden floor can be refinished up to 4 times, which means it can last for 60 years. Considering the significant environmental and cost savings that comes with just one renovation, the benefits are considerable when looked at from a long-term perspective.



A WORN SURFACE LIKE NEW AGAIN

It is easy to judge a worn floor as unrepairable. This can lead to radical decisions about replacing a floor unnecessarily. In many cases, when a floor looks dull, tired and lacklustre from heavy traffic and build-up of dirt and residue, a proper deep clean can work wonders and restore the freshness and appearance. In other cases, with a more scratched and heavily worn floor, superficial sanding and a new protective coating can restore the floor to its former glory.

ASSESSMENTS CRITERIA

It's all about getting to know your floor and establishing the criteria for what treatment is really needed. For example, an oil waxed floor can accumulate a lot of dirt build-up, which makes the surface look worn out and unrepairable but in reality, what's needed is just a replacement of the surface layer.

TREATING WOODEN FLOORS

Bona offers several different treatments and maintenance programs depending on floor type and needs. From regular daily cleaning to a full-scale floor transformation, Bona's Commercial System will extend the floor's lifespan and keep your floors beautiful, durable and healthy for a long time.

TREATMENT	CONDITION	DOMESTIC	COMMERCIAL	PUBLIC AREAS
REFRESH	Loose dirt	1-2x/week	3-5x/week	Daily
	Bonded dirt	Weekly	Weekly	2x/week
	Care	Bimonthly	Monthly	Weekly
REVIVE	Stubborn stains	1x/year	3-4x/year	4-6x/year
RECOAT	Scratches	Every 5-10 years	Every 3-5 years	Every 2-3 years
RENEW	Worn	Every 10 years	Every 5 years	Every 3 years



TRANSFORMED AS NEW

A worn-out wooden floor can be restored to its former beauty by a refinish. With bare wood dust-free sanding, the floor is just like a newly installed floor and with a new, fresh waterborne coating, the feeling is the same. Not only does it look and feel great, it is also the perfect choice for the future, where beautiful design and care for the environment go hand-in-hand.



CREATE A NEW EXPRESSION

Design the floor of your dreams. Refinishing is like a new floor, along with all the possibilities that come with it. An old lacquered floor can be transformed into a brushed ebony coloured oiled floor or a white lacquered surface. The surface can be brushed to create texture, toned to create new colour and contrasts as well as achieving the desired sheen and protective finish.



RESILIENT FLOORS

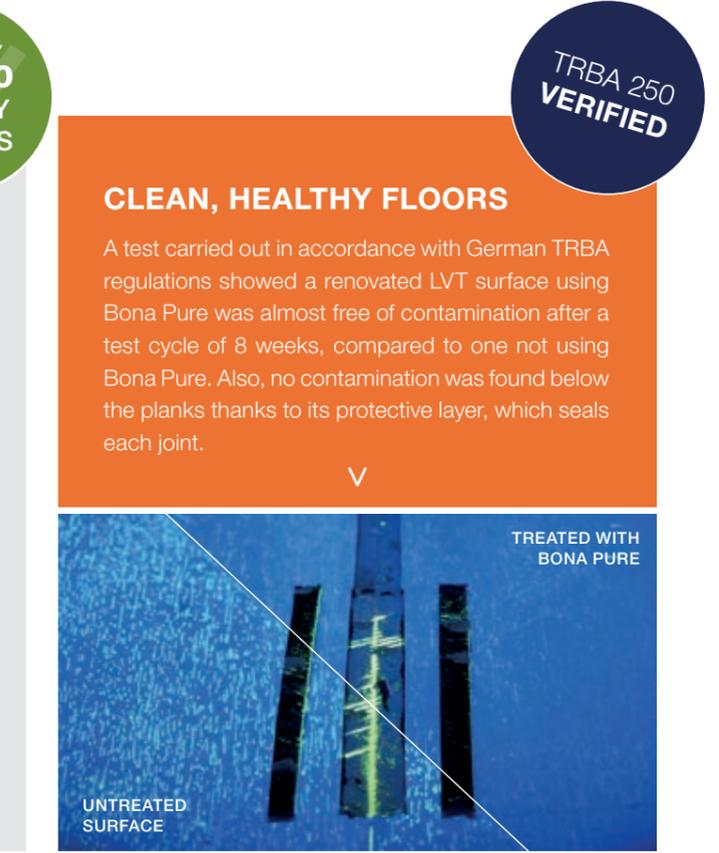
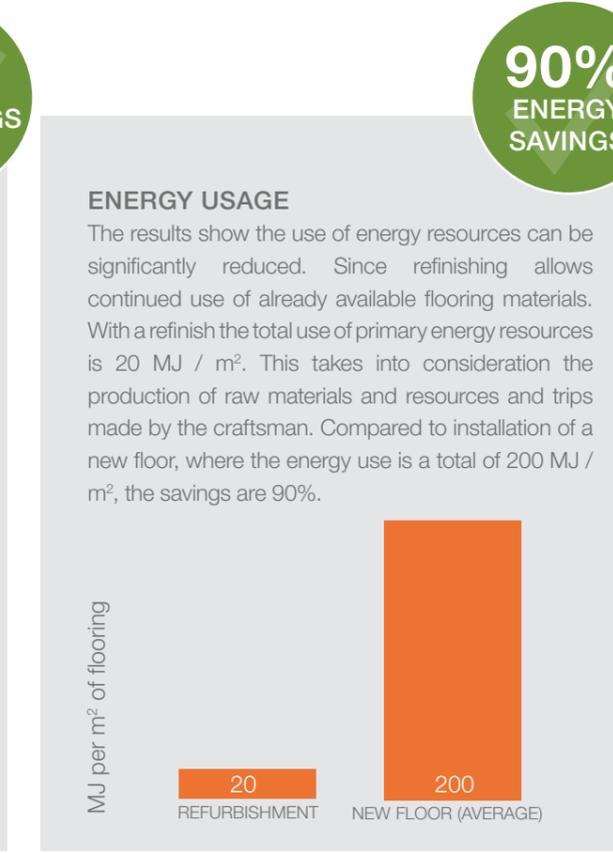
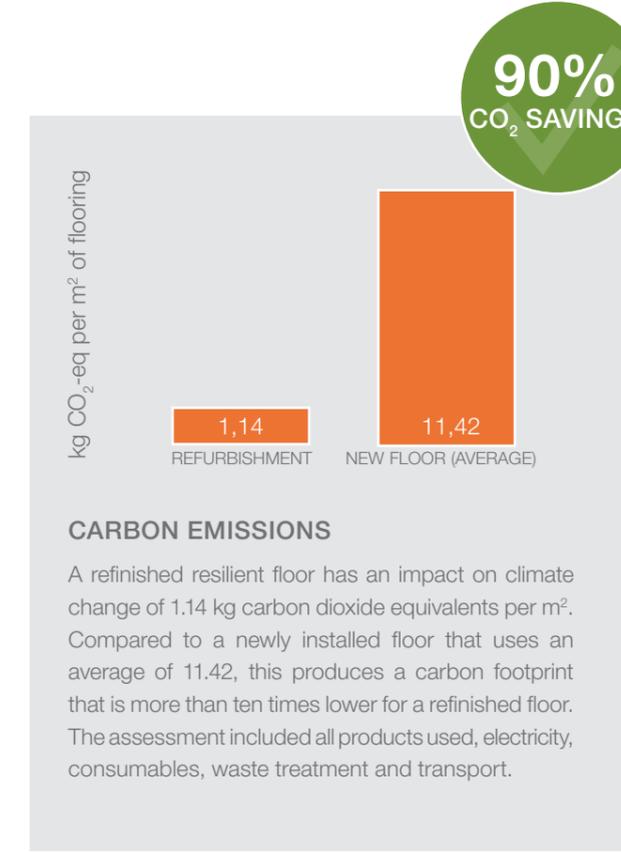
NEW POSSIBILITIES FOR ENVIRONMENTAL SAVINGS

For resilient floors that are damaged or heavily worn, replacement is the traditional answer. However, with new and modern methods a resilient floor can be completely restored to its original beauty and lifetime extended immensely, while lowering material and time-related costs, as well as environmental impact. When maintained properly, the floor remains safe and healthy free from contamination. Considering the substantial lower impact on climate change of renovation, compared to installing a new floor, and the endless possibilities in design and creativity it offers, the choice whether to renovate rather than installing new floors should not be so difficult.

- ✓ ENVIRONMENTAL SAVINGS
- ✓ COST AND TIME EFFICIENT
- ✓ HEALTHY FLOORS

SUSTAINABLE BENEFITS

The IVL study highlights the that substantial sustainable benefits to be gained from refinishing existing flooring, rather than replacing it with a new floor. Refinishing contributes to reduced greenhouse gas emissions by more than 90%. Also, the use of primary energy resources, especially renewable energy resources, is drastically reduced since refinishing allows continued use use of existing flooring material.



HEALTHIER FLOOR SURFACE

A renovated floor also means a healthier floor. Renovating ensures that bacteria and microorganisms are eliminated – even those hiding in joints, scratches and other hard-to-reach areas. The test verified that a smooth, joint-free LVT surface can be created using Bona Deep Clean and Bona Pure, securing a hygienic floor according to the regulations of Technical Rules for Biological Agents (TRBA). Its sealing power and optimal slip resistance creates a barrier against residual germs and microorganisms, for hygienic floors. So, from many aspects, to perform a floor care renovation is truly taking care of both health and environment.

TIME AND COSTS

Instead of traditional methods, which involve removal of the old floor, sanding of the subfloor, priming, levelling and finally installation and bonding of the floor, a recoating will take less than half the time. Furthermore, there is no need to polish the floor. This results in savings, not only on downtime, but also in terms of costs with the reduction of man-hours and environment impact due to re-use of already installed material.



UNIQUE TREATMENT FOR NEW LIFE

A worn, dull and damaged resilient floor is usually habitually ripped out and replaced with a new one, resulting in the unnecessary waste of resources. Instead, the feeling of a brand-new floor can be achieved with our innovative Bona Recoating Treatment, a fast, effective alternative to restoring the original beauty and prolonging the floor life.

ASSESSMENTS CRITERIA

Get to know your floor and what treatment is required. Assess its needs, from a dull appearance, to large scratches and holes. Thanks to our straightforward process, the perfect surface can be attained, whether its reviving or restoring the surface or transforming the floor colour and character totally.

TREATING RESILIENT FLOORS

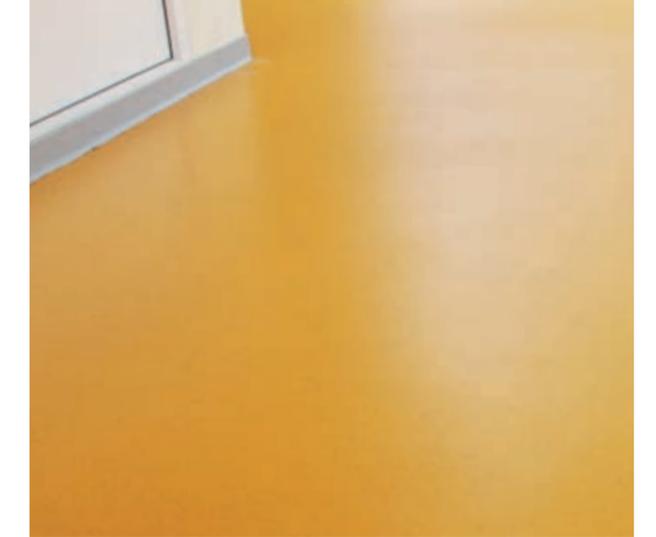
Regular cleaning is the key to a better, longer lasting floor. Over time and heavy wear, stubborn stains and residue build up, resulting in tired and dull surfaces. To restore the original lustre and prolong the life of floors, add a new protective layer to make the floor as good as new again.

TREATMENT	CONDITION	DOMESTIC	COMMERCIAL	PUBLIC AREAS
REFRESH	Loose dirt	1-2x/week	3-5x/week	Daily
	Bonded dirt	Weekly	Weekly	2x/week
	Care	Bimonthly	Monthly	Weekly
REVIVE	Stubborn stains	1x/year	3-4x/year	4-6x/year
RECOAT	Scratches	Every 5-10 years	Every 3-5 years	Every 2-3 years
RENEW	Worn	Every 10 years	Every 5 years	Every 3 years



TRANSFORMED AS NEW

Whatever the floor type, restoring it to its former beauty with a full renovation, including hard-to-reach areas, couldn't be easier or more effective when following our unique treatment program. Add a recoat of Bona Pure lacquer over the top for protection and durability and you've got a new floor that's ready for any challenge.



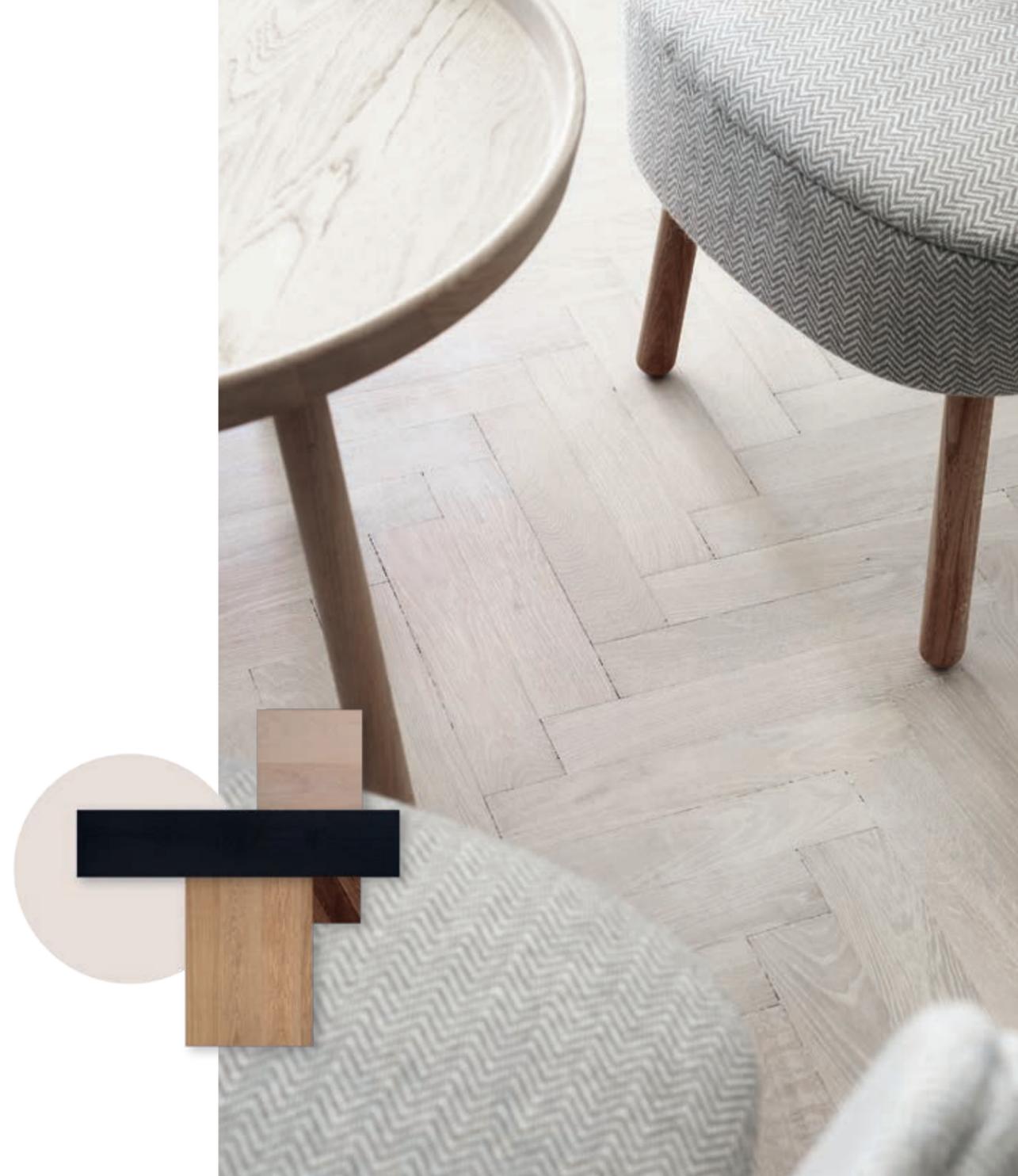
CREATE A NEW EXPRESSION

For sports floors, design effects or creative looks, Bona enables you to add signs, symbols or even change the colour of your resilient surface. With a complete range of RAL/NCS colours and Bona's Creative Chips, the design possibilities are endless.



RENEWING DESIGN AND POSSIBILITIES

Bring your floor vision to life. Bona's solutions enables you to bring out the unique character, whether you're looking to achieve a fresh minimalist look with white broad planks, a contemporary take on classic parquet, or a look that's as unique as you are.



TONING EFFECTS

From two-tone contrasts, to eye-catching, contemporary two-colour effects, the unique formula of Bona Oils, enables you to combine and contrast colours for endless creative possibilities.

- ✓ WOOD FLOOR CHARACTER
- ✓ UNIQUE CONTRASTS



GLOSS AND COLOUR

Whether it's a high shine surface or subtle lustre you want to achieve, Bona coatings enable you to create unique surfaces with lasting beauty.

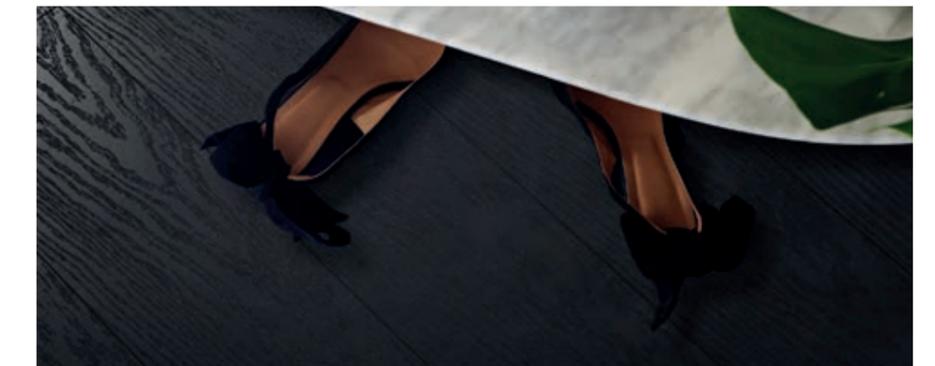
- ✓ PROTECTS AND ENHANCES
- ✓ FROM AUTHENTIC MATT TO HIGH GLOSS



TEXTURE

Bona Brush Technology involves wire brush attachments that remove the soft wood tissue, adding depth and texture to the wood's surface. The brushes create a soft organic touch and brings out the authentic feel of wood.

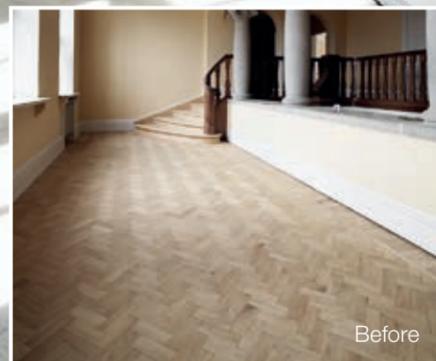
- ✓ ORGANIC TOUCH
- ✓ MATERIAL AUTHENTICITY



INSPIRATION FROM ALL AROUND THE WORLD

A SLEEPING BEAUTY

A castle like villa in an exclusive neighbourhood in Malmö transformed its traditional worn herringbone into a stunning whitewashed floor using Bona Nordic Frost. The result created a light, Scandinavian feel, well suited for this fantastic space.



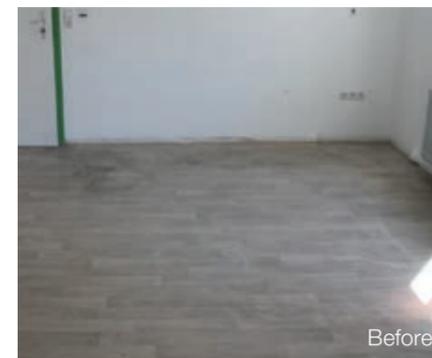
WHAT A DIFFERENCE A DAY MAKES

At a condominium in Newcastle Great Park the Bona Certified Craftsman, Newcastle Floor Sanding, restored an extremely worn and scratched floor to its original beautiful herringbone using classic primer topped with Bona Mega One.



FIRE ACTION WEEKEND

Bona donated materials and expertise to restore the floor of the New York City Fire Museum's event room. Over a weekend volunteers re-sanded and finished more than 1,000 m² of red oak floor with a coating of Bona DTS® Deep Tone Sealer, followed by Bona Traffic HD Extra Matte. By Monday morning it was ready for action.



NEW LOOK TAKEN CARE OF

A worn, dull looking PVC floor at a nursing home in Germany got a completely new look. Starting off with PowerRemover, followed by sanding with the FlexiSand, it was then scrubbed using a PowerScrubber to neutralize the colour. Two layers of Bona Pure colour were applied, followed by a final coating of Bona Pure transparent for protection.



COLOURS FOR PLAY

A linoleum floor at a Kindergarten in Bonn, Germany was renovated and refinished using the Bona Commercial System. It was sanded with Bona FlexiSand and Diamond abrasives, then the Bona PowerScrubber was used to neutralize the surface. After 2 applications of Bona Pure colour system and a coat of Bona Pure transparent, it was ready for play again.

READY FOR ACTION

A Bona Certified Craftsman was commissioned to refresh the gymnasium of Balatonföldvár School in Hungary. After two days of damage repairs and preparation, the new floor surface was sanded, cleaned and finished with Bona Pure colour and transparent coating, all applied within four working days.



Bona®

FLOOR CARE IS ENVIRONMENTAL CARE

FLOOR TREATMENT SOLUTIONS

Bona has a long history of working with sustainability and driving the environmental aspects of renovation rather than replacing. We offer a full range of products, from dust-free sanding to waterborne finishes and oils with renewable raw materials for taking care of your floors for their lifetime. Our floor products and treatments have always focused on a circular and holistic view on the complete process and we strongly believe that reuse is the way to a sustainable future.

EDUCATION

In addition to our sustainable products, Bona is developing modern methods and processes in cooperation with the flooring industry to increase circular economic thinking. We work together with craftsmen to develop sustainable methods with a floorcare management view. Within the Bona Certified Craftsman program, we educate and ensure that the craftsmen have the latest technology, methods and products to secure a sustainable way of renovating, as well as ensuring a perfect result.

ROADMAP TO OPTIMAL FLOOR MANAGEMENT

Bona is continuously looking for innovative ways to increase our environmental work. The roadmap in the IVL report states a number of proposals for actions to overcome the barriers that deter owners from refinishing as a preferred alternative when renovating.

Primarily, refinishing needs to be suggested at an earlier stage when the first discussion about a renovation takes place. When speaking to floor owners who are thinking of upgrading their property, or the architect involved in renovating the project, when discussing materials, a refinish should always be part of the discussion as a valued alternative. This could be done by offering increased technical know-how by adding criteria such as cost and time for refinish in the calculation tools, as well as other as climate data and maintenance costs.

We can create incentives for floor owners to choose renovation rather than replacing. For example, property owners can be offered maintenance services or even floors to lease. Another incentive could be cheaper rent since the cost is lower with renovation.

Providing knowledge about how to maintain a floor properly is another way to support the renovation argument. Bona offers an extensive maintenance plan to assure healthy and long-lasting beautiful floors. In addition, for example, by offering regular subscribed digital maintenance plans, the possibility to renovate becomes a more attractive option.

- ✓ UPDATE CALCULATION TOOLS IN DECISION-MAKING STAGE
- ✓ CREATE COST, TIME AND CLIMATE INCENTIVES TO RENOVATE
- ✓ OFFER MAINTENANCE PLANS AND PROGRAMS
- ✓ INCREASE AWARENESS ABOUT DESIGN POSSIBILITIES

Creating a feeling of a newly installed floor is not only desirable but also possible and with almost endless design options with floor renovation. Awareness of the design possibilities during a renovation needs to be increased, as well as the environmental aspects of it. We need to shift the focus from replacing being the norm to renovating being the obvious choice in order to form a sustainable future.

Bona[®]

Passion for wood floors

Established in 1919, Bona is a world leading innovator with a unique system for wooden floor treatment. Through subsidiaries and distributors, we have local presence in more than 90 different countries enabling us to be close to our customers and craftsmen. Our long commitment and passion for wooden floors enable us to offer lasting, sustainable results that meet all wooden floor needs for professionals and floor owners alike.



**Based on calculations in the IVL-report "Increasing resource efficiency in the Swedish flooring industry through floor refinishing", 2020.*

*** <https://www.energimarknadsbyran.se/el/dina-avtal-och-kostnader/elkostnader/elforbrukning/normal-elforbrukning-och-elkostnad-for-villa/>*

**** The great circle around the world measures 40,000 km. In cruise the speed of an airliner is about 900km/h. If we divide 40,000/900 it gives us roughly 45 hours. A Boeing 737-400 emits about 250 kg/CO₂ per hour (<https://www.carbonindependent.org/22.html>). 108 000 000 kg/CO₂ divided by 250 gives us equivalent of 432 000 hours of CO₂ saved. One lap around the globe takes 45 hours which adds up to 9600 laps around the world.*