LIGNOLOC®
A BECK brand

LOOKBOOK
2025

BECK-FASTENING.COM

BETTER IDEAS THAT INSPIRE

WITH LIGNOLOC®, WE HAVE DEVELOPED A GROUNDBREAKING NEW PRODUCT WHOSE CONCEPT AND UNIQUE FEATURES TRULY INSPIRE.

WE CELEBRATE EVERY AWARD, OF COURSE, BUT WHAT INSPIRES US EVEN MORE ARE THE PROJECTS AND SUCCESS STORIES OUR CUSTOMERS ACHIEVE WITH LIGNOLOC® – BECAUSE THAT IS WHAT TRULY MATTERS.

GERMAN INNOVATION AWARD '22 GOLD

GERMAN DESIGN AWARD WINNER 2020

Green Product Award
Special Prize 2019
Handcraft

FENNIA

ADDITIONAL AWARDS

INNOVATIONSPREIS ARCHITEKTUR + BAUWESEN

Green Product Award

torque

EUROBOIS LAUREAT

PTTA 2018

LIGNA

PTTA 2022

01 | BIONIC BUGA PAVILION BY THE UNIVERSITY OF STUTTGART | 2019

Location: Federal Garden Exhibition (BUGA), Heilbronn, Germany
Photo: © ICD ITKE

For the assembly of the bionic BUGA Pavilion by the University of Stuttgart, 18,000 **LIGNOLOC®** wooden nails were used. The vaulted structure was entirely digitally designed and consists of 376 custom-made segments manufactured using robotic systems. Thanks to **LIGNOLOC®**, there were no press downtimes during the lamination of the top layer, and no custom molds were required for the vacuum press. Even during subsequent high-precision milling, the nails were processed without any issues.

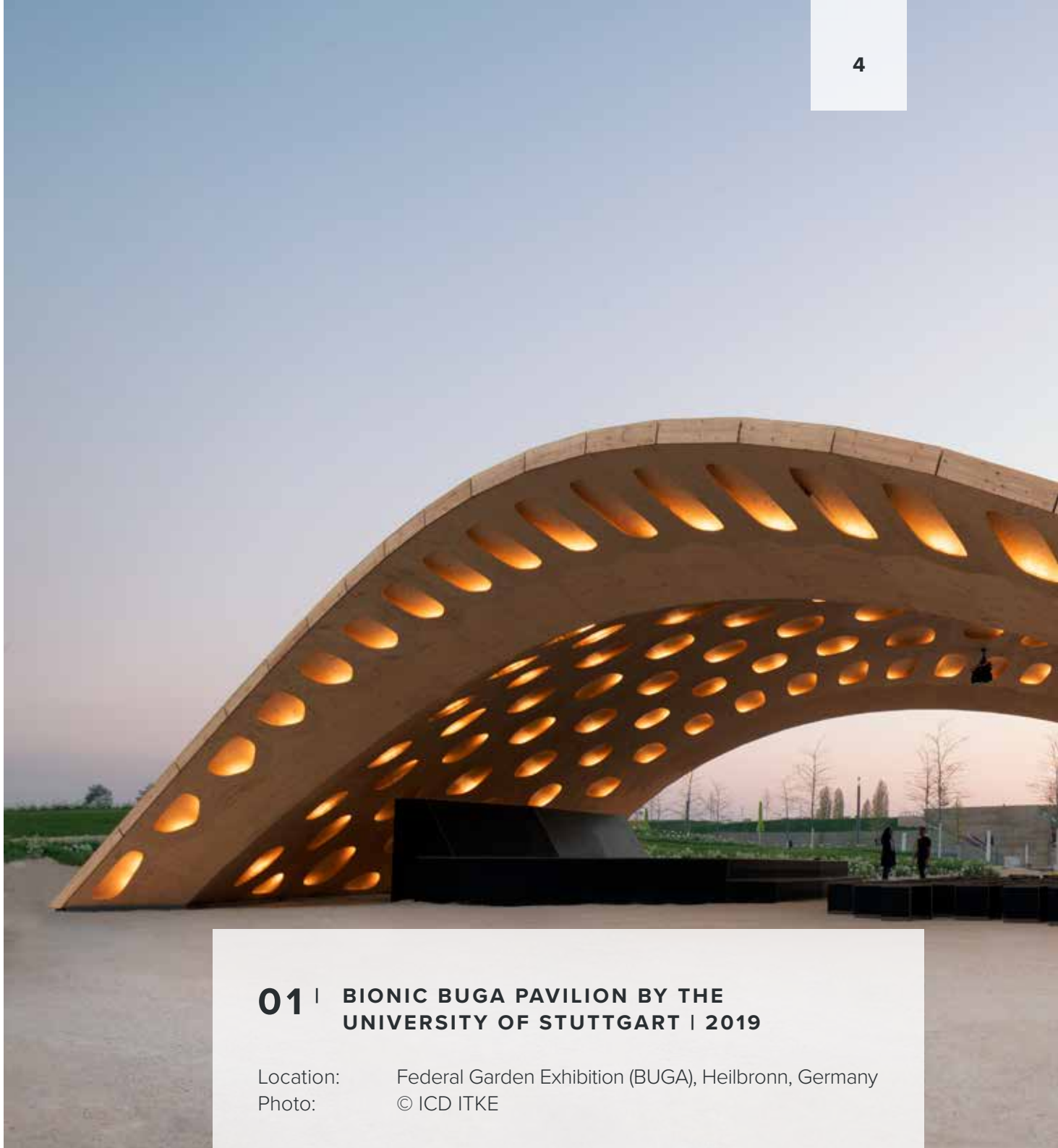

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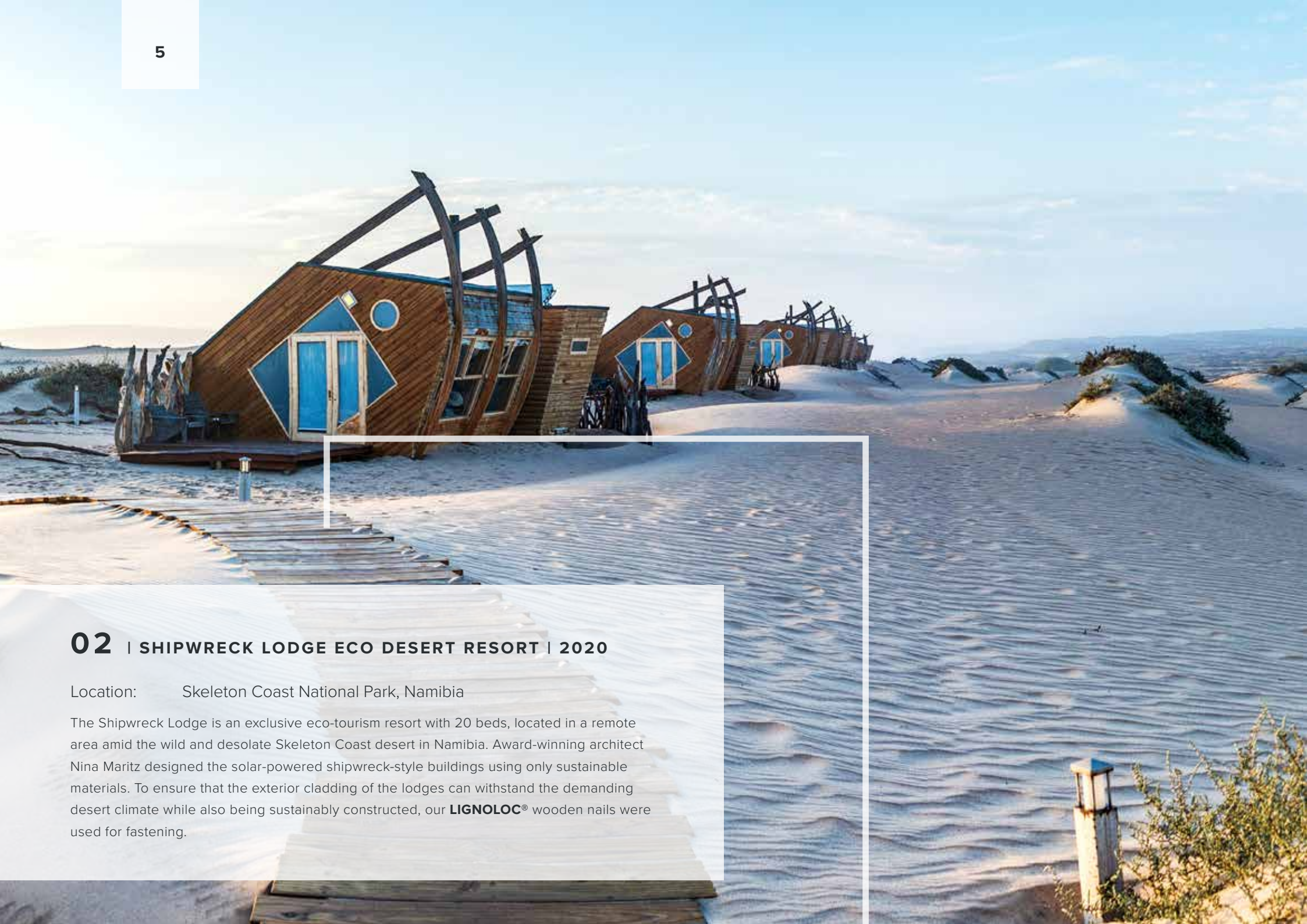
Photo: © ICD ITKE



02 | SHIPWRECK LODGE ECO DESERT RESORT | 2020

Location: Skeleton Coast National Park, Namibia

The Shipwreck Lodge is an exclusive eco-tourism resort with 20 beds, located in a remote area amid the wild and desolate Skeleton Coast desert in Namibia. Award-winning architect Nina Maritz designed the solar-powered shipwreck-style buildings using only sustainable materials. To ensure that the exterior cladding of the lodges can withstand the demanding desert climate while also being sustainably constructed, our **LIGNOLOC®** wooden nails were used for fastening.

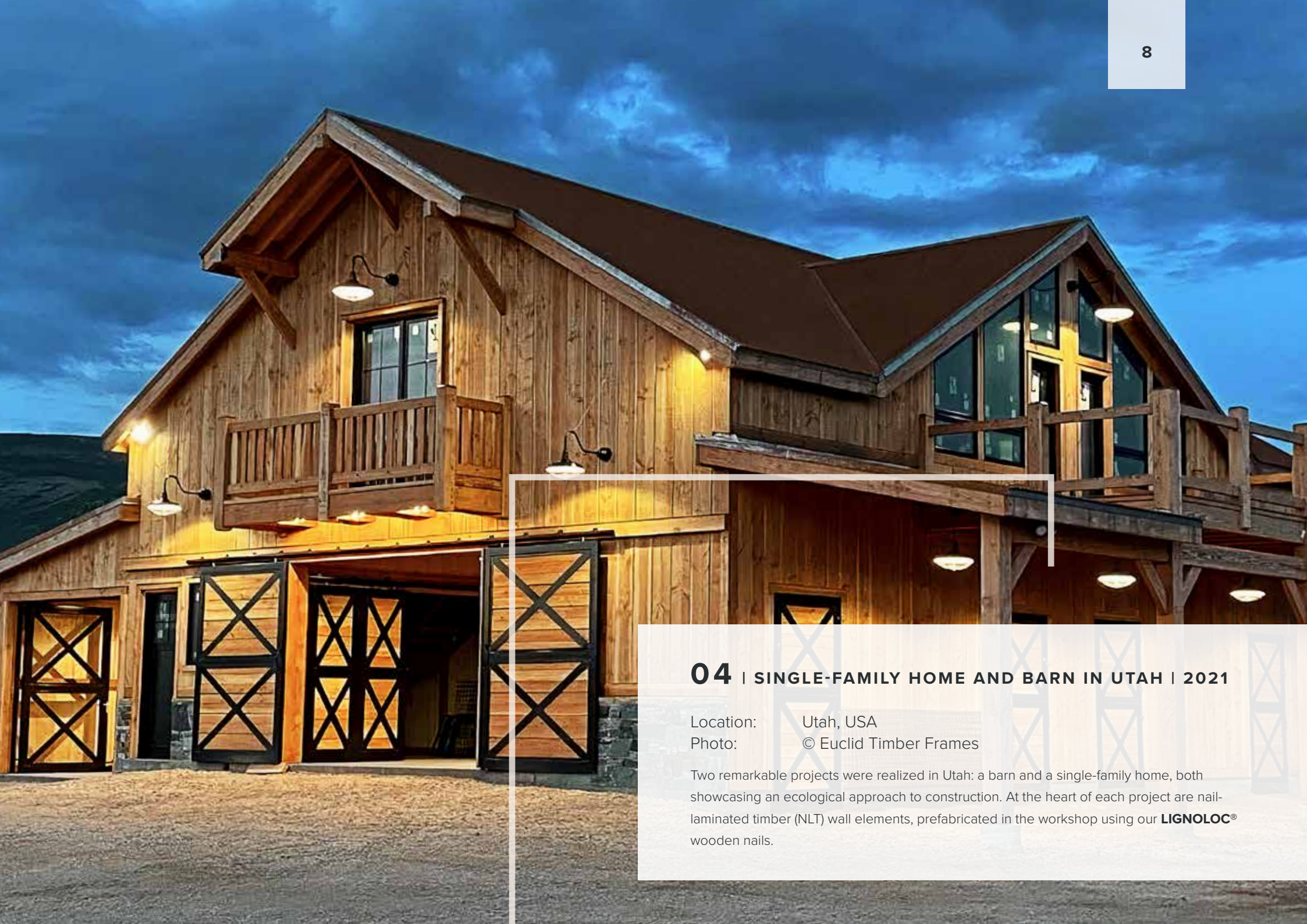
03 | HOUSEBOATS IN HAMBURG HARBOR | 2020

Location: Hamburg, Germany
Photo: © Hausboot Hafen Hamburg

Since 2020, environmentally friendly houseboats have been handcrafted at Hamburg Harbor. The construction follows ecological principles, with **LIGNOLOC®** wooden nails used for both the interior wall paneling and the attachment of the larch wood façades. Fastening solid wood and three-layer spruce panels not only reinforces the timber frame construction but also serves as the finished surface of the interior walls. The carefully flush-sanded wooden nails are intentionally left visible, creating an aesthetic and natural look. On the exterior façade, the nails are deliberately left slightly protruding to create a rivet-like design effect.

03 | HOUSEBOATS IN HAMBURG HARBOR | 2020

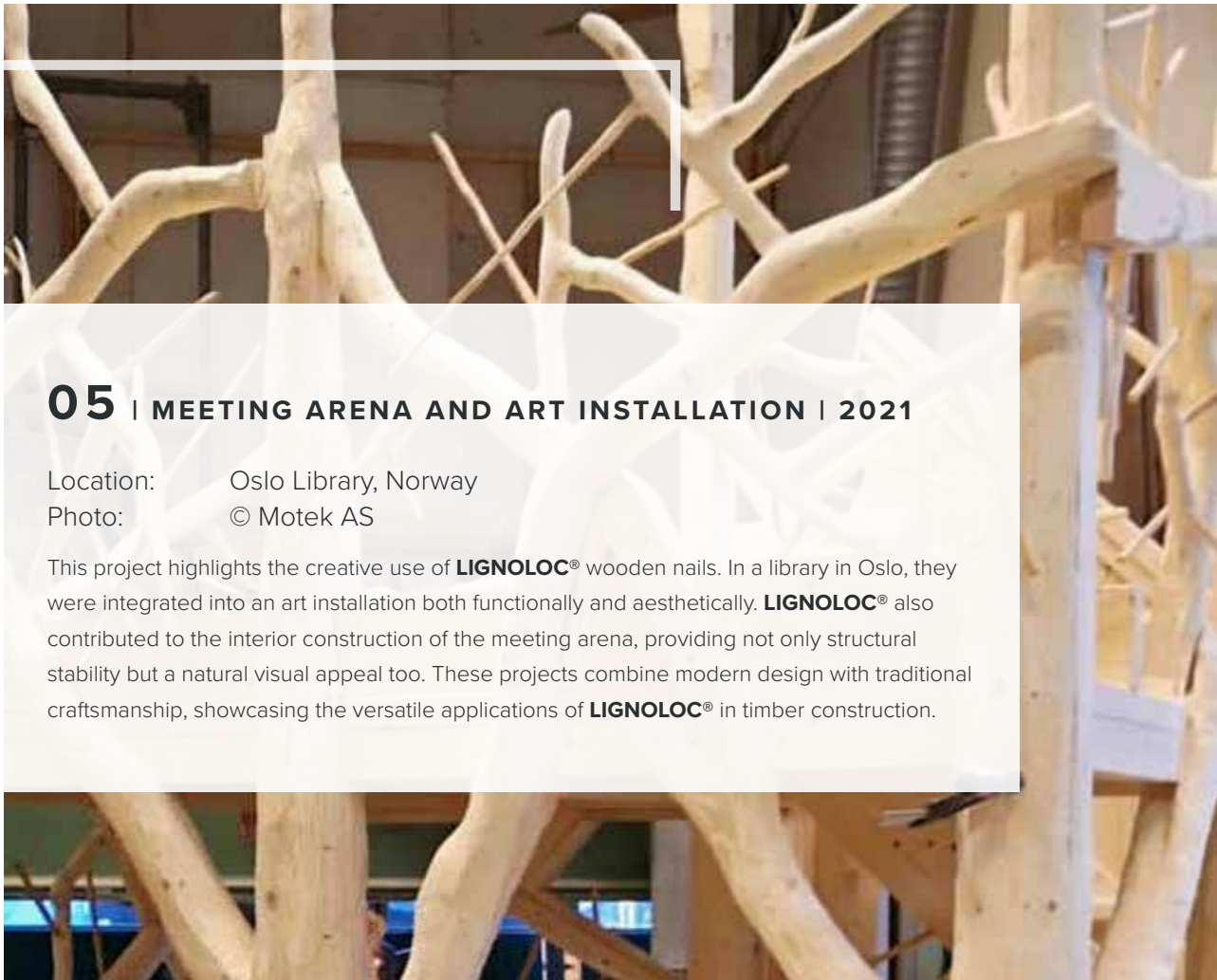
Location: Hamburg, Germany
Photo: © Hausboot Hafen Hamburg



04 | SINGLE-FAMILY HOME AND BARN IN UTAH | 2021

Location: Utah, USA
Photo: © Euclid Timber Frames

Two remarkable projects were realized in Utah: a barn and a single-family home, both showcasing an ecological approach to construction. At the heart of each project are nail-laminated timber (NLT) wall elements, prefabricated in the workshop using our **LIGNOLOC®** wooden nails.



05 | MEETING ARENA AND ART INSTALLATION | 2021

Location: Oslo Library, Norway
Photo: © Motek AS

This project highlights the creative use of **LIGNOLOC®** wooden nails. In a library in Oslo, they were integrated into an art installation both functionally and aesthetically. **LIGNOLOC®** also contributed to the interior construction of the meeting arena, providing not only structural stability but a natural visual appeal too. These projects combine modern design with traditional craftsmanship, showcasing the versatile applications of **LIGNOLOC®** in timber construction.

06 | COMMERCIAL BUILDING
BUTCHERY WEIGAND | 2018

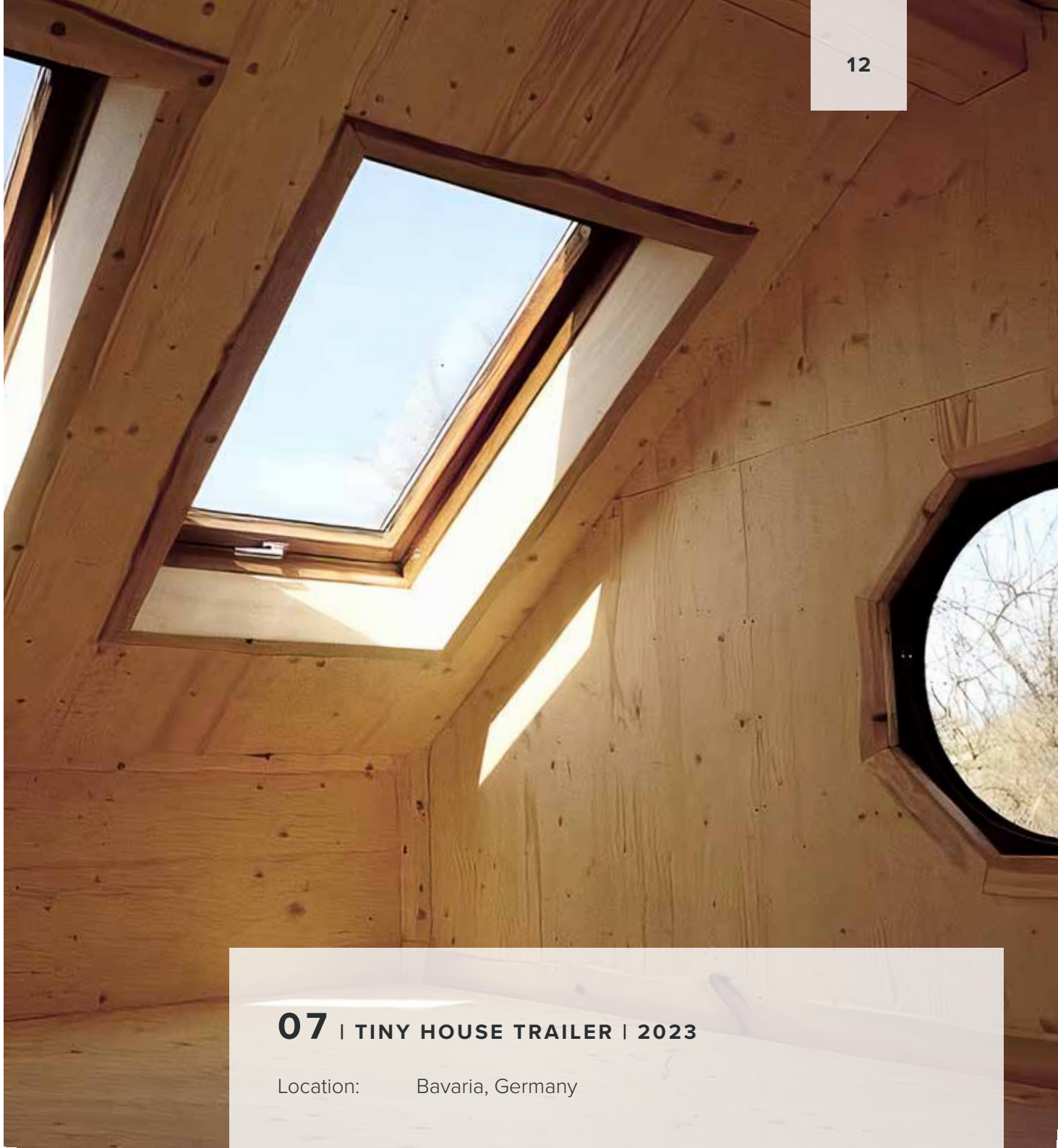
Location: Flörsbachtal-Lohrhaupten, Germany

With its striking building extension, the Weigand Butchery in Lohrhaupten has created a sustainable shopping experience. A key element is the interior wall cladding in the 100 m^2 sales area, where eco-friendly **LIGNOLOC**® wooden nails were used.

07 | TINY HOUSE TRAILER | 2023

Location: Bavaria, Germany

This tiny house project is the epitome of sustainability and creativity. Master carpenter Tom Mahnke transformed an old construction trailer into an impressive 23 m^2 tiny house. For the interior cladding, he used three-layer panels, which he fastened with **LIGNOLOC®** wooden nails. The goal was to repurpose the trailer in a sustainable way by turning it into an eco-friendly, space-efficient living space with a particularly natural indoor climate.



07 | TINY HOUSE TRAILER | 2023

Location: Bavaria, Germany

08 | PAVILION HAUBARG | 2022

Location: Copenhagen, Denmark
Photo: Lars Rolfsted Mortensen & Victor Boye Julebæk, Royal Danish Academy

The pavilion Haubarg was designed by Professor Nicolai Bo Andersen and Victor Julbæk, a research associate at the Royal Danish Academy, and is located in the open-air museum in northern Copenhagen. This student project integrates cultural heritage, transformation, and restoration. Under the supervision of Morten Gehl, the building was constructed in collaboration with master's candidates from the Heritage, Transformation, and Conservation program at the School of Architecture of the Royal Danish Academy. The façade was assembled using eco-friendly **LIGNOLOC®** wooden nails.

08 | PAVILION HAUBARG | 2022

Location: Copenhagen, Denmark
Photo: Lars Rolfsted Mortensen & Victor Boye Julebæk, Royal Danish Academy

09 | SINGLE-FAMILY HOME REISECKER | 2020

Location: Altheim, Austria
Photo: © getifo.com

During the modernization of a traditional four-sided farmstead from 1860 in Upper Austria's Innviertel region, the new buildings were constructed with a clear commitment to ecology and the principles of circular economy. The new structures focused on the use of natural materials with high material purity and separability. The load-bearing walls were built in an upright log construction system featuring double tongue-and-groove joints with a visible-grade finish. The 16 cm and 12 cm thick dowelled log wall elements were further stabilized using a diagonal tongue-and-groove cladding. This cladding was attached to the log elements using sustainable **LIGNOLOC®** wooden nails. As a result, the entire load-bearing structure consists exclusively of wood and is free from metal fasteners.

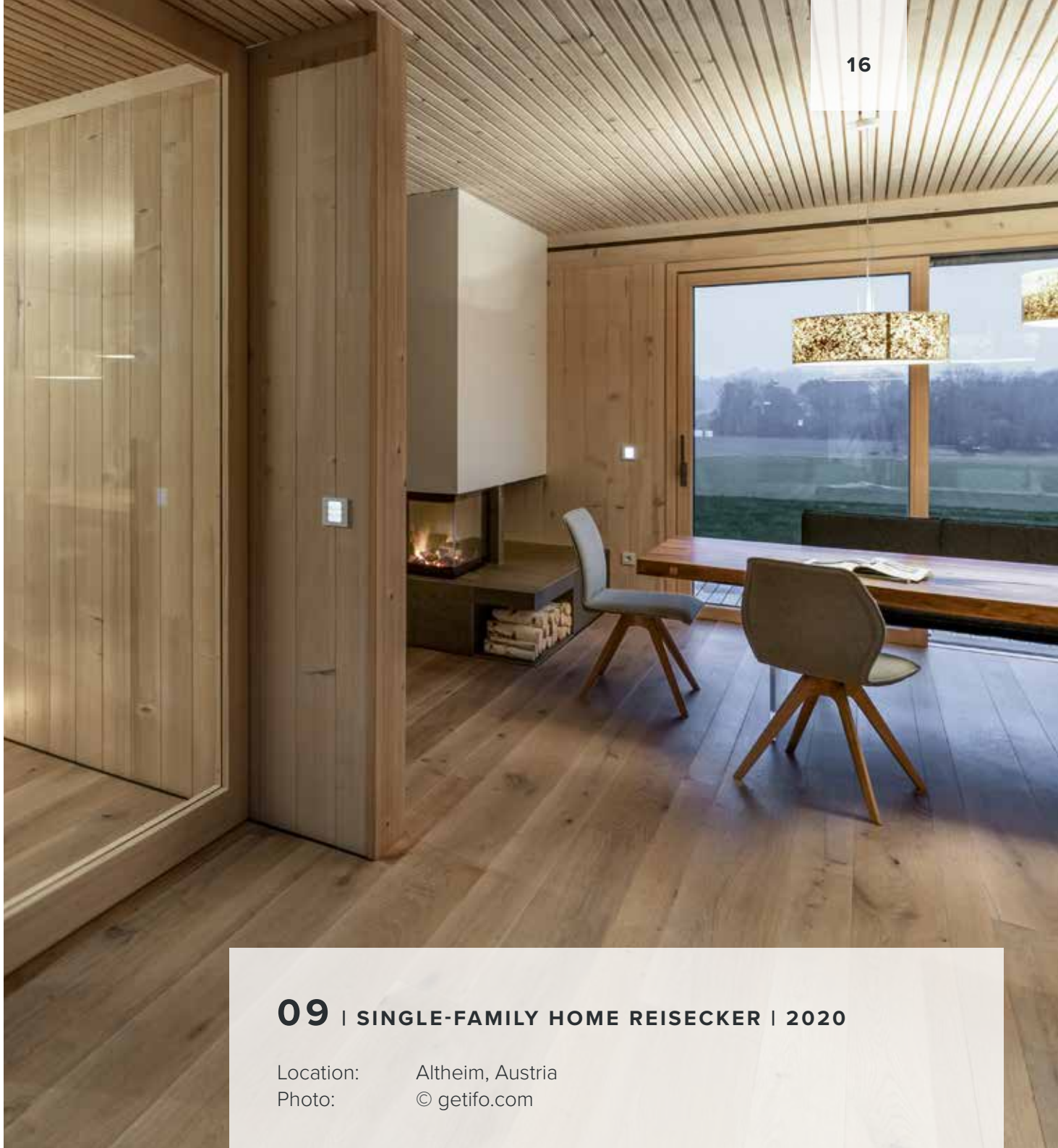


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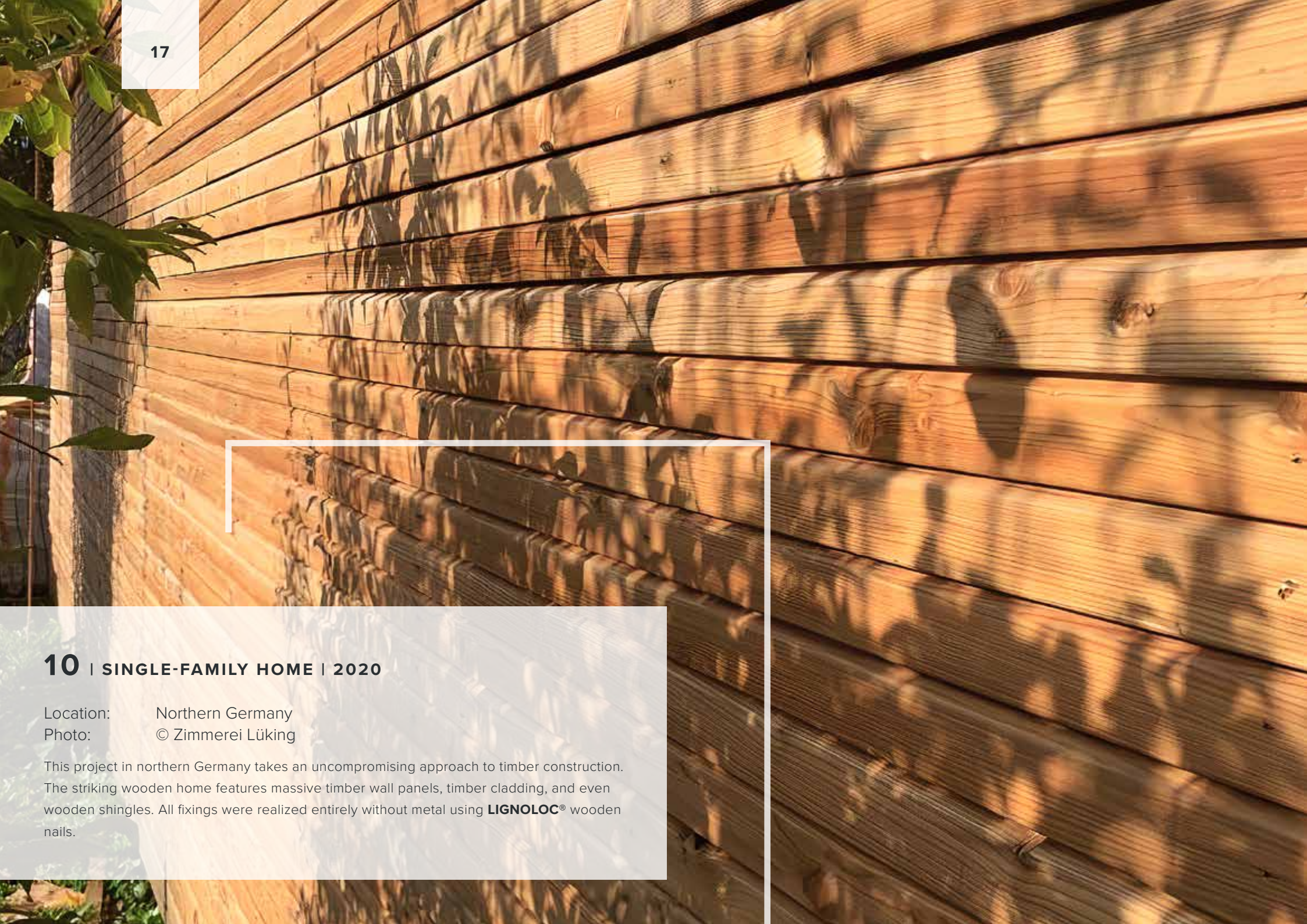
Photo: © getifo.com



10 | SINGLE-FAMILY HOME | 2020

Location: Northern Germany
Photo: © Zimmerei Lüking

This project in northern Germany takes an uncompromising approach to timber construction. The striking wooden home features massive timber wall panels, timber cladding, and even wooden shingles. All fixings were realized entirely without metal using **LIGNOLOC®** wooden nails.

10 | SINGLE-FAMILY HOME | 2020

Location: Northern Germany
Photo: © Zimmerei Lüking

11 | HOLIDAY HOME WENZHOU | 2020

Location: Wenzhou, China

Located in China's Zhejiang Province, this unique holiday retreat is designed according to passive house principles. The structural frame, made of pinewood, was assembled using innovative **LIGNOLOC®** wooden nails – emphasizing both the aesthetic appeal and sustainable construction of this exceptional getaway.

12 | HOTEL PROJECT LOFOTEN | 2018

Location: Lofoten Archipelago, Norway

Amidst the breathtaking scenery of the Lofoten, this hotel stands out for its distinctive timber design. The interior wall paneling was fastened using **LIGNOLOC®** wooden nails – ensuring not only a robust structure, but creating a warm and inviting atmosphere too.

13 | STUDENT PROJECT 1000X SUMMERFAB | 2018

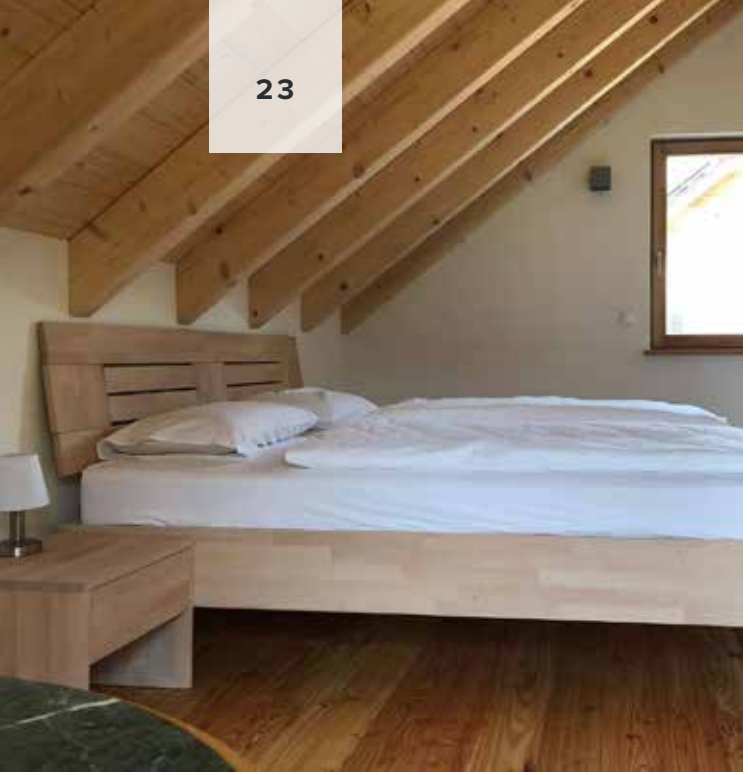
Location: Wentworth Institute of Technology Boston, USA
Photo: © Daniel Sebaldt

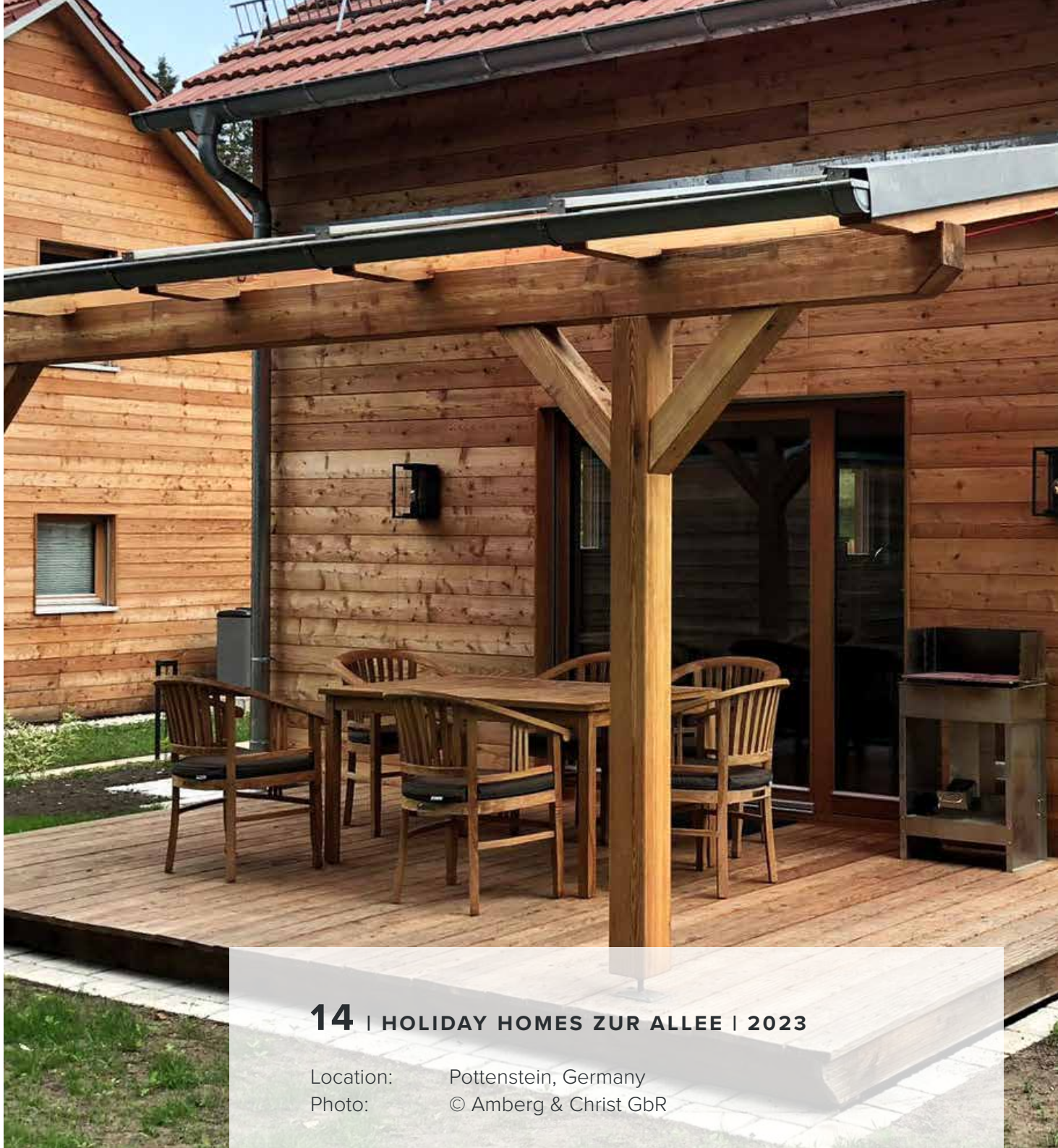
SummerFAB, a six-week program hosted by Wentworth Institute of Technology, introduces high school students to architecture through interdisciplinary, project-based learning. During the 2018 edition, participants designed and built a distinctive timber installation in collaboration with local partners, using **LIGNOLOC®** wooden nails for fastening

14 | HOLIDAY HOMES ZUR ALLEE | 2023

Location: Pottenstein, Germany
Photo: © Amberg & Christ GbR

The holiday homes in Franconian Switzerland, Germany, stand out for their unique construction approach. The project includes two identical KfW55-rated houses with a living area of approximately 85 m^2 each, as well as a sauna house – all built with the goal of minimizing the use of metal and chemicals. **LIGNOLOC®** wooden nails were used in numerous details wherever feasible – from the larch exterior cladding to the interior paneling, flooring, and even the roofs and roof linings.





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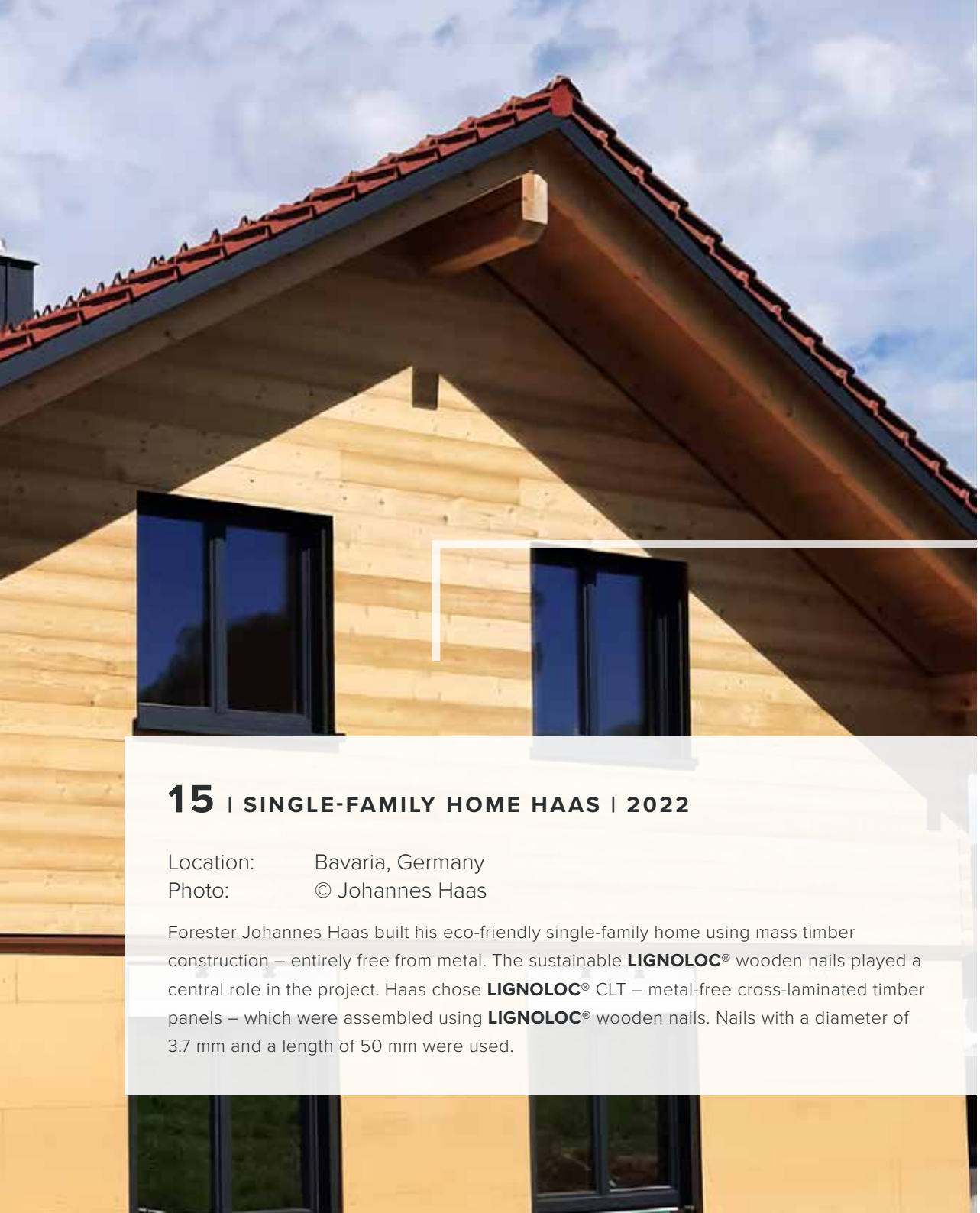
Location: Pottenstein, Germany
Photo: © Amberg & Christ GbR



15 | SINGLE-FAMILY HOME HAAS | 2022

Location: Bavaria, Germany
Photo: © Johannes Haas

Forester Johannes Haas built his eco-friendly single-family home using mass timber construction – entirely free from metal. The sustainable **LIGNOLOC®** wooden nails played a central role in the project. Haas chose **LIGNOLOC®** CLT – metal-free cross-laminated timber panels – which were assembled using **LIGNOLOC®** wooden nails. Nails with a diameter of 3.7 mm and a length of 50 mm were used.

16 | SINGLE-FAMILY HOME MADE OF HEMPCRETE | 2025

Location: Albisheim, Germany
Completion: 2025
Photo: © Louis Kurz

A single-family home in southwestern Germany showcases a timber-frame construction combined with sustainable materials such as hempcrete and clay. The wooden structure was assembled primarily using wood-to-wood joinery and timber gusset plates, fastened with **LIGNOLOC®** wooden nails – consistently avoiding synthetic or metal fasteners. Thanks to its plant-based materials, the building not only reduces CO_2 emissions but actually achieves a carbon-negative footprint, while also providing outstanding thermal insulation.

17 | EMPLOYEE HOUSING HOLZ REISECKER | 2024

Location: Altheim, Austria
Photo: © Reisecker

To provide housing for its employees, the Holz Reisecker sawmill in Upper Austria built an apartment building using mass timber – from foundation to roof. The building comprises six residential units spread across three floors. The structure follows a vertically stacked solid wood design. The prefabricated wall elements feature 15.8 cm of mass timber, with an additional 26 cm of cellulose insulation in the exterior walls. The rear of the walls is finished with a diagonal tongue-and-groove cladding, secured with **LIGNOLOC®** wooden nails.

18 | TINY HOUSE IN WITZENHAUSEN | 2021

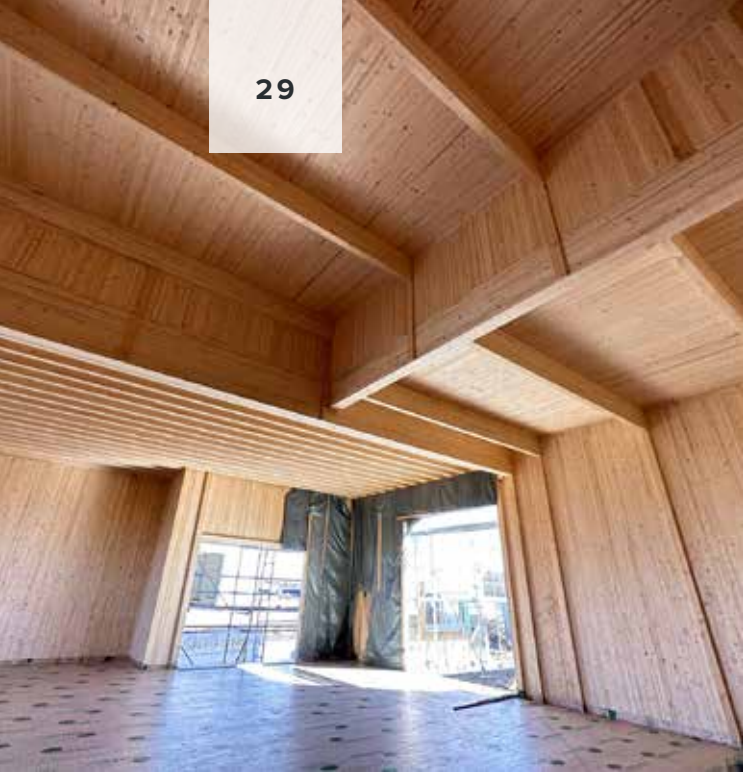
Location: Witzenhausen, Germany
Photo: © Lothar Lüking

In a tiny house project in northern Germany, the carpentry company Lüking consistently relies on wood as the primary building material. The structure features mass timber wall panels, wooden cladding, and attractive wooden shingles. All fastenings were made using **LIGNOLOC®** wooden nails, eliminating the need for metal and full-area glue lamination. Thanks to the innovative **LIGNOLOC®** technology, the natural aesthetics of the wood are preserved, ensuring a sustainable and robust construction.

19 | RENOVATION PROJECT IN JAPAN | 2021

Location: Japan

In 2021, the architecture firm Kaneko Atelier completed a renovation project in which plywood was fastened onto cypress wood using **LIGNOLOC®** wooden nails. The **LIGNOLOC®** technology integrated seamlessly into the studio's innovative, wood-based design concept. The use of wooden nails and natural materials allowed modern technology to blend harmoniously with traditional craftsmanship.



20 | BUILDING AT THE RIO INDUSTRIAL PARK OSTERBURKEN | 2023

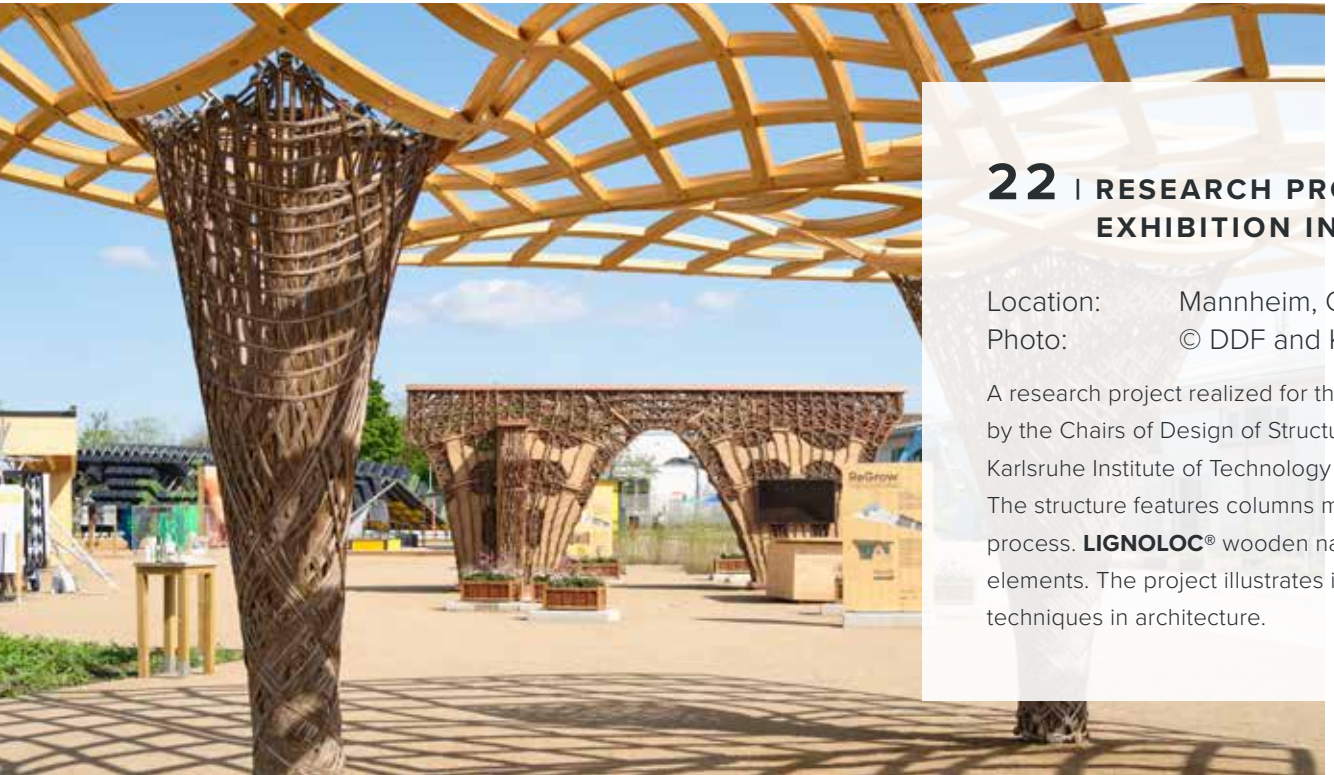
Location: Osterburken, Germany
Photo: © prema system solutions, Hermann & Karl Preiss

At the RIO Industrial Park in Osterburken, prema® GmbH constructed a sustainable industrial building in just ten months, using almost exclusively special prema® NLT panels. The nail-laminated timber elements were manufactured entirely metal free, fastened with **LIGNOLOC®** wooden nails, and used throughout – from the 9-meter-high walls to the floor slab. prema® shaped the architectural vision and oversaw both the planning and execution of this pioneering project.

21 | HASLETRE OFFICE BUILDING | 2023

Location: Oslo, Norway
Photo: © MOTEK AS

HasleTre is a 3,000 m^2 office building constructed from natural materials and designed as a timber structure from the outset. The façade, made of particleboard, changes its appearance with the seasons and incorporates areas planted with climate-adapted vegetation. A rooftop garden serves both as a biotope and a welcoming social space. The building is constructed entirely from wood and was conceived as a demountable, reusable system to meet high ecological standards. It features 3,000 m^2 of interior cladding and 100 m^2 of exterior cladding – all fastened using **LIGNOLOC®** wooden nails: nails with head for the exterior and headless ones for interior applications.



22 | RESEARCH PROJECT FOR THE FEDERAL GARDEN EXHIBITION IN MANNHEIM | 2023

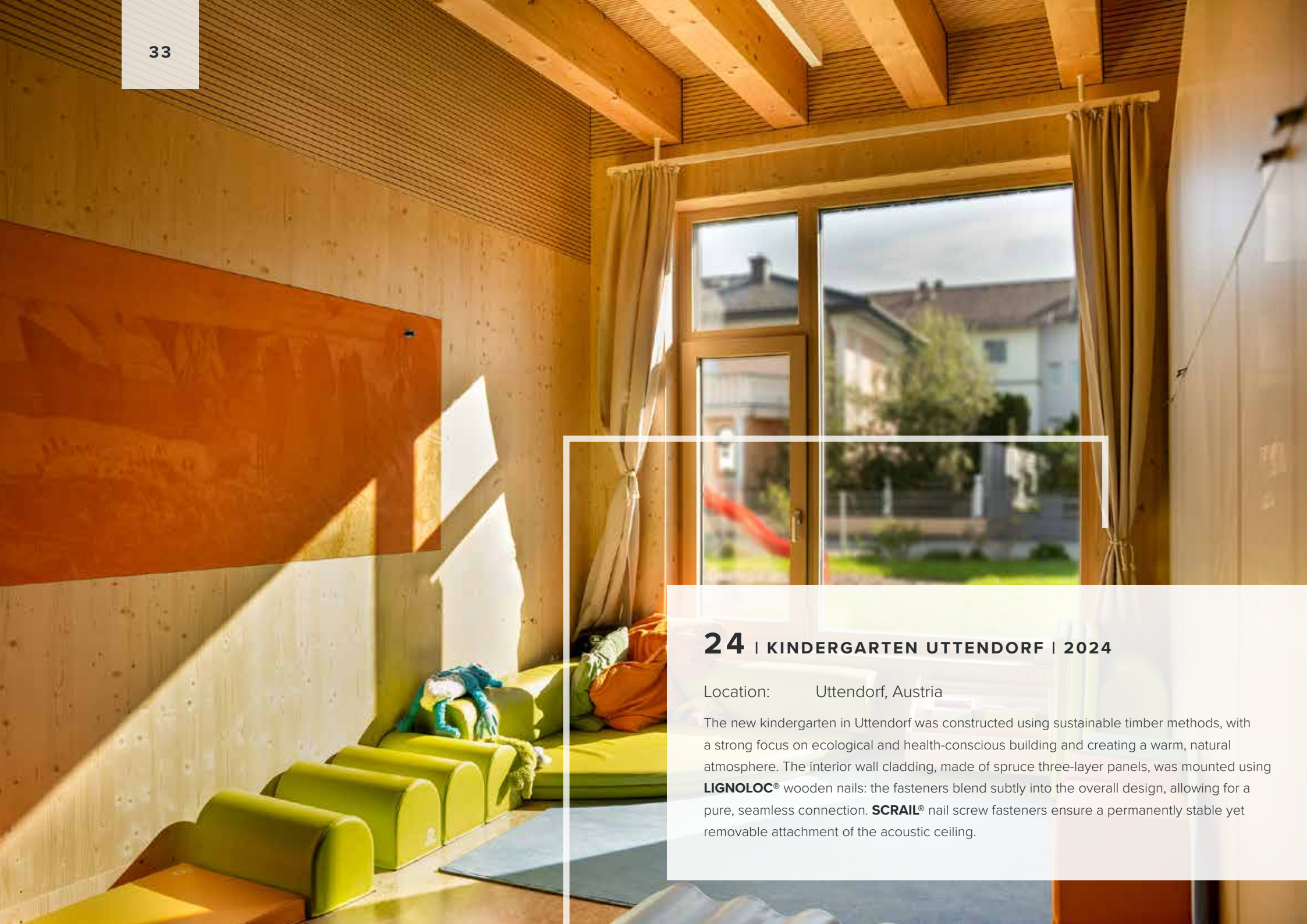
Location: Mannheim, Germany
Photo: © DDF and Karlsruhe Institute of Technology (KIT)

A research project realized for the Federal Garden Exhibition 2023 in Mannheim (BUGA23) by the Chairs of Design of Structures (DOS) and Digital Design and Fabrication (DDF) at Karlsruhe Institute of Technology (KIT), in cooperation with FibR as an industrial partner. The structure features columns made of flax fibers, produced using a robotic textile winding process. **LIGNOLOC**® wooden nails were used for the mechanical lamination of the structural elements. The project illustrates innovative approaches to using sustainable materials and techniques in architecture.

23 | RESIDENTIAL CONSTRUCTION PROJECT | 2024

Location: Fuijan, China

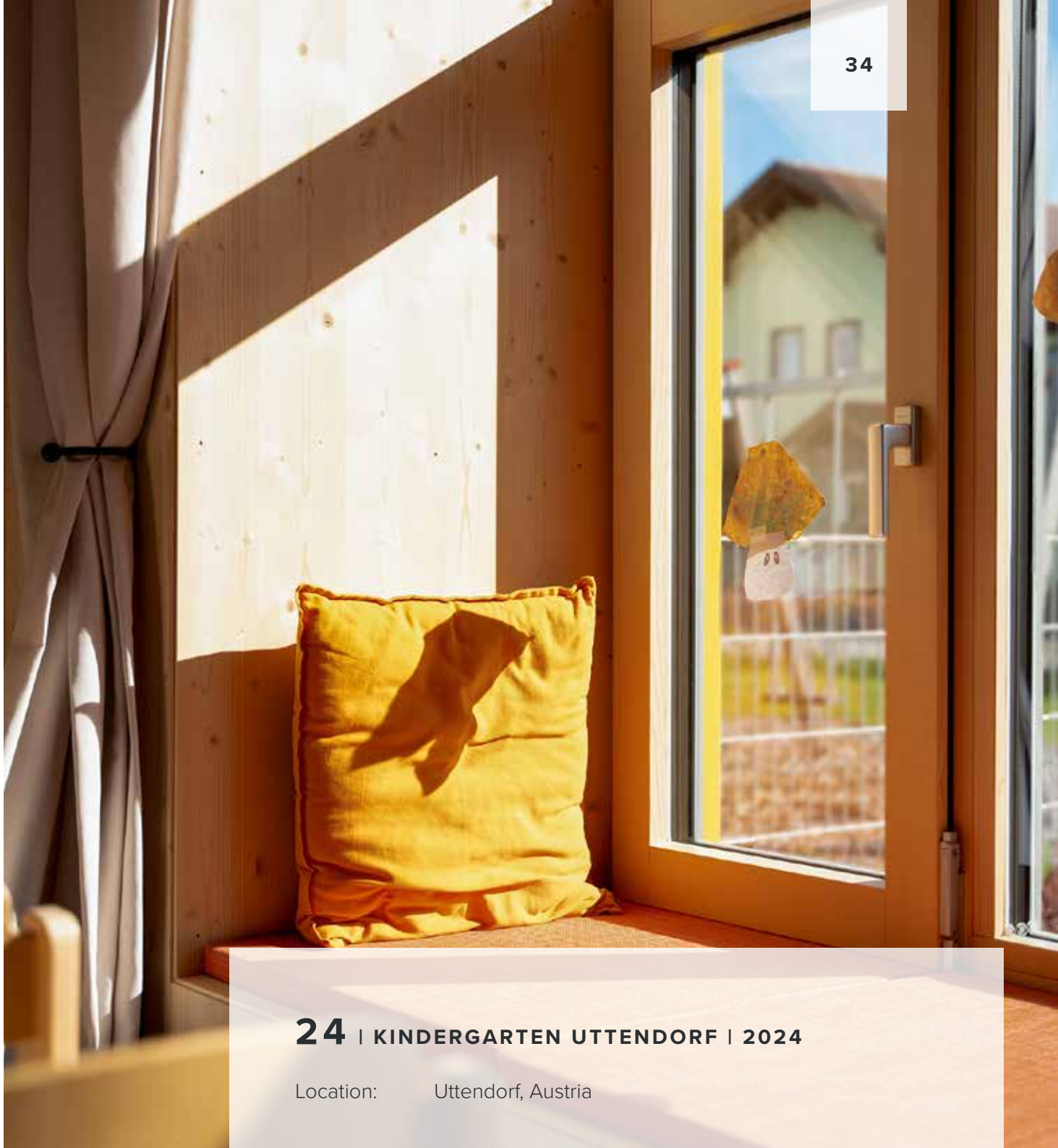
Professor Zeli Que, head of the Department of Timber Construction at Nanjing Forestry University in China, led his team in planning and realizing an innovative timber construction project. The result is a demonstration model for new rural housing in Fujian, distinguished by its pioneering 3+1 structure – comprising three layers of wooden beams and columns topped with a single concrete floor slab. The project showcases advanced timber building techniques, including the use of **LIGNOLOC®** wooden nails, which enable particularly eco-friendly fastening of the interior wall cladding.



24 | KINDERGARTEN UTTENDORF | 2024

Location: Uttendorf, Austria

The new kindergarten in Uttendorf was constructed using sustainable timber methods, with a strong focus on ecological and health-conscious building and creating a warm, natural atmosphere. The interior wall cladding, made of spruce three-layer panels, was mounted using **LIGNOLOC®** wooden nails: the fasteners blend subtly into the overall design, allowing for a pure, seamless connection. **SCRAIL®** nail screw fasteners ensure a permanently stable yet removable attachment of the acoustic ceiling.



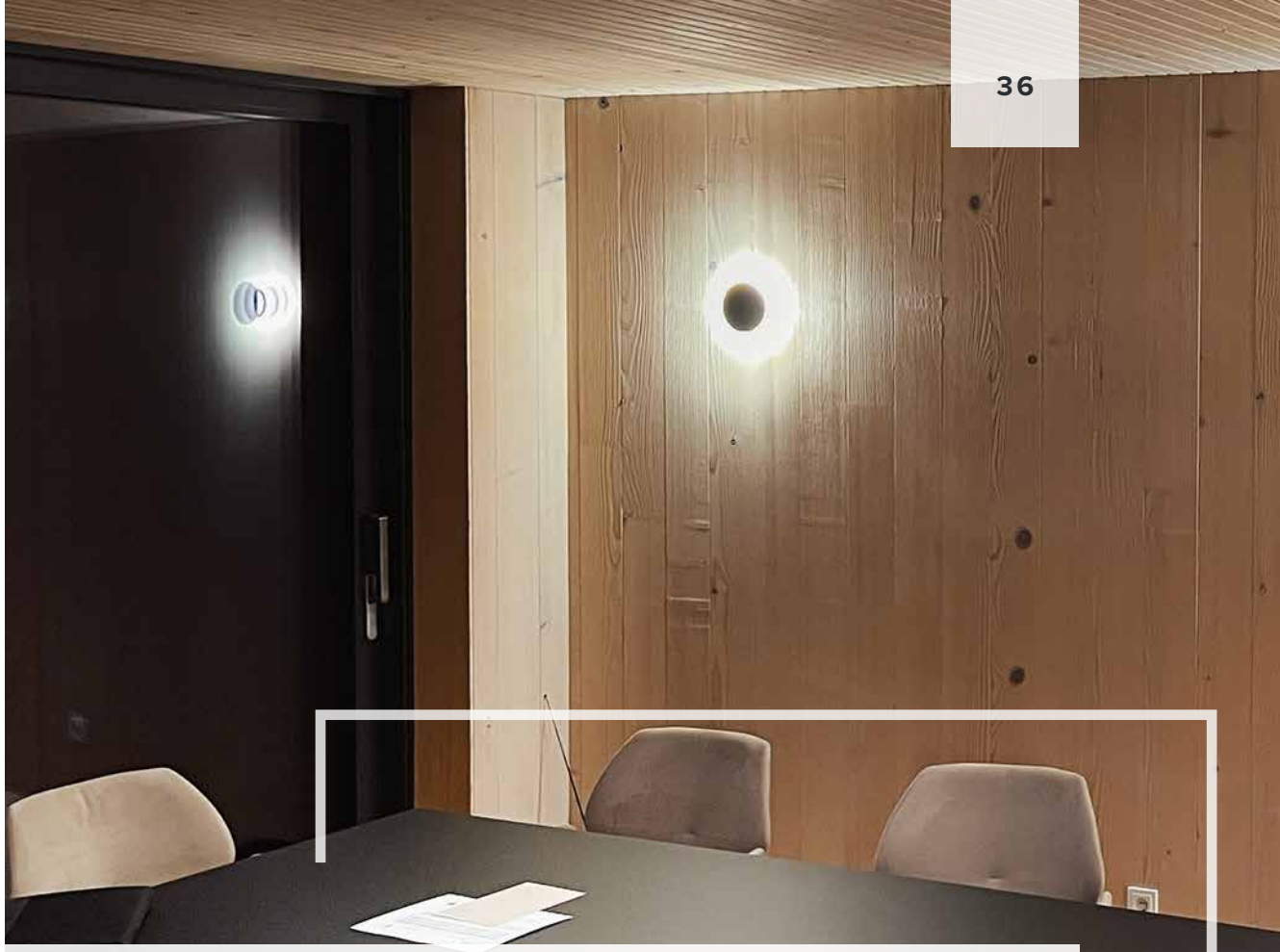
24 | KINDERGARTEN UTTENDORF | 2024

Location: Uttendorf, Austria

25 | ABTENAUER BAUERNBOGEN | 2024

Location: Abtenau, Austria
Architekt: Studio Precht

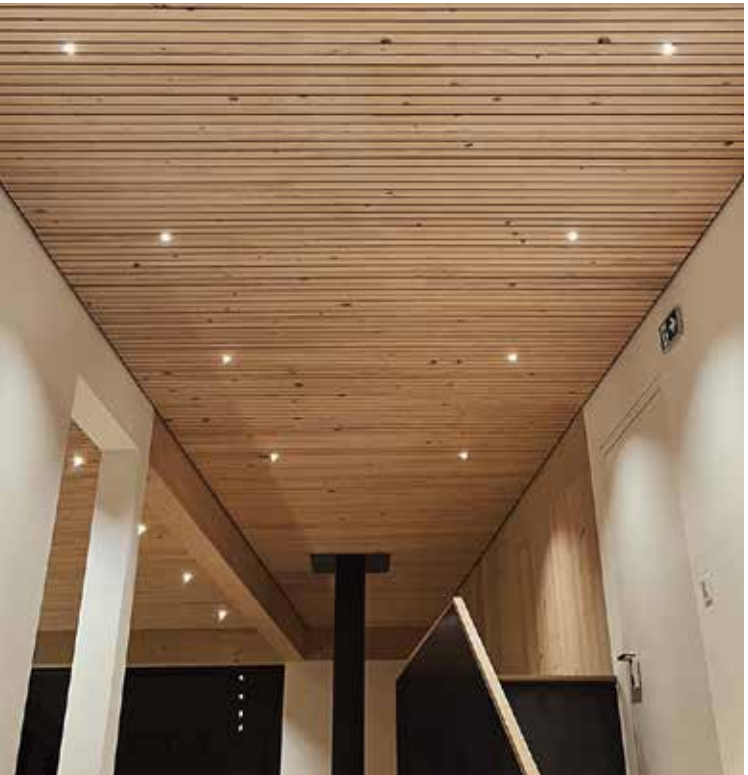
The newly constructed Abtenau Farmers' Store is an exceptional timber building that consciously departs from the region's typical architectural style and sets new impulses for the town. The concept combines architectural individuality with a modern approach to marketing regional food products. The entire load-bearing structure is made of wood; façade and insulation follow principles of ecological construction and rely on local materials. The timber cladding was fastened using **LIGNOLOC®** wooden nails – a sustainable, metal-free connection that underscores the project's holistic vision.



26 | HOTEL AND CULINARY WORLD APOLLO AT LAKE MONDSEE | 2024

Location: Mondsee, Austria

With its opening in spring 2024, the Apollo guesthouse sets new standards in architecture and sustainability. Built using a modular solid timber construction method based on the award-winning design of the Innviertler Vierseithof by Johannes Reisecker, the walls are free of metal. Six layers of solid wood are reinforced by a diagonal tongue-and-groove layer, fastened with **LIGNOLOC**® wooden nails. These mass timber walls can be fully recycled and exemplify sustainable construction in line with circular economy principles. The project was realized by Reindl Bau Mondsee in cooperation with Holz Reisecker, who prepared the solid timber components from fir wood.



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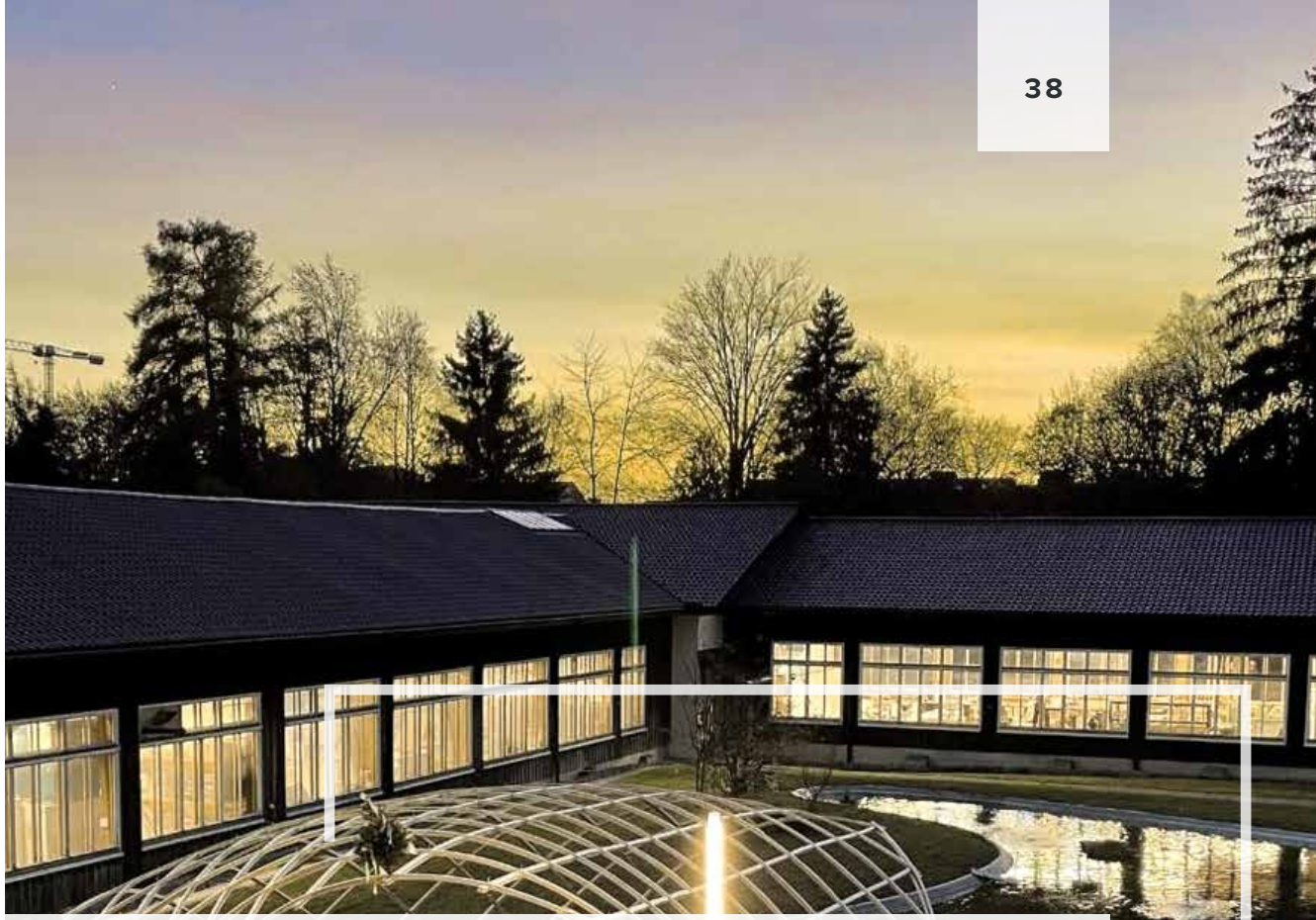

27 | „ONLYWOOD“ SEGMENTED TIMBER GRIDSHELL BERN | 2022

Location: Berner Fachhochschule Campus Biel, Switzerland
Photo: © Berner Fachhochschule

As part of the “Special Week,” a segmented timber gridshell was created, serving as the architectural highlight of the village festival in Rupperswil. The structure was divided into three sections to allow for efficient prefabrication in the workshop and facilitate transport. The load-bearing system consisted of triple-layered, laminated and curved wooden slats. The timber was sourced from the nearby forest and processed in the school’s own sawmill. **LIGNOLOC®** wooden nails ensured a metal-free connection – further emphasizing the project’s commitment to sustainability.

28 | TINY HOUSES BY HAUPTSACHE TINY | 2024

Location: Nieklitz, Germany
Photo: © Hauptsache Tiny GmbH

The tiny houses by Hauptsache Tiny stand for thoughtful craftsmanship and ecological construction. For the interior finishing, they rely entirely on our **LIGNOLOC®** wooden nails – for a metal-free, sustainable connection. The result is a modern living space in harmony with nature.

29 | BROCKHAUS TIMBER SHOW HOME | 2018

Location: Vechta, Germany
Photo: © Julia Pöstges | Fotowerk Vechta

With its show home in Vechta, Holzbau Brockhaus showcases how prefabricated timber frame construction can be implemented both efficiently and to a high architectural standard.
The wall and roof elements – including windows and doors – were fully preassembled in the factory and erected on site within a very short time. The façade, made of larch wood in varying widths, was fastened entirely using **LIGNOLOC®** wooden nails – enabling a pure, metal-free design with a particularly uniform appearance, free from visually disruptive elements. Concealed roof drainage and flush-mounted door cladding further underscore the clean, minimalist aesthetic.

30 | INDUSTRIAL HALL – PREMA® NAIL-LAMINATED TIMBER ELEMENTS | 2024

Location: Baden-Württemberg, Germany
Photo: © prema GmbH

Sustainable timber construction across two floors: This office building was realized using prema® nail-laminated timber elements – joined entirely without metal, using **LIGNOLOC®** wooden nails. A particular highlight: even the floor slab was constructed using nail-laminated timber, resulting in a fully single-material, future-proof building concept

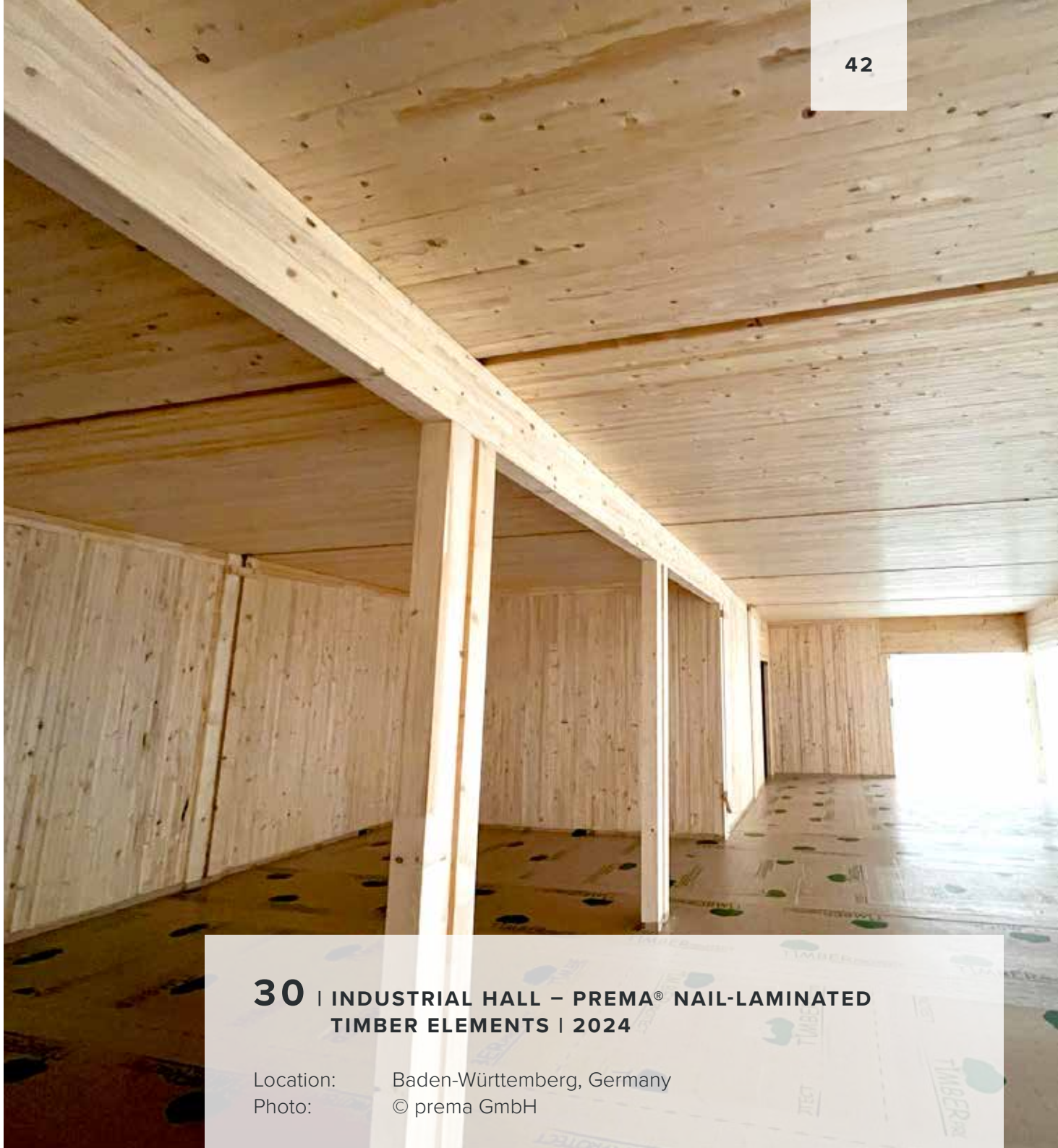

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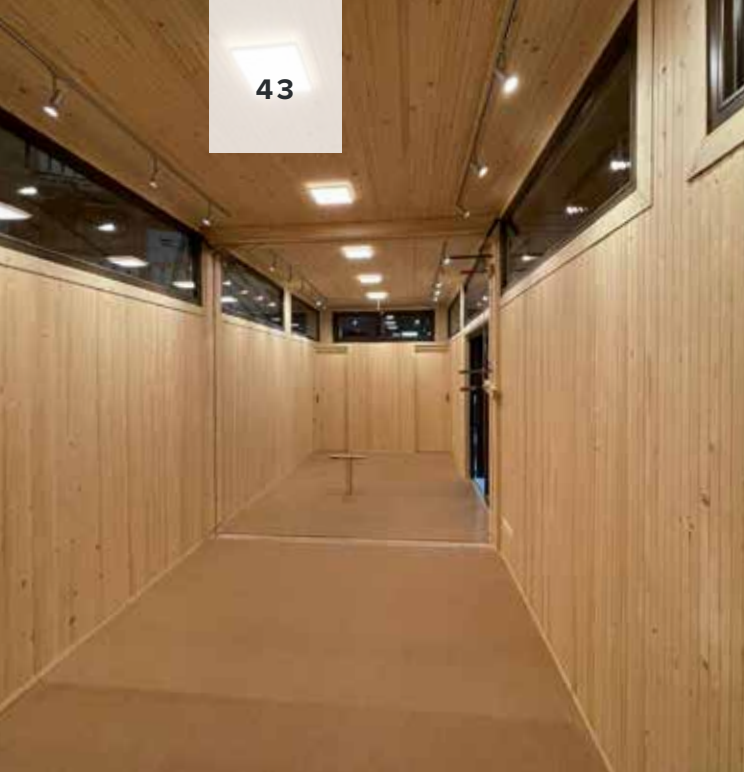
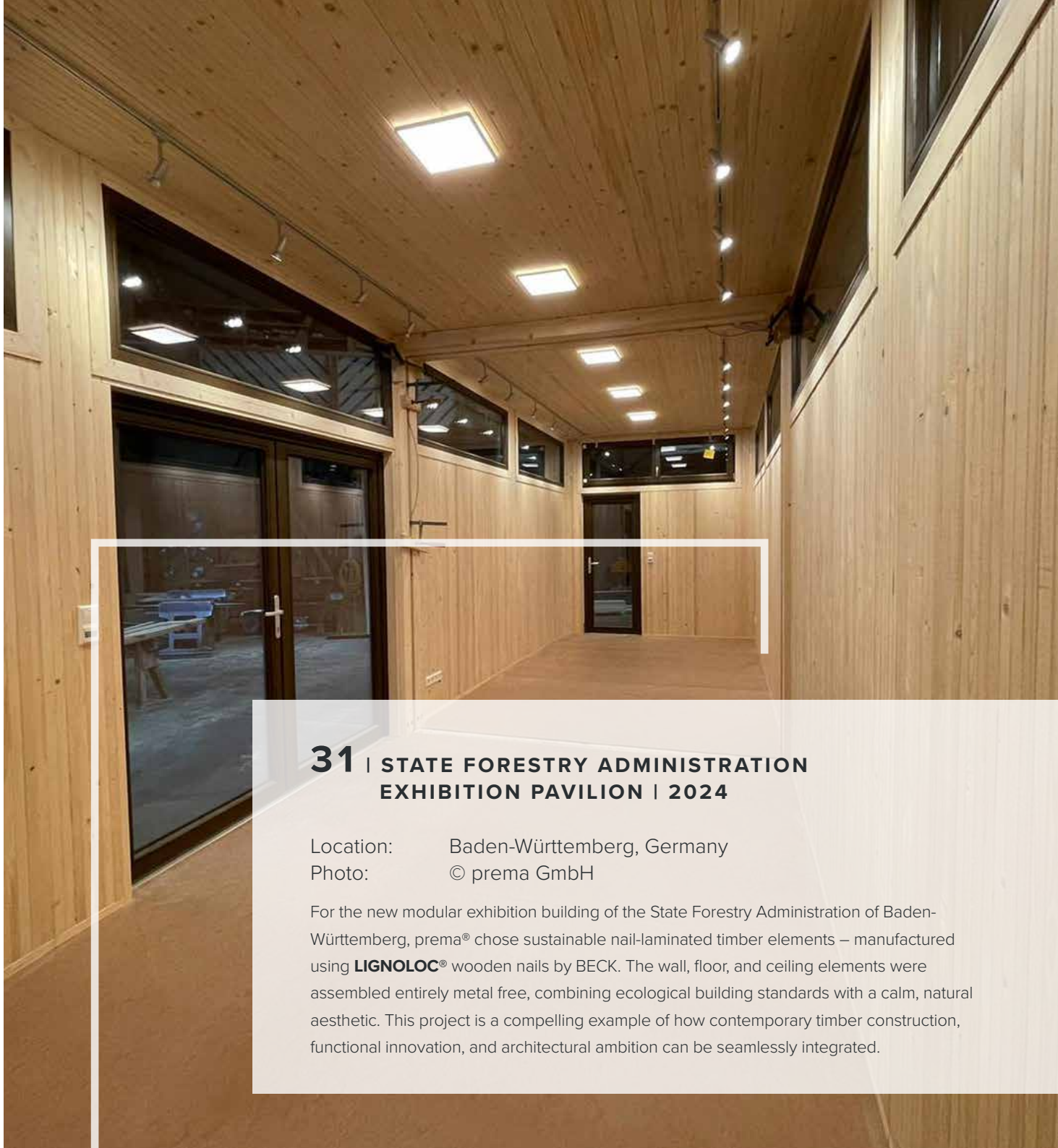
Photo: © prema GmbH

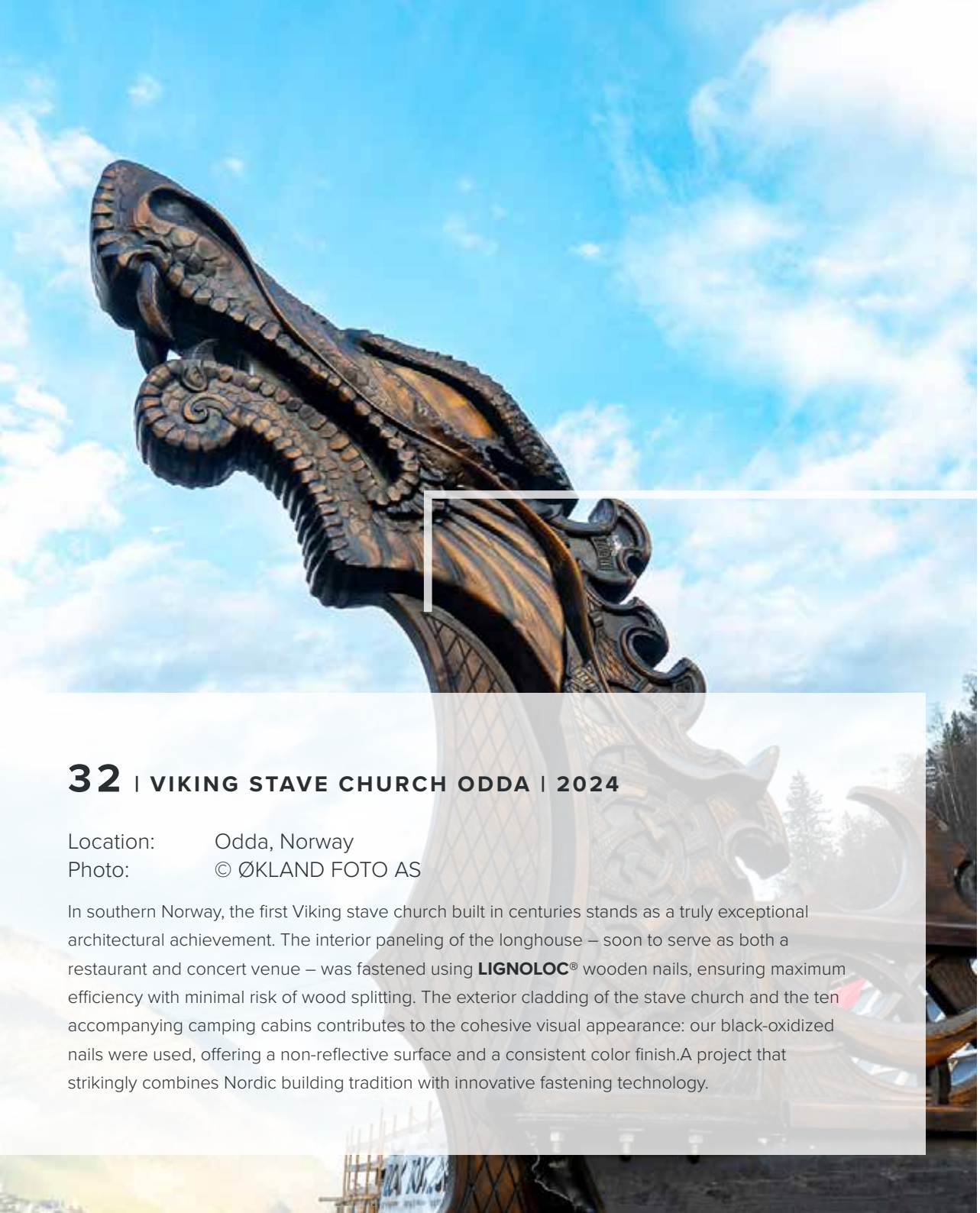




31 | STATE FORESTRY ADMINISTRATION EXHIBITION PAVILION | 2024

Location: Baden-Württemberg, Germany
Photo: © prema GmbH

For the new modular exhibition building of the State Forestry Administration of Baden-Württemberg, prema® chose sustainable nail-laminated timber elements – manufactured using **LIGNOLOC®** wooden nails by BECK. The wall, floor, and ceiling elements were assembled entirely metal free, combining ecological building standards with a calm, natural aesthetic. This project is a compelling example of how contemporary timber construction, functional innovation, and architectural ambition can be seamlessly integrated.



32 | VIKING STAVE CHURCH ODDA | 2024

Location: Odda, Norway
Photo: © ØKLAND FOTO AS

In southern Norway, the first Viking stave church built in centuries stands as a truly exceptional architectural achievement. The interior paneling of the longhouse – soon to serve as both a restaurant and concert venue – was fastened using **LIGNOLOC**® wooden nails, ensuring maximum efficiency with minimal risk of wood splitting. The exterior cladding of the stave church and the ten accompanying camping cabins contributes to the cohesive visual appearance: our black-oxidized nails were used, offering a non-reflective surface and a consistent color finish.A project that strikingly combines Nordic building tradition with innovative fastening technology.

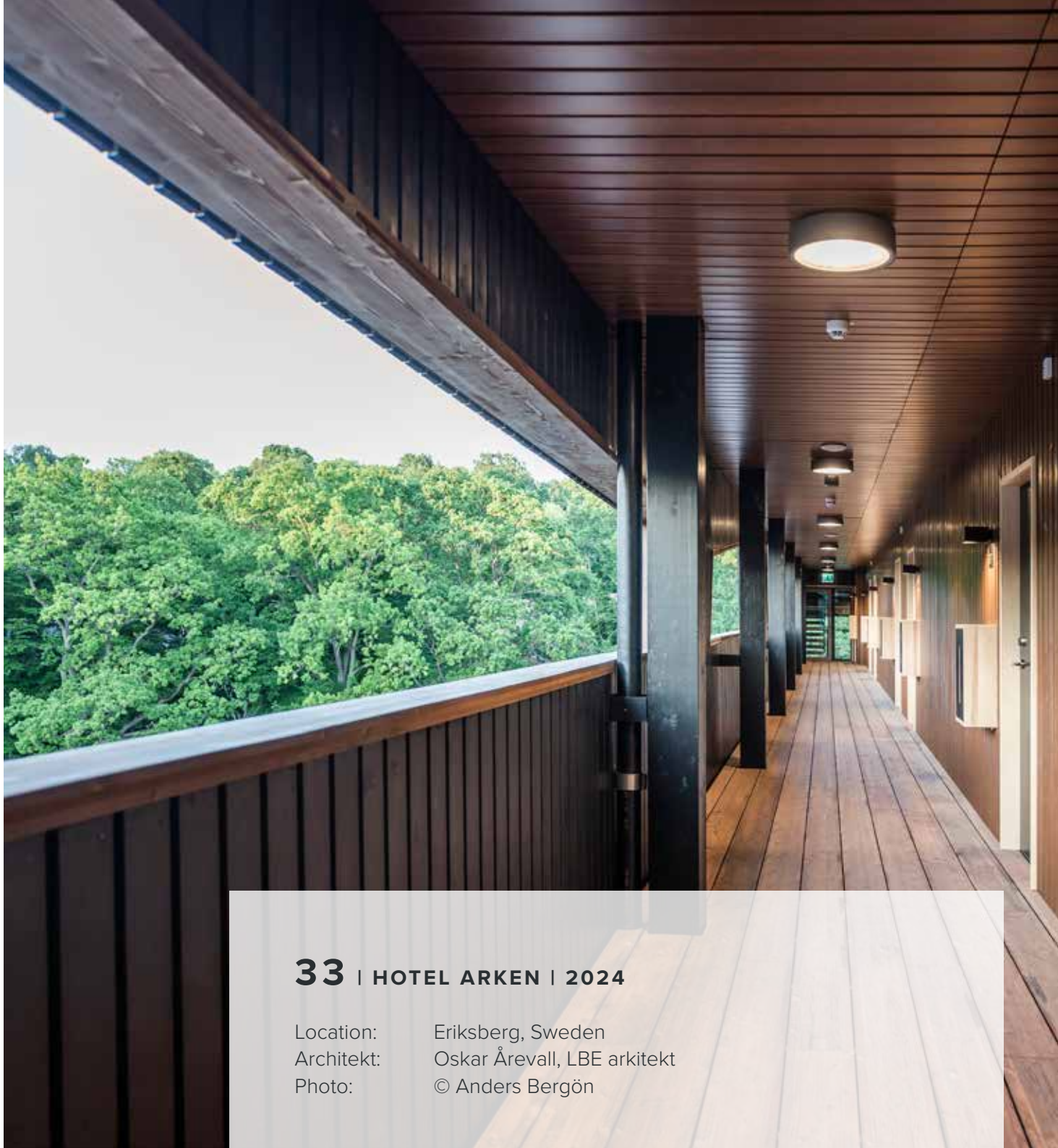
32 | VIKING STAVE CHURCH ODDA | 2024

Location: Odda, Norway
Photo: © ØKLAND FOTO AS

33 | HOTEL ARKEN | 2024

Location: Eriksberg, Sweden
Architekt: Oskar Årevall, LBE arkitekt
Photo: © Anders Bergön

Hotel Arken in Eriksberg combines modern architecture with sustainable design. The three-story timber construction blends harmoniously into its surroundings, dissolving the boundaries between indoor and outdoor spaces. **LIGNOLOC®** wooden nails were used to assemble the lofts and external corridors. Our innovative fastening technology ensures high stability and a nearly invisible, seamless appearance. With its sustainable construction method and the use of environmentally friendly materials, Hotel Arken sets a strong example for next-generation construction and demonstrates how aesthetics and ecology can be perfectly combined.



33 | HOTEL ARKEN | 2024

Location: Eriksberg, Sweden
Architekt: Oskar Årevall, LBE arkitekt
Photo: © Anders Bergön

34 | NO-NAIL BEACH HOUSE AT KATASE HIGASHIHAMA BEACH | 2017

Location: Katase Higashihama Strand, Enoshima, Japan
Umsetzung: Haseman
Fotocredit: © Haseman

With the No-Nail Beach House at Katase Higashihama Beach, HASEMAN® has been setting a benchmark for sustainable construction in coastal areas since 2017. The temporary summer pavilion serves as a multifunctional space for lifeguard services, first aid, and beach radio – built from only six different structural elements. The lightweight LVL construction is completely free of metal. Instead of screws or steel nails, **LIGNOLOC®** wooden nails were used to fasten the plywood panels – providing a single-material solution that can be dismantled without leaving residues, in line with the principles of circular economy. A minimalist, resource-efficient project that demonstrates how temporary architecture can have a lasting impact.

35 | HOUSE PARADIES IN BITTERFELD | 2024

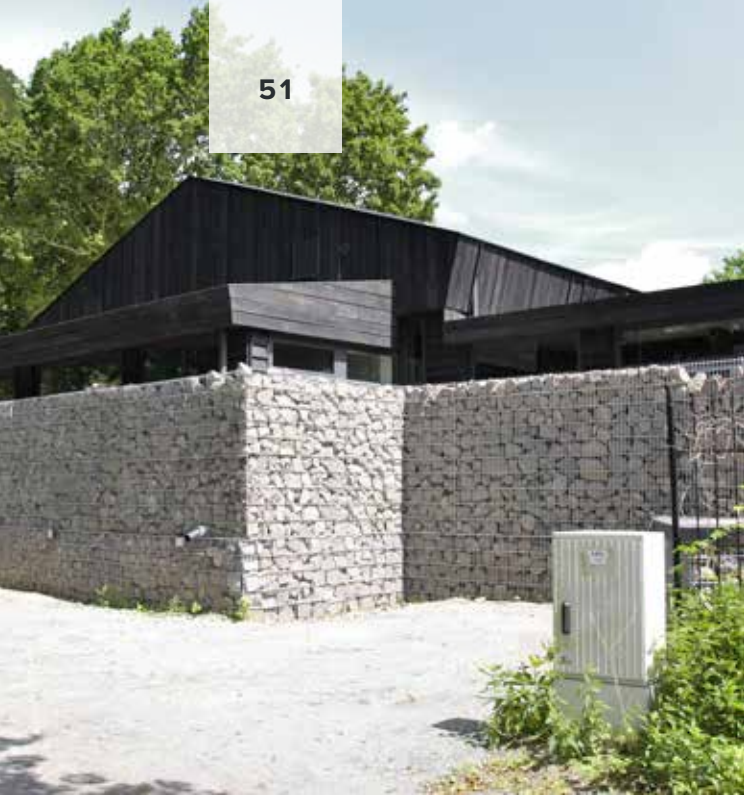
Location: Bitterfeld, Germany
Photo: © Karin Brünsch & Alex Schmidt

The Haus Paradies, an impressive bungalow in Bitterfeld, showcases what modern and sustainable construction can look like today. Built with NiTO® solid wood blocks made entirely from renewable resources and securely connected using our **LIGNOLOC®** wooden nails, it meets the highest ecological standards. The modular design of the NiTO blocks allows the house to be assembled like building bricks – quickly, flexibly, and efficiently. For the metal-free connections, 57,000 **LIGNOLOC®** wooden nails by BECK were used. These nails ensure a strong and environmentally responsible bonding that preserves the natural aesthetics and ambiance of the wood.

36 | CIRCULAR CEILING SYSTEM TERRATIMBER | 2024

Location: Karlsruhe, Germany
Photo: © DDF dos Karlsruhe Institute of Technology (KIT)

The Terra Timber project, developed by the Chairs of Digital Design and Fabrication (DDF) and Design of Structures (dos) at Karlsruhe Institute of Technology (KIT), presents an innovative ceiling system made from reclaimed timber, joined with **LIGNOLOC®** wooden nails and filled with clay. This student-driven initiative combines clay and wood residues from secondary material cycles, leveraging digital construction techniques to promote resource-efficient and low-emission building. Through the use of digital image recognition, wood offcuts from the production of NLT panels are repurposed into load-bearing components. A total of 4,000 **LIGNOLOC®** wooden nails were used in the full-scale demonstrator.



37 | DANCE SCHOOL AM EICHBERG | 2024

Location: Wieck a. Darß, Germany
Photo: © Tanzschule Am Eichberg

In the heart of the village of Wieck on the Darß peninsula, a place has been created where nature, craftsmanship, and movement come together in a truly special way: the dance school Am Eichberg. The new building was designed as a traditional timber hall in the style of a barn and integrates seamlessly into the ensemble of the heritage-listed Alte Försterei (Old Forester's House) from the early 20th century. The south-facing façade is clad in oak using a traditional shiplap siding, charred using the Shou Sugi Ban method and finished with linseed oil. The cladding was secured with **LIGNOLOC®** wooden nails, perfectly reflecting the project's holistic commitment to sustainability. The dance school stands as a symbol of enduring architecture – in its structure, its expression, and its ethos.

38 | SENIOR LIVING RESIDENCE IN MUNICH | 2025

Location: München, Germany

For the construction of a sustainably planned senior living residence with 261 units, the carpentry company Höfle opted for a modern timber frame construction that confidently showcases its inner strengths. The three-layer panels were assembled entirely without metal using 4.7 x 75 mm **LIGNOLOC®** wooden nails on a WEINMANN® Wallteq M-300. The visible connections give the walls a distinctive appearance and allow for easy post-processing – without damaging tools. This project exemplifies precision, efficiency, and a consistent commitment to sustainability in timber construction.

39 | RESIDENTIAL BUILDING EXTENSION WITH KIRI WOOD FAÇADE | 2022

Location: Stuttgart-Weilimdorf, Germany
Photo: © Werner Grosse

As part of a proof-of-concept project for the TRIQBRIQ® timber construction system, a residential building extension in Stuttgart-Weilimdorf was clad with untreated kiri wood – a exceptionally lightweight and dimensionally stable material known for excellent weather resistance. By using **LIGNOLOC®** wooden nails, the façade is entirely metal-free and designed for easy separation and recycling of pure wood components. This project powerfully illustrates how sustainable timber construction systems can be paired with innovative façade solutions to create long-lasting and circular buildings.

40 | MULTI-GENERATIONAL HOME, BAVARIA | 2025

Location: Traunstein, Germany

Chiemgauer Holzhaus has constructed a mass timber apartment building with six residential units in Traunstein, featuring walls entirely free from construction chemicals. The structural load transfer is achieved through diagonal sheathing secured with **LIGNOLOC®** wooden nails – resulting in a pure solid timber wall system. The building meets the standards of an Efficiency House 40 with QNG certification and combines sustainable construction with a high level of living comfort. A photovoltaic system, a heat pump, and high-performance insulation ensure low operating costs and environmentally friendly energy generation – a holistic approach for ecological and economical living.

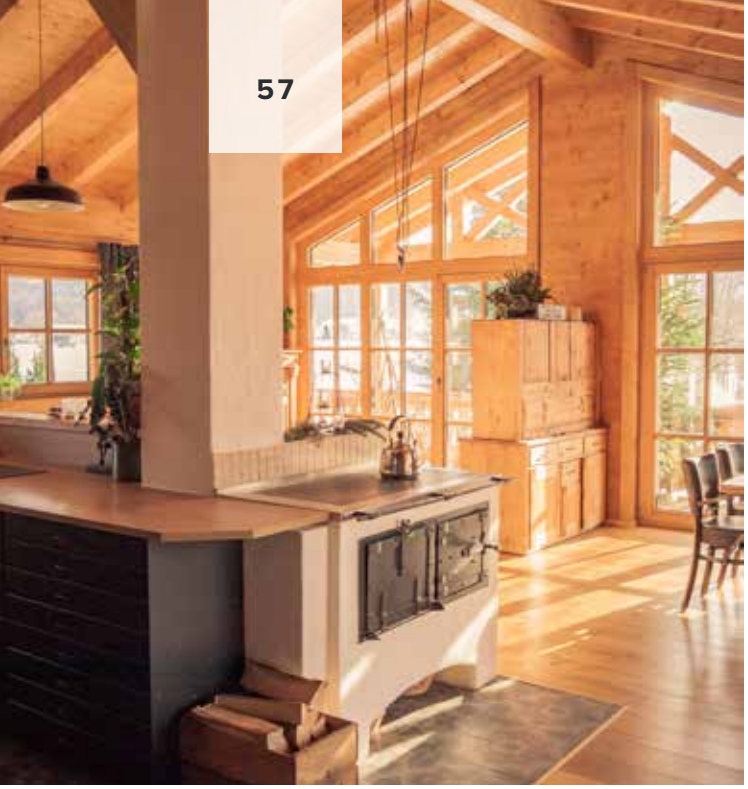
40 | MULTI-GENERATIONAL HOUSE, BAVARIA | 2025

Location: Traunstein, Germany

41 | SINGLE-FAMILY HOME IN ASCHAFFENBURG | 2021

Location:	Aschaffenburg, Germany
Photo:	© Lars Gruber
Architecture and construction supervision:	Ewich Innen Architektur
Construction:	Zimmerei Wissel GmbH – Die Holzhausprofis

A thoughtfully planned single-family home for six people that is characterized by reduced material use, ecological construction, and a high level of owner involvement. The structural shell, ceilings, floors, and stairs are built from spruce wood, while the exterior is clad in a seamless metal façade. All interior walls follow a timber frame construction with three-layer spruce panels and fastened on both sides with **LIGNOLOC®** wooden nails – entirely free of metal. The homeowners plastered the walls themselves using clay sourced directly from the excavation site, creating a healthy, chemical-free indoor climate. The house is heated with a Roman-style wood stove and ceiling-mounted infrared radiant panels, powered by a photovoltaic system. Hot water is supplied via an electric instantaneous water heater – low-maintenance and efficient. A sustainable living concept, realized by Wissel Timber Construction, that inspires through clear architecture, smart technology, and honest craftsmanship.



42 | MULTI-GENERATIONAL MASS TIMBER HOME IN THE CHIEMGAU REGION, BAVARIA | 2018

Location: Chiemgau, Germany
Photo: © Chiemgauer Holzhaus LSP Holzbau GmbH and Co. KG

Designed by Chiemgauer Holzhaus, this solid timber home in Bavaria's Chiemgau region was conceived as a sustainable multigenerational residence. It offers space for three generations: a basement apartment for the grandparents, a ground-floor unit for the parents, and an attic apartment for the youngest family members. An additional studio above the carport can be integrated into the main home or used independently as needed. The house stands out for its high insulation performance, use of regionally sourced timber, and complete avoidance of construction chemicals. Its metal-free solid wood walls are joined using **LIGNOLOC®** wooden nails. The architecture harmoniously blends traditional forms with modern ecological and health-conscious design principles.

43 | MASS TIMBER HOME IN GARS | 2018

Location: Bavaria, Germany
Photo: © Chiemgauer Holzhaus LSP Holzbau GmbH and Co. KG

Contemporary design meets mass timber in this striking home in the Bavarian Chiemgau Region. Featuring minimalist design, natural materials, and an efficient energy concept, the home stands out for its sustainable approach. Expansive windows connect the interior to nature, while the mass timber walls provide a comfortable indoor climate throughout the year. Securely fastened with **LIGNOLOC®** wooden nails, ensuring a metal-free and sustainable construction.

44 | MASS TIMBER HOME IN MUNICH | 2018

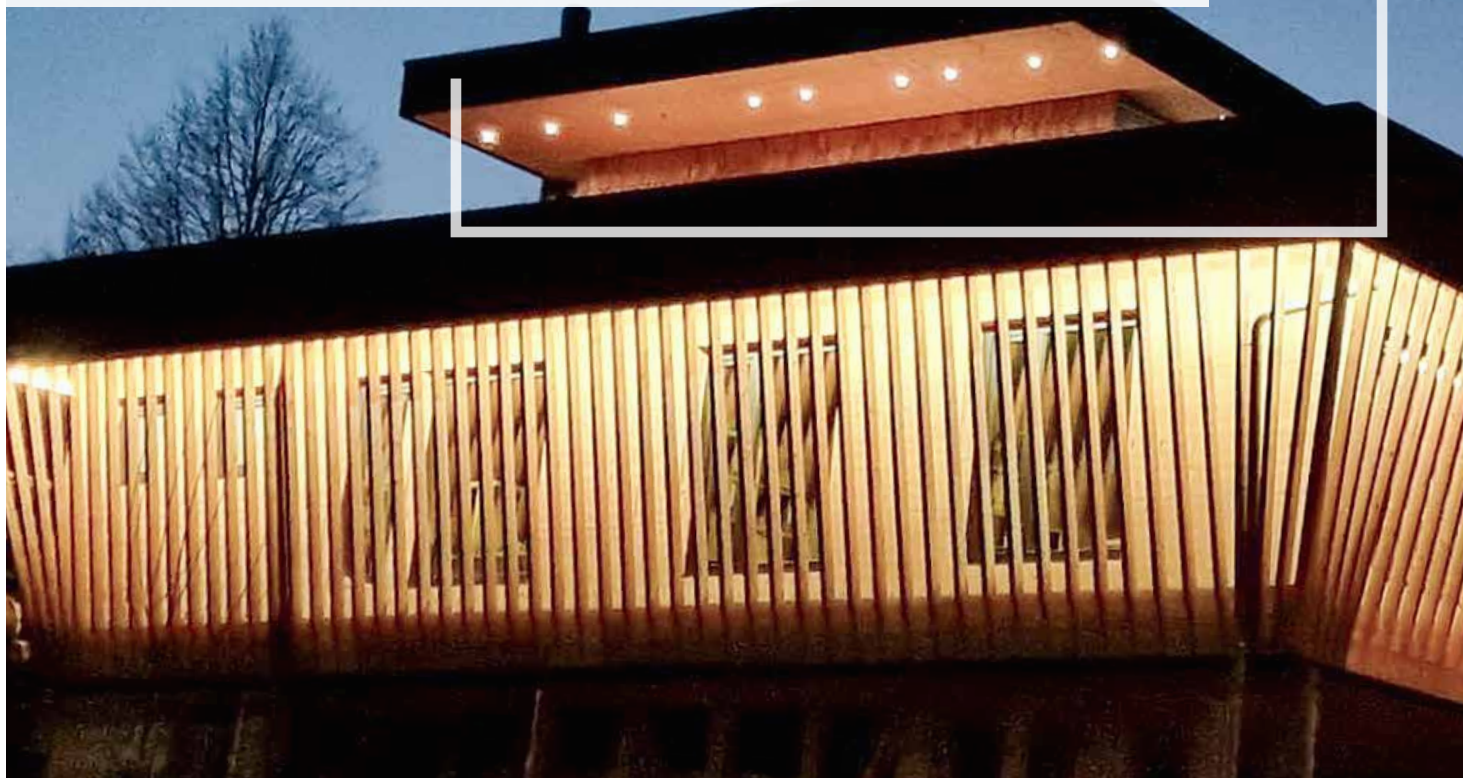
Location: Bavaria, Germany
Architect: © Chiemgauer Holzhaus LSP Holzbau GmbH and Co. KG

Naturally Connected: Healthy Living Meets Timber Style. This custom-designed mass timber home seamlessly blends modern architecture with sustainable design principles. The exterior is clad in vertical larch wood, providing robust protection for the solid timber structure – entirely metal-free. Inside, clay plaster, wood fiber panels, and toxin-free materials foster a thoughtfully balanced indoor climate. **LIGNOLOC®** wooden nails were used throughout the walls, ceilings, and interior finishes, ensuring a durable, sustainable connection without any metal.

45 | OFFICE BUILDING ZIMMEREI WISSEL IN MÖMBRIS | 2025

Location: Mömbris, Germany
Photo: © Zimmerei Wissel
Planing and Construction: Zimmerei Wissel GmbH – Die Holzhausprofis

For its own office building, Wissel Timber Construction embraced a fully ecological approach, utilizing modern timber frame techniques. The interior walls are clad with three-layer spruce panels on both sides, fastened exclusively with **LIGNOLOC®** wooden nails – entirely metal-free. These nails were also used in the sound-insulating partition wall, where the visible spruce slats are meticulously sorted and aligned by wood type. A standout feature of the design and craftsmanship is the folded oak staircase: its steps are milled directly into the wall structure, showcasing artisanal precision, innovation, and the potential of modern timber construction.

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