architectum

INTERNATIONAL MAGAZINE FOR BRICK ARCHITECTURE

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SPECIAL EDITION
WIENERBERGER
BRICK AWARD 2020

#30
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HEIMO SCHEUCH
CEO Wienerberger AG

IMPRESSIVE BUILDINGS, SUSTAINABLE CONCEPTS

Exquisite constructed beauty captures the eye at the very first glance: It draws the gaze from one detail to the next, up the facade to the roof and then down to the base, arousing a desire to learn more about the concept envisaged by the architect. At the same time, a building reveals a great deal about how it is used, those who live in it and the architects who designed it. The Brick Award is part of our Wienerberger philosophy and offers architects from all over the world an opportunity to present creative projects that make innovative use of brick architecture. The award seeks to inspire both architects and enthusiasts from outside the profession to share design concepts and to explore new forms of construction. In 2020, Wienerberger presented this internationally renowned award for the ninth time. I am pleased to say that a record of 644 projects in 55 countries by 520 architects were submitted this year.

This edition of architectum will enable you to learn more about the impressive and beautifully-designed projects chosen as the winners of the Brick Award. We are also taking this opportunity to present inspiring solutions that address the challenges of our time, climate change and resource conservation, in a way that is both innovative and efficient. There is a long and proud tradition of sustainability at Wienerberger. Our sustainability concept encompasses three dimensions – ecological, environmental and social – all of which play an essential role in every measures and products.

Be inspired by the extraordinary architectural projects on the following pages and see what can be achieved with bricks.

Heimo Scheuch
CEO Wienerberger AG

IMPRINT

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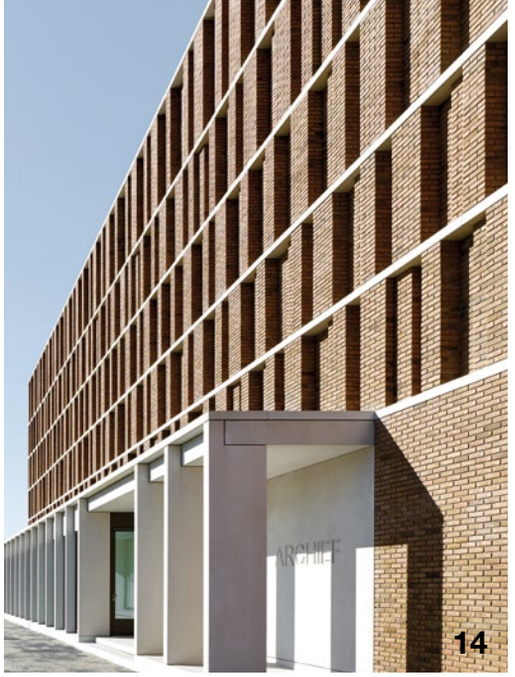


BRICK AWARD

SUSTAINABILITY

THE BRICK AWARD

The Brick Award recognises and celebrates exceptional brick architecture from around the world. It provides a platform from which architects and planners can present their innovative and creative projects and designs to an international audience.

Architecture can achieve great things, and unite people, cultures, and nature – as demonstrated by the winners of the Brick Award 20. For the ninth time since the award was launched in 2004, Wienerberger has provided a showcase for exceptional brick construction projects from around the world, making them accessible to a wide audience. The Brick Award was established as an independent and international award with the aim of representing and inspiring architecture, design, urban planning, art and culture. The 50 nominated projects also demonstrate the aesthetic and functional potential of ceramic building materials.

The project selection process focuses on certain specific criteria. The most important being: A significant part of the project must consist of clay building materials, such as clay bricks, clay facing bricks, clay paving, clay roof tiles, and clay façade panels. The building could be a new build, renovation or conversion project, and the bricks can be new or reused. In particular, the jury looks to see how projects combine functionality, sustainability and energy efficiency. Although Wienerberger is the organiser behind the Brick Award, it is not a requirement for participation that projects use Wienerberger products. Projects can be submitted in one of five categories. They are: Feeling at home, Living together, Working together, Sharing public spaces, and Building outside the box. The following pages present both the outstanding winners in each category and the renowned jury that chose them. You can see all the nominated projects and find further information on **www.brickaward.com**.

THE DECISION MAKERS

This year, the jury of the Brick Awards is once again composed of five internationally renowned architects from five different countries. They all share a passion and enthusiasm for architecture, and their different approaches and specialisms complement one another. Together, therefore, theirs has been a multifaceted decision-making process, as they jointly selected winners from a number of extraordinary projects and a variety of outstanding submissions.

Helena Glantz

Born in Sweden, Helena Glantz received a post-graduate degree from the Royal Institute of Art in Stockholm in 1998. She spent 13 years working for various architectural firms in Sweden before co-founding the Urban Design agency in 2001. Her work focuses on design in relation to urbanity and encompasses offices, living spaces, brand identity and technical systems. Helena Glantz and her team won the Brick Award 2018, in the category 'Building outside the box', for the Värten biomass-fired power plant, and have won and been nominated for several other awards.

« It is exciting to see how differently various cultures express their understanding of architecture and how the same material is used differently in different climates. »

Jonathan Sergison

Jonathan Sergison was born in Great Britain and graduated from the Architectural Association School of Architecture in 1989. In 1996, together with Stephen Bates, he founded the architectural practice Sergison Bates in London, which specialises in urban planning, public buildings and residential buildings. The practice has gained international recognition by winning various awards, including the Heinrich Tessenow Gold Medal and the Erich Schelling Medal for Architecture 2006. It was also included on the Domus magazine list of the '100+ Best Architecture firms 2019'.

« The Award provides an excellent overview of the culture of brick architecture around the world, and significantly contributes to supporting it. »

Tina Gregorič

Tina Gregorič studied at the Faculty of Architecture of the University of Ljubljana and at the Architectural Association in London. In 2003, together with Aljoša Dekleva, she founded Dekleva Gregorič Architects, which takes a 'research by design' and 'design by research' approach to its work. The team undertakes projects on various scales, and with different purposes, in a range of locations and climate zones. Its most well-known projects include the University Campus Livade 1.0 (Izola), the XXS House (Ljubljana) and the Clifftop House (Maui). They share their knowledge of building theory with students at the Technical University of Vienna.

« It is time that brick – as an ecological building material – be put centre stage and recognised as a reusable, sustainable material. »

Toni Gironès Saderra

Born in Barcelona, Toni Gironès Saderra studied at the Vallès School of Architecture and at the Polytechnic University of Catalonia. His work focuses on the everyday life of people and how they identify with their environment, in order to find the best possible solution for any space. Since 1993, his professional work has gained recognition through awards, publications and exhibitions. His most famous works include the Climate Museum (Lleida), 80 social housing apartments (Salou) and 35 houses and the spaces linking them to the city (Badalona).

« Architecture is the intermediary between people and the places where they live. The versatility of bricks make them the perfect material to create this link. »

Mette Kynne Frandsen

Mette Kynne Frandsen completed her degree at the School of Architecture of the Royal Danish Academy of Fine Arts in 1987. Since 1993, she has been working at Henning Larsen Architects, and was promoted to CEO in 2003. This international architectural firm, with almost 350 employees, focuses on creating dynamic and sustainable architecture. Frandsen has been named one of the top 100 female executives in Denmark and one of the 30 'must-know' female architects of 2017. Her best-known work includes The Wave in Denmark and the Eystur Town Hall in Iceland.

« The number of high-quality and inspiring submissions shows just how important the Brick Award is for the industry. »

A FAÇADE THAT REFLECTS THE PAST

GRAND PRIZE WINNER

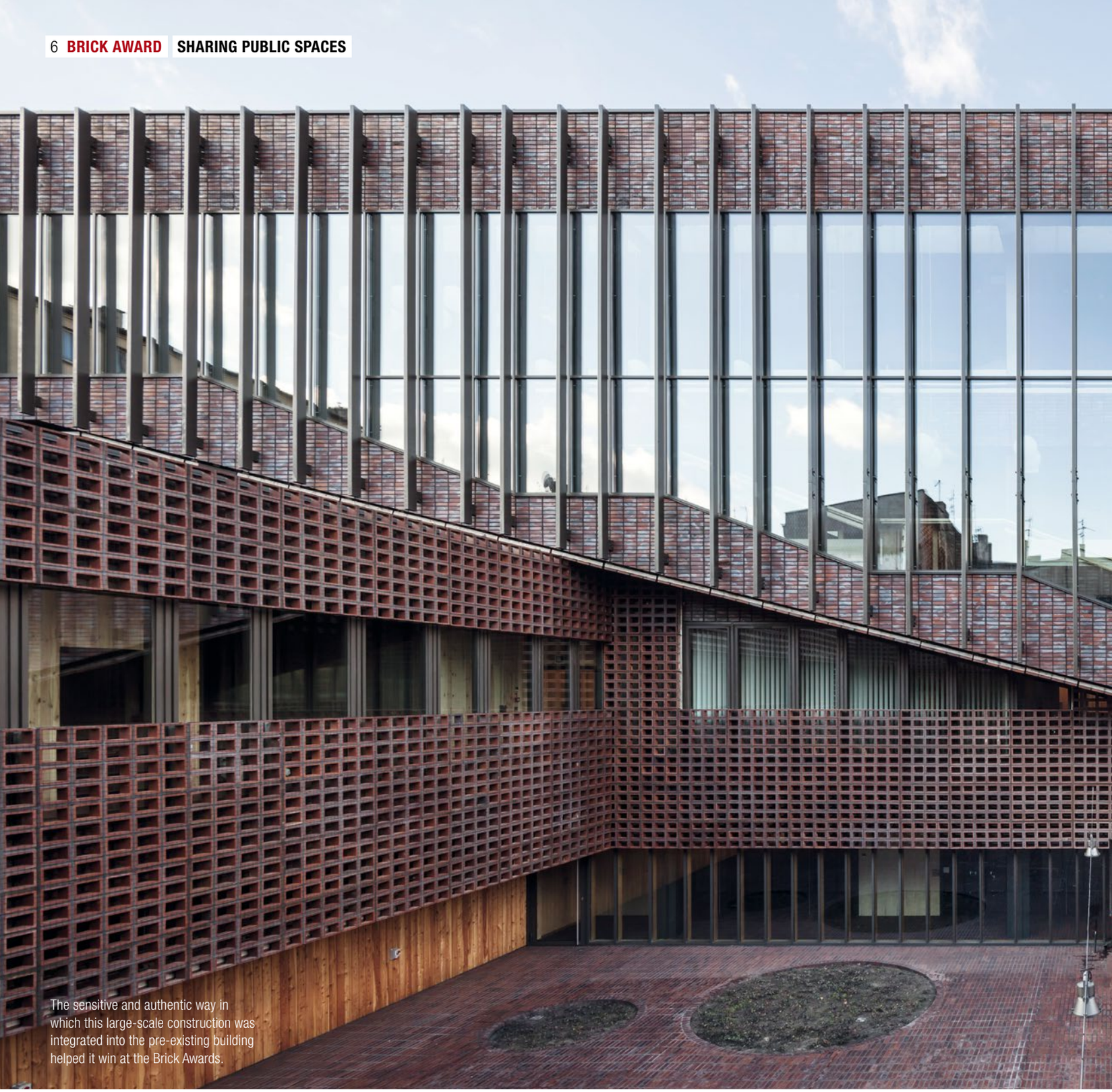
BRICK 20 Grand Prize Winner

SHARING PUBLIC SPACES

The modern brick façade creates a natural connection to the surrounding historic buildings.

Different countries, different experiences, different ideas. Thanks to the international collaboration of three architectural firms from Poland and Spain, the university in Katowice has a new – but aesthetically traditional – faculty.

Walking through the Polish city of Katowice, it quickly becomes apparent which of the city's streets have been shaped by the coal-mining history of Silesia. They are lined with buildings with dark and stained brick façades, which bear witness to their past. Indeed, on an otherwise mainly empty plot of land, which was the intended site of the new Institute of Radio and Television at the University of Silesia, there was an abandoned residential building, in the style typical of accommodation for coal mine workers. Rather than demolish the building, the three architectural agencies – BAAS Arquitectura, Grupa 5 architekci, and Małeccy biuro projektowe – incorporated it into their design. Because, as they say, their aim was not 'to create an iconic building but, rather, to complete a certain district of the city'. With this >



The sensitive and authentic way in which this large-scale construction was integrated into the pre-existing building helped it win at the Brick Awards.

FACTS & FIGURES

Project name
University of Silesia, Katowice, Poland

Architecture
BAAS Arquitectura, Grupa 5 architekci, Małeccy biuro projektowe

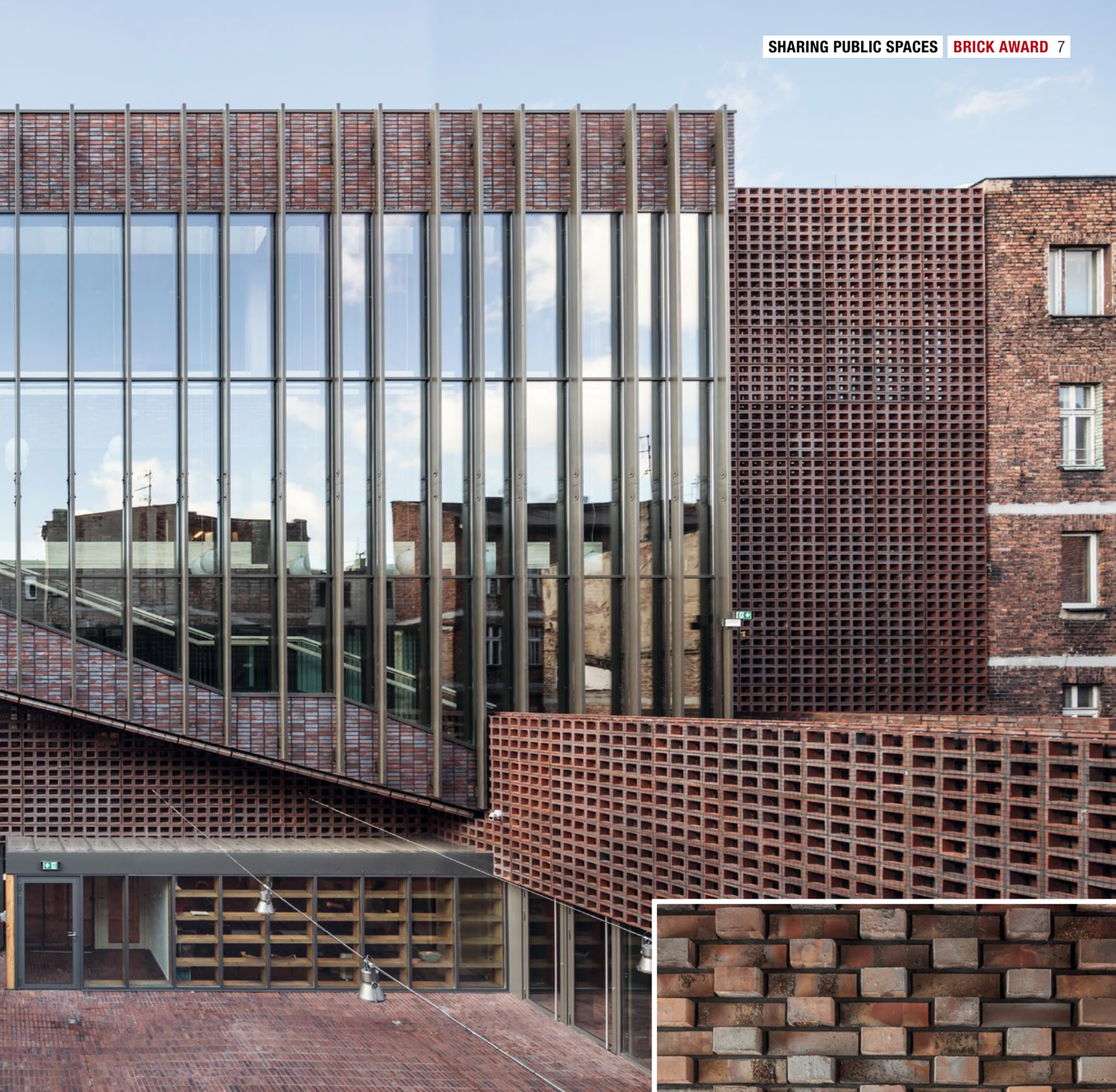
Client
University of Silesia

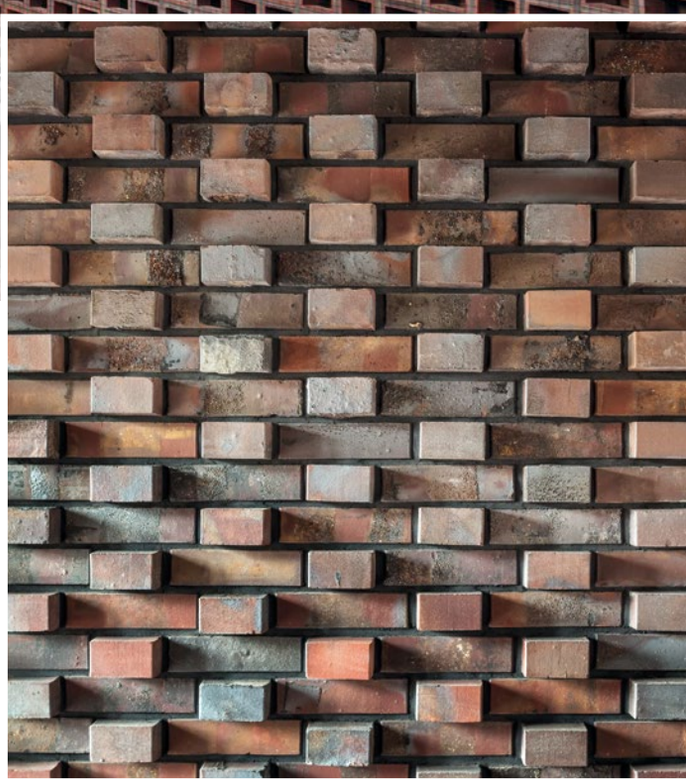
Products used
Facing bricks, internally and externally

Year of completion
2017

> in mind, despite building something new, they have succeeded in preserving the unique atmosphere of the surrounding area and even bringing it to the fore.

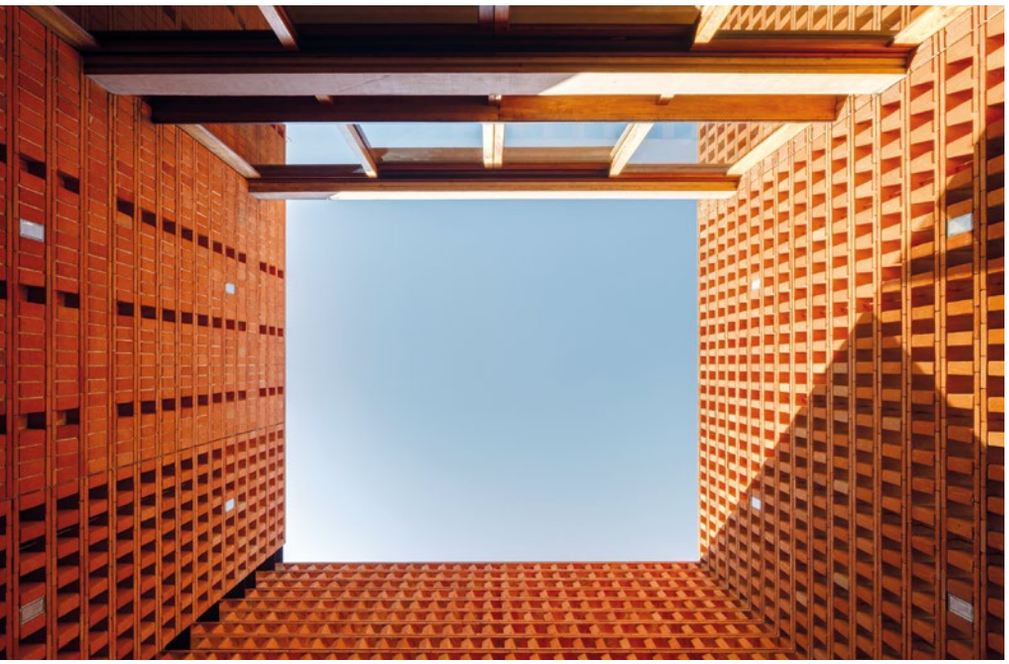
A LATTICE OF LAYERED MEANINGS A dark lattice of perforated clinker bricks now envelops the old apartment building, creating a large, abstract façade. Coal firing – now rare – lends the bricks their nuanced gradations of colour. 'With our design, we strived to take a sensitive approach to working with the aesthetics of the existing building; it uses the materials and visual value of the building to create an abstract volume of brick lattice work, which connects to neighbouring buildings', explains the architectural team. With 4,806 m² of usable space, the new building occupies almost the entire plot, and also accommodates a central courtyard, which is a key element of social activities linked to the studios and lecture theatres of the university's new faculty. The inner structure is lower, and the open space in the middle allows light into all the surrounding parts of the building, whilst also visually reflecting the shape of the perforated brick blocks.





Brickwork in dark shades runs through the design of the building, both internally and externally, without making the light-filled rooms feel oppressive.

SIMULTANEOUSLY RADICAL AND SENSITIVE The sensitive and authentic way in which this large-scale construction has been integrated into the existing cityscape, together with the successful modern extension of the existing building, makes the University of Silesia the well-deserved Grand Prize Winner of the Brick Awards. The dark lattice of perforated clinker bricks is an uncompromising yet sophisticated solution, which significantly enhances the historic streets of Katowice and creates a bridge linking the past and present. ◀



BRICK 20 Category Winner

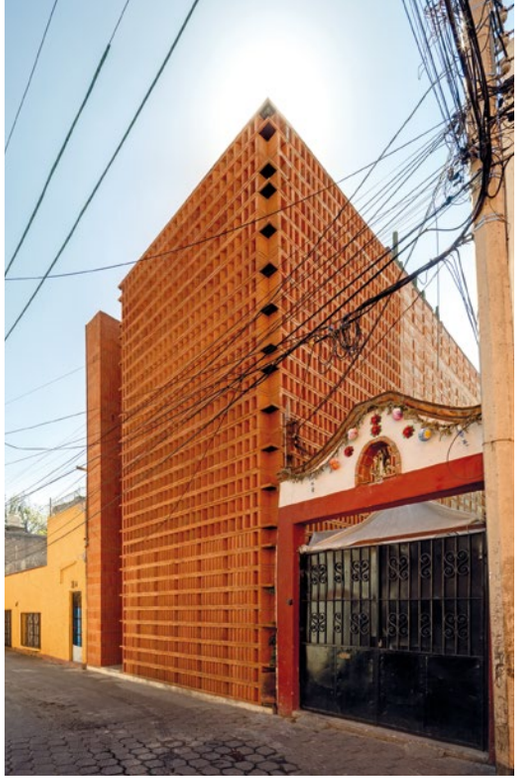
FEELING AT HOME

PERSPECTIVE, PERSPECTIVE, PERSPECTIVE

The studio of Mexican photographer Graciela Iturbide is a place that both produces and inspires art. When she tasked her son with designing it, the only stipulation was that it should be built of brick.

From the outside, it appears windowless and the monolithic brick construction rises like a tower, high above a carpet of low, neighbouring buildings. This very special project was carried out by Mauricio Rocha, the client's son, and Gabriela Carrillo in Coyoacán, Mexico. The three-storey building is formed of a series of 28 m2 rooms, layered on top of one another, with a courtyard on each of the north and south sides.

HIDDEN OPEN SPACE A windowless façade. The studio's extraordinary external appearance might leave an observer with a sense of oppression or being closed in. Because the rooms, internal courtyard, and the external façade appear dominated by clay bricks, the arrangement of which creates different patterns on the walls. In places, orderly openings provide a view to the outside; in other places, the wall is solid. The backing



The narrow steel structure disappears in the shape of the clay and the proportions make the building self-supporting.

The ubiquitous bricks and constant repetition of the material are intentional design features.

Outdoor light and indoor shade: the different arrangements of bricks draw visual boundaries and create interesting designs in various spaces.

bricks, combined with the large windows and maple wood floors and ceilings, create a special atmosphere in the studio. This type of architecture – which appears monotonous at first glance but turns out, on closer inspection, to be very well thought out – emerged from the philosophy of the design team: 'We want to take the local traditions and materials of the places where we work and apply them in a contemporary way – not with trendy shapes and fireworks, but with silence, space, and a sense of emptiness'. The building's earthquake-resistant construction is another design feature inspired by the local area.

TERRACES WITH A VIEW The courtyards on opposite sides of the building are another unusual feature, revealing a certain charm as they open up within the internal walls. The bricks forming the outer courtyard walls have been laid in alternating horizontal and vertical courses, creating a rhythmic pattern of light and shade. The red bricks have been arranged in such a way that they allow daylight into the internal spaces, whilst casting shadows that protect against too much heat. Standing in one of the courtyards, a glance upwards reveals an interplay of light and shadow that creates different patterns depending on the time of day. There is a roof terrace at the top of the building, with views across the Niño Jesús district, with its colourful houses and tall trees. The Iturbide Studio therefore links the street and the ground with the city skyline. This harmonious interlinking of indoors and outdoors makes this project the deserved winner in the category 'Feeling at home'.

FACTS & FIGURES

Project name
Iturbide Studio, Mexico City, Mexico

Architecture
TALLER Mauricio Rocha + Gabriela Carrillo

Client
Graciela Iturbide

Products used
Clay bricks for solid and lattice walls

Year of completion
2016

The central premise of this project is that it forms part of the landscape and blends in as much as possible with the local topography.

MERGING WITH THE LANDSCAPE

TEd'A arquitectes demonstrated real attention to detail and an eye for mulitfaceted clarity with this detached home, which has been designed to fit in perfectly with the topography of the Majorcan landscape. It also harbours an internal oasis.

FACTS & FIGURES

Project name
Can Jaime i n'Isabelle, Palma de Mallorca, Spain

Architecture
TEd'A arquitectes

Clients
Jaime Estela and Isabelle Abermann

Products used
Bricks, pavers

Year of completion
2018

The detached home 'Can Jaime i n'Isabelle' in the Spanish town of Palma unites two concepts: traditional Mediterranean architecture and blending in with the landscape. The design is evocative of traditional Majorcan architecture, with its ornate courtyards, which are often invisible from the outside of the building. These courtyards – also known as patios – were traditionally at the heart of the house and, as such, performed an important social function as a place for gathering. They also protected their inhabitants against the elements, both in summer and winter.

SURPRISING DETAILS The layout of the entire complex is almost – but not quite – square, and the external stone walls appear impenetrable. Inside, however, the building is a surprising oasis of diverse spaces, atriums, plants and walkways. There are four small courtyard gardens in 'Can Jaime i n'Isabelle', which bring together modern and authentic traditional elements. They connect to the central courtyard and are attached to individual bedrooms, living rooms and kitchens. In contrast to the rough outer walls, the internal walls are very neat, but the narrow clay bricks retain a link to nature.

LIVING PATINA Another special feature of this project is the way it has been designed to blend in with the local topography. The property is on a steep south-facing slope with an access road on the north side, which is above the building and has breathtaking views to the

BRICK 20 Special Prize Winner

FEELING AT HOME

It is precisely the natural evenness of the bricks – which are handmade – that creates a pleasant structure and warmth. The architecture of the building has strong roots in the traditional Majorcan style of construction, with a focus on the interior, particularly the courtyards.

south. The view remains unbroken by the house, because it is set into the ground, and the materials used in its construction blend in perfectly with the landscape. The roof has been planted with native grasses and shrubs and the concrete walls were made using stones from the site itself. Locally sourced materials dominate inside, too, with local clay bricks forming the walls and floors. In the courtyards they remain exposed while, indoors, they are painted white. Patterned tiles and wooden features complete the look. TEd'A arquitectes wanted the house to have texture and lines, and to acquire a patina over time – just like traditional buildings, which are actively shaped by time. That is why the Brick Award special prize goes to 'Can Jaime i n'Isabelle'. This building is not just about feeling at home in your own house, but also about feeling at ease in a culture and its historical development.

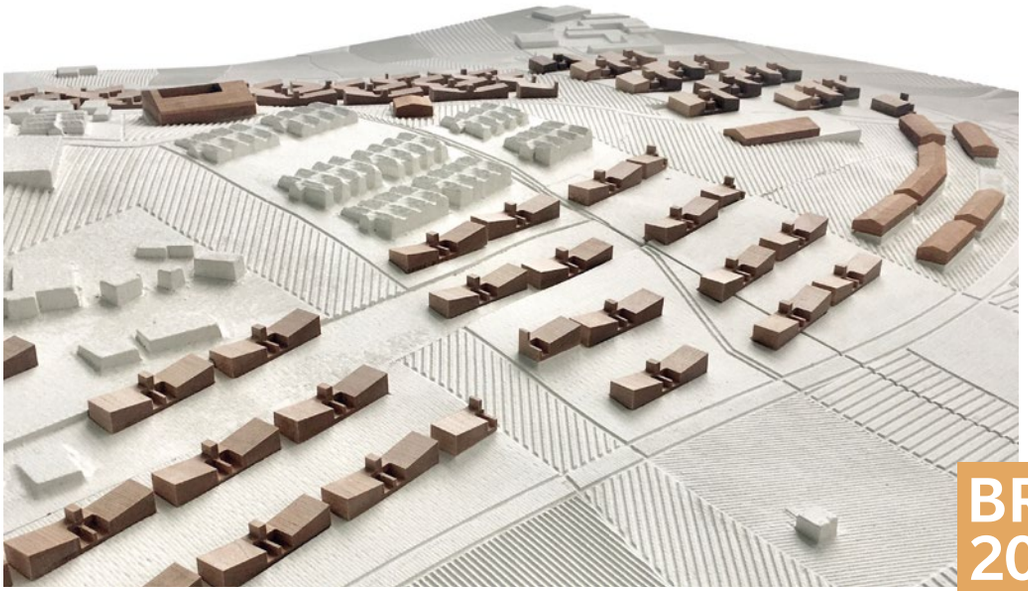
The flowing transition between outdoors and indoors, and the traditional Rwandan culture, were taken into consideration during the design stage.

LITTLE DETAILS WITH BIG IMPACT

In Kigali, a prototype house has been designed to meet the specific needs of the rural population in Rwanda. This project has been carefully thought out, right down to the very last detail, and could be groundbreaking in terms of modernising settlements outside urban areas.

The grey crowned crane is native to Rwanda, and this bird has recently lent its name to a brick building – Umusambi House. Professor Rafi Segal and his team of students from MIT-Africa applied their local knowledge to the design and construction businesses. Together with local companies, workers and the authorities, they developed a prototype house in just three weeks. The floorplan is simple, but ingenious.

TAILORED TO LOCAL NEEDS The long, rectangular shape of the building is perfect for the rolling Rwandan countryside and involves low construction costs, because it requires the removal of only very little earth. The house has an internal area of approximately 68 m2, which can be divided up as needed to suit the individual needs of a specific family. In Rwanda, a significant proportion of housework and life takes place outside, so the project team was careful to incorporate plenty of covered outdoor spaces into their design. The mono-pitch roof ensures that rainwater can be collected and used, avoiding long walks to public wells. The transition from indoors to outdoors is marked by open and



The houses are designed to be built in pairs.

BRICK 20 Category Winner

LIVING TOGETHER

The masonry allows for natural lighting and ventilation.

FACTS & FIGURES

Project name
Prototype Village House, Kigali, Rwanda

Architecture
Rafi Segal, MIT Rwanda Workshop Team

Client
Rwanda Housing Authority

Products used
Facing bricks, backing bricks

Year of completion
2018

closed masonry, which allows light and air to flow in. The durable red bricks come from a production site near the village.

MORE THAN ONE USE Although only one prototype was initially built, the project could result in entire villages being constructed in the future. The project has been designed in such a way that houses are arranged back to back in pairs. This allows them to share a chimney, water reservoir and wall, which, in turn, reduces the amount and cost of materials used in the construction. So, it is no surprise that this not-for-profit project won in the Brick Award category 'Living together'. It has been sensitively designed to suit local conditions, supports local experts, and is a sustainable, ecological and affordable housing model.

The brick façade is an expression of the timeless and robust character of the building, the main purpose of which is to store historical records.

BRICK 20 Category Winner

WORKING TOGETHER

FACTS & FIGURES

Project name
City Archive, Delft, The Netherlands

Architecture
Office Winhov (NL) &
Gottlieb Paludan Architects (DK)

Client
Municipality of Delft

Products used
Facing bricks

Year of completion
2017

AN OVERSIZED BOOKCASE

The façade of the City Archive in Delft reflects the bookshelves found inside – this unusual idea for the city's important building was the brainchild of Office Winhov and Gottlieb Paludan Architects.

An archive is like a treasure trove. Or a time machine. Or both. That's why, for the city of Delft in the Netherlands, the city archive is an especially important building, because it is where the city's history is preserved and available to the public. The task of the architectural firms Office Winhov, in Amsterdam, and Gottlieb Pauladen Architects, in Copenhagen, was therefore to develop a new archive building in the middle of a park, creating visual links to the historic city centre. The result is a timeless, rugged cube with a brick façade and

Inside, the efficient layout enables the flexible use of space and also supports the sustainability of the building.

The use of bricks for the archive building is a direct reference to the rich tradition of brick buildings in Delft's historic city centre.

the highly efficient organisation of internal space. On the ground floor, there are offices, workshops and public reading rooms with unobstructed views of the outside; the floors above have closed façades and house the archive depositories.

CAREFUL VARIATION The relief work on the façade links the building with the distinctive tradition of brick buildings in Delft. The white concrete base is a clear reference to other public buildings in the city's historic centre, and the classic arrangement highlights the cultural and public importance of the archive building. The abstract brickwork is intended to be both reminiscent of bookshelves and evoke associations with the work of Jan Schoonhoven, one of Delft's most important artists. The facing bricks were laid in a regular pattern with variable recesses. The result is an external brick design that references the high level of detail within the archives. The public building, which is important to Delft, is open to the public for research and work in the reading rooms, and makes a significant contribution to collective work on historical records, above and beyond temporal and historical boundaries. A worthy winner in the 'Working together' category. ◼

The curve of the roof is reminiscent of rolling hills. The roof is accessible from several sides, and serves as a playground for young and old alike.

JOIN ME ON THE ROOF!

If you're looking for traditional architecture then you're looking in vain here: the Maya Somaiya Library in Kopargaon, Maharashtra, India, provides children at the school for which it was built with an unusual place to learn and play.

FACTS & FIGURES

Project name
Maya Somaiya Library, Kopargaon, India

Architecture
Sameep Padora & Associates

Client
Somaiya Vidyavihar, Shri Sharda School

Products used
Facing bricks

Year of completion
2018

© Photos: Edmund Sumner

On initial inspection, the narrow plot of land appeared particularly uninspiring – located as it is between the existing buildings of the Shri Sharda English Medium School, an electrical substation, and neighbouring farmland. Which only makes the artistic library, designed for the children by architect Sameep Padora and his team, even more striking. The new reading pavilion enhances the landscape with its architecture and raises it up a level. Because the wave-shaped roof is accessible – although it is constructed from a mere three layers of 32 mm deep bricks. The effect of compressive stress between the 105,000 locally-produced bricks means that the delicate vaulted roof can be used as a playground by local children.

INTERNATIONAL ENGINEERING KNOWLEDGE The architects drew inspiration from around the world when planning their design. Sameep Padora and his team were fascinated by the resource efficiency of the Catalan vault, which dates back to the 16th century, Rafael Guastavino's Tile Arch System, and the shell structures of Uruguayan architect Eladio Dieste. The curved dome shape of the library was calculated by Swiss computer modelling software. Beneath this digitally-designed – but very natural – roof is a single

BRICK 20 Category Winner

BUILDING OUTSIDE THE BOX

The ability to vary the configuration of the space and seating makes the interior perfect for browsing, reading, learning and group work.

room, 44 m in length, with rectangular glass walls that allow in plenty of natural light. It is an ideal place to learn and read: ‘Given the limited learning resources available in the local area, we wanted the space itself to be inspirational and act as a magnet, to draw in pupils and other residents from nearby villages’, explains Padora.

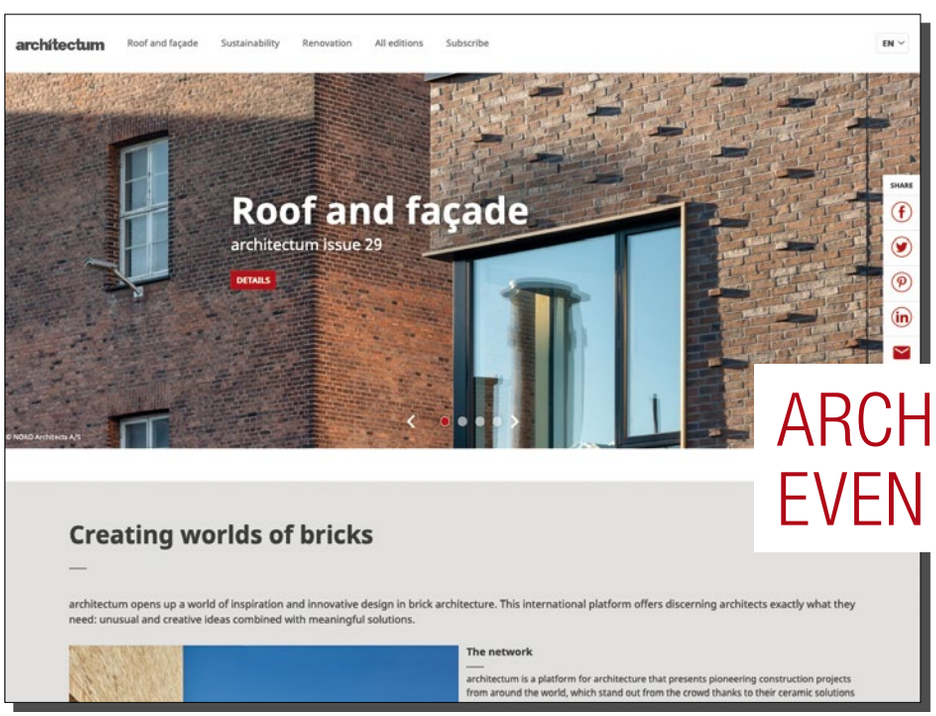
INNOVATION MEETS FUNCTIONALITY The library pavilion is accessible from several sides and, internally, the space and seating can be configured in many variations to suit individual or group learning. The curved ceiling, in warm earth tones, reaches protectively over the space, unbroken by lamps or other items. The architects integrated lighting into the furniture, thereby creating a unique, continuous curve. Overall, the Maya Somaiya Library is a project that aims to inspire pupils to access global knowledge in a sustainable way. ‘An innovative building that unites everything the Brick Award is about: the unconventional use of brick, combined with the full functionality that a library needs’, says the Brick Award Jury, summarising the project, which won in the category ‘Building outside the box’.

A TRIBUTE TO ALL NOMINEES

Now in its ninth year, the Brick Award recognises innovative building solutions and exceptional creativity in the use of brick building materials. This year also sees the publication of the BRICK'20 book, which presents all 50 nominated projects. The project descriptions are accompanied by spectacular photos and informative plans. Just like the award itself, the book is divided into the categories 'Feeling at home', 'Living together', 'Working together', 'Sharing public spaces', and 'Building outside the box'. At the start of the section about each category, you will find essays on current hot topics by renowned journalists and architects. The first volume in this series of books, which is produced in conjunction with Park Books, was published in 2004 and focuses entirely on brick – a timeless material for pioneering and innovative architecture.

The BRICK'20 book is available in English and German from bookshops.

The front cover of BRICK'20 features the 'Studio Iturbide' project by TALLER Mauricio Rocha + Gabriella Carillo in Mexico.



This international platform offers discerning architects unusual and creative ideas combined with meaningful solutions.

ARCHITECTUM.COM: EVEN MORE INSPIRATION

Don't want to wait another two years until the next Brick Award to get your fix of groundbreaking and innovative projects? Visit the architectum website for further inspiration. It reports on current developments and trends in international brick architecture. There are detailed descriptions of extraordinary buildings, with a focus on the themes 'roofing and façades', 'sustainability', and 'renovation', plus an overview of the variety and appeal of clay building materials.

www.architectum.com

The Wienerberger Sustainability Update provides an overview of challenges that have already been overcome and those that are newly emerging, and outlines the updated objectives of the Sustainability Strategy 2020+.

ACKNOWLEDGING CORPORATE RESPONSIBILITY AND PROVIDING SUSTAINABLE SOLUTIONS

The world faces major challenges – challenges that can only be overcome with good ideas and bold actions. Wienerberger is aware of its responsibilities as an international business, and is addressing the challenges of the future by providing innovative solutions, forward-looking concepts, and sustainable products.

Over the course of the company's 200-year history, Wienerberger has always strived to provide its customers with forward-looking solutions. In addition to eco-friendly building materials, the company also develops sustainable concepts and takes a holistic approach to infrastructure. In the second part of this issue of architectum, we look at ways these concepts have already been used by planners and how they have laid the foundations for the architecture of the future.

LOOKING TO THE FUTURE Innovative, resource-efficient, and smart products and solutions for the construction materials industry have been at the heart of Wienerberger's business for many years. With a view to counteracting climate change and the loss of biodiversity, the company has developed its own, self-imposed sustainability goals, which are captured in its Sustainability Strategy 2020+. It is based around the issues of decarbonisation, the circular economy, and biodiversity.

REDUCING, SAVING AND STORING CO_2 Products and construction solutions should make a positive contribution to decarbonisation throughout their entire life cycle. This means that buildings, and the products used in their construction, should store more CO_2 than is emitted during their production. To that end, Wienerberger uses technical innovations in both its production processes and its products to minimise CO_2 emissions. Until the company has successfully transitioned to climate-friendly technologies, any residual greenhouse gas emissions will be offset through various climate protection schemes.

CIRCULAR ECONOMY The circular economy is the only sensible alternative to the existing, linear economy. It is a key element of resource efficiency. Rather than expecting materials to end up in landfill at the end of their life cycle, we can conserve resources and minimise emissions through careful planning. The circular economy is about returning resources to the economy at the end of their life cycle – as secondary raw materials in another production chain. Wienerberger is committed to using resources efficiently and to supporting the circular economy: all products are expected to be fully recyclable.

BIODIVERSITY AT SOURCE Extracting raw materials disturbs nature and its impact must be minimised as much as possible. For every new clay pit, Wienerberger makes sure that surrounding habitats are preserved – or new ones created. In the future, Wienerberger will go another step further and take proactive measures to conserve and protect biodiversity, for example by making a positive contribution to increasing biodiversity and preserving or reinstating ecosystems in the area around clay pits.

The construction sector has a role to play in whether or not Europe succeeds in its goal of becoming carbon neutral by 2050. Wienerberger's Sustainability Strategy 2020+ will make a significant contribution to these efforts. The buildings showcased in this edition of architectum are just some of the pioneering projects helping to pave the way to a greener future for construction materials and infrastructure.

ECO-FRIENDLY PIONEER

The Porotherm 38 W.i EFH Plan is the first climate positive block from Wienerberger.

The Porotherm 38 W.i EFH Plan is Austria's first climate positive block. To achieve climate positivity, Wienerberger implements more activities during production to optimise its own CO_2 footprint, which was necessary to achieve certification as a climate neutral product. These innovative blocks for walls reduce CO_2 by 5,800 metric tonnes per year, which is equivalent to the CO_2 emissions of 3,000 cars per year. The eco-friendly block is filled with mineral wool, which is non-flammable, water-resistant, pest-resistant, vapour permeable and does not develop mildew. It is suitable for all requirements for the construction of detached houses and has excellent insulation properties.

www.wienerberger.at/produkte/wand/produktkatalog/porotherm-38-w_i-efh-plan.html

The bricks can be used for a second life cycle.

JUST A CLICK

In the Netherlands, Wienerberger has developed an innovative dry construction system, which is groundbreaking in terms of sustainability. Individual used bricks from the ClickBrick system can be fully recycled. They fix to the ground, and each other, with steel clips and wall ties, eliminating the need for mortar. The result is faster and more resource-efficient construction. This groundbreaking product is available in a wide range of colours and texture, providing plenty of scope for creativity.

www.wienerberger.nl/en/clickbrick.html

ELEGANT AND TIMELESS

The new Terca Elignia from Belgium is a long facing brick with a rough texture. Its fine structure with a light grain gives façades a subtle relief that is full of character. Available in a range of elegant and timeless colours, it appears at its best when combined with a thin mortar joint. Thanks to its multi-layered construction, when building with Terca, the skins of the wall remain separate from one another, so they can easily be recycled at a later date.

www.wienerberger.be/gevel/collecties/elignia.html

This range is available in light shades of white and grey.

Not a single tree was cut down during construction of the new 'The School' campus for the Krishnamurti Foundation in India. All 76 trees on the site were preserved.

LEARNING IN AND FROM NATURE

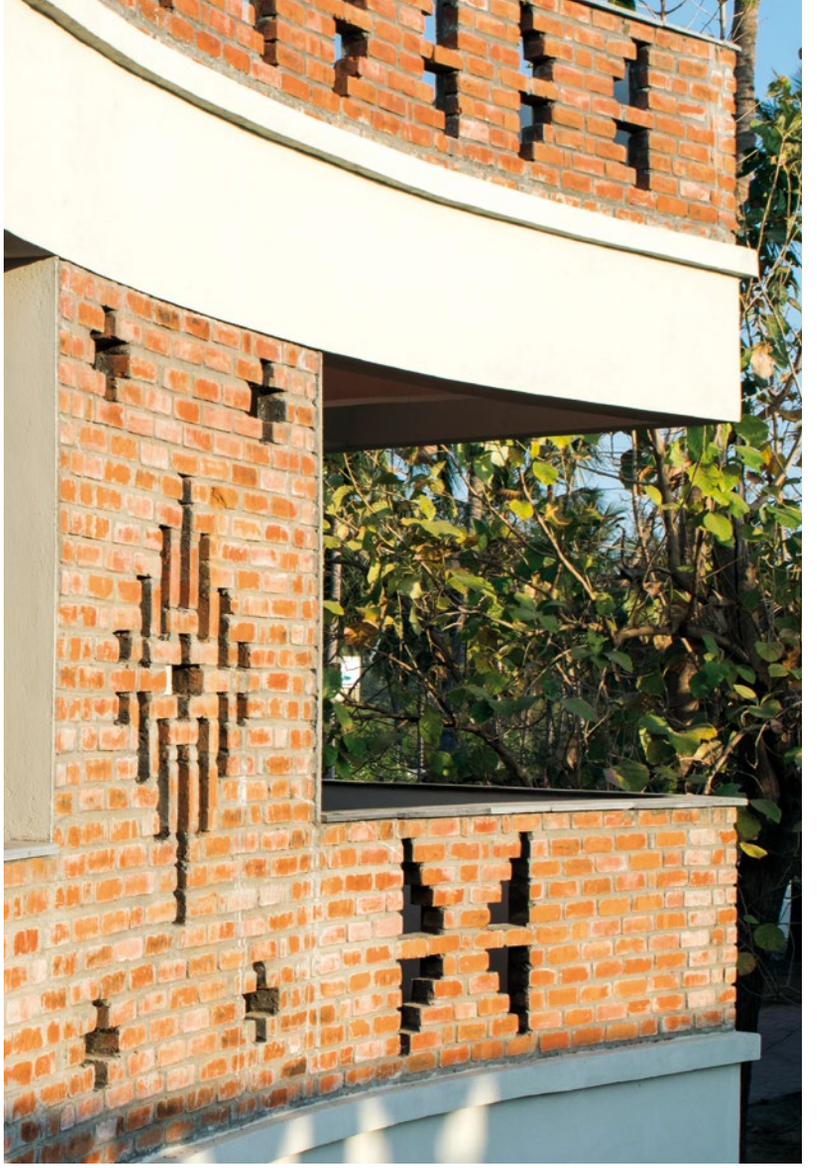
After 35 years on the same site, this renowned school in Chennai, India, had to move. It was a unique opportunity to design an environmentally friendly campus, which would inspire the 400 people using it to lead a sustainable life.

The Indian philosopher Jiddu Krishnamurti (1895-1986) famously said that, 'If you lose touch with nature you lose touch with humanity', and his teachings are at the heart of everything the day school, 'The School', of the Krishnamurti Foundation does. The school's holistic approach aims to ensure that sustainability is actively practised and, above all, is visible. So, the Chennai-based architectural firm Green Evolution took care to preserve the site's 76 trees when they constructed the campus. The result is an organic sense of reciprocity between the campus and its natural surroundings, which is both visibly and physically apparent in the inner courtyard. >

Both the construction materials and the campus as a whole have received sustainability awards from the Indian Green Building Council.

© Photos: Tavisan Ramesh, Shashank Mukundan

> **SUSTAINABLE USE OF RESOURCES** The architects incorporated comprehensive sustainability measures into their design from the outset. Rain and waste water on the campus is thoroughly treated and reused, and the organic waste from this process is composted on-site, in line with the zero waste principle, and energy consumption is 50% lower than at the old campus. In 2018, the Indian Green Building Council awarded the new campus the highest (platinum) level



Art in the masonry: the varied symmetrical patterns on the non-load-bearing brick walls are called Jali, and were created using half-bricks and by leaving gaps.

FACTS & FIGURES

Project name
The School, Thazhambur, Chennai, India

Architecture
Green Evolution

Client
Krishnamurthi Foundation India

Products used
POROTHERM SMART BRICKS as
POROTHERM HP BRICKS and
POROTHERM HP HALF BRICKS

Year of completion
2018

of certification under its Green Schools certification scheme. The materials used to build the campus have also been awarded eco labels. The clay bricks used – Porotherm Smart Bricks – have been recognised by the Indian Green Building Council (IGBC) for their resource-saving sustainability. The IGBC likes the bricks for their low U-value, and because they use local, recyclable raw materials such as fly ash and granite silt. Depending on the version, the hollow clay brick can achieve a U-value of 1 W/m2K, which, in the hot Indian summers, saves on energy for air conditioning systems.

LIGHT PLAY IN FAVOURITE SPACES The architects visited the site on several occasions, at different times of the day, in order to get a feel for the place. The result is an open arrangement of six buildings, which allow the breeze to pass between them, creating an airy feeling. The trees in the courtyard, which were already there, provide natural shade. Light and shade mingle and play from the treetops to the façade. Indian Jalis are sections of wall constructed from half-bricks, to create organic, ornate, filigree lattice screens. Although the campus is smaller than the site of the old school building, more efficient distribution of the buildings and use of space means that there is more space overall. ‘My favourite place is the “thinnai” in the open hall, a place where I can lean back, feel the cool stone beneath me, and listen to the gentle rustling of the leaves, while I talk to colleagues or students’, says teacher Arvind Ranganathan, describing day-to-day life on the natural campus.

BEAUTIFUL EXTERIOR, SMART INTERIOR

This luxury detached home in the German state of North Rhine-Westphalia is extremely energy efficient. The architects Anja and Jochen Engelshove opted for a sustainable, double-skin, brick construction, which was also designed with aesthetics in mind.

The façade of light grey clinker bricks greets visitors as they enter the plot, which also accommodates a guest house and pool house. There is a visual simplicity to the staggered, cuboid architecture that contrasts with the sheer size of the property. Cleverly placed projections and recesses create a sheltered entrance and spacious covered terraces and balconies. Wherever it falls, the eye catches sight of a defining feature of the structure. The sumptuous Polaris waterstruck bricks, in a long, modern shape, emphasise the clear, straight lines and forms of all three buildings.

ONE ELEMENT, CONSISTENTLY APPLIED It is this brick that visually links the trio of buildings, which sit on a plot more than 1,000 m^2 in area. The garages and garden beds have also been clad in the exclusive waterstruck brick, tying them into the overall design. Depending on the time of day, how the light falls, and where they are standing, an observer will see constantly changing patterns and designs on the brick façades.

Jochen Engelshove also chose clay building materials to create the open spaces and paths on the site. Pavers retain their visual appeal throughout their

Contemporary style with a natural feel: This detached home was constructed using three different clay building materials, with backing and facing bricks for the building envelope and pavers in the outdoor spaces.

FACTS & FIGURES

Project name
Single-family property, Neuenkirchen, Germany

Architecture
Engelshove Architektur

Client
Private

Products used
Poroton Plan T18, Terca light grey waterstruck Polaris bricks, black Penter Eros tumble-abraded pavers

Year of completion
2019

Depending on the time of day, how the light falls, and where the observer stands, the colours in the façade will constantly change, from a modern light grey to warm, sandy tones.

The architectural design is characterised by clear structures and staggered, cuboid construction. Projections and recesses create sheltered areas and spacious terraces and balconies.

lifespan, which means that they have a good environmental footprint: the joints make surface sealing unnecessary and allow some rain water to drain into the ground rather than into the sewer system. 'Penter Eros pavers are a great design match for the Terca Polaris facing bricks', says Engelshove. 'The retro brick pavers in modern anthracite black seamlessly carry the exclusive look of the façade over into the open spaces and paths'.

DURABLE CONSTRUCTION FOR A HEALTHY ENVIRONMENT The double-skin construction, which combines highly insulating Poroton backing bricks[1] and Polaris facing bricks, does not only look good: 'Firstly, the double-skin brick wall with cavity wall insulation is highly cost-efficient, provides lasting value, and is low-maintenance', explains Engelshove, 'and, secondly, it is sustainable and healthy'. All the buildings meet the KfH 40 Plus energy efficiency standard. In addition to its energy-efficient construction, the project also incorporates state-of-the-art smart home technology. 'Even without the automated building solutions, it would still achieve the KfW 40 Plus standard, simply because of the design and the excellent properties of the Poroton bricks'. ◀

1 Poroton is the name of Porotherm in Germany.

The recently constructed apartment buildings in Provence can withstand record summer temperatures: thanks to the self-insulating clay blocks, a comfortable indoor climate is maintained even when outdoor temperatures reach summer highs of 40 degrees.

SHADES OF CLAY

When temperatures rise, sophisticated planning alone is not enough – ecological and efficient insulating materials are a must. In France, two different projects satisfied these requirements with self-insulating clay blocks, which are made entirely from natural materials.

These two brick buildings in France could not be more different – completely different climatic conditions, completely different purposes, but a common goal: highly efficient thermal insulation and precise indoor temperature management. Their respective designers chose the same self-insulating brick, which is filled with natural wool and is not only environmentally friendly, but also provides exceptional thermal performance.

COOL COMFORT IN THE PROVENÇAL SUMMER Temperatures in Provence, in the south of France, can quickly climb to above 40 degrees Celsius in the summer. Since 2018, the small town of Istres, near Marseilles, has been home to the gated residential development 'Le Clos d'Enghun' with its 57 apartment buildings and a dozen small villas. Each home has its own terrace or private garden, and they have been designed to withstand the hottest summer temperatures. 'Effective measures are needed to create a real sense of wellbeing in the hot Provençal summers', says architect Gérard Mincone. With that in mind, alongside the self-insulating clay Porotherm Climamur block, the Marseilles-based architectural firm, Midi Architecture, also created shade by constructing terraces and using traditional bright colours for façades. 'We use the thermal inertia of the Climamur blocks to keep the rooms cool long into the evening', explains architect Mincone. The natural building material also maintains a healthy indoor climate.

REGULATING TEMPERATURES FOR THE WINE MATURATION PROCESS Around 400 kilometres north, in the commune of Quintaine-Clessé, the winemaker Jean-Pierre Michel used the same brick in response to a completely different challenge. He built an above-ground wine cellar for his wine barrels, which are highly sensitive to temperature: the barrels need to be kept at constant temperatures for 18 months,

FACTS & FIGURES

Project name
Le Clos d'Enghun, Provence-Alpes-Cote d'Azur, France

Architecture
Midi Architecture

Client
CDC Habitat

Product used
Porotherm Climamur 30

Year of completion
2019

At first glance, the exposed brick façade looks like the shell of a building. However, closer inspection reveals that the blocks have been placed on one another with millimetre precision, to achieve the highest level of insulation without the need for an additional external layer of insulation.

FACTS & FIGURES

Project name
Domaine viticole Clessé, Quintaine-Clessé, Bourgogne-Franche-Comté, France

Architecture
M. Michel

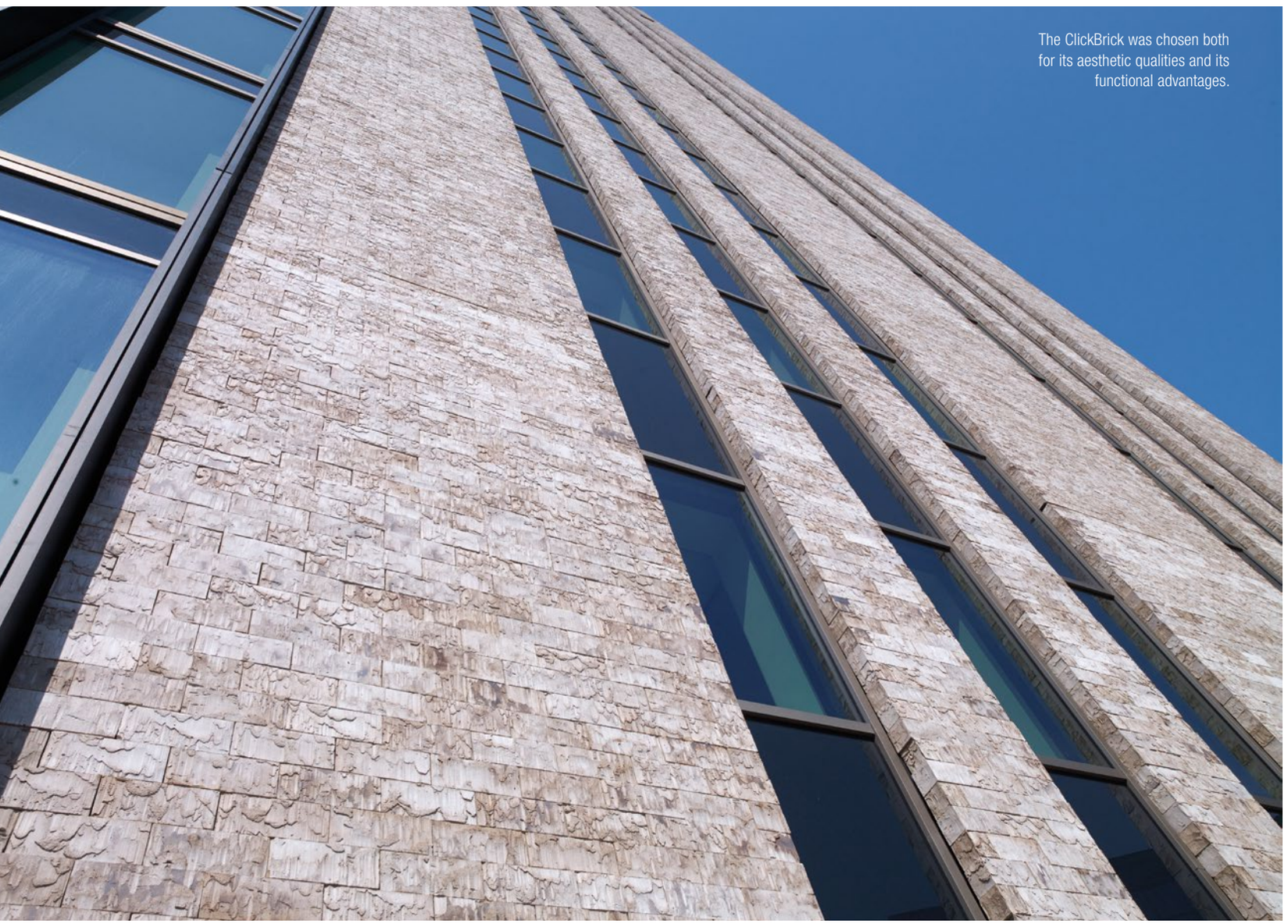
Client
Jean-Pierre Michel

Product used
Porotherm Climamur 30

Year of completion
2019

from maturation to bottling. So, he was looking for particularly effective insulation materials and suitable brick manufacturers in the region. He found a factory in Pont-de-Vaux, just 20 minutes from his winery, which produces the clay bricks filled with insulating rock wool. 'As a vintner, I have a close relationship with the earth and I am as respectful as possible towards it. So, I can't imagine using anything other than neutral, clean materials that are manufactured locally', he says. Michel proudly indicates the materials he used on the exposed brick façade, proving that a brick building can provide perfect insulation. ◼

MAKING THE WORLD A BETTER PLACE, TOGETHER



The ClickBrick was chosen both for its aesthetic qualities and its functional advantages.

The iconic Amsterdam office building ‘De Olifant’ has recently undergone a radical facelift. Renamed ‘The Sharing Tower’, it represents the new sharing economy in every respect – and the ClickBrick drywall system is a major part of this.

A new name for a new life – the Amsterdam office building ‘De Olifant’ was given an opportunity to start over. The purpose of the project was to renovate an outdated 90s office block, and bring it up to date to suit contemporary lifestyles and working habits. The new name, ‘The Sharing Tower’, perfectly describes a building that is all about sharing and collaboration, and which has been designed to support the development of innovative ideas and new initiatives.

The curved look of the façade creates a dynamic, yet organic, link between the floors of the office building. Using natural materials and glass ensures a healthy, spacious, and light environment.

A FAÇADE THAT REFLECTS THE CONCEPT 'The character of ClickBrick bricks, and the fact that they can be reused, makes them perfect in this context', says architect Oresti Sarafopoulos, who loves robust materials that age naturally. Flexibility is a key element in his designs; the buildings are designed to be adapted and extended. The environmentally friendly dry stacking ClickBrick system was perfect for the curved façade. Not only do the bricks have functionalities that are appropriate for the refurbishment project, but they are also cost-effective. 'It's difficult to place massive, solid stone on the façade of an existing building. It's simply too much for the construction team. So, we explored various options of prefabricated façade systems. In the end, we chose ClickBrick', says Sarafopoulos.

QUICK AND REUSABLE Sustainability was another decisive factor when it came to choosing ClickBrick. The individual bricks are fixed to the ground, and one another, using steel clips and wall ties. Since the joints do not have to be mortared, there is no efflorescence or staining of the finished brickwork and the system is completely recyclable. 'There's also no need for lots of scaffolding and these fusion bricks quickly make the building wind- and waterproof', explains the architect. Visually, colour and the tactile nature of the individual elements of the façade create a sense that the masonry radiates warmth, and also result in an imposing, modern façade. A combination of special aesthetics and functionality. ◀

FACTS & FIGURES

Project name
The Sharing Tower, Amsterdam, The Netherlands

Architecture
OZ Architects

Client
TRIUVA Kapitalverwaltungsgesellschaft mbH

Product used
ClickBrick Birchwood

Year of completion
2020

COMMITTED TO SUSTAINABILITY

e4 houses are designed to have low CO_2 emissions and primary energy requirements, and minimal heating costs. Using clay tiles on both the roof and façade helped achieve the project's ambitious goals.

Customised, energy-efficient, healthy and affordable housing – does that even exist? A house in the Slovenian town of Kamnik has been built based on precisely these criteria, making it an example of best practice for the e4 concept – a complete housing solution from Wienerberger.

How sustainable does a house need to be? This was the question that Slovenian architect Nande Korpnik asked himself when designing this detached family home in Kamnik, Slovenia. He based his approach on the e4 brick house concept, with its four cornerstones of energy, economy, environment and emotion. It is important to note that e4 houses are not standardised houses produced using a system, but offer planners maximum scope for creativity. Built from natural materials, these environmentally friendly buildings, which also support good health, are intended to enhance the quality of life of their inhabitants and are designed to be quick and easy to construct.

COMFORT AND WELLBEING IN A ZERO ENERGY HOUSE

Fundamentally, e4 houses are all about the comfort and wellbeing of their inhabitants: Low energy consumption means low running costs; natural materials

The brick curtain-wall façade provides extra insulation and heat storage.

Energy, ecology, economy and emotion – the four basic principles of e4 houses.

FACTS & FIGURES

Project name
e4 Haus, Kamnik, Slowenia

Architecture
Nande Korpnik

Clients
Eva & Grega Sušnik

Products used
Porotherm Profi 38, Tondach Beaver Black, Wienerberger System

Year of completion
2018

create a comfortable environment; and sustainably manufactured products help conserve nature and the environment. At the same time, these houses can – to a large extent – be tailored to meet the specific needs of the inhabitants. The same ceramic roof tiles were chosen for both the roof and the ventilated parts of the façade on the e4 house in Kamnik. This visually defines part of the house, marking it out from the rest of the building, while the ventilation also provides additional insulation for the interior and allows the house to retain heat from sunlight. Architect Nande Korpnik loves traditional brick construction materials. 'The e4 house is built from traditional clay bricks and employs all the latest and most environmentally friendly technical advances'.

ZERO-ENERGY AND LIFESPAN One of the aims of this project was to minimise energy consumption and, therefore, running and heating costs. It also sought to keep the home's primary energy needs and CO_2 emissions as low as possible. Thanks to their high heat storage capacity and good insulation properties, clay building materials help reduce overall energy consumption and CO_2 emissions. The building, which comprises two homes, meets ambitious performance criteria in accordance with the current EU Buildings Directive and is therefore virtually a zero-energy building. The basic idea of the e4 house is built on saving energy in every area from usage to disposal and decommissioning. According to Korpnik, clay as a building material ticked all the boxes. 'In designing the building, there was a special focus on finding waste management solutions, and on the choice of materials, installations and other devices that would make the homes easy to use and ensure they last a long time'.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