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**CHRISTOF DOMENIG**  
CEO CLAY BUILDING MATERIALS EUROPE



## EDITORIAL

# DEAR READERS,

Trends not only exist in the fashion world but also in the construction business. For example the renovation and refurbishment of existing buildings as well as urban densification are currently important topics. On the one hand, more and more people are attracted to the cities. This leads to an increasing demand for inner-city housing and living space. Adaptations and extensions of buildings as well as attic conversions are a good alternative to new buildings when new living areas have to be provided and buildings or even whole districts need to be upgraded. On the other hand, refurbishments help reduce energy consumption and, more importantly, preserve our cultural heritage. An essential aspect for the identity of a city or region is the use of clay building materials. Only think of the wonderful roof landscapes in Southern Europe or the brick façades in Northern Europe. Clay blocks, bricks and roof tiles are not only high-performance building materials, they are also infinitely versatile and adapt to every building project – and: they are simply beautiful. Convince yourself!

In this architectum issue you will find a number of inspiring projects – from the modernisation of single-family homes to the refurbishment of historic buildings, which vividly illustrate the range of possibilities and solutions bricks, clay blocks, roof tiles and clay pavers provide.

Enjoy the read,  
**Christof Domenig**



## IMPRINT

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## KEYMER – IN SAFE HANDS!

Keymer, the 16th century hand made roof tile brand is now part of the Wienerberger group. Based at its new home at the Ewhurst factory, the brand is in safe hands as its traditional techniques and heritage are being maintained.

To celebrate its new place within the company, the highly regarded Keymer Specification Guide has been redesigned and updated. The 76-page guide, which can be ordered free-of-charge is a compilation and celebration of Keymer's history, products and installation techniques. Copies are available by emailing [info@keymer.co.uk](mailto:info@keymer.co.uk).

[www.wienerberger.co.uk](http://www.wienerberger.co.uk)



## SUSTAINABLE INSULATION WITH POROTON-WDF

The Poroton-WDF thermal insulation system is a solid brick wall filled with Perlit, a natural, mineral fibre-free insulating material. It was specifically developed by the Schlagmann Company, a joint venture of Wienerberger, for energy-related refurbishments of existing buildings and is suited for both internal and external insulation. Poroton-WDF is safe and simple to process, provides a high level of fire protection, is very durable, and hardly prone to damages. Additionally, the system fulfils all aspects related to a building-biologically sensible and ecologically sound thermal insulation.

[www.poroton-wdf.de](http://www.poroton-wdf.de)



## SAINT-VINCENT, A NEW FAMILY MEMBER OF ALÉONARD

Emblematic tiling from Wienerberger France: since 1872 specializing in manufacturing traditional roof tiles, Aléonard is a household name for roof renovations of historical monuments and exceptional mansion. As a first step into the high-end Aléonard brand, the Saint-Vincent tile now offers the possibility to highlight all traditional roof styles. With a thickness of 12 mm, a curved or straight shape, dimensions of 16x24 and 16x27 cm, Saint-Vincent also comes in 5 colours. This tile is based on the Aléonard expertise, with an irregular and jagged edge, ancient and rustic texture to suit regional identities. Roof accessories are available for a perfect finishing.

[www.wienerberger.fr](http://www.wienerberger.fr)



## COST/BENEFIT ANALYSIS ASSERTS: START WITH THE BUILDING ENVELOPE

How do we make existing buildings more energy-efficient and limit both climate change and the utility bills of the inhabitants? With that question in mind, Wienerberger set up a test site in Spiere (Belgium). The extensive renovation of this detached home dating from around 1900 has now been completed. In collaboration with a number of experts one of the first studies was conducted to determine the effect of these measures on the net energy demand and comfort.

The results speak for themselves. Energy-related renovations of the building envelope as a first step are a perfect choice as we seek to balance gains in energy efficiency with costs. In the test case, the net energy consumption was reduced from 410 to 79 kWh/m<sup>2</sup>, an improvement of about 80%, whereas the cost of renovating and insulating the roof and façade, including new joinery, remained limited to 40% of the total renovation costs.

[www.wienerberger.be](http://www.wienerberger.be)





## ARCHITECTURE BENEFITS FROM COMPLEXITIES

Bevk Perovic architects, a young and striving architectural office based in Ljubljana, was founded by Matija Bevk and Vasa J. Perovic in 1997. The office has been awarded numerous prizes, among them the prestigious Mies van der Rohe Award for young aspiring architects in 2007. Their portfolio covers projects of various scales from large housing projects and public buildings to individual houses across Europe. In the following interview, Matija Bevk, founding partner and jury member of the 2016 Brick Award, explains the challenges and essentials of urban infill architecture.

**You have planned and realized many urban projects in different countries in recent years. What are from your point of view the essentials for successful urban infill housing?**

Like with any other project, the architectural idea itself is a crucial element, after that there comes the issue of architectural articulation. It is not only colours and textures; those are the final design elements of architecture and, in my mind, it would be wrong to resort to those visual/tactile issues straight away. With urban infill the main question is how does the new building react to its immediate surroundings, how does it use (or abuse) the existing conditions for its own articulation, what interior spatial concept can be established and how does it establish a dialogue with the surrounding city structure. Urban infill projects are always an opportunity to research and redefine the relations between the user, the building and the city. This redefinition is necessary – if for

nothing else than simply because the new programmes are certainly different from the ones in the past, and our times are different than those before, with all implications – from programmatic to technical and philosophical...

**And the challenges?**

All the so-called challenges – or problems, if you want – are simultaneously potentials and inspiration. Limitations and conditions are in reality a framework for the work of the architect. If we are honest, maybe it is most difficult to imagine a building on an open plot of land, without constraints – financial or other – and with 'carte blanche' from the client. I think the architect (or architecture) benefits from complexities and limitations – if you don't run away from them, but embrace and challenge them.



The building is not only 'itself' – a building – but an opportunity to renovate, reconstruct and revive a piece of the city, by intensifying the contact between the building and the city structure around it.

**How can renovation/refurbishment contribute to infill developments? Do town planners and architects nowadays consider the “old” housing stock?**

Old housing stock is in a much better position today than it was before – we don't demolish as much as we used to. It turned out that projects that 'embrace' the existing are much more easily accepted. That's maybe because we like to have a link to the past, or because the projects somehow gain more internal complexity, which is a prerequisite for a successful development of urban life.

**Old buildings are often brick buildings. Is the quality of the building structure and the building material an important factor?**

Of course it is an important factor, the architectural qualities stemming from the material 'definition' of a building are important – for sentimental as well as fundamental, structural reasons. Old buildings are often built with equally useful and beautiful structural solutions. A lot of the

old buildings have been built for different uses – as warehouses, workshops, factories – and it is this relative 'openness' that lets us use them for new programmes today, and brick is a key element allowing for this.

**What are your current urban infill projects?**

We are currently working (together with B-architecten) on an urban infill project for the Erasmus University in Brussels, located right in the city centre in a former industrial area. In this refurbishment and extension project, we're looking for an interaction between the new and old buildings, between the old and new programmes and between the new complex and the city structure. The building is an opportunity to reconstruct and revive a piece of the city, by intensifying the contact between the building and the city structure around it. We're executing the project in brick, but in a different colour and appearance as against the existing fabric – we're aiming at a strong 'presence' and contrast, rather than 'blending' in with the existing.



## RESTORATION OF A LISTED BUILDING

The historic Burgmühle [castle mill] with a granary in Brandenburg an der Havel can look back on 700 years of tradition. In 2002, it was almost completely destroyed by fire and collapsed in places. In the course of the renovation, 64 high-quality condominiums and two commercial units in a prime waterside location were created.

**B**ernd Jansen, managing director of Jansen Immobilien GmbH, was responsible for the restoration project. “The strict regulations for listed buildings required the preservation of the character of the industrial monument on the Dominsel, the Cathedral Island.” The investor decided in favour of systems supplier Wienerberger, whose high-quality building materials are suited for conservation projects and also satisfy the requirements for multi-storey residential construction in terms of soundproofing, thermal insulation and fire protection.

**TOWN CENTRE CHARM WITH RIVER VIEW** Because large parts of the façade survived the fire, it did not require complete rebuilding. When complementing the existing brickwork, it was important from a building physics point of view to select a similar ceramic building material to avoid a mixed construction method. Damaged facing bricks in the façade were cut out by hand and replaced with colour-matched smooth

extruded bricks from Wienerberger: Schleswig ruby red and Heide red shaded.

For the inner layer 365 mm clay blocks were used. This all-ceramic clay block comes closest to the existing brickwork in terms of sustainability characteristics. Due to the high standards of sound insulation required for the internal walls, sound-insulating blocks were used as well as clay block composite floors, which are suitable for properties of this kind. For the gables, the client decided on thermal insulation blocks filled with mineral wool. Another advantage of this block is that it saves space due to its slimmer dimensions. The monolithic integrated construction following the reconstruction guarantees the owners a good investment, a healthy room climate and all the benefits of sustainable construction.

Now restored to a high standard, the Burgmühle has become a fascinating architectural eye-catcher. A building where grain was once processed has become a place for modern forms of living and working.




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## INFO

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**PROJECT**

Restoration of the Burgmühle in  
Brandenburg an der Havel, Germany

**ARCHITECT**

S&P Sahlmann Planungsgesellschaft  
für Bauwesen, Potsdam

**CLIENT**

Projektentwicklung Jansen Immobili-  
en, Brandenburg an der Havel

**FACING BRICKS**

Terca Schleswig ruby red and Heide  
red shaded (both smooth)

**CLAY BLOCKS**

Poroton-T8-MW 24,0; Poroton-T12;  
sound insulating block MZ 5 DF-1,8  
and MZ 6 DF-1,8; clay block floors  
13+6 and 18+6



## LOOKING SMARTER

How do you bring a 1960s university hall of residence up to current standards whilst at the same time giving its exterior a fresher and smarter look? The answers were provided by Strasbourg architecture firm Urbane Kultur and Terca façade bricks.

**B**uilt in the 1960s according to the precepts of the Athens Charter and the “functional city” dear to Le Corbusier, the Alfred Weiss university hall of residence belonging to the Strasbourg CROUS was in need of dual restructuring: interior renovation to offer the students the convenience of single rooms despite the relatively confined space, and exterior renovation to meet contemporary thermal insulation requirements whilst at the same time giving the building a successful facelift.

### BRICK PROVIDES THERMAL INSULATION AND A NEW LOOK

The 208 renovated study bedrooms, each less than 10 m<sup>2</sup> in size, have a triple function: sanitary cubicle, optimised storage areas and larger windows to open up the horizon and eliminate the feeling of confinement. To meet the thermal requirements, the only solution was external wall insulation. The option chosen to give the hall of residence an entirely new look was the Terca façade brick, which was used as external facing.

**MERGING MODERNISM AND TRADITION** Combined with insulating material, the brick reinforces the insulation and considerably limits the thermal breaks. It provides acoustic comfort and a long-lasting façade, with the building being protected against the elements and external shocks. From the aesthetic point of view, the Terca brick allows a combination of the modern and the traditional, playing on colour and the laying of the bricks to rectify and create a vibrant effect on the façades.

This was the aim of Urbane Kultur, a firm of architects with considerable experience in restructuring communal buildings, sports, water sports and cultural centres as well as school buildings and children’s centres. Philippe Dahan, architect and partner in the firm summarises the choices behind this rehabilitation project. “Regarding the exterior structure, we had a building whose geometry was not perfect and whose thermal behaviour was seriously dated. We also had to deal with the change in the building base, which previously was open and is now enclosed down to



the ground. This was achieved by adding a U-shaped metal section between the ground floor and the first floor. As well as its thermal and long-lasting qualities, in an environment where this material was already present, the Terca brick – with its warm white colour and laid using the Joints Vifs® dry joint masonry system to create an abstract, graphic effect – gives the building a calm, solid, sober look. It also has another advantage that is important in this type of renovation project: it allows structural defects and deviations in verticality to be corrected.”

## INFO

### PROJECT

Renovation of the Alfred Weiss university hall of residence in Strassbourg, France

### ARCHITECT

Urbane Kultur

### CLIENT

Strassbourg CROUS

### FACING BRICKS

Terca Terre blanche



## FACELIFT ON THE FLY

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The “Vogelwijk” townhouses in Lisse were built in the late 1960s. After more than 50 years, the well-built but in terms of facilities outdated buildings needed a facelift and an adaptation to current energy requirements. Woningstichting Stek has been entrusted with the renovation of the five square-shaped building blocks. With subtle changes, they achieved a comprehensive facelift and improved the housing conditions of 218 homes.

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The objective was to work with the current tenants to realise a widely supported renovation plan. The starting points were: comfort improvements as well as a change of the appearance and space through an individualisation of the houses. The renovation had to be carried out with the properties being occupied. The 218 homes were therefore divided into five types varying in the extent of wall and roof insulation. A specific approach was developed per house type, tailored to the state of the property. The brick façade could be replaced in a single day. The prefabricated components, developed on the basis of a model home, were mounted from the outside. For the Stek Corporation it mattered that it could retain the properties. The dwellings were adapted to current energy requirements. All houses were awarded a green energy label by the EPA-Advisor.

#### REFURBISHMENT OF 218 OCCUPIED HOMES

“This major maintenance project comprising 218 homes with the residents staying in place required careful planning and preparation”, says George Altena from the Coen Hagedoorn Construction Group. “To be able to work quickly and efficiently, we had a first test-run in a vacant house. We made our sketches and developed a pilot project.” The façades and roofs were prefabricated based on the pilot project. To reduce inconveniences, the façades and roofs were replaced in one day. After three days, the works on the front and rear walls as well as on the roof were completed. Older people, people with asthma or walking difficulties could temporarily stay in a guest house provided by Stek Wonen.

**BRICKS ALLOW UNITY IN DIVERSITY** Ron Baltussen, Hooyschuur Architects explains the design concept: “The brick facings of the houses had a poor visual quality and were highly identical, whereas corporations and tenants currently strive for a certain individualisation. So how far do you go with it? Dutch social housing might appear boring, but it radiates peace and cohesion. We started working on that basis, looking for the

balance between personal expression and coherence. The rows are still divided in blocks of eight to twelve homes. We turned each block into a kind of painting. By finishing the masonry walls in different but matching colours, we created both cohesion and variety as well as individuality. With the insulated HSB element, we could additionally invest in durability and comfort. Within that framework, we started to compose with three differently coloured bricks. One brick look, identical in terms of texture and size, but distinctive in colour. In short, individualisation within a collective appearance. Driving past in your car, you won't see it. When cycling past, the colour differences are noticeable. When you pass on foot, the intended individuality is clearly noticeable.”

#### ELABORATE DESIGN AND ACCURATE EXECUTION

Rien van Amerongen, Advisor of Gevel & Wand Wienerberger added: “In this project, the decision was to replace the outer shell with solid facing bricks. An alternative to this is the SlimBrick, allowing more space for insulation. However, standard facing bricks also create an appropriate, robust renovation solution. It is nice to be able to make your contribution to this selection process. The builder did a great job in Lisse, with fantastic process management. The work was done by a good architect. He knew how to create a subtle colour range with the various facing bricks.”



## INFO

### PROJECT

Renovation project of the “Vogelwijk” townhouses in Lisse, The Netherlands

### ARCHITECT

Ron Baltussen, Hooyschuur Architects, Wormerveer

### CLIENT

Woningstichting Stek, Lisse

### CONSTRUCTION COMPANY

Coen Hagedoorn Construction Group, Huizen

### FACING BRICKS

Terca coral red, beige red and mastic

### ROOF TILES

Koramic Madura – slate engobed and natural red

### COMPLETION

2014



## SCHWERIN'S GEM

The listed building ensemble is located in the old town of Schwerin. It was constructed around 1842 by order of Grand Duke Paul Friedrich of Mecklenburg as a prestigious hotel according to the design of Georg Adolf Demmler, a student of Schinkel. In 2011, the elaborate stucco and half-timbered façade was for conservation-related reasons insulated on the inside with Poroton-WDF.



The listed building in Schwerin's old town was constructed as a prestigious hotel in 1842. It consists of 3 building parts.

parts: a four-storey entrance building with a richly adorned plaster façade, an adjoining half-timbered central part, which comprised four-storeys before the refurbishment, now only two, as well as the building Klosterstraße 5. Together, the buildings form a semi-open courtyard.

#### COMFORT WITHIN THE FRAMEWORK OF MONUMENT PROTECTION

The utilization concept of the new owner intended the implementation of comfortable apartments with floor areas ranging between 60 to 184 m<sup>2</sup> to be carried out in the course of the restoration in keeping with monument protection requirements. All the apartments should have a balcony or a garden terrace. The installation of new lift systems should provide barrier-free access to all storeys. Aiming to upgrade the quality of outdoor areas, the concept proposed – despite the landmark status – the demolition of two storeys of the central part of the building to create a green, bright inner courtyard. In 2011, Schwerin-based architect Antje Forejt started to analyse, plan and implement the necessary refurbishment works.



#### REFURBISHMENT BASED ON SUSTAINABILITY CRITERIA

A carefully planned energy concept was imperative for the refurbishment under monument protection aspects.

The insulation behind the façades with a slate cladding was fitted with 16-centimetre exterior insulation. The ceramic thermal insulation Poroton-WDF by Schlagmann was used on the inside of the dilapidated and damp stucco and half-timbered façades. The capillary-active, diffusion-open insulating material facilitates a functional interior insulation of the exterior wall.

After the completion of refurbishment works Antje Forejt commented on her approach: "The restoration of the building in keeping with monument protection regulations was in all respects aiming for the implementation of the best possible solution with due consideration of monument conservation issues, the urban development, the property developer, and current technical requirements."

Further information on Poroton-WDF is available at [www.poroton-wdf.de](http://www.poroton-wdf.de).

Ten years after the opening of the luxuriously fitted out hotel, its operation was discontinued. Subsequently, the building complex was subjected to changing uses and a large number of conversion and extensions. Since the 1990s, the ensemble had finally been completely vacant and so the building structure suffered considerably. When the owner changed in 2011, the ensemble was refurbished in a sustainable and sensitive way and converted to suit contemporary residential and commercial uses.

The ensemble "Schlossstraße 12/Klosterstraße 5" is located in the immediate vicinity of Schwerin's governmental buildings. It consists of three building

#### INFO

PROJECT  
Refurbishment of a residential and commercial building in Schwerin, Germany

ARCHITECT  
Antje Forejt, forejt architekten, Schwerin

CONSTRUCTION COMPANY  
Schelfbau GmbH & Co. KG

CLAY BLOCKS  
Poroton-WDF, 18 cm

FLOOR AREA  
2,177 m<sup>2</sup>

COMPLETION  
2014



The districts on the northern outskirts of Zurich used to be rural communities, which were only urbanised as industrialisation took hold. This led to a large number of estates being built for employees of the major industrial enterprises. The worker's house built in the Affoltern district in 1930 is typical of its time: to keep as much of the narrow plot of land as possible free for a self-sufficient lifestyle, the house was joined to the one next door at the plot boundary.

**DOUBLING THE VOLUME** This meant that the space available no longer met modern requirements, and since there was permission for the house to be extended and have an extra floor added, it was converted and expanded in 2005. The aim was to create two two-storey apartments with spacious layouts in the converted house. To this end, another floor was added to the building and a cube-shaped extension built on the side facing the courtyard. This meant that each of the three storeys was enlarged by 20m<sup>2</sup>, while the top floor received a terrace on the roof of the annexe. The extension and the existing house are merged

by the open-plan layout, creating the spacious rooms initially aimed for, especially as the building volume more than doubled, from 410m<sup>3</sup> to 870m<sup>3</sup>.

**CLAY BUILDING MATERIALS FOR WALLS AND ROOF** The extra storey and the wall separating the extension from the house next door were built of brick. This was clearly the best solution, as it was simple and low-cost to construct and, in the case of the extension, provides the necessary level of fire protection and noise insulation. "Using bricks made it possible to keep the building's original material concept while enhancing it in a logical way," says architect Martina Roth. The new roof, which is now one storey higher and thus has the same ridge height as the house next door, was covered with dark grey roof tiles. The conversion has thus transformed the former worker's house into an elegant building with a consistent colour concept. The grey roof perfectly matches the red-dyed wooden slats on the extension and the façade of the existing building, which was given a plain white finish.

# CREATING MORE SPACE WITH FINESSE

With a cleverly positioned extension and an additional floor, a small worker's house was transformed into an elegant townhouse featuring two spacious two-storey apartments. The walls were built of brick and a new tiled roof was added to cover the successful conversion.



A worker's house was transformed into an elegant townhouse

## INFO

**PROJECT**  
Conversion of a townhouse in Zurich, Switzerland

**ARCHITECT**  
Imroth GmbH, Flawil

**CLIENT**  
Margrith Roth, Zurich

**ROOF TILES**  
Plano roof tiles

**CLAY BLOCKS**  
Swissmodul

**FLOOR AREA**  
218 m<sup>2</sup>



More details and plans under  
[www.architectum.com](http://www.architectum.com)



## RENOVATION MEANS LOOKING AHEAD

In a two-stage barn conversion project, architect Xavier van der Heyden created a spacious family house that is a harmonious blend of the old and the new. The secret behind it? A logical master plan and love of natural materials allowing a contemporary design to be integrated into a rich architectural tradition.

**R**enovation sometimes requires long-term planning if requirements, flexibility, sustainability targets and the available budget have to be reconciled. This project perfectly illustrates this point. In 2002, the architect Xavier van der Heyden converted a barn with a basement into a compact house. From the very start, the architect made allowances for a larger family. The actual accommodation facilities as well as a vertical stairwell with front door and hallway were added; an appropriate family budget provided,

this could be used as the focal point for an extension added at a later date.

This new part has now been realised. Sophistication in both the design and the use of materials meant that the architect was able to forge a cohesive whole from the old and new parts, while nevertheless keeping them clearly distinct. A striking element is the choice of Blue Terca Paepesteel as facing brick for the new part. The fired bricks clearly distinguish the extension from the red masonry facing of the former



The new volume has a consistently contemporary appearance thanks to its facing bricks, which have been glued on and because the rainwater downpipes are embedded flush in the wall.

The judicious positioning of the new part created an intimate patio along the garden side.



barn. The separate identity is emphasized by using a thin-bed laying method and integrating the rainwater downpipes into the wall. At the same time, it is clear from the dark colour accents provided by the double-fired clay bricks in the façade of the original part that the two outer walls belong together. “The fired Blue Terca Paepsteen is a reference to the shades you can see in the double-fired facing bricks that were used in the original barn”, adds the architect.

The distinction can be seen in other details as well. The new part is higher, its front is closer to the street and it extends further back into the garden, so that a sheltered patio was created in the corner where the two volumes meet. The unity is then created by the typical gabled roofs and the aluminium window frames.

The new part is, of course, very well insulated and set up to be sustainable. Architect Xavier van der Heyden on the advantages of the clay material: “The bricks act as a temporary heat reservoir, only releasing it again slowly, and thus add to the level of comfort for the residents throughout the year. Ceramic building materials are good for sustainable architecture: the raw materials and the production are local and the product properties help create a pleasant and healthy environment to live in.”

Additionally, a GSHP (ground source heat pump) in the extension provides cooling in summer and warm air for heating in winter. Solar control glazing prevents overheating on hot days, while allowing sun rays in during the winter. The architecture bonds the design and the benefits of the residence together.

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## INFO

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PROJECT  
Barn conversion project in Ottignies,  
Belgium

ARCHITECT  
Atelier XVDH – Xavier van der Heyden,  
Ottignies

CLIENT  
Atelier XVDH – Xavier van der Heyden,  
Ottignies

FACING BRICKS  
Terca Blauwe Paepsteen



## CHARACTERFUL REPLACEMENT

Located on the outskirts of Berlin, this former farmstead dating from 1873 was originally built by colonists with little land. Following consultation with the conservation authorities, it was agreed that the most economic option would be the best solution – to demolish the existing building and rebuild it in the original style.

The result is a modern family home with historic charm, in which old and new features are reunited. The entrance door, transom windows, half-hipped roof and stone plinth were reconstructed in accordance with historical details. The clients wanted a both natural and highly insulated building envelope. They opted for Perlite-filled clay blocks from Wienerberger's joint venture Schlagmann Poroton.

**MODERN AND TRADITIONAL** Passing through the timber front door, you arrive in the hallway, a typical feature of these smallholders' houses, which

has been integrated into the new house in compliance with conservation regulations. Leading off from the hallway is a granny flat and access to workrooms and the kitchen. The whole of the ground floor has a bright and generous appearance due to the open doorways. The exposed brickwork in the arches was salvaged during the demolition, and confers more than just a rustic character to the building. All in all, a wonderful unique example of traditional brick architecture has been recreated. The roof space has been converted in a contemporary studio style. The living and bedroom and modern bathroom with a wood-heated sauna are now located on the first floor.

Left: Smallholder's house full of character: The entrance door, transom windows, half-hipped roof, and stone plinth were reconstructed in accordance with historical details.



Left: Old and new features are reunited. Inside view with exposed bricks in the kitchen.

The retained cellar was refurbished and now demonstrates the quality of the architecture of the century before last.

The floors are tiled throughout the house, the ideal solution for the underfloor heating system, which is heated by a gas-fired condensing boiler. When combined with a building envelope from energy-efficient clay blocks this guarantees low running costs. In addition to having excellent sound insulation properties, the cellular blocks also provide pleasant room conditions: Fired clay and the Perlite filling do not give off any harmful substances. This aspect was particularly important to the young family. Clay blocks are also the preferred choice when it comes to fire protection. The long-life building material has the ideal characteristics for a further 200 years in the new smallholder's

house. This rebuild project is an impressive demonstration of the fact that tradition and modernity are not necessarily mutually exclusive. Monument preservation requirements were satisfied while still creating a modern, high-quality living space.

## INFO

**PROJECT**  
 Refurbishment/ Renovation of the  
 "Büdnerhaus" in Berlin, Germany

**ARCHITECT**  
 Dipl.-Ing. Mariola Dieckmann, Berlin

**CLIENT**  
 Bianca and Michael Lies, Berlin

**CLAY BLOCKS**  
 Proton-T8-P

**FLOOR AREA**  
 315 m<sup>2</sup>

# A PLACE TO MEET AND READ

The identity of a village centre is often defined by a single building that characterises the overall appearance. In the small village of Noorderwijk, that role is taken by the former town hall, which was later redesignated as a village hall and library. Its main features are the warm and welcoming outer shell clad with wine-red clay tiles and the strong contrast this forms with the glass extension.



The town hall lost its original function when Noorderwijk was merged with the nearby town of Herentals. While efforts were made to find a new role, the premises were temporarily used as changing rooms for the municipal environmental services and as occasional office for the district policeman. After a thorough analysis of options and requirements, the local authorities decided to convert and expand the former town hall to provide a village hall and municipal library. Additionally, the designers had to integrate a number of parking spaces for vehicles of the local Red Cross and the municipal environmental services.

The job was awarded to the Bert Gebruers – Peter Jannes design studio. At a very early stage the archi-



itects decided that the village hall function would be taken on by the existing premises. Key features of the building are its archetypical architectural form, the large volume, the simple load-bearing structure and the distinctive symmetrical layout, with the stairwell in the centre and a number of rooms on both sides. The building's structure was ideal for laying out separate rooms for a music school, for instance, meeting rooms or a social welfare centre.

Quite a number of changes were necessary to get the stately old building ready for these new functions. The building was insulated, all the exterior joinery was replaced and the wooden joists replaced with hollow-core concrete elements. The load-bearing walls remained intact.



The wine-red glazed tiles that the village hall is completely clad with strengthen the impressive appearance of the building. The architects emphasise that “finishing the roof and walls with the same material gives a building a monolithic look and a powerful appearance”. On top of that, they accentuate the contrast with the transparent cuboid of the new structure that runs perpendicular to the town hall, parallel with the street. The section where the existing and new volumes come together has been cleverly laid out as the common entrance with an area for sanitary facilities.

The architects also focused on sustainability issues. As energy consumption was one relevant aspect, a tiled façade proved advantageous: “A wall cladding

using clay tiles makes it easy to insulate the existing building”, the architects reasoned their choice of material. Moreover, they also drew on the repertoire of sustainable building services: a heat pump and condenser boiler for heating, a solar boiler for hot water, a ventilation system with heat recovery for the library and the village hall, slatted blinds to keep the sun out and control the temperature, the maximum amount of natural light combined with energy-efficient lighting controlled by sensors, and a rainwater collection system. These choices were much appreciated by local associations, because they will undoubtedly encourage the creation of lasting social contacts.

## INFO

**PROJECT**  
Conversion of the old town hall in Noorderwijk, Belgium

**ARCHITECT**  
Ontwerpbureau Bert Gebruers – Peter Jannes bvba, Olen

**CLIENT**  
The City of Noorderwijk

**BUILDING ENVELOPE**  
Koramic Pottelberg 301 Plain Tile, wine-red glazed

# FROM THE URBAN FRINGE TO THE CENTRE OF THE EAST

Oostpoort had long been a marginalised part of the city: low-rise buildings, businesses and open areas. With the arrival of shops, offices and homes, this area had to become the centre of East Amsterdam. The plans were ambitious, but not irrational, given the already large concentration of facilities: the district office, the MuzyQ music building, Amsterdam CBD, sports hall, swimming pool, primary school, and the Muiderpoort station. The number of inhabitants, about 600, is projected to quadruple.

The initial situation was twofold: growth in supplies and professional features, but a weak socio-economic structure. The vision for the urban development partly emerged from the outcome of negotiations between the Eastern suburb and developer OCP.

In 2013, the project office East specified: "There will be fewer apartments, more low-rise private homes and a more spacious, greener public area. There will be more than 80 social rental homes. This new plan better reflects the demand on the housing market and is developed step by step. Thus it can be implemented a lot faster. The new plan is expected to appeal to buyers and tenants who would like to live an urban lifestyle in a green, well-kept and quiet low-traffic residential area."

**INTIMATE SQUARES AND SHOPPING STREETS** In Oostpoort East, 30 quay-side villas will be added along the Ringvaart, 70 mansions (for sale), 35 free sector apartments for sale and 84 social rental apartments. In addition to the houses, there will be a catering facility in the historic Ammonia building of the Oostergasfabriek, a former gas plant. The new residential area in the eastern part forms the link to the more lively western part, where many high-rise buildings emerged previously, accommodating apartments and a shopping area with a parking garage underneath. "This will become a real Amsterdam neighbourhood comprising a mix of historic buildings of the former gas plant and attractive new buildings with intimate squares and shopping streets and corresponding paving."

**EVERYTHING THAT MAKES A CITY A CITY** A large number of agencies contributed to the balanced design of the industrial buildings, the fresh new structures and the intended intimacy. Urban development architect Sjoerd Soeters explained: "Oostpoort has the atmosphere of an intimate city centre. The public areas, the streets and the squares are compact, so people can recognise each other. Everything that makes a city a city we bring together."

## INFO

**PROJECT**  
Refurbishment/urban development of Oostpoort in Amsterdam, The Netherlands

**ARCHITECT**  
Soeters Van Eldonk architects, Amsterdam

**CLIENT**  
Amsterdam Municipality, District Oost [East]

**PAVERS**  
Terca Rosa water-struck DF

**COMPLETION**  
2014





# EARLY MODERN ARCHITECTURE

**Buildings like the Hans-Erlwein-Gymnasium in Dresden tell their own story: about the design concept, the architectural style at the time of their creation and their changing significance in terms of urban development. The building, which was meanwhile placed under a conservation order, underwent comprehensive restoration between 2012 and 2014.**

The school was built between 1912 and 1914 in the Dresden district of Gruna under the supervision of Hans Erlwein, head of the Dresden City Building Department. To this day, the building consists of the north and south wings, which are linked by a recessed central section with a dining hall on the raised ground floor, a gymnasium on the first floor and passageways on the second and third floor. The whole block comprises five storeys in addition to the basement and attic floors. While the building is dominated by the two wings, which form prominent corners with clearly defined façades, the central linking section is distinguished by a curved avant-corps or protruding front part with a balcony.

The respective roofs give the building an upper end appropriate to the distinctive architecture. An elongated mansard roof interrupted by dormers is topped by a hipped roof. The fifth floor and the attic floors are visually separated by a cornice at eaves level. The roof of the linking structure is divided into two parts: the lower part is a classic mansard roof, which is interrupted on the street elevation by five eyebrow

dormers; the upper section is a very steep double-pitch roof, whose ridge is about 15 m lower than that of the roofs of the two wings, and which ends in the rear part of the respective hips.

**IDEAL COMBINATION** The restoration carried out in 2012-14 according to designs of Elbcontor Architekten, Dresden, included reorganisation measures to adapt the building to the requirements of the future school operation. The refurbishment of the building envelope under energy-consumption aspects, which involved the installation of new windows, also included a complete renewal of the roof.

The roof was re-tiled in conformity with conservation requirements using Koramic Alegria 12 tiles with a deep black engobe finish. Koramic E32 tiles with a matching colour and profile were used on all of the mansard roofs. This tile offered advantages in forming the eyebrow dormers due to its range of special shapes in including A-shaped formats and those tapered either on the left or right.





## INFO

**PROJECT**  
 Refurbishment of the Hans-Ertwein-Gymnasium in Dresden, Germany

**ARCHITECT**  
 Elbcontor Architekten, Dresden

**CLIENT**  
 City of Dresden

**ROOFER**  
 Zimmereihandwerk Aufbau GmbH, Chemnitz

**ROOF TILES**  
 Koramic Alegra 12 - deep black engobed, E32, Stormfix

**ROOF AREA**  
 2,950 m<sup>2</sup>

**COMPLETION**  
 2014



# HISTORIC JEWEL

The ravages of time have also taken their toll on the historic jewel Schloss Ebreichsdorf in Austria. The roof of the water castle dating from the 13th century was leaking and the penetration of water threatened to damage the building structure. Consequently the owners, the Drasche-Wartinberg Family, decided on having the 2,800 m<sup>2</sup> roof surfaces elaborately refurbished true to the original.





**T**he fortified castle dating from the 13th century, which was converted into a Renaissance castle and today's Schloss Ebreichsdorf in the 16th century, was subjected to an elaborate roof refurbishment. The Drasche-Wartinberg Family took the initiative for this once-in-a-century investment and, in collaboration with the monument protection authority and the Tondach Company, achieved an exemplary result true to the original. In the following interview, Nora Drasche-Wartinberg describes the moving family backgrounds as well as details from the refurbishment works.

**Did you involve the monument protection authority in this roof refurbishment? If so, what were the main criteria? What requirements were imposed on the building materials in order to achieve a result as true to the original as possible?**

Nora Drasche-Wartinberg: Yes, the castle is under a preservation order and the monument protection authority was, of course, involved in this project. The competent art historians were very cooperative and

took an active part with words and deeds. The specifications made by the monument protection authority included the use of the historically correct material of clay roof tiles with a Tasche format – no plain tiles – and the refurbishment of the chimneys, towers and dormers in their original appearance.

**There is a historical connection between your family, the Wienerberger Company and Schloss Ebreichsdorf. Would you please explain this briefly? Did this influence your selection of the roof tiles?**

Nora Drasche-Wartinberg: The great-great-grandfather of my husband, Heinrich Drasche took over the "Wienerberger Ziegelwerke" from his uncle and big industrialist, Alois Miesbach, which he established as Wienerberger AG in 1869 and as one of the largest and most progressive companies in Austro-Hungary. Schloss Ebreichsdorf was purchased by the Drasche Family in 1909 and still serves as family seat. The contact to the Wienerberger Company and the decision to use Tondach roof tiles was obvious, but this was



The special feature of this roofing solution for historic buildings is the mixture of three roof tile formats as well as their roughened surface, which facilitates historic characteristics. The colour antique was specifically coordinated to match the existing old roof and sampled accordingly.

not the only reason for our decision. We visited the Tondach Company in Gleinstätten and were advised regarding material and colours. The proposal of Tondach and our choice was subsequently coordinated with the monument protection authority. In the end, we used the “Wiener Tasche” old town package in 3 colours and 3 lengths, which was laid by the roofers in an arbitrary pattern to deliberately produce asymmetry. The new roof should not sit on the historic castle like an unnatural orange blot!

**Owing to the property, a castle surrounded by moats, you were surely confronted with difficult conditions for the refurbishment works. How long did it the refurbishment take and how was the work carried out?**

Nora Drasche-Wartinberg: We obtained several cost estimates, from which we found the Greil Company from Lienz was best. Owing to the moats surrounding the castle, the refurbishment works had to be carried out without scaffolding. The work on the tower was done by craftsmen hanging on ropes like

alpinists. In order to reuse the old roof truss dating from the 16th century, the original battens including the old roof tiles had to be removed. For that purpose, a lift was specifically installed. The construction works for the refurbishment of the large roof area of 2,800 m<sup>2</sup> with two towers and several chimneys were carried out over a period of three summers.

**With this roof refurbishment you made an important contribution to the preservation of the historic building. Did the public appreciate your efforts or did you receive any support?**

Nora Drasche-Wartinberg: We have made the decision in favour of this once-in-a-century investment all by ourselves, whereby my husband deserves great thanks for his initiative. We experienced very positive appreciation from our entire environment and were also granted financial support from the State and the monument preservation authority, but we have borne the lion's share of the costs.

More details and the full interview under [www.architectum.com](http://www.architectum.com)

## INFO

PROJECT  
**Roof refurbishment Schloss Ebreichsdorf, Austria**

CLIENT  
**Drasche-Wartinberg'sche Gutsverwaltung, Ebreichsdorf**

ROOFER  
**Reinhard GREIL GmbH, Dölsach**

ROOF TILES  
**TONDACH old town package “Tasche”, engobe antique**

ROOF AREA  
**2,800 m<sup>2</sup>**

COMPLETION  
**2013**





## ARCHITECTURE TO HONOUR THE PAST AND FIT THE PRESENT

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The Chideock Memorial Chapel, part of the Manor of Chideock, is a building steeped in history. The church started life as a simple barn, which, in the 17th century, at the height of the English Civil War, was used as a safe place for Catholic worship. Following the conflict, the barn was transformed into the stunning church, which is now enjoyed by many.

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The Chideock Memorial Chapel, part of the Manor of Chideock, is a building rich with ancient English and religious history. Starting life as nothing more than a barn in the grounds of the manor house, it became a place of secret Catholic worship in the wake of the Civil War, before Humphrey Weld, and then his son, Charles, transformed the barn into a beautiful church, dedicated to Our Lady, Queen of Martyrs and St. Ignatius, founder of the Society of Jesus.

This particular project represented a huge technical and aesthetic challenge. The chapel's striking dome required replacement with something more in keeping with the original style of the building. At some point in its history, its original roof had been repaired or replaced with one that might have kept the rain out, but certainly didn't do justice to the architecture of its construction.

The owner of the chapel, Gaby Martelli, teamed up with architect, Andrew Stone, and main contractors and conservation specialists Magenta Building Repair, to begin the careful process of restoring the church to its former glory in June 2013. Naturally, building tech-

niques and materials have changed hugely since the church was first created, but wherever possible the architect and owners wanted materials and methods to echo the original design.

With that in mind, and on the basis of a series of factory visits to meet the craftsmen and observe the traditional ways of working, the architect specified Sandtoft, Wienerberger's UK roof brand, to supply clay roof tiles. Making use of its specialist heritage expertise as part of its Heritage Service, Sandtoft created two bespoke clay tiles for the dome. The first was an interlocking spearhead tile, specifically created to visually reference original old tiles recovered from the barn (even before it became the chapel it is today). These were manufactured in two colours (red and black) so as to provide a striking and complex zig-zag pattern on the completed dome. The second style was a buff hip tile, with a barley rub twist on the façade.

The result is architecture that not only honours the past and fits the present, but will stand well into the future.

The twin colours seen in the roof tiles perfectly illustrate the thought behind the dome's restoration

## INFO

PROJECT  
**Chideock Memorial Chapel,  
United Kingdom**

ARCHITECT  
**Andrew Stone, Dorset**

CLIENT  
**Gaby Martelli**

ROOF TILES  
**Bespoke Sandtoft tiles – red and black**

COMPLETION  
**2014**



## A PALACE REBORN

A former episcopal residence adjacent to the cathedral, Laon's Law Courts, the "Palais de Justice", which is listed as a historic monument, was almost closed in 2004. An exemplary collaboration and an exceptional restoration project – topped off with a tiled roof by Aléonard Patrimoine – have now revitalised the building.

Perched on a rocky hill, the old town of Laon and its cathedral dominate the surrounding plain and are visible from far away. At the heart of this protected area, the Palais de Justice was owing to its temporary slate and red steel roof a constant source of irritation for many locals. This changed in 2011, when the Public Prosecutor and the Minister of Justice decided to invest some four million Euros in its renovation, which required more than two years of work and the refurbishment of the 3,226 m<sup>2</sup> roof area with Aléonard tiles.

In its history this building, which includes some remnants of a 12th century building and a fine Re-

naissance façade, has accommodated Henry IV, Catherine de Médicis, Anne of Austria, and Louis XIV ... no less!

**ROOF TILE WITH AESTHETIC QUALITIES** It therefore deserved some care and attention and a roof in keeping with its prestigious history. The decision was made to use Aléonard Patrimoine Ocré Lichen clay roof tiles. These tiles, particularly appreciated for their aesthetic qualities, were used in three different sizes with varying nuances in order to create an effect as close as possible to the historical character of the building.



The three sizes of nuanced Aléonard Patrimoine Ocré Lichen tiles create an effect that perfectly matches to the historical character of the building.

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## INFO

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### PROJECT

Roof renovation of the “Palais de Justice” in Laon, France

### ARCHITECT

Mrs Plantinet

### CLIENT

Ministry of Justice

### ROOFER

José Fauchaux Crépy

### ROOF TILES

Koramic Aléonard Patrimoine Ocré Lichen

### ROOF AREA

3,226 m<sup>2</sup>


**A PROJECT REQUIRING GREAT ARTISAN SKILLS** José Fauchaux, the only artisan roofer in the Aisne Department qualified to work on “historic monuments”, nicknamed the “pope of the bell towers”, was chosen from among eight competitors for this job, which ended with him winning an award at the Trophées Aléonard. It’s a job he won’t forget any time soon...

“My fifteen journeymen and I are very proud of our work on this project. Even though we spend almost half our time on heritage restoration jobs, it’s not every day that you get a roof this size to work on. And it is always a great pleasure to work using traditional

methods and with noble materials like gold leaf, copper, lead, and, of course, Aléonard Patrimoine tiles. It was a genuine adventure for us and the collaboration with the Ministry of Justice, the Bâtiments de France architect, Mrs Plantinet, the other contractors and Wienerberger, represented by Stéphane Raux and Pascal Harang, was exemplary. On this venerable, but extremely steep roof, exposed to all weathers and some gale-force winds, we took great care to do an aesthetically pleasing job – with the tapering of the tiles for the turrets in particular – and one that would last, with every tile being fastened down by two copper nails. Fine workmanship!”



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