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IN THIS ISSUE:

Combining old & new
Building extensions
Historic renovation



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CHRISTOF DOMENIG
CEO Clay Building Materials Europe

OLD BUILDINGS. NEW DESIGNS. ONE CONNECTION: BRICK

For architects, the amount of work to be done on existing buildings is steadily increasing. This reflects the advancing age of buildings, an increased awareness of sustainability issues, heritage protection and economical concerns. But it is also due to a growing appreciation of existing structures. When these structures are of high quality, renovation is an excellent choice.

In architectural terms, it's all about breathing new life into an old building using modern materials and designs that both compliment and update existing features. Contemporary architecture incorporates the past to create something new and exciting – with a wide range of creative potential.

That's why demolition is not the most obvious first choice for architects and clients nowadays. Buildings and spaces bearing traces of the past are transformed into new exciting concepts and spark attention in the architecture scene. Ceramic materials are perfectly suited for the task. Used in old constructions, they age beautifully without losing durability and energy efficiency. Used to complement the old structure, the natural material is visually appealing, versatile and provides a modern touch while connecting present and past. The projects carefully selected for this issue demonstrate the value of renovation using sophisticated concepts and creative approaches to design.

Enjoy reading!

Christof Domenig

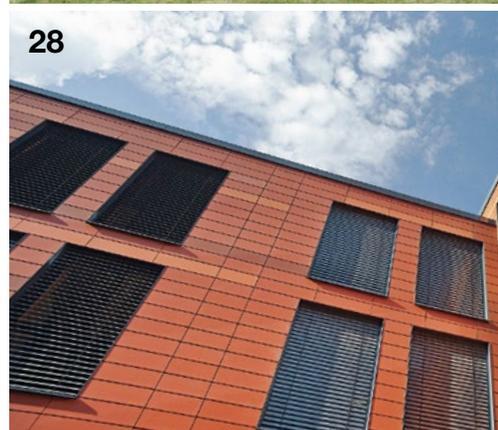
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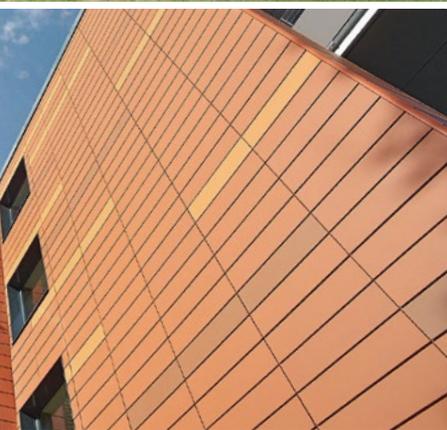
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WIENERBERGER HERITAGE SERVICE OUR BRANDS FOR HISTORIC ROOF RENOVATIONS

For most of us, historic buildings are cultural and tangible witnesses to history and art, so that their protection is necessary to preserve our cultural identity. Wienerberger's long-standing dedication to roofing means offering a very broad range of ceramic products, dedicated to traditional buildings and cultural heritage. To realize special architectural needs and wishes, development and manufacture of bespoke clay roof tiles as well as engobes especially for restoration is possible. Wienerberger distributes its



products for historic renovation under following brands: Aléonard (France), Casta Manufaktur (Switzerland), Keymer (UK), Koramic (Poland and several other countries), Manufaktur (Germany), Sandtoft (UK), Tondach (Czech Republic and several other countries).

Customized solutions for extraordinary roofs, Wienerberger offers special products and local expertise for historic renovation.



OVH Vario roof tiles can be fastened with a simple roof clip, saving work costs and time.

PLENTY OF FLEXIBILITY WITH THE OVH VARIO ROOF TILES

With the new OVH Vario, a gracefully undulating roof is ensured. It is extremely practical to work with, thanks to its variable head and side joints. This means that this roof tile model can be variously processed lengthwise or widthwise. Ideal for renovations, but also for new builds, it fits on any bay dimension. You can lay the tiles at batten intervals from 305 mm to 320 mm and in the width from 200 mm to 204 mm. This variable spacing gives you plenty of processing ease. The efficiency also saves significantly on costs. On top of that, the tiles have been tried and tested in terms of watertightness, breaking strength and frost resistance. Available in eight colours, matt or glazed.

www.wienerberger.nl – info.nl@wienerberger.com

IN TREND: TERGA WATER-STRUCK LIMELINE BRICKS

Warm, earthy colours such as beige, grey and brown are the trend for urban residential buildings. They enable lively architecture with a wide range of design options and are also durable and require little maintenance. With the LimeLine water-struck bricks in five different colours, from beige-white to volcanic grey, Wienerberger has successfully responded to impulses from the market. During the production of water-struck bricks, the clay is pressed through turntable presses and water is used as the separating medium. This produces the typical streaked design with roughened areas, which give each brick a unique character.

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Due to the use of water as a lubricant in the manufacturing process, each brick has a unique colour and surface.



The Culture Cauldron in Tallinn, Estonia, is a recent renovation project by Kavakava.

CREATIVITY AS THE MAIN TOOL FOR RENOVATIONS

KAVAKAVA is an architecture office in Estonia with Siiri Vallner and Indrek Peil as the key figures. Their work is always site-specific, highlighting the potentialities of a particular place. At the same time, their aim is to provoke new situations. If an old structure has enough real and authentic material, they transform the old building into something new and creative. Siiri Vallner talks about her approach to renovation projects.

You recently finished the renovation of the Culture Cauldron, a new event centre in Tallinn. What was the challenge for that specific project?

The Culture Cauldron is a former power plant located between the Old Town and the seaside. The complex

was built step by step, some parts in the 19th century, but most of it during the last century. It has been classified as a cultural heritage monument, so it was not easy to change and modify the use of the space.

How do you deal with restrictions that often occur while renovating a building?

Creatively. In this case, the main design tool was removal to unveil the existing structure in a most attractive way.

Does that mean you developed a plan to show the original materials and structures, as opposed to adding new elements?

We added only a very limited amount of new things. The chimney and the smoke stacks, where we used brick, were already such unusual and impressive >



The Narva College – University of Tartu, Estonia, is a new building that combines the past with the present.

> spaces that we decided to follow the existing features. Originally everything was made out of brick, as the temperature inside was high. Consequently, for the new extra space, the rooftop of smoke stacks, we used bricks as well.

How would you define the challenge between renovating a heritage building while at the same time providing informal creative space for modern use?

We transformed the power plant into an informal cultural place for artists and musicians. The main characteristic of the spatial concept is openness and exposure of the materials – brick, steel and concrete. This enabled us to achieve authentic design even with little financial investment. Indeed, there was a very limited budget. And this means that you have to be very precise and to the point with every intervention. Now, after the renovation, there are halls for performing and rehearsal; there are artists' studios, offices and lots of common space. The design concept was developed alongside the concept of the Cauldron itself.

Which projects would you find most suitable for renovation work?

Anything which still has enough real and authentic materials left. For example, brick is one of the materials which are well suited for this kind of work – combining old and new materials. Our experience is, that for successful reuse, it is necessary to integrate external impulses, hold workshops and listen to us-

ers' input. When you communicate with the various parties, you can develop new content.

The aesthetic appearance can be changed completely when renovating a building, like in your project Raua sauna. How and when did this idea evolve? What are the reasons for covering the whole building in a clay brick lattice?

In this case, the existing building itself was very simple, just a shed. But it is located in a posh neighbourhood, where most of the buildings are under protection. So we needed something modest, which would not offend the heritage department, but still be clearly new and fresh. Natural light on the inside was also important, but without exposing the interior, of course. Another thing is – we want our buildings to get old in a beautiful way – and for this, brick is perfect. The renovated older parts in the original are a mixture of Art Deco and Functionalism, and we redesigned the street side pavilion building, which was enclosed by a brick lattice structure. The new



Siiri Vallner and Indrek Peil are the key members of Kavakava.

»If you use something existing, it is much easier to create diverse and meaningful places than when you start from zero.«

Siiri Vallner, Kavakava



look relates modestly, but clearly to the heritage site neighbourhood.

What makes renovation projects especially interesting?

Discovering, “reading” and rearranging previous spatial ideas. When we began planning the Culture Cauldron, we considered the spatial connections both in the vertical and horizontal direction. So, for example, the basement is accessible via the chimney, adding a dimension to the more common horizontal method of movement in space.

What are the advantages of renovation?

If you use something existing, it is much easier to create diverse and meaningful places than when you start from zero. On the other hand, renovation often turns out to be more expensive than starting from scratch. But architects, as trend setters, can introduce new methods and aesthetics which are more affordable. ■

Raau Sauna in Tallinn, Estonia.





ARCHITECTURE LINKING PAST AND PRESENT

In an ambitious and complex project, a former pumping station in Mons, Belgium, was transformed into a military history museum. To offer more space, extensions were added to the building on both sides. Clay bricks were chosen as building material to establish a connection between the old and new structure.

FACTS & FIGURES

Project name
Mons Memorial Museum,
Mons, Belgium

Architect
Atelier d'architecture –
Pierre Hebbelinck

Client
City of Mons

Products used
Terca Elise and Arte pavers

Year of completion
2015

The Mons Memorial Museum invites visitors to question the multiple, complex realities of the phenomena of war.

The building of the former water pumping station holds a key position in the civilian, architectural and urbanistic history of the city of Mons. It serves as a symbol of an industrial society aiming to improve the quality of life for its people. This designated historical site was converted into the Mons Memorial Museum that deals with the military history of the city from the Middle Ages up to and including both world wars.

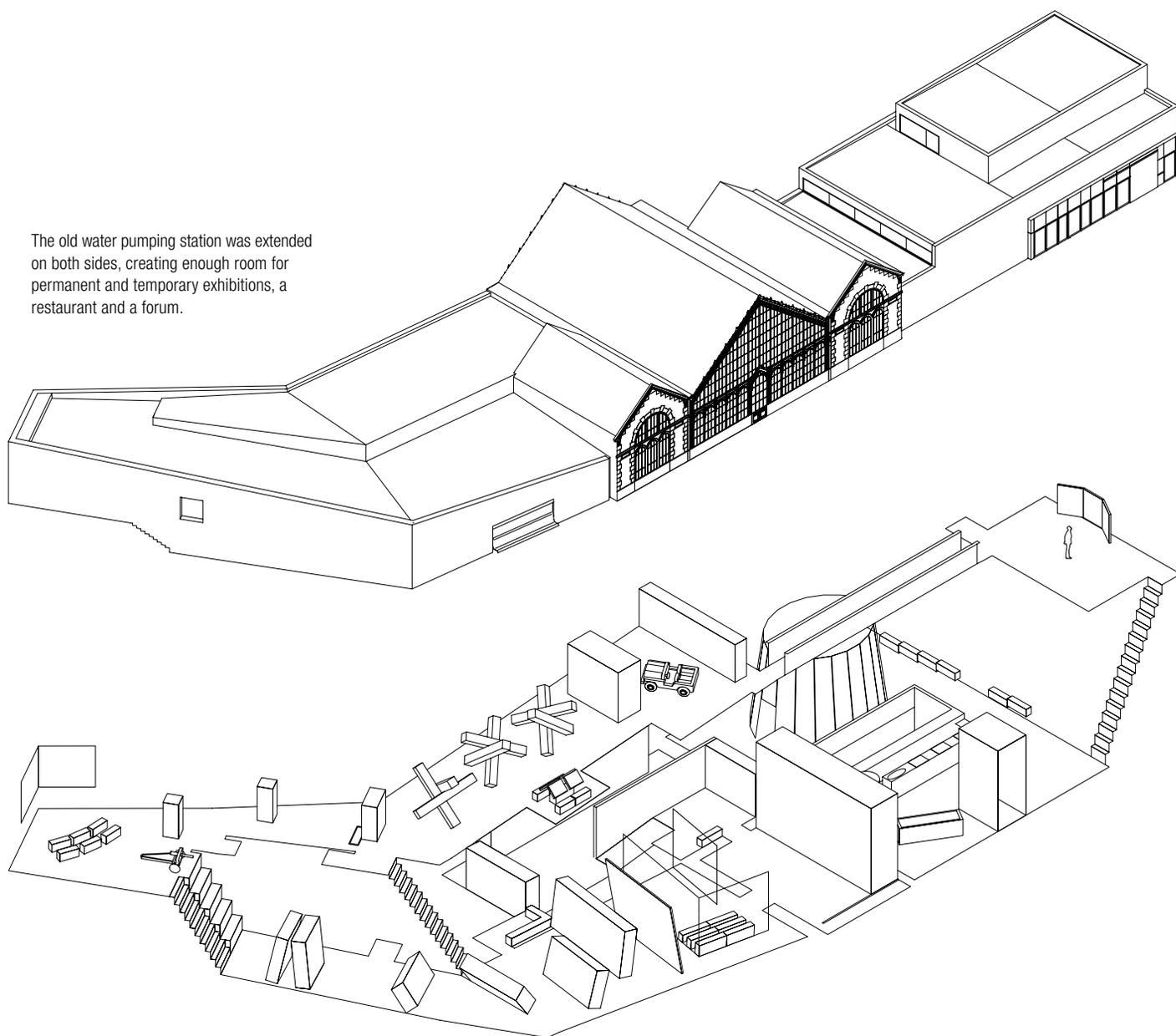
CREATING SPACE FOR NEW USE To provide enough room for permanent and temporary exhibitions, a restaurant and a forum, more space was needed. The structure was carefully adapted and extended with two contemporary extensions on both sides of the existing building by Atelier d'architecture – Pierre Hebbelinck. The new white extensions flank the old structure, making it the heart of the compound and giving the museum a whole new appearance.

DESIGN FOR A MEMORIAL SPACE In order to unite all three structures optically, a contiguous front on the corner of the nearby Boulevard was created. The extensions have their own identities but harmonize with the old building at the same time. The light and >

Red clay bricks were used for both extensions. On the outside they were painted white but the cut-outs remained red, matching the old structure.



The old water pumping station was extended on both sides, creating enough room for permanent and temporary exhibitions, a restaurant and a forum.



> open aspect as well as the cantilever form symbolize the intention of the museum as a place of peace and remembrance, since most of the displayed items exhibit a history of human suffering during wars.

CLAY MATERIALS FOR PAST AND PRESENT Like the museum itself, the material used has a story to tell. The old red brick façade of the former pumping station is listed as protected heritage, so choosing clay materials for the extensions made sense, to combine tradition and modernity. The facing bricks used for the new

»The matters of the project are light, memory and history. The materials used are glass, steel and brick.«

Atelier d'architecture – Pierre Hebbelinck

parts were painted white on the outside, giving them a light appearance. In contrast, the cut-outs were not treated with paint and remained red, matching the clay pavers used. The traditional red colour emphasizes the authentic vibe of the whole museum. ■

MAKING ROOM FOR BUSINESS

To add a new shop, storage space and tea room, the Cornu S.A. biscuit factory in Fontain, France, was enlarged. The new building, covered with light bricks reminiscent of the flour used in the factory, clearly separates the production from the customer area.

The client and owner of the factory, the Cornu Group is a family business producing savoury and sweet biscuits and has been passed down from father to son for three generations. The group has a number of production sites in France and Switzerland.

ADAPTING TO CUSTOMER NEEDS At its Fontain site in France, the Cornu S.A. Biscuit factory manufactures savoury snacks and sweet products, and its biscuits are also available to purchase on site. The scope of the project included extending the premises by constructing a new building called “La Fabrique” (The Factory) to house a shop, tea room and storage space.

A TRIBUTE TO COMPANY ROOTS “La Fabrique” stands out boldly, whilst also drawing inspiration from the materials and logo of the original shop in Champagne, with brick, concrete and blue resin flooring. The framework, which is visible from the outside, forms a regular concrete grid. It is a pre-fabricated post and beam construction, filled with brick or glass depending on the internal functions of the building.

FAÇADE COMPOSITION The façades have been designed to differentiate between the public spaces (shop and tea room) and the storage areas that are

FACTS & FIGURES

Project name
La Fabrique – Biscuiterie Cornu S.A., Fontain, France

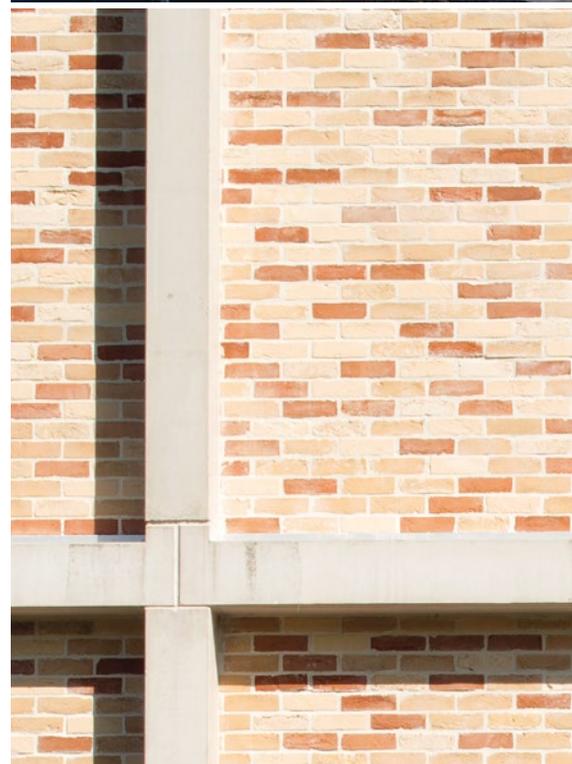
Architect
Atelier d'architecture tardy

Client
Biscuiterie Cornu S.A.

Products used
Terca Système Kess in the colours Fleurs de pommier, Fleurs de cerisier, Vieux Knokke, Forum Branco, Oud Bologne

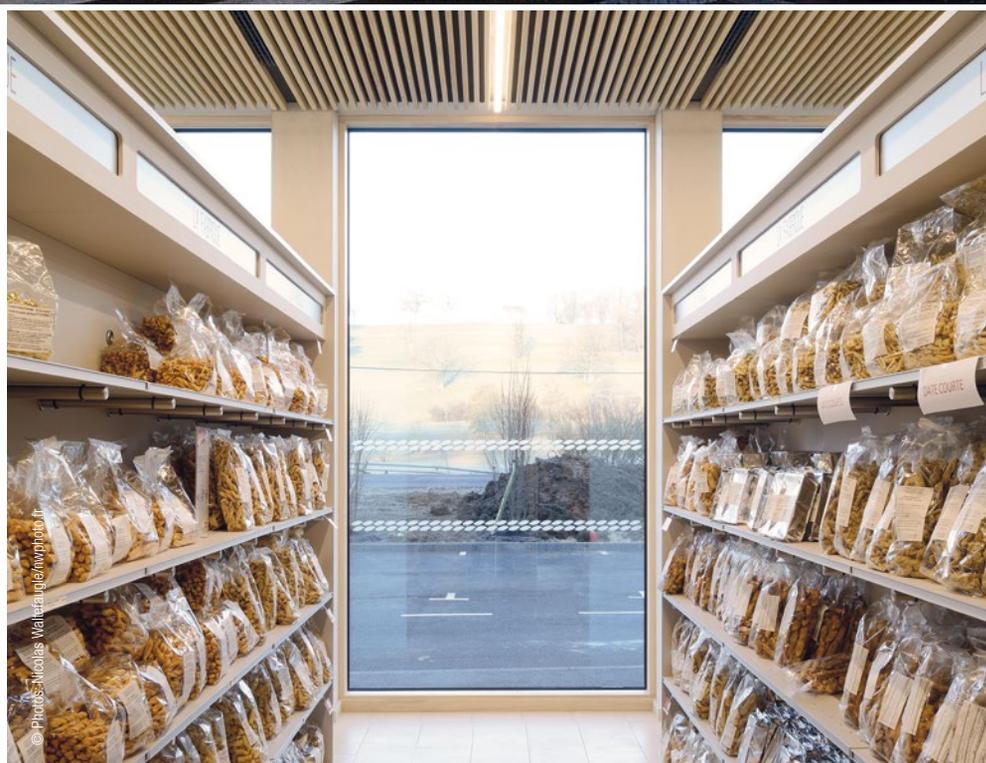
Year of completion
2016

The colours of the clay bricks relate to the flour used in the factory.





The extension houses a shop, tea room and storage space.



included in the new building. From the outside, the façades form two separate L-shaped spaces. The first features huge windows and houses the retail space on the ground floor and tea room on the first floor. The second L-shape contains the storage premises and is enclosed by bricks. This creates interplay between the delicate shades of the light pink bricks, their bleached appearance creating a reference to the flour used in the factory and the grey of the concrete grid.

BOUTIQUE APPEARANCE Inside, the shop breaks with the codes of manufacturing environments: the spaces are designed along the lines of a boutique, with large bay windows providing a view onto fields and the surrounding countryside. Light entering from the large windows adds to the open feeling, reflecting the image of the delicious products on sale. ■



TRANSFORMATION OF A FAMILY HOME

The sensitive addition of a car barn and rear extension to a 19th century house in Cheshire, United Kingdom, brings with it many advantages for its family. Soft pink clay bricks complement the existing brick house and create an interesting contrast to the old dark red bricks.

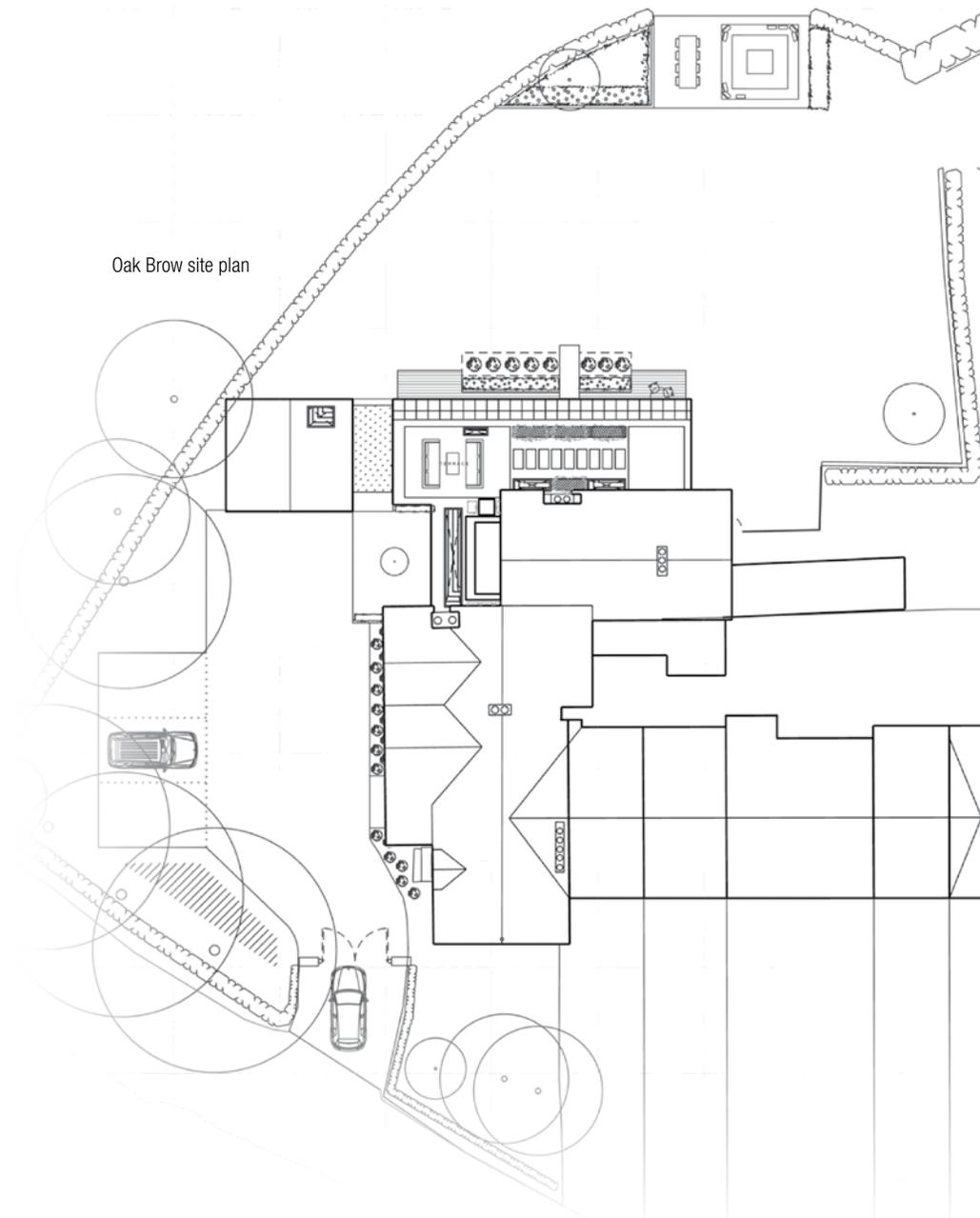


To provide much needed modern ancillary accommodation to a special 19th century house in a conservation area, Annabelle Tugby Architects used a soft palette of bricks, cedar cladding and decorative steelwork using the existing construction as a reference.

CREATING SPACE The project included demolishing a tall detached garage from the rear garden to open up

views from the living spaces and increase the size of the garden and light levels in the property.

A new car barn was sited vertically to the house to create a courtyard feel to the front of the property. A glazed link which provides a view of exposed brick walls creates a new and practical family entrance to the house with access to a new study over the barn overlooking bee hives in the fields beyond. >



Oak Brow site plan

The contemporary extension harmonises well with the historic building.



> **CREATING NEW AREAS** The back extension to the rear of the existing kitchen has a large sitting room. Hidden doors either side of the space lead to a new ground floor WC, laundry room, dog room and plant room. Off the master suite, the stunning terraced roof of the extension provides a fantastic entertaining space for the family, with external stairs down to the garden and a hot tub.

BRICK SELECTION The clay bricks were carefully selected to complement the existing house, its age and the quality of the property, alongside the aspirations

FACTS & FIGURES

Project Name
Oak Brow, Cheshire,
United Kingdom

Architects
Annabelle Tugby Architects

Client
Private

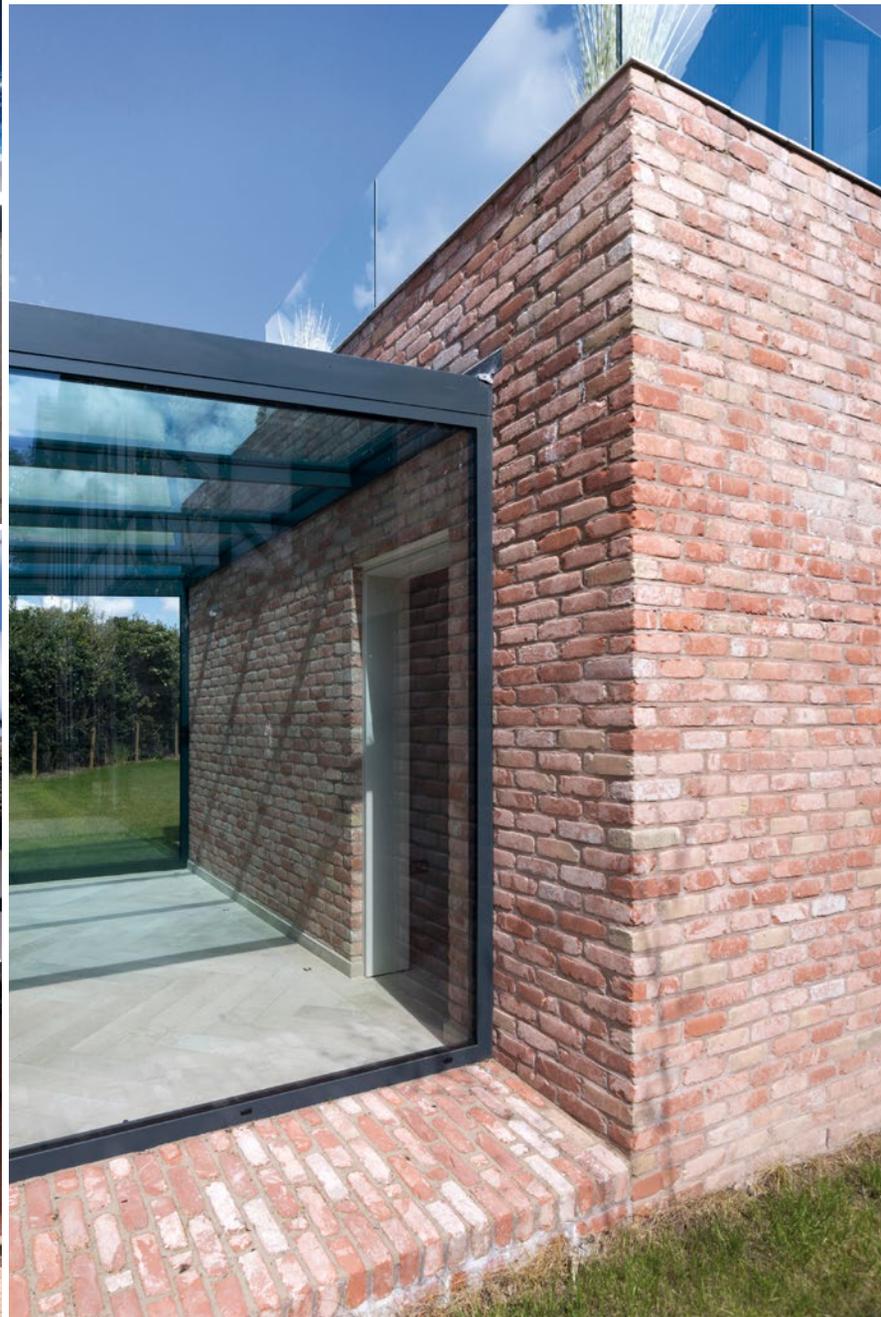
Products used
Terca Retro Tiffany Stock

Year of completion
2016

of the owner. The aim of the soft pink brick was to contrast and complement the existing dark red brick, as opposed to directly matching it.

NEW LIVING QUALITY Overall, the purpose of the project was to add practical spaces to reinforce the existing living spaces, but the outcome has included the addition of exciting new rooms.

What was once a house with a single direction of flow is now a fully connected and visually exciting property with contemporary interiors for the family. 



»Although instinctively contemporary by style, our practice has a track record of sensitive refurbishments to period and listed buildings, being able to blend modern interior architecture or extensions to period properties.«

Annabelle Tugby Architects



IMPROVEMENT OF A LISTED BUILDING THROUGH EXTENSION

The project in London, United Kingdom, comprises the extension and internal and external re-ordering of an apartment within a Grade II listed former Victorian public house. Glazed white bricks connect the new part with the stucco base of the existing building and add a contemporary touch.

The main new elements of the project are a kitchen extension at ground level, an additional bedroom and an en-suite bathroom excavated at lower ground level as well as a new study, all orientated around new landscaped external spaces.

MANY REASONS TO CHOOSE BRICK The external expression of the project is primarily through the use of white glazed brick. This selection was driven by three main factors:

- The brick fits into the existing context of brick buildings and garden walls.
- The reflective qualities of the new brick maximizes the daylight entering the lower ground spaces, helping to amplify and bounce natural light around the lower level courtyard, whilst the white colour serves to visually connect the new extension with the stucco base of the old listed building and the faded white-painted garden wall.
- The glazed brick was also important to the client in personalizing the project.

INTERPLAY BETWEEN SOLIDITY AND TRANSPARENCY The new brickwork is conceived as a monolithic sculpted form and translates vertically into a composition of slender piers whose orientation create a dynamic interplay between solidity and transparency, while maintaining long views from the reception and study spaces through to the garden. A single cut away corner brings light into the bedroom and connects it with the lower ground courtyard. Large window and door openings connect the kitchen to the rear garden.

A SPECIAL MORTAR The mortar colour was developed and agreed in a collaborative craft-based relationship

FACTS & FIGURES

Project name
Brooksby, London,
United Kingdom

Architect
Llowarch Llowarch
Architects (LLA)

Client
Private

Products used
Terca white glazed

Year of completion
2015

»Our client writes that the finished project fulfils all their criteria even more beautifully than we had imagined ... we adore our transformed flat and look forward to enjoying it for many years to come.«

LLA architects

with the contractor on site. Dyed mortar samples with relatively high cement content were produced to achieve a light grey appearance. ◀

On the lower ground level, partitions were removed and a new study was created for the client – chief arts editor of a leading national newspaper – who frequently works from home.



The aim of the project was to balance contemporary elements within the context of the existing interior.



DEVELOPING A POWER PLANT INTO AN EVENT AREA

Kultuurikatel (Culture Cauldron) is the name of a former power plant, located in Tallinn, Estonia. The renovation project focuses on simple principles of spatial organization to meet the needs of the new creative users. The key concept of the project is to provide openness.

The original complex was built in the 19th century with various additions in the 20th century. All buildings are listed as heritage monuments, owned by the city of Tallinn and located between the old town and the sea. After extensive renovation, the complex now offers various halls for performing and rehearsal, club spaces, studios and offices, integrated with a continuous common space enabling all kinds of possibilities for new usage. This makes the area perfect for all kinds of events and offers a lot of room for creativity on a total floor area of 11.200 m².

STRATEGY AND DESIGN CONCEPT The project focused on simple principles of spatial organization to meet the needs of creative users. The tight budget was a challenge – any intervention had to be precise and to the point. The key concept of the project was to provide openness – to enable later additions and unplanned developments. To integrate external impulses, workshops and users' input were used. Communication with various parties was an essential part of the project. The design concept was developed alongside the concept of the new "Culture Cauldron" itself. The project was built in stages; many spaces were equipped with the barest minimum, so that they could be completed by the new user in the future.

PRESERVING OLD STRUCTURES For the renovation project, materials were selected in accordance with >

FACTS & FIGURES

Project name
Kultuurikatel, Tallinn, Estonia

Architect
Siiri Vallner, Indrek Peil,
Kavakava

Client
Kultuurikatel

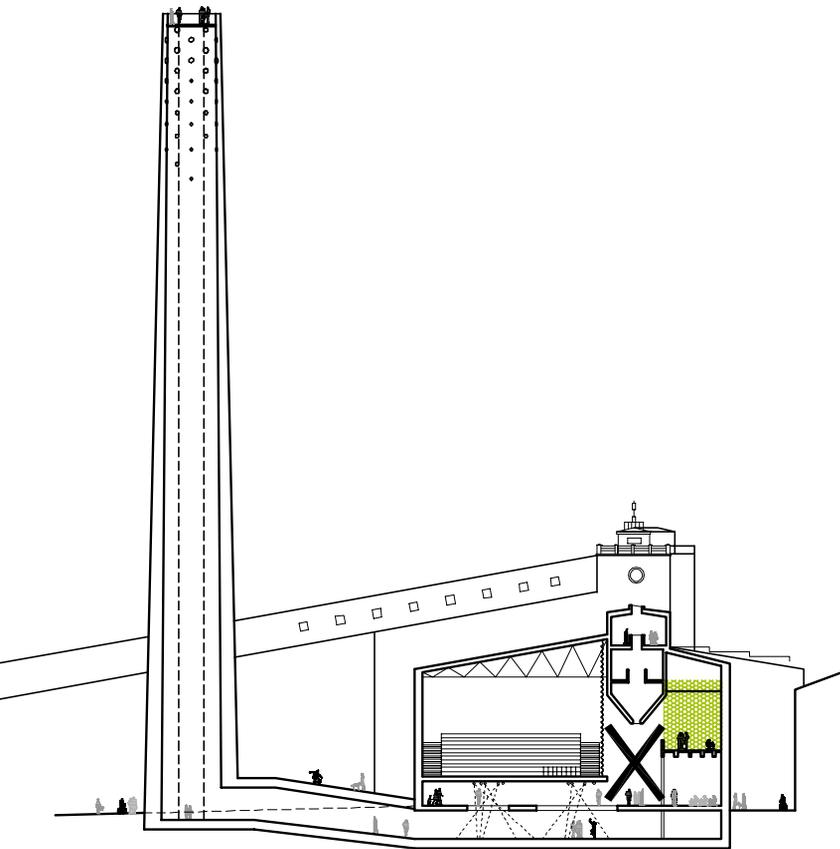
Products used
Terca Aseri red, smooth

Year of completion
2015

The former power plant was transformed into a modern cultural space for artists and musicians.





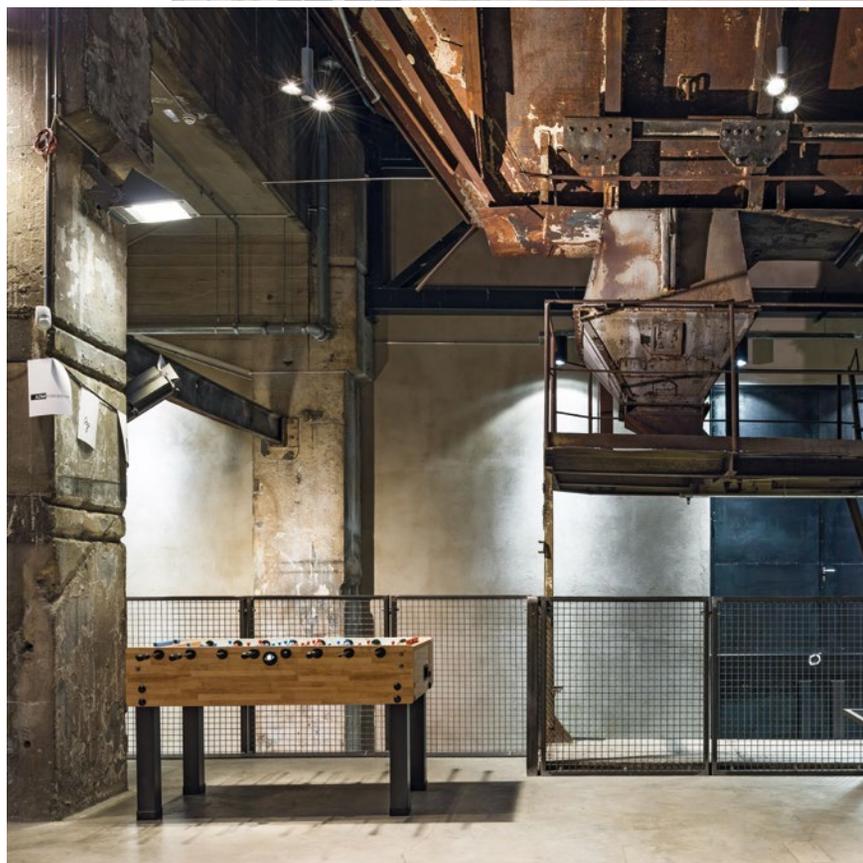


»We added only a very limited amount of new things. The chimney and the smoke stacks, where we used brick, were already such unusual and impressive spaces that we decided to follow the existing features.«

Siiri Vallner, Kavakava

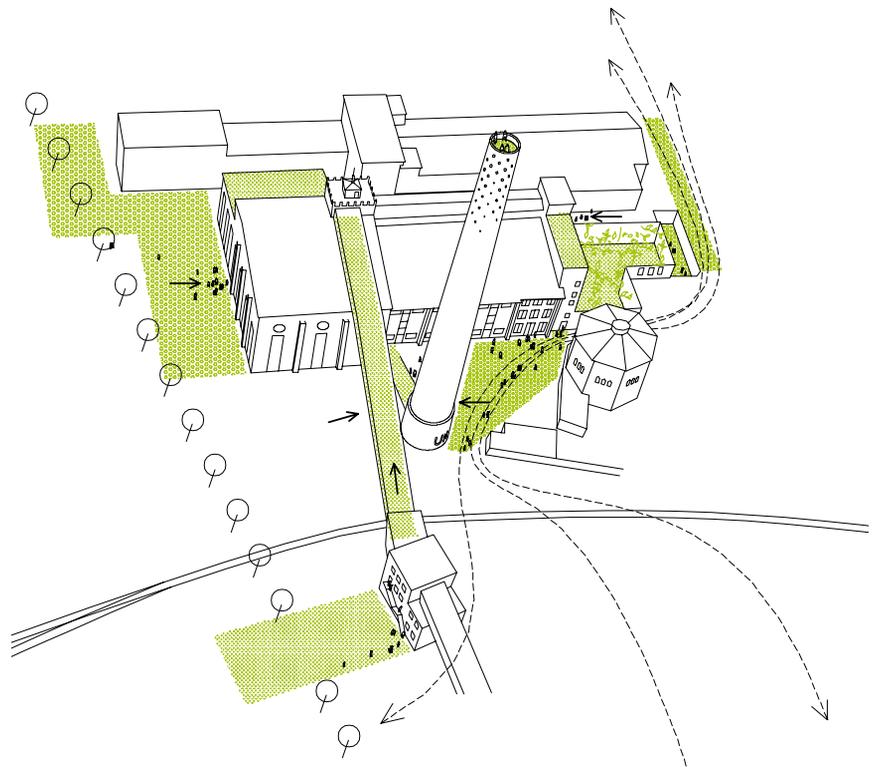
> the initial architecture. Replacements and new additions were executed in a sensitive way, and surfaces were left unpolished as was the case in the original state. You will find exposed concrete, steel and brick from the old factory, and even the interior has often been left untouched and integrated into the design. This creates a unique atmosphere.

Despite or perhaps because of its unusual industrial look, building has been selected as a main venue for this year, when Estonia will hold the Presidency of the Council of the EU. ◀





The main characteristic of the spatial concept is openness and exposure of the materials – brick, steel and concrete. This authentic design was achieved with little financial investment.



UPGRADE FOR A FOUR-STAR HOTEL

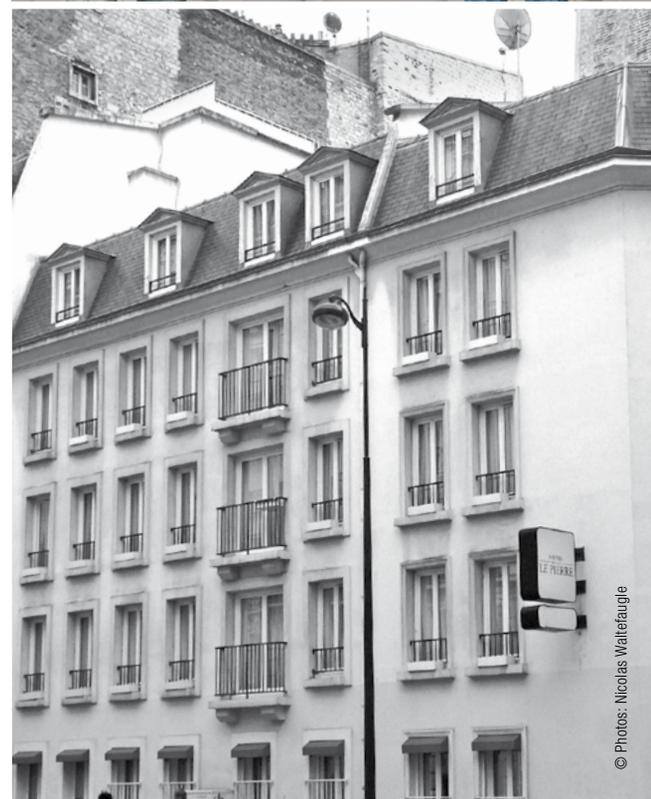
The corner building housing the XO Hotel, which architect Pierre Monmarson was commissioned to renovate and extend upwards, lies in Paris, France. The architect has succeeded in simultaneously creating something new while, at the same time, respecting the typically Parisian urban landscape of Haussmann façades punctuated by Art Deco buildings.

Enlisted in the project because of his knowledge of public buildings, the challenge Pierre Monmarson (BM Architecture) faced was threefold: complete the project quickly, at minimal expense, whilst increasing the height of the building, which originally had three floors and a sloping slate roof. In order to increase its capacity to 58 rooms, the hotel needed to be extended upwards and yet retain harmonious proportions. Therefore, the architect transformed the style of this Faubourg building by giving it a more Haussmann look.¹

RAISING THE BAR “The approach had to reflect the existing building but also create a dynamic between respect for history and innovation. To achieve this, Pierre Monmarson designed a dome, taking as his reference the many imperial domes in the district and creating an interplay between the protruding angle of the corner building and the soft curves of the roof. Continuing with this approach of urban integration,

1) Baron Georges Eugene Haussmann (1809–1891), dramatically rebuilt Paris at the request of Napoleon III. The so-called “Haussmann style” buildings usually have five to seven floors, designed to accommodate several families of varying social classes under the same roof. The mansard roofs with hatches, which lit the rooms of the service personnel, are typical.

Originally the building had three floors and a sloping roof.





The balconies and railings, which add a touch of Art Deco to the building, were inspired by the hotel logo, a stylised vine leaf.

FACTS & FIGURES

Project name
XO Hotel, Paris, France

Architect
BM architecture,
Pierre Monmarson

Products used
Koramic 301 white glazed

Year of completion
2016

the architect incorporated curved bay windows, recalling the bow windows which are another common feature of the district. A sofa in each bay window allows guests at the hotel to enjoy views across the rooftops of Paris.

DEPENDING ON TILES Monmarson needed a light-weight material to extend the building skywards – something flexible that could be used to create the curves and support the tiling of the dome. The white glazed smooth tile was exactly what the architect was looking for – easy to fit to the wooden roof battens, like cladding, and small enough to shape the curves needed. Pierre Monmarson combined the pearlescent white tile with white paint on the façade for consistency of colour across the building. “The aim was to avoid an obvious break between the existing building and the extended section”.

It is a remarkable project, impressive for having dressed up the Parisian rooftops in keeping with the architecture of this iconic district by combining tradition, Art Deco and modernism. ◀





AMSTERDAM'S 'GARDEN VILLAGE' IN FULL BLOOM AGAIN

The Van Der Pek neighbourhood in the north part of Amsterdam, The Netherlands, dates back to 1926. Around 1,500 houses are being renovated in phases. About 40 % will be sold to finance the project. The rest of the houses will remain social housing as was the original intention of the neighbourhood. Clay tiles give the new roofs their beautiful look.

The Van Der Pek neighbourhood is one of first 'garden villages' in Amsterdam. The aim of the neighbourhood was to counter the impoverished working-class neighbourhoods in the city centre. At the time, workers were able to live near industries and the shipbuilding sector without the need to establish an expensive riverbank connection between the city centre and Amsterdam-North.

VILLAGE VIBES The Amsterdam architect, Jan Ernst van der Pek, designed nearly all the houses; he opted for a neighbourhood with genuine village vibes. The buildings were badly damaged during World War II. Afterwards, 14 of them that needed repair were rebuilt while those beyond repair were demolished and replaced by townhouses to counteract the big housing shortage.



All concrete roof tiles were replaced with ceramic tiles.



BUILDING HISTORY The renovation project started in 2015 and will go on until 2019, when all the houses will be as good as new and able to last for another 50 years, while also having the highest attainable energy label (A) in The Netherlands. Eric Schaaphok, project developer of Housing Corporation Ymere: “The first plans were based on demolition and newly built houses in retro style. After a revolt by the tenants’ association, we decided to preserve the entire neighbourhood. Together with the Commission for Spatial Quality, we started careful renovation: from foundation to shell and from layout to comfort.”

BEAUTIFUL CLAY ROOFS The old concrete roof tiles were replaced by ceramic tiles. Eric Schaaphok: “If you invest lots of time and money in preserving a monument, you opt for an eye catcher on the roof:

beautiful roof tiles.” The brickwork, which was just too complicated to touch, was left as it was – a good washing was sufficient. Where possible, the original old yellow bands in the brickwork were restored together with the arched windows of the shops. With traditionally accurate renovation, the Van der Pek quarter is once again a place providing quality of life for its inhabitants and shop visitors. ◀

»If you invest lots of time and money in preserving a monument, you opt for an eye catcher on the roof: beautiful roof tiles.«

Eric Schaaphok

FACTS & FIGURES

Project name

Van der Pek quarter,
Amsterdam, Netherlands

Architect

Architect Bureau Hoogveen BV,
Amstelveen, Netherlands

Client

Housing Corporation Ymere

Products used

Koramic Tuile du Nord 44,
throttled in natural red and blue

Year of completion

2015–2019

CONTEMPORARY REFURBISHMENT OF A STUDENT RESIDENCE

The successful renovation of the student residence in Minden, Germany shows how a building can be designed to be both visually attractive, and also more sustainable and economical. The ceramic façade solution makes an essential contribution to this success.



With the refurbishment of the student residence, which was constructed in Minden in 1969, the Studentenwerk Bielefeld has implemented a high quality and sustainable concept. To enable contemporary quality of living, the planners developed room solutions with four different standards. This included the conversion of 113 individual apartments into 55 larger single and two-room apartments. Two of the 20 ground floor apartments are now suitable for wheelchairs and four are barrier-free.

ADDED VALUE THROUGH REAR VENTILATED FAÇADE Because of the new, larger windows, the Bielefeld architects Crayen + Bergedieck suggested a ceramic tile façade. The elements can be fastened to a substructure, which is mounted directly on the rear wall, and the possibility of an open insulation system also reduces the energy consumption of the building. Due to rear ventilation, there are no problems with moisture. In addition, the fired clay also has a long life. It is low maintenance, therefore especially economical,

is not subject to algae growth and can be recycled. Roof collectors for thermal solar energy for hot water and a natural gas fired heating system provide efficient heating for the building.

ATTRACTIVE APPEARANCE To blend in with the neighbouring buildings on 1.400 m² façade area, salmon, natural red and red-brown coloured ceramic tiles were used. The colours blend in with the environment, but at the same time give the building an individual character.

SAFE LIVING WITH FIRE PROTECTION CLASS A1 A condition for the refurbishment was the implementation of a fire protection concept, whose conditions could be easily fulfilled with the planned ceramic curtain façade. (Fire protection class A1, non-flammable). Anyone who is granted one of the sought-after apartments in the student residence can enjoy a contemporary, energy-efficient and safe living situation close to the university. ■

FACTS & FIGURES

Project name
Student residence, Minden, Germany

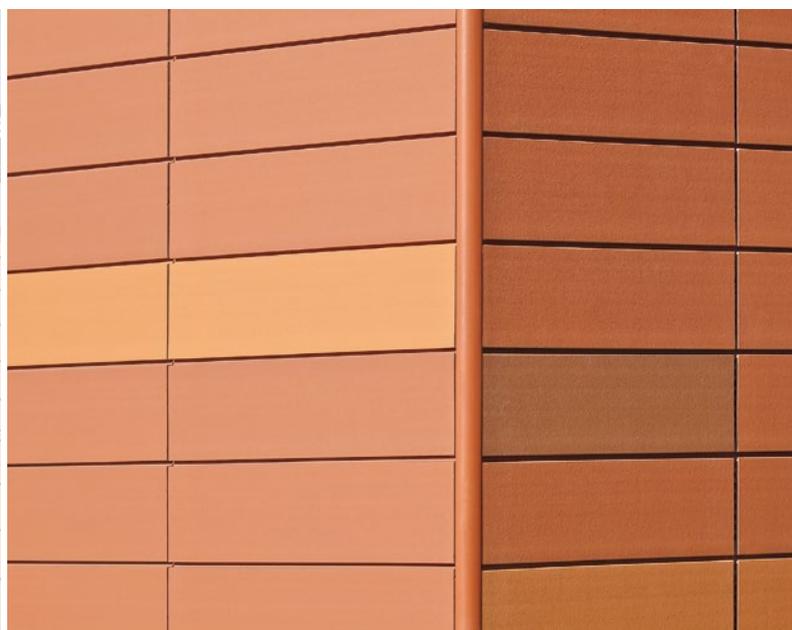
Architect
Crayen + Bergedieck

Products used
Argeton in salmon, natural red and red-brown

Year of completion
2015

Semi-circular aluminium profiles in matching colours create a homogeneous and technically clean finish at the edges of the building. The profiles are supplied by Argeton in four different versions, open, semi-circular and Y-shaped.

Irregular changes in the colours of the clay tiles give the facade an interesting appearance.





With its thousand years of history, Prague Castle is part of the city's conservation area. It was founded around 880 AD by prince Borivoj of the Przemyslid dynasty.

NEW PANTILES WITH HISTORICIST PATINA COVER THE ROOF OF PRAGUE CASTLE

Prague castle is a significant Czech historic sight, as well as the most striking landmark of the UNESCO listed historic centre of Prague. The highest demands are therefore placed on the quality of the clay roof tiles, during renovation.

The roofs of Prague castle are covered either with classic clay tiles bedded in mortar or with historical rectangular slate tiles. In recent years, it has become necessary to restore the pantiles of a number of buildings. The renovation was carried out mainly on some parts of the western, central and northern wings of the New Palace, the Old Royal Palace and the blacksmith's workshop in Lumbe Garden.

ROOF WITH HISTORICIST PATINA An important part of the castle compound which has undergone complete renovation is the central wing of the New Palace, mentioned above. The eastern part of its roof, measuring 1,440 m² in size, received new pantiles with ceramic tiles engobed with an antique finish. The ecru tile patina effect gives the roof a historicist

FACTS & FIGURES

Project name
Prague Castle, Prague,
Czech Republic

Architect
Petr Chotěbor, Heritage
Conservation Department

Products used
Tondach Prejz malý, engoba antic

Year of completion
2015

look and was achieved by partial engobing, where a coloured glass mixture was applied to the tiles before burning. A special mortar, not containing any cement, was used. The laying method itself has remained unchanged for decades and maintains the original historical design. For 40 days, three groups of roofers, carpenters and tinsmiths took turns working on the roof. 189 pallets of clay tiles and 22 pallets of mortar were used.

PROFESSIONAL OPINION All materials and technological processes used during the reconstruction of the Prague Castle roofs were discussed with and approved by the Heritage Conservation Department of the Office of the President, whose purpose is to carry out state administration regarding heritage conservation of the Prague Castle as a national heritage site. **█**



The castle with its clay tile roofs is a symbol of the Czech state and one of the most important cultural institutions.

»I believe the reconstruction of the roofs has been successful – the quality of all types of roofing and its flawless functionality is a matter of course. It is very important for the overall image of the historical buildings to maintain the shape and type of roofing as well as its colouring.«

Architect Petr Chotěbor from the Heritage Conservation Department



The traditional clay tiles in red and black preserve the authentic look of the 900 m² roof.

RETURNING ORIGINAL STYLE WITH LAVISH ATTENTION TO DETAIL

Nestling on the lower slopes of the Alsace Wine Route, the historic village of Andlau in France is beautifully preserved. Many of the red and black roofs are topped by steeples, and the façades of the half-timbered houses are constructed from Vosges sandstone. For the renovation of the chapel, clay tiles that respect this tradition were needed.

The dimensions of the chapel of Saint-André d'Andlau are unconventional. Classified as a chapel because there is an abbey in the village, it is as large as a church, with nearly 900 m² of roof in need of renovation. Although the original building dates back to the medieval Carolingian period, the chapel has been expanded and restored several

times. Today, its octagonal tower keeps watch over an old cemetery on the edge of vineyards.

COMBINING INNOVATION WITH TRADITION The historic site was the perfect place to use traditional clay tiles of high quality. Two versions of the natural coloured tiles, scallop and bullnose, were selected to ensure a perfect fit. The production is complex as the tiles are slow baked for five days in a furnace at a high temperature to ensure flexibility during production. Shaping and cutting of all extra parts is entirely carried out by hand.

The experienced roofer Aimé Fluck and the mayor of Andlau chose the colours Noir de Vigne (Vine Black) and Rouge de Mars (Mars Red), which are colours that occur frequently in the local area.

SPECIALIST KNOWLEDGE Very special attention was paid to the combination of tiles used on the roof: an area of 3 m² was tiled to find the right proportions of red and black tiles, in scallop and bullnose styles. The aim was "to recreate the slight irregularities that can be seen on old roofs with a blurring of lines". Red and black were alternated "to preserve the aged look of a red roof mottled with black, a sign of natural ageing in terracotta tiles".

It was important that the renovation of the chapel roof should preserve the authenticity of the building by retaining the aged look that is part of historic buildings and a characteristic of the regional heritage. ■

FACTS & FIGURES

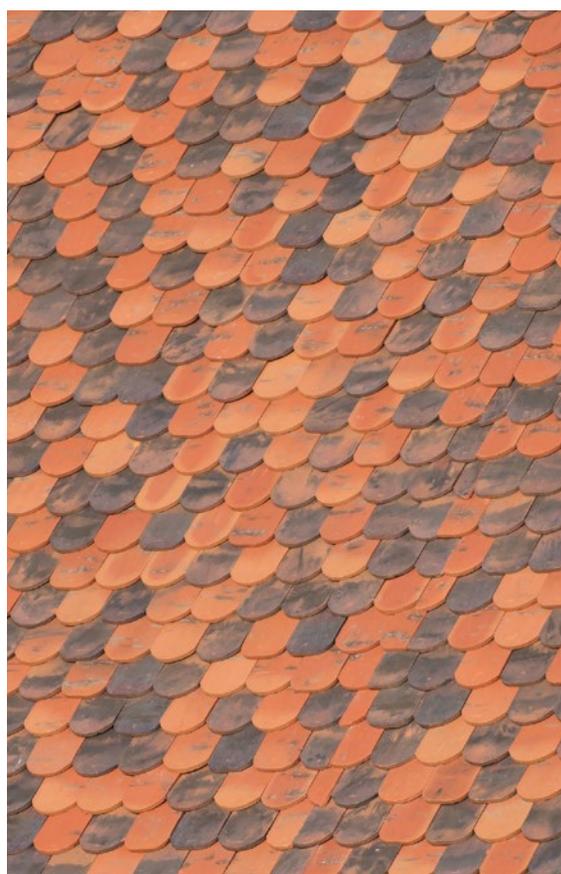
Project name
Chapel of Saint Andre,
Andlau, France

Architect
Aimé Fluck (roofer)

Client
City of Andlau

Products used
Aléonard Alsace Noir de Vigne
and Rouge de Mars

Year of completion
2015

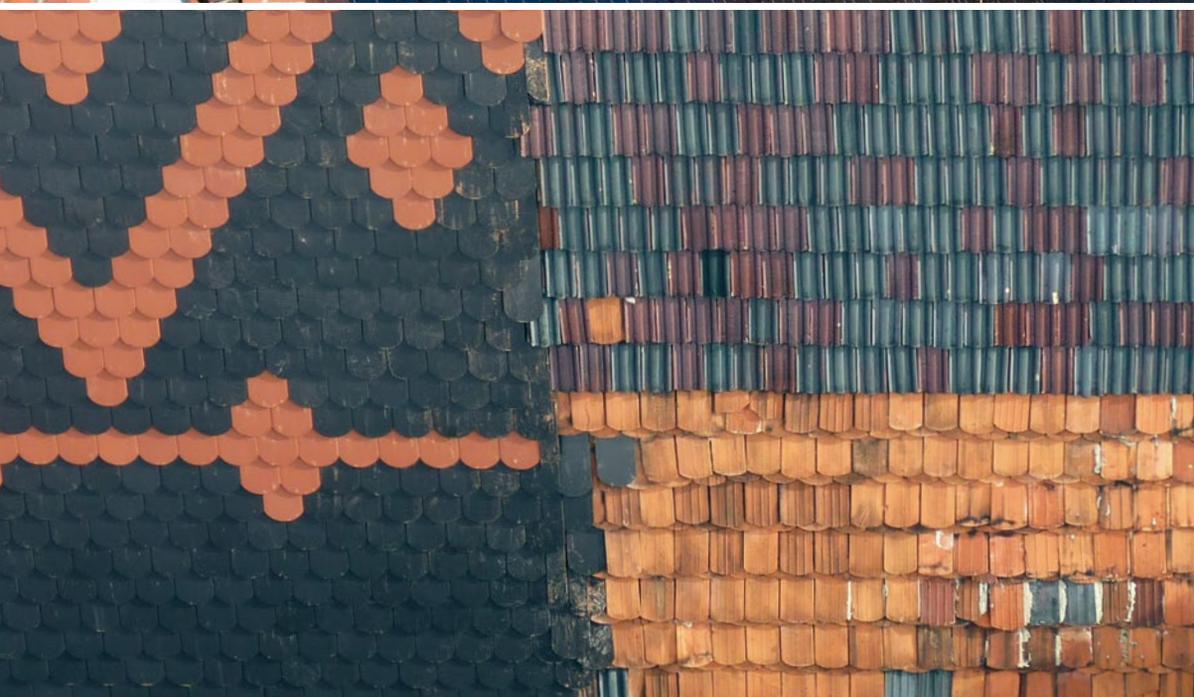




NEO-GOTHIC ROOF RENOVATION

For 100 years, the Holy Guardian Angels Church has been the main Catholic place of worship in Wałbrzych, Poland and an important point on the tourist's map. Renovation of the neo-Gothic roof required using a rare roofing technique of neatly cut interlocking clay tiles, which makes the roof's surface exceptionally smooth.

When the parish church of the Holy Guardian Angels was being constructed in Wałbrzych in 1899-1904, no one expected that more than a century later it would still function as the main Catholic hub of the city. The author of the project was architect Alexis Langer, a representative of the neo-Gothic style. The brick hall church with the net vault was created according to the Latin cross floor



The church roof now features a beautiful and authentic neo-Gothic roof pattern.

FACTS & FIGURES

Project name

The Holy Guardian Angels Church, Wałbrzych, Poland

Architect

Alexis Langer

Roofer

Alpex Sp. z o. o.

Product used

Koramic Beaver gothic cut, red & anthracite engobed

Year of completion

2017

plan and supported by polygonal pillars. The temple's historic roof is gabled, with an integrated tower topping the main entrance.

SPECIFIC ROOF DESIGN Renovation of the church's roof started in 2016, and the plan was to use tile in two colours, arrange a pattern on the roof's surface and apply the unusual technique of constructing a valley. Clay roof tiles, engobed in anthracite and red colors – were chosen because of their indisputable similarity to the original materials, as well as their high quality and durability. Before the pattern was approved by the conservator, the renovation contractor prepared a model of the roof and presented several alternatives for the colour layout.

SPECIAL CRAFTSMANSHIP Jerzy Lisowski, president of Alpex Sp. z o. o., the contractor renovating the historic roof comments: "During the renovation of the Holy Guardian Angels Church's roof, we had to face at least three challenges: a very steep roof, arranging a two-colour pattern with beaver tiles on the 34 slopes of the roof, as well as the construction of airtight valleys between the slopes. The pattern was made with extreme precision, and the special sheets enabled the tiles to interlock at the roof valley. This is a difficult and time-consuming solution, which is rarely used in Poland, and few roofers can do it. The appearance of this type of valley perfectly fits the neo-Gothic character of the building".

KEEPING HISTORIC INTEGRITY WITH HANDMADE CLAY ROOF TILES

The Old Vicarage, located in Suffolk, United Kingdom, was rescued from years of decline and renovated very carefully by its owner Tim Pitt, who is also an experienced renovator. The traditional handmade clay tiles match the historic property and its nearby surroundings perfectly.

FACTS & FIGURES

Project name
Old Vicarage, Suffolk,
United Kingdom

Architect
Tim Pitt (owner)

Products used
Keymer Traditional
Elizabethan and Antique

Year of completion
2016

The aim of the renovation of the listed property in Suffolk was to create a comfortable and well insulated family home. Owner Tim Pitt started the project after gaining previous experience working on awarding-winning listed properties. Tim's aim was to ensure that the roof was sympathetically retiled with respect to its heritage, age, locality and period style.

A BUILDING WITH TUDOR ORIGINS The building hadn't been over-modernized by the previous owners and needed a lot of care to bring it back to its former glory. It had evolved through three stages from its Tudor origins right through to its development as a larger building when it gained a substantial Georgian extension. The outside of the house was completely repaired as the render and roof were in poor condition. The façade was painstakingly restored to its former glory by replacing the lime/horsehair plaster and finishing with a lime wash. The roof was renovated using handmade clay roof tiles.

PERFECT FIT Due to the listed status of the property, it was essential that the tiles chosen fitted in with the overall character and quality of the building. A 50/50 mix of two different coloured tiles were the closest

match to the peg tiles you would expect to see on a house of this period and location. They are considered by the owner to be a very significant improvement on the machine made tiles that had previously been falling from the roof.

ADDING INSULATION Tim installed as much insulation as possible in the spaces between the beams as well as a layer of gold breather membrane behind the plaster. The same level of insulation was repeated below the clay roof tiles to save energy costs.

A GOOD INVESTMENT Tim and his family now enjoy a stunning home which is comfortable and efficient to run – maintaining an even temperature both in summer and winter. The quality and durability of the tiles used for the renovation means that the roof should remain beautiful and watertight for decades to come. ■





The appearance of the sympathetically renovated roof complements the building beautifully and is much admired by the local community.



Built in the 1950s, the listed building was renovated and converted with great care and now houses offices, a communal kitchen and 6 apartments.

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UNCHANGED EXTERIOR IN SPITE OF NEW USE

The historic listed Rothen Stall building in Teufen, Switzerland has been given a new lease of life by its new owners. The strictly symmetrical building with coach house and stable has been completely converted. Apartments and offices are now housed beneath the renovated tiled roof.

The building was constructed in 1833 for the textile merchant and farmer Daniel Roth. It consisted of living quarters, and a stable with a coach house. Farming continued in the Rothen Stall until the 1950s. After this, the stable section remained empty until the conversion in 2016.

HISTORIC The Rothen Stall is a unique classical stable building, for which structural principles from wooden bridge building were used in its construction. It forms a part of the Teufen Culture Route and is a listed building.

FACTS & FIGURES

Project name
Rothen Stall, Teufen, Switzerland

Architect
ateBO AG

Products used
Casta hand-finished,
round cut, natural red

Year of completion
2016

ORIGINAL APPEARANCE For the new owners it was important that the classical architecture and especially the bridge construction of the roof structure as well as further features of the former architecture were shown to their full effect. The function of the barn, which is accessible to vehicles, was also to retain its function. With the conversion, the characteristic appearance of the 400 m² roof remained unchanged. The material that was used remained the same: fired clay. As a replacement for the old roof tiles, it was decided to deliberately avoid treated models with an artificially weathered effect. Traditional, natural red roof tiles were selected, which will only develop the desired patina of their own accord over the years to come.

TRADITIONAL ROOFING WITH MODERN SUBSTRUCTURE A further requirement related to the method of roofing, for which the original, but now rare single covering was required. A tried and tested system consisting of a vapour barrier, PU inclined roof insulation and a sub-roof membrane were used for the roof structure. In spite of the great age difference, the modern system harmonises well with the traditional tiled roof. Thanks to the successful renovation, the Rothen Stall shines with new splendour and at the same time provides a new, contemporary use with 6 apartments, offices and a communal kitchen, which can be used by all tenants. ■

