

The magazine for Jansen Steel Systems | Issue 1.2019

SCALE

BUILDING WITH STEEL & STYLE

Renovation

Münster Reconstructing old steel windows

Arosa Chic shed with a mountain view

Professor G. Giebeler Renovation – what's what?

2019 Baukultur report Architectural inventory has a future

Lyon Flagship showroom through the ages

London A window into history

Genk A monument for restructuring

Professor S. Kurath Densification and retention

Tervuren Versatile historical witness

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Steel Systems

Editorial

Renovations with a unique profile

Steel plays a central role when it comes to renovations and the retention of existing and protected building structures. It offers outstanding material properties and a variety of design options. Reason enough to give the topic of “Renovation” a platform in this edition of SCALE, our new magazine.

The aim of SCALE is to inspire, inform and entertain. Projects that have been carried out in different countries demonstrate the results that can be achieved with steel systems by Jansen. Professor Georg Giebeler from the University of Wuppertal (BUW) brings clarity to the large number of confusing terms, while Professor Stefan Kurath from the Zurich University of Applied Sciences collaborated on a specialist article entitled “Dealing with historically significant examples of residential housing”. For anyone who wants to relax or is already planning their next holiday, we recommend the article “Holidays in listed buildings”. It details where the whole family can relax in carefully and lovingly restored buildings – home improvement inspiration included.

Metals were already being used even in the early ages. However, it was the development of special melting furnaces at the time of the Industrial Revolution that made it possible to manufacture iron or, rather, steel in such large quantities that it became used in architecture just as much as stone and timber.

Jansen AG has been working with steel since 1923. The expert knowledge of the material that has been acquired over generations is now being used by the family company to provide innovative building systems for custom solutions.

Are you interested in the modernisation, renovation or flexible conversion of old existing structures in line with listed building regulations? With the current edition of SCALE, we show that with steel profile systems from Jansen, almost anything is possible.

Be inspired. We hope you enjoy the magazine.

Your SCALE Editorial Team



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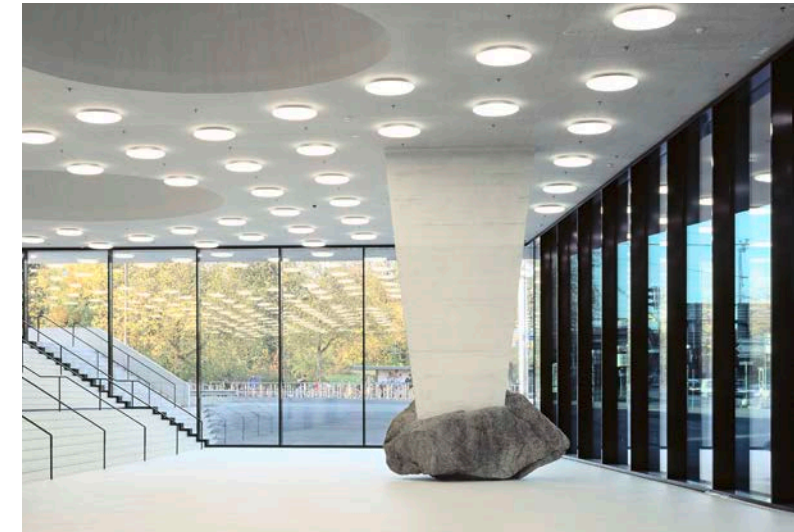


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Read SCALE online: scale.jansen.com

Image on title page: The core expertise of Jansen includes the development and production of well-conceived profile systems made from steel and stainless steel. Jansen offers support for all areas of fabrication and the lifecycle of buildings – BIM models, JANIssoft planning software, machinery and training courses are just a selection of the wide range of services on offer. The result is extraordinary reference projects such as the Royal Museum for Central Africa in Belgium.

LATEST NEWS



New: Janisol Arte 66

Since the market launch of Janisol Arte, Jansen has systematically expanded the application options of the extremely narrow, thermally broken steel profile system. With a wide variety of opening types, Janisol Arte 2.0 lends itself well to both the reconstruction of old windows as well as to windows in trendy newbuilds. The narrow profiles result in slender yet stable constructions with a large proportion of glass and excellent thermal insulation.

With Janisol 66, Jansen is expanding its range of systems to include an attractive variation. The basic depth of 66 millimetres enables the use of thicker glass, with a vent height of up to 2300 millimetres. This makes it possible to have the turn/tilt opening type, even with the special requirements of listed buildings. It can be combined with other opening types from the Janisol Arte 2.0 steel profile system range.

jansen.com/arte66



100 years of Bauhaus

A legend celebrates its birthday. Even 100 years after it was founded in Weimar, the basic principles, methods and visions of the masters and scholars of the Bauhaus school are still alive today. Bauhaus has defined architecture history like no other institution of modernity. Indeed, just as the aims of the individual directors and workshops were so different, so too is the view of Bauhaus today.

The meaning of Bauhaus, the associations it has and what is typically deemed “Bauhaus” are all a matter of opinion and interpretation. There is no generally valid formula. In a new book, “My Bauhaus” (ISBN: 978-3-95553-451-6), international architects give their personal views on Bauhaus and what they associate with it. 100 individual opinions on 240 pages, which reveals a great deal about the design principles of the authors and their understanding of architecture.

bauhaus.de



Cantilevered

With its clear and reduced vocabulary of form, Neues Bauen (New Building) not only revolutionised architecture, it also put stylish furnishings in the spotlight. Tubular steel furniture, including a cantilever chair, was first presented in 1927 at the Weissenhof Estate in Stuttgart. Today, cantilever chairs can reach their full comfort potential thanks to high-strength, flexible steel tubes from Jansen. Excellent, tailored precision and shaped steel tubes from Jansen are the perfect choice to achieve the complex combination of form and function. However, a Jansen steel tube doesn't necessarily have to be round. Jansen designs the shape, wall thickness and tolerances of the special formed steel tubes in any way the customer wishes. Jansen steel tubes are the perfect for those who are looking for precision and excellent functionality.

jansen.com/furniture



Atlas renovation

The “Atlas Sanierung” (renovation atlas) book is an essential reference work for how to treat old buildings correctly. It defines terms, combines the focused perspectives of experts and provides specific approaches to the broad topic. The 280-page book bridges the gap between elementary construction literature and very one-sided, specialised literature. In the familiar quality of the Detail construction atlases, it is a practical planning aid for renovation – in the form of relevant information on the fundamentals of building physics, fire protection, sustainability and energy efficiency issues, hazardous materials, interior building materials and façade materials, aspects of building conservation as well as on technical building design.

Edition Detail, Munich, in German
280 pages with numerous photos and drawings
Format 23 x 29.7 cm
Laminated foldout brochure



Grand Parc Bordeaux

The “Mies van der Rohe Award 2019” goes to Lacaton & Vassal architectes; Frédéric Druot Architecture and Christophe Hutin Architecture. The award-winning “Grand Parc Bordeaux” project is an innovative redesign of three large dilapidated residential buildings with a total of 530 apartments. Instead of completely removing the existing apartments from the post-war era in order to create new social housing, the architects increased the volume and added 3.8 metre-deep conservatories and balconies. The apartments are now brighter and more spacious than before. The work took only 14 days for each apartment and was carried out at the very low cost of 365 euros per square metre. Jansen provided doors for the project.

miesarch.com

AGENDA

12 June – 20 October 2019
Copenhagen (Denmark)
BIG exhibition

28 – 29 September 2019
Open House Zürich

23 – 24 October 2019
Architect@Work Turin

25 October 2019
Oberriet (Switzerland)
Jansen partner workshop

28 – 29 October 2019
Bern (Switzerland)
Conference on Advanced Building Skins

1 – 2 November 2019
Architect@Work Turkey

4 – 8 November 2019
Roissy (France)
Batimat

13 November 2019
Architect@Work Milan

14 – 18 January 2020
Basel (Switzerland)
Swissbau

LWL regional council building Münster, Germany

Reconstructing old steel windows



As structural legacies of a bygone era, buildings of the 1950s are increasingly being considered as historical monuments that need to be preserved. This has been the case for the Westphalia-Lippe regional council building in Münster, which was given listed building status in 2010. The reconstruction of the original fenestration from the 1950s aimed to reproduce the simple appearance of the building.

The Westphalia-Lippe regional council building was built between 1898 and 1901 in the Renaissance Revival style. It was initially used as an administration building for the Westphalian provincial association, the predecessor to the current regional council. After the Second World War, both the building and the self-governance lay in ruins. However, rather than demolish the building, a decision was made to restore it – as a symbol of the “continued existence of municipal self-governance in Westphalia”. Reconstruction began in 1950, following the plans of Werner March, the architect who designed the Berlin Olympic stadium. The parts of the building that were preserved were integrated into a newbuild, thereby connecting modern units to traditional architecture.

The reconstructed windows of the regional council building were fabricated at the time by British company Crittall. The windows were made of steel and were installed in sandstone walls on the ground floor and in externally visible sheet steel profiles on the floors above. The outer frames of the steel windows were installed in the sheet steel walls of the windows. The double-vent

windows were composed of side-hung vents, consisting of two panes of glass in one frame, which could be opened for cleaning purposes. At the start of the 1980s, these windows were replaced with insulating glass windows in bulky aluminium frames, which has been a particularly disappointing situation since the building received listed status, and all the more so because the building housed the LWL regional council building as well as the office for preservation of historical monuments, regional culture and building culture in Westphalia (Amt für Denkmalpflege, Landschafts- und Baukultur). The recent replacement of the windows was not only carried out to improve energy efficiency, it was also for the council to use their own building to show an example of the technical possibilities currently available for reconstructing old windows.

When architectural practice Mensen + Zora assessed the state of the building, they found the outer frames that were still present to be problematic. “We had hoped that we could remove the outer frames and connect a new window directly to the old sheet metal walls”, explains Bernhard Mensen.

The “window-in-window”, a bottom-hung window integrated in the side-hung vent, is a project-specific special construction using the Janisol Arte 2.0 steel profile system.

While the windows are fitted in sandstone walls on the ground floor, the outer frames of the upper floor windows were installed at the time in window walls made from sheet steel.



The three window doors in the meeting room of the council groups (Europazimmer) were reconstructed using the Janisol Arte 2.0 steel profile system, following the example of the original fenestration of the 1950s.

However, these hopes proved to be in vain. After the trial removal of one window, it was found that the outer frame and sheet metal walls were installed as one unit and cast in concrete; removing the windows would have required enormous additional effort and could also destabilise the masonry.

Following this discovery about the structure of the building, the search began for suitable profiles and structural details that could be adapted to fit the existing building. During this search, the architects came across the Janisol Arte 2.0 steel profile system. “The profile meets all of the modern requirements for sound reduction and thermal insulation and is just a few millimetres wider than the non-insulated original from the 1950s”, says Mensen about the insulated profile system. A sample window was fabricated which impressed the architects, clients and building conservation office alike, as it was an almost exact replica of the original window. This meant that the original window arrangement could be retained without having to install transoms, even with the 255 centimetres high windows with two 65 centimetres wide vents. The airtightness, watertightness and wind resistance properties of the oversize units were tested at the Schüco Technology Center, an accredited test institute, in accordance with DIN EN 14351-1. The use of Janisol Arte 2.0 also made it structurally possible to implement the special feature of the old windows, namely a bottom-hung vent integrated in the side-hung vents

in the uppermost segment. This “window-in-window” concept is a project-specific special solution, which is currently only possible with steel profiles if such a slim-line appearance is desired. However, in agreement with the building conservation office, the ventilation vent was repositioned in the lower segment so that it was easier to operate.

All of the 500 or so windows of the LWL regional council building are to be replaced in stages. Indeed, the building conservation office now has an exemplary showpiece in its own building. True to the original, the reconstruction of the old fenestration using the Janisol Arte 2.0 steel profile system clearly demonstrates that the requirements of building conservation and today’s requirements for thermal insulation and sound reduction are not mutually exclusive. ■

PROJECT DETAILS

Client:

Westphalia-Lippe Regional Council (LWL), Münster

Architect:

Mensen + Zora Architekten Partnerschaft mbB, Münster

Window construction:

Metallgestaltung Stratmann GmbH, Essen

Steel profile system:

Janisol Arte 2.0



Eatery in Arosa, Switzerland

Chic shed with a mountain view

An old goods shed with a new lease of life – the 5 m high arched window made from Janisol Arte steel profiles steals the show, providing views from the warm of the impressive mountain scenery.

New life in old walls: an abandoned goods shed belonging to the Rhaetian Railway (RhB) has become the trendy new place to go. At its heart – the spectacular views of the Arosa mountains.

Music, an open fire and fresh, regional dishes – there is no better place to unwind than nestled in amongst the cosy cushions of the “new” goods shed in Arosa. Dating back over 100 years, the building at the terminal station of the Arosa railway has now been given a new purpose. For many years, the shed stood empty because the Rhaetian Railway no longer had any use for it. To mark its centennial in 2014, the site of the RhB’s second-highest terminal station was initially re-designed. Planning for the conversion of the goods shed also began shortly after. Together with RhB, a trio of industry experts took on the project – restaurateurs Marc Saxer, Daniel Kehl and Marc Bachmann. The aim was to retain the old structures of the listed building as far as possible and to attract guests and locals alike with a contemporary concept.

A glance at the goods

A decision about the concept was quickly reached – alpine magic was to meet with international inspiration, including live entertainment. To achieve this, the clients and the interior architects played on the industrial charm of the former goods shed, which they highlighted with puristic fixtures and fittings. They also increased the openness of the building. Using enormous glass windows in the former archways, they were able to bring the authentic setting from the outside into the inside space. The building now has a bright, airy feel, with the central point being an open kitchen with a charcoal oven and a long bar with a lounge area. All around the cube-shaped fireplace at the end of the restaurant, comfortable sofas invite the guests to relax. However, the highlight is the view from the warm of the impressive mountain backdrop – made possible through a five metre-high arched window. If the weather permits, an outside terrace invites you to enjoy the atmosphere at the Arosa Obersee in the fresh air.

Industrial style meets cabin charm

In order to maintain the authentic character of the goods shed, the interior architects used simple, robust materials such as reclaimed wood, black steel and concrete. The metal fabricators made the striking windows out of profiles from the Janisol Arte steel system. Janisol Arte 2.0 is extremely slimline but still very stable. Overall, they fabricated nine small arched windows and the impressive fixed glazing on the gable end with a curved frame at the top and integrated window doors. The profiles here were reinforced with slimline steel flat tubes. A combination with Janisol profiles was also used for the main entrance and two internal doors. As noise specifications needed to be met, double insulating glass made from sound reduction laminated glass was used. ■



Arched-head windows with Janisol Arte profiles open up the panoramic view of the true heroes of this holiday location: the surrounding mountains.

PROJECT DETAILS

Client: Blue Mountain AG, Zug

Architect: Peter Schillig, Dipl. Architekt HTL / STV, Zurich

Metal fabricator: Wüst Metallbau AG, Altstätten SG

Steel profile system: Janisol Arte arched windows, doors in combination with Janisol

Renovation – what’s what?

Terms and their definitions

There is no all-encompassing, universal term to describe all of the building work that is carried out on existing buildings and which is also generally understood as such. In addition to the term “renovation”, there is a range of words which have similar or sometimes identical meanings: conversion, maintenance, modernisation, dismantling, redevelopment, restoration, and upgrading. Georg Giebler, University of Wuppertal (Germany), gives us an overview.

There are many reasons why the definition of these terms is so vague. Firstly, the level of conversion work varies greatly when measured against the extent of the existing building that needs to be retained; it can range from small-scale repairs through to essential structural restoration. There are also different motivations for changing the structure of a building: aesthetic, practical or user-specific. Added to this is a “traditionally” vague choice of words which makes it impossible to assign explicit, clearly defined terms to the different types of building work. Nevertheless, this overview will attempt to summarise and delineate the different terms. This is not in order to provide conclusive definitions. The aim is rather to give architects a handy index to help them in their planning. Different types of work on an

existing building require both different planning methods and different kinds of construction. If the architect is able to give a name to their task, it will help them to clarify the planning and building process. Hence the following terms will not only be explained and defined, there will also be practical advice for implementing the planning task. The terms have been assigned from two standpoints: firstly according to the extent of the work that needs to be carried out on the existing building, and secondly according to the scale of the new building work. Planning methods and construction tasks can be derived from a combination of the two. The scale of the work ranges from the reproduction of a building that either no longer exists or only exists in parts, complete demolition and rebuilding, through to varying

degrees of preservation (renovation to gutting). Added to this are more terms which can be linked to renovation: modernisation, removal of dangerous substances, extensions / annexes, development and change of use. In many cases, several terms refer to one building task because they overlap in places or where several types of work are carried out at the same time. Let’s take the terms “ongoing construction” and “redevelopment” by way of categorisation. Neither of these describes a technical process; rather they concern an attitude. Ongoing construction reflects the continuing process of building: it’s an open-ended cycle. It also implies that each step needs to take account of the existing structures. Therefore it’s not really “redevelopment”, but “development of existing structures”.

Reconstruction

Reconstruction is understood to be the reproduction of a building that no longer exists; strictly speaking, it is really a new-build. Genuine reconstruction, however, relies on old building constructions. Reconstructions are always a controversial topic. Criticism is generally fiercer where less is actually reconstructed, i.e. faithfully restored. The plans for the Berlin Palace, for example, were heavily criticised, while the reconstruction of the Frauenkirche in Dresden was met with great approval. Although they are based on old designs, reconstructions are always newbuilds with no original building. Generally, the familiar rules for newbuilds therefore apply: standards and laws, manufacturer guidelines, building processes, construction time, the type of specification and the site management. The work methods during the planning stage are also similar, as historical buildings are seldom sufficiently documented such that the architect doesn't need to design something new. Additionally, the Second World War saw the destruction of a large proportion of the European (and especially German) building archive, which means that you often need to rely on illustrations or photographs rather than scaled architect plans. In addition to reworking the existing sources for the original building, reconstruction as a concept is also an artistic imitation of the construction style of a certain era by the current architect. This means that it is not an exclusively scientific task. Contemporary specialist literature helps during the planning stages when it comes to recreating old constructions as true to detail as possible using modern tools.

Restoration

Restoration is the completion of an unfinished building. The term comes from the period of Romanticism, when interest in cultural monuments of the past became the focus of attention. This was essentially embodied by French architect and cultural historian Eugène Viollet-le-Duc, who restored a number of medieval castles at the beginning of the 19th Century. Cologne Cathedral was completed after nearly 300 years of construction standstill. Restoration is very similar to reconstruction. The only difference is that, in the case of the former, original building parts still exist and are added to so that they match the style of the era. The similarity of restoration to reconstruction likewise makes it controversial: "The process of restoration is a highly specialized operation. Its aim is to preserve and reveal the aesthetic and historic value of the monument and is based on respect for original material and authentic documents. It must stop at the point where conjecture begins," (Venice Charter, 1964). However, this well-meaning piece of advice is often ignored, and often because original documents are not available to rely on. It is also not always clear what is deemed to be the original: the first building, the first extension, the first renovation or the first conversion? This conflict runs through the expert debates of the last decade, and the answers are more of a reflection of the respective Zeitgeist rather than being generally accepted. This is possibly also due to the fact that the term "original" was incorrectly carried over from visual art to architecture, which has never known of this term.

Demolition

Around the turn of the century, urban planners took the topic of demolition as "negative building" and revamped it as "conceptual demolition". The catalyst for this was the copious number of empty homes in East German cities following reunification. But there are comparable problems in other regions too. They are usually a result of deep-rooted, structural processes which trigger an economic decline and thereby a mass exodus of residents – such as in Detroit after the collapse of automobile production. The intention of demolition is to heal urban problems of empty homes by specifically demolishing individual buildings, blocks or city districts and therefore control the shrinking process. However, these concepts often fail due to a lack of financing, as demolition without a newbuild never yields returns.

Building dismantling

In addition to large-scale demolition, individual buildings are often demolished to make way for a newbuild in their place. This is not a service provided directly by the architect, because it is often carried out by specialist companies during one stage of the project development, as only they have the corresponding specialist knowledge. In addition to building regulations (demolition approval), structural properties (specific demolition structural properties) and safety guidelines for the workforce and residents as well as environmental protection measures for harmful and hazardous materials all need to be observed.

Upgrading / maintenance

Upgrading does not add anything new to the existing building or replace the old with the new, but rather preserves the value and function of the existing building through professional "maintenance". Rental properties are typically upgraded in this way. The German Second Calculation Regulation (Zweite Berechnungsverordnung) stipulates in this regard: "Cosmetic repairs only include wallpapering, painting or white-washing of walls and ceilings, painting of floors, radiators including heating pipes, internal doors as well as the inside of windows and external doors", (Second Calculation Regulation, section 28). The legislation also deems maintenance as the following: "Maintenance costs are those costs which must be expended during the period of use to maintain the intended use, in order to properly remedy any structural or other defects due to wear, ageing and weather exposure." The legislation includes work which actually falls under maintenance: "Minor maintenance work includes exclusively the repair of minor damage to installations for electricity, water and gas, heating and cooking appliances, window and door locks as well as the closing mechanisms of window shutters." "Failure to carry out maintenance work may lead to greater damage in areas that are not visible, such as flat roofs." Developers should therefore provide the client with a summary of appropriate maintenance work including routine intervals and work instructions – an additional service to be provided in accordance with the fee scale for architects and engineers (HOAI).

Repair / servicing

Servicing is limited to the replacement or repair of defective building components. Servicing work takes place regularly between the overall renovation intervals and usually falls to the property management without planning support. For reasons of economy, you should monitor how frequently the servicing of the same components is carried out. For example, a burst water pipe can happen at random, but is not something that occurs every year. If it does occur every year, it is advisable to replace all of the water pipes from the basement up. However, burst pipes can be fixed through earlier servicing if, for example, copper pipes are added to an iron pipe system. Servicing work inevitably leads to follow-up costs which can significantly exceed the actual repair costs – such as when intact floor tiles need to be pulled up in order to find a burst pipe. This raises the question of whether it makes sense to take the opportunity to renovate the entire bathroom at the same time.

Partial renovation

Partial renovations focus on just one part of the building, such as the façade, the ground floor or the east wing. They are one of the most difficult jobs to arrange, as they are carried out while the building is still in use. There is sure to be conflict with the users, as partial renovation work cannot be carried out separately; the technical infrastructure stretches across the entire building, for example. An effective strategy is to give detailed advance notice of the planned activity. Mortise work in inhabited buildings, for example, is very annoying, particularly when it starts at 7 o'clock in the morning. Consideration of contractually agreed work times as well as communication of the building work period both help to remedy this. The work remains annoying,

but the time limits increase acceptance. A similar case applies to putting up scaffolding, decommissioning infrastructure (particularly the television), work on internal and external access points as well as all work which involves an above-average level of dust, noise or vibration. With partial renovations in particular, the time and cost buffer should be set higher than usual and a budget should be in place for collateral damage to parts that aren't actually to be renovated. This damage is unavoidable and its rectification should be unbureaucratic and fast. In addition, the client should be advised straightaway of the risk of lost rent in the case of let buildings. After all, if the "suitability of the rental property for use as stipulated in the contract" is negated or decreased, German jurisdiction states that the rent can be reduced by an average of 20%. This is already the case if the residence cannot be ventilated following the build-up of dust or if it is not possible to use the telephone in an office because of the noise.

(These terms are based on a German perspective.)

Complete refurbishment / general refurbishment

Dismantling work in the case of general refurbishment is very extensive. It reduces the building almost to a shell. The primary construction remains unchanged for the most part. Typical work includes complete replacement of the infrastructure as well as retrofitting of all building components in line with today's laws and standards. Due to its extent, general refurbishment work is very costly, particularly if additional work is required to remove harmful substances. In return, however, you get a building which comes very close to a newbuild in terms of facilities and safety. This is also reflected in the fact that upon completion virtually all components have a warranty, including in terms of current standards and laws. In the case of simple renovations, this is often not guaranteed, or is only guaranteed to a certain extent, as many components remain in their original condition. In terms of planning, general refurbishment does not differ fundamentally from a newbuild, seeing as many uncertainties are almost cancelled out. From an economical viewpoint, weaknesses from the building shell that cannot be remedied may remain, such as missing horizontal damp-proof barriers, excessive ceiling deformations or sound insulation weaknesses due to low surface weight. The evenness tolerances, which usually fall outside the current standards (which have only been regulated since 1969 by DIN 18202, Sheet 1) must also be taken into account during planning.

Renovation

In contrast to servicing, renovation work includes intact, but perhaps outdated, building components and surfaces. Unlike with conversions, however, they do not involve any significant changes to the load-bearing structure and room layout. They therefore lie precisely between servicing and conversion. The extent of renovation work can vary widely.

“Standard” renovation

Standard renovations cover the entire building or at least an autonomous part of the existing building that is clearly marked off. The necessary dismantling work usually extends to just surfaces or preliminary work for the retrofitting of fire protection, sound reduction or thermal insulation. Additions and changes to the existing infrastructure are common, but it is rare that it is completely replaced. Renovation cycles for individual building components are relatively easy to determine empirically. Proper renovations without changes of use do not require any building regulation approval and are covered by the building insurance, while this usually ceases in the case of general refurbishments or conversions.

Gutting / newbuild with partial preservation

Gutting is very similar to a newbuild. It often involves work – resulting from a disputed understanding of monument conservation – where the façade of an old building is kept while the interior is completely gutted and rebuilt.

Conversion

Conversions always change the structure of the building. They expand on the term “renovation” to include intervention in the statics and/or room arrangement. With conversions, it is therefore essential that you deal with the existing load-bearing structure. Fundamental renovation work is almost always a conversion, such that many types of building work can be best described by several terms, for example “general renovation with conversion”. Structural work requires structural verification, which must also include the existing building. This means that it is essential to carry out early and often disruptive checks of building materials used and construction processes, for example, prising open a concrete ceiling to clarify the type and location of the reinforcement. Professional design services are also required for conversion work, as they can be used to make changes to the arrangement of rooms or access points. This additional planning work is taken into account as a conversion surcharge in the German fee scale for architects and engineers (HOAI). Partial conversions can be considered in the same way as partial renovations. ■

Professor Georg Giebeler holds the professorship for “Development of existing structures and construction” at the University of Wuppertal. He completed his degree in Architecture at TU Graz. He has been running architectural practice 4000architekten in Cologne since 1995. Following a teaching position in Darmstadt in 2002-2003, he received his first professorship for construction at the University of Wismar and the professorship for “Designing and developing existing buildings” at the RheinMain University of Applied Sciences in Wiesbaden.

Boekentoren Ghent, Belgium

Restoration of an icon

The last great work of Henry van de Velde is the Boekentoren (book tower) in Ghent. The Belgian architect and designer was commissioned to design the university library and all of the interior details at the beginning of the 1930s. In 2009, after many years of planning, the Boekentoren was given the green light to undergo an urgently needed renovation. It took around five months just to relocate the 48 kilometres of books and documents to a depot.



The new glazing is true to van de Velde's original design and brings the transparent areas up to date.

The top floors were designed with Janisol Arte (insulated system), while the non-insulated Art'15 system was used on the other floors.

The central library of the University of Ghent was to be a symbol for science, knowledge and wisdom. Van de Velde therefore designed a shining beacon that could be seen from a great distance. After making countless changes and adjustments, he presented his final plan in 1935. The 64 metre-high book tower had four subterranean floors and twenty storeys above ground, with an impressive belvédère on top. Van de Velde gave the tower the shape of a Greek cross – not as a religious symbol, but in order to connect heaven and earth as well as time and space. He opted for an unusual façade of bare concrete on a plinth with blue stone cladding.

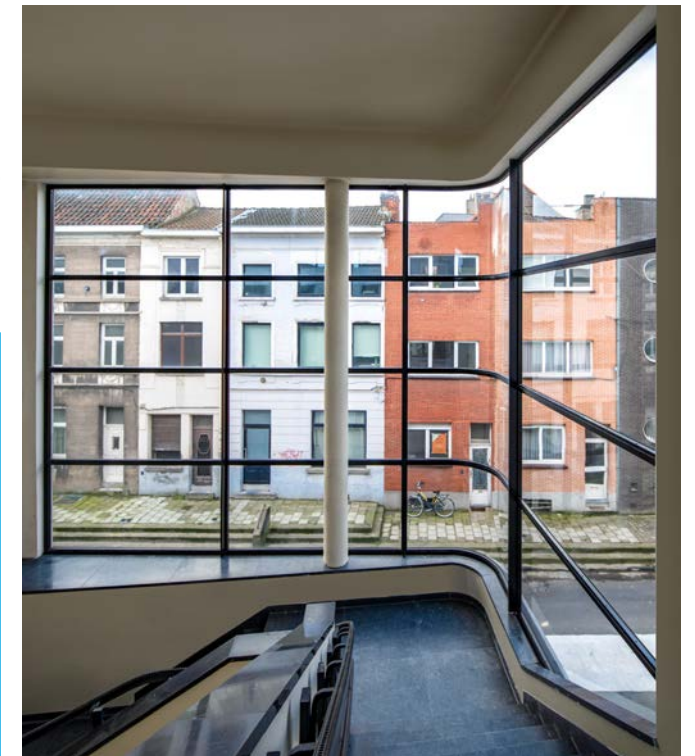
The architect let the light determine the position of the reading rooms. The main reading room and journal reading room face south so that they receive maximum light, while the manuscript room faces north so that it is shielded from harmful light.

As an all-round artist, van de Velde also designed every possible detail for the interior: floor patterns, door-knobs, furniture, radiator hoods, as well as the black iron window profiles. However, the economic crisis and outbreak of World War II meant that it was not possible to implement all of the architect's designs, and compromises had to be made in many areas.

Original design

Only in the late 20th Century did the Boekentoren become a recognised landmark of the city of Ghent. The library building was officially listed as a heritage site on 1 July 1992. However, it took another ten years before renovation was considered. Several years later, the governing board of the University of Ghent finally approved the renovation master plan put forward by the architects, Robbrecht en Daem. The aim was to make the building more comfortable for the users of the more than three million books, while also recognising the building as a place to study and read.

At the time, the belvédère floor was inaccessible; the aim was therefore to bring it and its outstanding view of the city back into use. The job of Belgian Jansen sales partner Kloeckner Metals was to use windows which are true to van de Velde's original design and also state of the art. In close collaboration with the metal fabricator, Kloeckner Metals developed a window construction which integrates the latest structural requirements in the design



of the original windows. This resulted in an insulated and non-insulated version of the van de Velde windows.

The building has a tower in a tower, in order to better protect the books, as well as a new concrete façade. Janisol Arte units were installed in the top section of the tower, while Art'15 units and Janisol doors and windows were used in the other areas of the building.

The mission of the Boekentoren restoration project was to closely study the original designs, the actual building that was erected and its current state, and then turn it all into a coherent, future-oriented building. The new profile system from Jansen was able to play an important and visible role in this process. ■

PROJECT DETAILS

Client:

Ghent University

Architects:

Robbrecht en Daem, Ghent; SumProject, Brussels; Baro Consulting, Ghent; Barbara Van der Wee, Brussels

Window manufacturer:

Lootens, Deinze

Jansen partner:

Kloeckner Metals Belgium NV, Antwerp

Steel profile systems:

Jansen Art'15, Janisol, Janisol C4, Janisol Arte 2.0, Janisol Arte 66



Citroën branch Lyon, France

Flagship showroom through the ages

The largest car dealership in the world – that was the Lyon-based Citroën branch in its day. Approximately 1000 cars were permanently on show here, not to mention the workshops and a replacement parts warehouse. The building, which was opened in 1932, has now been renovated and extensively converted. In addition to strengthening the load-bearing structure, the building structure was thermally insulated and the glazing was replaced with Janisol Arte and the Jansen VISS HI façade.



The internal ramps can be clearly seen in the façade on Rue Béchevelin. The small window and fixed glazing sections were reconstructed using Janisol Arte so that they remained true to the original.

The monumental building in the 7th Arrondissement was the last in a series of around 20 newbuilds that André Citroën commissioned his head architect Maurice Jacques Ravazé to construct within a few short years. Approximately 135 metres long and 52 metres wide, the reinforced concrete building stretched along two busy streets. It offered around 40.000 square metres of space over six storeys. The cars were transported to the upper floors via internal ramps. Access on foot was made via five stairwells in the striking corner towers.

Large display windows along Rue de Marseille and Rue de l'Université provided unrestricted views of the latest models. Prospective buyers entered the building at the intersection of the two streets through glazed sliding doors, where they were greeted by an enormous glazed lobby facing the street. The repair workshop faced Rue Salomon Reinach. Here, a 14 metre-wide by 10-metre high folding door provided maximum penetration of natural light to the interior of the cathedral-esque workshop. The internal ramps are also still clearly evident today in the façade on Rue Béchevelin. The horizontal ribbon windows made from dark steel with part transparent, part satin-finish glazing also structure the light rendered façades. In total, the original design encompassed 6000 square metres of window and fixed glazing, door and gate constructions.

Building heritage

Despite its age, the building fascinates people even today due to its apparent modernity and clean lines. In 1992, it was listed as a heritage site. The retention of the building structures, including the internal ramps, was a mandatory prerequisite for the agreed renovation work. In 2011, project developer "Group 6ème Sense Immobilier" acquired the property. They created a mixed-use concept with of-

fices and training rooms in the upper floors and workshops and sales areas on the ground floor. Two architectural practices – SUD Architectes and ALEP Architectes – shared the demanding construction task. Their common objective was to transport the charm of the Art Deco building into the present day while ensuring contemporary building standards were met. "New Deal", as dubbed by its new owners, has since been certified in accordance with the French building standard BREEAM. Energy for heating and hot water is provided by means of a geothermal heat pump. Light wells that were present in the original design, but had been built over, were uncovered once again and used to provide more natural light.

Contemporary glazing

The renovation of the large-scale windows and fixed glazing required close cooperation between the heritage protection authorities, who were seeking to protect the historical substance and thereby the authenticity of the building, and the desires of the client for contemporary levels of comfort, without which the property would barely be marketable. For each individual component, both parties weighed up their interests anew. This is why, for instance, the 18 metre-high fixed glazing in the large foyer, including the integrated automatic sliding doors, was restored. For the glazing of the stairwells, a compromise was reached whereby openable vents made from Janisol Arte were fitted into the original construction of the existing building. The display windows on the ground floor were reconstructed using the highly thermally insulated VISS HI steel profile system. To reconstruct the windows and fixed glazing which, at the time of building, were made

as slender industrial glazing, the architects opted for the Janisol Arte steel profile system. With their extremely slimline appearance, the profiles retain the look of the old constructions while also fulfilling current structural requirements.

The main entrance still leads through the monumental entrance hall on the corner of Rue de Marseille / Rue de l'Université and counts towards the ten percent of building space that all leaseholders have to make available for communal use. Furthermore, the tenants can drive their cars directly up the restored ramps to park in one of the 170 spaces distributed across the top floors. Last but not least, the architects incorporated the idea of a car dealership into their design. With the original "CITROËN" sign above the main entrance, the brand continues to make a visible mark. For Citroën continues to be present – even if only as a tenant. ■



In the showroom on Rue de Marseille, Citroën showcases new cars and lifestyle products as a tenant.

PROJECT DETAILS

Client:

Groupe 6ème Sense Immobilier, Lyon

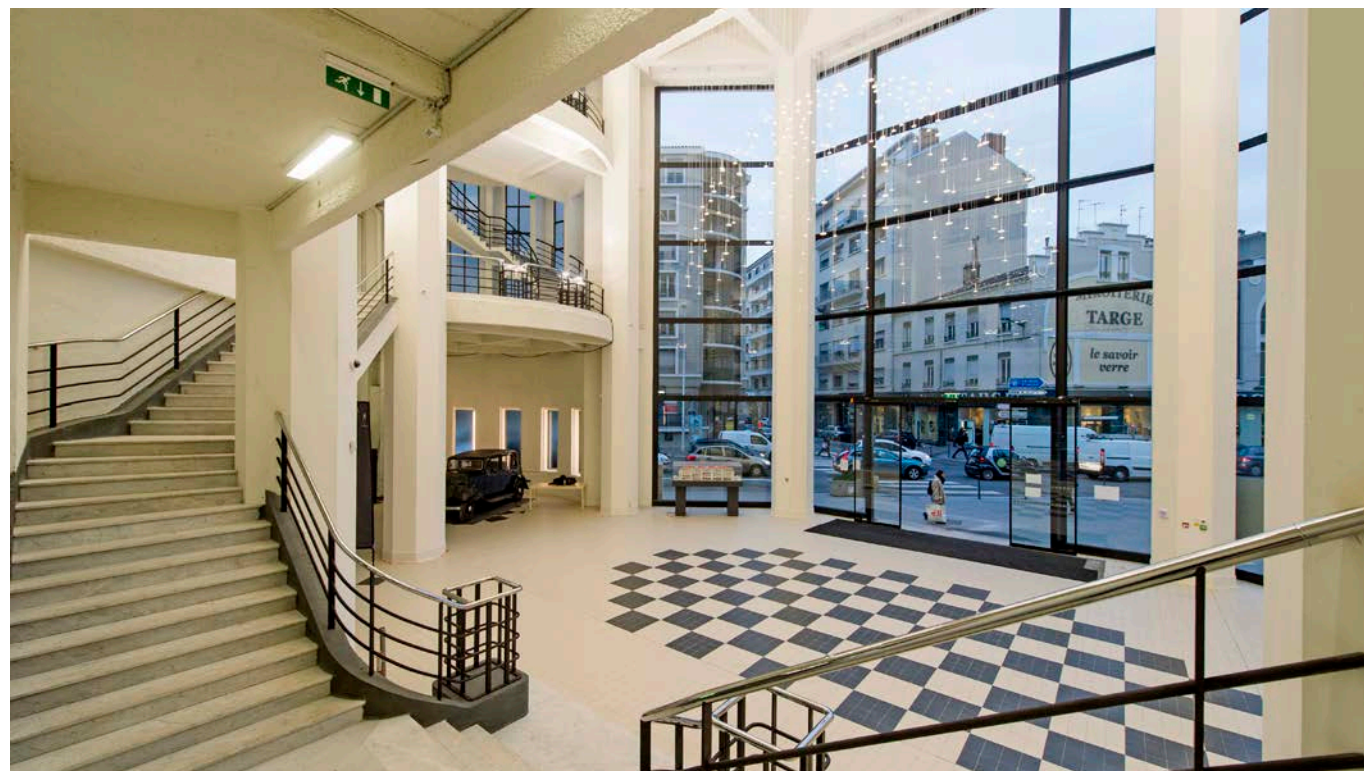
Architects:

SUD Architectes, Lyon and ALEP Architectes, Lyon

Steel profile systems:

Janisol Arte, Jansen VISS HI façade

At the intersection of two busy streets, the restored foyer offers a stylish reception with its 18 metre-high fixed glazing.



2019 Baukultur report

Architectural inventory has a future

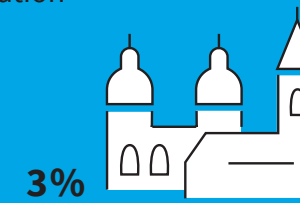
“Heritage – Presence – Future” is the title of the 2018/2019 Baukultur (building culture) report by the Baukultur federal foundation. It highlights how important contextually-sensitive planning and construction is for our living spaces, identity and culture. But how can sustainable conversion of our cities succeed in favour of a better quality of life?

Existing buildings up to 2030 old and new

According to estimation by Baukultur federal foundation

Approx. 8%

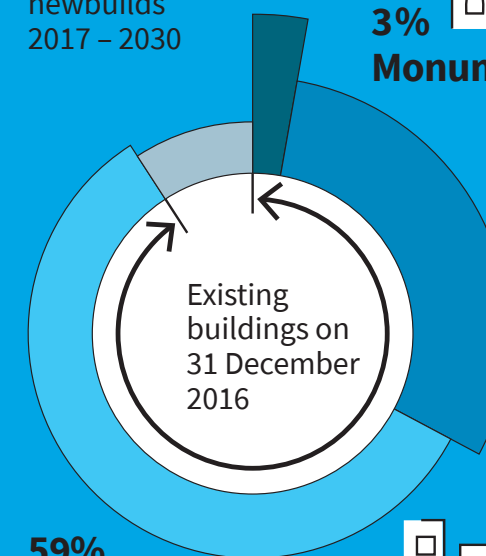
Estimated number of completed newbuilds 2017 – 2030



3% Monuments

30% Preservation-worthy structures

59% Everyday buildings



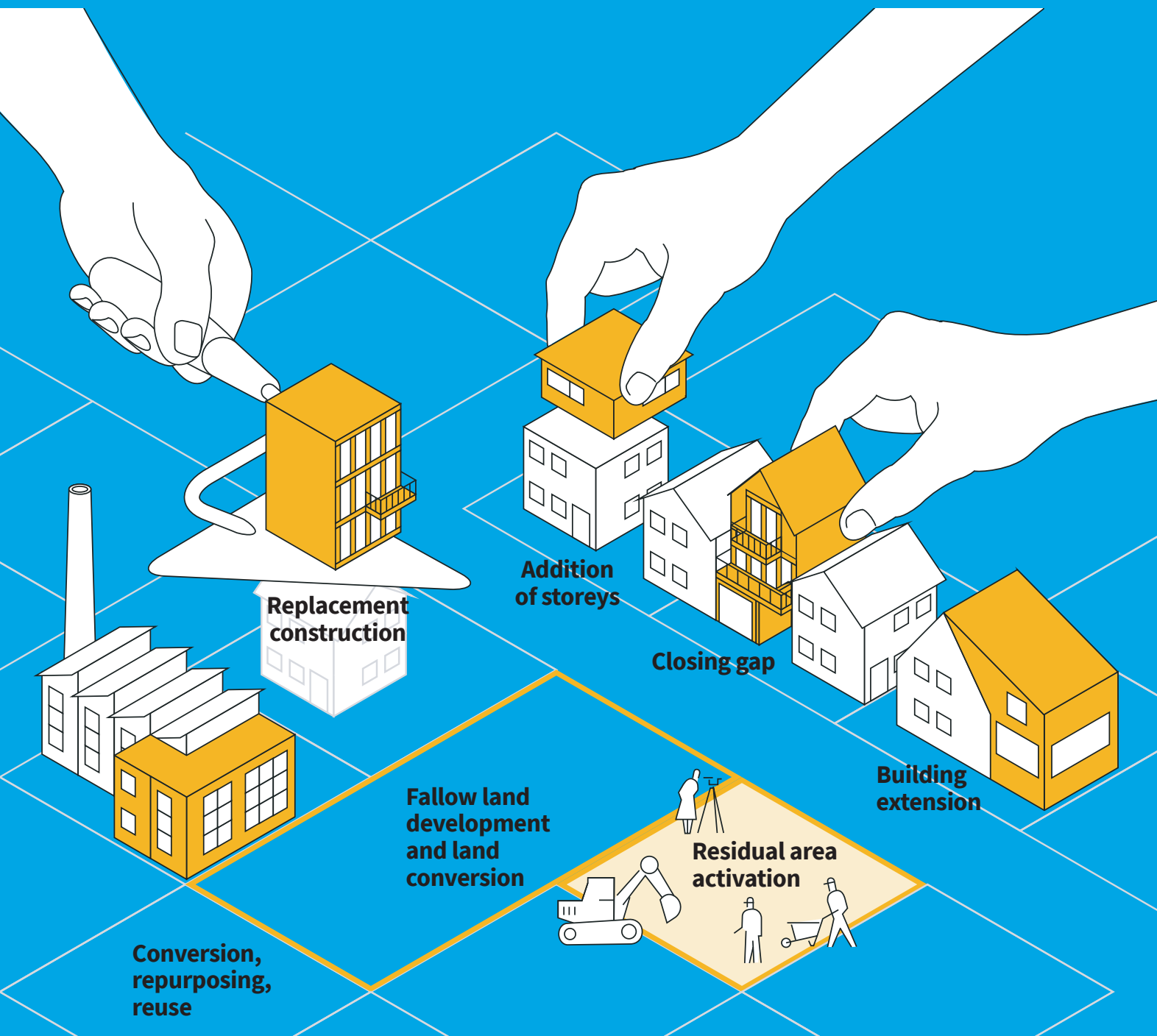
Around 90 percent of the city of the future already exists today. Approximately two thirds of investment in the construction sector goes into existing buildings, and this trend is on the rise. The 2018/19 Baukultur report therefore also sees the treatment of the existing building and heritage as a starting point for “integrated, socially sustainable, creatively valuable and ecologically sustainable urban development”.

Holistic development of our living spaces and our society can only come from the existing building, believes Reiner Nagel, Chairman of the Baukultur federal foundation. After all, existing buildings shape our homelands, help to prevent new use of land, and conserve resources. “We have gained an extensive stock of buildings and infrastructure. We live like lords for that matter and it is in our own interest to be responsible with existing buildings”, says Nagel. In addition to study results on material use, modernisation of existing buildings and the conservation of historic monuments, the report includes results of a survey by the Chamber of Industry and Commerce on the development of business and commercial property as well as results of local questionnaires and surveys of the population. In this report, the foundation asks for opinions on reconstructing historical buildings or reusing churches, among other things. The report also provides examples of successful conversion culture from all over Germany as well as nine practical recommendations for action for politicians and developers.

The 2018/19 Baukultur report is the third report on the situation of building culture in Germany under the

Possibilities of conversion

According to the Baukultur federal foundation



direction of the federal foundation. It was the result of a complex work process and involved experts and the German Institute of Urban Affairs (Difu). The foundation was guided by its advisory board, an interdisciplinary group as well as representatives from associations. The public discussion took place across Germany as part of six build-

ding culture workshops. The 2018/19 building culture report is thematically related to its predecessors, "Built Living Spaces of the Future: Focus City" (2014/15), and "City and Village" (2016/17), which dealt with the building culture challenges for booming cities as well as specific requirements of rural areas. ■

Core messages of the building culture report

Continue building mixed quarters:

Create Baukultur guiding principles

The built environment holds an important key to character and identity in future-oriented transformations. Baukultur guiding principles have a positive effect on the further development of cities, places and landscapes. They ensure the preservation of regional diversity, local recognition and common values.

Design public spaces for people

Whether in dense cities or as a village meeting point, public green and open spaces create added value for all citizens. With participation, commitment and good design, urban fallow land and open spaces can be activated with relatively little effort, which has a positive effect on the quality of life.

Use mobility as an opportunity for conversion culture

The conversion and expansion of transport infrastructures has great potential for design and structural improvements. In the age of global and mobile society, transit areas increasingly take on the role of a local business card with an identity-creating effect.

Establish conversion culture:

Retain and redevelop existing structures

Additions, extensions and conversions can represent contemporary solutions for existing buildings. These measures contribute to environmental and economic sustainability. In the process, the continuity of identity-creating regional elements has to be ensured.

Strengthen the historical context as the starting point for new construction

Baukultur becomes apparent by means of historical layers whose special features make up the essence of a place. New building structures upgrade places – provided the projects relate to local qualities and develop them further.

Secure material and immaterial values

Only through a specific mediation can Baukultur values be recognised and maintained. Thereby, society assumes the role of steward of the material and immaterial heritage for the next generation. The responsibility is to be perceived to be a joint task of politics, administration, economy and citizenship.

Design successful processes:

Establish responsible land and property policy

Land is an irreplaceable commodity of extraordinary social and political importance. Municipal land ownership thus forms the basis of urban development planning for the common good.

Secure Baukultur values together

The further development of the built environment requires alliances at all levels and in all disciplines. The best solutions for complex questions and processes arise in the interaction of different experiences and approaches.

Anchor design tools

Federal structures and a heterogeneous building stock make a functioning measures catalogue on conversion culture necessary. This can be identified and used effectively at all levels.

More information and the complete 2018/19 Baukultur report can be found at: bundesstiftung-baukultur.de

Regent Street London, United Kingdom

A window into history

From office to living space. Just off Piccadilly Circus in London, the “27 Regent Street” project is a successful example of how existing buildings can be made sustainable with modern window and façade systems – and how this can result in a very special living experience.

Regent Street is one of the most famous shopping streets in London. It sits with the likes of busy shopping streets such as the Champs-Élysées or 5th Avenue. Like the wide boulevards in Paris, Regent Street came from the drawing board and was also an urban intervention. At the start of the 19th Century, architect John Nash broke away from the existing, narrow medieval structure of the city to create a grand ceremonial avenue for the Prince Regent and later King George IV. The outstanding architect of the Regency period completed numerous ambitious construction projects and gave the centre of London a new, classicist appearance.

Royal property

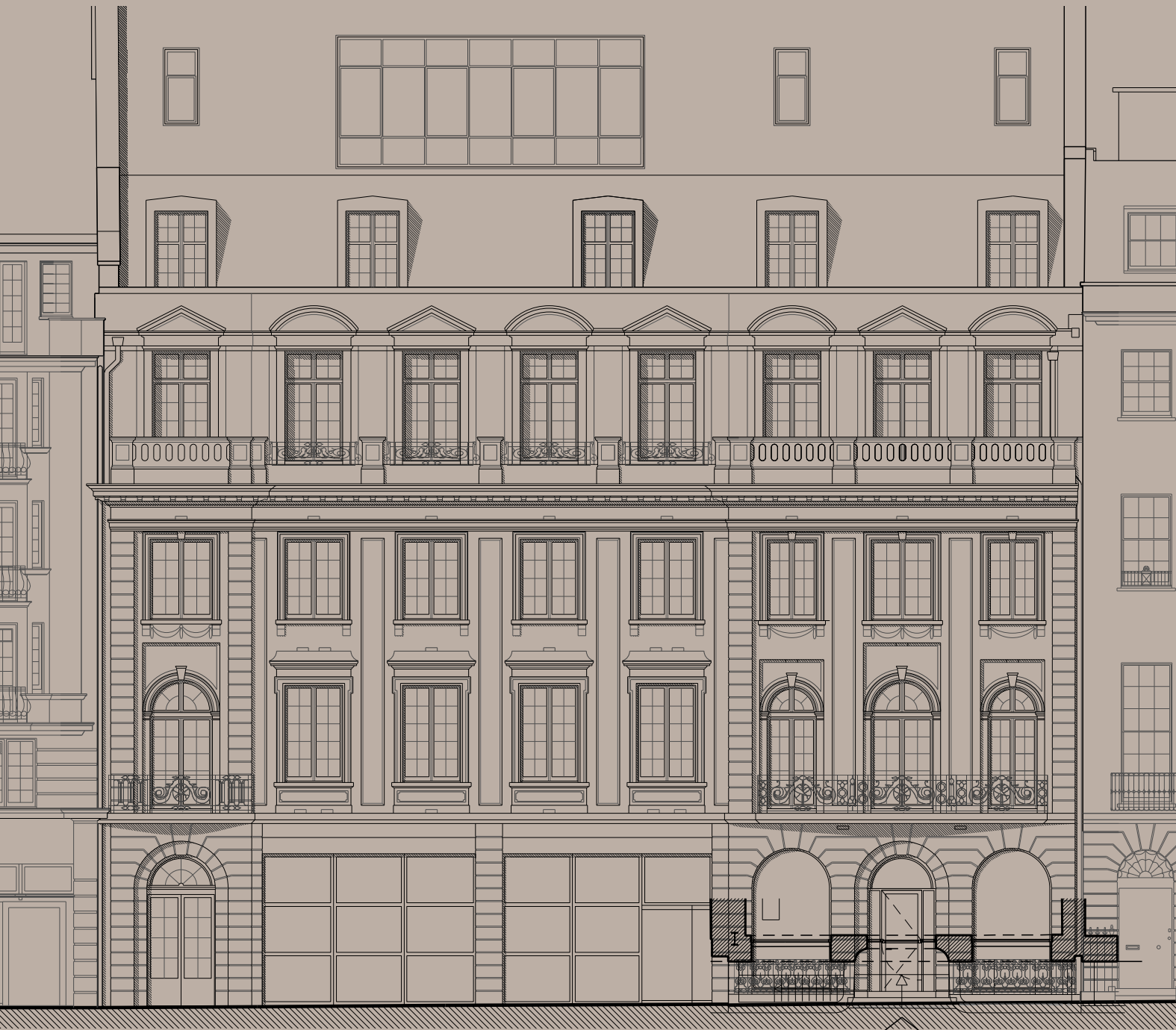
To date, most of Regent Street has been owned by the Crown. However, virtually all of John Nash's buildings that were constructed in the 1920s have been replaced by Neo-Baroque style buildings. Most of these façades have listed status (Grade II), but modernisation of the existing building has many facets here, as can be seen in 27 Regent Street. The priority was to create a sustainable building envelope which did not necessarily require reconstruction of the fenestration that was true to the original. Nevertheless, the old windows needed to be adapted in keeping with the old style as far as possible. For the richly structured façades of this existing building, the small-sectioned division of the existing façade openings was critical for the compatibility of the façade architecture with the replacement fenestration.

Attractive and contemporary solution

The architects opted to update the large window areas in keeping with the style using a steel profile system which was developed by Jansen, originally for the renovation of its own industrial building. The extremely slimline Janisol Arte profile system – it has profile face widths of just 25 to 40 millimetres with a basic depth of 60 millimetres – still easily meets thermal insulation regulations, even for the conversion of the existing building into living space. And in places where there are increased sound reduction requirements, such as here with certain window axes that face towards Piccadilly Circus, these can be met with a double window solution. For structural reasons, Janisol Arte was combined with Janisol Primo for the window doors measuring over 220 cm high. Both profiles have the same basic depth.

The slimline Janisol Arte steel profiles span a fine network in front of the large windows and thereby pleasantly connect the inside with the outside. Modern standards in terms of sound reduction and thermal insulation do not need to be neglected here. If it is possible, as it was in this project, to avoid the risk of dissonance that inevitably results from historically unsuitable windows – to this end, the window component is simply too critical for the aesthetic overall effect of the architecture – then nothing stands in the way of the sustainable use of existing structures.

The building work focused on creating a sustainable building envelope for a contemporary, new use.





The limited creative freedom when adapting old buildings to meet today's structural requirements always poses a particular challenge in planning practice.



The architects opted to update the large window areas in keeping with the old style using steel profile systems.



PROJECT DETAILS

Client:

The Crown Estate, London

Architects:

Eric Parry Architects, London

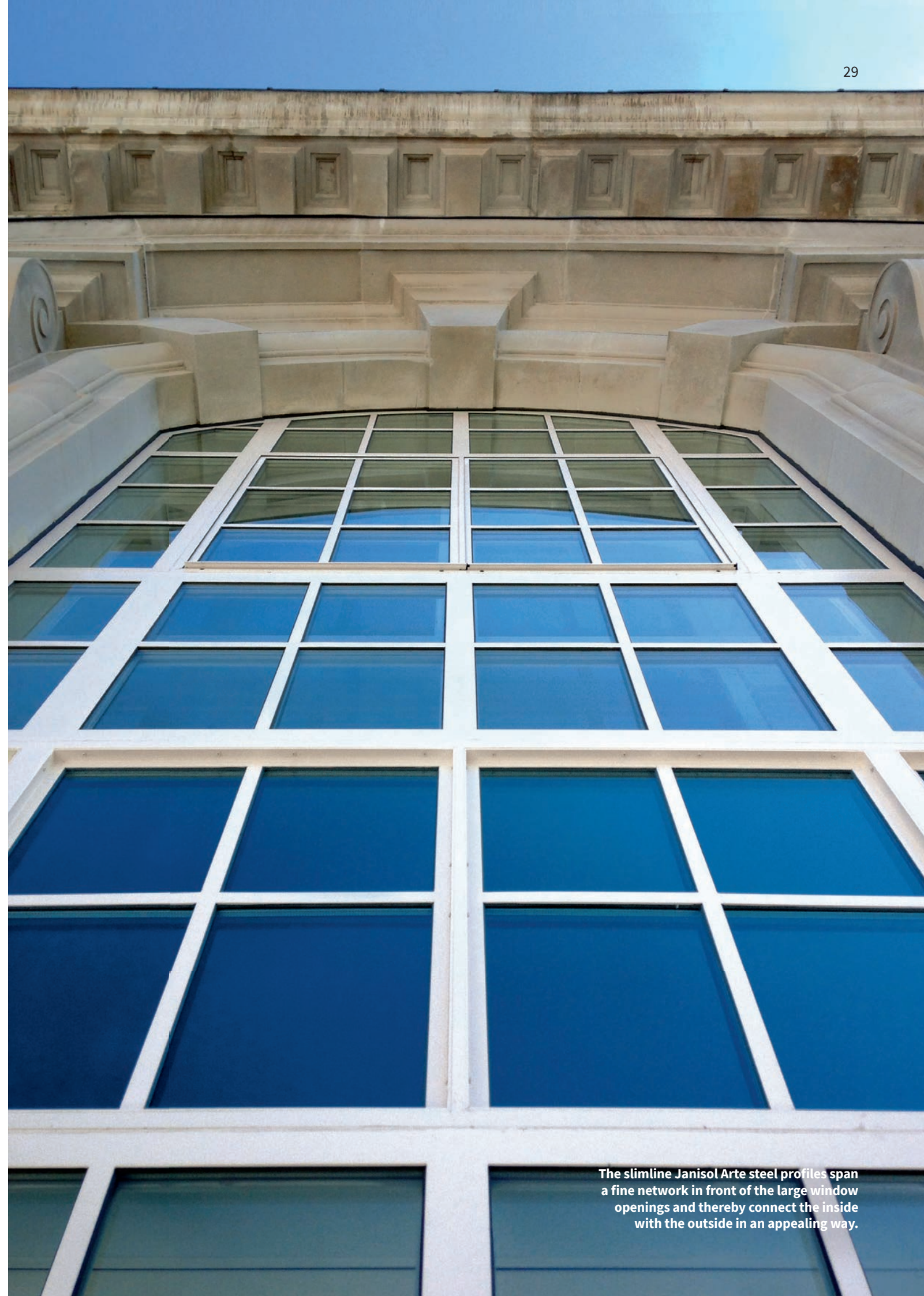
Metal constructor:

Firezone, London and Propak Architectural

Glazing Ltd., Stevenage, Herts

Steel profile systems:

Janisol Arte, Janisol Primo



The slimline Janisol Arte steel profiles span a fine network in front of the large window openings and thereby connect the inside with the outside in an appealing way.

Piscine Molitor Paris, France

From swimming pool to luxury hotel

The “Piscine Molitor” does not just tell a story about the history of building; for a long time, the swimming pool was an important part of the leisure culture in Paris and was one of the city’s most popular meeting places. As part of its revitalisation, the Perrot & Richard Paris architectural practice converted the facility into a luxury hotel with a bar, club and spa.

For six decades, the Piscine Molitor was a defining feature of the cityscape between Boulevard d’Auteuil and Avenue de la Porte Molitor in Paris’ elite 16th Arrondissement. Recently, the MGallery hotel chain (belonging to the Accor Group) opened a five-star hotel on the plot of the swimming pool which was closed in 1989. The apt translation of the building’s Art Deco style into the modern day contributes greatly to the perception of this historic site as authentic and poignant.

The concept developed by the architect Lucien Pollet in the 1920s was unique: for the first time ever, the Piscine d’Auteuil-Molitor combined an Olympic-size indoor and outdoor pool, thereby serving the needs of both the competitive sport and the leisure pursuit in equal measure. A three-storey structure surrounded the swimming pool hall, which opened out upwards, with stairs and walkways encircling the pool providing access to the changing rooms located there. They were designed to look like the Deauville beach huts.

Its unique character meant that the building commonly known as “the white cruise liner” was used time and again as a backdrop for eye-catching photo shoots. With the unveiling of the first bikini, fashion history was also written here. However, over the years, the elaborate decor lost its appeal and the equipment became outdated. In August 1989, the pool was finally closed. The community association “SOS Molitor” quickly formed, and managed to get the building listed as a heritage site

one year later. Despite this, the building was mostly dismantled apart from a small section of the façade and some building components that had been safeguarded previously, in order to make space for a newbuild. In addition to a hotel with 124 rooms, some of which look out over the swimming pools, the building complex houses a luxury spa with a bar and restaurant.

Retention through change

In an ideal situation, the original external appearance of a building would be retained when it undergoes necessary changes. In the case of the Piscine Molitor, the architects integrated the indoor pool in their design to match the original exactly. However, they made the previously Olympic-size outdoor pool smaller in order to make space for the hotel rooms that were constructed in place of the changing rooms. Paintings, mosaics and large-scale Tiffany-style glazing give it an authentic feel. Other key stylistic elements such as the wooden stairs, pergolas and spandrels on the surrounding walkways were faithfully reconstructed.

The discerning guests expect the highest level of comfort as soon as they cross the threshold. Glass sliding doors with slimline frames underline the very high aesthetic demands placed on the design there. The architects opted for a special solution for the automatic sliding doors using the Janisol Arte steel profile system.

The apt translation of the building’s Art Deco style into the modern day – the Janisol profiles integrate seamlessly with their functional simplicity and guarantee contemporary standards.



Glass sliding doors with slimline frames made from Janisol Arte steel profile systems underline the high aesthetic requirements placed on the design.



The sometimes large-scale window and façade openings that were required by the conversion were adapted for the architects using the thermally insulated Janisol, Janisol Arte and Janisol 2 EI30 steel profiles. Their functional simplicity allows the new windows and doors to guarantee contemporary standards of thermal insulation, fire resistance and comfort. On the side facing the swimming pool, they meet the fire resistance requirement EI30. With a great deal of gut instinct, Perrot & Richard mastered the balancing act between “conservation” and “newbuild”. Upon its opening, the building ensemble was therefore still the same as it used to be – but also completely different. ■

PROJECT DETAILS

Client:

COLSPA SAS, Paris

Architects:

Perrot & Richard, Paris

Metal constructor:

Metalleries du Forez, Montbrison

Steel profile systems:

Janisol, Janisol Arte, Janisol 2 EI30

Holidays in listed buildings

Experience and inspiration

Holidays in a church, an icon of the Neues Bauen (New Building) era or a centuries-old farmhouse? Sounds a bit different, but also rather spartan or like something ravaged by time. Upon closer inspection, it is actually the contemporary and logical idea of protecting building culture.

In various places, people have taken on the task of carefully renovating endangered historic sites down to the very last detail, and then renting them out to guests. This makes use of the existing old buildings in a gentle and sustainable way. And you don't necessarily have to dispense with comfort in order to do this. In general, the buildings in question no longer meet the living standards of modern homes. However, with their charming mix of restored heritage structures and modern elements, they are the ideal retreat for anyone looking for a bit of peace, quiet and authenticity.

Various initiators are rescuing dilapidated, empty buildings in this way and making them fit for use by the public. The aim is to create a holiday experience, which allows traditional building culture to be discovered up-close. In doing so, they are making the guests interested in these remote regions and thereby generating sustainable tourism. In turn, this adds value to the regions that are specifically affected by migration. And it's not only the guests that benefit – so too, do the townscapes and cultural landscapes.

Proponents and providers of the concept

Switzerland

The Turalihus in Valendas (Graubünden) is one of the flagship buildings of the Foundation “Vacations in a Listed Building”. Established in 2005, the foundation is a non-

profit organisation of the Swiss Heritage Society. It takes on historically valuable building structures across Switzerland, renovates them and rents them out. In 2017, the Turalihus was given the “Good Buildings” in Graubünden award and the award for “Dealing with Listed Buildings”. The building is one of many grand town houses in the area of Valendas, which has 300 inhabitants. Its oldest sections date back to 1485. The joint collaboration of architects, the citizens' association and the Swiss Heritage Society, as well as the responsible preservation of the heritage site, enabled the building to be revitalised. Restoration was limited to the essentials – repairs by skilled tradesmen using traditional materials, scientific preservation cleaning of patterned surfaces as well as the careful incorporation of new décor. The objective was to retain the original building structure and the unique character of the house. Well-worn stone steps, sooty areas in the old kitchen, painted panelling and fires in the living rooms are all evidence of the construction era. The restoration works followed a strictly conservative approach and could be described using the keywords “courage in the fragments”.

The apartments in Turalihus were fitted with modern kitchens and bathrooms, with classic Swiss designs. The result is a delightful combination of past and present.

In addition to town houses, the Vacations in a Listed Building Foundation owns and manages predominantly a large number of alpine chalets as well as craftsman houses and farmhouses. The residence in the Neubühl housing

estate in Zurich is somewhat of a rarity. It is a symbol of the Neues Bauen era of the late 1920s, which famously advocated living spaces with an abundance of air, light and clean lines. The guest apartment in the estate offers an authentic experience particularly as it is even equipped with furniture designed by the original architects.



Air, light and clean lines: you can even holiday in an icon of the Neues Bauen era – the Neubühl housing estate in Zurich.

The range of “Vacations in a Listed Building” is constantly increasing. The Flederhaus in Wegenstetten (Aargau) is one example of a current project. The former Trottenhuus was gently refurbished and repurposed as the Flederhaus. To do this, the surroundings underwent a bat-friendly renovation for the protected horseshoe bat and holiday apartments were constructed in the residential section of the listed building. This is a place where you can experience building culture and wildlife conservation first-hand.

magnificasa.ch
werkbund.ch



England

The Landmark Trust in England served as a model for the Swiss Foundation. In 1965, Sir John and Lady Smith launched a foundation with the aim of preventing the loss of smaller historic buildings in the UK. They were concerned with retaining historic buildings and promoting them to the public – and not in museum form, but as living spaces which people inhabited. And thus the idea was born to turn them into holiday homes with character.

Nowadays there are three criteria for determining if a building is to be rescued by the Trust: whether the building is important – historically, architecturally or culturally, whether it will be lost without the help of the Trust and whether it will be a nice place for a holiday.

landmarktrust.org.uk

Germany

In Germany, there is currently no central organisation that deals with preservation-worthy buildings in the same way as described here. However, there are numerous examples of local and private initiatives in the country. In Xanten, there are two city gates and a quarantine house from the 16th Century that can be rented by guests.

The first church to be made into a holiday home in Germany was recently completed in Bernkastel an der Mosel. Dating back to 1669, the church was doomed to disrepair until the owner of German rental website bleibe.de found out about it and renovated the entire church, including dealing with the dry rot. Now the church offers multiple family rooms, a large reception room with a kitchen and modern bathrooms. The original character of the church building, which had also functioned for a while as alms houses among other things, has now been fully restored to its former glory. Other projects by bleibe.de include a range of historical buildings in the Eifel mountain region and in the Sauerland.

xanten.de/de/unterkuenfte/ferienhaus-pesthaeuschen
bleibe.de
ferien-im-baudenkmal.de
urlaub-im-ickelhaus.de

The Türalihus in Valendas (Graubünden) is one of the flagship properties of the Swiss Vacations in a Listed Building Foundation.

The first church in Germany to be used as a holiday home is located in Bernkastel an der Mosel.



Thor Central Waterschei Genk, Belgium

A monument for restructuring

An old mining tower illustrates the history of coal mining in Waterschei in Genk – one of seven former coal mines in Belgium’s Campine region. Following the restructuring within the region, the site was transformed into an up-and-coming technology park: Thor Park. The old main building, Thor Central, received a new role in the process. Thanks to the use of new Jansen Art’15 profiles, no compromises were necessary when it came to maintaining the old building appearance.

Despite extensive renovation and equipment for contemporary use the historic appearance of the “Thor Central” has been preserved.



The pitmen in Waterschei once dug over 1000 metres underground into the earth. Coal mining began in 1924. Up until the pit was closed in 1987, 72.453.796 tonnes of coal were mined here – and the “Thor Central” bears witness to this. Today, the monumental main building of the site is preserved as a piece of cultural heritage. The rest of the site has meanwhile been transformed into a state-of-the-art technology park covering an area of 93 hectares. “Thor Park” emerged as a concept of architecture and development of the surroundings. To this end, the city of Genk and its partners brought together activities in the areas of research and development, innovation, business, talent development and urbanisation. The “Central” building was reopened in mid-2017 as the heart of the site measuring 22.000 square metres. In addition to a food plaza with two restaurants, it also contains other facilities such as meeting rooms, an auditorium, a main reception and a day care centre. One of the wings serves as an exhibition and events space. There is also a mining museum in the “Central” building. All of the facilities are available for use by local businesses and residents. The building is to take on the role of a facility centre for the businesses in Thor Park. It is therefore used as a lively intersection between the past and future – it represents the history of the region and is a new flagship building for the city of Genk.

Change for the future

In order to carry over the “Central” building into its new role and make it fully operational again, a range of building work was necessary. In its old condition, the building no longer met modern requirements. It was not equipped specifically for the potential number of people present. Among other things, floors needed to be reinforced and the external brick façade replaced or rebuilt. 1500 square metres of glazing was restored, repaired and coated. Most of the building services were also upgraded. The aim

The highly stable Jansen Art'15 steel profile system guarantees durable, resilient constructions with a high proportion of glass.

of the preservation project was to bring out the historic character of the building and thereby do justice to the cultural heritage. At the same time, energy needed to be supplied in a modern, innovative way.

Transparency with new comfort

At the heart of the “Central” building is the light and airy Barbarazaal hall. Before the restoration, the hall was a gloomy space because a canopy covered the beautiful glass roof. As the original Val Saint-Lambert glazed units and the concrete construction of the roof could not be retained and were no longer available, a special solution for the project was designed to infill new glazed units. Specially made for this purpose, 3600 glass tiles from France now provide sufficient light to the glass-roofed hall. A second glass screen was installed above the glass roof for protection. In order to make full use of the light throughout the entire building, transparent walls were used in many places. To this end, new materials were also used which bear visual resemblance to the original in a similar way to the roof construction. Internal walls and doors were designed with profiles from the Jansen Art'15 system – a series which Jansen specially developed for very slimline steel doors with modern levels of comfort.

The highly stable, non-insulated steel profile system ensures durable constructions in extremely narrow frames. Jansen Art'15 doors and partitions separate different spaces without compromising on the generous space. The traditional, handcrafted metalwork of Jansen Art'15 makes every product a unique piece. ■

PROJECT DETAILS

Client:

Autonom Gemeentebedrijf Genk

Architects:

Satijnplus / ELD Mijnsite Waterschei THV

Window manufacturer:

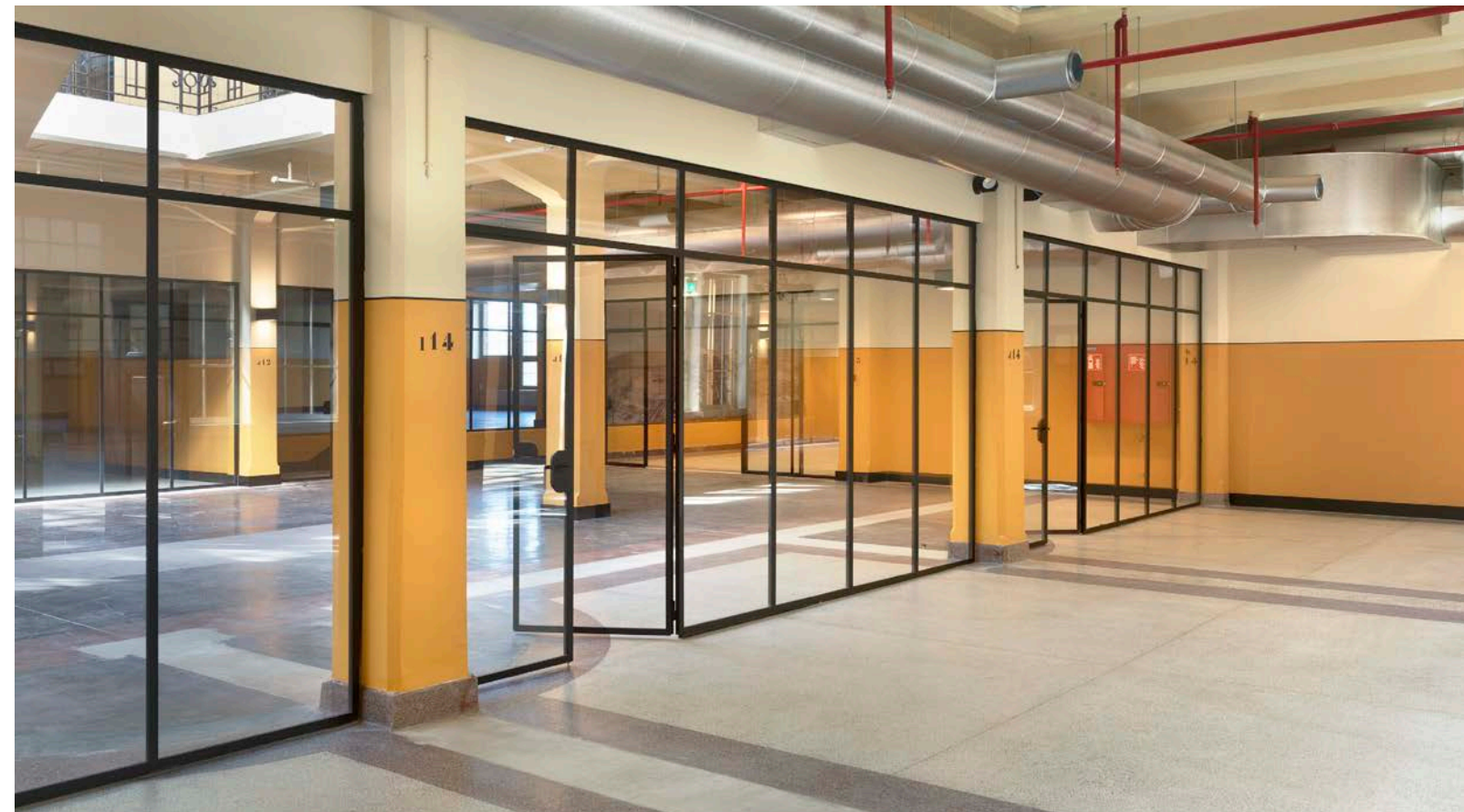
JK Glasconstruct, Kruishoutem

Jansen partner:

Kloekner Metals Belgium NV, Antwerp

Steel profile system:

Jansen Art'15



Internal walls and doors were designed with profiles from the Jansen Art'15 system – a series which Jansen specially developed for very slimline steel doors with modern levels of comfort.

Struberkaserne barracks Salzburg, Austria

Style in the barracks

Originally, the tank hall in western Salzburg housed the vehicle workshop of the Struberkaserne barracks. Following the withdrawal of the Austrian Armed Forces, the building was to be maintained as an example of late 1930s architecture.

The tank hall was built in 1939 as part of the Struberkaserne barracks and extended in 1952; the Austrian Armed Forces then used it up until 1995. Today, the site of the former barracks has residential and commercial use. The tank hall was restored and redesigned. It contains co-working spaces, office lofts, exhibition and event spaces, a large market hall and a restaurant. Large apartment lofts are located on the second and third floors.

Around three quarters of the hall were retained, including the external walls with the large door openings, and the wing walls. However, they needed to be updated to bring them in line with the state of the art and to make them more comfortable. The once closed roof area is now broken up by numerous roof windows and terraces as well as a roof lantern. The “new” tank hall is now characterised by exposed concrete, unplastered rough brick masonry and the door openings, which have been left unchanged. The integrity-separating shell on the ground floor is formed by 42 large-format units, consisting of fixed glazing and two opening vents. The archi-



itects opted for the Janisol HI steel profile system with insulating bars made from glass fibre-reinforced polyurethane. Its high level of thermal insulation goes hand in hand with greater mechanical stability, which was a further requirement due to the expected heavy public traffic. The weathered doors were deliberately sparingly restored and placed in front of the glazing. They do not have a functional purpose, but rather reflect the history of the building.

PROJECT DETAILS

Client:

Panzerhalle Betriebs GmbH, Salzburg

Architects:

ARGE Panzerhalle; Arch. Christoph Scheithauer, Salzburg (building section A, office tower); hobby a., Salzburg (building section B); LP architektur, Altenmarkt (building section C); strobl architekten, Salzburg (building section D)

Metal constructor:

Manfred Bruggler GmbH, St. Veit i. P.

Steel profile systems:

Janisol HI and Janisol 2; Jansen VISS façades; VISS Fire EI30 façades; VISS Fire EI90 façades and VISS Fire roof glazing



New perspectives for structural fire protection too. The four glazed atriums and open spaces were designed with Jansen VISS Fire EI90 up to a height of 420 cm, on top of which an extension was built using Jansen VISS Fire EI30.

Music school in Nuremberg, Germany

Transformation for music

The repurposing of the Sebastian hospital in Nuremberg into a music school is a successful example of how a listed building can be converted with just a few yet fundamental tweaks, without forfeiting the architectural quality. The unique charm of the old hospital has remained intact.

The Sebastian hospital was built between 1910 and 1914 in the Renaissance Revival style, following the designs of Nuremberg master architect Heinrich Wallraff. With 420 beds, the largest care facility in the free imperial city was celebrated as the ultimate social achievement when it was opened. But the Zeitgeist brushed aside the "Wastl", as Nurembergers affectionately call the building. By the 1960s, the rooms which contained rows of up to 20 beds were stripped back and parts of the building were used by the city administration; since 2008, it has been the temporary home of Germany's newest music school, the Hochschule für Musik Nürnberg. But only now, with the completed renovation, conversion and extension, is there an inspiring training facility for young musicians which also marks a new era for the building. The desire to give the building a new architectural appearance while also preserving the memory of its history was the design challenge faced by Munich architectural practice Robert Rechenauer.

At the time, the hospital was built in the rural idyll of the Lake Wöhrder. Today it is part of the dense suburb of Wöhrd. Coming from the city, it looks like nothing has changed, as the old entrance on Veilhofstrasse remained virtually untouched. The once open meadow towards the Lake Wöhrder was transformed into a park in the 1960s. It therefore made sense to move the main entrance from the narrow Veilhofstrasse to the park, which is one storey lower. From the outside it is possible to see the transpa-



rent sequence of rooms, which draws the visitor into the heart of the music school, towards the large orchestra hall, which the architects placed in the internal courtyard. For this, the previously closed façade was opened up into an inviting entrance using four large, glazed portals. The intermediate floor between the lower and ground floor was removed in order to create a light, two-storey foyer which connects the former main entrance level to the new main entrance, which lies one floor below.

View from the gallery on the ground floor of the new main entrance with four large portals made using the Janisol HI steel profile system, with the two middle portals functioning as doors.

While the old main entrance and the 600-plus timber windows of the outer façade were painstakingly reproduced in line with the latest building standards, all of the new portals, windows and window doors were designed in steel. “Wherever a reinterpretation has taken place, we have deliberately chosen a new, modern profile”, explains Robert Rechenauer. “With the selection of materials we wanted to mark the areas which have been transformed.” In spite of this, the new main entrance naturally blends in with the historic building. The two-storey, largely glazed foyer makes the building much lighter and airier than before – even though the internal courtyard has been “filled” with the new orchestra hall.

Based in Zwenkau, Jaeger Glas- und Metallbau took on the task of fabricating the new entrance portal from the Janisol HI steel profile system. The metal fabricator used laser scanning to take the measurements. This method is not only extremely precise, it’s also very quick. It was also possible to transfer the calculated dimensions as DWG files to the metal fabricator’s data processing system. The profiles of the upper windows were curved directly at the Jansen AG plant. ■

The new orchestra hall was placed in the internal courtyard; its roof is designed as an accessible terrace. It is reached from the ground floor via large portals which are visually identical to those in the new entrance on the lower floor.



Generous space thanks to fire-resistant glazing to prevent the flashover point from the foyer.

PROJECT DETAILS

Client:

City of Nuremberg, building authority

Architects:

Robert Rechenauer Architekt BDA, Munich, with Architektur + Baumanagement Christopher Bloss, Nuremberg

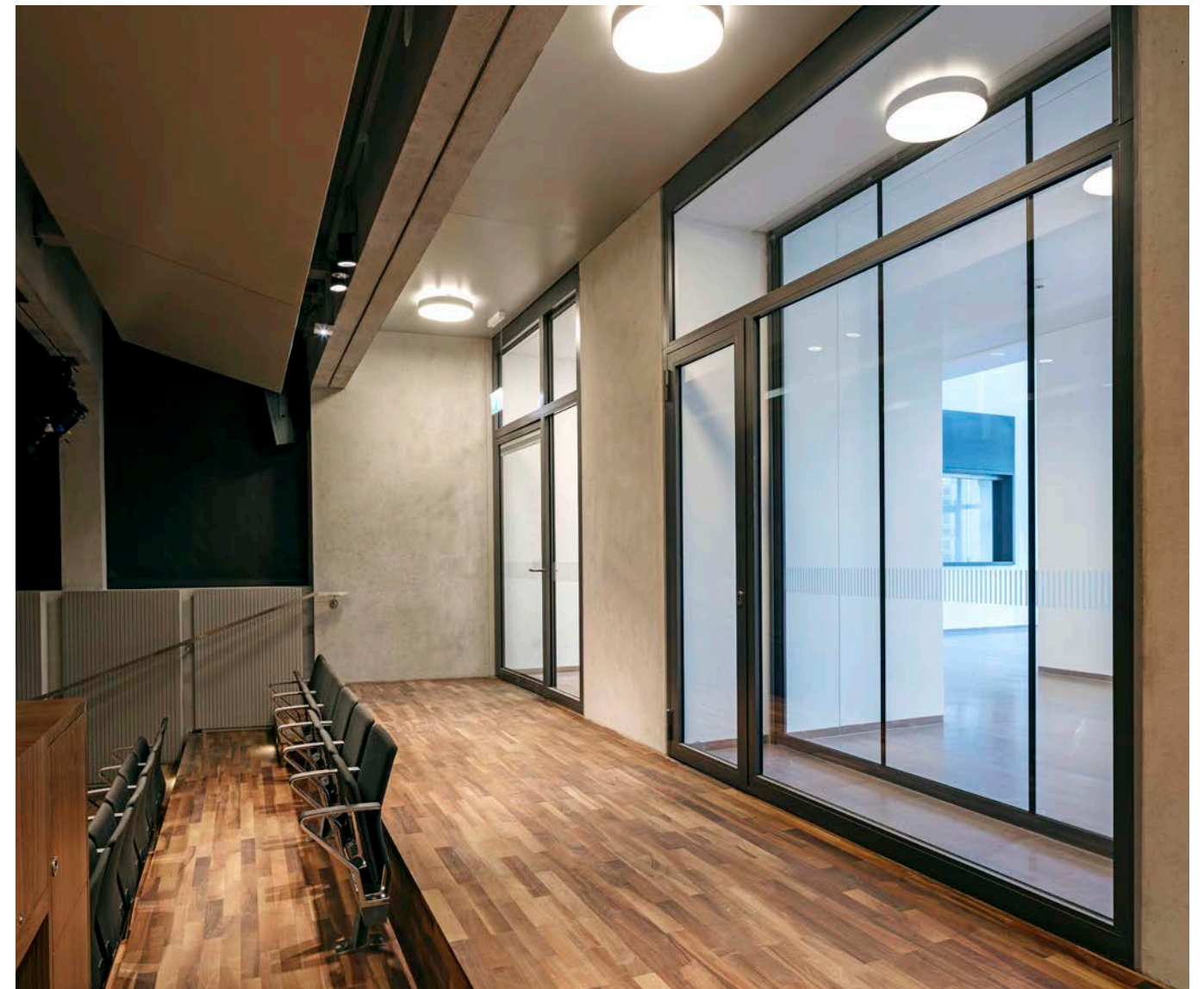
Metal constructor:

Jaeger Glas- und Metallbau, Zwenkau

Steel profile systems:

Janisol HI, Janisol 2, Janisol EI30, Janisol C4, Jansen Economy

The orchestra hall can be accessed from the foyer by means of two glazed doors. On the foyer side, the doors are designed as fire protection doors, while on the orchestra side they are smoke protection doors.



Reconstruction of a living specimen

Function or aesthetics?

Erasing the traces of time or getting closer to perfection? Many people assume that plastic surgery is just a “cosmetic” surgery. However, the reconstruction of structures and proportions often has predominantly functional objectives. This becomes clear in a discussion with Jan Plock, a specialist in plastic and reconstructive surgery.



Professor Plock, to what extent would you say your work is associated with “restoration”?

Jan Plock: “Restoration” is actually a very apt word in this regard. It comes from the Latin word “restaurare”, meaning to repair and reconstruct. Hence restoration is a fairly good word to describe the work of a plastic surgeon. Plastic surgery is all about repairing and restoring.

What exactly does a plastic surgeon restore?

Plastic surgery is actually a very broad field. It is usually subcategorised as “cosmetic” and “reconstructive” surgery. Reconstructive surgery is concerned with the restoration of structures or functions that the body has lost, for example following an accident, burns or the removal of tumours, as well as congenital defects. This includes nerve and muscle defects, as well as the body’s shape and appearance. Cosmetic surgery is performed to correct so-called formal imperfections, and these imperfections are all perceived differently by each individual. But in my experience, the two areas are not so clear cut.

Does this mean that it is not possible to separate aesthetics and function when it comes to the human body?

It’s certainly very difficult – form and function are in very close quarters here. In English we say “form follows function”. For example, in my everyday work I treat people with very serious burns. For these patients, the primary concern is generally to ensure the vital functions of the skin and soft tissue. Once the body’s surface – i.e. the skin – has healed, the next step might be to improve the appearance of scars.

So it’s then about looks?

Definitely, but on the basis of the best-possible functionality. Scarred skin, for example, can severely restrict the movement of a hand, leg or face. The primary aim of surgical intervention, beyond improving function, is for the patient to regain their self-confidence. In the case of scarring on visible parts of the body such as the hands and face, this aspect also clearly extends into the realm of aesthetics. Ultimately, the aim is to also restore the appearance of a person disfigured by fire, illness or an accident as best as possible.

So attractiveness inevitably plays a role?

The attractiveness of a person is about much more than just looks. For that matter, we perceive symmetry as beautiful, for example. Symmetry “functions” very well in many areas and therefore appears healthy with regard to the body. This is why it appeals to us so much. Fundamentally, however, appearance has a clear social function. The way in which each person interprets it comes down to the individual. Not everything is practical and recommended for everyone – even if it is feasible.

Speaking of feasibility, medicine and technology are making rapid progress all the time. How do doctors keep up with these developments and the demands for highly specialised services?

A willingness to cooperate plays a huge role here. Increasing specialisation can only bear fruit if the separate knowledge of each individual is pooled together again. This includes research work at universities. As far as plastic surgery is concerned, this research work is happening in the area of regenerative medicine, as well as in skin replacement research and the treatment of wounds. This also depends on the implementation of new technology, such as robots, and on ensuring the availability of scientific data. In the end, however, everything needs to be economically viable.

Where is plastic surgery heading?

We are noticing increased specialisation. On the one hand, there are plastic surgeons who focus on repairing breasts following breast cancer treatment, for example. On the other hand, personalised treatment concepts for the patient, for example due to individual genetic or rare health conditions, are playing an ever increasing role. ■

Professor Jan Plock MD heads the centre for burn victims at the University Hospital in Zurich (USZ). He is a specialist in plastic surgery and hand surgery. He completed his education in Switzerland, Germany and the USA. He is also a researcher in the area of reconstructive surgery and is part of an international research network. He has been an assistant professor at the University of Zurich since 2017.

Densification and retention

Dealing with historically significant examples of residential housing

Housing developments from the post-war period are in the spotlight. More living space needs to be created in cities, which increasingly places a question mark over old structures. Stefan Kurath and Simon Mühlebach from the Institute of Urban Landscape at the Zurich University of Applied Sciences (ZHAW) have researched the issue of dealing with historically significant examples of residential housing.

The socio-political demand for development internally is putting the focus on residential housing from the post-war period. Their age means they are in need of renovation and their floor plans no longer reflect the current requirements of living spaces. At first glance, replacing the old buildings with newbuilds seems the obvious choice. At the same time, the abundance of green space makes densification measures in the intermediate and access areas enticing. Larger plot areas are mostly the reserve of the same property developers. Even if a housing development has been recognised as historically significant in the meantime, they have sometimes not yet been entered into the heritage inventories.

Why renovate?

There are a range of arguments in favour of the conservation of these buildings. For instance, housing development structures have significance in terms of social history and building culture, making them important witnesses of the urban development considerations and housing construction subsidies at the time on greenfield land, mostly on what were the outskirts of the city. In terms of their dimensions and quality, the housing developments and districts are comparable to other city expansions, such as those in the 19th Century. The structure of the free space and the landscape architecture was accorded particular importance at that time and was considered to be a guarantee for a high standard of housing. Building on this today would noticeably disrupt the entire spatial experience and quality of the free space. The rationale against the replacement of the old buildings with newbuilds is the fact that the latter often have fewer residences per area than before, despite the building being larger, as the living space requirements per person have considerably increased. A so-

lution involving a replacement building also often results in the residents being forced to leave the district because they cannot find a replacement due to inadequate phasing within the development or are unable to afford the new properties.



Densification through upwards expansion. Upwards expansion allows the large areas of trees and shrubs to be retained. The spatial proportions and shading of the free spaces change (Bebelallee housing development, Hamburg, Germany).

These considerations make it clear that strategies need to be found which strive to strike a balance between densification and renovation – in favour of retaining achievements in building culture as things that are worth remembering. To this end, we at the Institute of Urban Landscape have examined different residential developments in Switzerland and Germany with regard to the balancing act between retention and densification as part of a research project funded by the Foundation for Monument Protection (see publication by Anke Domschky, Stefan Kurath, Simon Mühlebach, Urs Primas, *Densifying urban landscapes. Strategies for renewing the cultural building heritage of the post-war era*, Triest Verlag, Zurich, 2018).



Densification through supplementing with spatial layering, renovation of existing buildings and structuring of free spaces (Turmatt workers' housing development, Altdorf, Switzerland).

This showed that there is in fact potential for densifying housing development structures of the post-war era if cultural building heritage is taken into consideration.

Strategies promising success

Two urban design strategies have proven themselves to be particularly successful in the past. On the one hand, the discovery of weaknesses generally leads to interventions which contribute to a clarification and strengthening of the original urban development concept. This affects structural, typological and design aspects, especially on the outskirts of the developments as well, which mostly become modified over time. Here, replacement newbuilds or extensions are perfectly feasible, while the more sensitive components of the housing development and free spaces are renovated. On the other hand, renovating, adding to or extending the inherent structural logistics of the existing development has also proven to be beneficial.

An important prerequisite for success in this regard is to raise awareness of the issue among everyone involved in the planning. Intensive cooperation at the earliest possible stage between the client, architects, landscape



Densification through upwards expansion and with newbuilds on the outskirts to clarify the urban transitions (Altenhagener Weg housing development, Hamburg, Germany).

architects and those responsible for the preservation of historical buildings and gardens is imperative here. The process of competing for tender has also shown itself to be particularly suitable for exploring the range of densification options, if the aim is for all those involved to imple-



Densification through upwards expansion and renovation of the existing building in order to retain unique structural features (Irchel retirement homes, Zürich, Switzerland).



Renovation and supplementation of the existing building with spatial layering to extend the living space in close cooperation with the heritage preservation authorities (Tscharnergut housing development, Bern, Switzerland).

ment the best solution and not just the first good idea that comes along. It is worth the effort, because taking into account the cultural building heritage – quite apart from whether or not a building is worth protecting – helps to endow the housing with greater substance in terms of building culture, urban development and atmosphere, thereby making it a more pleasant environment to live in. This is in the interest of the residents, owners, property managers and investors. ■

Professor Stefan Kurath is an architect and urbanist. He studied architecture in Switzerland and the Netherlands and earned his doctorate at the HafenCity University in Hamburg. He runs his own architectural practice, *UrbaNplus*, in Zurich in close cooperation with Ivano Iseppi in Graubünden. As Professor of "Architecture and Design", he leads the Institute of Urban Landscape together with Regula Iseli in the Department of Architecture, Design and Civil Engineering at ZHAW.

Simon Mühlebach, MSc ETH Arch, studied architecture at ETH Zurich. He is partner at the architectural practice *Bach Mühle Fuchs* in Zurich and works with the cantonal monument preservation authorities in the city of Basel. In addition, he has assisted with the project management for the research project "Verdichtung von Siedlungsstrukturen der Nachkriegszeit" ("Densification of housing development structures in the post-war era") at the Institute of Urban Landscape at ZHAW.

Restoration of wooden racing boats

The Stradivarius of the sea

Passion – tempo – tradition. Wood chippings fly, a wood plane swishes and the smell of wood glue and varnish fills the air as the small team of boatbuilders from Stämpfli Racing Boats in Zurich's Wollishofen district breathes new life into a racing boat made from wood. Right in the thick of it is a former European and World Champion rower.

Those in the know readily compare Stämpfli wooden boats with the famous Italian violins. It is a piece of craftsmanship with a history and pedigree that can accompany a rower throughout their entire life – even the sound it makes on the water is unique. In fact, wooden boats absorb sound, which allows the rower to enjoy a special kind of peace on the water. In contrast to the renowned Stradivarius, the Stämpfli dockyard still builds its racing boats out of wood today – and by hand, using almost the exact same process that was used hundreds of years ago. That is why no two ways of wooden boat building will ever be the same. The narrow hull struts of a Stämpfli are visible through its transparent top. A classic Stämpfli boat made from thin cedarwood is also a thing of beauty.

Turning old into new

Every now and then, a “Stradivarius of the sea” will find its way back to the workshop on Lake Zürich. Melchior Bürgin explains: “Rowers who appreciate timber craftsmanship and aesthetics – the true connoisseurs – are the ones who bring their boats back to be serviced.” Often, he says, it can “fall very heavy on the heart to make the decision whether a wooden boat should be repaired or scrapped.” Many of them nurture and care for their boat themselves over the years. It is only when there is real damage to their boat – due to a collision with driftwood or another rowing boat, for example – that they bring their boat back to its birthplace, the dockyard in Wollishofen. Many a rowing club will scrap boats like this at some point in order to make space for the modern synthetic boats. For Bürgin, this is not a very sustainable way of thinking, as “synthetic boats are often replaced after only a few years, whereas wooden boats can serve for between 30 and 40 years.” These words are spoken with

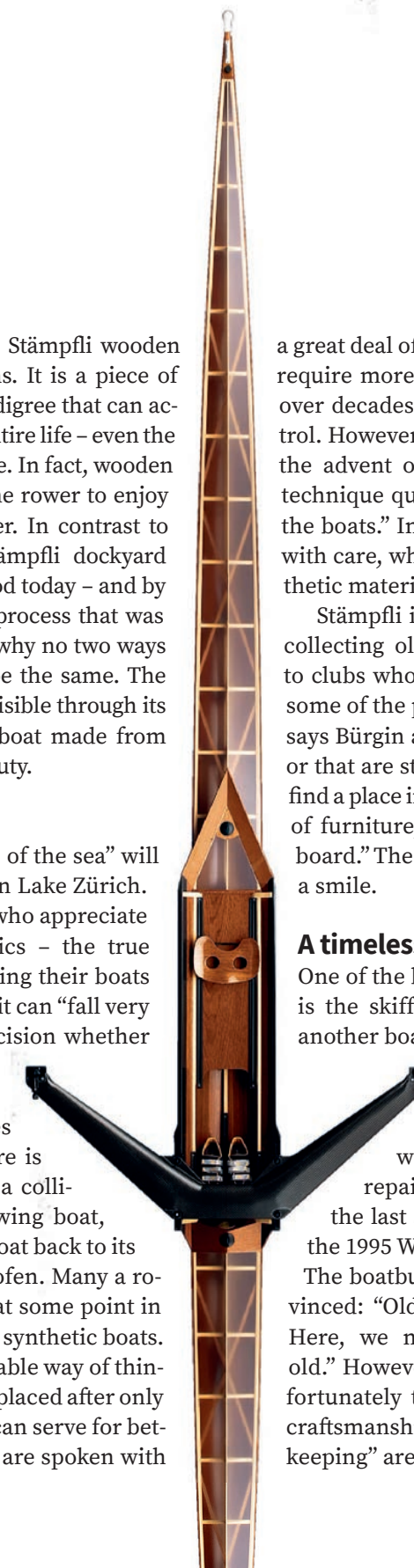
a great deal of experience and passion. “Wooden boats require more repair work. But this can be dealt with over decades and the repairs can be kept under control. However, the sport has grown significantly since the advent of rowing machines – people learn the technique quickly, but do not know how to maintain the boats.” In other words, you have to treat all boats with care, whether they are made out of wood or synthetic material.

Stämpfli is countering this throw-away culture by collecting old boats. “We give many of them away to clubs who can't afford new boats. We also restore some of the particular treasures or timeless classics”, says Bürgin and adds “The boats that we cannot save or that are still with us after several years sometimes find a place in someone's home or office as a nice piece of furniture, like a table, bookshelf or even a sideboard.” The sky's the limit in this regard, he says with a smile.

A timeless classic

One of the boats that Stämpfli “rescued” themselves is the skiff “Espresso”. Following a collision with another boat, which resulted in the bow of Espresso being destroyed, the rowing club didn't want to have it restored. However, for the men at Stämpfli there was no question that the boat would be repaired – after all, this is the boat that was the last Stämpfli wooden boat to win a medal in the 1995 World Championship.

The boatbuilders of the Stämpfli dockyard are convinced: “Old things don't need to be thrown away. Here, we make something new from something old.” However, the throw-away mentality is also unfortunately taking with it people's appreciation for craftsmanship. Only “beautiful things, things worth keeping” are restored now.





The skiff “Espresso” was badly damaged following a collision with another boat and was going to be scrapped. Stämpfli restored the last wooden boat to win a medal in a world championship.



Experience is in demand

Even where the craft of wooden boat building is concerned, modern technology can help here and there to restore or repair something. Adhesives, for example, have become stronger and more powerful. But, otherwise, the work is much the same as it always has been. Bürgin sees it as a positive thing that young people are coming back to the challenge of working with wood. Young people also know that they have more to learn in this regard than just how to use wood. Melchior Bürgin is a living legend in the Swiss rowing community and is even a former World and European Champion rower himself. He knows what he is talking about when he philosophises about the feeling of gliding when rowing. His memoirs were published recently, detailing the many years he spent as a professional rower. The book also contains numerous anecdotes about boats and fleets that Stämpfli once flew all over the world and sailed in international regattas. Even though Bürgin has since passed on the business to the younger generation, his former apprentice Daniel Zlinszky, he is still involved whenever possible and wherever he is needed.

Rapid and reliable

When it comes to racing boats, form should also always follow function – and that is, above all, to be fast. When asked if there is still potential for further developing the racing boat, Bürgin expanded on the issue and explained the relationship between shape and frictional resistance of the rowing boat (8% versus 90%). Less importance is to be placed on the shape, which is why development is “more focused on fittings, booms, rudders and footrests” with the aim of creating a more simple transfer of forces, as well as making the material more durable and handling easier. The weight of the boat (the current lower limit for a single scull is 14 kg) could be further reduced whilst maintaining the same level of durability. For rowers who are not counting on being able to squeeze every last tenth of a second out of their boat, wooden boats still represent an aesthetically attractive and sustainable alternative. For Stämpfli, they very much remain a matter of the heart.

Melchior Bürgin, the former World and European Champion rower, is still involved in the business, despite Daniel Zlinszky, his former apprentice, having taken over the workshop.



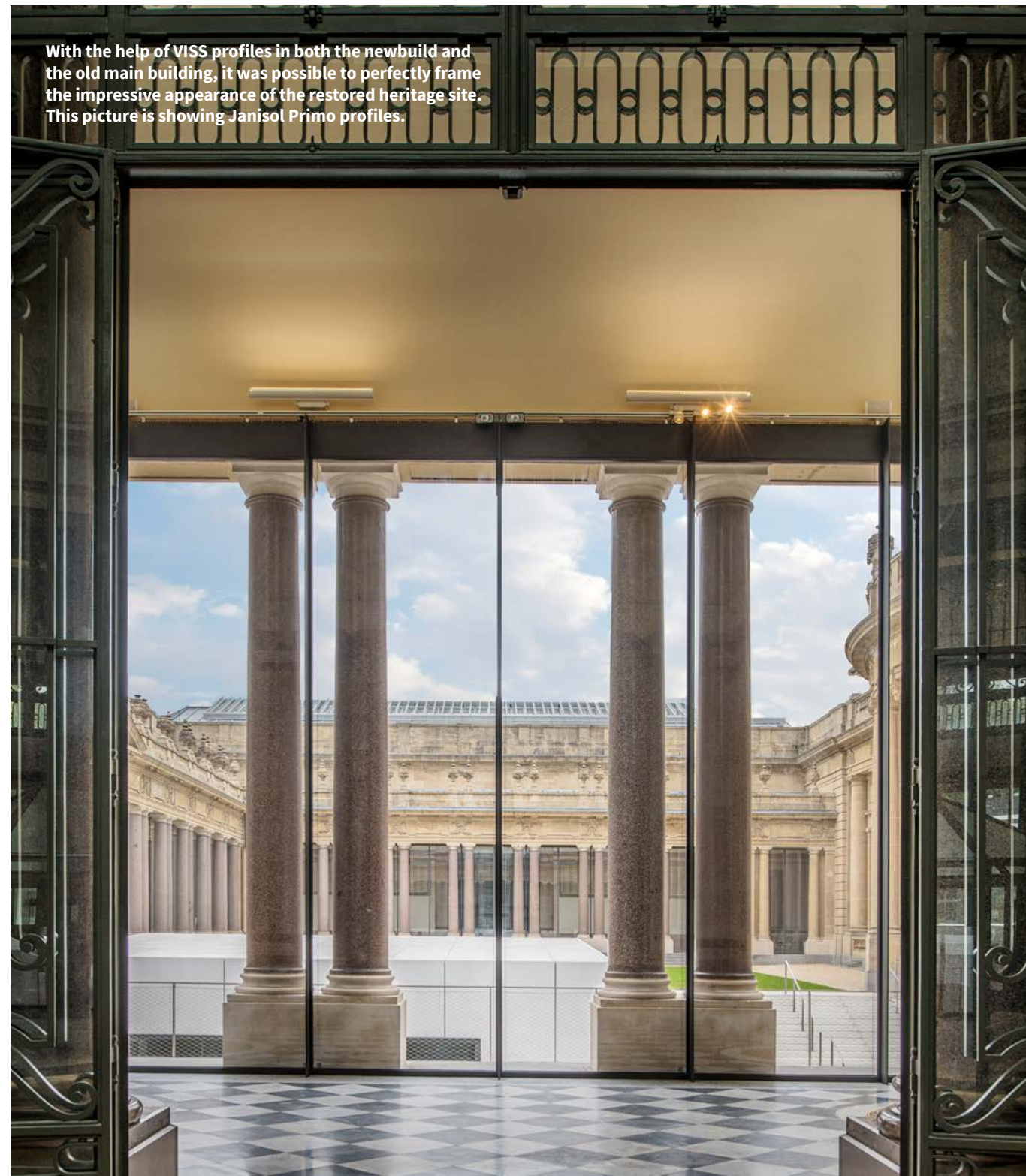
The Stämpfli boat shape has tradition. Today, it is still the famous, fast Stämpfli shape that made the dockyard of Alfred Stämpfli one of the largest and most successful in the industry right up until the 1980s. Time and again, teams have fought for victory in Stämpfli boats at World Championships and the Olympics. Many developments and innovations in rowing boatbuilding have originated from Stämpfli. Then in the 1980s, synthetic boats that could be produced faster and easier came onto the market – composite constructions made from honeycomb material and carbon. Stämpfli also began producing lightweight synthetic boats – in red and white. The shape of the boat – i.e. its cross-section – which is so important for stability and glide, was and continues to be the same as the wooden boats in many respects. Despite or because of this, the wooden boats are now a dying breed. They are virtually never seen at world championship competitions any more.

Koninklijk Museum voor Midden-Afrika Tervuren, Belgium

Versatile historical witness

The Africa Museum in Tervuren near Brussels is an informative monument. As the Royal Museum for Central Africa (RMCA), it can be traced back to the International Exhibition of 1897. Today, it is a place of research and dissemination of information. The appearance of the museum has also changed to meet contemporary requirements.

Today, a deliberately modern newbuild complements the fully renovated colonial palace. Jansen steel profiles offer contemporary functions and a harmonious appearance – not to mention the fantastic views to the outside.



With the help of VISS profiles in both the newbuild and the old main building, it was possible to perfectly frame the impressive appearance of the restored heritage site. This picture is showing Janisol Primo profiles.

In 1897, the International Exhibition took place in Brussels under King Leopold II. In addition to the main exhibition in the Parc du Cinquantenaire (or “Jubelpark”), the King also set up a 96 hectare colonial exhibit in Tervuren about the Congo Free State. At the time, the Congo was the King’s personal property. However, the colony generated less profit than hoped and the Belgian King needed to persuade the Belgian people of the merits of his colonial policy. To this end, he brought the Congo to life right in the centre of the Belgian capital and had an authentic Congolese village

constructed in the park in Tervuren. 267 African people lived there throughout the duration of the exhibition.

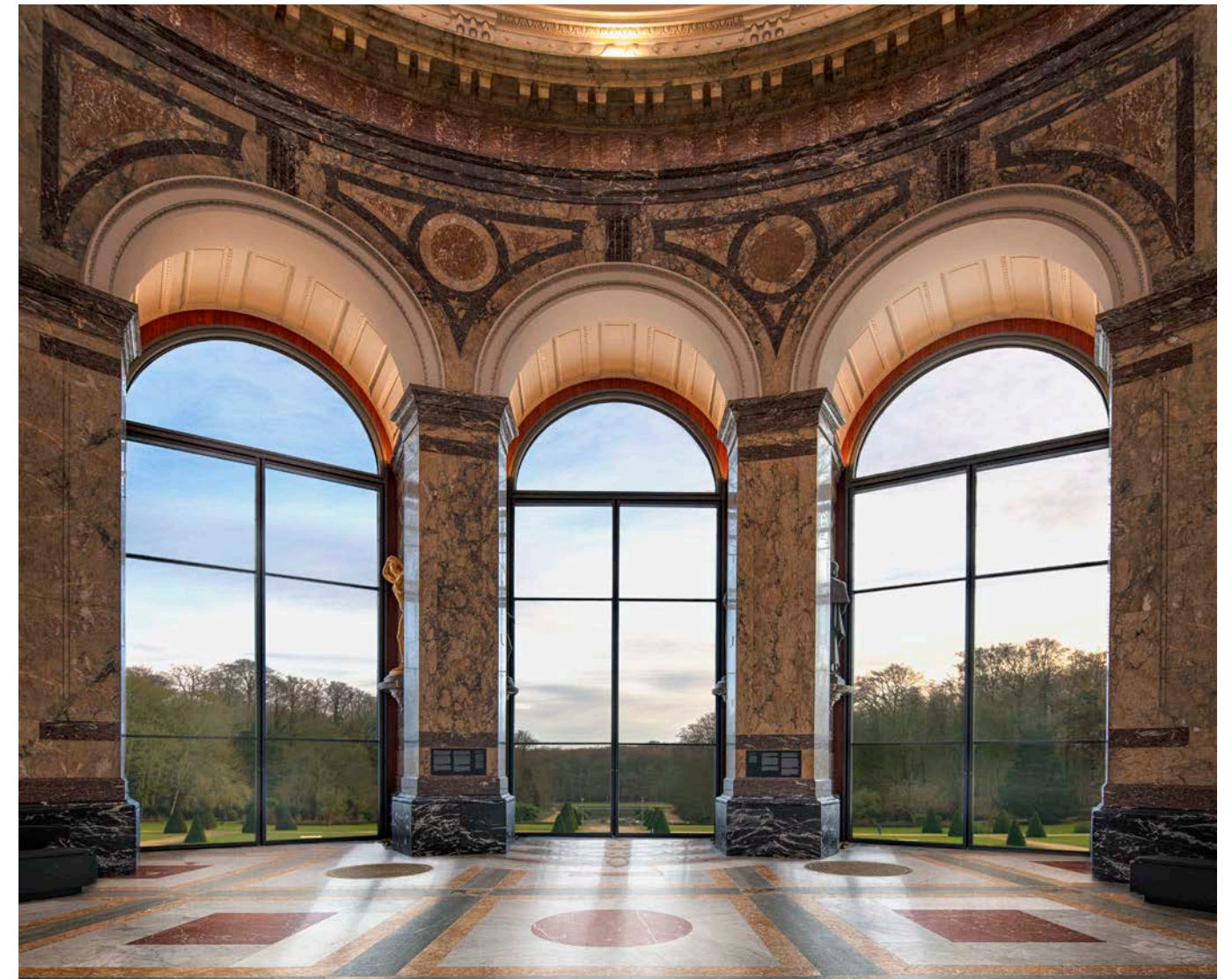
Once the International Exhibition was over, the King commissioned the construction of a permanent building to house the African exhibits. The museum building was designed by architect Charles Girault in neoclassical palace-style architecture and inaugurated in April 1910. Prior to Expo58, the CAPA building (Centre d’Accueil du Personnel Africain) was added to it, which was later converted into a research centre and archive.

Comprehensive modernisation

Recently, the museum had become completely run down. Both the infrastructure of the building and its content resembled nothing of a modern museum or a contemporary representation of Africa – it was in desperate need of restoration.

A five-year conversion and redesigning phase has now been completed. Today, the Africa Museum is a centre for research and knowledge transfer. It deals with the past, the present and the natural habitats of communities in Africa, and Central Africa in particular. In doing so, it aims to “generate interest among the public and the

ted with a deliberately modern building. The old building was completely restored and redesigned, taking into account the original design plans. Elements that didn’t belong to the original building were torn down, while original marble panels, forgings, parquet flooring, murals and vitrines were resored on site. The roofing was also renewed and insulated. In order to improve the thermal insulation and acoustics in the halls and galleries, a double-glazed wall was inserted behind the existing glazing into the almost six metre-high façade. Janisol Primo profiles were used for this. To increase stability, they were reinforced with welded blades. The gallery is



science community for this area of the world, to enable a better understanding of this region and to contribute significantly to sustainable development through partnerships”.

A view to its heritage

In their design for the “new” museum, Stéphane Beel Architects referred back to the original master plans of Charles Girault. The listed main building, the colonial palace, was reserved entirely for this, but was contras-

divided into sections by means of glass installations with VISS Fire (EI60) and Janisol 2 (EI30) profiles – including a semi-circular toplight that is the same as the vaulting in the gallery. They improve the fire resistance and the climate in the exhibition rooms. The double windows in the characteristic rotunda have been made using VISS profiles due to their dimensions. Here, the fixed toplight has double profiles so that it looks the same as in the galleries.

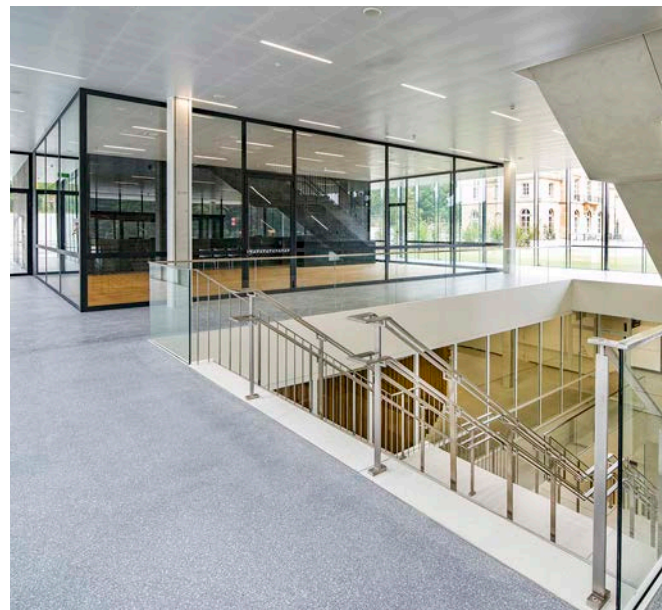
New access

As part of the conversion work, the area of the museum open to the public was extended from 6000 to 11.000 square metres and fitted with state-of-the-art technology. The new entrance pavilion is made up of a steel construction with maximum glazing, which aims to immediately attune visitors to the contemporary, transparent museum philosophy. It contains the ticket desks, a museum shop, the museum restaurant, a picnic area for children and the cloakroom. Thanks to the transparent VISS façade, visitors can stand in the entrance pavilion and marvel at the French gardens as well as the palatial main building. Janisol lift-and-slide doors open up the pavilion towards the park. This impressively highlights the dialogue between old and new.

From the freestanding building, you can go underground to the main building and into the new permanent exhibition. In fact, around 70 percent of the new



space is underground. The transition from old to new is made via an open staircase which enables views of the building from both sides. The various parties involved from Belgium and Africa helped to create the concept for the permanent exhibition.



State-of-the-art reception. The open glass/steel construction of the Jansen VISS façade and Janisol lift-and-slide doors invites visitors to engage with new perspectives.

PROJECT DETAILS

Client:

Regie der Gebouwen

Architects:

Stéphane Beel architecten, Ghent; Origin, Brussels

Building technique consultants:

Bureau Bouwtechniek, Antwerp; Daidalos Peutz, Leuven

Window manufacturer:

Lootens, Deinze and ZNR, Zuid-Nederlandse Ramenfabriek, Rucphen

Jansen partner:

Kloeckner Metals Belgium NV, Antwerp

Steel profile systems:

Janisol lift-and-slide doors in VISS façade, Janisol Primo



The gallery is divided into sections by means of glass installations with VISS Fire (E160) and Janisol 2 (E130) profiles. They improve the fire resistance and insulation.

Young Talent Architecture Award

Jansen promotes young talent

Architecture is also always an expression of society and paves the way for the design of future living spaces. Today's actions are already shaping how we will live tomorrow. As a sponsor of the "Young Talent Architecture Award", Jansen is promoting young architects, urban planners and landscape architects.

The "Young Talent Architecture Award" was presented for the third time in 2018. The YTAA honours the best theses by students of Architecture currently in their final year throughout the whole of Europe. 40 projects in total were submitted, from the fields of European architecture, urban planning and landscape architecture. Of those, eight finalists were nominated. The select judging panel finally chose the four winners who, in the European Year of Cultural Heritage, all dealt with precisely this issue.

Award ceremony

The winners received the coveted YTAA on 20 September during a formal ceremony at the European Cultural Center at the Palazzo Mora in Venice. The occasion was accompanied by a debate about space, education and culture, where the talented youngsters took part in discussions with up-and-coming and well-known architects. The winners' projects were published online and were also included in a travelling exhibition, which was inaugurated at the 2018 Architecture Biennale in Venice. Furthermore, the winners are given support by the "Mies van der Rohe Award" for contemporary architecture in the European Union and by the "Future Architecture Platform" to help them build up a network of architects and institutions.

Quality for the future

The YTAA was launched in February 2016 by the "Fundació Mies van der Rohe" in conjunction with the EU programme "Creative Europe" and "World-Architects.com" as founding partners. The YTAA is supported by partnerships with the "Architects' Council of Europe" (ACE), the "European Association for Architectural Education" (EAAE) and the "European Cultural Centre" (ECC) as local partners in Venice.

"It is remarkable that the four winners in the European Year of Cultural Heritage have dealt with precisely that topic. A study of architecture that takes into account cultural heritage is of utmost importance for the future of Europe," commented Themis Christophidou, Director-General for Education and Culture of the European Commission (DG EAC), about this year's chosen winners.

By recognising particularly interesting ideas and providing the winners with subsequent support from established architects, the YTAA is fostering quality in the architecture of tomorrow. Jansen AG supports the YTAA as a main sponsor also in 2020.

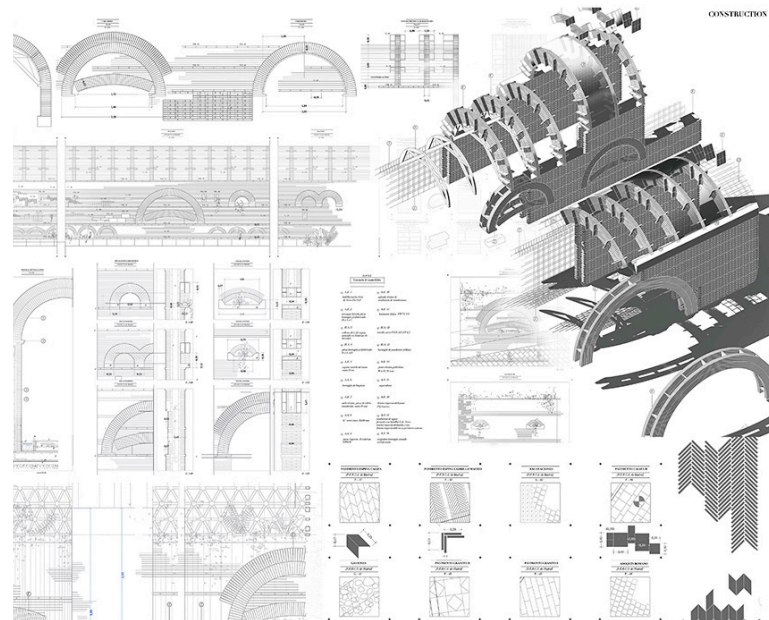
ytaaward.com

The four 2018 winners are:



Hendrik Brinkmann (1989, Germany)

College of Architecture, Media and Design, Berlin University of the Arts, for a project on the site of Friedrich Schinkel's Bauakademie.



Julio Gotor Valcárcel (1993, Spain)

Madrid School of Architecture, Polytechnic University of Madrid, for a study of the potential of the underground spaces in Madrid.



Loed Stolte (1990, Netherlands)

Faculty of Architecture and the Built Environment, Delft University of Technology, with a project on John Soane's Bank of England in London.



Matthew Gregorowski (1992, South Africa)

The Cass Faculty of Art Architecture & Design, London Metropolitan University, for his suggestion of a holistic reinvention of the British countryside.



St. Jakobshalle Basel, Switzerland

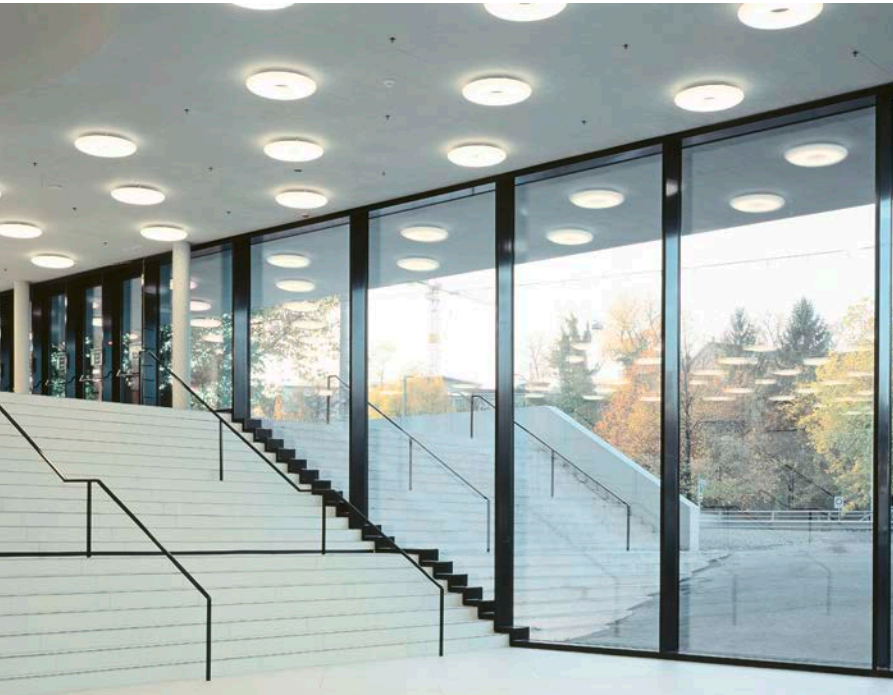
Steel and glass for the new foyer

Over several construction phases, the St. Jakobshalle in Basel was renovated in terms of energy efficiency and safety and restructured in terms of visitor flow. The six-and-a-half metre-high, cantilevered glass façade of the new foyer is a project-specific special construction made from steel profiles with excellent structural properties from the Jansen VISS system.

The foundation stone of the hall extension is a 25 t boulder from the Saint-Gotthard Massif. The column growing out of it supports the service floor, which forms the canopy.



Giovanni Panozzo, who planned the original construction of the St. Jakobshalle, felt bound to the Bauhaus tradition. Thanks to its clear architectural structure, the arena, which was the most state-of-the-art sports venue in Europe when it was completed, is incredibly versatile. In addition to the Swiss Indoors tennis tournament and the ice



The mullions of the free-standing Jansen VISS mullion/transom construction measure just 60 x 280 mm; they were additionally reinforced with welded base plates at their lower end points.

hockey world championships, rock concerts, operas and television shows are also held in the hall. Numerous measures were carried out over the decades to adapt the building to meet the required conditions. However, after 40 years of operation, it was time for extensive renovation and redesign. Over several construction phases, the building was optimised in terms of energy efficiency, safety and visitor flow, while largely retaining the existing building and with a limited number of events held. The aim was to offer a suitable infrastructure for future dual use as both an events space and sports venue.

The team led by Basel architectural practices Berrel Berrel Kräutler and Degelo impressed the judging panel of the architectural competition with its proposal to relocate the entrance area. Moving the main entrance from Brüglingerstrasse to St. Jakobsstrasse has created an urban square, via which the architects lead the spectators towards the building and through the new entrance portal into the foyer, which is four times larger than it used to be. It's impossible to miss the foundation stone standing right in the middle of the hall extension: a 25 tonne boulder from the Saint-Gotthard Massif. Out of the stone grows a column, on which the service floor rests to form the canopy. It is cantilevered by up to 19 metres and stretches across the entire length of the north-east

façade. Achieving the cantilevered service floor was a real challenge for engineering company Schnetzer Puskas. Just as ambitious as this extraordinary construction, the free-standing glass façade of foyer measures around six-and-a-half metres high. The mullion/transom construction made from steel profiles with excellent structural properties from the Jansen VISS system stretch over 120 metres along the building. Given the enormous format of the glass panes, the 60 millimetres "wide", 280 millimetres deep mullions are barely visible. They have been additionally reinforced with welded base plates at their lower end points. Steel is always the preferred material when there are high loads and large spans. This load transfer into the base point is only possible using steel profiles; they can be used to significantly increase the span of a steel construction.

The steel profiles were perfectly tailored to combat a particular feature on this building, namely the expected ceiling deformation due to dead loads, live loads and long-term deformation. Together with the façade fabricator, Ziltener AG from Aarau, and the architects, the experts from Jansen came up with a clever solution: two profiles which can slide into one another and which absorb and convey the movements of the ceiling. Double weatherstrip lips ensure a wind, weather and water-tight seal for the loose construction, i.e. it is not fixed to the ceiling.

"The building is of the quality expected for the transformation it has undergone in previous years", says Jürg Berrel from the architects consortium, adding, "It was a joy to work on this project." Once the work was complete, right on time for the Swiss Indoors 2018 tennis tournament, for the first time ever over 12.000 visitors were able to watch the world's best tennis players battle it out to win the prize money of almost two million euros. ■

PROJECT DETAILS

Client:

Basel city council

Architects and developers:

BBK and Degelo, Basel/Switzerland, with Schnetzer Puskas Ingenieure, Basel

Metal constructor:

Ziltener AG, Aarau

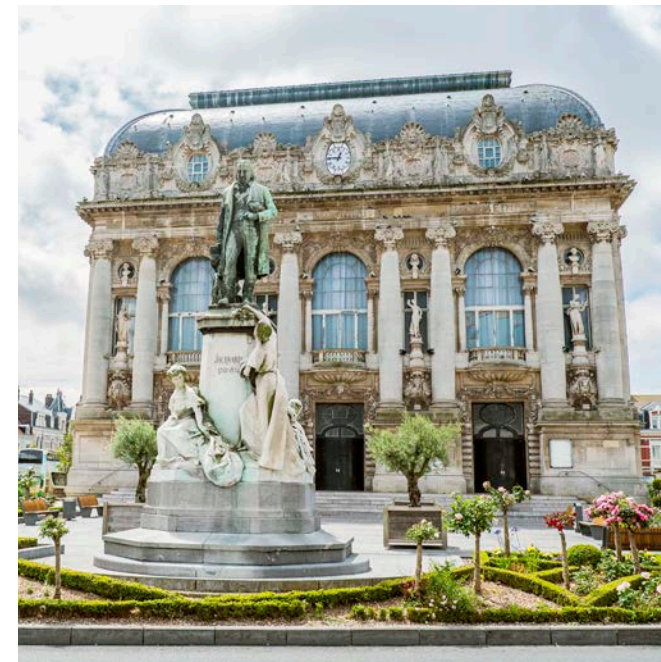
Steel profile systems:

VISS façade and Janisol HI

Grand Théâtre Calais, France

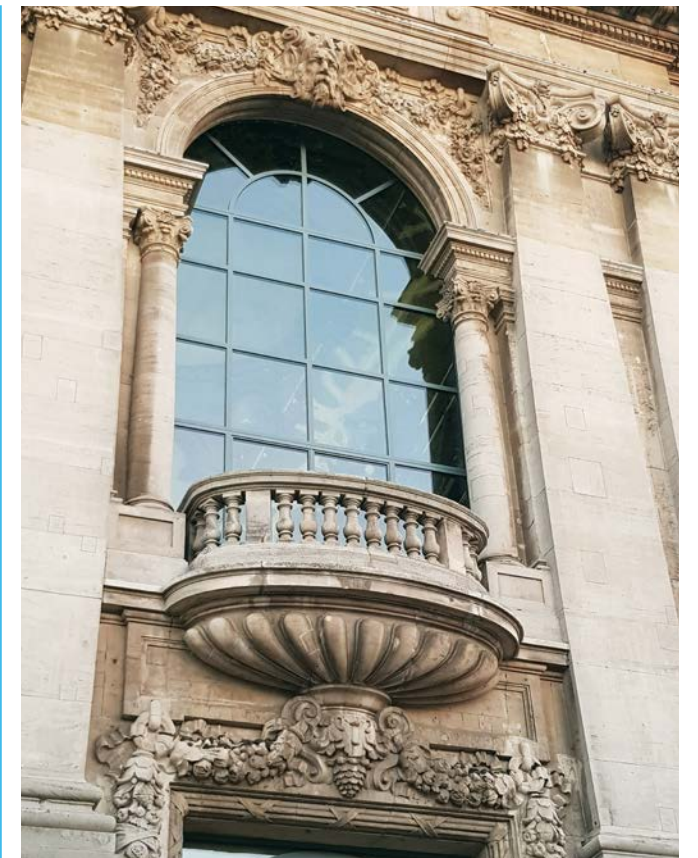
Theatre given a new look

Poetry, comedy, dance and music – four statues symbolise the varied artistic programme at the theatre in the port city of Calais. Built between 1903 and 1905, the building had since become outdated – but now the exterior once again shines in all its glory.



When the cities of Calais and Saint-Pierre joined together in 1885, the idea took off to build a new municipal theatre for the "new" city. In the end, Gustave Malgras-Delmas was chosen as the architect. He designed the building in the Beaux-Arts architectural style. The magnificent, free-standing structure with its extravagant, baroque proportions and details defined the cityscape from that point on. The French President at the time, Emile Loubet, also attended the laying of the foundation stone in 1903. When it was opened in 1905, the theatre held 1390 seats over four galleries. The stage technology was a complex piece of steel machinery, one of the first of its kind in France.

It eventually became necessary to renovate the 110 year-old structure. One of the first key steps in the extensive work was to tidy up the façade and update the windows. The architects opted for the Janisol Arte steel profile system for the reconstruction of the old glazing. With its slimline, thermally broken profiles, it was possible to both retain the appearance of the façade and meet all of the thermal insulation and sound reduction standards



required today. The Jansen profiles play a key role here in the renovation and maintenance of the fabric of the old building due to their specific strengths in terms of material properties and design options. ■

PROJECT DETAILS

Client:

City of Calais

Metal constructor:

Société Vilet, Calais

Steel profile system:

Janisol Arte

UPCOMING

“Inner skin” for tram depot in Zurich, Switzerland



Since it was built over 70 years ago, the tram depot on Elisabethenstrasse had never undergone any overall maintenance. It began to show serious defects in terms of fire protection, structural integrity, building envelope as well as earthquake resistance. In addition, the building technology was outdated

and energy consumption levels too high. The servicing to be carried out while the building is still in use will repair the structural and technical defects. The energy efficiency will be matched to today's requirements. As the external appearance and the load-bearing structure are to remain largely unchanged, an “inner skin”

will be added to the interior: a new layer of masonry with core insulation in the lower area and a slimline metal/glass façade in the upper area. The resulting intermediate space is perfect for providing rear ventilation to the construction. Janisol windows and Janisol HI doors will be used.

Ramblas Barcelona, Spain

Janisol arched windows are being used on the famous La Rambla boulevard. Due to the extensive renovation of the protected façade, a total of 52 arched windows, a Janisol door and 400 square metres of the VISS façade system are being installed in the Rambla 124 building. Architects Roldan + Berengué arqts designed the Janisol windows with an increased height of 3.36 metres.

Casa Burés Barcelona, Spain

Built between 1900 and 1905, Casa Burés bears the name of its first resident, Francesc Burés, owner of one of Spain's most successful textile companies. The current renovation of Casa Burés is not only preserving the building structure and the listed decorative elements, it is also retaining all of the benefits of its modernist architecture: light, space, habitability, high-quality

materials and maximum comfort. Janisol, windows, Janisol C4 fire doors, ten Art'15 units and 38 Arte 2.0 units are being installed in Casa Burés.

BNP Paribas Paris, France

The registered office of major bank BNP Paribas on Boulevard des Italiens is being renovated. Janisol Arte 2.0 will be used (Arte 2.0 dry glazing).

Unique art depot in Rotterdam, Netherlands



The Depot Boijmans Van Beuningen in Rotterdam is the first art storage facility in the world that offers unchaperoned access to the complete collection.

Thanks to the VISS RC4 system solution as well as other Jansen products, the building can be constructed with a special curved shape. Standing almost 40 metres high, the building was designed by Rotterdam architectural practice MVRDV. Unlike in the neighbouring museum, there are no actual exhibitions here. The public can discover around 70.000 artworks alone or with a guide, and gain insights into the areas of conservation, restoration and provenance research. The route runs from the lobby on the ground floor, through numerous depot and exhibition rooms as well as a cinema, and on to the sculpture garden and a restaurant on the roof. The depot is being constructed on the northern edge of the Rotterdam museum park. In order to conser-

ve the park, the building structure was designed as a compact, round volume which takes up a minimal amount of space and fitted with a reflective glass façade. The resulting building aims to reflect the colours and shapes of the environment. In the Depot Boijmans Van Beuningen,

the VISS RC4 system solution is being used, which meets the increased security requirements. VISS and Janisol C4 fire doors are being installed in the interior. The sustainability objective is to achieve BREEAM Excellent Standard.



UPCOMING

Centro Canalejas Madrid, Spain



The Centro Canalejas is being turned into a new landmark in the revived heart of Madrid. For the past few decades, this area has

been home to the headquarters of financial institutes such as Banesto, Central Hispano and Zaragozano. The unique project includes the

complete renovation of seven old buildings covering 50.000 square metres of floor space and will transform this area into a complex for luxury apartments, an exclusive shopping mall and a Four Seasons hotel. Designed according to plans by José Grases Riera, the building complex originates from the year 1887. The buildings were inaugurated in 1891. Today, they are historically significant monuments worthy of protection. The focus of the renovation is therefore on protecting and retaining the historical and cultural heritage, in particular of the façades and the main gallery of the two buildings. 44 doors and 137 windows from the Janisol Arte 2.0 range as well as numerous Janisol applications are being used here.

Police and justice department in Zurich, Switzerland

The numbers for the construction are impressive. The total floor space of 40,000 square metres is the same size as six football pitches. The storey area in accordance with SIA 416 covers 132.000 square metres. On the site of the freight yard in the Aussersihl-Hard district of Zürich, the new police and justice department is being constructed with space for 1800 workstations and 300 prison cells. The most cutting-edge centre of excellence in Switzerland for tackling crime is costing 568.6 million francs.

Architectural practice Theo Hotz Partner AG has designed a large sculptural building which can be seen as an extension of the block structure of the neighbouring residential area. The building contains the administration offices for the police and judiciary, a police school, a forensic institute, the criminal

prosecution and the prison. The repetitive façade of the giant building is impressive. The VISS Basic BR4-NS steel system is used as a special construction here, along with VISS Fire BR4-NS.

The AWS 75 XR and FWS 60 FB7-NS

aluminium systems are also special constructions, with 49.708 metres of window and door profiles, 450 metres of mullion/transom façade, and 1380 metres of profile for toplights and add-on constructions being installed.



Imprint

Published by:

Issue 01/2019

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Athesia-Tyrolija Druck GmbH (Paper: Papyrus Plano Art)

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