

A MAGAZINE ABOUT BRICKWORK AND RESPONSIBLE ARCHITECTURE

PETERSEN



ON THE EDGE OF THE SEA

FORMALLY ARTICULATED FAÇADES AND SUBDUED MATERIALS – RAW CONCRETE, WHITE PLASTER, TEAK AND HANDMADE BRICK – ENSURE HARMONIOUS INTEGRATION INTO A DRAMATIC ENVIRONMENT.

The stunning view to the west is framed by the concrete pillars and the load-bearing construction.



The site for the new house would prove to be as challenging as it was beautiful. Sydney based Tobias Partners were commissioned by a married couple in their sixties to create a new home that would have room not only for family and friends, but also for the beautiful furniture and artworks that the clients had collected over the years.

The site lies on a shortcut to Ramsgate Avenue, five miles east of Sydney, atop the rocky Ben Buckler headland at the northern end of Bondi Beach. The spot, due east of Bondi Bay, provides an unobstructed view of Sydney's southern coastline. Fitting the house on the approximately 390-m² site presented considerable technical challenges, due to the dramatic, three-storey slope from the road to the water's edge.

The site is part of a particularly scenic stretch along Bondi Beach, and a dilapidated five-storey apartment block was demolished to make way for the new building. The house would stand three metres from its neighbours to the north and south, and five metres from

its neighbour to the east, making it crucial to come up with a design that safeguarded everyone's privacy. Other factors that had to be taken into consideration were the intensity of the afternoon sun, the unpredictable coastal winds and the corrosive, salty environment. It was also crucial that the residents had the opportunity to enjoy the extraordinary view to the fullest, and make the most of the direct and indirect sunlight. In addition, the home was to benefit from natural ventilation. The construction process threw up numerous practical challenges. For one thing, the site could only be reached via a narrow access shared road between its neighbours to the east. The working rhythm was dictated by the ebb and flow of the tide, which means that the foot of the building is inundated twice a day.

"The clients gave us a free hand to make suggestions about the design of their home," says architect John Richards of Tobias Partners." We chose to build the house as a compact volume with a logical, easy-to-read

design based on concrete frame of columns and beams in-filled with a composition of solid and void. The pillars around the periphery create a series of outdoor spaces with very different characteristics. To the west, all five floors extend to terraces of varying sizes that overlook the bay. On the north side, platforms at several levels act not as terraces, but as extended planters that imitate the greenery along the headland. On the upper level is a screened-off roof terrace decorated by the artist Mika Utzon Popov."

The 900-m² interior consists of two kitchens, dining and living areas, bedrooms, entertaining spaces and a library, all of which are primarily located over the building's western end. Whilst the subterranean spaces are largely used for secondary functions.

The house's retractable, louvred screens, operable glazed walls and internal window furnishings form an active secondary layer to the exoskeletal building skin allowing the house to respond in a dynamic manner to both the residents' needs and the changing

The house at Bondi Beach literally has its feet in the water. Balconies look out over the sea on every floor.



“We wanted density at the bottom and lightness at the top of the screens. To achieve this effect, we needed the thinnest bricks we could find – which turned out to be Kolumba by Petersen Tegl.”
Nick Tobias, architect

environment – from the angle of sunlight to the tide and the winds.

The location’s harsh seafront conditions required robust and maintenance-free materials. The concrete columns, beams and infill elements are raw, the closed-off façade towards the road is in white-plastered concrete, and the large garage doors are made of Burmese teak.

The northeast corner of the building has its own distinct aesthetic, which stands in contrast to both the raw and the white plastered concrete. It consists of two nine-metre-high, perforated brick screens that run on each side of the concrete corner column. The screens enclose a small, 2.5 x 2.5-metre void – an outdoor space – with a number of functions: located adjacent to the three-storey stairwell in the house, and separated from it by a glass wall, the space provides both privacy and retreat from the activity outside whilst filtering dappled sunlight, natural light and cross ventilation into the interior of the home. The both practical and

decorative outdoor space is occupied by a sugar palm tree and other vegetation native to the area.

“We did a lot of research to find the right brick for the patterned screen walls. We looked at screens from Asian countries, but the types of bricks used in those were too heavy for this setting. We wanted density at the bottom and lightness at the top. To achieve this effect, we needed the thinnest bricks we could find – which turned out to be Kolumba by Petersen Tegl. Once we had decided on the brick, we conducted many experiments to find the optimal way to lay them in order to achieve a good balance between sunlight and shadow. The result is a regular pattern that produces a changing light in the rooms, depending on the season and the time of day. The brick screens fulfil a different function when darkness falls, as the artificial light from the garden and the home’s interior streams out of the perforations, producing an effect like a lantern.”

Behind two screens made of interlacing Kolumba is a small courtyard, which provides natural ventilation and allows daylight to reach all of the floors above ground level.

“We are very pleased with the final result. The bright, rustic, Danish brick stands in beautiful contrast to the raw concrete, the white-plaster façade and the cobblestone pavement in front of the house. For the screens, we drew on Indian and Asian influences, but used a European product – which is actually a typically Australian way of doing things,” concludes Nick Tobias.

**Private residence, Bondi Beach
New South Wales, Australia**
*Architect: Tobias Partners
Contractor: Belvedere Constructions
Engineer: Partridge Structural
Landscape architect: Myles Baldwin Design
Artistic decorations: Mika Utzon Popov
Bricks in screen walls: K91
Bricks in artistic decorations: K21
Completed: 2016
Text: Ida Præstegaard, cand.arch.
Photos: Justin Alexander*

The visually solid façade to the east is made of polished white concrete, Burmese teak and greyish Kolumba.



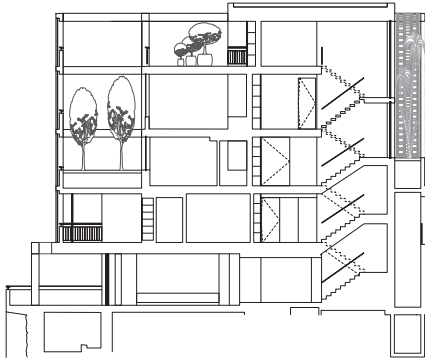
Beautiful Australian daylight floods the living room. The artificial light is just as beautiful, but Danish, by Poul Henningsen.



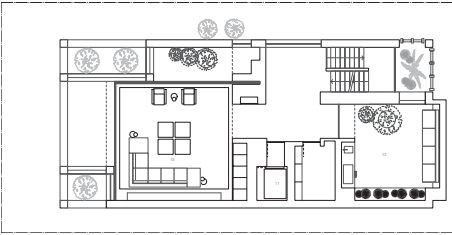
The screen walls filter light from the staircase.



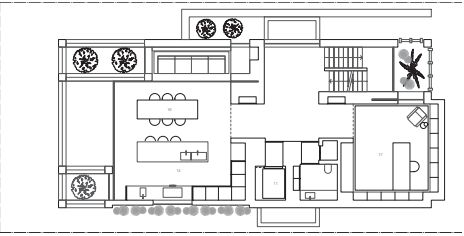
In the bedroom to the east, the furnishings include a Wegner chair by Carl Hansen & Søn.



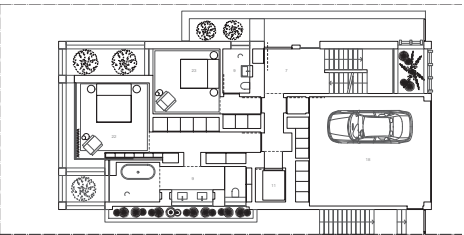
Section



Floorplan, 2nd floor



Floorplan, 1st floor



Plan, groundfloor towards the road



The building’s character changes at night, when the decorative screens resemble a lantern in the dark.



John Richards, Tobias Partners, project architect.



Nick Tobias, Tobias Partners, partner and founder.



The house has a system of shutters and sliding glass panels that can be opened or shut depending on wind, weather and the need for privacy. For example, the top floor terrace may be opened to the rest of the building.



The interlaced brickwork was inspired by Asian patterns. The handmade brick comes from Broager, Denmark.

MIKA UTZON POPOV ABOUT WORKING IN CLAY

1. The clay’s memory

We started off by using our hands to stretch the clay in a flat brick template. This process establishes an orientation in the clay particles. The clay is then transferred into the organically shaped mould. We press and twist it carefully down over the mould, but without changing the basic shape. Clay particles have a “memory”, and during this process they try to return to their original, compressed form. The clay needs to be carefully massaged into place to ensure that it does not return to its original, flat shape during the drying stage.

2. Mixing

After experimenting with twisting and stretching the clay, we chose a highly stable and very fine-particled German clay. This particular clay has a heavy and smooth consistency that lends itself to the shape I had chosen.

3. The settling period

This is the period when the clay is allowed to “fall into place” and emits much of the moisture it contains prior to the drying phase.

4. Drying

All of the moisture is drawn out of the clay in Petersen’s 80°C drying room. During the drying period, the clay shrinks by about 10–15%. If the clay is not completely dry before it is fired, any moisture present will turn into steam and burst as it expands.

5. Firing

The brick’s curved shape requires extra attention during the firing, which is done at 1,080°C. The dried bricks are therefore placed on sand in the furnace so that they are supported and do not lose their shape during the hard firing.

The concrete foundation was cast by 2Barrows Polished Concrete in Sydney.



The organic details of the artwork's concrete foundation recall the structure of the sandstone rocks beneath the house. According to Mika Utzon Popov, the handmade brick brings elements of the house itself – the Kolumba bricks – into a dialogue with the client family's Mediterranean heritage. The missing bricks are a reference to ancient Southern European friezes that have fallen into disrepair over the millennia.

CLAY REMEMBERS AND SHAPES EVERYTHING

THE OWNERS OF THE HOUSE AT BONDI BEACH COMMISSIONED THE ARTIST MIKA UTZON POPOV TO CREATE A WORK OF ART FOR THE ROOF TERRACE. HE FOUND INSPIRATION IN THE ROCKY COASTLINE AND THE KOLUMBA SCREENS AROUND THE COURTYARD.



In consultation with Kim Reinecker of Petersen Tegl, a German clay was chosen for the artwork.



In its raw form, the clay is dark brown.



The 25-m² sheltered roof terrace on the fifth floor is the owners' favourite spot in their new house at Bondi Beach. The terrace is always sheltered from the elements and features a large olive tree in a pot and an outdoor kitchen, and offers a beautiful view over the small courtyard and its eight-metre-tall sugar palm. The terrace's point de vue is a decorative piece created specifically for the site by Danish-Australian artist Mika Utzon Popov.

"I wanted to create a work that, like the house, doesn't make a big fuss but just merges imperceptibly into its surroundings. The idea was that the work should both refer to the surrounding natural environment and incorporate elements of the building – like the brick screen walls around the courtyard," Popov explains. The result is a wall-hung 3.2 x 1.2-metre rectangle of polished concrete, consisting of three panels with an organic, wavy surface. Arranged on the panels are hand-shaped, rustic bricks in a warm, terracotta hue, which follow the undulation of the concrete.

"The concrete borrows its organic shape and structure from the sandstone cliffs along the coastline, while the bricks are the architectural element. I have manipulated their usually rigid rectangles to resemble shapes seen in nature – a reflection of both the architecture and its surroundings," he continues. The bricks are in parallel sections, but placed at irregular intervals. "I wanted the look of an ancient frieze that has degraded over time, so you can see the walls of the building."

Once Popov had developed his artistic idea in theory in Sydney, he called Christian A. Petersen, whose brickworks had supplied the Kolumba blocks for the screen walls at Bondi. "Without knowing anything about clay or process, I asked if they could shape wet bricks to an organic rhythm. I see Christian's response as the very essence of the way Petersen Tegl works: "I don't know, so let's find out. Come up and give it a go!"

Popov took up the gauntlet and ended up working at Broager for two separate three-week periods.

"The brickworks made space, materials, expertise and labour available. Working in a field and with a material that I knew nothing about beforehand was like a dream come true. I learned an incredible amount from people like Kim Reinecker, who is responsible for developing new bricks using foreign clay. Our work together took the form of an ongoing dialogue about limits, development, process and intention. We were not sure the goal we had set was possible, but we pushed ourselves to achieve it."

The first thing Popov did at the brickyard was to create a base template in foam, which he hand-cut, polished and sealed with epoxy varnish. The template would form the base for the design of the bricks, and later serve as the mould for the concrete panels on which the bricks would rest. The next step was to choose the clay. Popov and Reinecker selected a stable German clay that has a soft terracotta shade when fired. The bricks were individually hand-shaped on top of the template, laid out to dry and then fired. Clay



Mika Utzon Popov.

"A crucial point is that clay has a phenomenal memory. When it is pressed and shaped, it keeps that shape. If you bend or move the clay, it will try to return to its original shape."
Mika Utzon Popov, artist

but after firing it ends up a light shade of terracotta.

shrinks 10–15% while drying, which meant that Popov had to recut the moulds when he got back to Sydney. He also had to repair and redo the details on the surfaces so they would fit the fired bricks, which arrived in Sydney after 40 days at sea. A reverse mould was then made, from which the concrete base was cast. Finally, the concrete was polished to a smooth finish, the bricks were glued on and the work was finished.

“It was a big surprise to me that working with clay requires so much patience. Clay has a sensitive but very strong character,” says Popov. “Originally, I thought that the concrete would drive the project, but I was wrong. It turned out to be the clay that dictated the shape, and hence the idiom of the final work. The clay shaped everything! Crucially, I learned that clay has a phenomenal memory. When it is pressed and shaped, it keeps that shape. If you bend or move the clay, it tries to return to its original shape. To convince clay to move in a different direction, you have to caress it. Never try to force it, because then you run the risk of breaking the surface and ruining it.”

The owners of the house, the architects and artist are all pleased with the finished artwork, which is now mounted on the wall on the terrace in Bondi. Popov also enjoyed his time as an apprentice at Petersen Tegl: “During the process, I learned to understand the nature of clay – and to like it!”

“Originally, I thought that the concrete would drive the project, but I was wrong. It turned out to be the clay that dictated the shape, and hence the idiom of the final work. The clay shaped everything!”
Mika Utzon Popov, artist

The artist and architect enjoyed working together, and art became an integral part of the architecture.



THE WORK OF ART WAS PRODUCED IN BROAGER AND SYDNEY



1. Cutting the polyurethane casting mould.



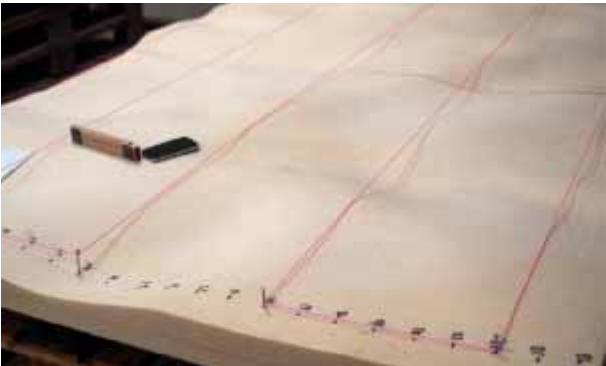
2. Inspecting the first sample brick after firing.



3. Evaluating the curves of the sample in relation to the mould.



4. The finished mould is ready for the clay elements.



5. A grid ensures correct positioning on the moulds.



6. The kneaded clay is ready to be shaped.



7. The clay is pressed into the wooden moulds.



8. The clay elements are placed on the polyurethane moulds, ready for drying



9. The fired bricks are not fully aligned with the moulds, which must be adjusted later.



10. The brick elements are placed on the moulds.



11. When they reach Sydney, the moulds are adjusted.



12. The moulds are ready to be copied in negative, for use in casting the concrete panels.



The new student residence, Campus, consists of three interlinked 15-storey buildings that tower over the Funen landscape.

ROOM WITH A VIEW

HIGH-QUALITY STUDENT RESIDENCE
DESIGNED TO NURTURE COMMUNITIES OF
DANISH AND INTERNATIONAL STUDENTS
LIVING SIDE BY SIDE.



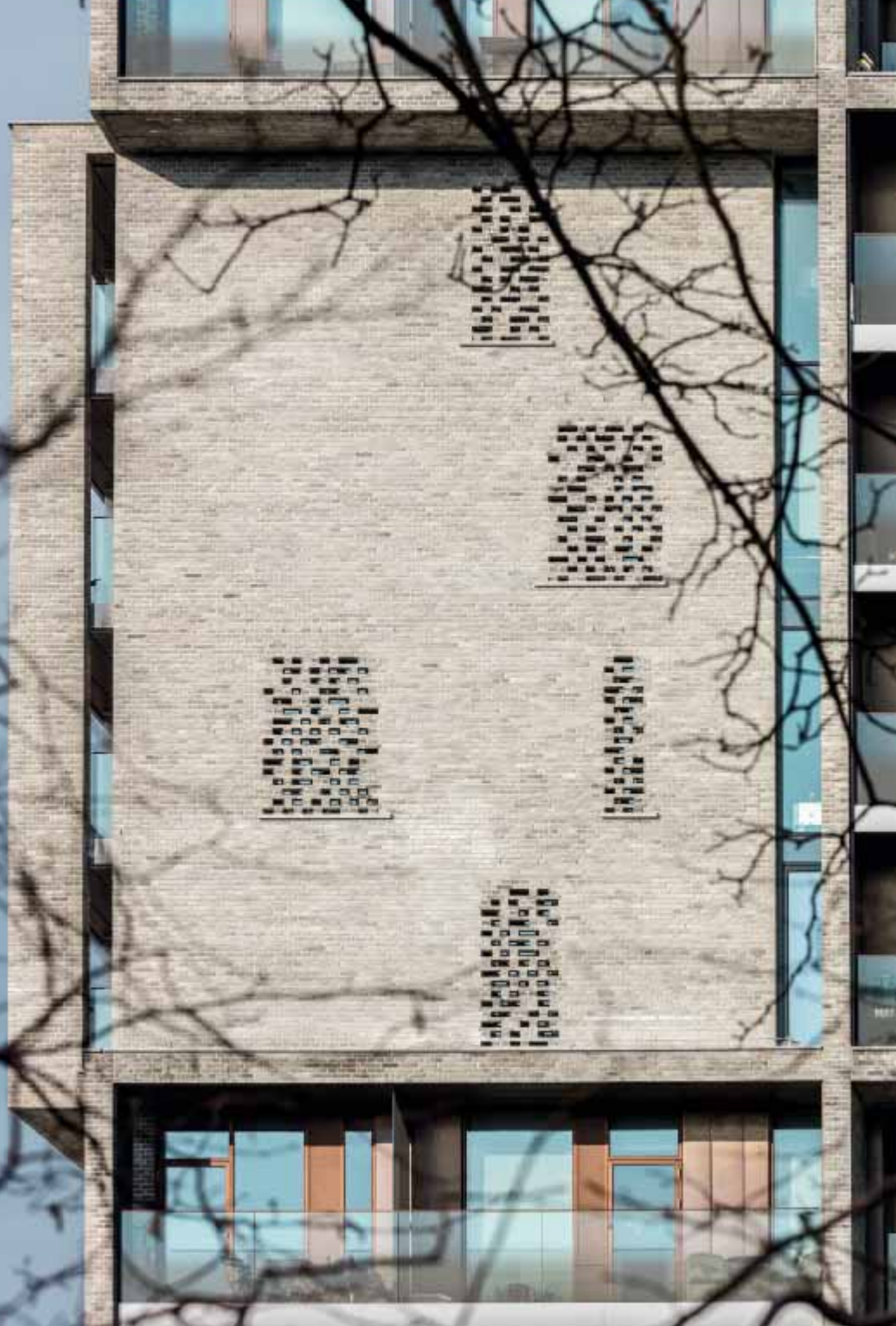
Oak floors and lots of daylight create a friendly atmosphere in the rooms.

Studying for a degree is not just about acquiring in-depth knowledge of a subject – it is also about getting to know yourself and others better. However, students on exchange visits abroad often find it difficult to find accommodation without the help of a local network. The University of Southern Denmark in Odense wanted a residence for international students near the campus – and with generous support from the A.P. Møller Foundation, Campus became a reality.

The University envisaged the residence as a landmark for both the campus and the surrounding area, which is being converted into a new science park, Cortex Park. The answer was a 15-storey building that consists of three juxtaposed towers enclosing a central building. The towers contain 250 student rooms, 35 of which have added accessibility. Seven rooms in each tower share a small communal area. The 21 rooms on each floor also share a kitchen and common room at the core of the building. The overall effect is of dynamic interplay between private, semi-private and communal areas.

The main structure's rotating sections give the façades a varied appearance.





The architects and clients had blue-tempered bricks custom-made. The fine yellow-green shades mix beautifully with the rich brown tombac on the balconies.

The criteria for choosing materials were stringent and have a Nordic air, inspired by the nearby University of Southern Denmark, a structuralistic complex from 1966 made of distinctive raw materials such as concrete and Corten steel. Campus Odense has brick exteriors and balconies in tombac. Brick is also used indoors, complemented by beautiful floors and detailing in oak. “We chose a custom-made blue-tempered brick because we wanted something lighter and more uniform than the bluish bricks in the standard Petersen range. The result is a light-grey brick that reveals a fine play of colours, moving toward yellow-green as you get closer. The tone of the tombac also relates to the warm, metallic glow of the University,” says architect and partner Julian Weyer of C.F. Møller.



The twists and turns mean that all of the rooms have views of the surrounding landscape without anybody being able to see into them. Recessed balconies help control the sunlight and regulate the indoor climate.

A great deal of study and investigation lay behind many of the decisions about the residence’s appearance and interior. A full-scale mock up of an entire floor was built in an industrial building nearby. The architects experimented with different bricks to test aspects such as decor, furnishings and lighting. A reference group of students was set up to ensure that the perspective of future residents was taken into account.

The residence does more than just bring together Danish and international students. It exudes an air of welcome and quality as well. “Anybody living here will really experience Danish architecture and design close up,” says Weyer. It is a matter not just of the building’s exterior aesthetic idiom, but also how its spaces are designed. “We wanted to take as our



At the core of the building are the communal areas, which include extremely spacious kitchens.



Interlacing brickwork creates patterns on the façade and fascinating light effects in the room behind.



Brick has also been used indoors, endowing the interior with a robust textural character and a comfortable indoor climate.



Section

Campus Student Residence, Odense, Denmark

Owner: Fonden Campus Kollegiet

Client: The A.P. Møller and Chastine Mc-Kinney

Møller Foundation for General Purposes

Architect: C.F. Møller

Engineer: Niras

Landscape: C.F. Møller Landscape

Completed: 2015

Brick: D70PT2

Text: Martin Søberg PhD, architectural historian

Photos: Anders Sune Berg, Torben Eskerod



Floorplan

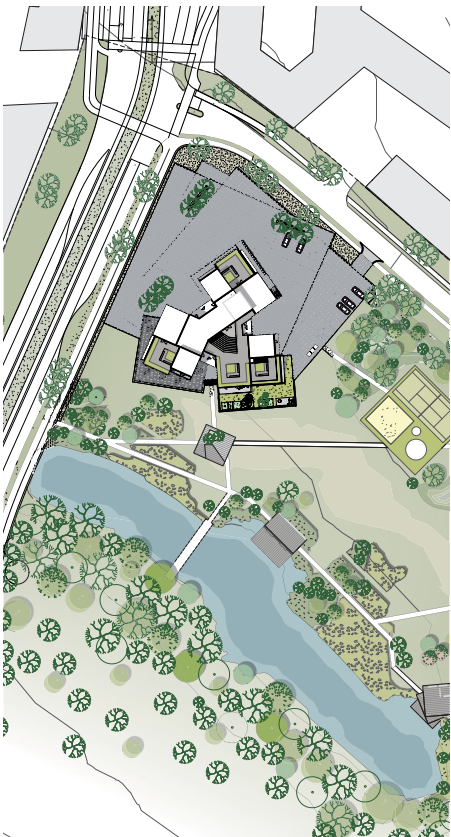


On the top of the building is a large, multi-level communal roof terrace, with plenty of space for relaxation and activities.

starting point the way in which people actually live in a student residence. One of the things we focused on was how communities arise.” All of the rooms – including the communal areas – have their own balcony. The balconies have three different outlooks: toward the city, toward the University and over the green, Funen landscape. The ground floor houses a café, while at the top of the building there is a reading room and meeting room, as well as an event space and two apartments for researchers. In addition, a large communal roof terrace spreads over several levels and offers panoramic views of the surroundings.

Campus has the air of a coherent, monolithic whole that towers over the landscape. However, the exquisite patterns and colouring of the brick surfaces also add an almost transparent lightness. The choice of bond was key. “Very early on, we had fallen for a cross bond, which

isn’t that surprising because we use it often and like it. The cross bond is extremely beautiful when used for large brick surfaces,” Weyer explains. “Some of the rooms are in the gables. We inserted fields where light penetrates the rooms via interlacing brickwork. It looks really beautiful at night when the light is streaming out.”



Site plan



The terrace affords magnificent views of the University and the surrounding Funen landscape.



A protruding glass panel on the front façade was removed and replaced with a slightly retracted main glass panel.



The architect wanted minimal perforation in the brick cladding. The façade to the east features a single large glass section that extends onto the roof.

RESURRECTION IN FIRED CLAY

THIS FAMILY HOME IN BREDA IN THE NETHERLANDS IS UNRECOGNISABLE AFTER EXTENSIVE RENOVATION, INCLUDING NEW CLADDING OF ROOF AND FAÇADES.

The detached house form the 1970s on the corner of a residential street in Breda had been refitted several times, resulting in a highly uneven exterior, with the south-facing glass extension standing out in a particularly unfortunate way. The owners commissioned the architect Jan Oostveen to draw up plans to resurrect the property.

The brief specified:

- A new, appealing and modern architectural idiom
- New interior
- An extension measuring approx. 30 m²
- New façade insulation
- New fixtures and fittings

Nearly all of the other houses in the area are brick built, so it was important to find a cladding that suited the surroundings but still managed to catch the eye. Oostveen and his clients also sought to find a material that would give the house the appearance of a single, continuous volume, so narrowed their search down to one that could be used on both the façades and the roof. They wanted a highly durable, maintenance-free, natural material that radiated warmth. It also had to act as a canopy over the new insulation that would be installed on top of the existing façade. It did not take them long to settle on Petersen Cover, which met all of the criteria.

The whole of the main building is clad in Cover in a red-dish-brown hue with a rich play of colour. A small outhouse in yellow brick was preserved, consisting of a garage and two upstairs rooms, as was the yellow brick wall surrounding

the property. To avoid breaking up the exterior surface of the main volume, the light intake is limited to large glass panels, complemented by one or two small windows. The central part of the living area consists of a double-height space, with plenty of light from the east-facing windows cut into the roof. The house has been extended to the south, and the exterior facing onto the garden is one big glass panel. On the upper level, the glass panel is recessed under the eave, leaving the first-floor balcony and the terrace slightly covered. To the north, the glass panels are joined, making up the entrance and the window on the first floor.

The interior has undergone an equally dramatic transformation, with multiple glass walls lending an air of transparency. The only elements preserved from the previous iteration are a staircase, a walkway and an open fireplace.

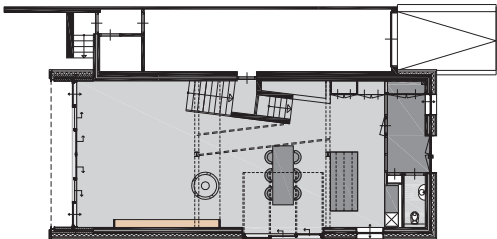
The house has been extended to the south. The recessed glass section features a first-floor balcony that stretches the entire width of the gable.

The south façade, pre-renovation.

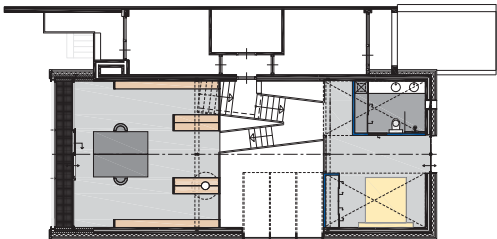
The north and east façades, pre-renovation.



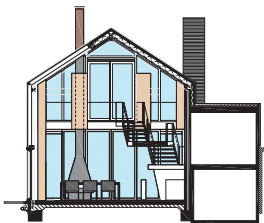
House renovation, Breda, the Netherlands
 Client: Private
 Architect: Oostveen Architectuur
 Contractor: De Kok Bouwgroep
 Engineering, construction: Constructeur Van Langevelde
 Engineering, construction and drawing: Tekembureau André Ouwerkerk
 Completed: 2016
 Brick: C60
 Text: Ida Præstegaard, cand.arch.
 Photos: Paul Kozlowski



Plan, ground floor



Plan, 1st floor



Section



The façades are clad in Kolumba, which establishes a link with the adjacent industrial brick buildings. The rhythmically modulated glass panels reflect the building's modern office function. Photo: Piotr Piatek.



Ericpol is located in the centre of Lodz, surrounded by a park that used to belong to a neighbouring, neo-classical palace. Photo: Piotr Piatek.



To the south, the ground floor is retracted. Like the façade, the underside of the cantilevered first floor is clad in Kolumba. Photo: Wojciech Krynski.

HEADQUARTERS WORTHY OF ITS SURROUNDINGS

A LEADING POLISH IT COMPANY HAS BUILT A NEW HQ FOR 700 STAFF LOCATED IN HISTORICAL SURROUNDINGS IN THE CENTRE OF LODZ.

In 2011, Ericpol bought a beautiful – but demanding – site in Lodz. The company wanted to build its new headquarters in exceptionally beautiful surroundings and make it a building of the very highest quality. Krakow-based architects Horizone Studio were commissioned to design it.

The neighbours to the new HQ include several 19th-century industrial buildings and the neoclassical Scheibler Palace from 1844, the gardens of which now form part of the park surrounding Ericpol. The whole area is under a preservation order, which meant that the Regional Heritage Preservation Office had to be involved throughout the design process. The building was not to have more than four storeys and had to fit in with the local industrial architecture as well as the landscape.

To avoid appearing monolithic, Horizone Studio designed a long, X-shaped structure, the centre of which houses a

lobby with reception and lifts. The top floor facing the park has been pulled back to accommodate a terrace and make the building appear smaller. To emphasise its links with the surroundings, the building is bordered by lawns and greenery, and all of the big trees surrounding it have been preserved.

To create a bond with the brick industrial buildings but still underline the modernity of the HQ function, the architects opted for handmade Kolumba for the exteriors, combined with large, rhythmical glass panels. The brick is a light-coloured Kolumba with various shades of grey, the uneven surface of which gives the building a rustic touch that contrasts with the precision of the glass panels.

Since its inauguration in 2015, Ericpol's new HQ has received several honours and awards. The German magazine Bauverlag named it one of the top ten brick buildings of 2015. In the same year, it received the prestigious SARP

Ericpol Headquarters, Lodz, Poland

Client: Ericpol

Architect: Horizone Studio

Contractor: Strabag

Completion: 2015

Brick: K91

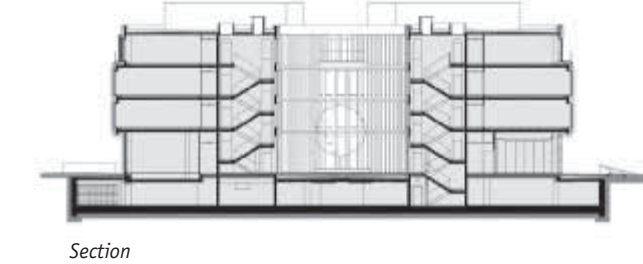
Text: Ida Præstegaard, cand.arch.

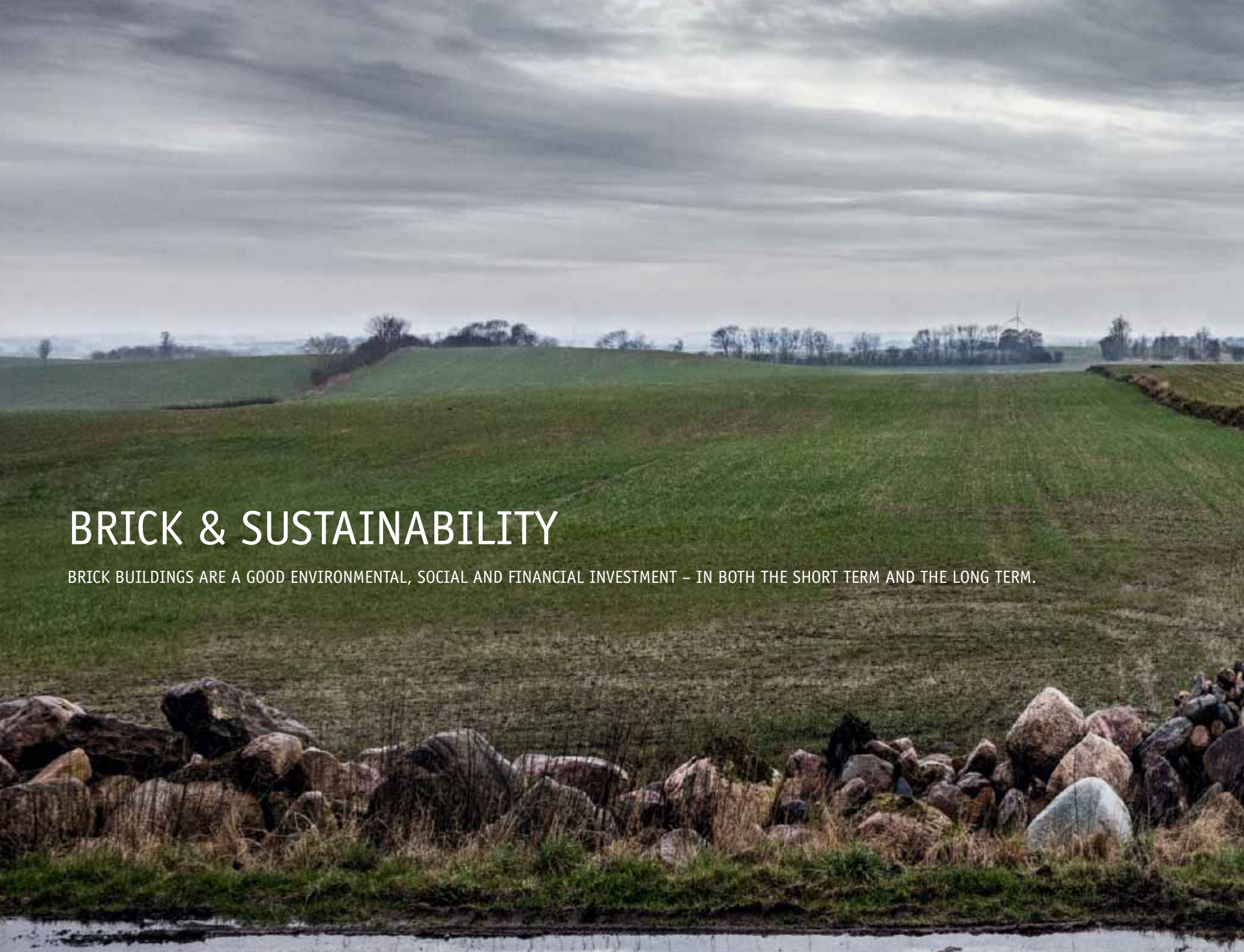
Photos: Piotr Piatek, Wojciech Krynski

Award, which is given to the best architectural building in Poland and awarded by the Association of Polish Architects. The jury said:

“The prize is awarded for the creation of an extremely coherent, yet subtle vision of a modern, people-friendly office building. The project is characterized by its harmonious relation with the vicinity, and accurately reflecting the atmosphere of the location. Despite its ultimately modern character, the building fits perfectly into the existing urban landscape of this post-industrial city. Particularly noteworthy is the discipline of design, moderation and a mastery of careful detailing, and the restrained use of means of expression, both in terms of form and materials used.”

The very precisely shaped building is not built on top of a base, and the brick façades are in direct contact with the cobblestones. Photo: Piotr Piatek.





BRICK & SUSTAINABILITY

BRICK BUILDINGS ARE A GOOD ENVIRONMENTAL, SOCIAL AND FINANCIAL INVESTMENT – IN BOTH THE SHORT TERM AND THE LONG TERM.

Most of the clay used by Petersen Tegl is excavated from fields a few kilometres from the brickworks in Broager – and has been for 226 years. The topsoil and upper layers of earth are carefully removed and then the clay is dug out. Before the topsoil is replaced, the soil is drained, making the field far more viable for cultivating crops.

Clay as a raw material

Brick is made of natural, raw materials, including clay, sand and other minerals. Clay is formed by mineral deposits that accumulate in the ground over a period of some 15,000 years. Over time, rainwater flushes out all of the soluble material from the deposits, leaving natural, pure clay. Once the clay is shaped and fired, it makes extremely hardy bricks that have a lifespan unmatched by other traditional building materials.

Extraction

To extract clay, the topsoil and upper layers of earth are removed and put aside. After the clay has been extracted, these layers are put back so that the site can again be used for farming or other purposes. Usually, there are no visible signs that clay has been extracted from an area, except that the field may be 1–2 metres lower down than it was before. The process of extracting clay has no negative effect on the soil or ground water.

Minimal waste

Petersen Tegl uses all of the clay it extracts in its production process. If anything goes wrong, the clay and brick are recycled. Since 2015, the volume of water used in production has decreased by 75 %, and all water used in the process is recycled. During production, heat from the ovens is redirected to dry bricks prior to firing. This means that the heat energy generated is used twice.

Environmental impact

The only significant environmental impact during the raw material and production phase stems from the energy used in firing. Clay must be fired at temperatures in excess of 1,000°C to ensure that the brick is durable and frost-proof.

Maintenance

Brick is used untreated and is maintenance-free. Unlike other building materials, it does not need to be treated with hazardous chemicals like paint, wood preservatives, etc., that have a detrimental impact on the environment.

Durability

Brick is a building product that lasts for hundreds of years without maintenance. Some brick buildings around the world are as much as 3,500 years old. More than two-thirds of the brick churches in Denmark are 700–800 years old, and still look great.

Demolition, disposal and recycling of crushed brick

Clay does not cause environmental problems during demolition or disposal. In Denmark, up to approximately 95–99 % of all brick is crushed, recycled and reused, which reduces the need for fresh raw materials. The very small proportion sent for disposal causes no environmental problems, as brick has no negative impact on the soil or groundwater.

Recycling

The lime-based mortar used in brick buildings can be broken down and the bricks cleaned and recycled. In 2009, Petersen Tegl and a group of architects developed the facing brick Petersen Cover, which has been part of the standard range since 2014. Cover can be mounted on a wood or steel structure, is easy to remove again, and can be recycled indefinitely.

The temple pyramid Choga Zambil in the Khuzestan province in Iran was built in brick about 1260 BCE. It still stands, 3,500 years later.



The vast majority of the Great Wall of China was built during the Ming Dynasty in the late 16th century. The bricks remain intact to this day.



Work started on Roskilde Cathedral around 1175 and continued throughout the 13th century. Today, more than 800 years later, the large medieval bricks still look just as beautiful as when they were laid.





The only visible sign that the excavation has taken place is that the field is now at a lower level – the one on the left has been excavated, the one on the right has not. The excavations often uncover granite, which came to Denmark from Norway and Sweden during the last Ice Age, 20,000 years ago. Granite is a much sought-after commodity. Photo: Anders Sune Berg.

Fire

Brick does not burn, and walls made with traditional mortars do not begin to significantly lose strength until temperatures reach over 400°C. After major roof fires, brick walls are often left standing, and can still be recycled without a need for demolishing the building. In the event of fire, it is a significant safety feature that occupants have time to vacate the building before it collapses.

Indoor climate in brick-built buildings

Brick has a beneficial effect on the indoor climate as brickwork emits no gases, smells or other emissions. It also absorbs sounds and vibrations, regulates heat, diffuses water, assists drying after water damage, and provides no nourishment for microorganisms, meaning that it rarely develops mould.

Economy

As brick has a very long service life and does not require maintenance, it is a highly economical building material that helps to ensure the high resale value of brick buildings.

Conclusion

The lifespan of a building material determines its environmental impact – the longer it lasts, the better for the environment. Brick is, in every respect, a highly sustainable product.

Source: Kalk- og teglværksforeningen af 1893 ((Lime and Brickworks Association of 1893) – today Danske Tegl/Danish Brick)

The benefits of bricks and sustainability in brief

- 100 % natural ingredients
- Extraction has no adverse environmental impact
- Production near to the raw materials
- Limited energy consumption over the lifespan of the brick
- Limited CO₂ emissions over the lifespan of the brick
- Extremely long product life
- Maintenance-free (no use of chemicals for maintenance)
- Relatively inexpensive in relation to durability and low maintenance costs
- Can be recycled during demolition
- Contains no harmful gases
- No smells
- Fire protection
- Sound-absorbent
- Helps to regulate heat
- Does not nourish mould

Work on Hammershus on the Danish island of Bornholm started in the 13th century. The bricks are from various periods, but the majority were produced in the 16th and 17th centuries. Stamps show that many of them came from Lübeck, which ruled Bornholm for about 100 years. The ones without stamps were most probably made on the island.



When the garrison vacated Hammershus in 1743, people started to use the walls as an ersatz quarry, and thousands of bricks were pilfered before the castle was placed under a preservation order in 1822. Hovedvagten, the main guardhouse, in Rønne, which is painted red, was built in 1744 for military purposes. It is without doubt one of the buildings constructed using bricks from Hammerhus, which makes it a prime example of brick’s sustainability and recycling potential.



Although firing bricks does emit CO₂ the overall environmental impact over the lifetime of a brick is relatively modest, as illustrated by the examples below. The carbon footprint of a family of four on flight from Hamburg to Bangkok and back lasting 20 hours amounts to approximately six tons of CO₂. Two cows emit methane gas equivalent to about eight tons of CO₂ per annum. A standard house with a lifetime of a century or two uses about 12-16,000 bricks. The firing process accounts for six-eight tons of CO₂ and the brick does not require any maintenance.





Both Havnehusene and Kanalhusene are in a beautiful location next to the Port of Aarhus. Each consists of contiguous units in varying heights, from four to 12 storeys, which together form a block. The development consists of a total of 232 flats ranging from 76 m² to 179 m², as well as 106 flats for young people.

Virtually all of the flats have plenty of natural light and balconies facing the courtyard and waterfront.



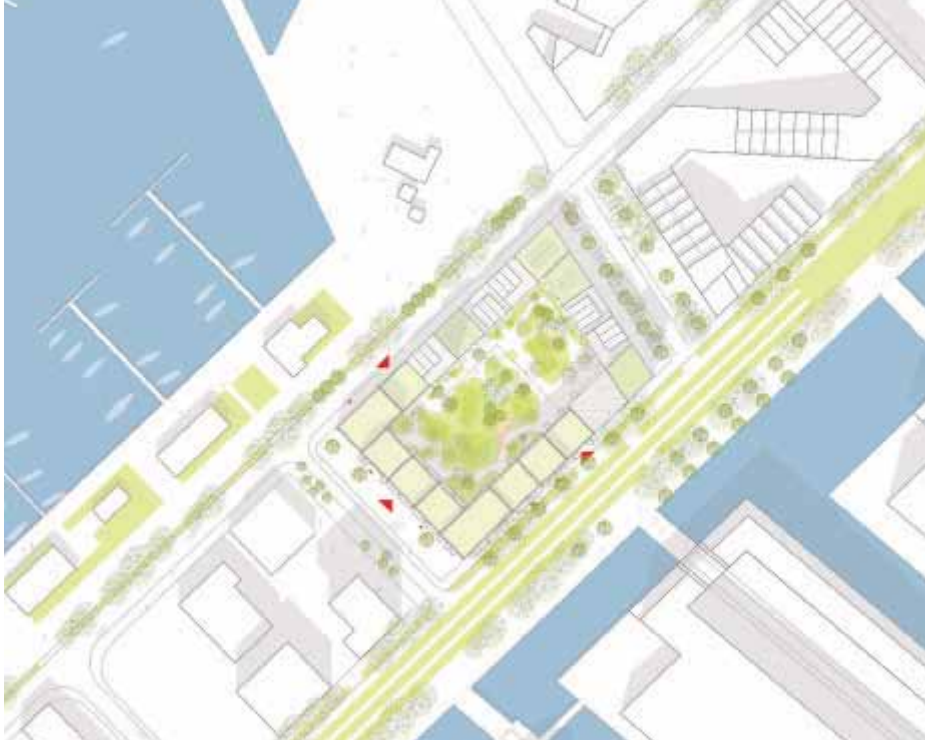
WATERFRONT WAY OF LIFE

NEW BLOCKS OF FLATS IN AARHUS WITH A HINT OF THE OLD NEW YORK WAREHOUSE.

All over the world, former industrial waterfronts are metamorphosing into attractive new urban neighbourhoods. In Aarhus, the second biggest city in Denmark, the northern parts of the container port have been transformed into Aarhus Ø. In the long term, this area will be home to about 10,000 people, create 12,000 jobs and provide recreational areas for use by the whole of the city. Aarhus Ø is surrounded by water and crisscrossed by canals, and closely linked to the centre of the city by a wide, tree-lined boulevard. It boasts a marina and Denmark's largest urban garden, as well as magnificent views of the Bay of Aarhus, the greenery of Risskov and the city's skyline.

Havnehusene (the harbour houses) and Kanalhusene (the canal houses) are two residential developments that together form a U-shape and make up an interconnected neighbourhood around a joint green courtyard, which the buildings shield from the elements. The canal development consists of private flats of various sizes, while the harbour development consists of social housing for families, young people and the over 55s. A large variety of people live here. The neighbourhood represents a familiar typology in Danish housing – the developments do not form a monolithic-looking block, rather the different heights and exteriors resemble a collection of smaller buildings. The straightforward architectural idiom and the textural effect of the brick surfaces evoke associations with historic waterfronts and industrial districts, most notably New York's famous warehouses.

Havnehusene consists of ten buildings, Kanalhusene of nine. Together, they form a small cityscape consisting of blocks ranging from four to 12 storeys. Their proportions complement the scale of the existing buildings in the area, making the developments feel like part of a larger whole. The lowest buildings correspond with the intimate scale of the marina, while the highest reflect the appearance of the buildings along the boulevard's monumental axis which has the cathedral spire as its point de vue.



Site plan



The big communal courtyard provides a space to play and hang out. The varied heights make the developments seem less monolithic, and more reminiscent of traditional Aarhus housing.

Havnehusene, homes, Port of Aarhus

Client: Brabrand Housing Association
 Architects: Luplau & Poulsen Architects and Adept
 Main contractor: Dansk Boligbyg, Anton Nørgaard
 Engineer: Niras
 Landscape architect: Niels Boldt MAA
 Brick: D73
 Completed: 2015

Kanalhusene

Client: KPS Invest Århus
 Architects: Luplau & Poulsen Architects and Adept
 Main contractor: Dansk Boligbyg, Anton Nørgaard
 Engineer: Niras
 Landscape architect: Niels Boldt MAA
 Brick: D71, D72, D73
 Completed: 2017

Text: Martin Søberg PhD, architectural historian
 Photos: Anders Sune Berg



Section



The same brick is used throughout, but the look varies greatly due to different bonds and joint colours, and because in some places the headers protrude from the façade.

On top of Havnehusene are communal winter gardens in greenhouses and terraces, with beautiful views of the port and the Bay of Aarhus. Solar panels on the roof help meet the buildings' Energy 2025 requirements.



The residents look after the winter gardens.

“The bricks bestow a cohesive appearance on the construction project as a whole, while the brickwork uses a variety of different bonds and mortars.”
 Jørn Lyager Poulsen, architect

All of the buildings have brick facing walls in golden tones. Architect Jørn Lyager Poulsen from Luplau & Poulsen Architects, who designed the project together with ADEPT, explains: “At Petersen, we found a brick, D73, which has a surface almost like a used brick. It has a grey tone, as if a bit of mortar has been left on it. We liked the look and chose it for Havnehusene. The fronts are D73 mixed with D72 and D71, which have similar colouring. The bricks bestow a cohesive appearance on the construction project as a whole, while the brickwork uses a variety of different bonds and mortars, e.g. in some places, the coppers have been pulled out, while elsewhere the runner bonds have been pulled out at every fourth change. In some places, the joints are black, while in others they are grey.”

Brick is a solid, durable material, and helps to make the project sustainable. Both developments consist of zero-energy buildings. Solar cells and panels are mounted on the roofs, and a large geothermal system consisting of 21 stakes has been drilled 150 metres down into the ground. The stakes pump cold and hot water up and down deep wells, which guarantees the efficient storage and use of energy.

At the top of the Havnehusene are winter gardens, which the residents plant and arrange as they wish. According to Jørn Lyager Poulsen: “I liked the idea that each building was different and that the residents would have the opportunity to develop it and make it their own.” The small buildings give the residents a collective focal point, and also extend to communal terraces with views of the buildings' green roofs and surroundings. The green courtyard also encourages a sense of community. Here, there are fruit trees, lawns, paths and terraces and two playgrounds, as well as a multi-activity zone where children and the young at heart can indulge themselves freely and safely. The brick façades form a warm, calming backdrop to all of the activities in the yard. The architecture is unassuming, almost discreet. All of this provides a strong framework for living the good life in the new waterfront district.





The new building was built in 2016 in the middle of the densely populated and architecturally heterogeneous Gangnam district.



For the façades, the architects and clients chose a handmade, red-brown brick that stands out by virtue of its format, structure and colouring.

FORM FOLLOWS STRUCTURE IN A HOUSE IN SEOUL

STRIKING AND ELEGANT MINIMALISM. NEW RED-BRICK BUILDING CATCHES THE EYE AND LANDS THE PERFECT RETAIL PARTNER IN THE BUSY SOUTH KOREAN CAPITAL.

A South Korean couple wanted a building that was split into two apartments – one for them, one for their grown-up son – as well as a couple of floors to rent out for offices and a shop at street level. They found the perfect site on Nonhyun, a street in the Gangnam district south of the Han River. Once the existing building had been demolished, they were ready to build. Back in 2012, the couple had read about the winner of the Korean Young Architect Award, Dong Joon Lee. Impressed by his work, they asked him to design their new building. Lee lives and works in Switzerland with his partner, Swiss architect Melanie Stocker. Together, they run Stocker Lee Architetti in Mendrisio. It was to be Lee's first project in his native country, and the couple were delighted to take on the challenge.

The new building was to fit a 326 m² site in the densely populated and architecturally diverse Gangnam district, which is crisscrossed by a network of very narrow streets. The surrounding edifices are of different heights and clad in different materials, although brick and concrete are the most common.

The architects and clients agreed that, given the mixed surroundings, the new building should have a clear identity,

within a modern yet classical idiom and that they should use traditional, high-quality materials.

The result is a precise, well-modulated and clearly defined volume. The upper four floors, which are covered with dark red Kolumba, almost look as if they are hovering above the ground floor, which is clad in light concrete. Here, form follows structure, and the base reflects the strength of the load-bearing construction. The outer walls in the base are at oblique angles and drawn in on two sides, endowing the building with its floating elegance. The cantilevered concrete deck that extends the length of the building forms a canopy that acts as a semi-private buffer zone between the street and the ground-floor retail space.

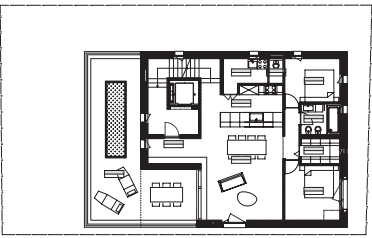
Stocker Lee were in no doubt that the cladding had to be in brick, the most commonly used façade material in modern Korea. Nor were they in any doubt that the brick had to be of excellent quality and stand out by virtue of its shape, structure and shade. It is the first Kolumba that has been used in Korea. Dong Joon Lee spent a great deal of time on the building site during the bricklaying process. The Korean bricklayers quickly got used to the brick's unusual length, and

The building is compact, with the concrete foundations drawn in under it to the north and south.

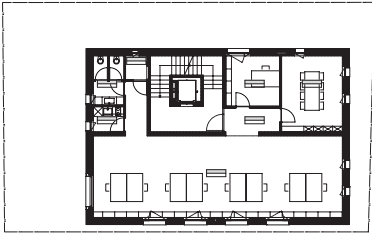


Even before the building was finished, the three lower floors were leased to a company with a shop specialising in Danish design.

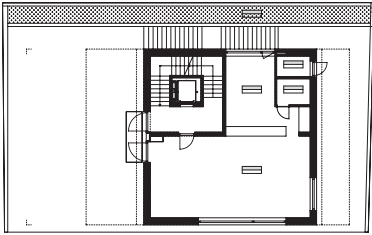




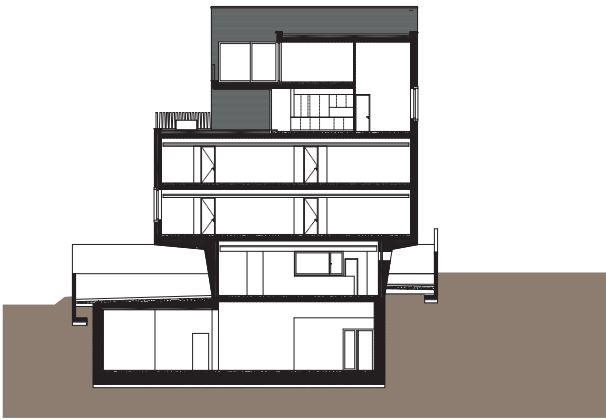
Plan,
residential floor



Plan,
office floor



Plan,
ground floor,
shop



Section

the construction work progressed smoothly. The horizontal joints are recessed, the stub joints are flush with the façade to emphasise the horizontal lines, and a red mortar gives uniformity to the surface.

According to local building regulations, the volume of multi-storey buildings must be reduced as you build upwards. As a result, Seoul buildings often have upper floors with a formalistic design, dictated by the desire to squeeze in the maximum number of square meters, with little heed paid to architectural idiom. Stocker Lee and their clients chose a different approach and did not build the maximum permissible number of floors. Instead, they opted for large terraces for both of the apartments, with ample space for the couple's hobby – a garden with vegetables, herbs and spices and an outdoor kitchen – both of which are rarities in Seoul.

The original idea was to divide the bottom three floors into multiple units for rent. However, before the building was even finished, a retailer asked to rent the entire commercial space. Serendipitously, Kolumba is exceptionally well suited to the shop's product range – which consists exclusively of Danish design by the likes of Normann Copenhagen, Hay and Muuto.

Nonhyun 101-1, Seoul, South Korea
Apartments and commercial units

Client: Private

Architect: Stocker Lee Architetti

Engineer: KyuSang Guak

Construction: Jehyo

Completed: 2016

Brick: K40

Text: Ida Præstegaard, cand.arch.

Photos: Simone Bossi

Photo: Page 16, bottom, to the right:

Propaganda Studio



Site plan



With a plot of just 326 m², the area around the building was limited. Drawing the ground floor in under the house to the east and west created room for two passages, which are covered by the cantilever.

The flats and offices in the building are extremely simple and use very few materials.

The walls and ceilings are in untreated concrete, with floors and fitted wardrobes in oak.





The elegant single-storey extension stretches the entire breadth of the building. Half of the façade's glass panel slides to the side, opening up the room to a spacious terrace.

FACING BRICK AS HORIZONTAL MARKER

UNDERSTATED YET FIERCELY MODERN EXTENSION IN HANDMADE BRICK STANDS OUT FROM AND BREATHE LIFE INTO ORIGINAL GAULT-BRICK SEMI-DETACHED IN PUTNEY.

The family had lived in the semi-detached on Upper Richmond Road for several years before they decided to redevelop the property to better meet their needs. The list included a big kitchen with a dining area, more bedrooms, a striking link between the ground floor and a basement and, in particular, more natural light in what had been a relatively dark place to live.

Located in Putney, in South West London, the building is one of a series of semi-detached residences known as the 'Nelson Houses', built in the 1860s. The name stems from the original landowner, a relative of Admiral Horatio Nelson, who parcelled out the land in the mid-19th century.

The client, a couple with two children, asked Chris Romer-Lee of London architects Studio Octopi to re-imagine their home and manage the project. In 2015, after 18 months of work, they had a new home that was everything they had dreamt of – and more.

Approaching from the street, it is not immediately obvious that the property has

undergone a radical transformation. It is a different matter when the front door opens and you find yourself looking through the depth of the house into a light filled kitchen beyond. To the rear, an elegant and beautifully proportioned one-level extension spans the entire width of the house looking onto the garden. The extension contains a dining kitchen with a large table in the middle and a sofa corner. Two-thirds of the exterior facing the garden consists of floor-to-ceiling glass. Combined with large skylights it floods the extension with light. Half of the glass panel slides to the side, opening up the room inside onto a spacious terrace, from which three steps lead down to the garden.

The other major element of the renovation is the basement, which is an inviting space consisting of a living room, two bedrooms, a kitchennette and two shower rooms. The earth in front of the basement has been excavated, and a folding glass doors allow daylight to stream into the room behind. From here, a wide tiled staircase leads up to the garden. An internal timber staircase

between the ground floor and basement links the two floors, and allows the parents to communicate with their children when they are downstairs.

The original outer walls are in cream-coloured brick made of Gault clay – a blue-tinged type found on rocky coasts, especially in the south of England. The challenge was to find a brick for the extension that would work well with this classic British style. Between them, the client and architect chose a version of Kolumba, the handmade, rustic idiom of which endows the tight, minimal architecture with an air of softness. Its cool, white-grey hue stands out discreetly from the yellowish English brick. At 15 metres, this is an unusually broad semi-detached house. Both the architect and the client wanted to accentuate these dimensions in the new extension. They succeeded. Not just because of the architectural concept, but also through the choice of Kolumba. At 528 mm long, the brick lends a clearly horizontal idiom to the extension.

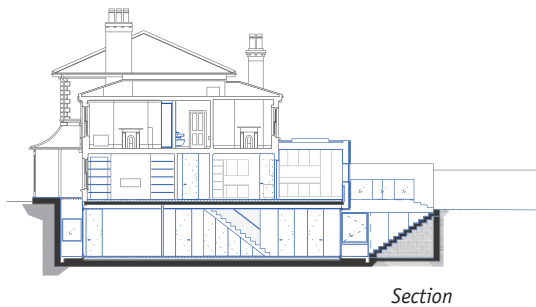
Kolumba's cool, white-grey shades interact nicely with the original yellow brick.



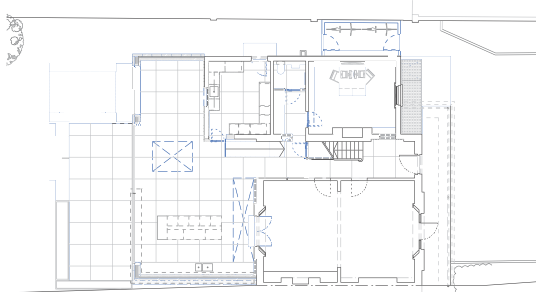
The new glass façade also allows plenty of light to reach the cellar.



The front façade.



Section



Plan, ground floor



Plan, basement

In addition to the glass façade, large skylights in the extension also increase the amount of daylight.



Extension to semi-detached house in Putney London, UK

Client: Private

Architect: Studio Octopi

Contractor: GMS Building Services

Engineer: Milk Structures

Landscape architect: Charlotte Rowe

Brick: K91

Completed: 2015

Text: Ida Præstegaard, cand.arch.

Photos: Jack Hobhouse



The rounded façade is covered with coal-fired, golden bricks and decorated with a pattern of white, glazed bricks. In seven places, the bricks are arranged to form crosses.



In the middle of the complex is an organically shaped courtyard.

“We wanted the architecture to look modern, and yet retain a religious, historical, social and traditional element. Brick helps. It is an eternally modern yet traditional building material.”
Dans Arhitekti

BRICK-BUILT SETTING FOR SPIRITUAL CONTEMPLATION

TRADITIONAL LOCAL ARCHITECTURE INSPIRES THE CLADDING ON THIS NEW CHURCH IN MARIBOR, SLOVENIA

As soon as the competition to design the Don Bosco Church was announced, Dans Arhitekti had a clear vision that the nave should be made of brick. The competition to design a new church for the Salesian congregation and community centre in Maribor, Slovenia, was announced in 2007. The winning design was submitted by Dans Arhitekti. A range of challenges had to be overcome before the church and parish hall were inaugurated in 2015. All the essential features of the religious complex, on a difficult site in the suburbs surrounded by roads and shopping centres, reflect the original vision. Just as the architects intended, brick anchors the building and infuses it with harmony.

Surrounded by a small park, the Don Bosco complex is a rectangular, closed building on one level, with an inner courtyard in an organic shape. When you enter the courtyard – somewhere to sit and reflect under the branches of an old lime tree – the church itself is suddenly visible on the other side of the colonnade. Its rounded shape rises above the low part of the complex, offering a clear view of the façade in coal-fired, golden brick. Around the upper part of the rounded façade, an even pattern of white glazed brick with seven white crosses produces an ornamental effect.

“We wanted the architecture to look modern, and yet retain a religious, historical, social and traditional element. Brick helps. It is an eternally modern yet traditional building material,” says Vlatka Ljubanovic of Dans Arhitekti. The studio also drew inspiration from local building traditions: “Brick is common in Slovenia, for example hay lofts in the north-west of the country traditionally have picturesque patterned brickwork. The gaps have an aesthetic as well as a functional role, providing natural ventilation so the hay doesn’t rot.”

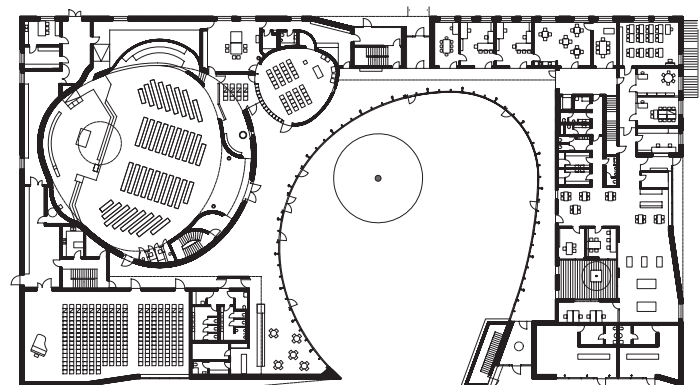
The church is a place for spiritual contemplation, and the architects designed the interior, which is made of concrete cast in situ, in such a way that the only exterior view is up toward the sky. “An intense experience of light is absolutely essential in a church, and we used different qualities of the light to highlight the embracing form of the nave,” explains Ljubanovic. “We choreographed a play of light with the natural light that enters the space, partly from the large, round skylights, and partly through the opening behind the presbytery and the choir.” When darkness falls, hundreds of delicate, low-hanging pendants made of white painted wood, also designed by Dans Arhitekti, suffuse the space with soft, atmospheric light.



The church is filled with beautiful natural light, partly via the large, round skylights, and partly through the opening behind the presbytery and the choir.



Section



Plan

Don Bosco Church, Maribor, Slovenia
 Client: The Salesians, Slovenia
 Architect: Dans Arhitekti
 Contactor: VG5 d.o.o.
 Engineer: Frenk Žugel
 Landscape architect: Mojca Balant
 Brick: D72
 Completed: 2015
 Text: Ida Præstegaard, cand.arch.
 Photos: Miran Kambi



HEALING ARCHITECTURE

INTERACTION OF MATERIALS, COLOURS AND LIGHT
GENERATES A FRIENDLY ATMOSPHERE AND SENSE OF
COMMUNITY IN SLAGELSE PSYCHIATRIC HOSPITAL.

The buildings that we use affect our behaviour and well-being and the physical environments we inhabit are of particular importance when we fall ill. When mental illness strikes, it is essential to re-establish day-to-day routines and social activity. Modern psychiatric treatment seeks to consciously incorporate this type of activation – which in turn affects the way in which psychiatric hospitals are designed. Architecture can help ease the transition back to wellness and everyday life.

The psychiatric hospital in Slagelse is the largest Danish facility of its type to be built in decades. Based on psychiatry research and extensive dialogue with future users, the architects sought to create smooth transitions between patient rooms and communal areas, and between the outside world and the interiors. The idea is to make people feel more in contact with their surroundings and with other people. As far back as the 1800s, it was recognised that nature plays an important role in curing disease and illness. In those days, psychiatric institutions were designed like manor houses and set in sprawling parks but did not usually allow direct access from the indoor space to the greenery outside. The psychiatric hospital in Slagelse is different. Here, nature is drawn into the house via large glass panels, and patients enjoy easy access to the surrounding park and the inner courtyard gardens.

The grounds have been landscaped, with small hills and wild flowers that allude to Zealand’s moraine landscape. As soon as you arrive at the main entrance, you are met by lush, green nature. The sense of an interactive, communal environment begins here. Visitors continue on through the building to the park on the opposite side. The two- and five-storey buildings around the entrance house the emergency reception, outpatient clinic and knowledge centre. The biggest building frames a beautiful atrium, in which two large spiral staircases, clad in golden birch panels, shiny glass screens and embedded streaks of light, wind their way up through the floors. Further into the complex, the general psychiatric ward stands to the west, while to the east the single-storey forensic psychiatry ward extends out into the park. Even further east is the “safe house”, a separate section for sectioned, criminal patients.

The façades are clad in yellow, coal-fired brick. “The interior is so transparent that the bricks on the exterior are always visible at any given time,” explains architect Christian Karlsson from Karlsson Architects. “The bricks are both distinctive enough to look appealing on a large scale, and quiet, bright and reflective enough to interact with the other materials. The ultimate result is a balanced whole.” At the

The façades are clad in yellow, coal-fired brick that the architects commissioned specially from the brickworks. Photo: Jesper Ray Manley.



An aerial view of the hospital immediately before it was inaugurated in 2015 shows how the buildings both envelop the many inner courtyards and open out towards the surrounding park.

Several parts of the interior are clad in birch veneer, which, combined with the abundant daylight, adds to the warm atmosphere. Birch panelling has been used in the sports hall and for the therapy bath in the forensic psychiatry area (left and centre), as well as the sweeping staircase in the outpatient building (right). Photos: Jens Lindhe.



The building furthest to the east is the “safe house”, a separate unit for sectioned, criminal patients.

centre of each section is a courtyard surrounded by patient rooms, communal areas, activity rooms, kitchen and dining facilities, offices and meeting rooms. The buildings also contain two smaller gymnasiums and a swimming pool, which offer patients opportunities for exercise and social activity. The hospital has 194 beds and approximately 650 staff.

New technologies have been incorporated in order to optimise the conditions that will allow the patients to make progress. The volume and colour of the light can be adjusted in such a way that the interplay of cold and warm light, along with the warm hues of the materials, creates a calm atmosphere. Glass sections enable visual contact between the rooms. This enhances security, transparency and proximity, and allows residents to maintain a social life without being too close to each other. Each ward has its own colour palette, created by artist Malene Landgreen. The author Ursula Andkjær Olsen – in some cases, in collaboration with the patients – wrote the poems that adorn the glass panels. Niches and benches provide varied opportunities for spending time in the transitions between different rooms. “We were interested in dissolving the transitions in such a way that patients feel willing and able to participate in the community. That was the whole goal,” says Karlsson.

Psychiatry Hospital Slagelse

Client: Region Zealand

Architects: Karlsson Arkitekter and Vilhelm Lauritzen Arkitekter

Landscape: Schønherr Landskab

Engineers: Moe AS, NNE Pharmaplan and Cenergia

Lighting: Bartenbach

Artistic decorations: Malene Landgreen and Ursula Andkjær Olsen

Brick: a mixture of D72 and D73

Completed: 2015

Text: Martin Søberg PhD, architectural historian

Photos: Jesper Ray Manley, Jens Lindhe & Anders Sune Berg

Awards:

AR Award 2016 (Health Care)

MIPIIM Award 2017 (Health Care)

“The bricks are both distinctive enough to look appealing on a large scale, and quiet, bright and reflective enough to interact with the other materials. The ultimate result is a balanced whole.”

Christian Karlsson, architect



The surrounding park is open to the public and dotted with small hills that resemble the Zealand moraine.



Each patient section is built around a yard, which draws light to the interior and makes the buildings pleasant places to be.





The new building is one storey lower than the neighbouring Bute Building, built in 1897, which is the oldest medical faculty in Scotland.



The nine buildings comprise 14 homes – six townhouses and eight apartments.



The prominent position, midway between the medieval, Georgian and Victorian buildings, meant that the project was subject to intense scrutiny by the city architect and conservation authorities.



The individual buildings vary in shape and position, just as they would have if the complex had developed organically.

COAL-FIRED BRICK AND SANDSTONE IN PERFECT HARMONY

NEW HOUSING DEVELOPMENT IN ST. ANDREWS, SCOTLAND, BOTH FITS INTO AND STANDS OUT FROM ITS FAMOUS, HISTORIC SURROUNDINGS

Tight, cubic shapes and smooth exteriors, alternating between wall and glass, make for an exemplary modern development in the narrow street. And yet, the finely articulated volumes, the materials and the refined detailing mean that it is sensitively integrated into its important cultural and historical setting.

The Edinburgh-based studio Sutherland Hussey Harris was one of the companies invited in 2013 by the developer, Eastacre Investments LLP, to compete for the 14-flats project on a narrow strip of land in St Andrews. Known as a rigg or burgage plot, the site is a long, narrow piece of land at right angles to a main thoroughfare. These plots are a relic of the Middle Ages, when landowners – monarchs and nobles – would divide the land into very narrow strips to charge rent from as many tenants as possible. The new development is directly adjacent to the 15th-century Holy Trinity Church on one side, and on the other, the Bute Building, home of the School of Medicine at the University of St Andrews, the oldest medical faculty in Scotland. Both are sandstone. A traditional sandstone wall runs from Queens Terrace – at a right angle to West Burn Lane – along the length of the new development, marking its eastern side.

The new development’s illustrious location – in the middle of a conservation area, surrounded by medieval, Georgian and Victorian buildings – meant, of course, that every detail of the project was scrutinised by the planning officer and conservation authorities, with whom the architects worked closely throughout the process. “We wanted the development to fit in as well as possible and

not look too massive, so opted for individual houses with a variety of forms and positions on the plot, as if it had emerged organically,” explains projects director David McKenna of Sutherland Hussey Harris.

The nine buildings make up 14 homes – six townhouses and eight apartments. West Burn Lane offers partial views of the greenery, trees and bushes in and around the new development. Some of the houses are pulled back from the pavement, others have a cantilevered first floor facing the lane. This means that how you approach each house depends on the individual building in question – again just like a settlement that has emerged organically over time.

Finding the right materials for the exteriors was absolutely crucial. The finished project had to resonate with the listed buildings on either side – which are centuries old – and the materials had to have a long lifespan and require minimal maintenance.

“For the ground floors, we chose Peak Moor sandstone from Derbyshire in northern England. To convey a contemporary idiom, we decided to clad the first and second floors in brick. At first, Fife District Council was concerned about the idea of modern brick so close to historic architecture. We tried various sample walls with different combinations of types of brick and joints, and D71 turned out to have the same shades as the sandstone on the buildings next door. Its special, almost shining surface, the result of adding clay slurry before the firing process, adds a patina that is just right for the site,” says David McKenna.



“The brickwork has a structured and natural look that changes depending on the lighting and weather conditions. The brick contrasts with the limestone, but is also related to it.”
David McKenna, Projects Director, Sutherland Hussey Harris

“We wanted the brickwork to look like coherent, homogeneous surfaces, so chose a stretcher bond with a limestone joint, flush with the brick. It also has a structured and natural look that changes depending on the lighting and weather conditions. The brick contrasts with the limestone, but is also related to it,” he says.

1–14 West Burn Lane, Housing project
St. Andrews, Fife, Scotland
 Client: Eastacre Investments LLP
 Architect: Sutherland Hussey Harris
 Engineer, structural: Morgan Associates
 Engineer, M&E: Keenan Consultants
 Landscape architect: Ironside Farrar
 Completed: 2015
 Brick: D71
 Text: Ida Præstegaard, cand.arch.
 Photos: Keith Hunter



Plan, ground floor

Section



The façades combine sandstone from Derbyshire in northern England with Danish, coal-fired brick, D71, in shades which closely resemble those of the adjacent buildings' centuries-old sandstone.



A conventional sandstone wall runs the entire length of the new building and marks the boundary to the east.

It was a key requirement that the new façade materials should have a long life and require minimal maintenance.





LIGHT & SPACE

In early spring this year, designer lighting retailers Flos Scandinavia opened the doors to their new showroom in Sydhavnen, Copenhagen. The 500-m² former tractor-repair workshop has been transformed into a highly inspiring exhibition space of international calibre. Behind the transformation is the multidisciplinary design firm OEO Studio, founded and headed by Thomas Lykke and Anne-Marie Buemann.



*Flos Scandinavia:
Sydhavnsgade 28,
København SV.*

*Photos: Jacob Termansen /
Portfolio*

The renovation project preserved several of the large rooms’ original spatial and material features, and combined them with a new display system and new architectural elements. The result is a beautiful and inspiring whole that functions extremely well as a setting for the Flos lighting range. Among the new elements is a dramatic, sculptural staircase that acts both as a room divider and display stand for table lamps. Another element is a small house that showcases domestic lighting. Clad in Cover in shades of grey, the house interacts in a highly convincing manner with the raw concrete character of the space.



THE KASPER-SALIN PRIZE 2016

In 2016, the Kasper Salin Prize, the prestigious Swedish architecture award, went to Johannes Norlander for his Gothenburg housing development Studio 1. Norlander and the client, the HSB housing association, together chose the blue-tempered D55 in Flensburg format for the project. The dark, rustic brick beautifully complements the surrounding nature. In its assessment of Studio 1, the jury wrote: “The prize is awarded for exemplarily formed architecture that emerges from close collaboration between architect and client. Skilled and empathetic treatment of space and materials, on both small and large scales, played a key role in the project. Studio 1 is a housing development with long-lasting qualities.”

Fotos: Anders Sune Berg

FOCUS ON CRAFTSMANSHIP IN MUNICH

At a time when digitisation and the virtual world are encroaching into almost every sphere of our lives, there is also increasing interest in genuine, natural materials and craftsmanship. One body to notice this is the Chamber of Crafts and Trades for Munich and Upper Bavaria. For 46 years – as part of the international crafts fair – the chamber has hosted the special exhibition Exempla, which this year took place on 8–14 March. In 2017, the fair focused on the importance of exceptional skill, via the theme Material Values in the Crafts, and Petersen



Tegl was one of 31 companies invited to showcase their products. Exempla seeks to bring the crafts to life, and so staff from Petersen Tegl mounted and dismounted Petersen Cover every day during the exhibition. Among the 1069 exhibitors, Petersen Tegl was delighted to receive an award for Kolumba, in the category “Particularly creative and technical performance”, from the Bavarian Ministry of Economic Affairs and Media, Energy and Technology. The award was presented to Peter Zinck, Petersen Tegl by Franz Josef Pschierer, Staatssekretär im Bayerischen Staatsministerium für Wirtschaft und Medien, Energie und Technologie.



PETERSEN

CONSULTANTS–PETERSEN Tegl

DENMARK EAST
CHRISTIAN TEITUR HARRIS
P: +45 2463 9235
E: CTH@PETERSEN-TEGL.DK

DENMARK WEST AND FUNEN
TORBEN SCHMIDT
P: +45 2028 4355
E: TSC@PETERSEN-TEGL.DK

EXPORT MANAGER
STIG H. SØRENSEN
P: +45 4014 1236
E: SHS@PETERSEN-TEGL.DK

NORWAY
MUR DIREKTE AS
SIMEN BØE
P: +47 2339 2010
E: POST@MURDIREKTE.NO

SWEDEN
TEGELMASTER AB
MARTIN PERSSON
P: +46 40 542 200
E: MAIL@TEGELMASTER.SE

GERMANY NIEDERSACHSEN, BREMEN AND HAMBURG
ERIC SCHMIDT-BANDUR
P: +49 174 3800 667
E: ESB@PETERSEN-TEGL.DK

SCHLESWIG-HOLSTEIN
ZIEGELTEAM
STEPHAN BAASCH
P: +49 170 2705 530
E: STEPHANBAASCH@GMX.DE

GERMANY EAST
HARTMUT REIMANN
P: +49 170 5565 792
E: HARTMUTREIMANN@HOTMAIL.DE

GERMANY SOUTH/NORTH RHINE-WESTPHALIA
SWITZERLAND (GERMAN-SPEAKING REGION)
AUSTRIA
BACKSTEIN-KONTOR GMBH
P: +49 221 888785-0
F: +49 221 888785-10
E: INFO@BACKSTEIN-KONTOR.DE

BENELUX
PETERSEN BENELUX
NETHERLANDS, BELGIUM, LUXEMBOURG
BJÖRN LUCASSEN
P: +31 (0) 652362168
E: BLU@PETERSEN-TEGL.DK

NETHERLANDS
LINEKE LUCASSEN
P: +31 (0) 622529266
E: LLU@PETERSEN-TEGL.DK

TOM LUCASSEN
P: +31 (0) 646236445
E: TLU@PETERSEN-TEGL.DK

UNITED KINGDOM
STIG H. SØRENSEN
P: +45 4014 1236
E: SHS@PETERSEN-TEGL.DK

EUROPEAN BUILDING MATERIALS LIMITED
P: +44 0203 805 0920
E: ENQUIRIES@EBMSUPPLIES.COM

POLAND
CENTRUM KLINKIERU SCHÜTZ
P: +48 58 56 37 201
E: BIURO@CENTRUM-KLINKIERU.PL

REST OF EASTERN EUROPE
INGRID KATHRIN GROKE
P: +45 2047 9540
E: IKG@PETERSEN-TEGL.DK

DESIGN AND LINTELS

STEEN SPANG HANSEN
P: +45 2142 7962
E: SSH@PETERSEN-TEGL.DK

PUBLISHER

PETERSEN Tegl A/S
NYBØLNORVEJ 14
DK-6310 BROAGER
P: +45 7444 1236
E: INFO@PETERSEN-TEGL.DK
WWW.PETERSEN-TEGL.DK

CHIEF EDITOR
ANNETTE PETERSEN, ARCHITECT MAA
E: ANNETTE@ZINCK.INFO

EDITOR
IDA PRÆSTEGAARD, CAND.ARCH.
E: IPR@PETERSEN-TEGL.DK

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