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PETERSEN

A MAGAZINE ABOUT BRICKWORK AND RESPONSIBLE ARCHITECTURE

Photo: Richard Barnes, DDG

HANDMADE BRICK SCRAPING THE SKY

BY OPTING TO USE BRICK ON THE FAÇADES OF A NEW 160-METRE TALL RESIDENTIAL BLOCK ON THE UPPER EAST SIDE IN NEW YORK, ARCHITECTS DDG ADDED TO AN ILLUSTRIOUS 20TH-CENTURY TRADITION OF BRICK-CLAD SKYSCRAPERS IN THE AMERICAN METROPOLIS. PETER GUTHRIE, THE ARCHITECT AND OWNER OF DDG, EXPLAINS THE PROCESS.

88TH

The new building on 88th Street in Manhattan is now the tallest on the Upper East Side. The views from the top to Central Park – and vice versa – are stunning.

My design and development firm, DDG, discovered and acquired a site in the Upper East Side of Manhattan where we could build a tall building through the purchase of air rights and the creation of off-site affordable housing. We arrived at our design for this 524-foot-tall building, the tallest building north of the 70s, through our typical iterative and methodical design process. We studied the history of the site from the geologic prehistoric bedrock to the Beaux Arts apartment houses on Park Avenue of the 1800s and on to the golden age of skyscraper design of the 1930s. We would juxtapose the solidity of these apartment house typologies to the soaring aspirations of the New York skyscraper to find our design for a 21st century residential tower on base scheme for this project.

We chose to investigate masonry and precast systems with traditional "punched" windows for the main façade to dovetail with our decision to use a poured-in-place concrete superstructure. After careful and thorough analysis, we decided that brick was the right choice here for us. It actually turned out to be the most economical façade system for this project due to its complex location mid-block making large crane "picks" over neighbouring buildings costly and logistically prohibitive for a precast system. Glass and curtain wall

180 East 88th Street, New York, USA
Client, architect, administrator: DDG
Contractor: DDG
Completed: 2021
Brick: K91 (95%), K56 (5%) and D91FF (99%), D55FF (1%)
Custom-made clay bricks K91, 449 lintels, 430 brick-on-edge sills produced at the brickworks in Broager.
Text: Peter Guthrie, Founder, Chief Creative Officer, Head of Design & Construction, DDG.
Photos: Richard Barnes; DDG
Photos, page 2/top, 4/top and 5/bottom: Tom Eckerle
Photos, page 3/bottom: Petersen Tegl

"Brick turned out to be the most economical façade system for this project due to its complex location mid-block making large crane "picks" over neighbouring buildings costly and logistically prohibitive for a precast system."
Peter Guthrie, architect, DDG

The new skyscraper soars above the surrounding neighbourhood as an elegant tower. As the eye moves down the building, the transition to street level is clearly delineated by changes in volume, the lowest of which is almost in line with the neighbouring buildings.

180 East 88th Street is a concrete structure cast in-situ with façades clad with brick on site. A vertical section in full length of the tower on the north side has exposed concrete, as does the belt of in-situ cast, parabolic arches.

Peter Guthrie and his colleagues from DDG made several visits to Petersen Tegl in Broager. Along with Christian A. Petersen, they inspected the clay for their chosen brick.

Mock-ups were produced before a final decision was made on the mixture of bricks they wanted for the façades.

Guthrie and team survey the brickworks, located in the scenic beauty of Nybølnor in Southern Jutland.

The design process for the new building began with sketches, but also involved a lot of model work.

The main residential lobby entrance is on 88th street, set back and accessed through a gated arch of Petersen brick.

"The old-world character and essence of these bricks are so incredibly useful for our schemes where we are building in historic neighbourhoods."
Peter Guthrie, architect, DDG

88TH

schemes were also not appealing here. Masonry can be very well suited to a tall building if detailed correctly allowing for proper expansion and contraction. It was simply the best choice architecturally because the scale, texture, pattern, and overall feel of masonry allowed us to juxtapose our massive, poured-in-place concrete arches and state of-the-art windows with a material not only rooted in the neighbourhood's history, but one that gives us a human scale and handmade crafted construction.

We developed a base, middle, and top scheme. The base would house the two residential entrances with residences and amenity spaces above, the middle would house a "sky garden" and be articulated with two-storey, cast-in-place concrete triumphal arches ringing the perimeter to act as a structural belt, with the top crowned in another series of varying shaped parabolic arches around the duplex penthouse residence.

We had recently completed our first Petersen brick building in the Meatpacking District of Manhattan and it had been a great experience, so it was far easier for us to understand how this could work here for this building. We had used our own in-house masons to cut the lip bricks and craft the corner "stitching" details to make it easier and more efficient for the masonry contractor and successfully constructed the first large-scale Petersen project in New York. The old-world character and essence of these bricks are so incredibly useful for our schemes where we are building in historic neighbourhoods. In the Carnegie Hill area for 180E88 we again took full advantage of the timeless beauty of these Petersen bricks and we used mock-ups created for us in Denmark to refine the mix ratio and detail our "stitching" to respond to the scale of this very tall building. We also introduced a curved "special" brick (a uniquely shaped brick custom-made for the project) into the façade as well to help delineate and accentuate the entrance on the front façade.

Handcrafted brick combined with a technologically state-of-the-art skyscraper may have seemed incongruous before we began this project, but we could not be more pleased with the results. We were able to design and execute the building perfectly, and it expresses our wish to connect to the past while celebrating the future in an architecture that feels timeless. The Petersen brick once again played such a pivotal role in this composition and we are proud to help them celebrate their tallest building to date.

Brick's inherent ability to make even simple idioms look decorative is fully apparent. Vertical bands on almost the entire height of the façade and in the corners of the building are accented with patterned brickwork that evokes the earliest skyscrapers, built more than a century ago.

Parabolic arches are a recurring architectural motif in the crown, middle and base. This theme continues in the lobby, where the arches create architecturally exciting spaces in which the walls and ceiling form an integrated whole.

The lobby's arched walls and ceilings are made of traditional hand-troweled plaster with a lime-wash finish. The floors are a combination of Austrian white oak and Italian travertine.

"We were able to design and execute the building perfectly, and it expresses our wish to connect to the past while celebrating the future in an architecture that feels timeless."
Peter Guthrie, architect, DDG

The skyscraper is a sleek and elegant addition to the cityscape.

L: Woolworth Building, Cass Gilbert, 1910–13.
Unknown photographer. Library of Congress, Prints and Photographs Division.
R: Equitable Building, Ernest R. Graham, 1913–15.
Unknown photographer. Library of Congress, Prints and Photographs Division.

L: Shelton Hotel, Arthur Loomis Harmon, 1922–24.
Irving Underhill. Museum of the City of New York.
R: One Fifth Avenue, Harvey Wiley Corbett, 1926–27.
Berenice Abbott. Milstein Division, New York Public Library.

L: Chrysler Building, William Van Alen, 1927–30.
Wurts Bros. (New York, N.Y.) Museum of the City of New York.
R: To the left in the photo: Eldorado Apartments, Emery Roth with Margon & Holder, 1929–31.
To the right in the photo: Ardsley Apartments, Emery Roth, 1929–31. Diego Silvestre.

L: San Remo Apartments, Emery Roth, 1929–30.
Wurts Bros. Museum of the City of New York.
R: Century Apartments, Irwin S. Chanin, Jacques Delamarre and Sloan & Robertson, 1930–31.
Wurts Bros. Museum of the City of New York.

L: Mayer & Whittlesey and Skidmore, Owings & Merrill, 1947–51.
Wurts Bros. Milstein Division, New York Public Library.
R: 180 East 88th Street, DDG, 2020-21.
Richard Barnes, DDG.

MANHATTAN ICONS

MANHATTAN IS HOME TO SOME OF THE EARLIEST AND MOST ICONIC SKYSCRAPERS ANYWHERE IN THE WORLD. ONE OF THEIR COMMON DENOMINATORS IS BRICK, A MATERIAL CURRENTLY ENJOYING SOMETHING OF A RENAISSANCE ON THE FAÇADES OF EVEN THE TALLEST OF BUILDINGS. ARCHITECT AND AUTHOR MICHAEL SHERIDAN LOOKS BACK AT THE HISTORY OF THE MANHATTAN SKYSCRAPER.

In Manhattan, the earliest skyscrapers were clad in a variety of materials, including stone, brick and moulded terracotta panels that were both fireproof and easily decorated. The architects often looked to historical models as they struggled to find appropriate forms for the new towers. The leading example is the 792-feet-high (241 m.) Woolworth Building (Cass Gilbert, 1913), which was based on the Victoria Tower in London and covered in terracotta panels with Gothic motifs. An exception to the rule was the headquarters for the Equitable Life Insurance Company (Ernest R. Graham, 1915), which had no tower and simply filled the site with a massive, 555-feet-high block (169 m.) of brick and terracotta that cast an enormous shadow over a large part of Lower Manhattan. The resulting public outrage led to the passage of the 1916 Zoning Resolution; the first such regulation in the United States.

The 1916 zoning law was designed to regulate the bulk of a building through a series of setbacks that were based on the width of the street. The regulations produced the archetypal "wedding cake" massing that characterised Manhattan for the next half-century. As high-rise construction became increasingly rectilinear, brick became the material of choice. The first step towards the skyscraper apartment building was the 35-story Shelton Hotel (1922–24) on the Upper East Side, which was designed by Arthur Loomis Harmon and classified as an apartment-hotel, which made it exempt from the restrictions on residential construction. Harmon designed the 387-feet-high (118 m.) building as a sculpted mass of earth-coloured brickwork and employed corbelled panels and double-arched windows to emphasise the material.

Harvey Wiley Corbett raised the brick tower to the form of urban artwork, creating complex masses that respond to changing effects of light and shadow, and articulating the forms with subtle patterns and projections. At One Fifth Avenue (1926–27), Corbett graded the bricks by tone, so that the building becomes lighter as it ascends and the tower seems to fade into the sky.

In 1929, changes in the housing laws removed the height limits on apartment buildings and initiated a frenzy of high-rise luxury construction in the last few months before the Wall Street Crash in October. The best known examples are the four twin-towered monuments on Central Park West, all completed during 1930–31: the San Remo (Emory Roth); the Eldorado (Margon & Holder, with Roth) and the pair of 29-story palaces that were designed by Jacques L. Delamarre and constructed by the fabled architect-developer Irwin S. Chanin; the Majestic and the Century. Each of these buildings is a civic icon and an essay in ornamental brickwork, which was ideally suited to the Art Deco aesthetic of contrasting colours and geometric decoration.

The Great Depression and the Second World War curtailed new construction in Manhattan for more than fifteen years. The first major post-war development was Manhattan House (1947–51), a block-long, 20-story slab on the Upper East Side. Inspired by the work of the pre-war European modernists, Skidmore, Owings & Merrill employed off-white glazed bricks that were laid flush and emphasised abstract form over delicate detailing. That attitude prevailed for the next three decades, as developers and their architects treated brick as a generic material for cladding Brutalist slabs and towers. By the mid-1980s, high-rise developers had largely abandoned masonry construction in favour of lighter and less expensive glass curtain walls. Glass remains the most popular surface treatment for tall buildings of every type but masonry has made a gradual comeback since 2000.

Inspired by the civic icons of the 1920s, a number of developers have employed brickwork as a way of creating architectural character, in an increasingly generic cityscape. The resurgence of artisanal practice has been shaped by changes in zoning regulations since 1961, which encourage freestanding towers in place of stepped masses. Nonetheless, a number of recent buildings employ the historical strategies of patterned brickwork and sculptural crowns to create towers that are at once unique and strangely familiar. The latest and most distinctive addition to Manhattan is 180 East 88th Street, on the Upper East Side, which features Petersen Tegl's signature Kolumba brick on a 50-story, 524-foot-high (160 m.) building punctuated with parabolic arches of reinforced concrete. In place of a freestanding tower, this dark-grey edifice of complimentary materials is carefully fitted into the site, reinforcing the street wall along Third Avenue and serving as both tower and infill. Through this hybrid of handmade bricks and advanced engineering, the developer-architect has created yet another chapter in the history of high-rise brick construction in the very birthplace of the residential skyscraper.

A longer version of this article is available on www.petersen-tegl.dk

"A number of recent buildings employ the historical strategies of patterned brickwork and sculptural crowns to create towers that are at once unique and strangely familiar."
Michael Sheridan, architect and author

The façade has two very different idioms, both of which are visible from the access road. The transparent façades face the garden to the southwest while the much heavier brick walls of the arrival area extend at right angles from the main entrance and anchor the building.

Towards the garden, the headquarters rise as a light, open, three-part pavilion that extends into the landscape via its reflection in the lake, resulting in a merging of nature and architecture.

Elongated Kolumba brick in a grey-brown shade reminiscent of bark emphasises the horizontal idiom and brings the building into harmony with the surrounding nature-reserve forest.

MIRRORING NATURE

THE HIGHLY DELIBERATE CHOICE OF MATERIALS HELPS NEW COMPANY HQ IN EAST JUTLAND ENTER INTO AN EXQUISITE INTERACTION WITH NATURE.

Using a body of water as a reflective surface has long been a popular way of visually linking buildings and nature. A new company HQ – designed by Ravn Arkitektur for a vast green site in East Jutland – uses this traditional feature as an architectural and landscaping anchor point.

From the outset, the architects and the client wanted to draw the qualities of the surrounding landscape into the building. Both indoors and out, the focus is on establishing a clear interplay between the architecture and its lush surroundings.

The elongated building is set back on the plot, its position on the edge of a forest leaving an open space to the southwest, and in time, it will look as if it is nestled in a clearing. Viewed from the forest, the building resembles a light, three-part pavilion, with glass façades tucked under its prominent eaves.

The protruding two-storey central part of the pavilion, flanked by two low-rise wings, is reflected in the lake. A walkway in Ipe wood follows the base of the glass façades all the way around the perimeter, forming a large terrace at the midway point that extends out over the water.

Together, the lake and walkway elevate the building over the terrain and emphasise its light, minimalist idiom. The mirror effect also coaxes the structure out into the surrounding landscape, seamlessly merging architecture with nature.

Visitors arrive from the east, along a winding forest track, and encounter two angled, grey-brown brick walls that embrace the main entrance. Both walls are built with Kolumba K58.

"We chose Kolumba for the thin, elongated format, which highlights the horizontal lines throughout the complex. We settled on K58 because its colour palette ranges from grey-brown to hints of ochre yellow, similar to tree bark. In fact, we asked Petersen Tegl to bring out the ochre element to enhance that bark-like quality. The surface resembles bark, too – it feels like running your hand across a tree trunk," explains architect and partner in Ravn Arkitektur, Uffe Lumbye Nielsen.

A narrow opening in the east-facing wall creates both a visual connection and a passage to the surrounding green landscape.

The tight, relatively closed idiom of the two brick façades is broken by the extended glass section at the main entrance, which allows the eye to wander right through the building and glimpse the garden behind.

First-floor plan

Ground-floor plan

The brick walls that make up the north and east façades on the wings have a relatively closed look, with sharply defined windows and doors. Both in the interior and on the exterior, these walls form a brick ridge that anchors the building and gives it solidity.

Due to the layout, visitors walk into the HQ via a spacious entranceway. From there, the central pavilion opens out into a large, high-ceilinged foyer that leads into a canteen with views of the clearing and lake. The first floor of the central pavilion houses the management offices and the boardroom, the two wings house service facilities, open-plan offices, a number of separate offices and conference rooms.

The architects achieved their key aim of drawing nature into the building by providing uninterrupted views of the scenic surroundings and their highly deliberate use of materials and colour.

"Throughout the building, we used honest materials that work well without the need to treat the surfaces – all of them in natural colours. Sustainability was another core consideration, so we focused on materials that patinate beautifully, last a long time and require minimal maintenance," explains Uffe Lumbye Nielsen.

The use of Kolumba on the ridge continues into the interior, where it is a recurring feature. In the entranceway, the walls and floor are made of it, and it recurs throughout the complex – as wall cladding in corridors and toilets, in offices and conference rooms and where the brick ridge forms the outer wall. Vibrant, tactile surfaces and the warm complexion of the brick walls provide a refined, discrete counterpoint to the other surfaces, such as raw concrete, glass, oiled oak floors and smoked-oak furniture. In terms of colour, the materials range from the grey hues of the concrete to the warm, greyish-brown and deep brown nuances of the brick and wood elements, with the darkest tones coming from the brownish-black ceilings and window frames.

The HQ's elegant and refined architectural idiom combines with a carefully thought-out material and colour palette to create an almost imperceptible transition between exterior and interior and a subtle interaction between structure and nature.

Company HQ, Vejle, Denmark
Client: Private
Architect: RAVN Arkitektur
Construction: K.G. Hansen & Sønner
Engineer: Niras
Interior designer: RAVN Arkitektur
Landscape architect: RAVN Arkitektur
Completed: 2019
Brick, façades: K58
Brick, floor: D55FF
Text: Tina Jørstian, MSc Architecture
Photos: Anders Sune Berg

Site plan

A large foyer stretches from the main entrance to the canteen. The soft, natural colour palette binds together the exterior and interior.

The canteen takes up the whole outer part of the middle pavilion and provides unobstructed views of the lake and surrounding scenery.

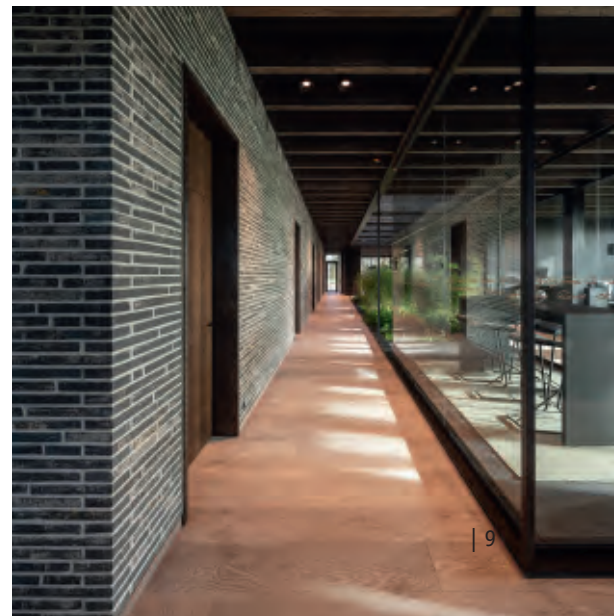
Large eaves crown the three pavilions, the middle of which rises two storeys.

The offices and meeting rooms that have exterior façades in Kolumba also use the same warm-toned brick as internal cladding.

The east wing culminates in a wall section that wraps around a walkway running all the way around the glass-walled garden façades.

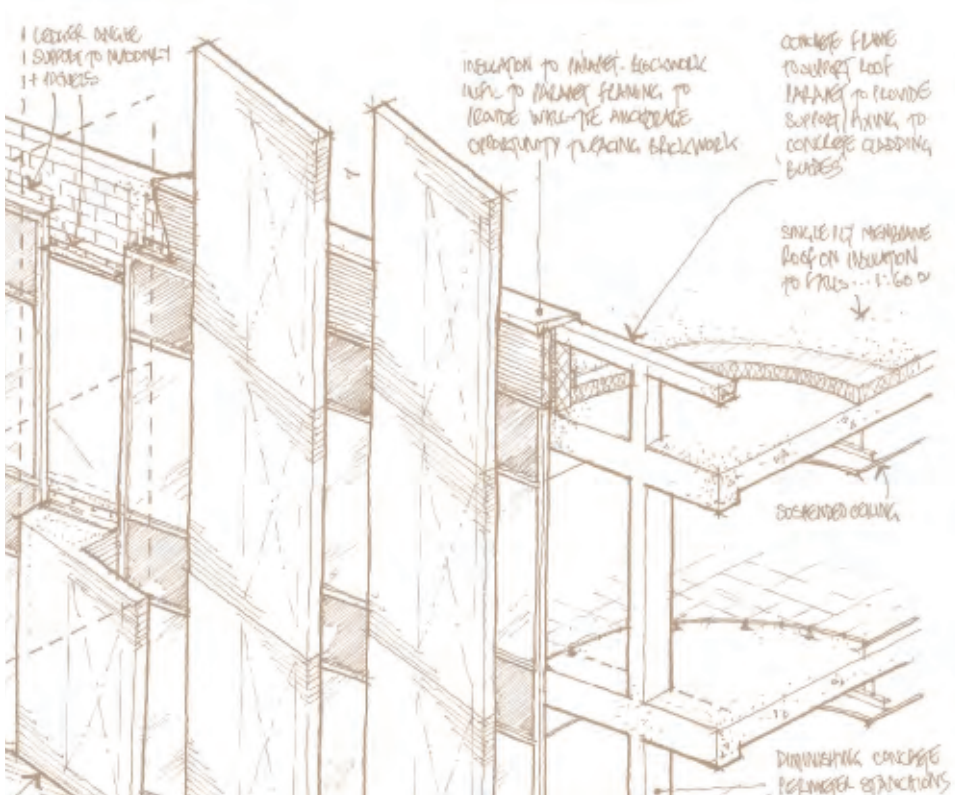
The east-facing Kolumba façade continues in through the main entrance, resulting in a seamless merging of interior and exterior. The floor in the entrance area is paved with D55 in the narrow Flensburg format.

"We chose Kolumba for the thin, elongated format, which highlights the horizontal lines throughout the complex. We settled on K58 because its colour palette ranges from grey-brown to hints of ochre yellow, similar to tree bark. In fact, we asked Petersen Tegl to bring out the ochre element to enhance that bark-like quality. The surface resembles bark, too – it feels like running your hand across a tree trunk."
Uffe Lumbye Nielsen, architect, Ravn Arkitektur



The interplay between outside and in is emphasised by the grey-brown Kolumba brick, which is pulled indoors and used as cladding on a number of the interior walls. The bricks' tactility and warm glow offer a delicate and discreet contrast to the other materials.

Sir Basil Spence designed Coventry Cathedral in 1956 as an extension to the ruins of the old Gothic church, which suffered bomb damage during World War II. The church is built of natural stone, with tall, angled screens that form the façades along the nave.



Basic drawing of the façade on the Alison Gingell building, showing the load-bearing concrete construction. The south-facing façade features angled concrete screens clad in brick. The screens effectively stop the large, south-facing window sections from overheating.

When designing the south-facing façade, Broadway Malyan took inspiration from the screens on Coventry Cathedral. The cathedral's tonality is also reflected in the choice of brick.

UNDERSTATED YET EYE-CATCHING

A DISTINCTIVELY RESTFUL, ELONGATED IDIOM AND EXPANSIVE BRICK FAÇADES ARE THE MAIN FEATURES OF THE NEW FACULTY OF HEALTH AND LIFE SCIENCES BUILDING AT COVENTRY UNIVERSITY, ENGLAND.

The English architects Broadway Malyan designed the new Alison Gingell Building at Coventry University. Completed in 2017, the new building houses the Faculty of Health and Life Sciences. The 11,100 m^2 complex houses biochemical laboratories, research offices and teaching rooms, as well as special learning environments that imitate a hospital, complete with operating theatres, an A&E department, etc. The aim is to provide a teaching environment that is as close to real life as possible. The design is the result of close and ongoing dialogue between the architects, the client and the users.

The Alison Gingell Building runs from east to west on the southern edge of the university campus in inner Coventry. The long, south-facing façade faces the elevated ring road that encircles the city, which makes it highly prominent. Mark Evans, director of architecture at Broadway Malyan, says the location presented an opportunity to build a significant structure that would serve as a landmark for the university.

"We wanted a building that is technically and aesthetically robust, which will still be considered appropriate, relevant and high quality in the future. It was important for the client that the new building be made from high-quality materials with a focus on tactility and patination. So brick was an obvious choice for the façades," he explains.

The subtle material palette consists of brick, concrete, wood, metal and glass. Deep reddish-brown D38 bricks dominate the façade, the light and dark tones of which hint at a more varied play of colour. The north-facing gable looks toward the Sir Basil Spence designed remodelled Coventry Cathedral, which sits adjacent to the bombed-out spire of the original cathedral. The modern cathedral has a patinated sandstone finish directly referenced in the new Alison Gingell Building.

The south-facing façade has a variety of window arrangements and a three-dimensional look. A row of horizontal windows stretches the entire length of the ground floor, with the load-bearing concrete elements between them serving as a column motif. Tight and precise concrete lintels above the windows mark the transition to the bright brickwork on the façade above. The first- and second-storey windows are set deep into the façade in a regular rhythm and have minimal concrete lintels and matching external sills. The upper floors feature large, angled sunscreens in concrete, clad with the same reddish-brown bricks as the façade.

"The screens mean the south-facing labs can have relatively big windows without overheating during summer. The screen motif is also our tribute to the angled brick screens that form the façades of the nearby new Coventry Cathedral, masterfully designed by Basil Spence in 1956," Evans says.

The long, north-facing façade looks out onto the campus and a triangular former carpark, which now serves as an outdoor recreational space. The façade overlooking the courtyard has a large glass section, which forms a counterpoint to the closed brick surfaces of the south-facing façade.

The old spire of Coventry Cathedral is visible in the distance. Its patinated brick façade is referenced in a modern way in the Alison Gingell building's lightly speckled brickwork.

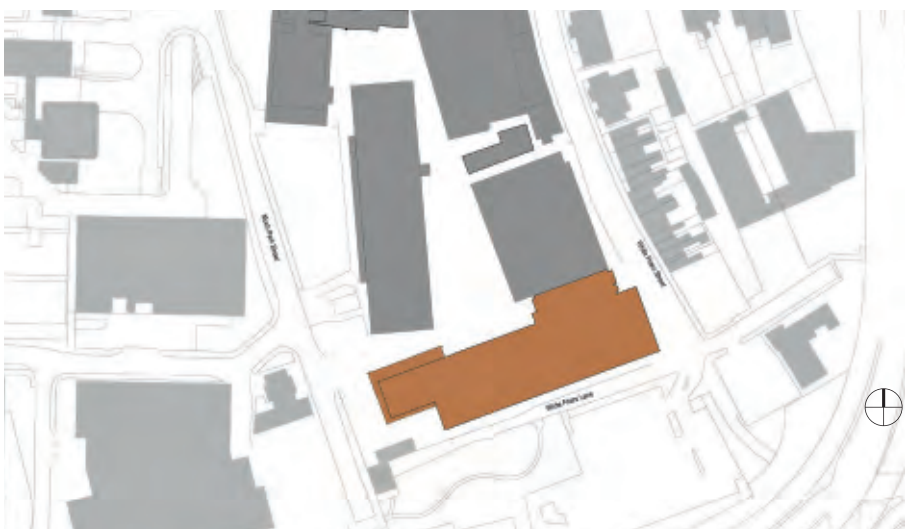
"It was important for the client that the new building was built in quality materials with a focus on tactility and patination. So brick was an obvious choice for the façades."
Mark Evans, director of architecture, Broadway Malyan

The south-facing façade is a three-dimensional, processed surface with varying but steady rhythms. At the bottom, the concrete construction has a column motif over deep window recesses with slender concrete sills. At the top are the characteristic angled-brick screens.

The new campus building's most distinctive feature is its south-facing façade. It is visible from quite some distance and embodies the architects' aim of creating a high-quality landmark building for the university.

The interior features the same bricks as the exterior in several places, along with concrete, wood and metal.

The new building, marked in brown, is at the southern edge of the campus. Between the buildings, on the site of a former car park, is a communal outdoor living space designed by Broadway Malyan.



The building is characterised by its expansive, calm brick surfaces.

The entrance to the Alison Gingell building is located to the north-east.

"It was a balance of requiring a robust material that had a long life span, as well as having a low maintenance requirement, but also finding a material that was good-quality that helped create a strong lasting landmark for both the University and the City of Coventry. We also chose the brick because of the narrower module/size, compared to a UK brick, as this helped 'reduce' the visual appearance of the large brick facades, as well as creating interest in and around the building."
Mark Evans, director of architecture, Broadway Malyan

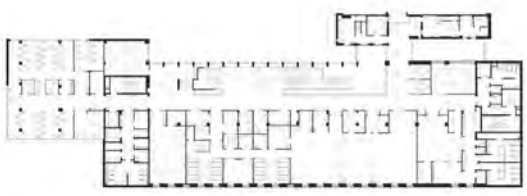
Behind the angled screens are the highly specialised rooms, including sensitive microbiology laboratories, which have to avoid passive solar gain. The screens made it possible to have big windows and plenty of daylight without overheating.

"The large window section to the north offers a glimpse of the activity that takes place inside. It draws your attention to the building as you walk through the elongated courtyard," he adds.

Behind the big glass section is an indoor atrium that extends the full height of the building. The floors are connected by a large staircase through the atrium, beside which are open lounge areas that allow students and researchers to work in informal, intimate settings. Inside the building, brick is again used along with structural concrete elements and large surfaces clad in wood. While the interior is immediately notable for its generous natural light and sense of space in all directions, the eye is also drawn to its finer details and subtle design elements.

Alison Gingell Building, Coventry University, UK
Client: Coventry University
Architect: Broadway Malyan
Construction: BAM
Engineer: Buro Happold
Landscape architect: Broadway Malyan
Completed: 2017
Brick: D38DNF
Text: Albert Algreen-Petersen, architect PhD
Photos: Keith Hunter

Section



First floor

Groundfloor

Site plan

TACTILE INSIDE AND OUT

IN THEIR DESIGN, CONSTRUCTION, FIXTURES AND FITTINGS, THESE NEW APARTMENTS IN SOUTH LONDON CELEBRATE NATURAL AND SUSTAINABLE MATERIALS.

The new complex mimics the surrounding buildings without plagiarising them. The choice of Cover meant the façades and roofs could be treated as a single surface with uniform windows, emphasising the holistic sculptural idiom.

Nicola and Ty Tikari opened their London practice in 2014. The pair act not only as architects but also as project developers and contractors. Amalgamating these traditionally separate disciplines affords them extensive control over their buildings. Their first, Pocket House, was awarded the RIBA London Award in 2014 and shortlisted for House of the Year the same year.

Their most recently completed project, the Rye Apartments, consists of ten flats on an attractive corner plot opposite Peckham Rye Park in South London. The objective was a high degree of sustainability and interiors made of non-traditional materials and imbued with greater individuality than the market norm. Another important requirement was to reflect the architecture in the neighbourhood, while avoiding pastiche or glaringly obvious references.

The complex comprises two almost square buildings, housing 10 apartments, on top of a concrete plinth that evens out the different levels on the site. It also acts as a wall to the south, screening off the private gardens that come with the ground floor apartments.

For the roofs and façades, Tikari Works chose Petersen Cover, which has a look that is at once both new and familiar. The homogeneity of the cladding creates a kinship with the reddish-brown brick on the neighbouring Victorian houses and adds to the sculptural idiom of the blocks. Another important reason for choosing Cover was the ease with which it is possible to dismount and reuse the bricks, which makes Cover a highly sustainable choice.

The windows on the façades and roofs of both buildings share the same design, and some even appear to flow over the gutter-free eaves, reinforcing the sculptural, building-block effect. Inside, the simple and well-appointed apartments make use of tactile materials and are bathed in daylight from the large windows and internal balconies. The floors are clad in whitewashed ash or terrazzo tiles flecked with red brick. All of the walls and ceilings are exposed Cross Laminated Timber (CLT), generating a warm and friendly ambience.

The Rye Apartments, London, UK
Client, architect and main contractor: Tikari Works
Engineering, construction: Webb Yates
Engineer, mechanical and electrical: Syntegra
Built: 2020
Brick: C48
Text: Ida Præstegaard, MSc Architecture
Photos: Jack Hobhouse

A concrete plinth extends the full length of the plot, absorbing the different levels of the terrain.

Floors are whitewashed ash or terrazzo tile. Wall and ceilings are exposed Cross Laminated Timber.

The red shades of the Cover cladding reflect the surrounding brick houses. The use of unconventional bricks endows the new homes with an identity of their own.

Ground-floor plan

Section

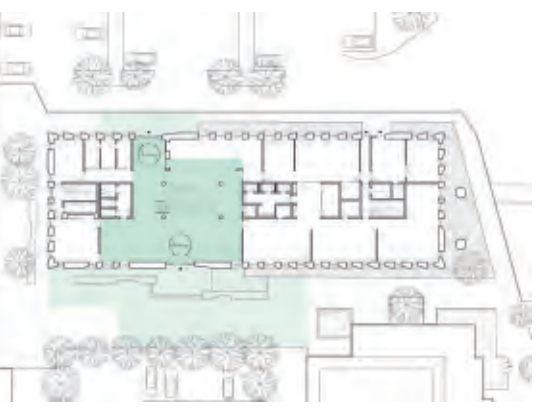
The steady rhythm of the façade is broken around the entrance and the high atrium. An oversized, angled recess draws attention to the largest window, suggesting that the room behind it is particularly important.

MAKING EVERY BRICK STAND OUT

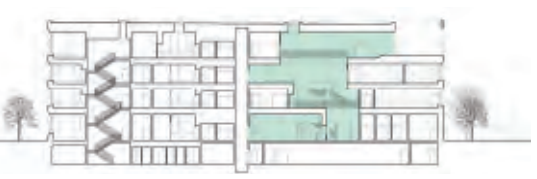
INTELLIGENT USE OF STANDARD BRICKS ENDOWS THE FAÇADE OF THE NEW TOWN HALL IN VEJEN WITH GREAT SPATIAL VARIATION. THE SAWTOOTH BRICKWORK HIGHLIGHTS EACH INDIVIDUAL BRICK AND RESULTS IN A FINE PLAY OF LIGHT AND SHADOW THAT CHANGES WITH THE TIME OF DAY AND THE WEATHER.

Vejen Town Hall, Denmark
Client: Vejen Council
Architect: Transform Arkitekter, Pluskontoret
Engineer: Rambøll
Built: 2019
Brick: D91DNF
Text: Martin Søberg, PhD, architectural historian
Photos: Anders Sune Berg

First-floor plan



Ground-floor plan



Section

Building a new town hall is not just about creating a functional home for a council's political activities, administration and services. It is also about designing a building that celebrates and makes a bold statement about the local community. Traditionally, Danish town halls have drawn attention to themselves with a tower, but exceptional precision in the proportions and exquisite detail are also used. With an aesthetic that is both classic and completely up-to-date, Vejen Town Hall is a fine example of the latter. It consists of a long, rectangular, four-storey block with a rhythmic façade, broken up by pillars placed 2.4 metres apart. The strict regularity of this system stands in contrast to the large atrium visible through the façade's double-height, extra-wide windows, each of which is bordered by deep, angled recesses of varying sizes.

The angled recesses point inwards from the corners of the building, creating an exaggerated depth effect and a rhythmic counterpoint to the pillars' tight metrics. The sawtooth look is achieved with standard bricks, inspired by 1950s and '60s modernist buildings such as the Louisiana Museum, north of Copenhagen.

"In those days, sawtooth patterns were usually used for ornamentation on large walls," explains architect and project manager Lars Povlsen of Transform Arkitekter. "For the town hall, we have exclusively used sawtooth on the recesses, the angles of which point in the same direction as the other bricks."

All of the bricks on the new town hall are precisely positioned in relation to each other, but by varying their displacement, the architects have achieved refined contrast effects.

"A sawtooth joint is only ever used on one side of the windows," Povlsen explains. "Towards the corners of the building are small windows with a very slight joint in three-quarter-brick, indented just 30 mm. Toward the middle of the building, there is a half-brick variant, which allows space for a bigger window. Another variant has half-brick, with a double indentation of 60 mm. Towards the atrium there are two variants, either in two three-quarter bricks or two whole bricks, which results in long, low angles on the recesses."

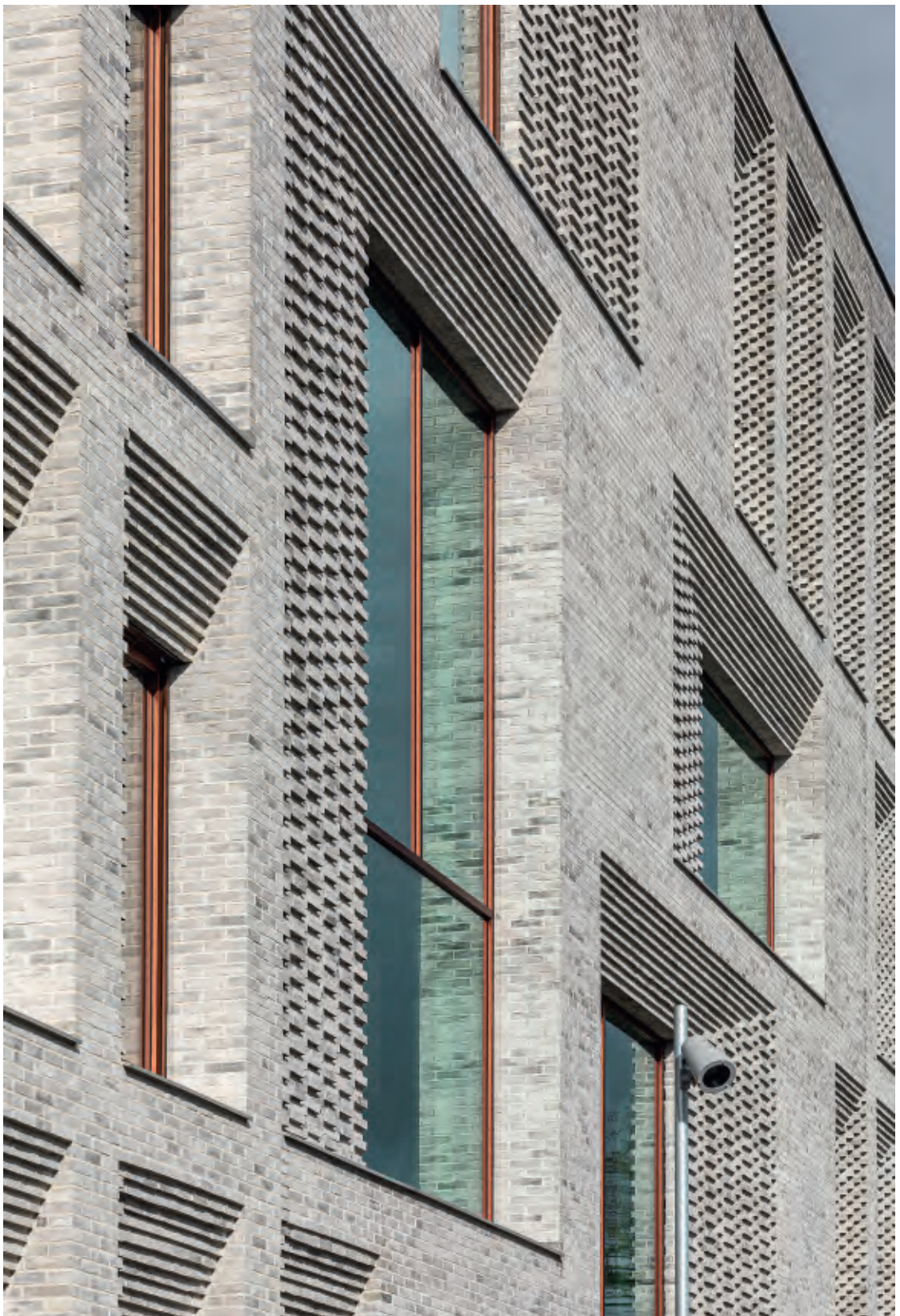
"We opted for the sawtooth look partly because of the small shadows it casts under the bricks. This creates a pixelation effect in the colour of the brick that changes throughout the day and enhances the illusion of depth," Povlsen adds.

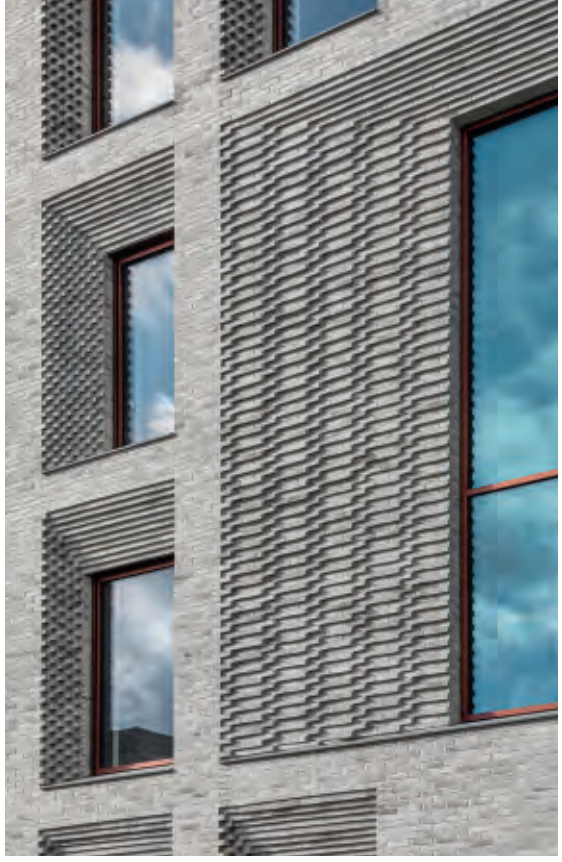
"In normal brickwork, you only see one or two sides of a brick, here you see all four sides, so you get a much better sense of each individual brick." The whole façade is in D91. "We really like D91. The colours vary so much it can seem both very light and very dark. It suits this type of sawtooth design, because the individual bricks stand out from each other. At the same time, it is so light that the shadows from the sawtooth patterns are clearly visible."

The new town hall's focal point is the large atrium. As the new building is located between the square and a car park, the atrium also serves as a welcoming passageway that houses council services and exhibitions from the local museum. Oak-clad stairs lead up through the building, past the large windows that offer views of the town, and up to the top-floor council chamber. At the ends are two roof terraces that almost seem to have been carved out of the body of the building. Here, the façade pulls away from the rest of the brickwork and becomes a colonnade that emphasises the town hall's distinctive character – a minimal, modern building that also pays tribute to classical architecture.

"We really like the D91. It is so varied in colour that it can seem both very light and very dark. It suits this type of sawtooth design because the individual bricks stand out from each other. At the same time, it is so light that the shadows from the sawtooth patterns are clearly visible."
Lars Povlsen, architect and project manager, Transform Arkitekter

Two roof terraces are located on diagonally opposite corners of the top floor. The brickwork continues all the way around the building and forms colonnades around the terraces.





Two whole bricks laid end on end with an indentation of 30 mm result in the angled recess at the large window. Indentation after just half a brick produces a deeper recess around the smaller windows.

A sawtooth pattern highlights the individual bricks. The idiom changes depending on the intensity, direction and tone of the sunlight.

The town hall forms a contemporary yet classic backdrop for the town square and its beautiful pollards. The building also acts as a passageway between the square and the car park behind, forming a hub within the town.

Only standard bricks were used, and yet the façade has no shortage of variety. The light hues of D91 allow the shadows to be drawn sharply across the fine relief of the façade.

TWO URBAN DEVELOPMENTS IN AMSTERDAM

THE FAÇADE MATERIAL IS THE COMMON DENOMINATOR ON TWO SUCCESSFUL AND VERY DIFFERENT INFILL PROJECTS IN AMSTERDAM.

A number of the new building's architectural features, including the marking of piers and the tall, slender format of the windows, refer to neighbouring façades.

PC HOOFTSTRAAT

THE FAÇADES OF THIS CLASSIC YET CONTEMPORARY RESIDENCE COMBINE PORTUGUESE SANDSTONE AND HARD-FIRED DANISH BRICK.

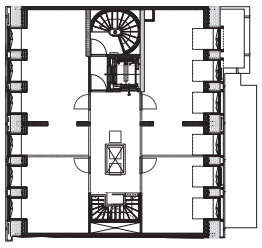
A long-standing gap in a street, Hooftstraat 170–176, in central Amsterdam has been filled in the most beautiful of ways. Marc Prosman Architects were commissioned to take on the classic infill project, which involved creating a new building with two duplex apartments on the ground and top floors, and two single-storey apartments on the floor in between.

While its core architectural idiom clearly relates to its 19th-century neighbours, the new building has a straightforward modern look. Architecturally, the new building echoes the vertical and horizontal lines of its surroundings. The lines of the façades and the positioning of the windows elegantly highlight the building's dimensions and reference the two buildings that originally stood on the site. Like its neighbours, the new building consists of a large plinth, a central volume and a roof with dormer windows. The vertical nature of the structure is further emphasised by the use of different materials for each section – Portuguese sandstone, Danish brick, and a slate roof.

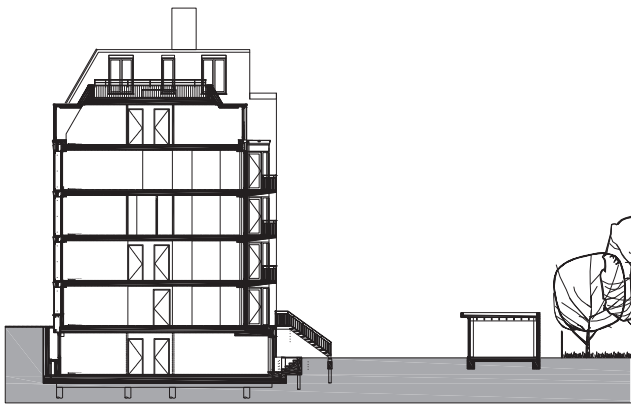
Light sandstone is used on the ground floor and for the overall grid, which establishes a visual affinity with the white plaster on the neighbouring blocks. The façade's vertical elements are in brick. "Brick is a traditional building material in the Netherlands, so it was an obvious choice to complement the light, natural stone," explains project architect Brian Debruijn. "Kolumba is 528 mm long, so we were able to stack single bricks in the narrow areas between window openings, and two bricks side by side in the wider spaces. Stacking the bricks imbues the building with a calm yet abstract air."

The architects opted for the K23 variant of Kolumba, which is made with German clay, with light slurry added to the wooden moulds. The end product combines light tones with rich red nuances. This brings bold colour contrast to the façade and complements the tonality of the light sandstone.

The main door is made of brass, and all of the windows have white-painted wooden shutters.



Plan, top floor



Section

The façade's light sandstone and red brick fired with light slurry suit each other and also blend nicely into the row of buildings.

PC Hooftstraat 170-176, Residential building, Amsterdam, The Netherlands
Client: Ivemo BV & Saturnus II BV
Architect: Marc Prosman Architecten
Construction: Bot Bouw
Engineer: Duyts Bouwconstructies
Built: 2019
Brick: K23
Text: Ida Præstegaard, MSc Architecture
Photos: Luuk Kramer

The architects designed the framework for the façades, while the future residents chose the window sections. The residents also influenced the choice of the almost bright-red D23 and the red and white joints.

CPO DE HALLEN

TWENTY-ONE DIFFERENT TYPES OF MOULDED BRICK WERE USED TO CLAD EVERY NOOK AND CRANNY OF THIS TOWNHOUSE-STYLE FAÇADE.

The Dutch people and their institutions have a reputation for challenging conventional lifestyles. A good example of this is De Hallen, one of a range of projects in Amsterdam for which the council offered plots to people keen to explore a different approach to urban living. Several architectural firms, including Platform Architects, bid to work directly with the co-owners of the site. A central premise was that the people who would live in the ten apartments – all of whom knew each other as family, friends or colleagues – would be intimately involved in designing the interior and the architectural idiom of the exterior, so that the end result would reflect their collective vision.

De Hallen overlooks a canal in the historic heart of the city. At first glance, it looks like two traditional gabled buildings. The exterior, including the transitions between the floors and the window openings, is defined by bands of protruding brickwork that subdivide the façade. The vertical bands are in runner bond, while the horizontal axis consists of courses of headers. Within the grid layout, residents had a choice of three designs for their section of the façade – double glass doors, with or without a French-style balcony, or a single glass door combined with a closed brick section.

"We curated the frameworks, but had no say in the final look," explains architect Ramon Scharff from Platform Architects. "It was an exciting and rewarding process that led to an interesting result. Despite the element of chance in the way it was designed, the façade has a harmonious air."

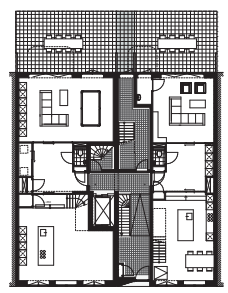
The architects and residents opted for D23 for the brick façade, which establishes a connection with the neighbouring buildings' reddish-brown brickwork while still standing out due to its almost luminous red tones.

"The owners wanted to maximise their living space, so we agreed to work with cut bricks affixed directly to the insulation. Our only condition was that the effect should look like traditional bricklaying. Working with Petersen Tegl, we designed 21 different moulded bricks, which allowed us to clad balcony undersides, window niches and various joints and corners. To create even more variation, we used a combination of red and white mortar in different sections of the façade."

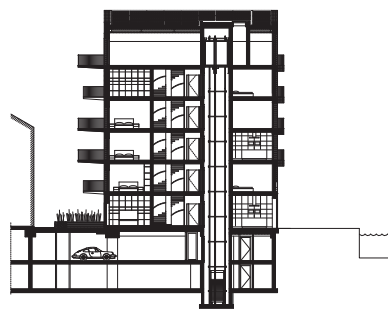
Like its neighbours on either side, the new building has double gables and is clad in brick.

CPO De Hallen, residential building, Amsterdam, The Netherlands
Client: CPO De Hallen
Architect: Platform Architects
Construction: Lokhorst Bouw
Engineer: Strackee
Built: 2019
Brick: D23, various moulded bricks in the same clay
Text: Ida Præstegaard, MSc Architecture
Photos: Luuk Kramer

The recesses, niches and the undersides of the balconies are clad in D23.



Ground-floor plan



Section

Site plan

The architects sought to create green oases and courtyards for outdoor gatherings.

By focusing on recognisability and high quality in the design language and choice of materials, architects Auer Weber have created a campus building that feels human and welcoming despite its size.

The buildings have a precise, sharp idiom, but include tactile qualities and plays of colour that stem from the choice of bricks. Four of the buildings are clad in a mixture of grey and yellow brick (K11, K91 and D71). The fifth and tallest is clad exclusively in K11.

CAMPUS ARCHITECTURE THAT APPEALS TO THE SENSES

CAMPUS HEILBRONN IN GERMANY IS A SHINING EXAMPLE OF HOW THE CHOICE OF MATERIAL – IN THIS CASE, BRICK – CAN IMBUE EVEN THE LARGEST STRUCTURES WITH HUMAN QUALITIES.

Large-scale contemporary urban construction projects tend to be characterised by striking architectural idioms and dramatic material effects, especially when viewed from a distance. At close quarters, however, such buildings often look strangely unremarkable. Usually, scant attention is paid to the architectural details and material properties at the end of the scale where they impact on human wellbeing.

Campus Heilbronn bucks this trend, demonstrating that it is possible to build big without losing sight of the qualities that enrich the human experience.

The city of Heilbronn, in south-west Germany, has a population of around 125,000. Over the past decade, it has been transformed into a dynamic and diverse centre of knowledge and education – a change driven and funded by the locally based Dieter Schwarz Foundation, which aims to promote education at all levels. A former industrial zone now houses more than ten educational establishments, from primary schools and colleges for young people and entrepreneurs to further and higher education institutions and conference facilities.

The Heilbronn complex was built in three distinct phases – the East Campus, the Central Campus and then the North Campus.

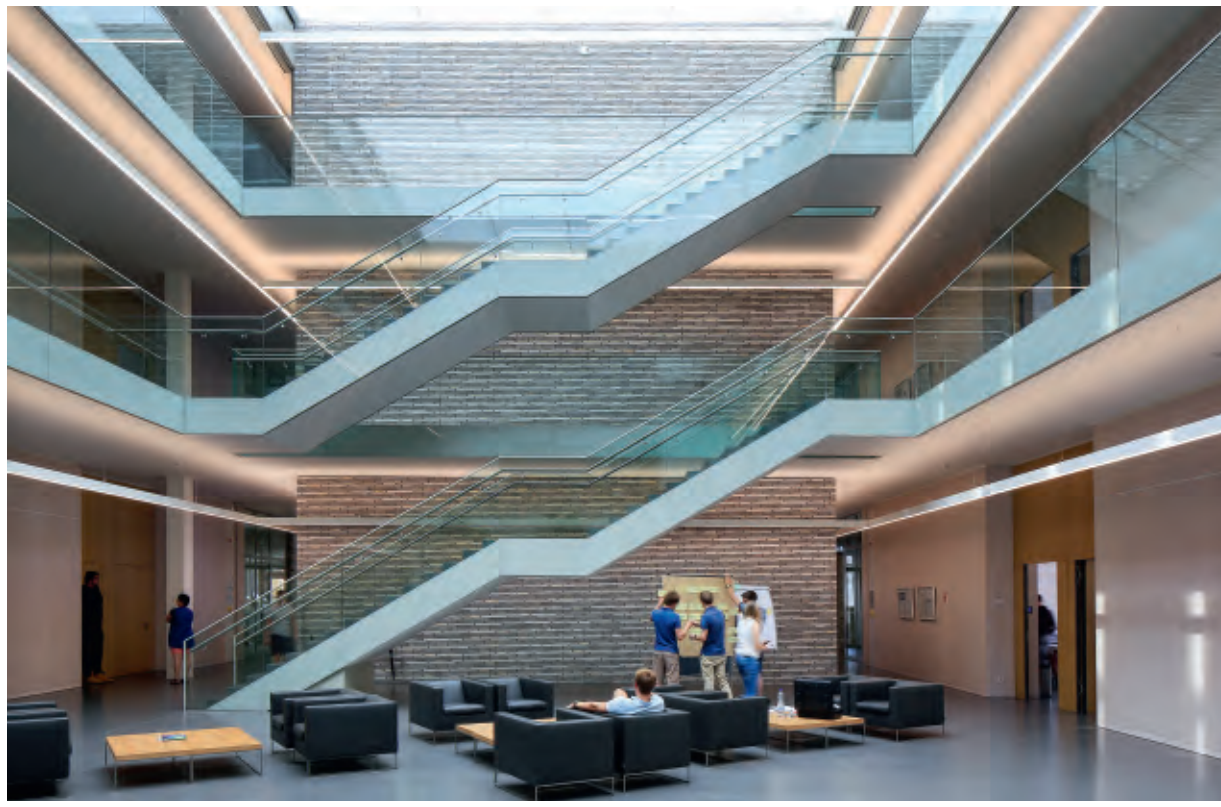
In 2013, internationally renowned German architectural firm Auer Weber won the tender for the ongoing development of the whole campus up until 2020. They subsequently designed most of the vast complexes of the Central and North Campus.

A quote from German architectural critic Gerhard Ullmann on the homepage of their website wryly articulates Auer Weber's architectural approach: "The irritating aspect of Auer Weber's public buildings is their normality" – words that get right to the heart of the matter. For this project, Auer Weber resolved to apply their vast professional expertise and focus on the human aspect of the campus architecture. The focus is on recognisability, not only visually, but via the other senses, and on exquisite quality in the overall design language, building details and choice of materials.

Five of Auer Weber's campus buildings house educational establishments of different types. All of them feature façades in light Petersen brick, which acts as a fundamental element of the main architectural idiom that is minimal and contained, while also tactile and welcoming.

The older campus buildings are in red Kolumba. Auer Weber used light-coloured brick to make the façade brighter.

In one of the buildings, the mixture of bricks on the façade is drawn into the central atrium by means of a wall that continues indoors and brings cohesion, warmth and a sense of human proportion to the large space.



The brick-clad volumes are precise and right-angled, with varying floor heights. The numerous window openings are choreographed either as continuous window bands or stringent, rectangular grids.

Auer Weber's other buildings – including the library and canteen – are spread across the campus, and are constructed in a range of materials.

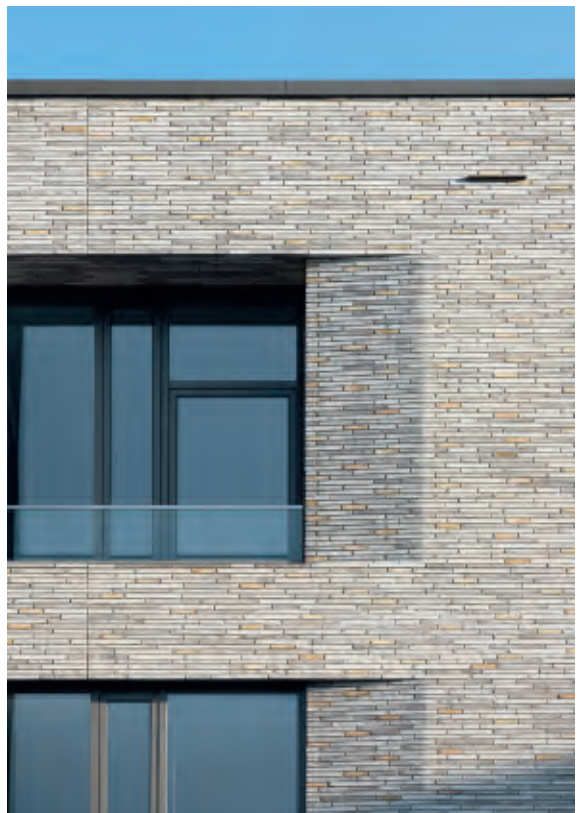
All of the East Campus buildings and the first building on Central Campus were designed by other architectural companies – including Glück + Partner – and are clad in red Kolumba brick. As such, it made sense for Auer Weber to continue the brick theme, which also reflects the site's original industrial buildings.

However, Auer Weber wanted a lighter and brighter look for the façade on their buildings. Along with the founders of the Dieter Schwarz Foundation, the architects made a trip to Denmark to study Petersen Tegl's range of light-coloured bricks. They also assessed how the bricks looked in different weather conditions. For four of the campus buildings, they decided on a mixture of light grey and yellow brick – K11, K91 and D71, respectively – resulting in varied, vibrant surfaces with a rich interplay of colours. In one of the buildings, the brick façade is also drawn indoors, where it acts as cladding for a large wall in the main atrium. The fifth structure, the sole high-rise building on campus, has façades entirely in K11, which brings a luminous, almost crystalline quality to the vast surfaces.

Overall, the natural and balanced colour palette of the tactile brick façades imbues the five large complexes with a sense of warmth and welcome.

Campus Heilbronn, Germany
Initiator & Nonprofit Sponsor: Dieter Schwarz Foundation, Office Heilbronn
Client: Schwarz Immobilienmanagement GmbH & Co.
Architect: Auer Weber Architects BDA, Stuttgart
Landscape architect: Koeber Landschaftsarchitektur GmbH, Stuttgart
Engineer: Schlaich Bergermann Partner, Stuttgart
Completion: 2020
Brick: K11, K91, D71FF
Text: Tina Jørstian, MSc Architecture
Photos: Lukas Roth, Paul Kozlowski

The tightly composed idiom has precise, subtle detailing, such as the oblique recesses at the window bands.



The chosen combination of light grey and yellow is the result of the brickworks' painstaking experimentation with various mixtures, including in different weather conditions.

BRICKWORK THAT BLENDS IN

BRICK LASTS ALMOST INDEFINITELY BUT 400-YEAR-OLD FAÇADES – LIKE THOSE ON CHRISTIAN IV'S BREWHOUSE – MAY NEED THE OCCASIONAL REPAIR. REPLACING BRICKS IS TECHNICALLY EASY, AND MEANS BUILDINGS CAN LIVE ON FOR CENTURIES. THE CHALLENGE IS TO FIND BRICKS WITH A MATCHING FORMAT, COLOUR AND STRUCTURE. FOUR EXAMPLES IN COPENHAGEN ILLUSTRATE THIS POINT.

Text: Ida Præstegaard, MSc Architecture

There is an age difference of up to 200 years between the façades built in 1608 and the sections built after the fires in 1632 and 1767. In the mid-1990s, Petersen Tegl produced new bricks in medieval format for repair purposes.

THE ROUND TOWER

Built by King Christian IV in the heart of Copenhagen between 1637 and 1642, the Round Tower is one of the best-loved buildings in the capital. It originally housed three very different functions: the Church of the Holy Trinity, which was consecrated in 1656, a university library on a mezzanine floor and then an astronomical observatory at the top. Due to light pollution, the observatory moved out in 1861, as did the library.

The Round Tower, which was built to provide access to the observatory and viewing platform, is a 34.8-metre-high cylindrical structure, broken up by lesenes, with the courses alternating between yellow stretchers and red headers in cross bond. To reach the top of the tower, visitors walk up an approximately 210-metre-long, step-free passage that winds around the inside of the tower 7½ times. The Round Tower has a long and colourful history. On one occasion, the visiting Russian Tsar Peter I rode up the winding passage on horseback while his wife, Catherine I, followed in a carriage pulled by four horses.

The brick walls in the winding passage are clad in a limestone layer, the thickness of which varies from 30 cm to 1 metre at different points in the spiral. On top of this are yellow clinkers with lime mortar, many of them the originals.

Since 1987, the old library has been used as an exhibition space. Vibrations from the electric carts that have been transporting materials between floors for more than three decades have caused cracks in the mortar, revealing bricks and leading to damage. Since 1990, Petersen Tegl has custom-made clinkers for regular deliveries to the Round Tower to repair the damage. The bricks are laid in the same kind of hydraulic mortar used in the 17th century, which provides good adhesion and elasticity, and enables the cladding to move with the rest of the building.

A well-travelled doctor, Holger Jacobæus (1650–1701), described the features for which the various parts of Denmark were famous. He wrote that the capital is renowned for snuff and for its buildings – the arsenal, the harbour and of course the "Turris Astronomica" (the Round Tower).

King Christian IV originally built the Brewhouse as part of the city's defences. Later, when it was no longer needed as a fortification, it was converted into a brewery for the armed forces. The façade facing the waterfront reveals traces of the building's various functions over the centuries.

CHRISTIAN IV'S BREWHOUSE

With its expansive roof and big, flame-red medieval brick façades, Christian IV's Brewhouse is one of the most spectacular historic buildings in Copenhagen. Aloof and enigmatic, the approximately 8,000-m2 building overlooks the waterfront and Frederiksholms Canal.

The Brewhouse was originally built as a bastion on Slotsholmen by Christian IV around 1608 to shore up a weak point in the capital's coastal defences. A decade later, the king built and fortified Christianshavn, and the bastion lost its military significance. In 1618, it was transformed into a brewery for the armed forces. After fires ravaged the Brewhouse in 1632 and 1767, it moved to a new site. It was then rebuilt in its current form and served as a warehouse for two centuries, including for the Royal Arsenal Museum. With its angled floor plan, up to 2.5-metre-thick exterior walls and numerous cross vaults and cylinder vaults, the Brewhouse's sturdy, brick-built ground floor clearly resembles a military fortification. The ground floor is one vast room with a timber roof structure that rises to a height of six storeys, built in a style reminiscent of older warehouses.

The architects Fogh & Følner have worked on Christian IV's Brewhouse several times. In 1996, following a survey and a look at design options for the interior, the company undertook repairs to the façades. The brickwork was particularly varied at the time, with an age difference of up to 200 years between the oldest bricks, dating from 1608, and the sections rebuilt after the two fires.

Brickwork repairs easily, even down to the individual brick, so the real challenge was to find one with colours and sizes similar to the originals. Working closely with the architects, Petersen Tegl produced bricks in blue and red clay, measuring 285 x 140 x 85 mm. They are coal-fired at 1,040° Celcius to achieve the varied and rich play of colours in reddish, greenish and yellowish shades found in the medieval originals.

Christian IV's Brewhouse, Copenhagen
Built: 1608–1762
Client: King Christian IV
Repairs to the brickwork on the façade, 1996
Brick: Custom-made red and blue clay bricks in medieval format
Architect: Fogh & Følner
Photos: Anders Sune Berg

The Round Tower was completed in 1642, the Church of the Holy Trinity in 1656.

Since 1990, Petersen Tegl has made bricks from Danish blue clay to repair damage to the paving in the winding passage.

Bricklayer Thomas Watson has maintained the Church of the Holy Trinity and the Round Tower for 30 years.

The Round Tower, Copenhagen
Built: 1637-1642
Client: King Christian IV
Architect: Hans II van Steenwinckel
Continious repair of paving over 30 years
Brick: Brick produced from Danish blue clay
Photos: Anders Sune Berg

In the 17th century, bricks were expensive. The niches in the tower reduced the number needed for the construction.

GRUNDTVIG'S CHURCH

Looking out over Copenhagen from the top of Bispebjerg Bakke, Grundtvig's Church still exudes the same presence and dignity as it did when it was completed in 1940. Architects from all over the world make pilgrimages to this unique and imposing edifice. Designed by engineer and architect Peder Vilhelm Jensen-Klint, the church was built as a memorial to the renowned minister, poet and educator Nikolai Frederik Severin Grundtvig. It took 27 years to build, and Jensen-Klint died a decade before it was consecrated. His son Kaare completed the project.

The design was inspired by the crenellated roofs of medieval Danish village churches, combined with Gothic columns and pointed arches. With an interior length of 76 metres, 22-metre-high vaulted ceilings and a tower reaching 49 metres, the strictly geometric church has a cathedral-like quality.

Its architectural stringency is matched by the choice of materials. In total, around six million light-yellow, hand-moulded bricks were used on the façades and the interior, including the columns and floors. Inside, the bricks are sanded down to create a homogeneous, silky surface that softly reflects the light. The massive brickwork is laid in a Flemish bond, which stops pattern effects from forming on the walls.

In 2005, an underground chapel and service room, built by architects Toyberg-Frandzen, was added to the north side of the monumental church. Petersen Tegl supplied a custom-made clinker measuring 120 x 240 mm for the walls and floors.

In recent years, Bertelsen & Scheving Arkitekter have been tasked with replacing damaged bricks in the façades. In 2018, for example, they replaced covering bricks in the buttresses on the north façade.

"After technical analyses of the bricks, we conducted experiments with clay types and firing. We ended up choosing a German clay that firing endows not only with a golden hue but also shades of green and red, just like the original brick. The bricks were handmade in wooden moulds and then lightly weathered with oxide black mixed with ochre to match the patinated church," explains project architect Rikke-Julie Schaumburg-Müller.

Architects Bertelsen & Scheving worked with Petersen Tegl to find the right clay and firing temperature to match the original bricks.

Grundtvig's Church is a strictly symmetrical, vaulted church with three naves, a tower the same width as the three naves, and a porch to the front.

THE CUSTOMS HOUSE ARCADES

Københavns Toldbod (Copenhagen's Customs House) was the name given to a large area in the north-east of inner Copenhagen in 1630. It was from there that customs officers controlled the seaward approach to the city, and the name stuck for centuries. Heads of state and other dignitaries would also disembark there when they arrived in the capital, including the world-renowned Danish sculptor Bertel Thorvaldsen, who landed there in 1838 after spending 40 years in Rome.

As trade grew in the 18th and 19th centuries, the Customs Service erected a number of buildings in the area, several of which were later demolished. The abandoned warehouses came down in the mid-1970s, when changes in the law meant that goods no longer had to be stored for physical inspection.

From the mid-1850s, access to Nordre Toldbodplads was via a lattice gate, on the pillars of which sit two lions, who are still there. Inside the gate, visitors pass two low arcade buildings, built in 1856 by architect Gustav Friedrich Hetsch. The listed and partially preserved arcades bear witness to a historic era, and are owned by the shipping company A.P. Møller and the urban development company By & Havn. About five years ago, the architectural firm Fogh & Følner was commissioned to restore the brickwork in the arcade pillars as part of the renovation of the southern arcade. Petersen Tegl supplied yellow bricks to replace the damaged ones.

The light bricks are fired from Danish blue clay and laid with a fired, extruded joint, which makes it difficult to distinguish them from the original 165-year-old bricks.

The custom house arcades, Nordre Toldbod
Built: 1856
Architect: Gustav Friedrich Hetsch
Repair of brickwork of piers in 2016
Brick: Customised moulded bricks from Danish blue clay
Architect, restauration: Fogh & Følner
Photos: Anders Sune Berg

A section of the oil painting Toldbodvejen by Peter Ølsted (1860), showing the lions and arcade buildings. From the book: Hundrede år under Dannebrog (100 Years under the Danish Flag), Bo Bramsen, 1983.

In the 19th century, the two stone lions welcomed many distinguished guests to the city.

Around 2010, damaged bricks in the piers were replaced with new ones made of Danish blue clay.

Architecturally, Grundtvig's Church is an oversized paraphrase of the traditional Danish village church. With the exception of the red roof, it is built exclusively of light-yellow bricks.

The bricks in the façades have both greenish and reddish shades, which the replacement bricks had to match perfectly.

Grundtvig's Church, Copenhagen
Built: 1913-1940
Architect: P.V. Jensen-Klint, Kaare Klint
Continious delivering of cover bricks in the buttresses
Brick: Customised moulded bricks from German clay
Architect, restauration: Bertelsen & Scheving
Photos: Anders Sune Berg

Architect Rikke-Julie Schaumburg-Müller of Bertel & Scheving and Erich Mick, head of the team that produces custom products at Petersen Tegl, inspect the brickwork.

The outer façade and its piers are made of brick, while the ceilings on the arcade and the recessed façades are both white- and yellow-washed.

The Southern Arcade and its twin, the Northern Arcade, and Løveporten (the Lions' Gate), mark the beginning of the harbour area. They were designed by architect Gustav Friedrich Hetsch and built in the 1850s.

Broken House,
Wroclaw, Poland
Architect: S3NS Architektura
Best Project of 2020, Archello
Brick: C43, K4
Photo: Maciej Lulko

Haus am Englischen Garten,
Munich, Germany
Architect: Baumstark Bielmeier Architekten with Axel Baudendistel
Fritz Höger Award 2020
Brick: K51
Photo: Florian Holzherr

Three Traction Stations Brabo 2,
Antwerpen, Belgium
Architect: Van Belle & Medina Architects
EUMiesAward 2022, nominee
Brick: D72
Photo: Stijn Bollaert

Z33, House for Contemporary Art,
Hasselt, Belgium
Architect: Francesca Torzo
EUMiesAward 2022, nominee
Premio nazionale di architettura 2020
Rowan Moore's Five best buildings of the year, 2020, The Guardian
Brick: Handmade, rhombus-shaped bricks
Photo: Gion von Albertini

The Rye Apartments, London, England
Architect: Tikari Works
Building of the Year, ArchDaily 2021, nominee
The RIBA London Awards 2021, shortlisted
The Wood Awards 2020
New London Architecture 2020
The Structural Timber Awards 2020
Wood Awards 2020
Brick: C48
Photo: Jack Hobhouse

Stenhöga office building, Stockholm, Sweden
Architect: Tham & Videgård
EUMiesAward 2022, nominee
AIT Award, 2020
Brick: D71
Photo: E:son Lindman

Drayton Green Church, London, England
Architect: Piercy&Company
The RIBA London Awards, 2021 shortlisted
Brick: D38
Photo: Philip Vile

NEW ACCOLADES FOR BRICK BUILDINGS

Johann Jacobs Haus,
Bremen, Germany
Architect: Felgendreher Olfs Köchling Architekten
Fritz Höger Award 2020
Brick: D48
Photo: Rainer Rehfeld

Muslim Wash- and Prayer House,
Hamburg, Germany
Architect: Medine Altiok
EUMiesAward 2022, nominee
Brick: D71
Photo: Jens Franke

Stylepark, extension, Frankfurt am Main, Germany
Architect: NKBAK Architekten
Deutscher Ziegelpreis 2021
Heinze Architekten Award 2020
Wienerberger Brick Award 2020
DAM Preis 2020
Fritz Höger Award 2020
Brick: D46 in three formats
Photo: Thomas Mayer

Amilu farm, Turin, Italy
Architect: F:L Architetti
The Plan Award 2021
Brick: D71
Photo: Beppe Giardino

Pierres Blanches Cultural Center
Saint-Jean-de-Boiseau, France
Architect: Raum
EUMiesAward 2022, nominee
Brick: D71
Photo: Audrey Cerdan

Museum De Lakenhal, Leiden, The Netherlands
Architect: Happel Cornelisse Verhoeven Architecten
EUMiesAward 2022, nominee
Fritz Höger Award 2020
Brick: D190
Photo: Paul Kozlowski

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