

Frederiksbjerg School – Fact Sheet

1.

Details

Location: Aarhus, Denmark

Client: Aarhus City Council

Gross floor area: 15,000 m² = 161,500 ft²

Construction period: 2014 - 2016

Type of assignment: Competition

Architects: Henning Larsen and GPP Arkitekter

Landscape Architect: Møller & Grønborg

Turnkey Contractor: Hoffmann

Engineers: Niras

Sustainability: Building Class 2020 (according to the Danish Building Regulations 2010)

The team at Henning Larsen: Peer Teglgård Jeppesen (Partner-in-Charge), Margrete Grøn (Project Manager), Anders Nielsen, Dorte Nielsen, Eva Bryzek, Eva Ravnborg, Henrik Jacobsen, Peter Munch, Vanda Oliveira, Vanja Scott, Zazia Wihlborg Bigom, Tobias Dræger, Kasper Christiansen, and Glenn Collett Poulsen

Graphic design, wayfinding and signage: Bodil Nordstrøm (Lead Graphic Designer), Andreas Engelbrecht Bünger, and Sebastian Simonsen

Energy and daylight calculations, material strategy: Jakob Strømmand-Andersen, Anne Iversen, Martha Lewis, Erik Folke Holm-Hansson, and Micki Aaen Petersen.

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Vision

Frederiksbjerg School is the first new-built school located in the center of Aarhus, the second largest city in Denmark, in approximately 100 years.

The new school, which also houses a daycare facility and a youth club, is built on the site of former school, Sct. Annagades School. For decades Sct. Annagades School was a well-established gathering place for the local community. This led to a vision of the new school building supporting the old memoir.

The school is dedicated to the youth and children of the local area. It aims to give children as well as adults an ideal environment for unfolding and learning. In the design of the building an architectural focus lies in numerous spatial qualities such as daylight and materials creating an environment which invites learning through movement and sense-perception.

The building follows Aarhus City Council's program for new learning environments in schools and public institutions. The program focuses on a merge between the building's organization and educational practice and purpose, which research proves has immense impact on children's learning.

3. **Design concept**

Frederiksberg School is organized around a center atrium where THE clusters of the building meet and join together. Shared practical rooms, laboratories and learning kitchens are located in connection with the atrium. When you move through the building from the main entrance, you start at the open center atrium through the smaller shared areas to the small class and group rooms in the clusters. This structure is repeated on all three floors.

The daycare, the youngest children and the administration are placed on the ground- and first floors, the middle grades students are on the second floor and the oldest students are on the third floor.

The students and the teachers meet in the atrium which is the vertical open connection between the floors. This targets the ambition to strengthen the visual and physical connection between students and teachers.

The clusters are built around a shared center-room encouraging various activities and study areas. The activity areas are used for that focus on learning through movement and play. These areas are specifically fitted to the different age groups and levels of understanding and motion. The study areas are built as small niches which create quiet rooms for individual study.

The classrooms are located in the clusters of the building and each classroom has its own group room, which can be accessed from both classrooms and from shared areas. The classrooms are arranged so they uphold different learning phases: A staircase utilized as benches, and a projector make up the area intended for presentations and introductions. The tables and chairs can be moved around, thus enabling the students to study in groups or separately. The window sills are made for quiet studies or breakout spaces from where the students can overlook the school's terraces and the surrounding city.

Outside school hours, the classrooms, playing fields and sports halls are open to the public and the local sporting associations.

4. **Context and the surroundings**

The school is placed in the Frederiksbjerg district in the southern part of the central Aarhus. The district is mostly characterized by 4-6 story building blocks in red bricks. In the area around the new school there are many public institutions and activities, e.g. a swimming stadium, a street market and a large playground.

The main entrance is placed on the corner of two historic streets and an cantilever is built in double height with concrete pillars which match the pillars in the atrium. Built along the boulevard is a big, south-facing staircase, often used as benches, which merges the school with the surrounding context.

The school shares public playgrounds and outside areas with the surrounding houses and institutions. The area has an outdoor kitchen, tool sheds, rabbit hutches and a mini mooncar garage.

The outside areas are supplemented by big terraces on each floor which work as both learning and playing areas. On the rooftop you find playing fields and areas with furniture where you can sit, relax and enjoy the view. Some of the terraces can in addition be used as outside workshops for the classes. All the terraces are open for the public outside of school opening hours.

5. **Materials**

The facades are made from recycled bricks. In fact, 20 pct. of the cladding stem from the old Sct. Annagades School. The patinated bricks give the building a contextual relation to the historical surroundings. The brick also tells the stories of former buildings adding a strong identity to the new school. The tactile, red material adds a warm and welcoming expression to the building exterior, which furthermore appears with pillars of concrete, black and anthracite grey surfaces and colored coatings.

Inside the building the colors and materials support the orientation and logistics of the school. Two halls which almost float in the atrium are covered with red and orange acoustic tiles and three big wall paintings wrap themselves around the detached group rooms.

The building appears as a lively and dynamic school where children as well as adults can find identity in the design and in the school as a whole.

6. **Daylight and learning**

Daylight is one of the most important influencing factors in creating a beneficial indoor climate. Variety in light intensity, colors and movement are key to the spatial experience.

The design of Frederiksbjerg School focuses on daylight as an ever-changing light source. In the design of the building the sizes of the windows have been graded, being largest in the center of the façade, smaller in the top by the roof and smallest near the ground. The pattern of the window creates a natural diversity in the experience of the daylight in the new building. Similar facade concepts have successfully been used in other educational buildings designed by Henning Larsen.

The large windows in the center of the façade create views to the open areas, the smaller windows at the top of the façade let the daylight shine far into the building and the lowest placed windows invite children to sit and read or play in the sills.

To prevent overheating and blinding there has been installed a discreet solar blinding on all the windows.

Starting in January, Frederiksbjerg School will function as a laboratory for studies in the correlation of daylight and artificial light and their significance in a new learning environment. This project is conducted by Henning Larsen Architect's sustainability department working with the Technical University of Denmark, University of Copenhagen, Aarhus University and the Danish Building Research Institute.

7. **Art**

During the building of the new school, 17 works of art have been created. These art pieces involve sculptures, figurative pieces and arts of installation executed by two Danish artists.

In the entrance, the Danish artist Grethe Sørensen has created an installation of tilting concrete pillars integrated with LED lighting. For the café, Grethe has woven a giant goblin depicted from images from certain demonstrations in New York.

Another Danish artist, Rose Eken, has painted big wall paintings, which bend around group rooms in the atrium. Additionally, she has created five painted bronze figures, which resemble the school's design. Rose Eken has also developed three small optical boxes and four showcases with miniature tableaus portraying a child birthday and the artist's own atelier among others.

8. Graphic design, wayfinding and signage

The graphic design concept has been developed in line with the architectural intention. Graphic designers at Henning Larsen have created the visual identity of the building with the keywords openness, kindness, motion, diversity, play, and learning as a common objective.

The typography, Deyinyl, is the initial key for the remaining parts of all graphics and signs, repeated both in- and outdoors.

The typeface exists in seven selections, with their own unique definition, creating a distinct and clear geometrical expression throughout the building.

By varying all seven typographic selections, the designers have created an expression which is both playful, dynamic and fluid. The colors correspond with the additional elements in the new building, where the color red acts as the primary color. The graphics also supports the main maps, maps of orientation, floorplans and glass markings, lockers and signs on meeting rooms and facades.

Quotes and inspirational words, adapted to the specific course and age level, are likewise implemented on classroom walls and glass. Here the graphics underline and clarify the spatial traits of the different rooms, while communicating academic useful information equal for students and teachers.

9. Background

The final decision of building a new school in central Aarhus, was made by Aarhus City Council in march 2011.

Frederiksbjerg School houses approximately 900 students from former N.J Fjordsgade School, Frederiksbjerg Youth Club and Frederiksbjerg Day Care. The school and its surroundings are open to public year-round.

In January 2013, Henning Larsen, in collaboration with the Aarhus based office, GPP Architects and contractor Hoffmann, won the proposal for Frederiksbjerg School. Additionally, four other joint ventures partook in the competition.

10. Henning Larsen

Henning Larsen's experience with school projects reaches back to when the office was first founded. In 1960, Henning Larsen won the proposal for the Klostermark School in

Roskilde, becoming the first school in a series of school and educational proposals in the time to come.

To name a few, Henning Larsen have completed designs of many other projects such as Roskilde University Center, Copenhagen Business School, Copenhagen IT University, University of Southern Denmark - Campus Kolding, City Campus Aalborg, and Frederiksberg High School.

In addition, Henning Larsen has designed kindergartens and integrated daycare facilities in Valby and Holbæk in the Copenhagen area.

Internationally, the office has excelled in the sector of Education making designs for e.g. Jättå Vocational School in Stavanger, Norway, Umeå School of Architecture, Sweden, Frankfurt School of Finance & Management in Germany, Queensland University of Technology in Australia, The French International School in Hong Kong and most recently the University of Cincinnati's College of Business in USA.

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