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Sågbäcksgymnasiet

VELUX Modular Skylights helped to rejuvenate a classic 1960s vocational school

Bringing light to life™



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A school to be proud of

Rebuilding a school's character with plenty of daylight

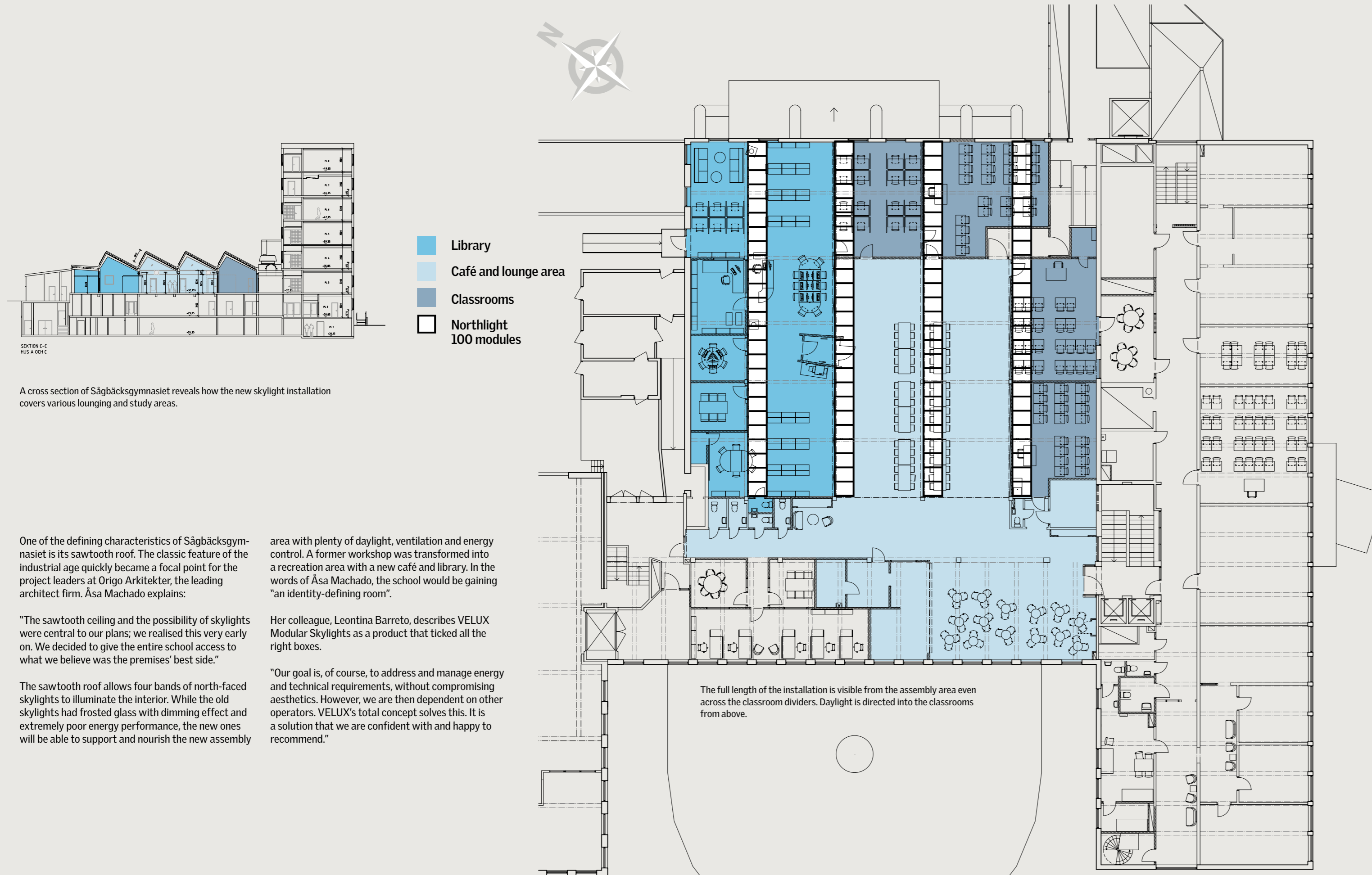
In 2012 local authorities ended more than 10 years of talks by adopting a plan to refurbish the old vocational school in Huddinge. The school, which was originally built in 1961 as part of the south development plan of Stockholm, represented classic 60s architecture and was of good quality. Still, fifty years of wear and tear had left its mark, and when the refurbishment plans were finally agreed upon they included the replacement of more than a 100 old skylights with 104 VELUX Modular Skylights in a northlight configuration. Today Sågbäcksgymnasiet has re-emerged as a genuine 21st century vocational school, leaving the students as well as the project participants with a distinctive sense of pride.



VELUX
Modular Skylights
VELUX Modular Skylights

Sågbäcksgymnasiet
Huddinge, Sweden

The Project
The Project



A cross section of Sägbacksgymnasiet reveals how the new skylight installation covers various lounging and study areas.

One of the defining characteristics of Sägbacksgymnasiet is its sawtooth roof. The classic feature of the industrial age quickly became a focal point for the project leaders at Origo Arkitekter, the leading architect firm. Åsa Machado explains:

"The sawtooth ceiling and the possibility of skylights were central to our plans; we realised this very early on. We decided to give the entire school access to what we believe was the premises' best side."

The sawtooth roof allows four bands of north-faced skylights to illuminate the interior. While the old skylights had frosted glass with dimming effect and extremely poor energy performance, the new ones will be able to support and nourish the new assembly

area with plenty of daylight, ventilation and energy control. A former workshop was transformed into a recreation area with a new café and library. In the words of Åsa Machado, the school would be gaining "an identity-defining room".

Her colleague, Leontina Barreto, describes VELUX Modular Skylights as a product that ticked all the right boxes.

"Our goal is, of course, to address and manage energy and technical requirements, without compromising aesthetics. However, we are then dependent on other operators. VELUX's total concept solves this. It is a solution that we are confident with and happy to recommend."

Northlight created the right setting for a new assembly area

The existing sawtooth roof was ideal for a northlight installation



Åsa Machado (left) and Leontina Barreto of Origo Arkitekter were put in charge of the project by the building owners, Høge Fastigheter AB.

"Through its overall concept, i.e. making sure all needs are attended to, VELUX has turned this into an opportunity. It is a solution that we are confident with and happy to recommend.

Leontina Barreto, architect



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The Solution
The Solution



Systematically organised – to the smallest detail

Installing a complete system made installation simple and fast



Harri Puolakka from HMP Entreprenad is pleased with the systematic approach of the VELUX Modular Skylights concept.

“ My perception of VELUX is that the company is constantly researching and developing its products. That delivers results.

Harri Puolakka
HMP Entreprenad

Project phases, participants and materials

The planning phase

- Planning began in 2011
- The installation started November 5, 2012 and was completed November 19, 2012

The participants

- The construction group included Origo Arkitekter, Temacus AB as contractor, HMP Entreprenad as installer and the building owners, Huges Fastigheter AB
- Leading the project was Ása Machado and Leontina Barreto of Origo Arkitekter
- The installation was led by Harri Poulakka of HMP Entreprenad

The product solution

- 4 rows of VELUX Modular Skylights in northlight configuration
- 89 fixed modules of 900 mm x 1700 mm
- 8 fixed modules of 597 mm x 1700 mm
- 7 venting modules of 900 mm x 1700 mm
- 62° roof pitch

Harri Puolakka has managed several VELUX Modular Skylights installations over the past few months and when talking about the new system, he still feels the excitement. “The VELUX system is fantastically well thought out”, he says, explaining how everything from the labelling on the pallets to the mounting brackets makes the entire installation process easy and trouble-free: “It is so systematically organised; to the smallest detail.”

Harri Puolakka and his crew used 14 days to install the 104 modular skylights, and as routine set in the process just kept getting faster and faster. “It is important to me that it is a complete system. Other

occupational categories need not be involved in order to complete the job. This simplifies and shortens the working time.”

With no real issues for concern, Harri Poulakka has time to reflect on the new systems innovative properties, and he likes the way design and energy performance has been integrated.

“With VMS, we now have a skylight with advanced technology and really good energy values. Moreover, the solution is stylish. I’ve seen other solutions on the market, but my understanding is that they are bulkier, more complicated and less efficient.”

A quality school with a bright new learning environment

Leading a vocational school, you need to invest in your students

Principal Hans Almgren describes the school as "a solid building in classic modernist style", and he is glad the refurbishment plan was able to maintain the look and feel of the original architecture: "They have managed to preserve something that is part of the school's soul - the 60s quality", he says.

The principal is especially pleased the way the new central area with its dominating sawtooth ceiling performs, reinventing the original aesthetics of the building and taking full advantage of the ceiling's potential.

"The skylight was key to the positive change. The architects always strived to open the building up, let

in light and create visual depth. We have no dead corners, and no dark corners."

Hans Almgren is well aware of the importance of creating a learning environment that is both inspiring and dignifying. A vocational school is always at risk of being regarded as a second-rate choice, he admits, and that is why the setting is so important.

"It is probably true that vocational training is not highly regarded, but we want to be the best in our sector. Our students are important and we want them to enjoy a nice and agreeable environment. This affects their confidence and their willingness to study."



According to school principal, Hans Almgren, the new VELUX solution has helped to restore the schools character and dignity.

"Now you can see the sky and keep an eye on the weather. The light also gives you an idea of what time of day it is."

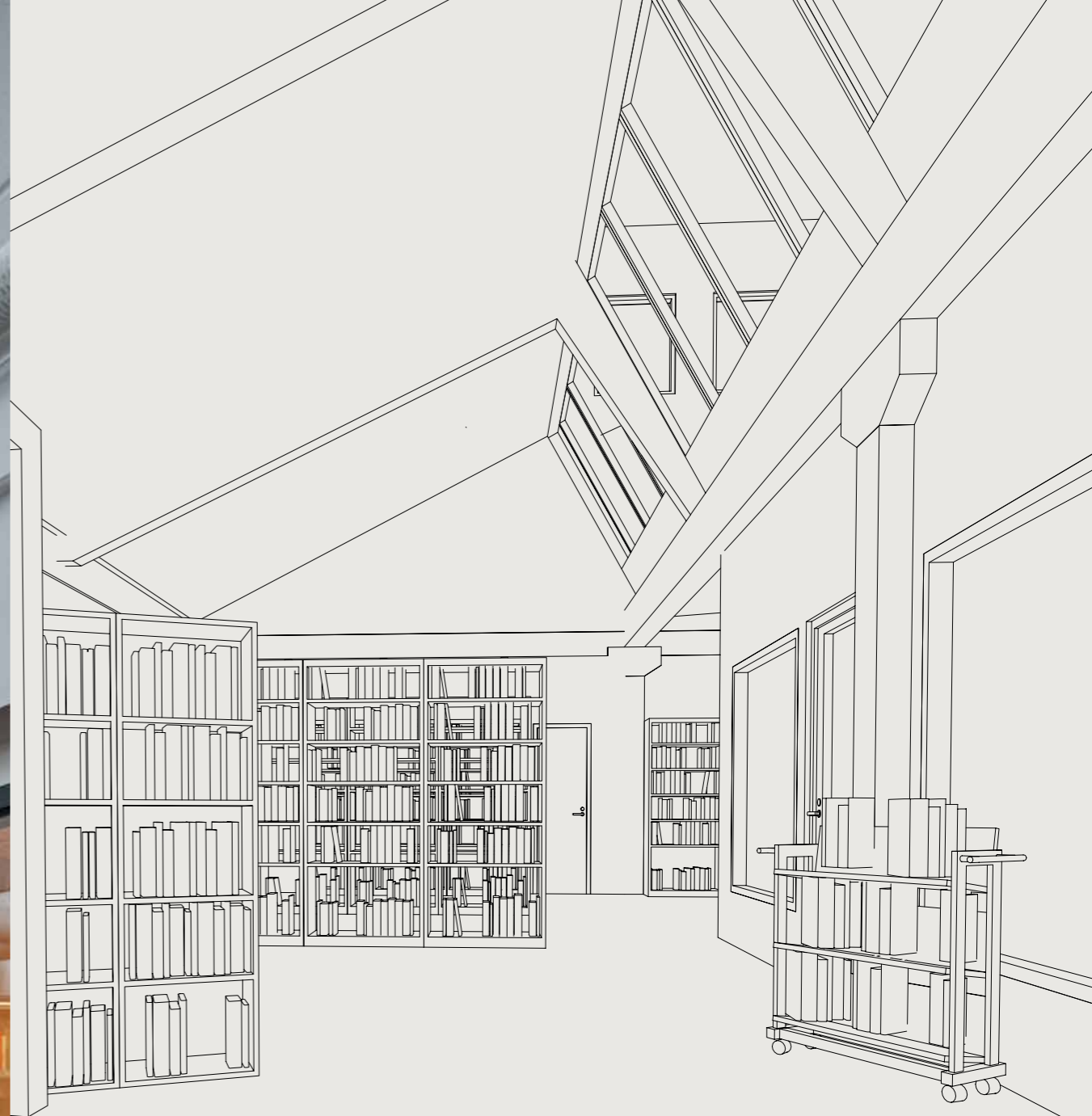
Hans Almgren, principal





“ Mutual respect grows in a worthy environment. The school is an important place and people do not only study for their own sake. Many people’s futures are decided here.

Maggan Bladh, café manager



Working in daylight

Activity increases in a bright and spacious environment

Inside the building, the change is significant. While the old brown wire glass of the previous skylights left the interior murky at best, the new flow of daylight has transformed the environment entirely, triggering a notable rise in student activity.

Schoolteacher Eva Källen has witnessed, how the students in a short time have grown in their new environment: “A school with self-esteem gives students a sense of pride and identity. And now our students are proud”, she says.

“Along with the colour scheme and the materials used, the light flow feels so well thought-out. It’s very positive.”

Maggan Bladh manages the school café. She is delighted that the café has changed location and now sits right in front of the bright and spacious central square.

“The café was previously in the basement, but we have now moved up two floors. It has become so much brighter and everything is new and fresh. The nice daylight has made everything lighter and happier. A lot of the Café’s equipment is new. But the big difference is working in daylight.”



“ The light gives energy. The students don't really believe that, but it really does.”

Eva Källén, teacher

“ During the work, we experienced new technology and new ideas regarding ventilation and skylights, which we hope to use in future projects.”

Leontina Barreto, architect