

SYNTRA WEST KASTEEL 'T HOGE KORTRIJK

Kortrijk

Construction of a new school building & modifications to utility lines

Status
2021 - 2024

Services:
Building Services

Sectors:
Care & education: Education

Client:
Kasteel 't Hooge NV

Architect:
BV GDB-ARCHITECTEN

Area:
4585 m²

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Building Program

The building for Syntra West connects to the already existing site in Kortrijk and is a supplement for Syntra West to meet the growing demand for technical training programs. This building was erected to accommodate several specific training programs. It comprises several training rooms distributed over 3 floors of approximately 1200m² each.

On the ground floor, there is 1 large multifunctional space with lesson boxes. The surrounding area is equipped with training materials that can be used for various disciplines.

Future-proofing

The building for Syntra West is designed with a keen eye for budget control and energy efficiency. By choosing a natural gas heating boiler with low-temperature operation, in combination with PV panels, a cost-effective solution was realized that simultaneously meets the EPB requirements regarding renewable energy. The heating strategy is tailored to the varying heat demand, particularly for training programs such as beauty care, thereby avoiding oversizing. The refined heat loss calculation formed the basis for an optimized installation, resulting in lower operating costs and a future-oriented energy performance.

Integration of Technical Systems

The technical installations are integrated with a focus on flexibility and efficiency. The rooms are uniformly equipped and can be quickly adapted to different training formats, which increases the occupancy rate and reduces the cost per square meter. The ventilation is demand-controlled and tailored to occupancy, with attention to Indoor Air Quality (IAQ). This guarantees a healthy indoor climate without energy waste. The expansion of the high-voltage cabin and the installation of a structured cable network provide a robust technical infrastructure that is easily scalable. This also makes a later integration of heat pumps possible.

Visual Comfort

The building offers a comfortable learning environment with attention to daylight control and visual tranquility. The classrooms are uniformly and neutrally designed, which not only increases flexibility but also promotes visual comfort. Thanks to daylight admission and automatic control of sun shading, overheating is avoided and energy consumption remains low. The ventilation and heating are tuned to low-temperature regimes, ensuring a pleasant and even heat distribution without disturbing elements in the field of vision. The EPB verification based on detailed heat loss calculations guarantees that the building meets the strictest standards regarding comfort and energy.

Broad Use

The building is designed for multifunctional and rapidly changing use. The large space on the ground floor is flexibly deployable thanks to the modular lesson boxes and the setup with training materials for various disciplines. The upper floors accommodate 12 uniform classrooms each that are easily reconfigurable. This approach makes the building suitable for a wide range of training programs, where the infrastructure can quickly respond to changing needs. The technical choices – such as low-temperature heating, demand-controlled ventilation, and a refined EPB approach – contribute to a building that is not only broadly deployable but also sustainable and cost-efficient.

Timing

Preliminary design: 08/2021
Final design: 04/06 - 2022
Execution period: 10/2022 – 06/2024
Provisional delivery: 06/2024

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Budgets:

- Preliminary design estimate: € 1,795,629
- Contract award: € 1,811,420
  - *HVAC: € 757,724
  - *SAN: € 238,379
  - *ELEC: € 756,587
  - *Elevator: € 58,730

- Additional works technical systems: +/- € 75,000

Building Partners

- Architect: Gino Debruyne
- Engineering firm: BM Engineering
- HVACSAN: Deneckere
- Electricity: electro gevaert
- Structural work: Himpe
- Building owner: Syntra

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