DE PLEINSCHOOL

Kortrijk

Complete renovation of existing school building

Status
2012 - 2018

Services:
Building Services

Sectors:
Care & education: Education

Client:
DPSA

Architect:
AVDK aRCHITECten

Area:
6000 m²

BM ENGINEERING GROUP

General

The project was architecturally designed by AVDK and started in 2012, with provisional completion in the fall of 2018. The long duration was due to subsidies for new construction and renovation of schools being released in phases. However, the advantage was that special techniques continued to evolve in the meantime, allowing for the most optimal solution to be chosen in each phase.

The school board's choice for a holistic approach, involving various partners, contributed to the high-quality end result. The focus was on balancing historical value with the integration of the latest techniques. This provides both an optimal environment for teaching and a pleasant and stimulating setting for learning. The success of this approach is already visible in increasing student numbers, but will of course also yield benefits in terms of budget due to the energy-related interventions.

Dividing the campus

Various buildings are located on the campus - a primary and secondary school, a cultural center, a historic chapel, refectories, and sports halls - all assigned to different users. In the first phase, the historically intertwined technical installations were disconnected so that the different entities could function independently of each other and certain parts could be sold.

Reducing energy demand and avoiding overheating

Then, for the secondary school buildings, we examined which measures were needed to increase sustainability based on the principles of the Trias Energetica. To limit energy demand, the thermal insulation of the building envelope was first strengthened.

Afterwards, the physical properties of the buildings, which are generously sized for the contemporary school function, were cleverly utilized. The school corridors are not heated but used as thermal buffers between the classrooms and the outdoor environment.

Local radiant heat ensures that the classrooms are comfortably warm in winter. By maintaining the high ceilings of the classrooms, overheating in summer - a problem in many renovated school buildings - is also counteracted.

Due to this vision, the thermal capacity of the new HVAC installation is 33 percent lower than the previous one, which will result in significant savings. With an eye to the future, it is also provided that the installation can be connected to a potential district heating network.

Electricity and lighting also up-to-date

In a second and third phase of the project, the basic electricity and lighting were completely renewed, respectively. Here too, the long duration of the project played to the advantage of the client. The final implementation of the lighting is indeed incomparable to the original plans, due to the rapid evolution in the lighting world. With all these interventions, the Pleinschool is not only didactically, but also energetically and in terms of user comfort completely ready for the future!

BM ENGINEERING GROUP