

Sports Architecture and Wood Structures

L'architecture sportive et les structures en bois

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Sport Architektur und Holzstrukturen

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Figure 1: Our team in the Sportshall Nieuw Zuilen Utrecht.

1. Introduction

Slangen+Koenis Architecten (S+K) is an architecture firm that consists of a permanent team of 18 employees, this team contains a healthy mix of experienced and young design talent. The company was founded in 1985. Our special attention goes towards a certain chemistry in the relationship with our client. The aspiration is to establish a degree of trust, wherein the client feels free and confident to leave it in the hands of the architect, after which the architect will fully live up to the expectations. It is our strong belief that every good project needs a good and above all involved client, as an architect you have a direct influence in this. Every project provides, within a certain framework, an opportunity to create good architecture as long as your focus as a company is aimed at this aspect. If you are always willing, as an architecture company at the beginning of a process, to keep an open mind and familiarise yourself with the required knowledge you can tackle the project head-on.

This mentality has time and time again resulted in groundbreaking designs. Our goal is to work with everyday enthusiastic clients and users. We want to make extraordinary projects for a normal budget and we want to add something special, something of ours, into every single project. The well-balanced process to create a good building in harmony is for us just as important as the building itself.



Figure 2: Sportshall Hardinxveld-Giessendam.

2. Specialised in sports

Sport is what we do, it has been our specialty for 25 years. We know the rules and technical standards for most sports by heart and work with them everyday. We have designed sports complexes ranging from purely professional sport at Olympic level to recreational sports and leisure. Often this range is combined into one building, so we are used to working together with professional athletes and their trainers, but we also focus on multifunctional use and continuous innovation in leisure concepts with a high attraction value to a broad range of users. Multi-use sport complexes, composed of swimming pools, sports halls and other public facilities like a medical center, a child day care and a library, have given us the experience to design for multiple users all with their own wishes and demands. Our buildings are aimed at an optimal sports atmosphere, but also facilitating the opportunity for people to meet and get into contact with sports.



Figure 3: Pool and outdoor sports facility 'De Geusselt'.

2.1. Sustainability and durability

Our firm is focused on making our projects as sustainable as possible. We are a partner of the Dutch Green Building Council and have in-house BREEAM experts.

We are extremely proud of our swimming pool project "De Geusselt" in Maastricht (The Netherlands). The project is an absolute pioneer in the field of sustainability since it is Carbon neutral, extremely energy efficient, All- Electric (no gas connection), Cradle-2-Cradle and the first swimming pool in The Netherlands with a BREEAM certificate.

On a European scale Maastricht is being used to set the standard for sustainable pool projects through a so-called BREEAM-bespoke certificate, in which assessment tools for pools are developed by a team of experts. Next to the rather contemporary theme of sustainability, our office is always focused on making very durable buildings. Pools and sports facilities are often heavily used and so it is very important to materialise them in a way that lets them age in a charming way. It happens once too often that materialisation experiments, supporting an architectural concept, turn out to be wrong for these kinds of buildings, giving them a worn and tired look too early in the lifecycle. Maintenance can become a heavy burden on the yearly balance.

Within our office sustainability is a central theme in all our design processes. The level of sustainable design is often determined by the ambition of the client, because of this we always start our design process with a couple of workshops to determine the ambition of the client. The focus of these sessions are;

1. energy and water efficiency
2. carbon neutral possibilities
3. cradle-2-cradle
4. quality of interior environment (daylight, acoustics, etc)

The translation of these ambitions into concrete, measurable design options by our firm form the base for our design decisions. The government has, in our opinion, together with us as architect the responsibility to act as an example and both parties need to utilise their ambition and creativity to find the best possible sustainability solution for each project.



Figure 4: Multiple sportcomplex 'IISPA' Almelo.

2.2. Innovation and quality standards

Being specialised in sport architecture you get the chance to always learn from your mistakes and keep making your projects better and more durable. Slangen+Koenis is an ISO 9001:2008 certified architectural firm and has several employees with the BREEAM expert certification. To stay ahead in our specialisation we are always striving for innovation. These innovations are on the level of building systems, building products and specific (sport or pool-) equipment. For example custom 3D facade tiling, new product lines for changing cubicles, the development of a water play table and lots more. But also by initiating and developing total pool concepts like the 2521 swimming pool concept in collaboration with the Royal Dutch Swimming Federation.

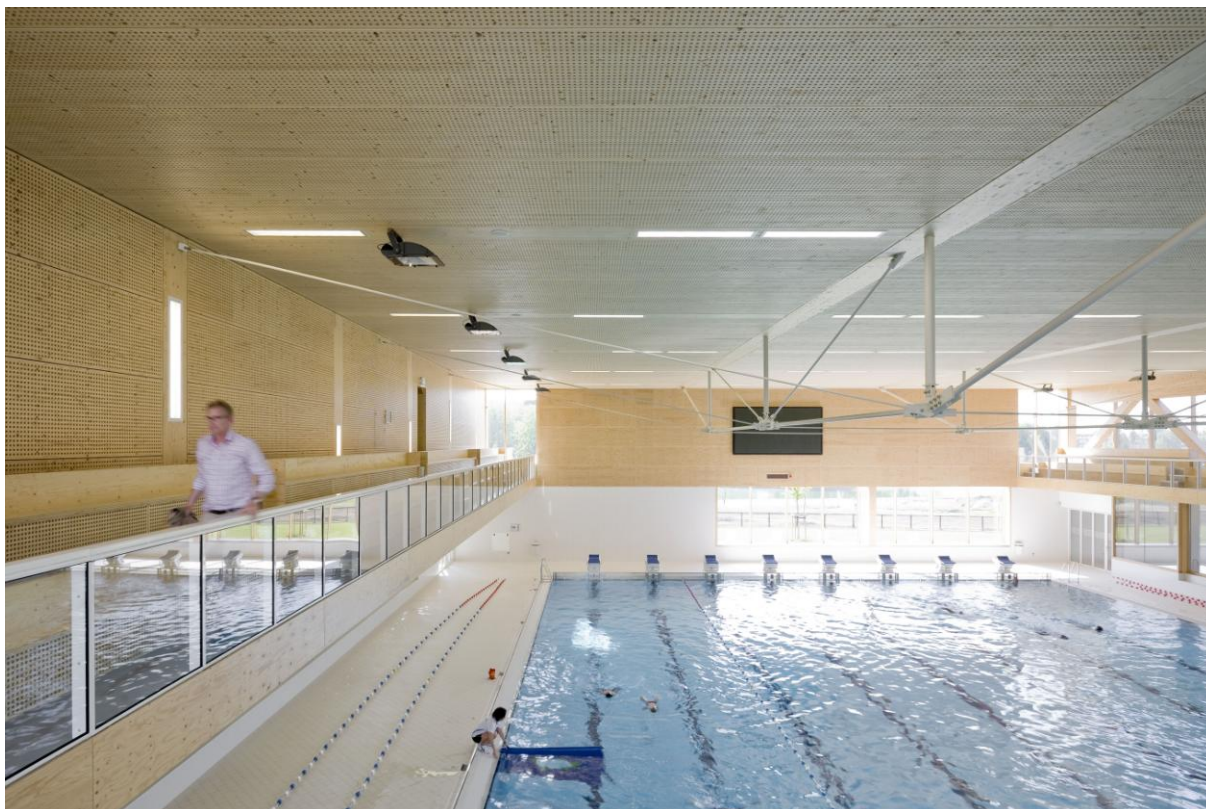


Figure 5: Pool and outdoor sports facility 'De Geusselt'.

2.3. Sports architecture and Wood construction

In a continues search for new solutions we found wood to be a building material which gives us a complete new range of applications in sports buildings. Solving acoustic demands for Sports halls, integrating big spans with relatively light constructions and introducing an environmentally friendly alternative as a main building material with higher insulating qualities for pools.

Over the course of years of designing projects we started using wood as indoor paneling in sport halls to ensure injury free spaces for athletes, finding solutions with perforations for reverberation in construction wide paneling. From the experience of this relatively elementary use of wood we expanded our knowledge by using light weight acoustic wooden roof elements to ending up doing completely wooden passive house structured pool projects.