



agence Engasser + associés

The House Sports in Bezons

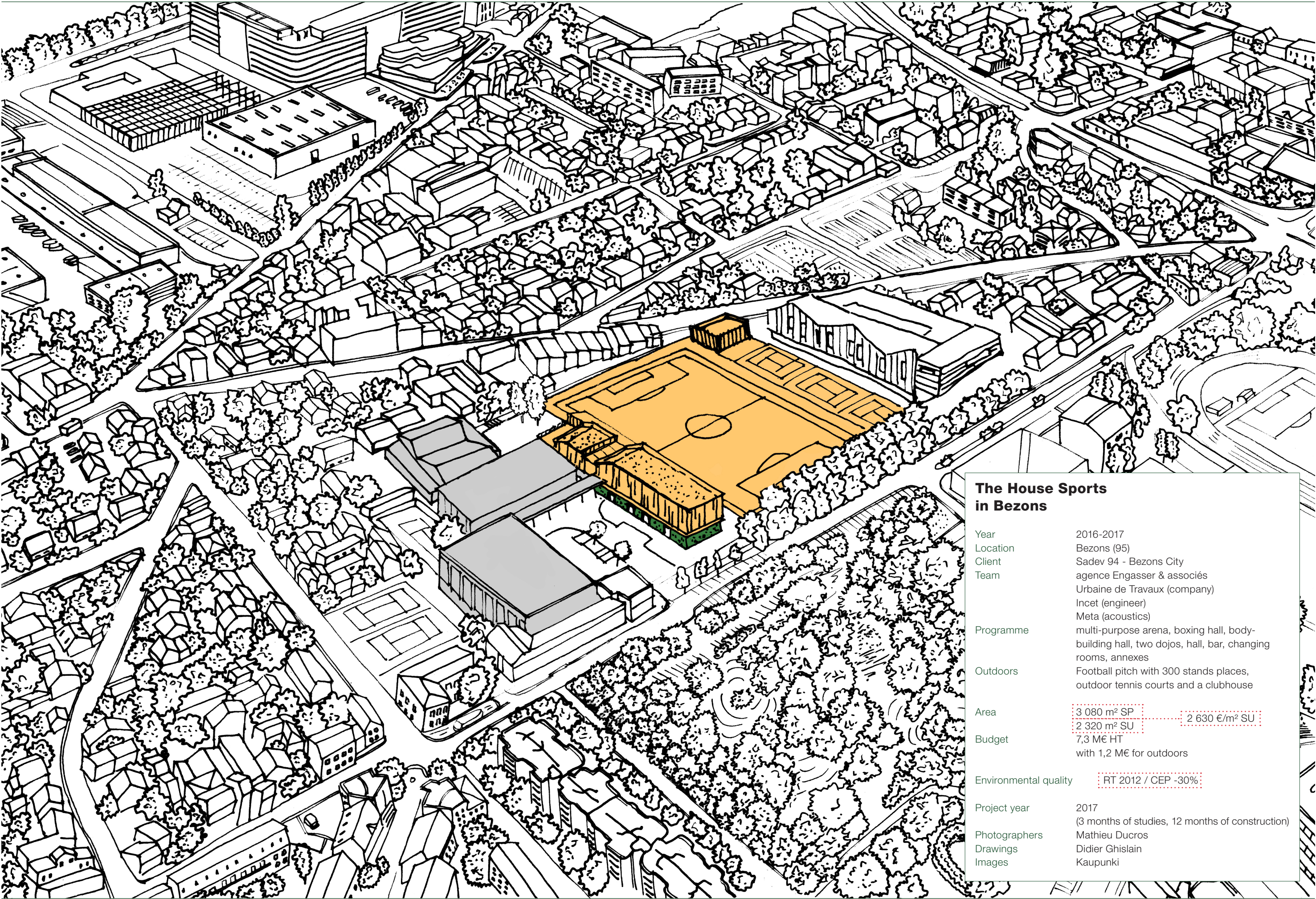
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**The House Sports
in Bezons**

Year	2016-2017	
Location	Bezons (95)	
Client	Sadev 94 - Bezons City	
Team	agence Engasser & associés Urbaine de Travaux (company) Incet (engineer) Meta (acoustics)	
Programme	multi-purpose arena, boxing hall, body- building hall, two dojos, hall, bar, changing rooms, annexes	
Outdoors	Football pitch with 300 stands places, outdoor tennis courts and a clubhouse	
Area	3 080 m² SP 2 320 m² SU	2 630 €/m² SU
Budget	7,3 M€ HT with 1,2 M€ for outdoors	
Environmental quality	RT 2012 / CEP -30%	
Project year	2017 (3 months of studies, 12 months of construction)	
Photographers	Mathieu Ducros	
Drawings	Didier Ghislain	
Images	Kaupunki	

Incorporating into an already existing urban setting



The entrance hall is a veritable dispatching point connecting the centre's various facilities with the gymnasium on the left, the swimming pool across the way and the new building on the right.



A link between all of the centre's facilities

How to fit into a site at the heart of an overall restructuring project on a city-wide scale and design an extension on an already very crowded plot of land?

As one consistent entity, the Sports Centre pulls together a large number of elements from different briefs, i.e. an already-existing gymnasium, swimming pool and indoor tennis courts with the creation of a multi-purpose arena, a boxing hall, a body-building hall, two dojos, a football pitch with stands, outdoor tennis courts and a clubhouse.

The new building fits in as a unique wing to the west of the existing L-shaped buildings, unifying the whole in a U configuration.

This creates an inner courtyard, a genuine place to breathe between buildings and a generator of light that unifies all access points.

The project is comprised of the three following strong elements:

- An entrance hall serving as the connecting point between the sport facilities; this entrance hall is highlighted by a broad horizontal line in continuity with the new building so as the have all the buildings revolve around each other and unify the two halls leading to the sport facilities
- A green base like a vegetal hedge that breaks up and lightens the building as a continuation of Bettencourt Park
- A two-floor hanging timber building that contains the sport halls and stands on the green base like lantern.



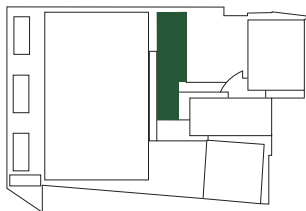
1. Entrance
2. Sports halls
3. Gymnasium
4. Swimming-pool
5. Indoor and outdoor tennis courts
6. Clubhouse
7. Football pitch
8. Stands
9. Bar
10. Solarium

The two upper floors of the entirely
timbered Sport Centre contrast with the
building's landscaped base.

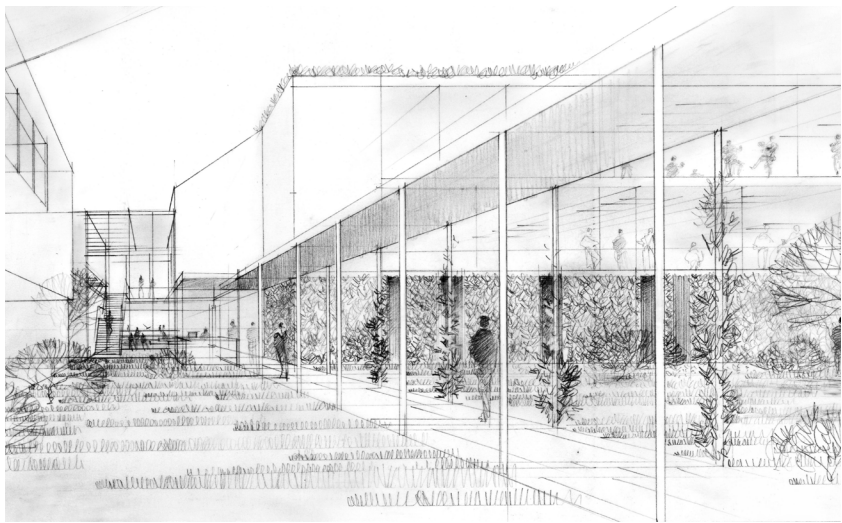


The House Sports

A green base, extension of the park



The new building is located in the extension to the park that occupies the north portion of the plot. Like an extension of this park, the ground floor is composed of an anti-graffiti glazed concrete facade doubled by a hedge of climbing plants, 50 cm thick at a height that corresponds to that of the entrance hall. This green base divides the building in two and lightens it. Composed of plants requiring little maintenance, it isn't a plant wall but a hedge growing from the ground. The non-invasive creepers grow up the trellises to the first floor without causing harm to the building in front of which they stand.



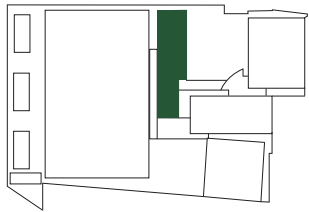
A play of contrasts and materials



The textured concrete base of the west facade, highlights the stands and extends towards the swimming pool's sun deck.

A hanging timber centre

The wooden centre stands on the green base, two constituent floors of the building (reception, offices and sports rooms) totally clad in timber. The facades are livened up by large timber spines that give rhythm to the cladding's shadows and extra thickness. They are generously glassed on the two best orientations favourable for practicing sport, i.e. the north and northeast, allowing athletes to enjoy a bright, open atmosphere that gives onto the park.



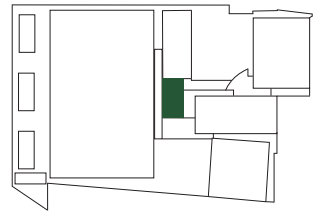


The entrance hall is drenched in natural light through its three-sided orientation and its double height. It gives access to the sport halls, the bar and the stands.

The double-height glass entrance hall



AN OPEN, BRIGHT RECEPTION AREA



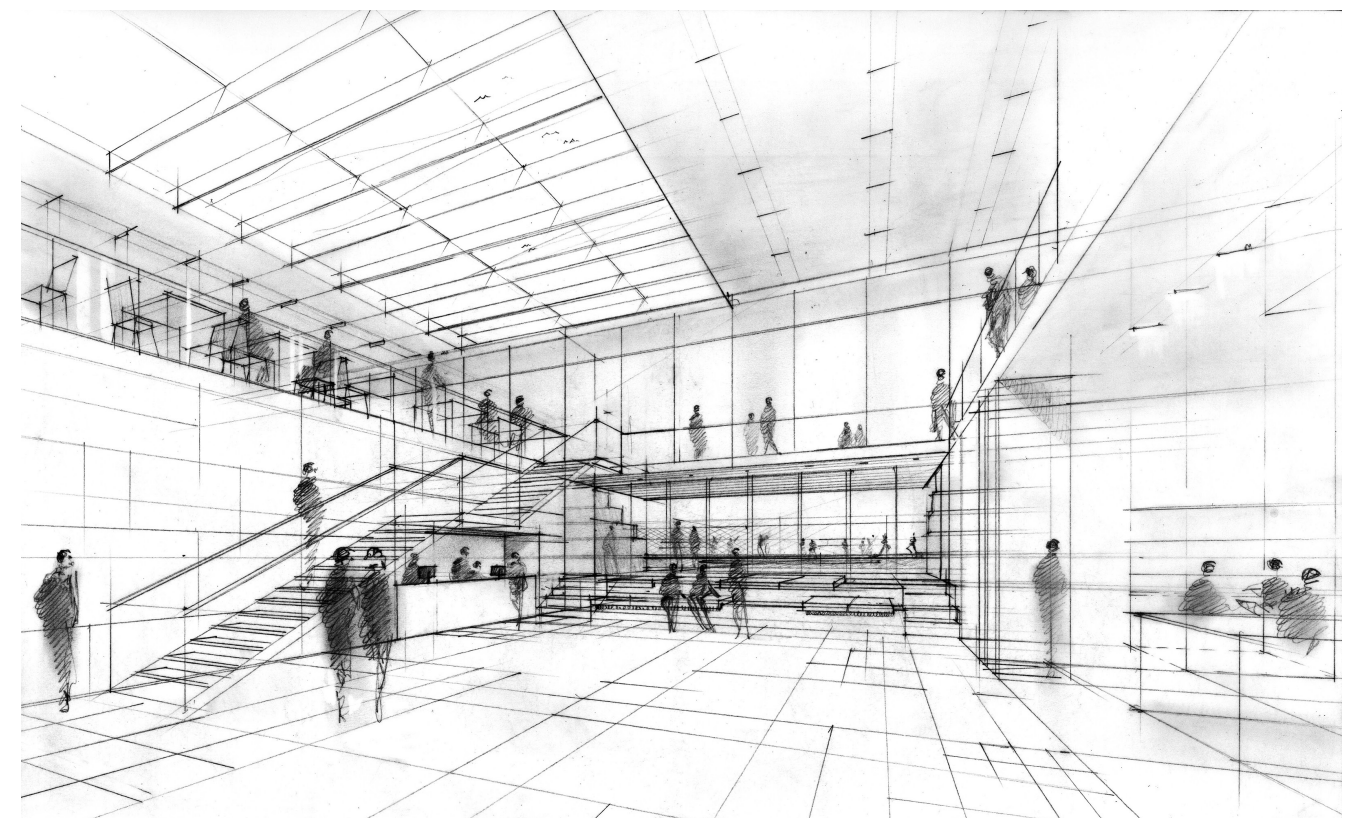
With its generously glassed-in facade and roof, the central entrance hall lets in natural light to the core of the Sport Centre. Being walk-through, it offers an uninterrupted view of the football pitch, and its double height (nearly 8m) creates an immediate rapport with the bar on the first floor. The caretaker's lodge, located very near the entrance, and a wide reception desk in the hall make it possible to monitor the access points and guide visitors.

On the ground floor the hall gives access to the body-building room, toilets, offices and premises for sport associations. With the lift and central staircase it links all the sport rooms located on the upper floors.

The reception, cafeteria and bar areas at the core of this atrium are organised directly with 3 briefs for the sale of drinks and snacks via a counter and three-directional glass partitions:

- towards the hall on the mezzanine
- towards the stands of the football pitch
- towards the terrace, an extension of the swimming pool's sun deck.

The stands are arranged so as to allow a wide, same-level platform with the bar, making it possible to watch matches with a panoramic view from inside.

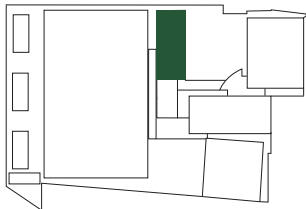


The two-directional (north/northeast)
multi-purpose hall provides athletes
with soft, homogenous light.

The great multi-purpose hall



A unique orientation installing warmth in the sports hall

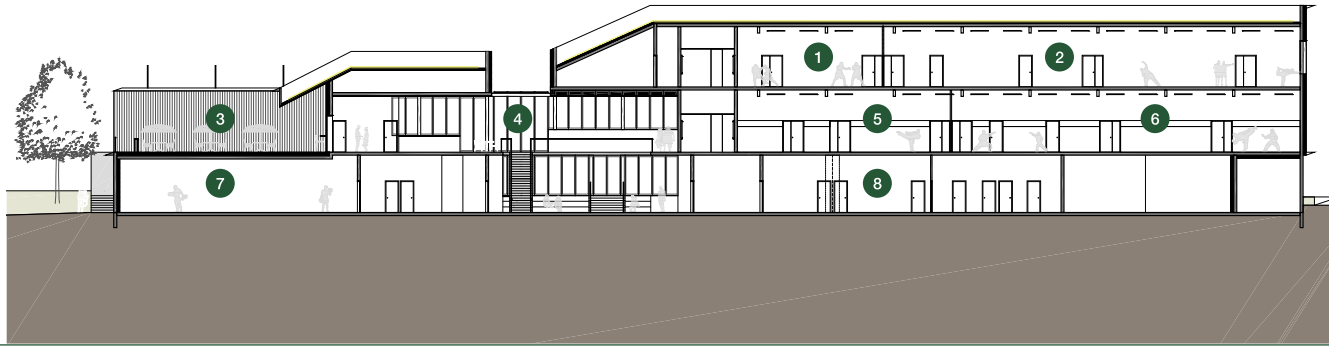


Located on the first and second floors, the sport halls all enjoy north and north-east exposure for a soft, homogenous light. The dojos are lined with cushioned walls. The other halls are lined with head-high acoustic panels.

The halls are built with pre-poured concrete slabs providing the sport areas with handsome volumes without intervening pillars. The ceilings are off-set, enabling the insertion of light fixtures and acoustic panels between the slabs. Each hall has two exits and areas for changing rooms and storage space.

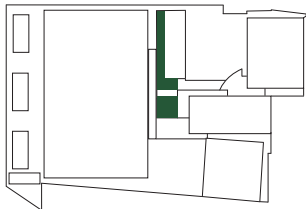


- 1. Boxing
- 2. Gym hall
- 3. Solarium
- 4. Hall, reception area
- 5. Small Dojo
- 6. Main Dojo
- 7. Bodybuilding
- 8. USOB offices





Generous, pleasant space in the annexes



The changing rooms located on all floors of the Sports Centre are walk-through and adhere to the street-shoe/sport-shoe concept, i.e. people enter the changing rooms with dirty shoes and emerge in the sport halls with clean shoes. The changing rooms are often grouped by two to limit the need for service ducts and to pool the wet areas (showers, toilets, etc.).

The hallway leading to the sport halls is also located on the facade side, giving rise to well-lit, friendly foot traffic and a panoramic view of the outdoor sport fixtures.

The body-building gym has direct access to the entrance hall and is wide open to the outside. It has a glass wall onto a small patio created along the swimming pool facade by a hedge that reproduces the base-principle of the Sports Centre. It forms a kind of landscape in front of the body-building room.



The football pitch and the stands



The location of the football pitch is the brief's largest element and has defined all the others, including the stands.



A plethora of outdoor activities



The football pitch has been laid over a previous one, making it possible to conserve part of its original shape whilst enlarging it. It also made it possible to place the stands up against the building.

The roof over the stands is composed of a light frame supporting a metal cover with timber cladding on the under side. Although the stands' 300 seat capacity abuts against the Sport Centre's building, it is entirely independent in its use.

There are 4 access points, three of which are free standing:

- a central access point from the pitch
- two access points on either end of the stands for independent use
- and access directly into the entrance hall that can be opened or closed depending on needs

The running track has been located between the football pitch and the tennis courts, enabling the separation of the two areas and preferential access.

Three new tennis courts have been placed at the end of the plot with the best possible sun-exposure for play. The clubhouse is located near these new courts so as to created a tennis hub.

A path enabling access for people with special needs makes it possible to reach the already existing indoor tennis courts via a landscaped passageway.

The sun deck has direct access from the swimming pool and on a level with the door to the pool. It faces directly south to take full advantage of the sun. A space for snacks is located closely nearby on the terrace outside the bar-cafeteria.



Stands with 300 seat capacity

Incorporated into the new building, the stands act as a link between the indoor arrangements and the outdoor spaces.



Complementarity of materials and technical choices

The Sports Centre marries the following:

- textured and anti-graffiti-treated concrete with indoor insulation on the ground floor
- trellised concrete with occasional plantlife
- stained and saturated Scots pine cladding with exterior insulation on the upper floors

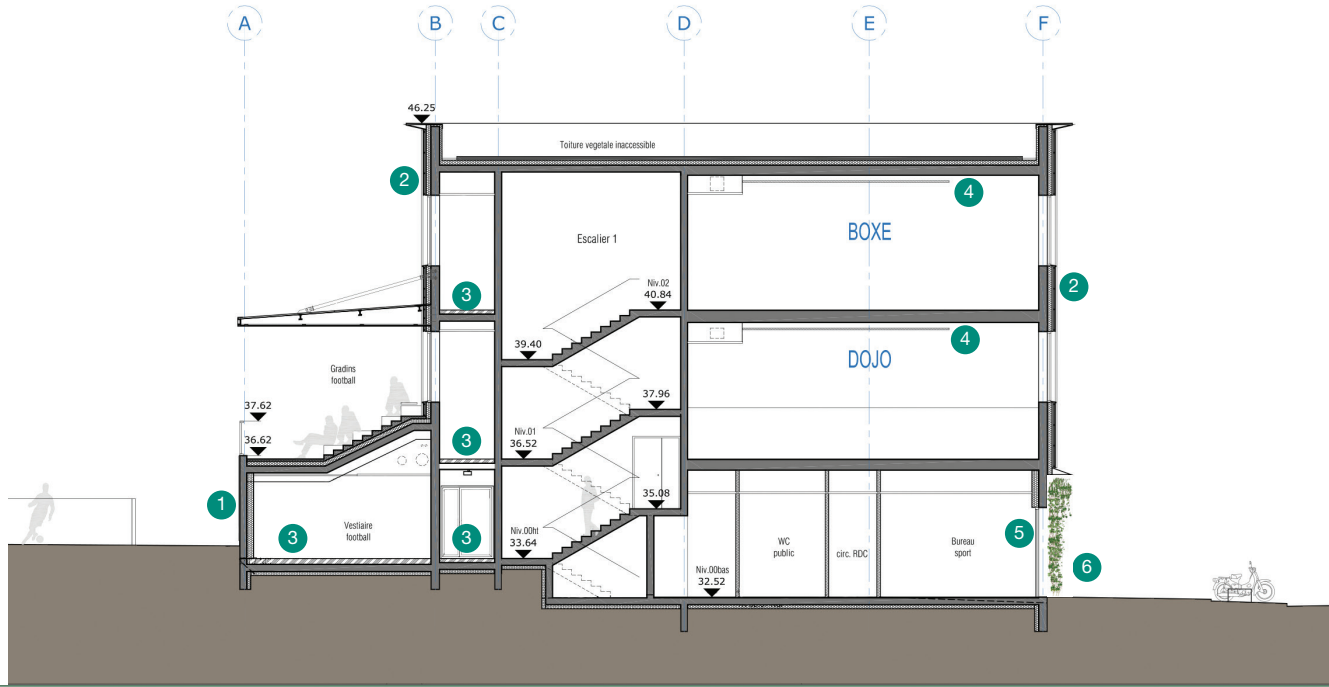
Construction systems:

- Foundations of piles and structural slabs
- Base and superstructure in concrete
- A system of floor slab shuttering (prestressed slabs)
- An insulated envelope, woodwork with thermal bridge breaks
- Northeastern exposure and natural lighting favoured, with a goal of the level

P equivalent of the HQE standard

- Cogeneration gas boiler
- Radiant panel heaters in the sport halls
- Floor heating in the entrance hall, passageways and changing rooms
- Overall double-flow ventilation
- Quality artificial light: a uniformity coefficient of 0.7
- green roof

1. Textured concrete
2. Timber-clad facade
3. Floor heating
4. Acoustic ceiling and heating panels
5. Powder-coated metal pre-frames
6. Green hedge and textured concrete



Autonomy and connected facilities



Protected by the stands the sun deck connects the Sports Centre with the already extant swimming pool for the enjoyment of swimmers.

Energy principles

A low consumption building

CHARACTERISTICS OF THE ENVELOPE		Losses U en W/m2.K
Thermal insulation	Concrete walls + 16 cm rockwool	0,22
	Green roof on concrete + 13 cm polyurethane	0,17
	Low concrete floor + 13,5 cm polyurethane underneath	0,28
Glazed surfaces	Aluminum joinery + double glazing low emissive	1,5
Thermal bridge treatment	External insulation continues to recover acroteria	
Airtightness	Objective permeability to 1,6 m³/h.m² facade	measured at 0,54 m³/h.m², much better than the goal

PERFORMANCE OF THE ENVELOPPE **BBIO = 83,80** FOR BBIO MAX = 110,00 **NAMELY RT 2012 -24%**

TECHNICAL PROVISIONS		Consumption in kWh/m².year
Heating	Cogeneration gas boiler	24,10
	Radiant panels, underfloor heating	
Ventilation & auxiliaries	Double flow with heat recovery	28,00
Hot water	Dito heating with balloon	68,00
Lighting	Favored natural lighting in rooms and circulations	42,80
Electric production by cogenerator		- 83,5

TOTAL CONSUMPTION	79,40 kWh/m²·year
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ENERGIE COMSUMPTION **CEP = 79.40 KWHEP/M².YEAR** FOR CEP MAX = 132 **NAMELY RT 2012 -40%**

PLANNING **3 MONTHS OF STUDY AND 12 MONTHS OF CONSTRUCTION**



Outdoor Facilities and rainwater management

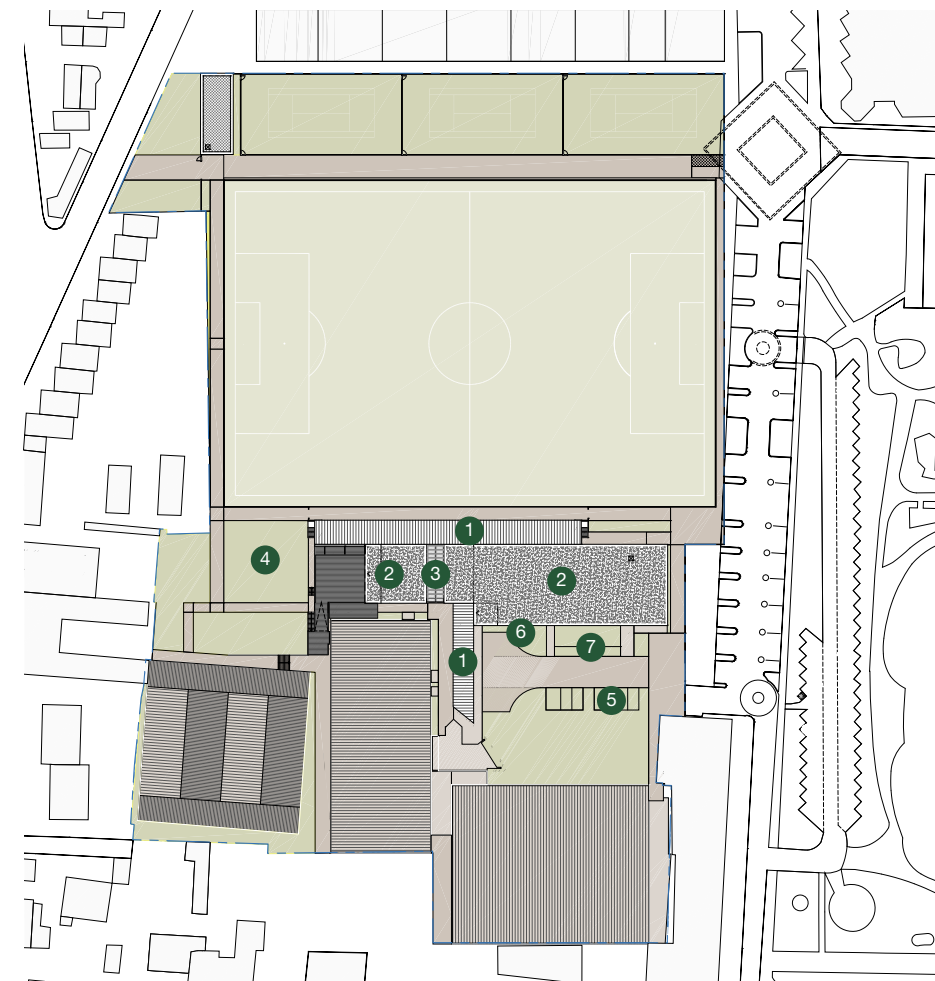
COEFFICIENT OF RUNOFF		Area concerned	Area impermeable
1,00	1. Roof slope or terrace	4 570	4 570
0,70	2. Extensive green roof	900	630
0,20	3. Grassed lawns	11 300	2 260
1,00	4. Roadway	550	550
0,70	5.Green parking	500	350
0,60	6. Foopath	3 340	2 004

Rainwater is collected in an underground basin of 264 m³

TOTAL SURFACES	21 160	10 364
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WATERPROOFING COEFFICIENT	49%
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TOTAL LEAKAGE RATE	8,46 L/s namely 4 L/s
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1. Metal roof
2. Toiture végétalisée
3. Vegetalized roof
4. Green spaces
5. Car park
6. Green hedge
7. 264 m3 underground retention basins

Gaétan Engasser Interview

by Jean-Philippe Hugron

What is particular about this project?

The agency is used to doing gymnasiums. The brief requested by the city of Bezons proposed trans-forming an existing site and to build new offices in order to create a Maison des Sports (sports cen-tre). Near the swimming pool and gym they wanted to build stands facing the football pitch, a mul-ti-purpose hall, two dojos, a boxing gym, changing rooms, offices and three tennis courts along with a club house and sun desk.

What was the challenge for you in the project?

The project called on us to think of combining all the brief's components. So we decided to have our proposal revolve around the open spaces: a forecourt, a foyer and a cafeteria.

Was it possible to share entrances to create a single foyer?

We had to work on an already built site whilst the swimming pool had to remain open all the while. So we couldn't create a common foyer for the whole brief (extant + new). What's more, that solu-tion involved making overly big hallways that would have hindered the organisation of the site and the plan's clarity.

Why the facades in wood?

The wood we used for the facade was in response an direct request made by the city. And we didn't mind. We were careful to opt for an autoclaved material and a darker pigment to prevent overly rapid ageing.

Can you tell us more about the facade's aesthetics?

To give the building a certain sense, we decided to work on this traditional cladding by giving it rhythm and depth. So we added wood strips to create an effect of thickness. At the same time we worked with three different shades of material.

The project is notable for having gone up quickly. How come?

The deadlines given us were particularly short. All in all we had 3 months for the studies and 12 months for building. The Bezons authorities were especially helpful in granting the building permits, and our relations with the whole set of players in the project were excellent.

Do you think speed is a hindrance?

A project that goes fast is a healthy project. Swiftness is a pledge of effectiveness. So you have to optimise the time given, which means working hand in hand.

In my opinion the dynamics of a project can suffer from having too much time. What I do regret, on the other hand, is the ever shorter time allowed for competitions. We now have a mere month and a half to design projects. We have to understand a site, the challenges in a brief and pro-duce all the documents required. Which means we are given only a few days to reflect on it, a det-rimental situation.



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The Sports Centre combines a wide variety of elements from different briefs, i.e. already existent gyms, swimming pool and indoor tennis courts with new all-purpose halls, a boxing gym, a body-building gym, two dojos, a football pitch with stands, outdoor tennis courts and a clubhouse. The new building is located to the west of existing buildings, uniting the whole with an entrance hall that acts as a bridge to all the facilities.

A ground-floor green base supports a «wooden house» that contains the sport halls. Bathed in natural light the entire building offers warm and functional spaces.