

to create a metaphor for the prolonged fascination with glass. They sought to create a technological gem and to completely dematerialize space – to overcome gravity by manipulating light and shadow. To this end, Brent Richard and his team at Design Antenna drew on structural concepts, and consequently, on the experiences their engineers – the firm Dewhurst McFarlane and Partners in cooperation with Rick Mather – had made with the realization of a similar, but smaller, private residence. The columns and beams of the pavilion, whose back sides butt up to the original building and are in part supported by it, are composed of three layers of laminated glass and were assembled on the construction site by means of mortise-and-tenon joints, which were then filled in with casting resin.

Role model with weak points

The glass pavilion at Broadfield House is the embodiment of a path-breaking idea: that is the consensus of the experts to this very day. It is still considered a key work with respect to structural glazing – a construction method in which glass plays a significant structural role. But it also played a crucial role in spurring the development of adhesive connections – a type of connection that is much more amenable to glass than are the drilled holes required for point fixing. Seen as a whole, the design of the museum pavilion – which would not have received a building permit in Germany at the time and for many subsequent years – was a boon to glass construction by impressively demonstrating how much potential the material holds. Many buildings were inspired by – or, in some cases, even copied – this prototype.

Jim McFarlane, who was involved both in the Broadfield House addition and the new impressive roof over the medieval department at London's Victoria & Albert Museum (see pp. 171–176), considers the latter the direct continuation of the principles that had been prevalent in the 1990s: the planners once again drew on the method in which the glass panels carried the loads away

from the roof surface by means of the adhesive connections. At the Victoria & Albert Museum in London, only slender, barely visible metal clamps are required to direct the stresses that result from a relatively new cold-bending procedure in which glass is curved on site.

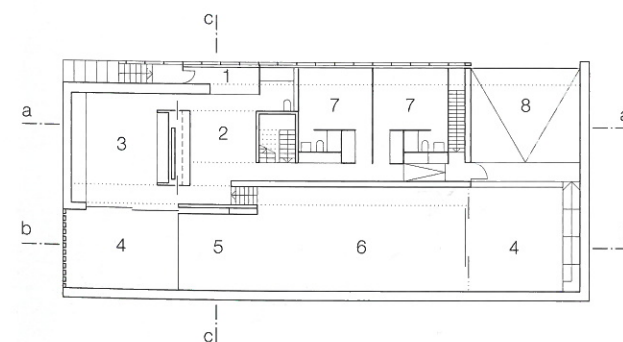
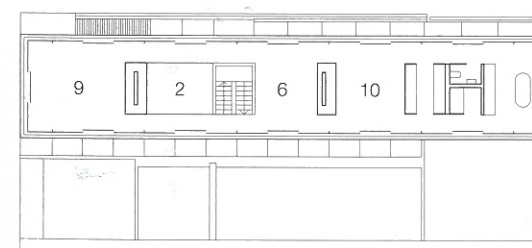
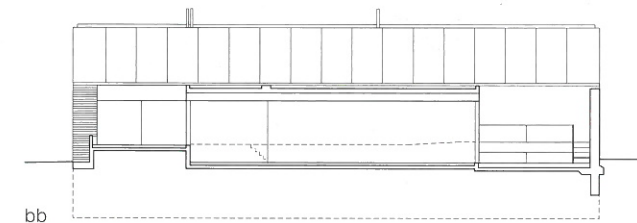
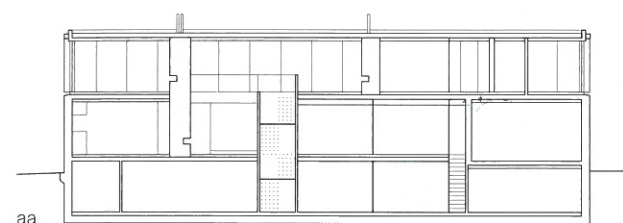
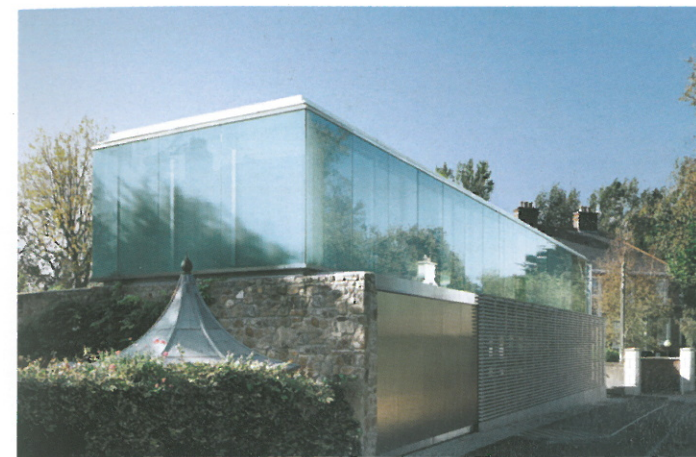
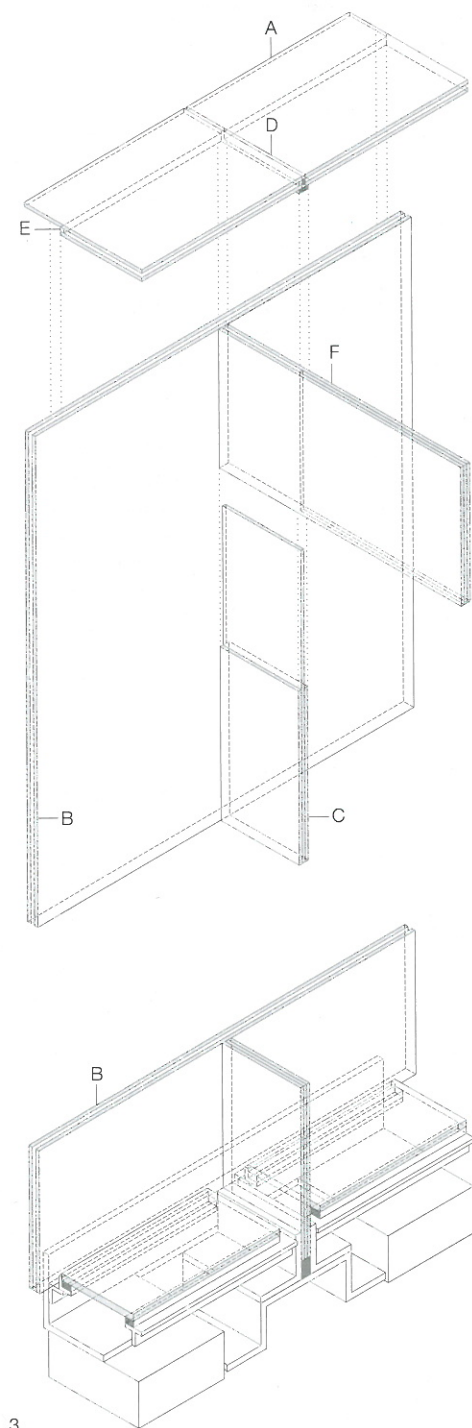
When visiting Broadfield House for the first time, those who have seen some of the many articles on the pavilion will be surprised at its unpretentious scale and its siting at the rear of the stately former manor. According to the planners and occupants, the (load-bearing) structure has successfully withstood the test of time. And upon inspection on site, with the exception of air bubbles in the adhesive connections – which were present from the very beginning due to poor execution – one is hard-pressed to find defects.

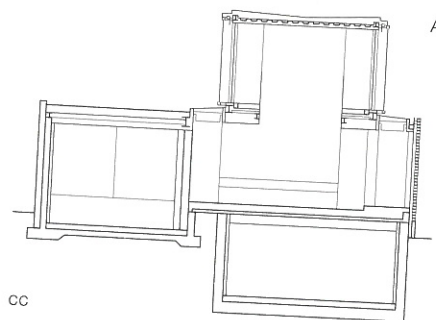
But the original concept foresaw contending with summer sun entering a space oriented to the southwest with nothing more than a solar-protection coating (applied to the inner side of the outermost pane) and a delicate dot matrix printed on the glass: it must be deemed a failure. Following years of employees' complaints regarding the high summer temperatures, the museum's administration decided a number of years ago to add a light-reflecting membrane to the inner surface of the facade and the outer surface of the roof.

Unfortunately, this alteration compromises the intended aesthetic effect, and, correspondingly, the pavilion's overall appearance. Particularly from the exterior, during the daytime the addition no longer seems airy and transparent, but is dark and forbidding instead. From above – as viewed from the manor's windows – the roof appears to have a mirrored surface. It does not come as a surprise that employees in the offices directly above it complain of the bothersome glare.

Built manifesto

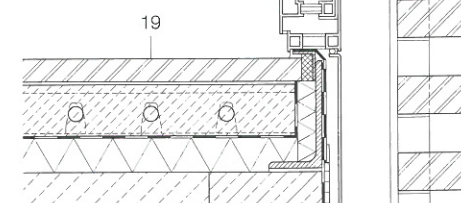
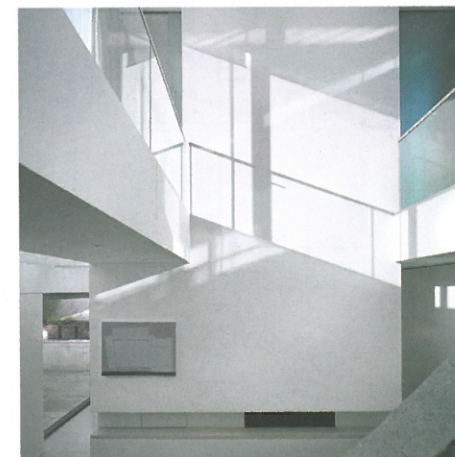
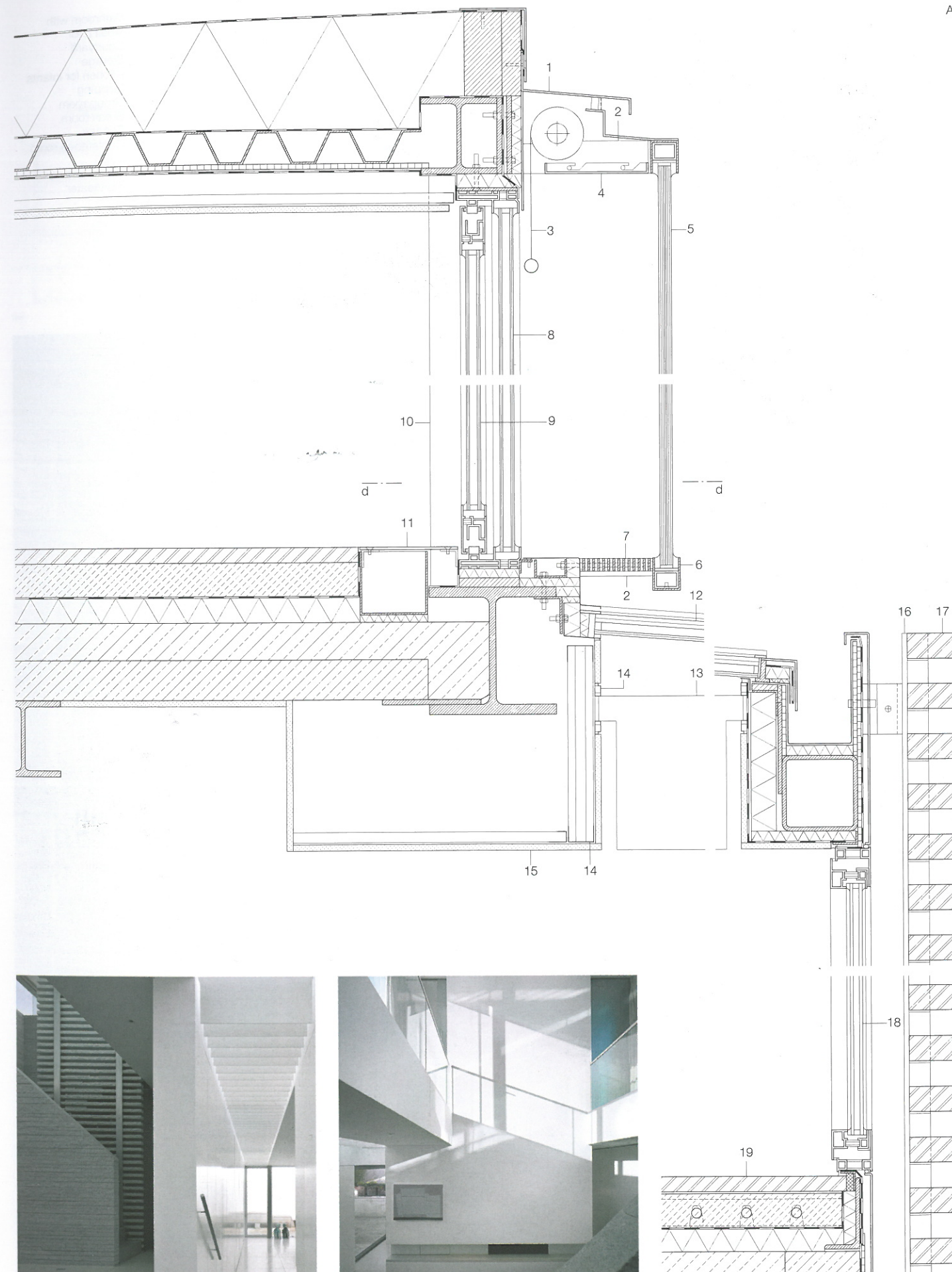
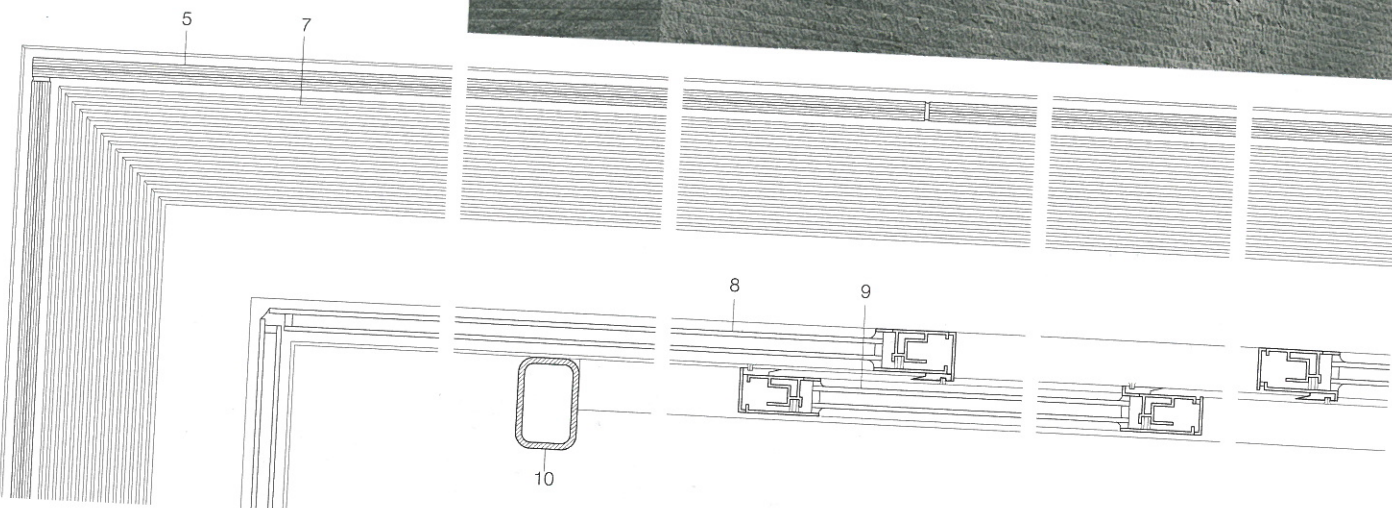
However, such functional shortcomings will hardly bring about the end of this fascinating experiment. The pavilion, as a built





Sections
scale 1:250
scale 1:10

- 1 3 mm aluminium sheet, anodized
- 2 stainless-steel bracket, shot-peened
- 3 solar blind, motorized
- 4 aluminium sheet, perforated, removable
- 5 25 mm laminated safety glass, fritted on inside
- 6 stainless-steel channel, matt
- 7 aluminium grating, anodized
- 8 fixed thermal glazing:
6.4 mm laminated safety glass +
16 mm argon-filled cavity +
6 mm toughened glass (low-e coating),
stainless steel frame, matt
- 9 sliding door/thermal glazing:
6.4 mm laminated safety glass +
16 mm argon-filled cavity +
6 mm toughened glass (low-e coating),
aluminium frame, anodized
- 10 120/80 mm steel RHS column
- 11 cover plate for electrical installations,
aluminium anodized
- 12 thermal glazing at skylight: 16 mm laminated
safety glass + 16 mm argon-filled cavity +
8 mm toughened glass (low-e coating)
- 13 25-5 mm sun-protection louvers,
medium-density fibreboard, painted
(decreasing in width toward bottom)
- 14 15 mm medium-density-fibreboard lath with
precisely fitting recesses to accommodate
sun-protection louvers
- 15 plasterboard suspended ceiling, painted,
metal substructure
- 16 steel T-section substructure
- 17 100/50 mm granite louvers
- 18 thermal glazing:
6.4 mm laminated safety glass +
12 mm argon-filled cavity +
6 mm toughened glass (low-e coating),
aluminium frame, anodized
- 19 floor surface: granite tile



House in Warsaw

Architect:

Jakub Szczęsny, Warsaw

Team:

Ryszard Szczęsny, Tomasz Gancarczyk

Structural engineers:

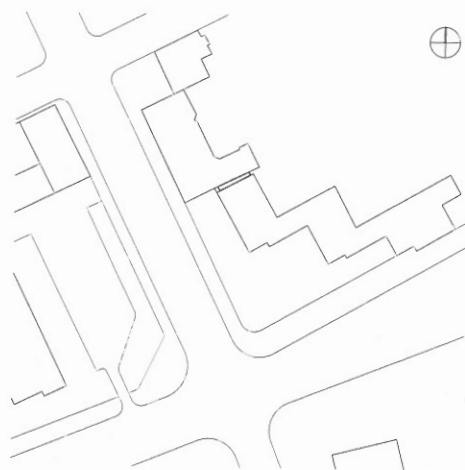
Sławomir Pucek, Ryszard Nalepski,
Warsaw

Others involved in the project: see page 441

With a width ranging from only 72 to 132 centimetres, this inhabitable work of art came into existence through the architect's initiative: it is conceived as an homage to the Israeli novelist Etgar Keret. The idea was first presented at an art festival, and the 14 m², two-storey interior functions both as Keret's temporary residence and as an atelier for young artists and creative types from all over the world.

Next to the architectural aspirations, a stipulation for its construction in this sliver of space between two apartment buildings in the centre of Warsaw was that it not touch either of the two existing walls. Due to the limited budget – the funding came from a number of sponsors, among them the Polish Modern Art Foundation – the architect chose a self-supporting structure with steel tubing as load-bearing element; the segments were bolted together on site and insulated with conventional panels or clad in translucent plastic sheets. The building envelope – installed by a firm that primarily creates facades for discount grocers – was realized in a fashion that is as simple as it is economical.

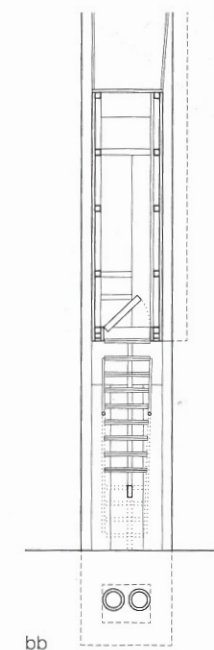
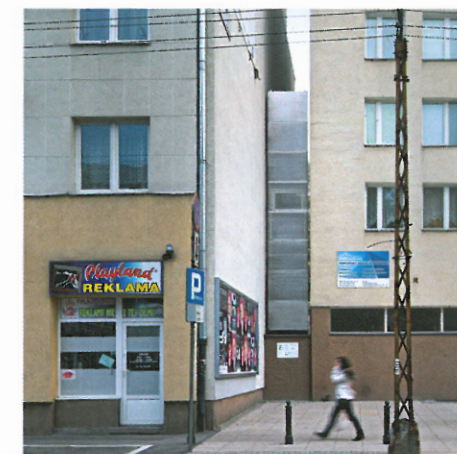
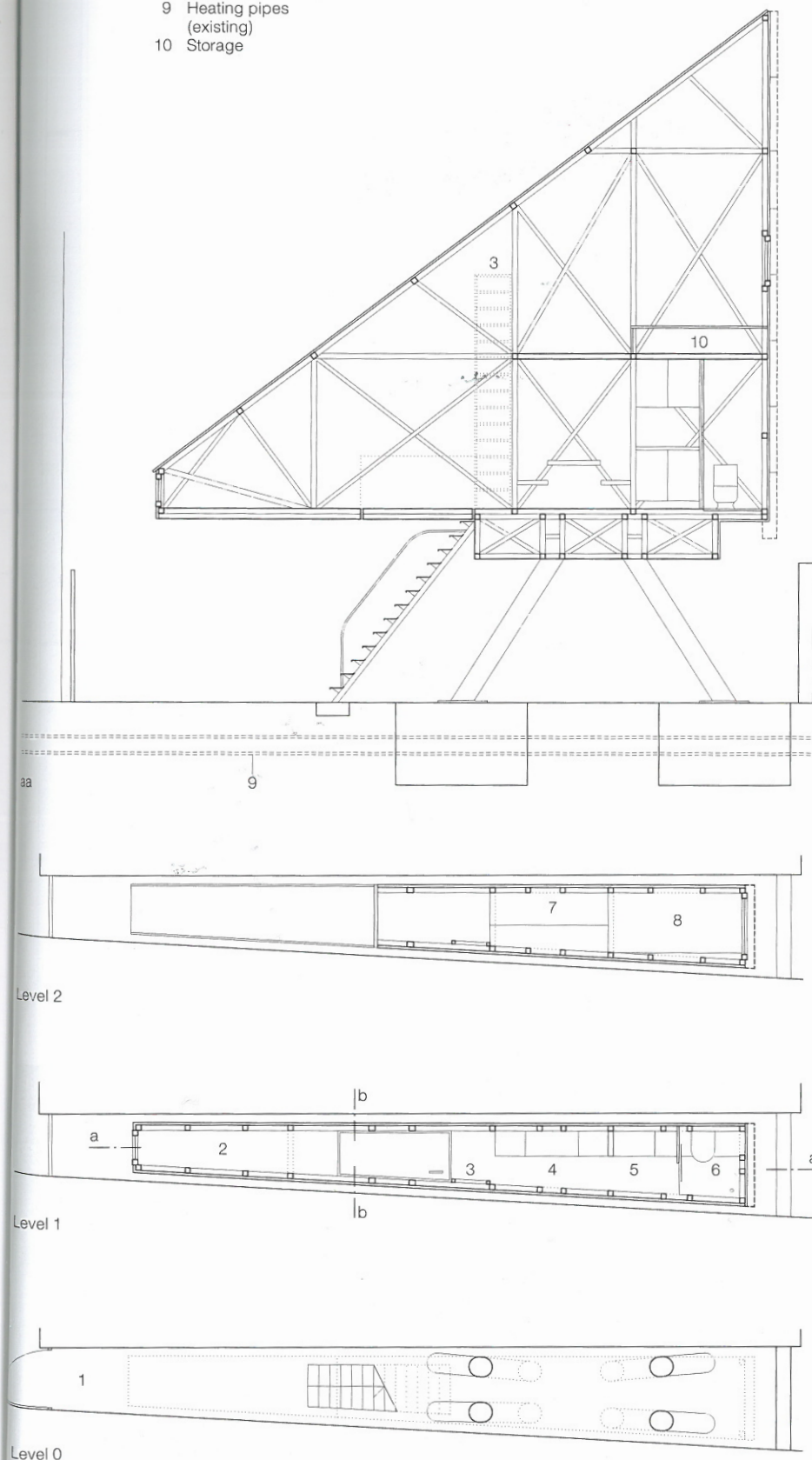
In the meantime it has become a tourist attraction, so there is a good chance that the structure now known as the Keret House, originally built with a duration of just a few years in mind, will end up occupying the narrow site much longer than planned.



Floor plans • Sections
scale 1:100

Site plan
scale 1:2000

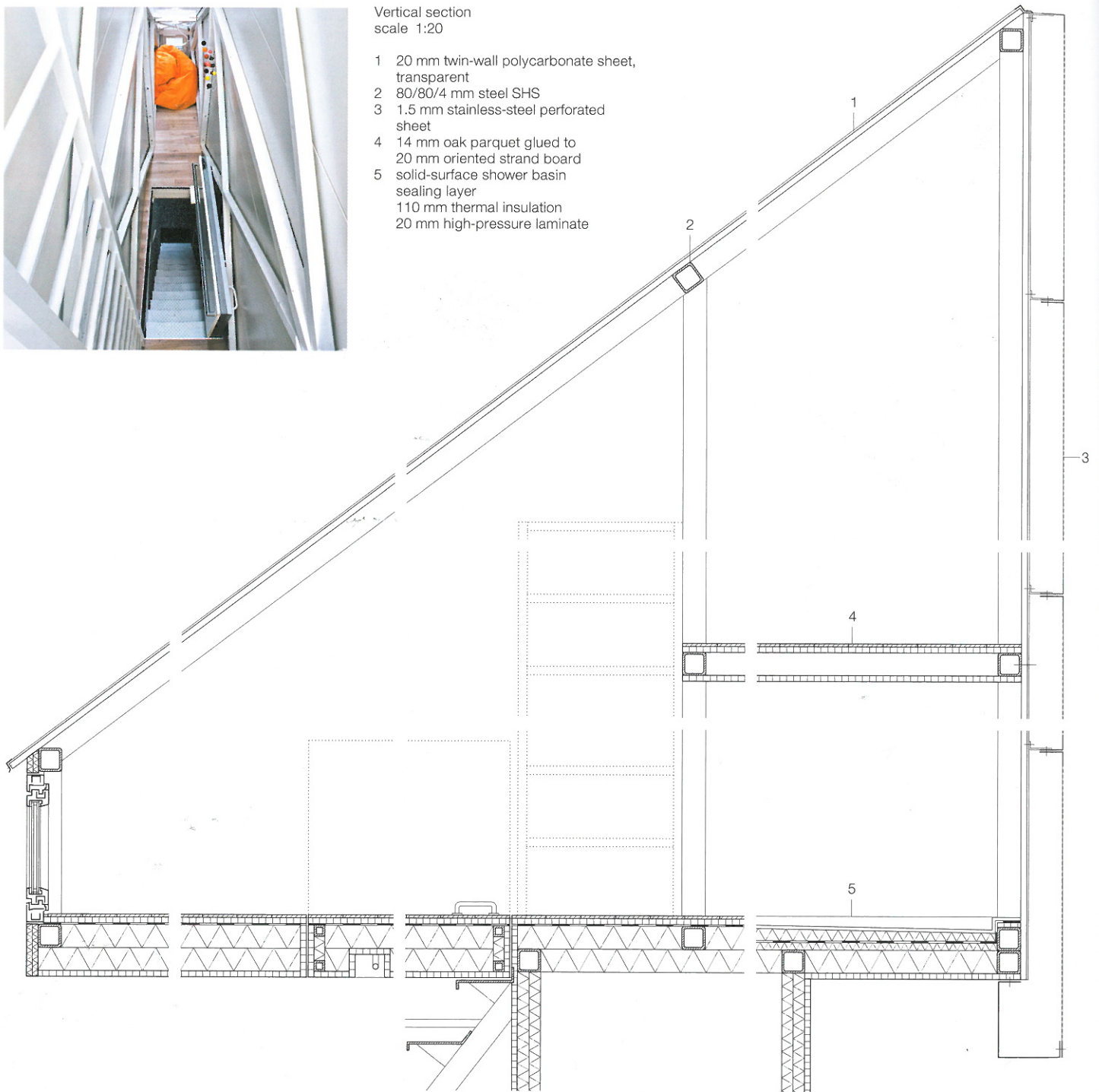
- 1 Access to house
- 2 Living area
- 3 Ladder
- 4 Kitchen table
- 5 Kitchenette
- 6 WC/Shower
- 7 Desk
- 8 Sleeping area
- 9 Heating pipes (existing)
- 10 Storage

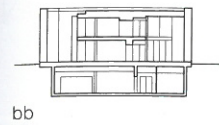




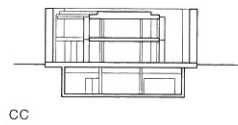
Vertical section
scale 1:20

- 1 20 mm twin-wall polycarbonate sheet, transparent
- 2 80/80/4 mm steel SHS
- 3 1.5 mm stainless-steel perforated sheet
- 4 14 mm oak parquet glued to 20 mm oriented strand board
- 5 solid-surface shower basin sealing layer
110 mm thermal insulation
20 mm high-pressure laminate





bb

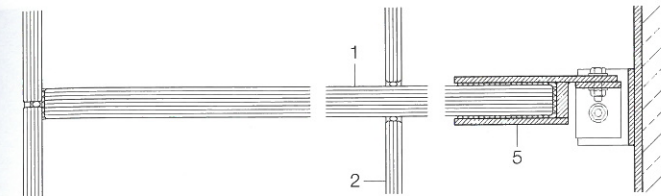


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Sections • Layout plans
scale 1:1000

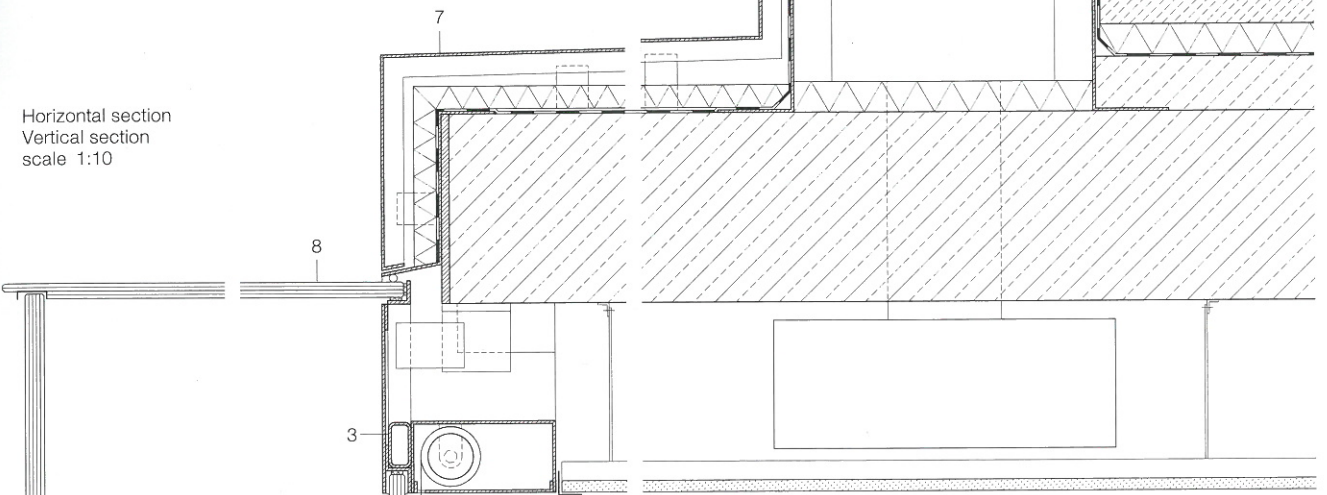
- 1 Entrance courtyard
- 2 Attorney's office
- 3 Foyer
- 4 Building services
- 5 Library

- 6 Administration
- 7 Seminar room
- 8 Garden
- 9 Waiting area
- 10 Consultation office
- 11 Assembly room
- 12 Terrace

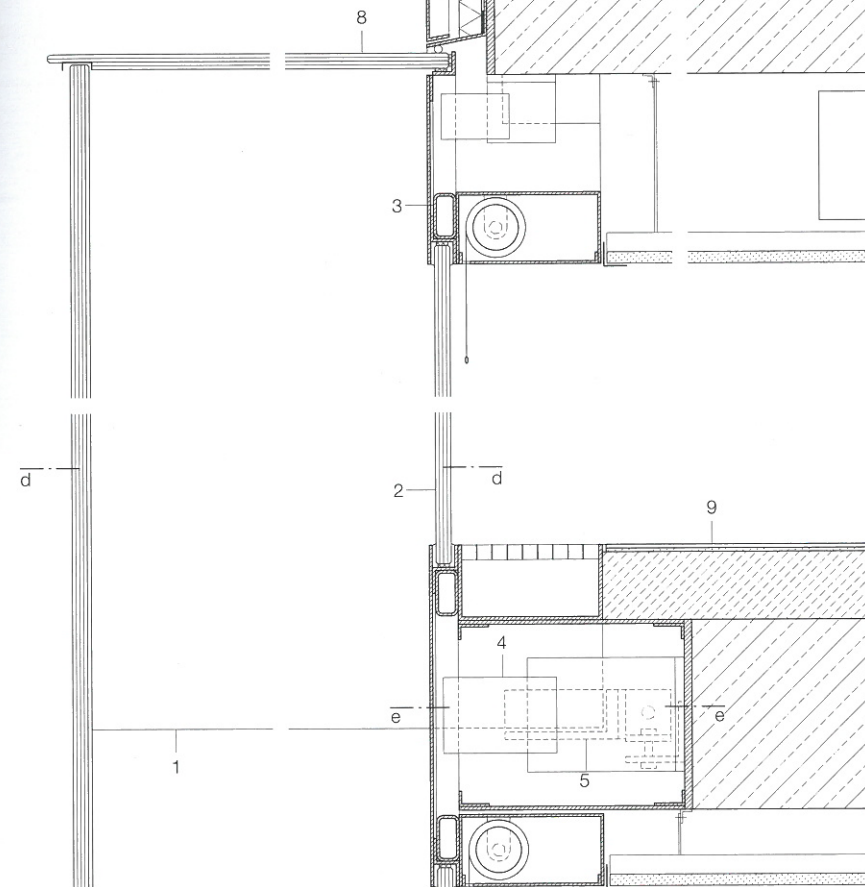


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Horizontal section
Vertical section
scale 1:10



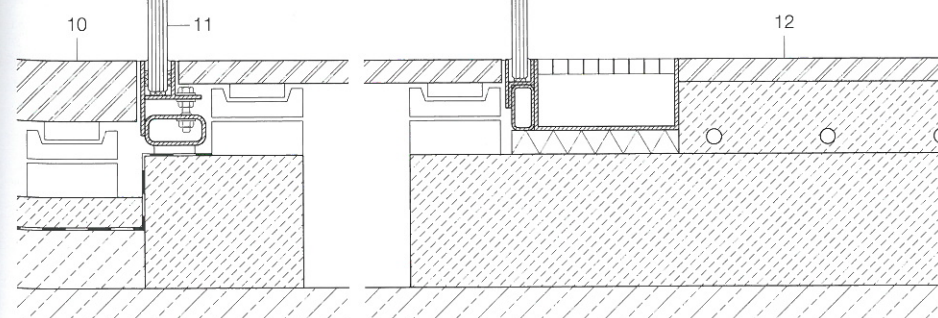
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