



Polski Komitet Narodowy  
Międzynarodowej Rady Ochrony Zabytków  
ICOMOS



VILNIUS GEDIMINAS  
TECHNICAL UNIVERSITY



## *Historical building adaptation to modern function*



Erasmus+

# Historical building adaptation to modern function

3 ECTS



Sustainable Heritage



Elective Courses



Erasmus+



**SURE**  
SUSTAINABLE URBAN REHABILITATION IN EUROPE



UNIVERSIDAD  
POLÍTÉCNICA DE MADRID

# Historical building adaptation to modern function

3 ECTS

SH

Sustainable Heritage

- 01 Introduction to building adaptation
- 02 Typology: big to big & small to small adaptations
- 03 Typology: big to small & small to big adaptations
- 04 Programme: extensions

EC

Elective Courses

- 05 Programme: bubbles**
- 06 Programme: other adaptations
- 07 Circulations: horizontal circulations
- 08 Circulations: vertical circulations
- 09 Enclosure: protective enclosure
- 10 Enclosure: lightweight roofs, façades and finishings
- 11 Systems: climatization
- 12 Systems: fire protection, water supply and evacuation
- 13 Illumination: natural lighting
- 14 Illumination: artificial lighting
- 15 Illumination: lighting systems



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SURE

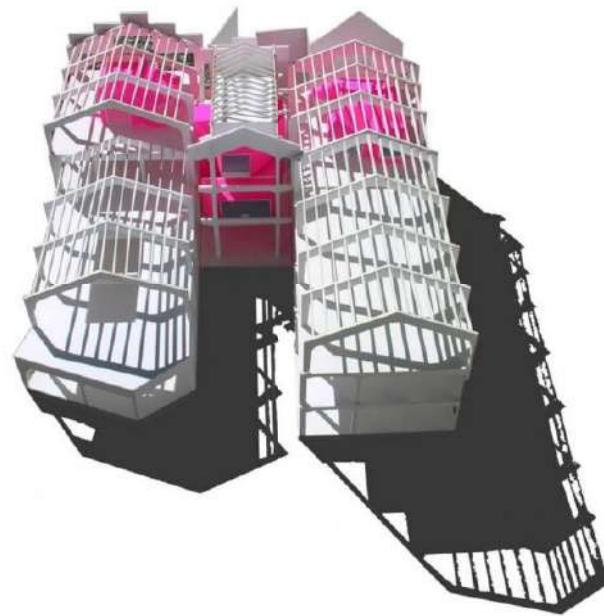
SUSTAINABLE URBAN REHABILITATION IN EUROPE



UNIVERSIDAD  
POLÍTÉCNICA DE MADRID

# Historical building adaptation to modern function

3 ECTS



## LESSON 05 PROGRAMME-BUBBLES

PROGRAMME - EXTENSIONS

## FUNTIONAL PROGRAMME

### EXTENSIONS

- ALONGSIDE
- WITHIN
- AROUND
- UNDER

### BUBBLES | INSERTED BOXES

### PARASITES

### HORIZONTAL COMPARTMENTATION

### VERTICAL COMPARTMENTATION

## **BUBBLES | INSERTED BOXES**

This type of intervention consist in the insertion of 'boxes', architectural object and spaces design in order to complement the functional needs of the building's function. Boxes and bubbles may provide thermally insutated spaces, bathrooms, water, gas, electricity, drainage and air-conditioning installations, staircases, etc.

The main advantage in the use of boxes in the adaptation of historical buildings is that this element is able to fulfil the functional requirements of a certain use, without transforming the image of the valuable spaces. Other advantage of this alternative is the possibility to prefabricate the inserted elements, its flexibility, etc.

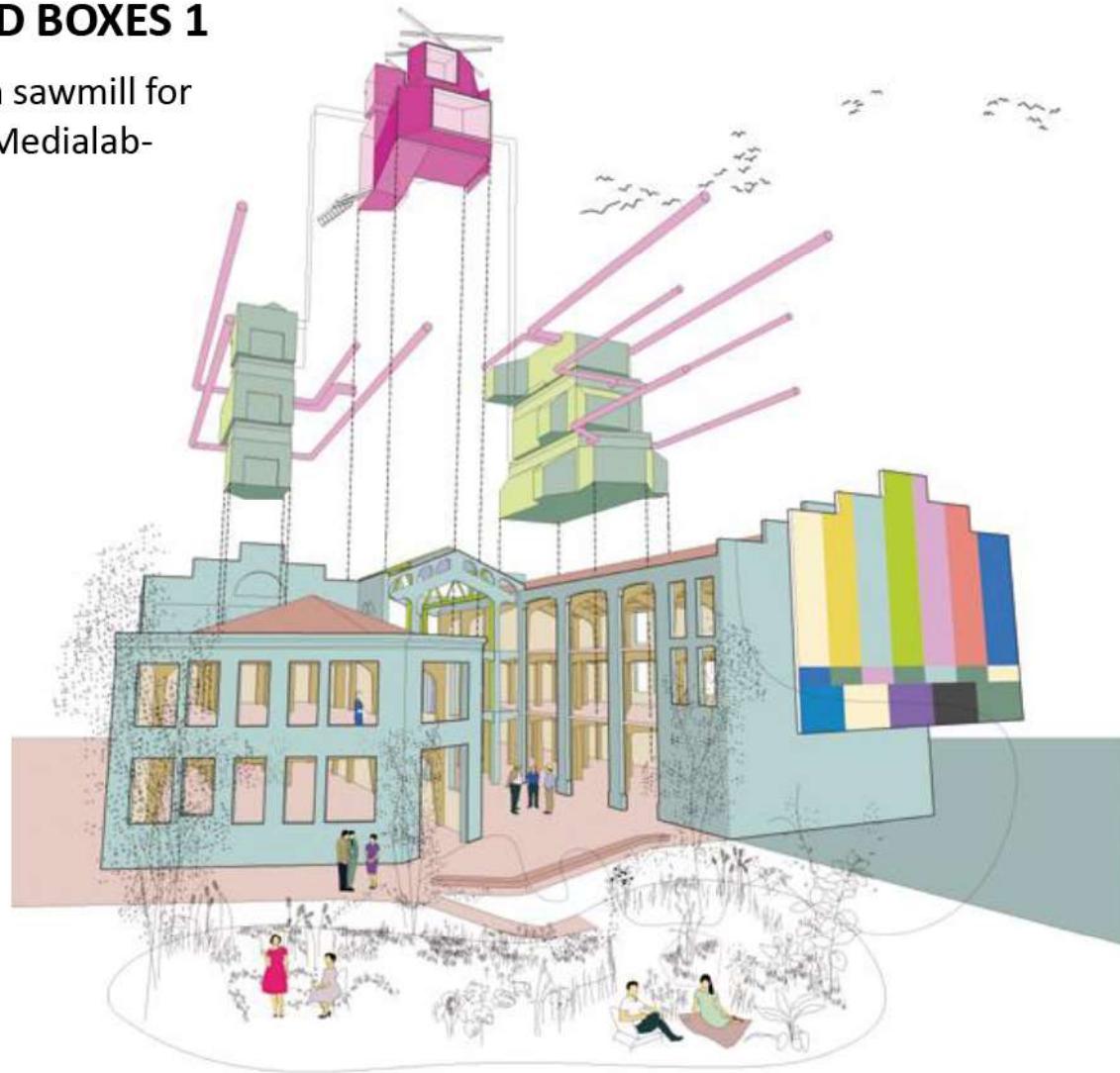
PROGRAMME - BUBBLES | INSERTED BOXES

## BUBBLES | INSERTED BOXES 1

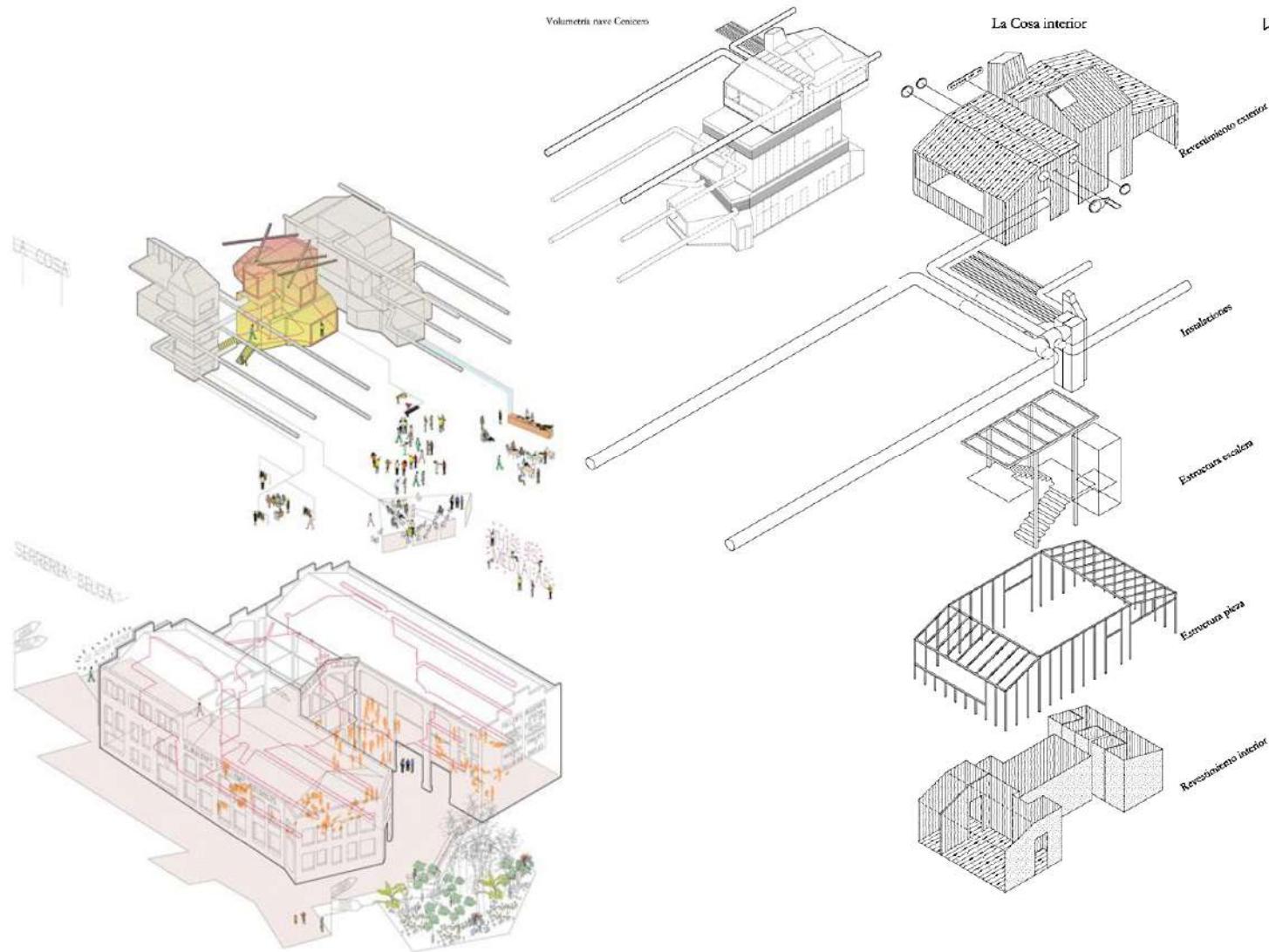
Adaptation of the Belgian sawmill for  
the headquarters of the Medialab-  
Prado Center

Madrid, Spain.

Langarita-Navarro



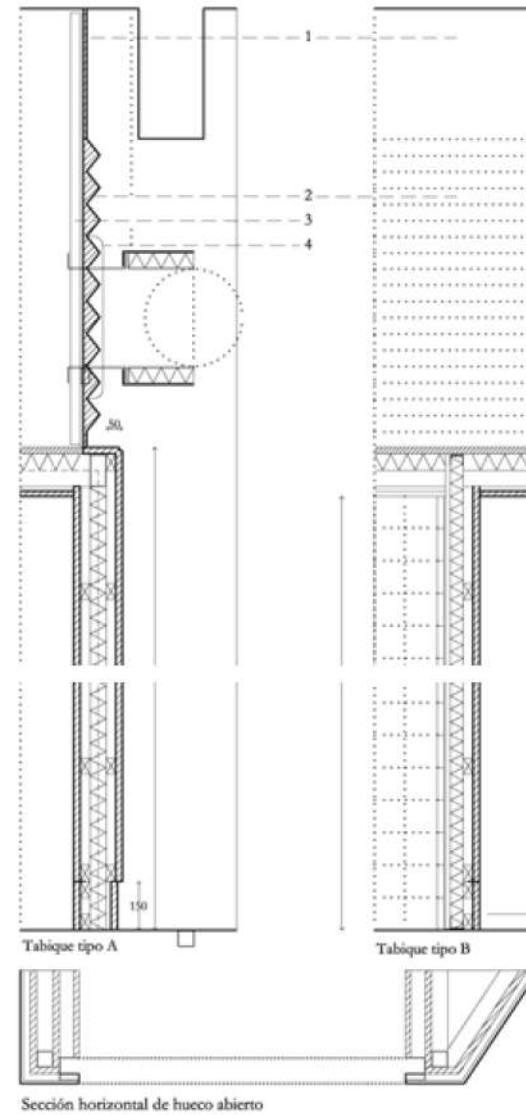
## PROGRAMME - BUBBLES | INSERTED BOXES



## PROGRAMME - BUBBLES | INSERTED BOXES



Secciones tabique perímetro - tabique interior



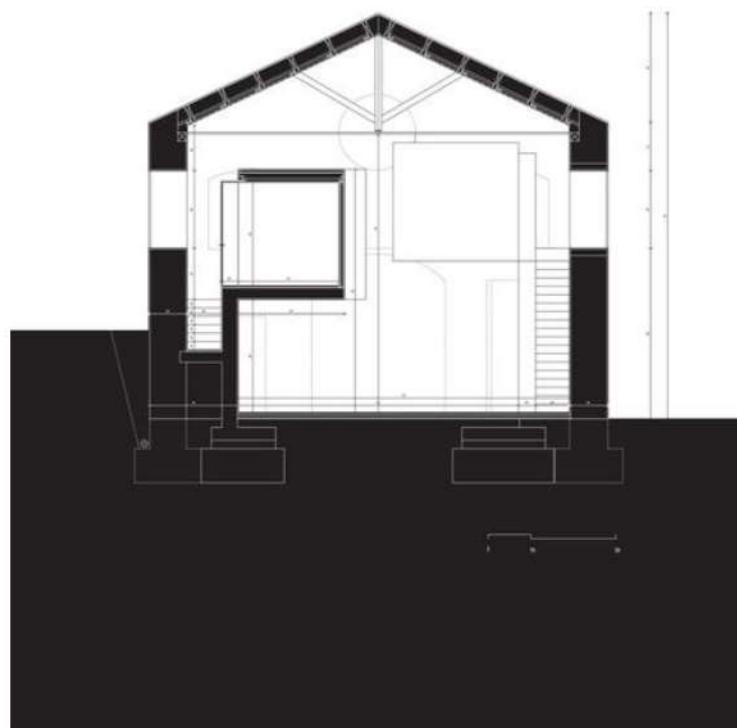
PROGRAMME - BUBBLES | INSERTED BOXES

## BUBBLES | INSERTED BOXES 2

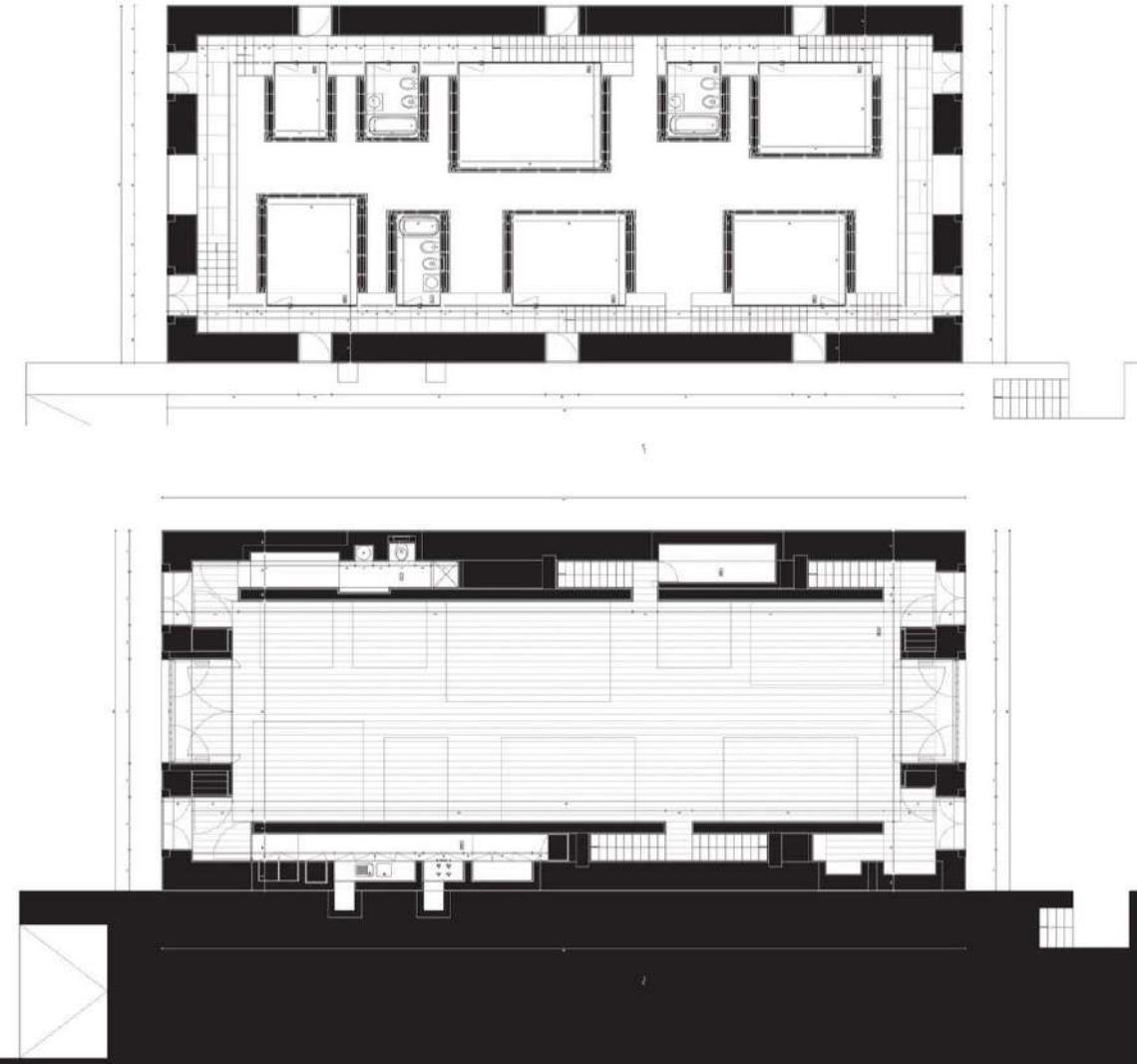
House in Azeitão

Azeitão, Portugal

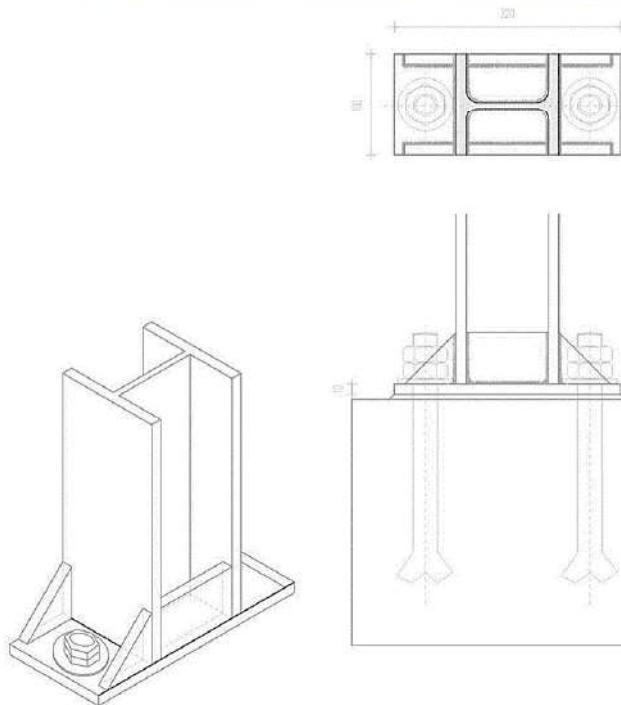
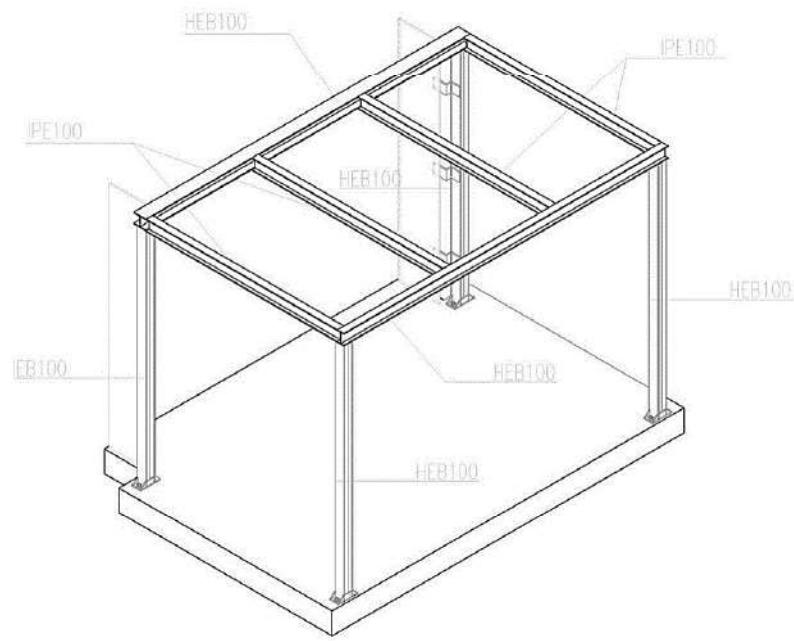
Aires Mateus



## PROGRAMME - BUBBLES | INSERTED BOXES



## PROGRAMME - BUBBLES | INSERTED BOXES

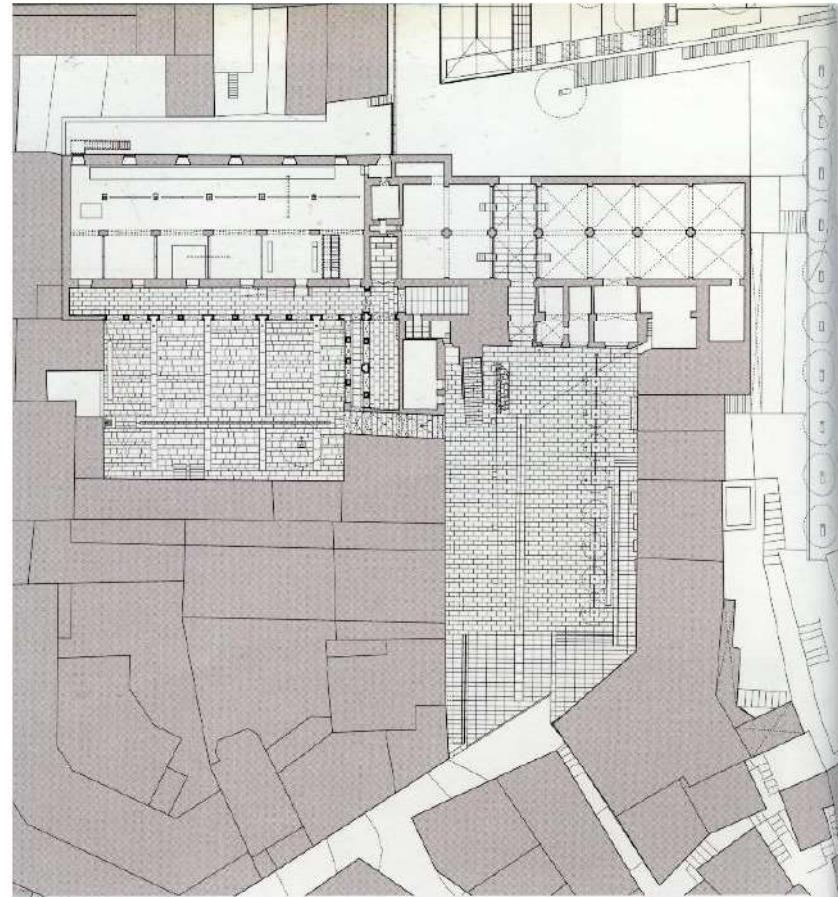


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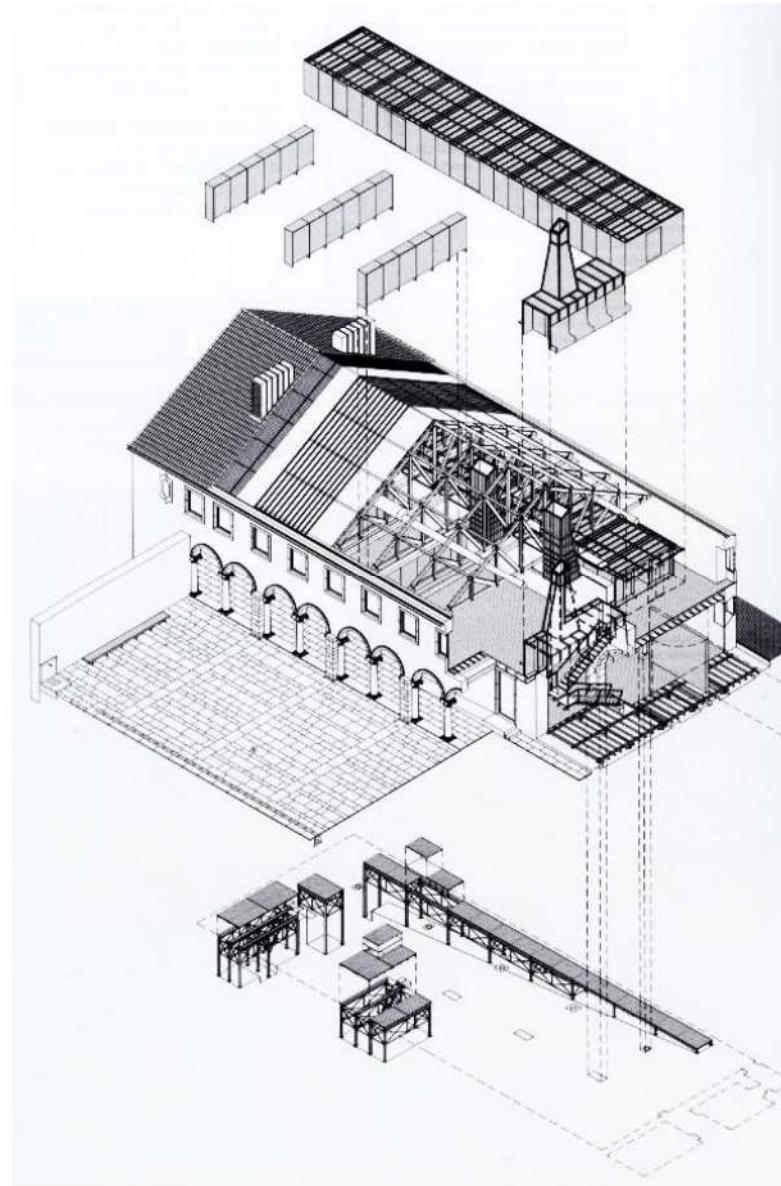
## BUBBLES | INSERTED BOXES 3

Reconversion of the West Wing of the Old Arts  
College - Visual Arts Center

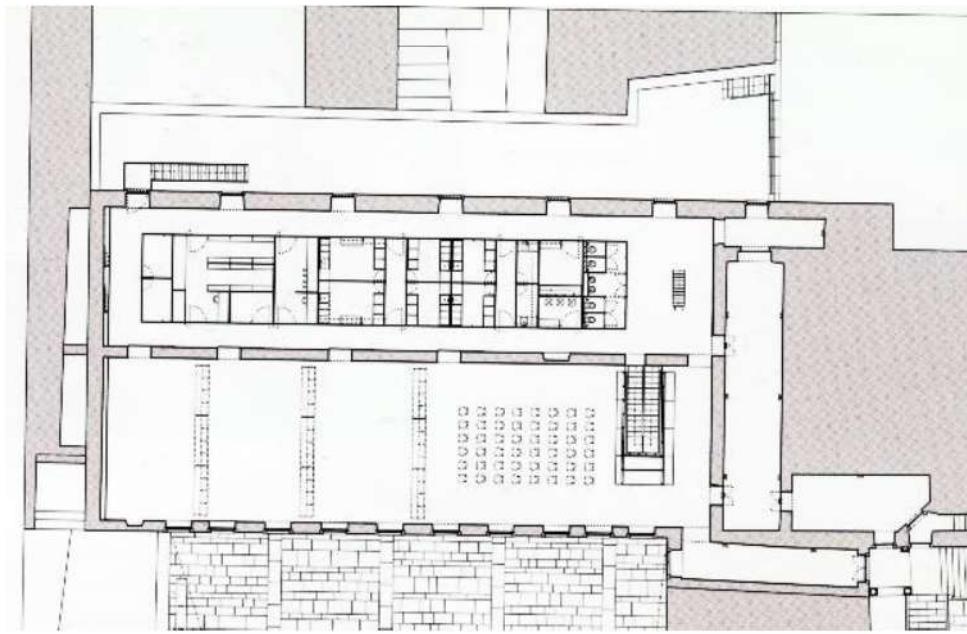
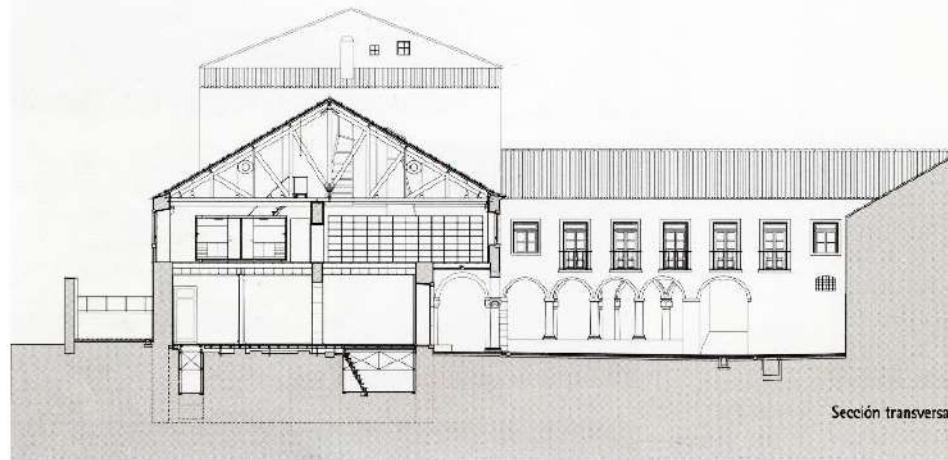
Joao Mendes Ribeiro, Coimbra



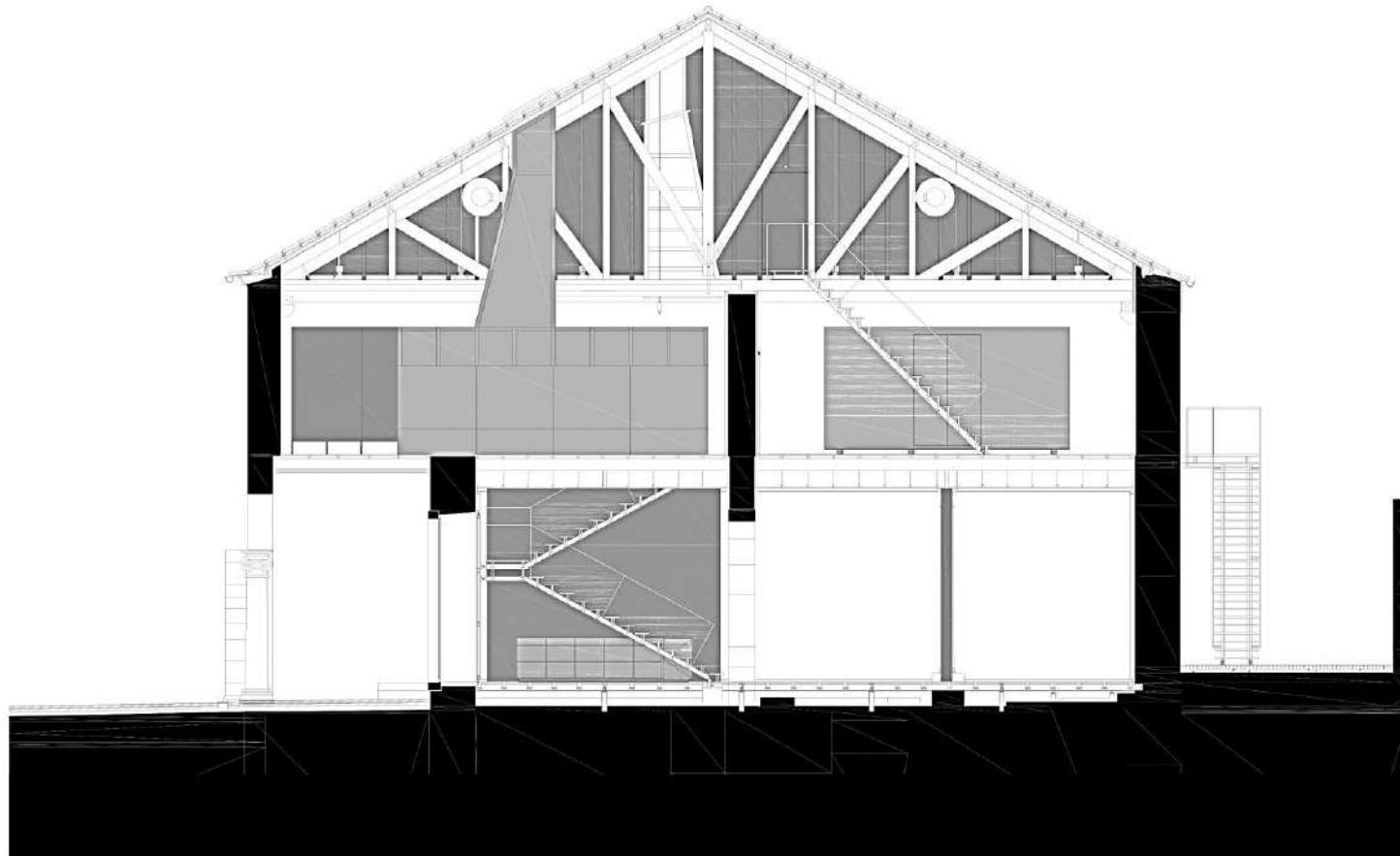
PROGRAMME - BUBBLES | INSERTED BOXES



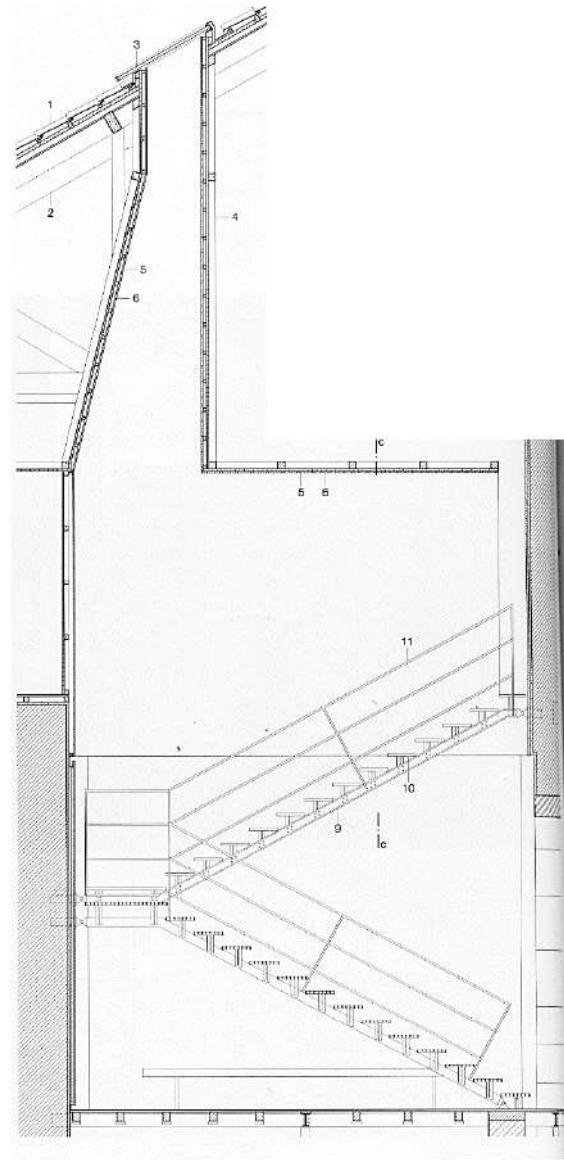
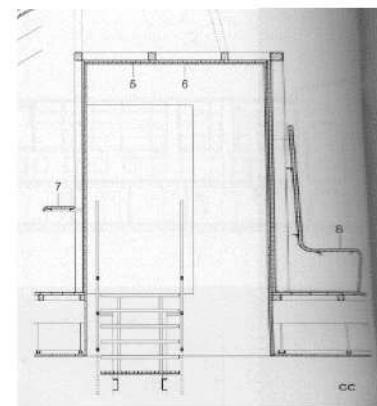
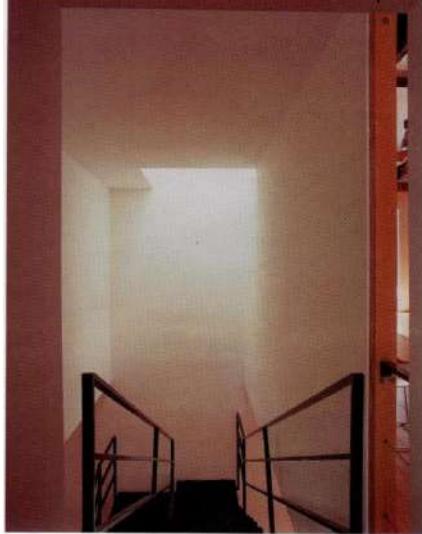
## PROGRAMME - BUBBLES | INSERTED BOXES



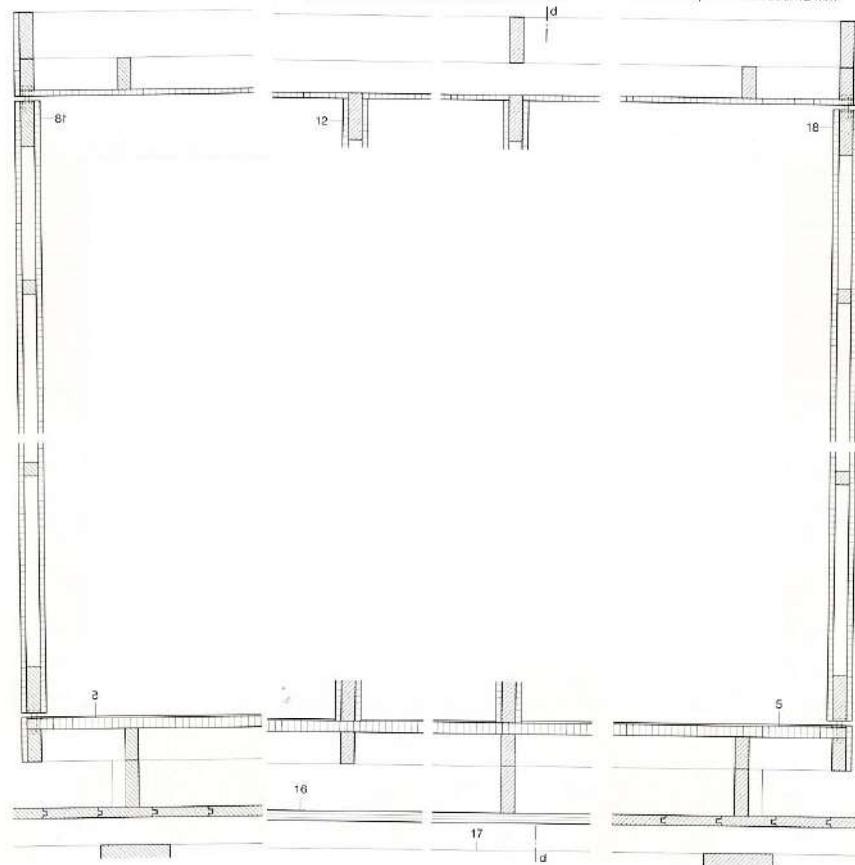
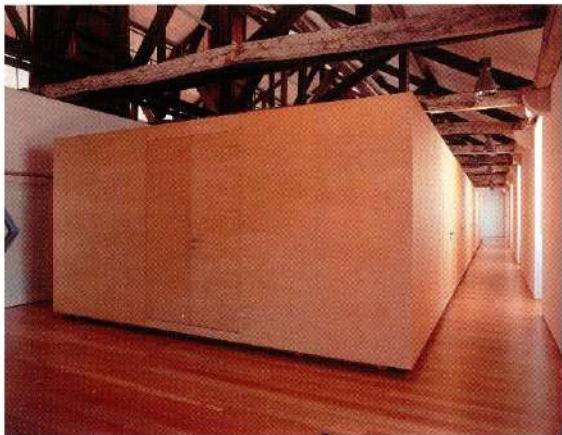
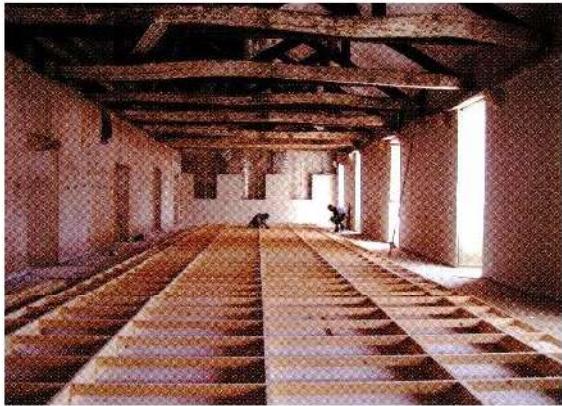
PROGRAMME - BUBBLES | INSERTED BOXES



## PROGRAMME - BUBBLES | INSERTED BOXES



## PROGRAMME - BUBBLES | INSERTED BOXES



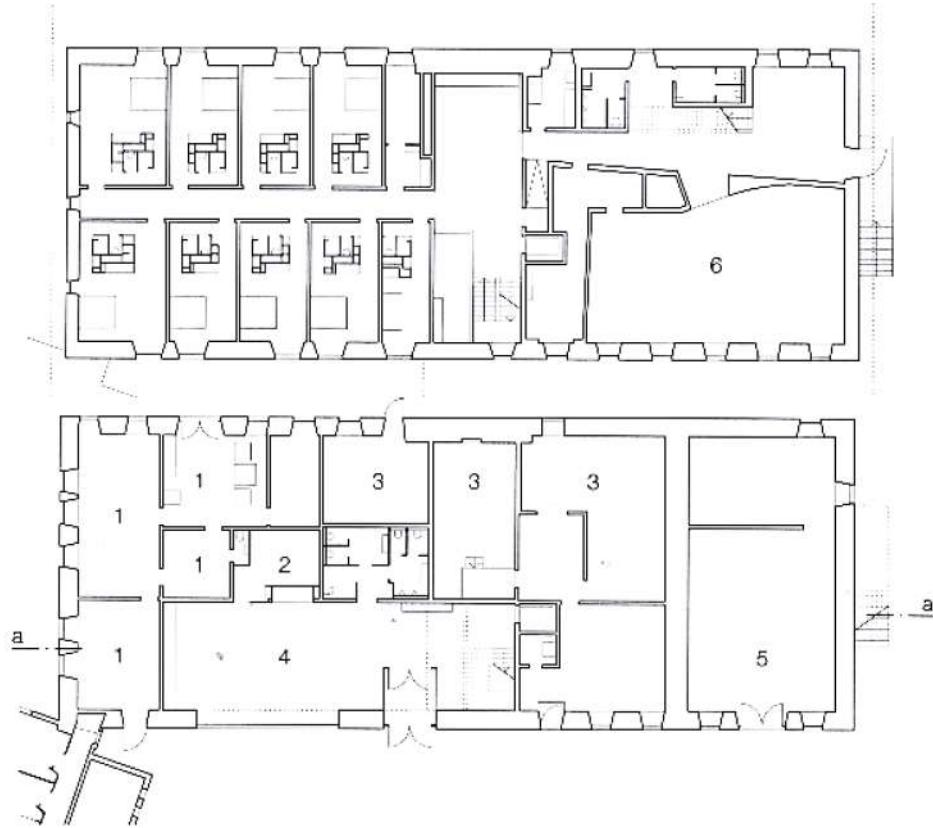
## PROGRAMME - BUBBLES | INSERTED BOXES

### BUBBLES | INSERTED BOXES 4

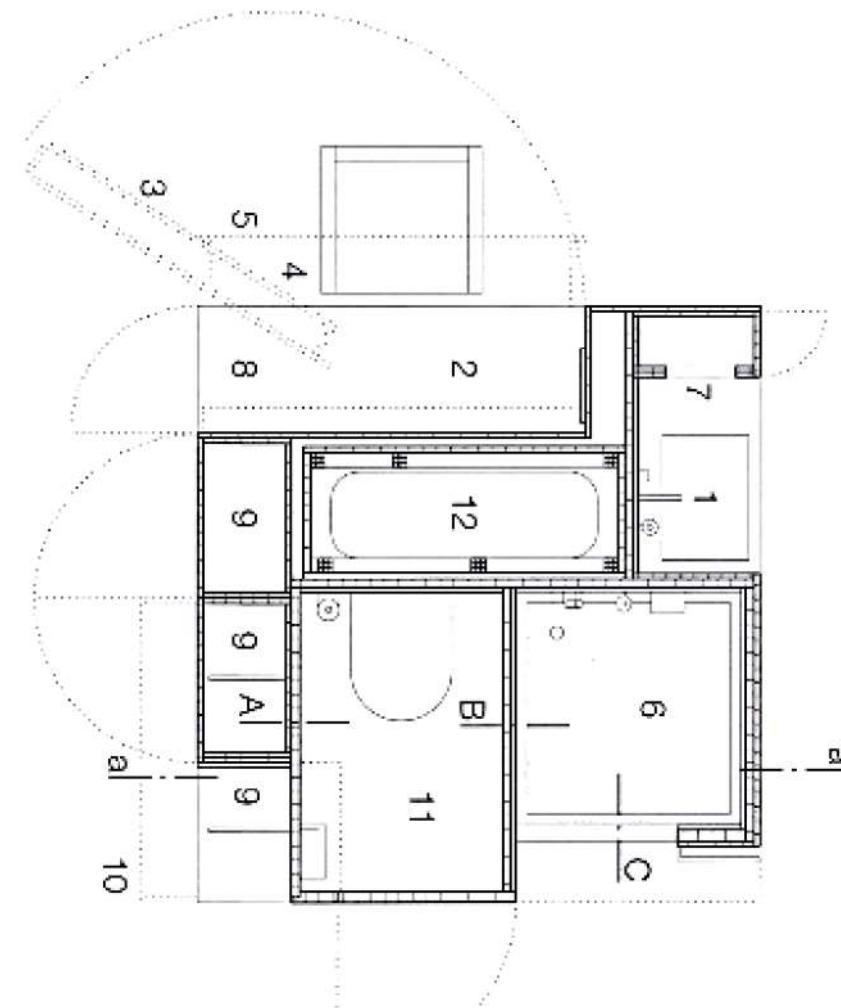
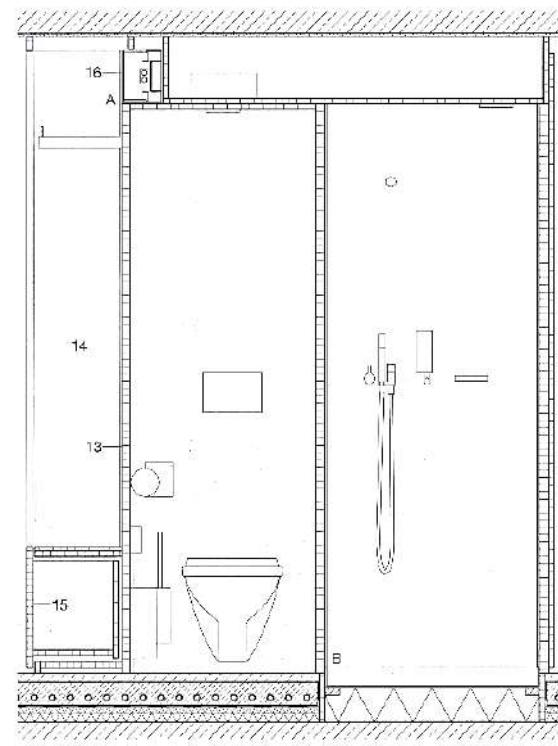
Guest house for the Ittigen

Charterhouse

Regula Harder, Jürg Spreyermann



## PROGRAMME - BUBBLES | INSERTED BOXES



PROGRAMME - BUBBLES | INSERTED BOXES

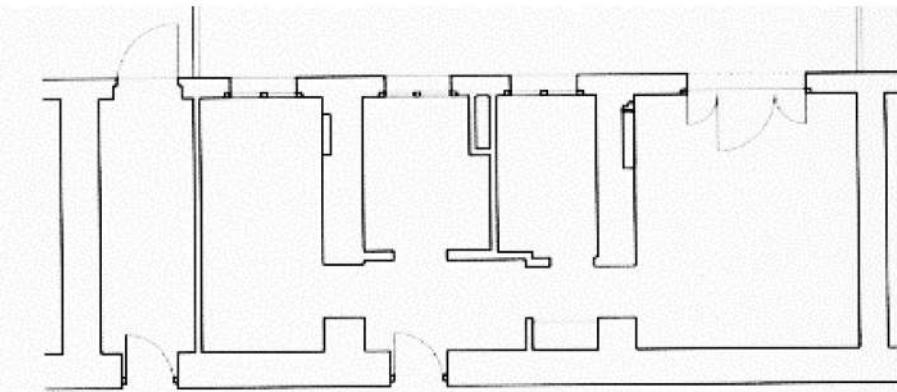
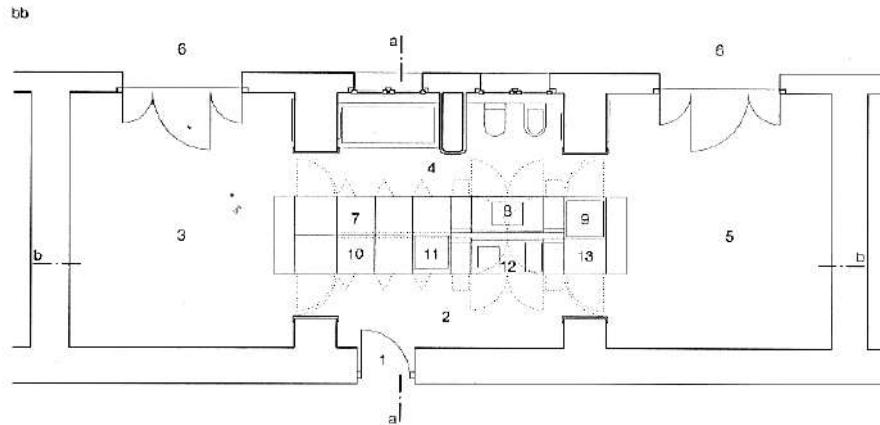
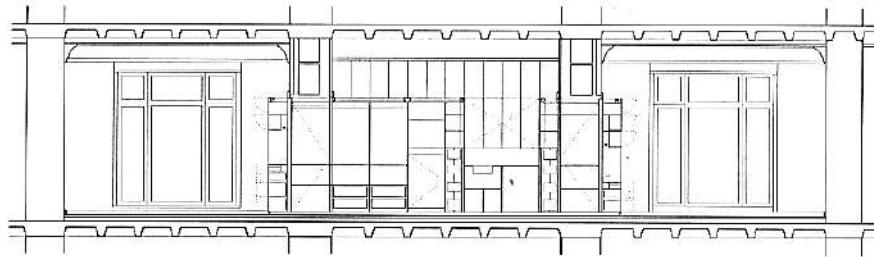
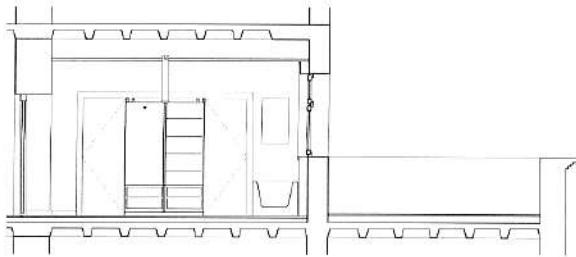
## BUBBLES | INSERTED BOXES 5

Apartment renovation in Berlin

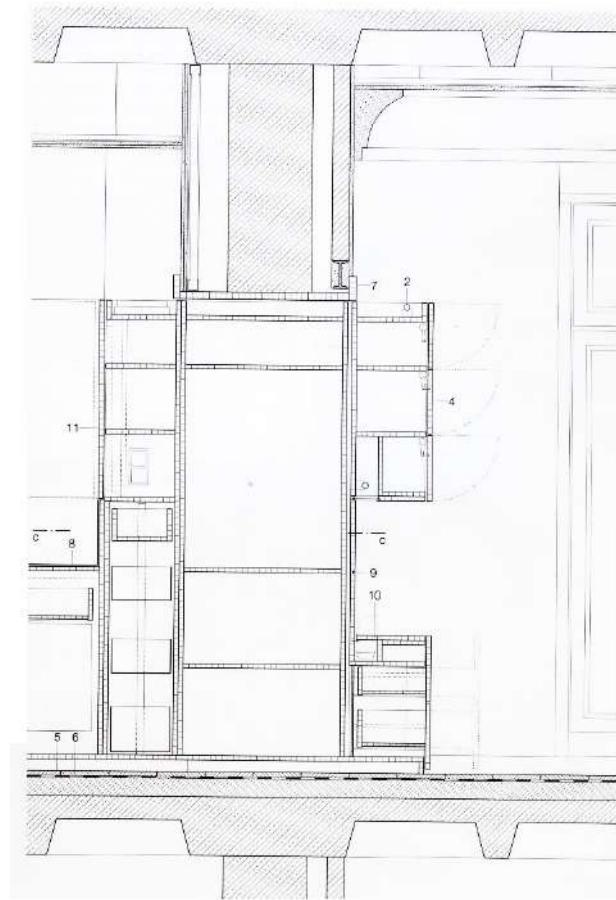
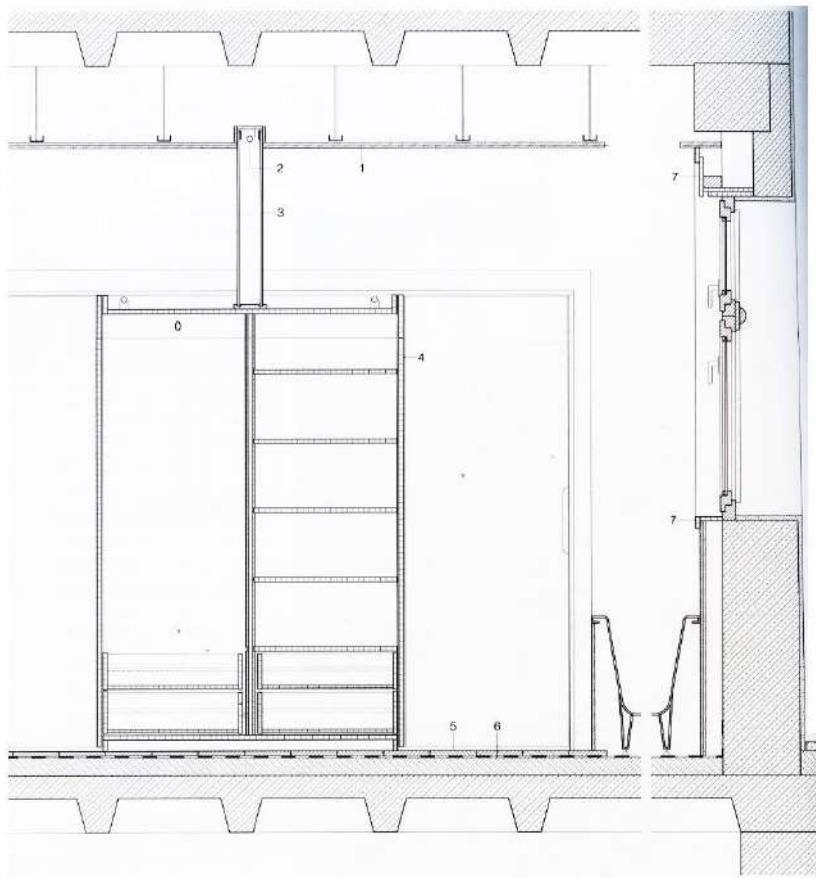
Behles & Jochimsen, Berlin



## PROGRAMME - BUBBLES | INSERTED BOXES



## PROGRAMME - BUBBLES | INSERTED BOXES





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