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## Reuse in Teaching – Learning and teaching transformation

Lorenzo De Chiffre, Artem Kitaev, Eva Mair,  
Katharina Paschburg, Katherina Putzer (eds.)  
**Reuse in Teaching.**  
The Future of the Architectural Design  
Studio

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epilogue by Astrid Staufer.

### Book launch

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Details to follow → [triest-verlag.ch/news](https://triest-verlag.ch/news)

- **Learning and teaching transformation –  
exchange between research, education and practice**
- **Richly illustrated, with student projects from Vienna  
(including the APA Tower), Oslo (former Munch Museum)  
and Trieste (Campo Marzio)**

*Reuse in Teaching* focuses on the highly topical issue of the adaptive reuse and transformation of buildings. The premise is that even though refurbishing and recycling buildings is gradually becoming part of mainstream practice, the education of future architects is lagging behind.

Dealing with existing buildings in an academic context is complex and challenging: it requires additional time, resources and, most importantly, different teaching methods and formats.

Based on a research project at the TU Wien, the publication presents a methodological discussion of the work of three separate design studios, including contributions from international experts involved in the project.

The book offers both theoretical depth and practical insight, showing how working with the existing requires new teaching formats, studio briefs, and design approaches. It bridges the gap between academia and practice, as most contributors are active in both fields. Rich visual material illustrates not only the students' work but also the broader pedagogic and conceptual framework behind it.

Unlike most books on adaptive reuse, which focus on built projects, *Reuse in Teaching* foregrounds the implications for design education. It opens up a timely and critical conversation on the future of the architectural design studio in a world where

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building less and transforming more is becoming a cultural and ecological necessity. The target audience are architectural educators, students, practitioners, researchers, and anyone interested in the future of architecture and its teaching.

## About the editors

The five editors worked together on the project "Reuse in Teaching" as part of the Excite research programme of the Faculty of Architecture and Spatial Planning at the Institute of Architectural Design, TU Wien.

**Lorenzo De Chiffre** is a Senior Scientist at the Department of Building Construction and Design 1, where he heads the Construction and Transformation research platform.

**Artem Kitaev** is a university assistant at the Department of Building Theory by Design, where he is doing his doctorate on the subject of adaptive reuse. He is also co-founder and partner of Kosmos Architects.

**Eva Mair** is a Senior Lecturer at the Department of Building Theory by Design and co-founder and partner of Mair-Paar in Vienna.

**Katharina Paschburg** is a university assistant at the Department of Building Construction and Design 1, where she is writing her doctoral thesis on building transformation.

**Katherina Putzer** is an architect based in Oslo. Until 2024 she lectured at the Oslo School of Architecture and worked for a year as an external lecturer at the Department of Building Theory and Design.

FOREWORD	
I TRANSFORMING THE EXISTING	
<i>Rudi Scheuven</i>	
The question of how we work with the existing built environment has become one of the most urgent challenges facing architecture and spatial planning today. As we collectively confront the climate crisis, resource scarcity and rapid societal change, the task of transformation must take a central place in our disciplines. This shift is not only a technical or environmental issue; it demands a profound rethinking of how we educate future architects and spatial planners.	
The Reuse in Teaching project, part of the faculty's EXCITE program, has addressed this challenge head-on. Through the concrete work of three design studios, the project has explored how to strengthen the teaching of adaptive reuse and transformation of the existing. Yet its contribution has extended beyond the design studios themselves, providing crucial momentum for a broader, faculty-wide initiative under the theme "Transformation of the Existing," which has brought together teaching, research and public events to explore how our disciplines can remain relevant and visionary in a time of transition.	
This focus reflects a deep commitment within the faculty to position reuse not as a constraint but as a creative and ethical opportunity – one that opens up new possibilities for design, fosters critical engagement with history, and supports more responsible ways of inhabiting the world. Reuse in Teaching has served as catalyst for this development, exemplifying how focused pedagogical inquiry can become the starting point for institutional change and broader cultural reflection.	
We see this project as an essential contribution to the work of the faculty and to the evolving outlook of architectural and spatial planning practice. It strengthens our capacity to prepare students for the real challenges they will face and underscores the faculty's role as a place where the future of the built environment is not only imagined but actively shaped.	
Rudi Scheuven Dean of the Faculty for Architecture and Planning, TU Wien	

EX MUNCH MUSEUM

STUDIO BRIEF

## THE TRANSFORMATION OF THE EX MUNCH MUSEUM IN TØYEN, OSLO, INTO A NEIGHBOURHOOD AND CULTURAL CENTRE

*Eva Mair, Katherina Putzer*

The Munch Museum moved from the Tøyen district of Oslo to its new building in a central harbour-side location in fall 2021. Despite years of discussion, it remains unclear what will happen to the old museum, designed in the 1960s by architects Gunnar Fougner and Einar Myklebust. Now that the last artworks have been moved out, the eighth Oslo Architecture Triennale has taken over the premises as a first interim use. The event offers the possibility for an experimental arrangement of activities and an on-site survey:

- What qualities are contained in this seemingly unremarkable and heterogeneous building complex?
- What are the specific characteristics of the individual rooms, some of which still speak the language of post-war modernism, while others have been heavily altered or are new additions from the 1990s?
- How can the building be transformed with selective interventions for a subsequent use by the residents

of the neighbourhood, who have little lobbying power or economic means?

- Which scenarios for reuse will prove to be suitable for the respective spaces?
- Which materials and details should be preserved and how can the design build on them and further develop the potential of what is already there?

As part of the design course, we will travel to Oslo and explore the building. Our starting point is not nostalgic retrospection, but the actual architecture as we find it at the time of our visit. Each student will choose and examine a specific spatial fragment, using various representation techniques to capture its qualities. Models, photos, hand drawings and short texts will be our design tools. We will look for the potential of transformation in the fragments of the building and simulate the intended changes with these tools.

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EX MUNCH MUSEUM

envelope and its surroundings. The design proposals of this first semester showed a deep understanding of the context in which the building is embedded: the urban and social conditions of Tøyen as well as the historical context. The student projects were exhibited as part of the Oslo Architecture Triennale held in the building in fall 2022.

If the design process of the first semester built upon the extensive input provided by the tutors, the second semester in winter 2022-23 aimed for the opposite: namely, to start the exploration and interpretation of the building with a mindset as detached as possible from predefined observations. Rather than looking to create a rational relationship between the students and the building on the basis of collected knowledge, data and history, we wanted to allow for the development of a connection that was not predetermined but individual and empathetic.

### FOR FRAGMENTARY INTERVENTIONS

Let's understand the transformation of the fragment as a potential moment of change for the entire organism! A small intervention can often represent the best possible connection! This request was the guiding principle of our pedagogic approach, determining the individual stages of the work as well as the chosen tools.

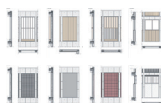
Students first looked at selected reference projects in order to understand different design approaches to dealing with existing buildings. The working tools defined for this discussion (1:25 models presented with photos, hand drawings and texts) were then also used in the building analysis and design process.

On the studio trip to Oslo each student selected a specific fragment of the former Munch Museum and spent several days on site in their chosen space, creating large pastel drawings, hand sketches, photos and texts that would form the basis for the 1:25 models they built on their return to Vienna.

Together, as a group, we achieved a very close, precise reading of the building's diverse spatial qualities. A discussion of each individual fragment in relation to the others and to the overall building complex led to the development of selective design interventions in the building structure. Working with punctual transformations not only allows students a precision in the elaboration of their design; it also reflects an approach to adaptive reuse that we find relevant.



5 Jonas Ramoser, Anna Romanous, Tøyen House for Children



6 Ramona Dörner, Leonie Munro: The Catalogue of Windows



7 Munch Full/Munch Empty/What's Next? Exhibition with posters of six student projects from the 2022-23 design course, Oslo Architecture Triennale, 2022



8 The students spent several days at the Ex Munch Museum and made large pastel drawings of a selected spatial fragment.

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STUDIOS

*"The element's existence does not precede the existence of the whole, it comes neither before nor after it"*<sup>4</sup>

Empty buildings like the museum in Tøyen represent an opportunity for communities that otherwise lack the resources and connections to put their projects and ideas into effect. Undertaking a complete renovation of a vacant building is often not feasible economically, but in many cases it is also simply not necessary. Good architecture can arise from a suitable understanding of beauty, functionality, comfort and convenience.

The design process and discussions between students, tutors and invited guests created an awareness of how it is possible to change the use, appearance and meaning of an entire building through small-scale interventions. It brought to light an affordable architecture with specific characteristics, able to live with blind spots while allowing for future developments.

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9 The students' pastel drawings were exhibited in the atrium of the existing building.



10 The 1:25 models were positioned on the 1:25 printed floor plan. The precisely elaborated fragments were discussed both individually and in relation to each other.

<sup>4</sup> Georges Perec, *Life: A User's Manual*, trans. David Bellos, London: Collins Harvill, 1987. Original title: *La Vie mode d'emploi*, Romans (Paris: Hachette, 1978).



STUDIOS

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EN

They call me 'the ruin'.  
Aged and unmindful.  
At times, I lose myself to the tiny fragments  
of the past, without reflecting on our future.  
Obliviousness, without the knowledge of oblivion.  
Without knowing what is yet to pass. What is  
long gone. No sooner had the rocks settled  
back into their designated place than I engulfed  
them into the abyss of my memory. Devoured  
them. Without remembering their absence.

They call you 'the time'.  
You manifested the body of my being. Froze  
me into my present shape. Trapped and inscrib-  
ed me within the layers of my surroundings.  
You keep your distance. Clutching onto my  
hand like a mother holds her child. Granting  
protection and purpose. Without stealing  
my histories.

They call you 'the path'.  
You nest your aching body in my sturdy envelope  
and assuage your pain in my senses. Without  
ever touching me. Never doing me harm, and  
yet the tension accumulates. Tension that you  
disregard. You hold on tightly, as if it were the  
core of your existence.

You are the path. You are the time. Freezing.  
Constantly freezing. And yet, without you I  
cannot exist.  
I am the ruin.

DE (original)

Ich bin die Ruine.  
Alt und Vergesslich.  
Manchmal verliere ich mich in kleinen Frag-  
menten der Vergangenheit ohne an unsere  
Zukunft zu denken. Vergesslichkeit, ohne  
zu wissen, dass man vergisst. Ohne zu wissen,  
was noch kommt. Was längst vergangen ist.  
Kaum findet jeder Stein wieder an seinen  
Platz zurück, so habe ich ihn wieder in meiner  
Erinnerung verschlungen. Verschluckt. Ohne  
zu wissen, dass er jemals gefehlt hat.

Du bist die Zeit.  
Hast mich in meiner Gestalt manifestiert.  
Erkalten lassen. Gefangen und eingeschrie-  
ben in die Schichten der Landschaft. Du  
trittst mir nie zu nahe. Hältst mich an der  
Hand wie eine Mutter ihre Tochter. Gibst  
mir Schutz und einen Sinn, aber raubst mir  
niemals meine Geschichte.

Du bist der Weg.  
Legst dich in meine starke Hülle und suhst  
dich in meinen Gefühlen, ohne mich jemals  
zu berühren. Ohne mich zu verletzen und  
doch haust du Spannung auf. Spannung, die  
du nicht beachtest. Die du vor dich hinträgst,  
als wäre sie der Grund deiner Existenz.

Du bist der Weg. Du bist die Zeit. Kalt. Immer  
fort. Kalt. Aber dennoch: Ohne dich gibt es  
kein Mich.  
Ich bin die Ruine.

(left) FABIAN BRIGMANN AND PAUL WINKLER built a 125 model of the foyer of Sala Beckett in Barcelona by Flores i Prats that conveys the collage-  
like character of the space, combining existing constructions and surfaces with new elements and details.  
(right) AMY ESTERMANN AND DARIA VIDAK'S text is a homage to the Museum Donkirkheaden in Hamar by the Norwegian architect, Svein Fehn.  
They take the perspective of the existing heritage building and poetically describe its relationship to the new elements added by Fehn.

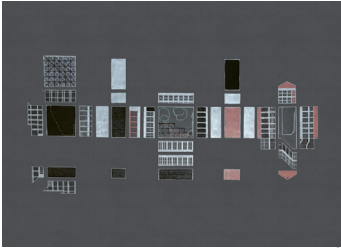
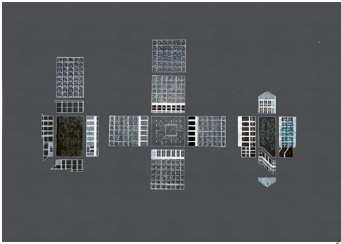
EX MUNCH MUSEUM

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In order to fully understand the spatial  
qualities and materials we used the tech-  
nique of overlapping photos of the existing  
situation with drawings of new spatial  
situations and structural elements. In this  
way we manipulated the original image to  
integrate additive or subtractive  
changes without losing the distinct  
character of the space.  
AMY ESTERMANN, DARIA VIDAK



The approach to a reuse project is  
very different to a new building.  
You don't jump into the project right  
away with crazy ideas but take your  
time to maybe fall in love with frag-  
ments. Realising that it is less about  
leaving a footprint as a new architect,  
and more about trying to complete  
or complement another architect's  
work, is an important step.  
MARLENE HÖPPNER, LEA NOTSCH

AMY ESTERMANN AND DARIA VIDAK worked with collages, overlapping photos of the existing situation from important viewpoints with their hand  
drawings to explore the possibilities for transformation.

MARLENE HÖPPNER AND LEA NOTSCH worked with expanded floor plans showing the room sequence in the central north-south axis. The surfaces  
of the walls and floors can be related to each other in the analysis of the existing spaces and in their transformation into a plant nursery.



HARDWARE/SOFTWARE

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## STUDIO BRIEF

# FROM STATIC FRAMEWORK TO EVOLVING LIVING ENVIRONMENTS

### Artem Kitaev

ARCHITECTURE OF CRISIS

We live in a rapidly changing world - economically, climatically, politically and culturally. As we transition from an industrial society to an information society, traditional methods of constructing infrastructure are no longer fast or flexible enough to meet the ever-evolving needs of users. This necessitates continuous adaptation of the built environment, typically through the demolition of existing structures and the construction of new ones.

Constant demolition of recently built, structurally sound buildings and new construction makes the construction industry one of the most ecologically harmful in the world.

Sometimes, building requirements change faster than concrete can set, leading to constant reconstruction and the demolition of recently built, structurally sound buildings. The gap between a building's obsolescence and its structural deterioration has become inevitable. The adaptation of existing structures is still often considered riskier than the construction of new ones,

without accounting for the unnecessary consumption of non-renewable resources. This makes the construction industry one of the most ecologically harmful sectors, with the building sector responsible for almost half of global CO2 emissions.

'Hardware/Software in architecture' is an attempt to imagine an alternative approach to the design and construction of buildings.

Acknowledging the inevitability of buildings undergoing unforeseeable changes, the concept proposes architecture designed for change from the outset. The building consists of two main parts: 1) an everlasting structure (Hardware) and 2) a flexible, functional infill (Software). The Software can be easily adjusted to accommodate new functions, while the Hardware remains untouched, addressing urban, architectural and aesthetic challenges. Just like in IT, where updating an application doesn't require buying a new computer, buildings can evolve without complete reconstruction.

HARDWARE/SOFTWARE

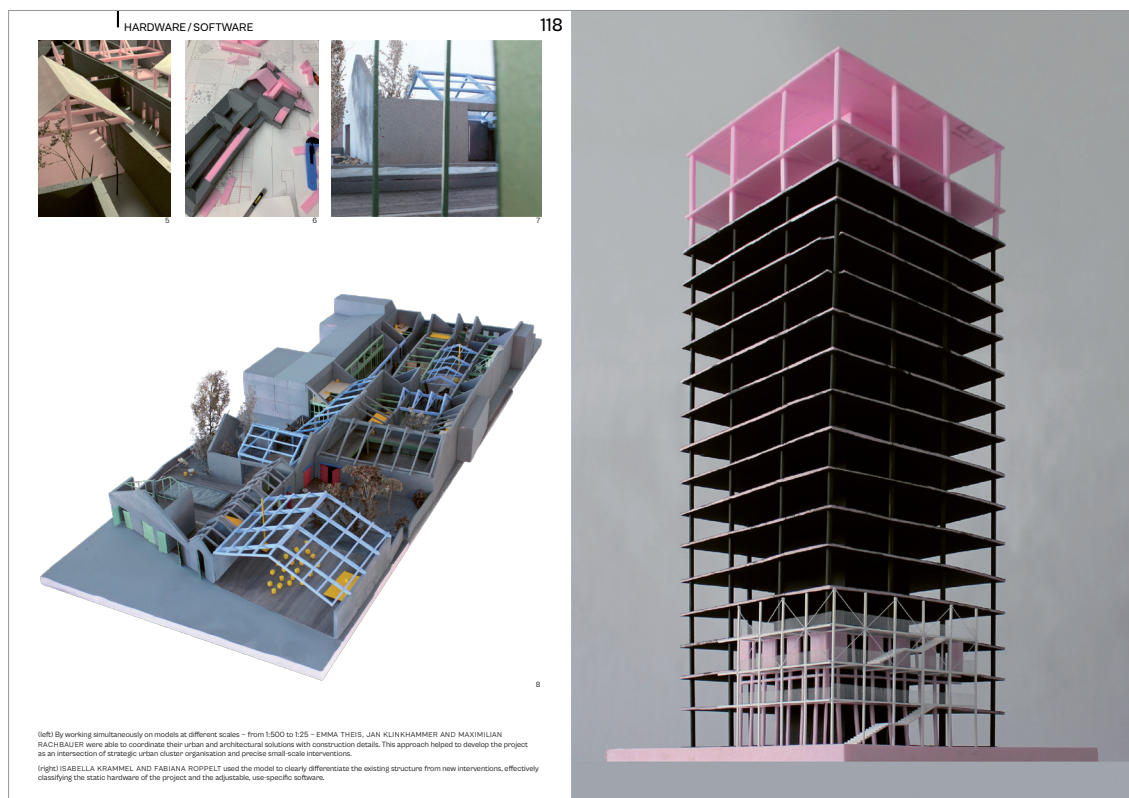
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LISA FELLIN AND URSKA RADULOVIC'S analysis of Valerio Olgiati's 'Yellow House', illustrating that at times a building's new identity can emerge from beneath thick layers of plaster.

STUDIOS

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ISABELLA KRAMMEL AND FABIANA ROPPELT, through their analysis of the transformation of a 1960s restaurant into the Garage centre for contemporary culture, demonstrate how an outdated structure can be effectively encased in a new translucent skin, creating a dynamic environment at the intersection of old and new.





CITTÀ APERTA

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STUDIO BRIEF

THE TRANSFORMATION  
OF TWO WAREHOUSES IN  
CAMPO MARZIO, TRIESTE  
INTO A BUILDING FOR  
SOCIAL INTEGRATION

Lorenzo De Chiffre,  
Katharina Paschburg

Trieste's harbour once served as a major hub for trade and logistics, facilitating a direct exchange between the docks, the railway and the city. Today, the harbour infrastructure is largely defunct, but these points of connection still handle flows of people - arriving, staying for a while, and moving on. The design studio will develop short-term, temporary and permanent housing for two of the disused warehouses in the area, bridging the gap between the port and the city centre. In addition to providing accommodation, the focus will be on integration and urban inclusion - on making a place that fosters social interaction and community living.

The idea of the 'open city' should be understood not only at the socio-cultural level of use but also more literally, in terms of opening the doors of vacant buildings near the city centre. The studio investigates buildings formerly used as logistics infrastructure for their transformative potential, looking at how the robust structures can be adapted or extended to make new spatial configurations, with an emphasis on creating comfortable, communal living spaces - on observing and integrating architecture and its users.

CITTÀ APERTA

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BUILDING DESCRIPTION

TWO WAREHOUSES IN  
CAMPO MARZIO

Approaching from the harbour, the two warehouses can be seen on the left (east) side of the alleyway, opposite a row of gabled buildings. Further down, past the warehouses on the left, is the historicist building of the university's philosophy faculty, while the alley ends in steel gate leading to the parking lot for an eight-storey residential building perched on the hillside of San Vito.

Although the two warehouses have roughly the same volume, they differ in structure and spatial quality. The first one, at no. 6, has the letters **SIDERURGICA COMMERCIALE** (commercial steelmaking) emblazoned on its long street-facing elevation, which has an articulated cornice, a decorated central entrance and a rounded corner at its southern end. The interior is defined by a grid of sandstone masonry arches. In the north corner, where the building is attached to its neighbour, a staircase leads to a mezzanine and the roof level. The roof is flat, the original pitched roof having been lost to a fire. Behind the warehouse, the neighbouring residential block stands conspicuously close to the party wall, leaving only a narrow wedge-shaped gap between the buildings.

The second warehouse, at no. 8, has a more complex shape and structure: its western part, facing the street, has a rectangular footprint, whereas the eastern part to the rear has a polygonal outline. The former is dominated by four tall wall segments that subdivide the main space into three naves; the latter has an arched structure similar to the other warehouse. The exposed timber roof structure in both parts of the building also sets it apart from the more neutral spatial quality of the elongated building at no. 6, with its flat ceiling. The exterior of the compound volume is dominated by large arched openings, some of them bricked up.

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1 Warehouse 6, interior

2 Warehouse 8, interior

3 Exterior of warehouse 6

<sup>1</sup> Andriana Maassen-Milan, "Androna Campo Marzio", l'arsenale perduto. Genesi postindustriale triestina, tra acciaio e destino della portualità, in Città mediterranea in trasformazione. Identità e immagine del paesaggio urbano tra Sette e Novecento ed. C. de Seta and A. Buccaro (Naples: Edizioni Scientifiche Italiane, 2014), 553-676.

## SPECULATIVE VISIONS *Collages and diagrams*

A project begins with the gathering of the key information that forms the basis for the design process. Once the parameters that influence the scope and possibilities of the project have been understood, the challenge is to synthesise the available information into a definitive concept. This systematic analysis also needs to be complemented with an intuitive and spontaneous approach. Given the time constraints of the semester, students were tasked with creating a programmatic 'drawing of intent' and a speculative vision for their project in parallel.

This dual assignment encouraged the students to consider diverse approaches to programming the buildings and their latent potential. Through 'searching by sketching' they tackled volumetric questions, such as how much mass to add or subtract from the building, and considered how the new elements could coexist with the old - whether by contrast, merging or building onto the existing structure.

Another key aspect was developing a speculative social idea addressing specific user groups. Integrating new uses and adjusting them to existing spaces can lead to the invention of new, unexpected living concepts. The students' speculative visions created an interesting juxtaposition of functionally innovative concepts within the rigid structures of the existing buildings.

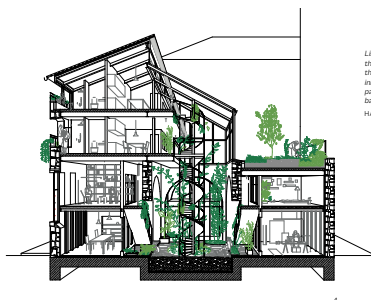


We collected different references from films and paintings, drew images of what an integration house means to us and turned them into a mosaic. We learned that architecture is not static, and our intervention is interwoven into an evolving environment.

MATEI TULBAN,  
VALENTIN BURTSCHER



VALENTIN BURTSCHER, FILIP MARCETIC AND MATEI TULBAN speak from the perspective of the building: 'Here, in Campo Marzio, lights are glowing as my arches sway to the dance of the music they've all gathered for. Together, they cook, celebrate, and laugh, and I begin to come alive.' Collages and sketches atmospherically transport their visions.

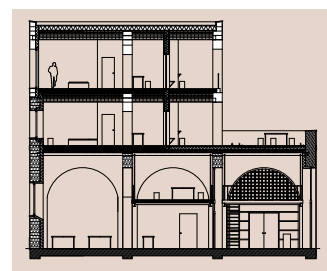


Liselotte mainly worked on the drawing, and I worked with the model. Even though it might initially seem redundant, this parallelism became a productive basis for our dialogue.

HANNAH NUSSE

Working with the model made me realise that it is not always necessary to demolish a bit. By experimenting with different configurations of space in cross-section and using sectional perspectives and axonometric drawings, I better understood the spaces of the warehouse.

MAX DONAUER



LISELOTTE BILAK AND HANNAH NUSSE developed their design interventions in parallel, working at the same time on a sectional model and a constructive section combined with a sectional perspective. This allowed for a simultaneous examination of constructive details relating to the building section and the overall arrangement of spatial subdivisions, stairs and the roof extension.

LEON PAUL HENSLE AND MARIA GIKONOMOU also worked synchronously. A balanced interplay between continuity through vertical additions in massive construction and lightweight insertions into the heavy existing structure is addressed constructively in a detailed section and spatially in the model.