Practices

In Research

Re-Mediating

Practices

In Practice
interuniversity research group
of practising architects

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CONTENT

Re Mediating Practices

Exploring Circularity's Impact on Representational Instruments and Design Processes in Architecture

The Practices in Research journal is an initiative of In Practice, an interuniversity research group of practising architects that places architectural practice at the heart of research. In Practice explores the multiple ways in which architects can engage their professional practice within academic research, and vice versa. Practices in Research (PiR) is an online journal for practice based research in architecture and related disciplines, based on a selection of contributions to a conference. PiR examines how architectural practices engage with and contribute to research.

For PiR, practice is never reduced to an illustration of theory. Conversely, research is not reduced to the observation of practice. PiR seeks contributions in which research and practice mutually enrich one another, and in which practice is essential as a subject, a modality, a perspective, or a combination thereof. While contributions are expected to

remain closely connected to practice, they are not limited to its presentation or documentation. Instead, they take a step beyond practice as such, articulating, exploring, and revealing reflections within the architectural field.

PiR also invites creative forms of communication, questioning the conventional hierarchy between text and image. Visual and written narratives are understood as operating in multiple, reciprocal ways: images are more than illustrations, and text is more than explanation.

This issue, Re Mediating Practices, is based on a call for contributions published in January 2025. The following paragraphs were part of the initial open call:

In the pursuit of an actual and pertinent attitude, architects are increasingly committed to working with the materials and structures that already exist. This practice—rooted in re use, reclamation, harvesting, and urban mining—challenges architects to embrace the unpredictability of what is available. Whether reimagining a structure or harvesting materials from demolition sites, they must navigate fluctuating quantities, variable qualities, and unexpected dimensions, colours, textures, and technical performance.

This unpredictability demands a mindset of resilience and adaptability from designers. Re use is not only about what remains of the material world, but also about how architects reimagine their own practices, relinquishing certainty and control in favour of experimentation and resourcefulness. To engage meaningfully with these constraints, designers must

let go of traditional aesthetic ideals as dominant drivers, instead embracing imperfection, irregularity, and serendipity.

How do architects thrive in this space of uncertainty? What instruments, methods, and processes enable them to work creatively within the flux of material availability? How do they reframe constraints—such as limited supply or inconsistent quality—not as barriers but as opportunities to uncover unexpected potential in existing resources? And what new aesthetics and spatial practices emerge when beauty is no longer defined by precision or uniformity, but by adaptability and responsiveness?

Urban mining, harvesting, and reclamation require architects to think in terms of flows: flows of materials, energy, and information. The availability of materials is contingent not only on demolition or deconstruction schedules, but also on logistical challenges, evolving regulations, and the inherent unpredictability of what is salvaged. How do architects design for this variability? How do they incorporate flexibility into their processes to align with what is available, when it is available?

Re use and reclamation are as much about unlearning as they are about learning. Architects must challenge established conventions of material perfection, the dominance of newness, and even the notion of authorial control over the design process. This work involves an ongoing negotiation between material realities and design ambitions, between available resources and project goals. How does this negotiation transform the role of the architect and the authorship of the project?

A preliminary selection of authors was invited to present at the Practices in Research conference at C.I.II.III.IV.A on 21 May 2025. Extended abstracts were made availablel in the conference proceedings. Following the event, a refined selection of contributors underwent a rigorous double blind peer review process for inclusion in the present issue.

All contributions in this issue were reviewed by two anonymous reviewers, in accordance with the journal's established review policy. The issue also actively supported and encouraged formats that challenge the conventional dominance of text over visual content. Several visual essays successfully underwent the same rigorous peer review process, offering complementary alternatives to more traditional articles.

Given the substantial increase in submissions, the issue is organised into thematic chapters that loosely mirror the conference structure. Across the contributions, a set of closely related concerns delineates the contours of contemporary circular and reuse driven architectural practice. Authors engage with material uncertainty, examining how variability in the quantity, quality, and performance of salvaged materials actively informs design decisions. Through processes of reclamation and contextual mining, new design methods and representational tools emerge to integrate existing materials, structures, and knowledge into architectural projects. This shift gives rise to distinct re use aesthetics, in which established aesthetic conventions are loosened and design outcomes are shaped by availability, contingency, and material histories rather than prede-

termined ideals. Operating within such conditions requires a heightened degree of resilience and adaptability in design practice, as architects navigate open ended and unpredictable processes. At the same time, several contributions highlight a human centred shift, foregrounding collaboration with owners, users, builders, and local experts as an integral component of circular workflows. Finally, a number of projects resist predefined categories, advancing de normed and de categorized approaches that challenge conventional typologies and open space for alternative modes of practice.

To conclude this issue, the Editorial Board invited Elodie Degavre (UCLouvain), Juliane Greb (Büro Juliane Greb, UAntwerpen) , Tine Segers, (UAntwerpen) and Cristian Ștefănescu (A-Works, BAS Bergen School of Architecture) to co author an overarching article reflecting on the initiative's setup and contributions. Their text offers a thoughtful synthesis of the coherence and diversity of Re Mediating Practices. They observe that circularity and practices of adaptive reuse can no longer be understood as purely technical concerns, but are instead profoundly reshaping the nature of architectural work itself. Drawing on the concluding panel discussion held at the end of the conference, they identify a set of recurring themes—uncertainty, archiving, collaboration, pedagogy, and scalability—that together outline a profession in transition, negotiating new modes of practice at the intersection of environmental responsibility and cultural imagination. While not peer reviewed, the contribution complements the intentions of the Editorial Board and the institutions represented.

Heartfelt thanks are extended to all contributors, advisors, reviewers, and members of the Editorial Board and Scientific Committee. Their collective engagement has significantly deepened and expanded the journal's reflective scope, fostering meaningful discourse on contemporary architectural practice.

Harold Fallon, Tomas Ooms
Editor in Chief and Associate Editor
PiR #06 – Re Mediating Practices

CHAPTER 1
MATERIAL UNCERTAINTY

No Time to Waste

On salvaged materials tectonics

Matthieu Brasebin
Elisabeth Terrisse de Botton

brasebin terrisse

No Time to Waste is an experimental installation developed for the 2024 Tallinn Architecture Biennale in response to the theme *Resources for a Future*. Conceived as a 45-meter-long canopy for bus stops in Tallinn's Balti Jaam square, the project reimagines the industrialized bus shelter archetype of the 1960s by exploring how public space and alternative construction methods can emerge from circular material practices.

From the outset, the project's central challenge, and equally, its defining opportunity was the impossibility of predetermining the outcome. The competition brief demanded a complete proposal built from unspecified, locally salvaged materials. Instead of presenting a fixed design dependent on speculated resources, we developed a framework of adaptable principles capable of responding to whatever materials ultimately became available.

Gabion walls, reinterpreted as architectural display elements, provided a porous structure that foregrounded waste as newly valuable material, embracing irregularity over standardisation.
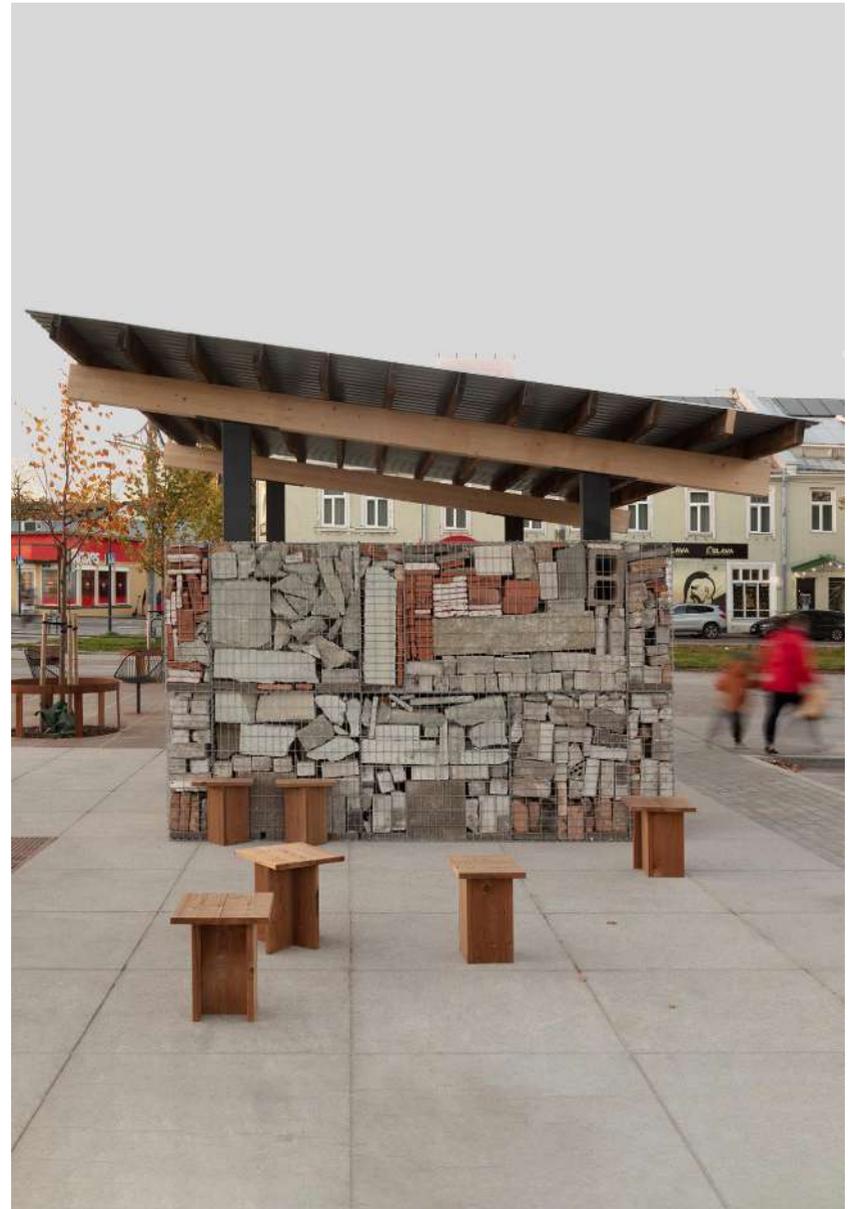
"Building from leftovers demonstrated that materials also have a metaphysical meaning, not just an architectural-conceptual purpose."
Ruuben Jan Rekkor, No Time to Waste production and construction leader team.
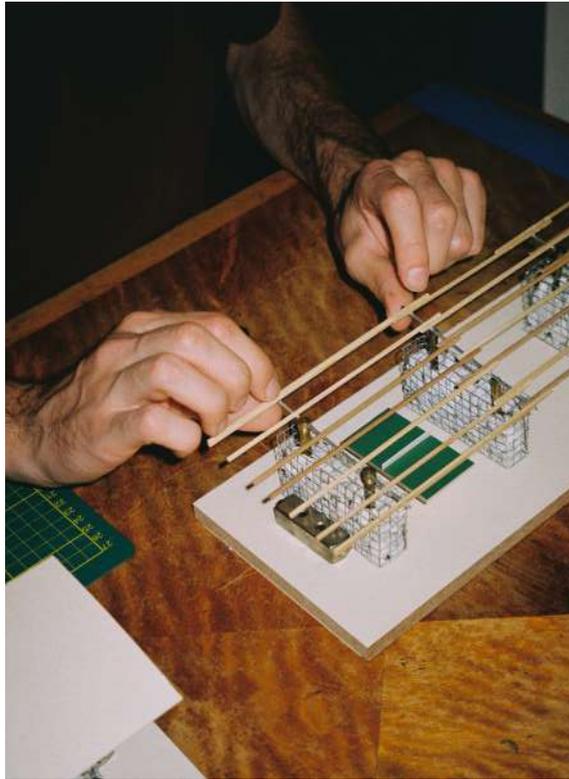
We had the opportunity to explore non-canonical construction processes through the project *No Time to Waste*, from early design stages to the finished prototype.
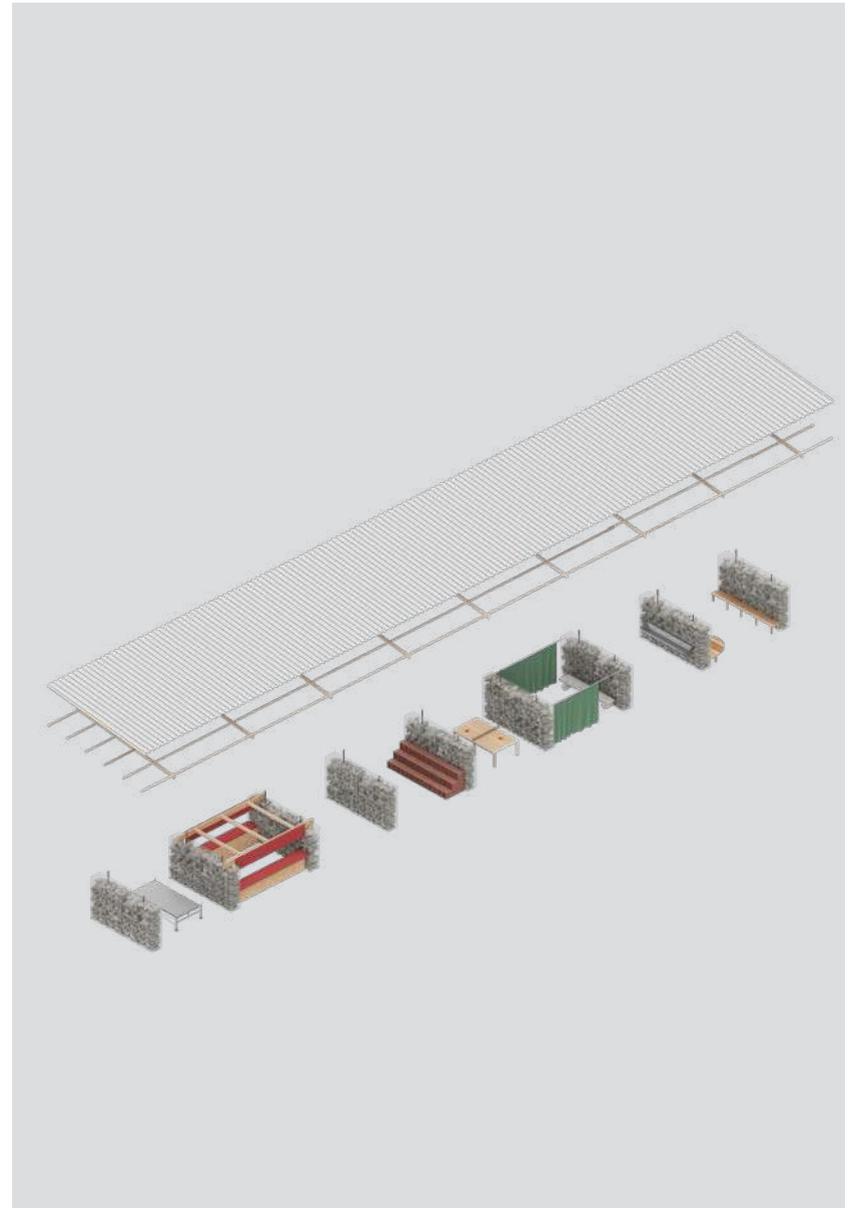
Learning from the mock-up, the entire pavilion could be reassembled after the Biennale. Its sequence of walls defines multiple covered rooms, open to diverse forms of appropriation. The pavilion becomes an active social infrastructure, transforming the idle act of waiting for a bus into a shared, communal experience.

Architectural
Elements

Design
Strategies

Roof ——— Cladding

Beams ——— Assembling

Walls ——— Filling

1. Standardized Bus Shelter; 2. Vernacular Hut; 3. Marc-Antoine Laugier "Cabane primitive".

The pavilion was composed using primary architectural elements: two walls, a structural grid, and a roof. Here, actions - such as infilling the walls, articulating the beams, or cladding the roof became more important than the nature of the material itself.

The assembly of multiple components creates a composed architecture in which each part performs according to its own structural logic yet contributes to a unified shelter. Combining reused elements with standardized gabions and irregular waste infill, the project merges vernacular construction practices with contemporary techniques.

Herzog & de Meuron, prototype for Dominus Winery

Reclaimed elements, sourced from demolition sites, waste disposals, and discarded industrial stock, were employed *as found*, embracing the unique state of each piece.

While some materials retained their original architectural purpose; others, often categorized as waste, were carefully re-purposed with intention and care.

Acting both as external foundations and display artefacts, the walls are filled entirely with demolition waste and held together by stainless steel cages instead of relying on traditional mortar joints.

"Placing the stones, when you don't have to worry too much about molding, mortar, and alignment, is quite fun. You can think about your ideas and figure out where the next piece of stone might fit."
Ruuben Jan Rekkor, No Time to Waste production and construction leader team.
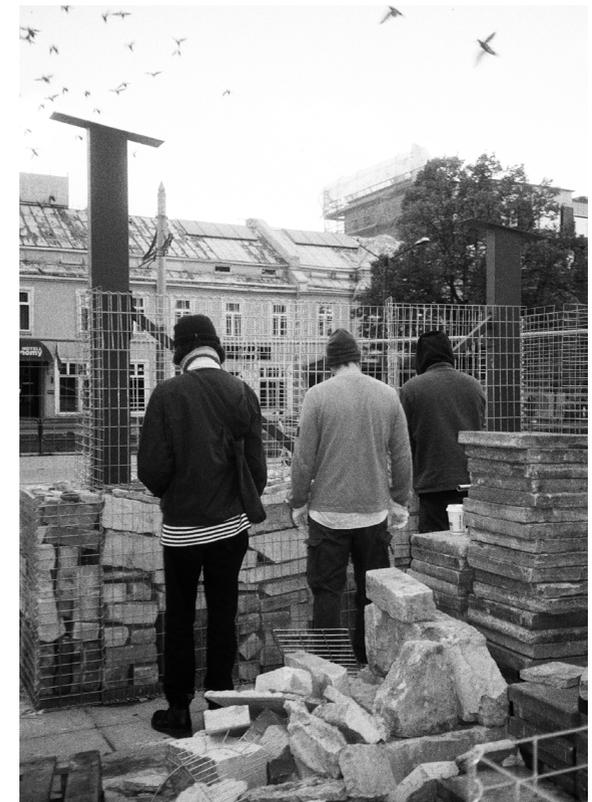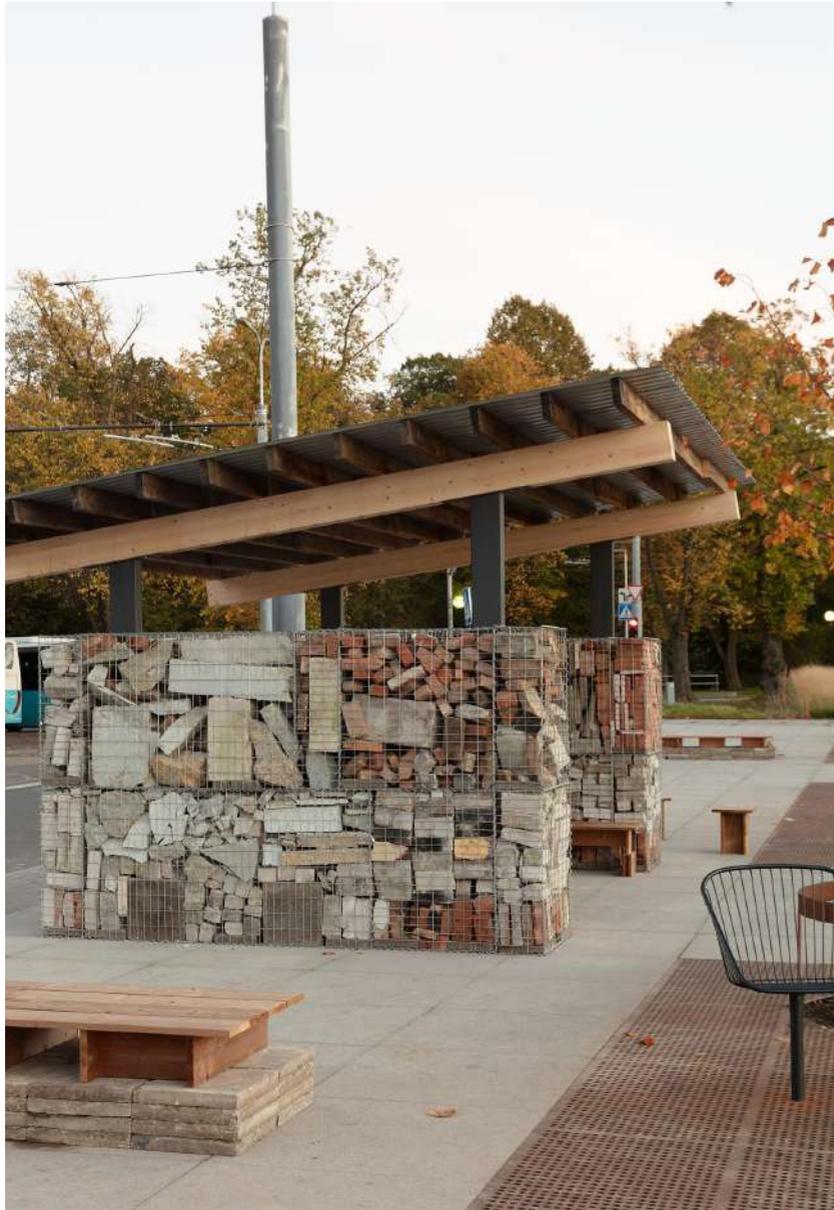
This flexible system can accommodate a wide range of salvaged materials, reflecting both the unpredictability and aesthetic richness of reused matter. In this way, the wall becomes more than a structural partition; it reveals the latent metaphysical significance of the materials themselves.
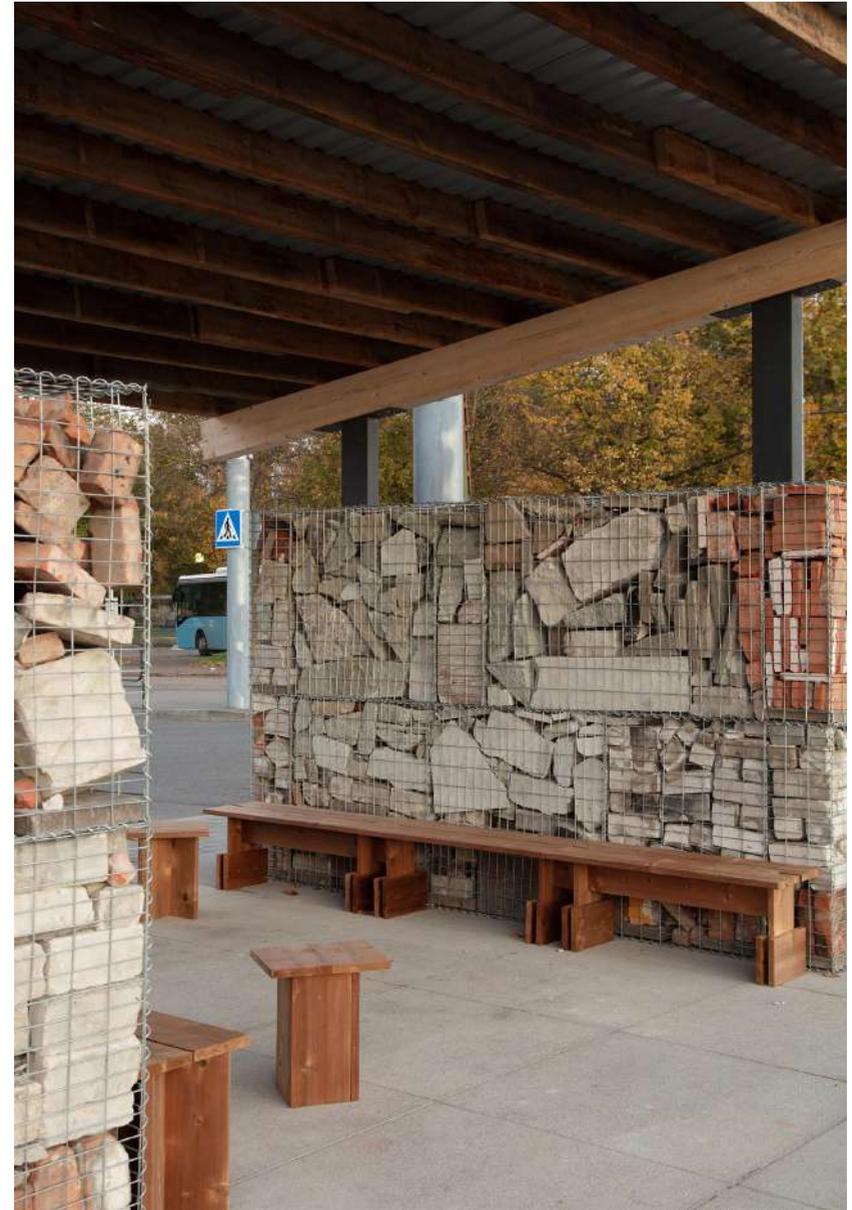
The materials, once considered debris, take on new value as cultural and temporal fragments. The method of their assembly — one that celebrates the inherent irregularities and imperfections — highlights the hands-on technique involved in the process.

It embraces a more human-scale, hand-crafted and sensitive approach, where the material's individual character is celebrated rather than hidden. Through this, the pavilion becomes not just a physical structure but a metaphor for the evolving role of architecture in a post-consumer society where every discarded object has the potential to find new life and purpose.

images © Gregor Jürna (finished prototype) © Elisabeth Terrisse de Botton (process)

DETERMINED IN UNCERTAINTY

Unfolding stories for the conservation of City Hall Diksmuide

Gert Somers
Jonas Lindekens
Sara Verleye

ono architectuur

Restoration has long been a pioneering field in the reuse, repair, replacement, and addition of materials. Throughout history, the methods and legibility of these interventions have been the subject of theoretical debate, notably by figures such as Ruskin and Viollet-le-Duc. Today, heritage projects often operate within a subsidized framework that favours conservation—frequently interpreted as the literal restoration of listed buildings to a specific historical period. However, this material- and labour-intensive approach is increasingly at odds with contemporary ecological awareness and the pursuit of more enduring, meaningful interventions over time.

The project under discussion is the City Hall of Diksmuide, a UNESCO heritage site that overlooks the Grote Markt as its central, noble presence. At the same time, the building embraces a more intimate, yet neglected space at its rear. This area has been transformed into a domestic-scale square featuring the new main entrance, which includes an accessible slope and a welcoming reception area, framed by a newly designed fence.

Parking space at the rear of the city hall.

A new domestic space for encounter.

The building now accommodates multiple functions: in addition to serving as the city hall, it houses administrative services, the tourist office, and the city's archives and art collection.
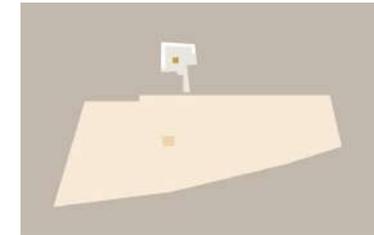
New domestic squre connected to the Grote Markt in Diksmuide.

In this project, literal restoration plays a role alongside more interpretive approaches to engaging with the existing fabric. Rather than imposing a singular, overarching restoration vision that seeks to constrain the monument, we embrace a process of discovery—allowing theories to emerge through what we encounter, design, and construct. We find that it is precisely in moments of uncertainty that opportunities for design arise. This paper explores five such moments encountered during the process, each related to a specific type of uncertainty: dimensional ambiguity, material quality, quantity of available materials, and construction complexity.

Throughout the essay, abstract diagrams are used. In these diagrams the red colour represents 'certainty' and blue 'uncertainty'.

Case I_A concrete bas-relief.

The current building is the result of post–World War I reconstruction by architect Vaerwyck. It quite literally rises from the foundations of the earlier City Hall by Delacenserie—remnants of which remain visible in the basement, where layers from different eras accumulate and intersect. This stratification became especially apparent in the newly constructed domestic square, nestled in the inner corner of the L-shaped historical structure. Here, a patio provides direct access to the old cellars, a World War I emergency room, and a newly added high-voltage cabin. While the layout and interconnections of the existing cellars could be mapped, the thickness of the underground exterior walls remained unknown during the design phase. This meeting of old and new introduced geometric uncertainty, prompting a layered design strategy: the upper layer addresses what is known and measurable, while the lower layer accommodates the unknown. The concrete bas-relief becomes a spatial and material response to this duality—an adaptive design that embraces both certainty and ambiguity.

A concrete bas-relief accomodates uncertainties in dimensions.
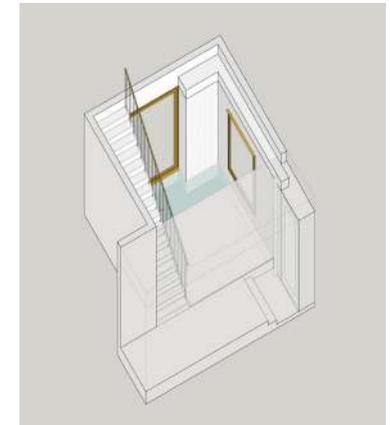
Isometric view of the double-layered design.

Old and new meet with geometric uncertainty during the design process.

Archival drawing of the design method for the concrete bas-relief.
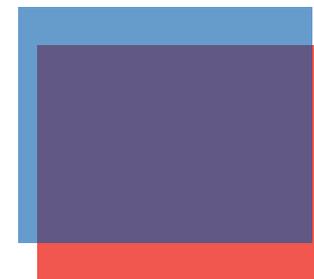
accomodating certainty and uncertainty in a determined adaptive design
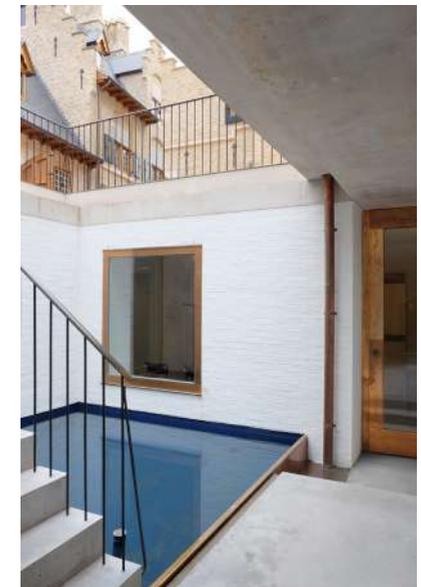
New patio linking the square with the archives, WWI emergency room and high voltage cabin.

Case II_Running out of tiles.

In one room, the original tiles were carefully removed and reused following the integration of new technical systems. However, breakage during this process led to a shortage of salvaged tiles, which was resolved by supplementing with new ones to complete the floor. New plinths were installed alongside the new tiles, but matching plinths for the old tiles were unavailable. As a solution, paint was used to visually complete the image. Here, the significance lies not in the resulting pattern, but in the recognition of paint as a material in its own right—capable of contributing to the architectural expression. This approach, which we refer to as painterly tectonics, was extended to other parts of the building, where paint proved to be a lightweight, agile, and cost-effective material.

Destructive and visual examination during the design study reveals cladding and imitation of materials.

Our confidence in this strategy was reinforced by discoveries made during preliminary investigations: wooden beams appear to be clad concrete; steel nails turned out to be black-painted wooden decor; and the steel anchors tying the façade were purely ornamental. This case illustrates how moments of material uncertainty can spark new narratives and design strategies within the broader project.

A tile pattern that shows when abruptly running out of tiles. This moment gives rise to a painterly tectonic that diverges throughout the larger project.

A corner stone of paint.

The painterly idea of a hinge plate.
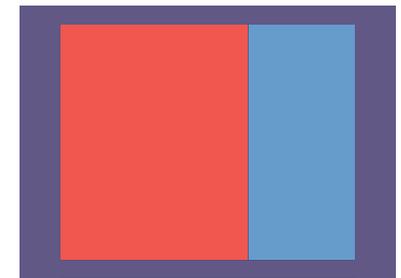
moments of uncertainty can provoke new narratives throughout the larger project

Case III_Duo toned confetti.
During construction, the originally planned polished concrete for the square proved too thick, prompting a shift to a tiled solution. Existing factory tiles covering part of the square were supplemented with a similar batch—slightly different in surface texture—found in an old warehouse. To avoid emphasizing the discrepancy, the tiles were mixed together in a scattered arrangement, resembling two-toned confetti.

Existing partially tiled square.
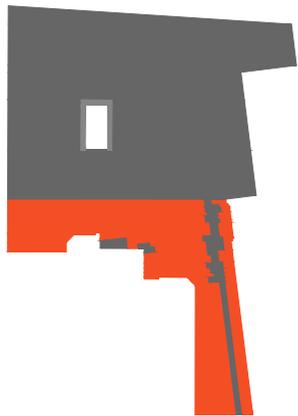
The square with the existing pavement, with to be recovered tiles shaded in red.
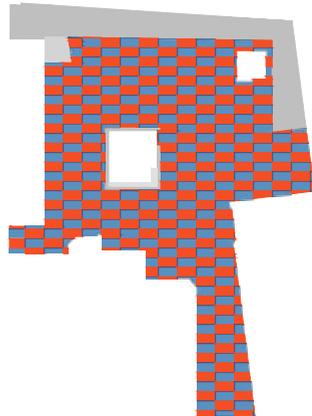
The square fully finished with tiles, in a patchwork of old and new.

This approach created visual cohesion through deliberate fragmentation, balancing certainty and uncertainty in a playful yet intentional composition. The result is not merely a workaround, but a design gesture that embraces imperfection and celebrates adaptive thinking.

Sorting of old and new tiles on site.
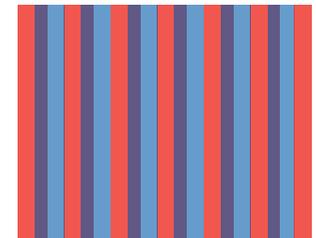
certainty and uncertainty in a mutual balance

Case IV_A (un)clear cut.

To open up the rear of the building, five existing windows were transformed into open porticos. This required cutting away the brickwork beneath each window—from sill to floor—with the intention of creating a clean, precise cut on both sides. The envisioned contrast between the smooth surface of the newly cut yellow bricks and the rugged texture of the existing opening was central to the design.

However, once the large saw was in use, a different reality emerged. Adjacent to the windows, the brickwork was not continuous, nor yellow—it was red, deteriorated, and structurally compromised. Instead of removing bricks, we were compelled to add new ones. The carefully imagined contrast between smooth and rugged surfaces was at risk of being lost.

Despite this unexpected condition, the original design vision remained a guiding force. The rugged areas were selectively tidied, missing bricks were replaced with reused ones, where visible surfaces were cut smooth. This process resulted in three distinct types of brickwork: the untouched rugged existing sections, the existing bricks smoothly cut by the saw, and the smooth newly added bricks laid in a fresh masonry bond.

A new narrative emerged—one that intertwined the certainty of the imagined proposal with the unpredictability of the building's material reality.

The big saw at work.

The surprising result putting the initial idea at risk.
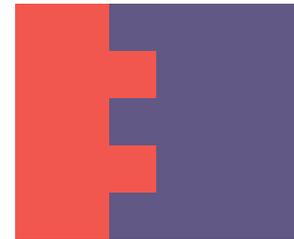
a new narrative entangles with the certainty of the imagined proposal

New, smooth bricks in a bond with the existing ones.

Case V_A dressed-up detail.

For the drainage of the square and surrounding roofs, the existing floor construction proved too thin to accommodate integrated piping, while the anticipated water flow was too high for open gutters. This led to an unexpected rerouting of drainage pipes through the public art depot—an unforeseen consequence of underestimated parameters in the existing structure. Faced with this challenge, a corrective design was required. The drainage tube now passes beneath concrete beams, enclosed in a felt-clad detail. In this moment, uncertainty overtakes certainty, giving rise to a new solution. Historically, these basement spaces were used to collect water from the building, forming a vast reservoir. Now, with new functions introduced, the imperative has shifted: water must be kept out. What initially seemed like a minor technical issue gains significance in light of this reversal. The attention given to this detail may appear disproportionate, but the necessity of keeping water out reframes its importance—transforming a small technical adjustment into a meaningful architectural response.

Dressing up a rainpipe with felt.

uncertainty takes over certainty
and gives way to something new

Uncertainty leads to unexpected piping in the art depot.

Historic narratives throughout the building offer a converging context for local interventions in conditions of uncertainty.

Conclusion

By offering insight into the design process across various cases of uncertainty, this paper identifies recurring design patterns and translates them into abstract graphical representations. In their abstraction, these patterns unlock lines of thought that hold relevance for other design processes—both in historical restoration and new-build contexts. We demonstrate how small moments of uncertainty can lead to specific tectonic decisions, sparking divergent narratives that ripple through the broader project. Conversely, we show how overarching narratives at the scale of the building provide a converging framework for local interventions in uncertain conditions. This dual dynamic reveals the generative potential of uncertainty and invites reflection on its role in shaping more sustainable approaches to restoration. Moreover, the paper advocates for flexibility in the construction phase. Current tendering procedures tend to fix the design before building begins, yet the cases presented here highlight the value of allowing design evolution during construction. These adaptive responses not only address unforeseen challenges but also enrich the architectural narrative.

accomodating certainty and uncertainty in a determined adaptive design
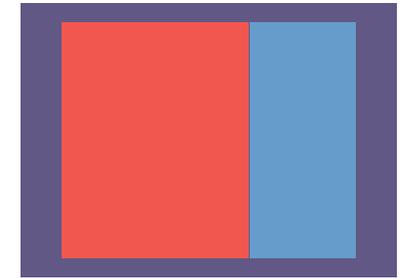
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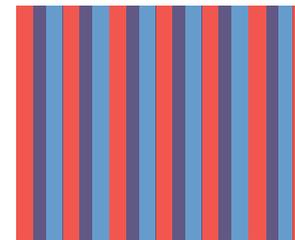
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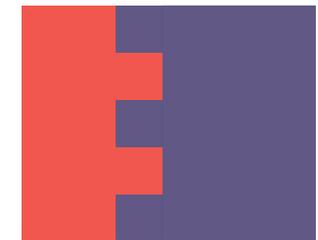
a new narrative entangles with the certainty of the imagined proposal

certainty

uncertainty

uncertainty takes over certainty and gives way to something new

ONE HAND WASHES THE OTHER

a story about the "Scarcity and Abundance: Making Architecture with What Is at Hand" studio

Tomas Ooms
Rémi Koumakpayi

KU Leuven, Faculteit Architectuur

Ester Bartekova, Markéta Marie Elbel Sólveig María Gunnarsdóttir, Judith Hoerder, León Hülsenbeck, Romy Khoury, Lennart Eric Knospe, Duncan Manthous, Francisco Nunes Pedro de Abreu Lopes, Noa Richard, Tianfang Shi, Yifeng Sun, Mirte De Wever, Leonhard von Zumbusch

In this studio, Faking it or Making it, students were asked to engage with the unpredictable conditions of material scarcity—not as a problem to solve, but as a context to build from. Each project began not with a fixed palette, but with what could be found, sourced, or salvaged.

What does it mean to "fake" or to "make" in architectural design? This was not just a theoretical provocation but a practical tension running through the studio—from first sketches to final fragments. The question was not answered directly, but tested again and again in detail, in construction, and in method.

Urban mining, reclamation, mismatch, imperfection—these became the studio's vocabulary. Fragments stood in for systems; gaps became openings for invention. Architecture was pursued not despite the lack of standard materials, but because of it.

If scarcity was the condition, then making was the response. But making, here, was rarely seamless. It meant assembling something meaningful—if not complete—out of parts that weren't meant to fit.

The studio, using real ongoing construction sites as hosts or donors, introduced a question each students had to grapple with and whose responses expressed the innovation sought after in the brief: "How can foreign reused parts be introduced into an empty frame in order to create a meaningful whole?" This article presents a taxonomy of answers to this last question through drawings crafted by the students.
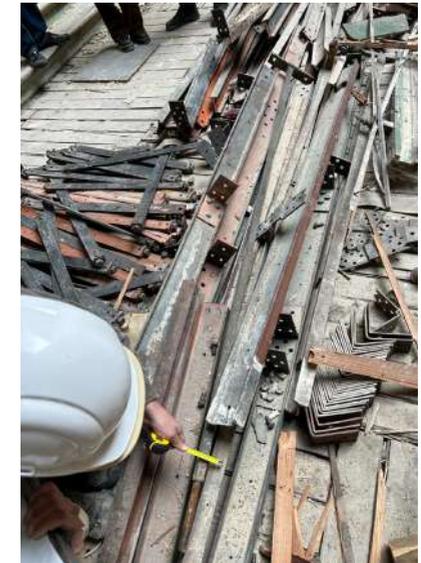
lost parts & found sites

Haut Marollen						
ID Number	Description	Application	Width (cm)	Height (cm)	Length (cm)	Quantity used
101	Wood, dimensional	Ramp bracing	3.8	20	<varies>	4/15
	Wood, mass timber	Temporary foundations	10	20	<varies>	30/30
102	Rebar	Railing guard rails	2cm dia	-	300	>300
103	Chain link fence	Flora fencing	n/a	200	300	10/50

Artveld						
ID Number	Description	Application	Width (cm)	Height (cm)	Length (cm)	Quantity used
104	Tile, glass, cratsman	Front facade	2.5	34	34	36/60
105	Steel I Beam, small profile	front facade / roof support	2	10	250	7/10
		front facade	2	10	150	8/50
106	Steel L shape bracket	roof & column connections	4	4	0.5	111/>100
107	Wood flooring	Pavilion flooring	5	1	25	>100

ATLAS						
ID Number	Description		Width (cm)	Height (cm)	Length (cm)	Quantity used
108	Steel frame stair case	Ramp structure	100	400	350	5/10
109	Translucent corrugated panel	roofing panels	100	10	150	86/90
110	Reclaimed facade bricks	circulation paths	11	7	20	4943
111	Steel cable	roof support	3cm dia	-	>10000	2600 cm
112	Corrugated steel sheet	roofing panels	100		300	2/3
113	Joist hangars	Roof and wall connections	10	30	-	9/9
			10	10		24/24
114	Dimensional lumber		10	30	1000	5/6
			10	10	500	6/12
115	Steel door		-	350	250	1/4
116	Steel structural column		15 cm dia	350	-	8/15
117	Glass block, textured		5	19.5	19.5	40/45

students measuring potential reusable elements on visits & reused element inventory by Duncan Manthous

a

b

c

d

e

f

g

h

BEAM A

COLUMN B

Steel Bar
W = 50 mm
Arteveld

Impregnated Beam
70*80*1500 mm
Atelier Circuler

Greenhouse Truss
400*20*6000 mm
HT Greenhouses

Steel Cable
Φ = 20 mm
Recy - Cable

Impregnated Beam
75*225*2000 mm
Atelier Circuler

Steel Cable
Φ = 20 mm
Recy - Cable

* Some materials have been cut, and the number with [ ] represent the cut size rather than the original size.

i

8 x 23 x 390

7 x 23 x 500

9 x 9 x 390

7 x 9 x 150

Railing E   Railing F   Railing G

j

PLYWOOD
gebruiktebouwmaterialen

INSULATION 12 cm
OPALIS

PLYWOOD
gebruiktebouwmaterialen

INSULATION
STAM

WOOD FLOORING
ARTEVELD

PLYWOOD SUBDECKING
STAM/recupecentrale

WOOD SLEEPERS/BATTENS
gebruiktebouwmaterialen

0   0.3m   1m   1.5 m

3 m

k

l

m

n

"transplant"/"a life for a life"

transfering materials from one site to another helping the elements outlive their former host

a - taking the opportunity of the D'Ieteren Building's situation for a détournement of facade materials into interior elements
by Lennart Eric Knospe & Leonhard von Zumbusch at Le Palace

b - when a loading deck isn't going to be kept in a renovation, cataloging its parts and rebuilding it across the street
by Judith Hoerder & León Hülsenbeck at ATLAS Breweries

"to reach out is to care"

reused materials enables visits which, in turn, generate interest and maintain the place

c - seeing an empty structure and detailing a chimeric staircase made of other staircases going up the tower
by Rémi Koumakpayi at the Dome

d - reused timber structure bridge and staircase opening up and spanning an unused site
by Yifeng Sun at Haute Marolles

e - to use reuse materials to set up the preliminary installations of an ongoing project and activating the site sooner
by Duncan Manthous at Haute Marolles

f - developing an elevated schoolyard to take advantage of the lost space of a projected design
by Francisco Nunes Pedro de Abreu Lopes at Haute Marolles

"to fix or to continue"

unintended parts are used to (re)vitalize a place's soul moving the future vision for the project forward

g - a study of an ongoing project and its redesign using material at hand
by Hugo Villa Gamboa at Haute Marolles

h - exploring «50 Ways of Fixing a Window Without a window» through found elements the rethinking of openings
by Noa Richard at STAM Europa

i - realizing the projected spatial layout and structure using secondhand timber elements and screens
by Mirte De Wever at P.A.R.T.S, Ictus, Rosas

j - redesign of projected circulation with reused material
by Tianfang Shi at Haute Marolles

"purpose instills life"

new parts implant a new meaning to the whole, be it close or far from the old one

k - completion of a new rooftop bar & terrace with reused material to reactivate the entire tower through gravity
by Romy Khoury at STAM Europa

l - given the material scarcity, the whole building is rehabilitated through transforming its cores into social spaces
by Ester Bartekova at STAM Europa

m - proposing a new layout of housing units which preserves the existing atrium and introduces new relationships with it
by Sólveig María Gunnarsdóttir at Arteveld

n - analysis of existing site and sufficient «reuse» interventions to activate its new purpose
by Markéta Marie Elbel at P.A.R.T.S, Ictus, Rosas

CHAPTER 2

RE-USE AESTHETICS

CC+
Current Condition Plus

A design tool for reuse practice

Gino Baldi
Serena Comi

VACUUM ATELIER architects

CC+ is an analytical and design tool to understand the intrinsic quality of a Current Condition. Through this methodology, drawings show the current condition (CC) before a project, becoming an added value (+) for a building. The graphical representation emphasise the artifact as found[1] with a color leaving the project grey as an unfixed element[2]. The topic presents a meta-project approach to architectural transformation, challenging fixed notions of heritage and demolition. Through case studies (A House Without a Roof, Legler Cotton Factory, SAB bus depot), one explores how constraints and resource scarcity generate new strategies for adaptive reuse. The proposed projects are placed in rural suburban contexts, characterized by strong contrasts: naturalistic landscapes dotted with abandoned structures, built areas completely empty crystallized in a state of decay. Using drawings and graphic coding, the method visually negotiates preservation, subtraction, and intervention, redesigning existing buildings as evolving artifacts.

Notes

1. For the Alison and Peter Smithson "As found" involves observing and valuing the existing reality, capturing its character, layers, and imperfections, rather than "cleaning up". It's a design approach that finds value in the real—materials, places, and uses.

2. In grey the project as an unfixed element. It is a drawing method that influences the design and the strategies adopted. In grey—subdued—the design strategy is suggested, keeping the focus on the preserved heritage. It assesses the adaptive qualities of the project, indicating possible adjustments and opportunities.

Bibliography

Boesch, Martin, e Joao F. Machado. "Why Yellowred?" In Yellowred: On Reused Architecture, di Martin Boesch, Laura Lupini e Joao F. Machado, 7.
Cinisello Balsamo: Silvana Editoriale, 2022; Mendrisio: Mendrisio Academy Press, 2017.

Brandlhuber, Arno, Olaf Grawert, Jonas Janke, e Roberta Jurčić. 2G B+.
Köln: Verlag der Buchhandlung Walther & Franz König, 2025.

Van den Heuvel, Dirk. "As Found: The Metamorphosis of the Everyday. On the Work of Nigel Henderson, Eduardo Paolozzi and Alison and Peter Smithson (1953–1956)." OASE: Journal for Architecture 59 (2002): 52–67.
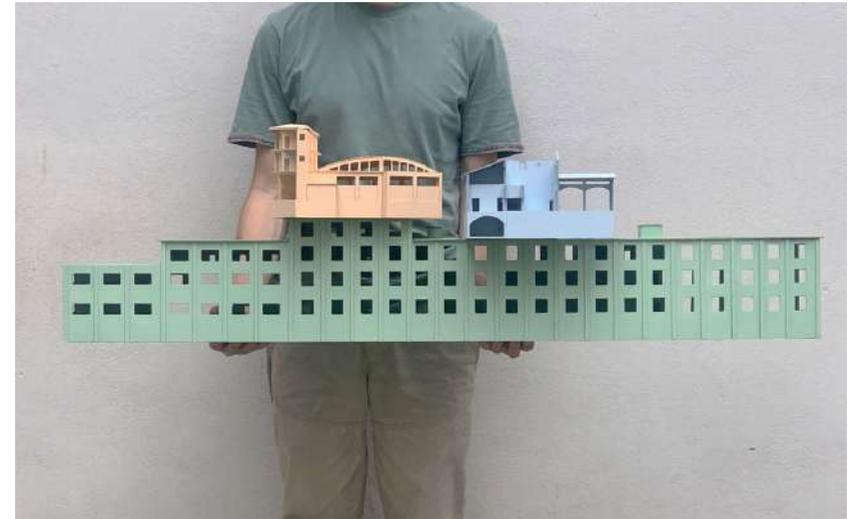
Imaginary landscape. CC+ demonstrates how a graphic code becomes a design approach based on minimal reuse of the existing structure. Keeping the original building visible allows the adaptability of proposed solutions to be assessed, ensuring spatial and volumetric qualities remain evident throughout the design process.

View of the rural-suburban setting. The project reveals the hidden order and latent potential of the context.
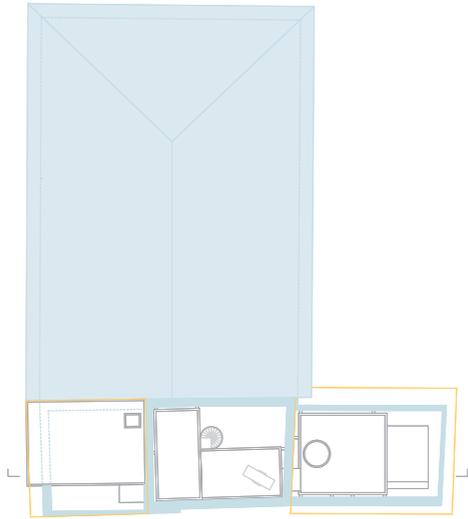
In A House Without a Roof, ruin—missing structural parts, roof loss, and encroaching vegetation—drives the concept. Material scarcity and fragility demand a non-invasive approach, following the CC+ methodology and avoiding total reconstruction. The project balances new volumes with the existing, negotiating continuously between inside and outside.

A House without a roof. The absent roof becomes an opportunity: voids transform into inhabitable spaces, forming gardens, courtyards, and interstices between nature and domesticity. Spatial and material possibilities enable adaptive reuse, transforming ruins into habitable spaces while preserving their original ambiguity. (photo Marcello Mariana)

A House without a roof. View of the missing roof as found. (photo Marcello Mariana)

A House without a roof. View of the existing building. (photo Marcello Mariana)

A House without a roof. View of the study model. CC+ graphics—highlighting preserved and sacrificial elements—guide strategies to amplify existing qualities, using model colors.

A House without a roof. The graphic method highlights the existing building in blue, the few demolitions in yellow, and leaves the proposed project in grey. The CC+ method questions the traditional boundary between heritage and demolition, presenting heritage as a dynamic condition of qualities, traces, resources, and emerging possibilities, rather than a fixed entity.

A House without a roof. View of the existing stratigraphy of the walls.

A House without a roof. The model includes the adjacent warehouse to emphasize contextual constraints and how they stimulate the design. The warehouse creates a blind edge, encouraging setbacks for new volumes and preserving part of the existing structure without a roof.

SAB bus depot. The vertical building is refurbished without altering the existing masonry, introducing only a few elements for structural reinforcement and space division, aiming to preserve as much of the original volume as possible.
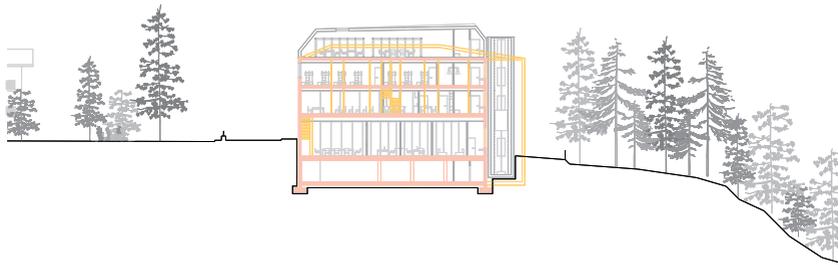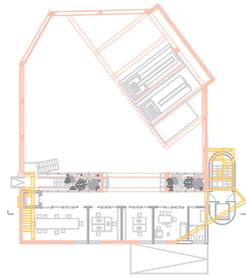
In the case of "SAB" building (ex-bus depot), an anonymous volume, at odds with the morphology of the context, destined for demolition, makes its physical presence a volumetric quality of re-use. Economic scarcity and the commitment to respect the buildings' embedded memory drive an adaptive reuse strategy, realized through careful maintenance and thoughtful, minimal additions.

View of the expansive spatiality of the concrete vault in the SAB bus depot, emphasizing the qualities of the building as found.

At the SAB Bus Depot, two buildings with distinct materials challenge preservation. Limited resources concentrate interventions on the lesser-quality masonry building, while the large reinforced concrete structure is left largely untouched, preserving its historical presence.
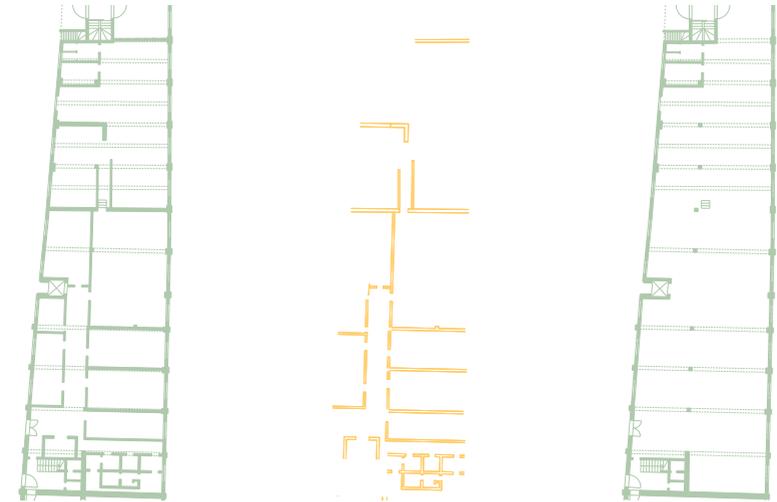
Legler Cotton Factory. The CC+ Current Condition drawing reveals the complex accumulated stratigraphy: ceilings, partitions, finishes, and additions that obscure original industrial qualities. Abandonment exposes these layers, allowing the project to identify what to preserve, remove, and rediscover the the raw building.

Legler cotton factory. View of the study model representing the physical presence of the building.
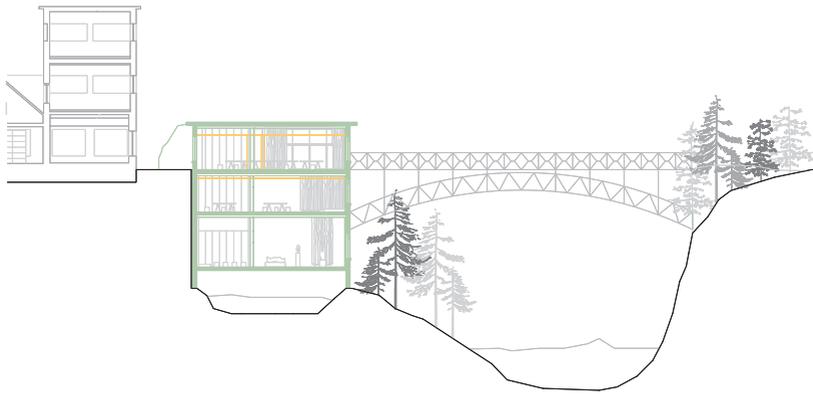
Legler Cotton Factory show the existing structure in a context of high historical and landscape value. The project faces a dual condition: a deeply layered, abandoned building and a highly valuable landscape. CC+ methodology, colouring the existing building, guide minimal, selective, reversible interventions.

Legler Cotton Factory. A reuse strategy is proposed based on preserving the building's identity within its territorial context without altering it, by introducing targeted interventions within the spaces, working between heritage preservation and demolition.

Legler Cotton Factory. The relationship between industrial archaeology and nature finds expression in the project.

Legler Cotton Factory. The project arises from a careful reading of the existing building, rich in value, meaning, and latent potential.
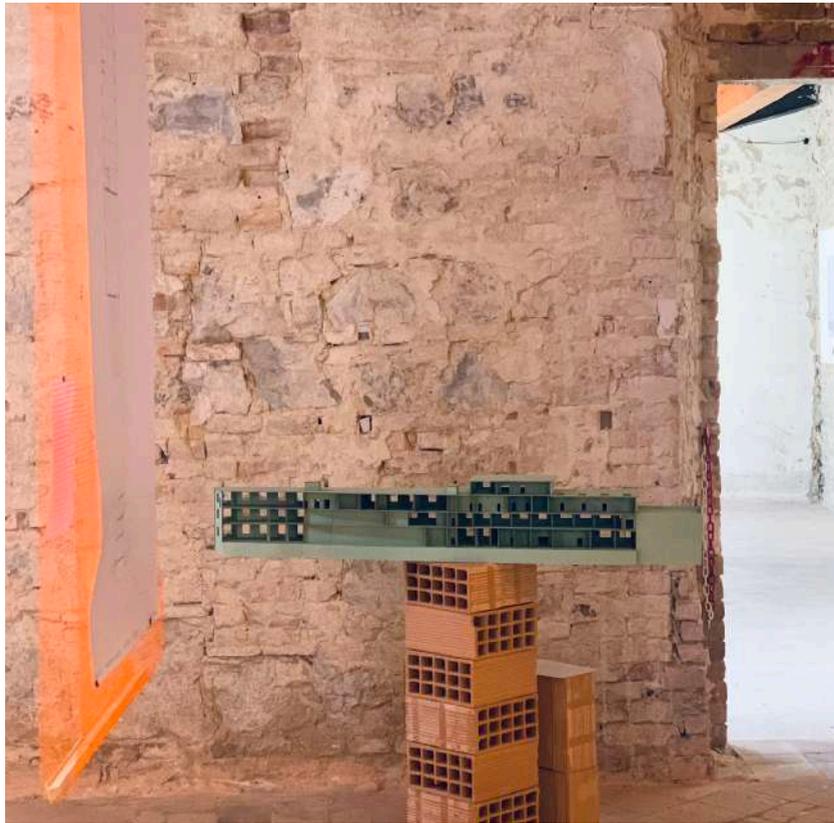
Exhibition 'Vuoto Futuro'. Observatory for new industrial reuse – Fermigliano (PU) Pesaro, Italian Capital of Culture 2024. This suspended condition between ruin and renewal embodies a reuse strategy focused on continuity, not idealized restoration, showing each intervention as an additional chapter in the building.

Legler Cotton Factory. View of the study model and the formal and structural clarity of the existing building.

RE-ENCHANTING BANALITY

Narratives of reuse in architecture

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Zélie Davodeau
Giulia Caterina Verga
Géry Leloutre

Karbon' architecture et urbanisme

Introduction

Reuse is presented here as an opportunity to reshape architectural narratives. It encourages us to explore the potential of <u>ordinary</u> (thus at times perceived as banal) subjects and components in their capacity to redefine space and aesthetics by challenging conventional notions of value.

As philosopher Joëlle Zask (2024)[1] highlights, reuse could place the architect in a particular reflexive posture, the one of admiration. Admiration is not fascination, nor is it purely ethical or historical. Rather, it is a critical and formative stance: on that highlights reuse's transformative potential as a creative act, an invitation to compose with what already exists.

When we speak of "re-enchanting banality", we refer to our daily architectural practice, shaped by ordinary constraints – from the normative frameworks and regulatory timelines of public projects, to financial limitations and availability of materials. Within these conditions, we are challenged daily to maintain both our commitment and interest. Another ordinary gesture that engages us architects, is the act of composition – through materials, forms, spaces. This commitment to work with compositions in their multiples phases (de-composing and re-composing) is not merely aesthetics; it is for us fundamentally a cultural gesture.

The need of "re-enchanting the banality" is thus rooted stems from the conviction that architectural practice is always an act of de-composition and re-composition, of dealing with entangled matters and adding a layer to an already existing palimpsest. As André Corboz (1983)[2] proposed, the (built) environment is continuously rewritten, always bearing the traces of what came before. Thus, architecture becomes a process of engaging with what is already there, embracing complexity and continuity. As architects and practitioners, we aim to shape spaces that become meaningful through care and attentiveness to the intricate relationships between materials, histories, people, and places. These spaces are embedded with values, designed to endure, to be maintained, and to transform over time.

From this position, this contribution explores the representational forms and implications of the reuse process, taking on a very literal meaning with the idea of "composing with", "de-composing" and "re-composing". It examines the narrative structures essential to conveying micro-stories across the extended temporality of architectural projects. Thus, this reflection unfolds through three intertwined principles, each illustrated by a specific project that brought them to the fore. These projects were deliberately chosen because they operate within the constraint of public procurement, a framework that underpins our practice and fundamentally structures and shapes our relationship to matter.

(1) Joëlle Zask, « Admirer » (2024), Paris : Premiers parallèles

(2) André Corboz, « Le territoire comme palimpseste » (1983), Le Territoire comme palimpseste et autres essais, Paris, Les Éditions de l'Imprimeur, 2001.

To Compose with

To endow the act of building with a generative force, the construction site needs to be approached as a space of adjustment where opportunities are both created and seized. In this perspective, the notion of prescription must be re-evaluated to accommodate indeterminacy, allowing the detail to remain an open field for negotiation, shaped by the contingencies of what is at hand.

The project *Cygne*, a small-scale public facility located in the municipality of Ixelles, includes an associative café and housing for the elderly, serves as a case study for this negotiation. In this project, we explored the reuse of salvaged tiles (varying in size, colour, and origin) as both a material and compositional challenge. The process was meticulous, from the drawing phase to on-site execution, and revealed a compelling tension between the ordinariness of the subject (a tiled floor) and the level of care and design investment required to revalue these materials.

What became clear is that the uncertainty and variability introduced by reused enabled a certain complexity in the design that would not have emerged otherwise. The contractor, for instance, would likely never have agreed to carry such a complex detail in any other context than reuse. Likewise, we ourselves would never have conceived this pattern with new materials, as it would have felt overly mannered. What's interesting here is that "composing with" works on multiple levels : it means working with what is already there (the available resources), but also working on site, with crafts(wo)men (in this case, the tiler) and compose with them to shape the outcome.

Through this aesthetic exploration, we have moved beyond the unique objective of material salvaging. The process has shifted from a recovery process to a more cultural act of composition. By reversing the conventional design sequence, reuse introduces a productive uncertainty that enables forms of composition rarely permitted by standards protocols. In-formed by mismatched reclaimed tiles, a once-ordinary surface gains complexity and presence through the constraints of variability.

Project "Cygnes" - Karbon' - 2019-2023

Photos of the reclaimed tiles used in the project: stocks of tiles on the left, and test of a preliminary layout on the right.
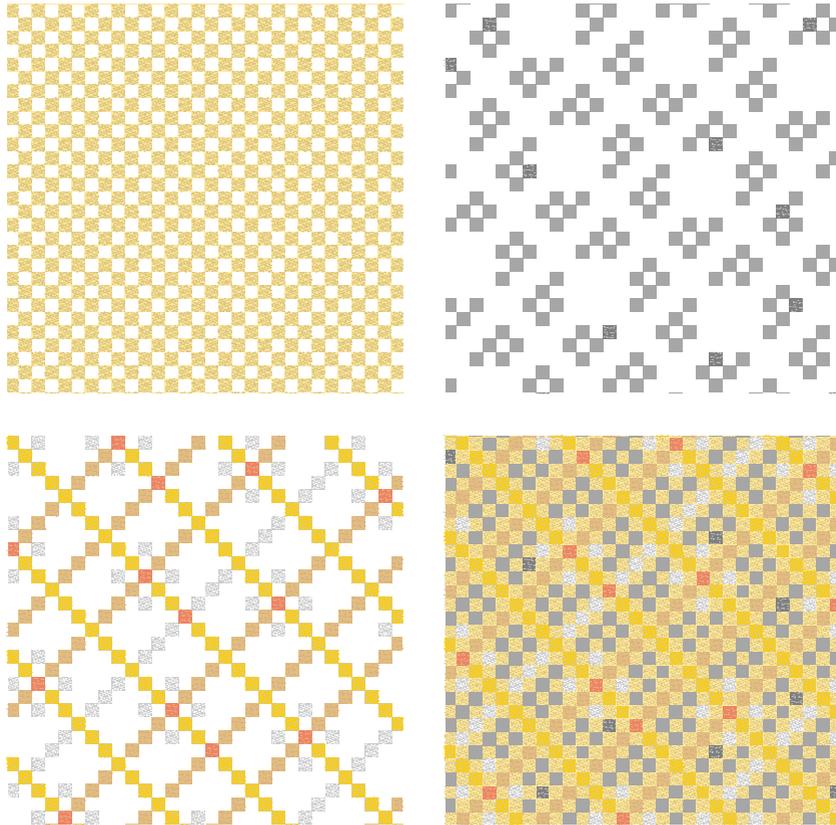
Project "Cygnes" - Karbon' - 2019-2023

Above: composition detail of mix-matched tiles for execution. On the right-hand page: photo of the final composition of the floor. Under: section of the inventory carried out on site to classify and quantify the tiles by colour and type.

Photo © Maxime Vermeulen

97	57	4	10	20	38

12	9	40	57	75	510	83	212	40

	Beige	Jaune	Orange
	893 / 910	163 / 189	26 / 36
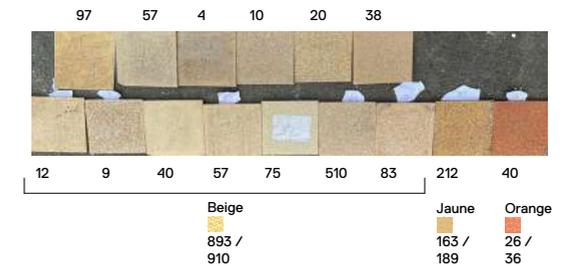
To de-compose

The process of decomposing transforms the way we read and engage with a site, and most often it unfolds through of inventories (such as those based on photos, tables, models, drawings, etc.). The act of de-composing cultivates an attachment to subjects and components we might once have considered minor, encouraging us to see them as architectural resources. This approach entails a critical re-reading of the site. Initiated from the very first visit and often developed as a photographic work, this approach uncovers the latent potential of discarded materials and components, documenting them as valuable resources. This selective and sensitive gaze nourishes the new project narrative – one that shapes our engagement with the existing, supports dialogue with clients and invites them to revalue their perception of the site.

In the *Boulevard General Jacques* project, a renovation of a social housing building block in *Ixelles*, this process started at the very beginning during the site visit. Through a photographic work, we developed a sensitive gaze on the existing. We took the time to identify its potentials and build a kind of catalogue of possibilities. What stood out was an interesting paradox : that embracing complexity sometimes requires a precise work of decomposition.

This preliminary work gradually evolved into a more exhaustive and operational inventory, which informed the execution process and consolidated a situated knowledge of the building. On several occasions, materials already present on site helped resolve project details in both economical and aesthetic ways, for example, reusing existing guardrails to create emergency staircases, or re-purposing kitchen tiles to extend windowsills.

Beyond practical considerations, documenting the process of reuse is essential to valuing a work sometimes invisible in the final outcome. It becomes a necessary effort (not only to acknowledge the experience) but also to keep active our engagement to reuse by nourishing an aesthetic imaginary around this practice.

Project "Boulevard General Jacques" - Karbon' & Label - 2020-2026

Photos of the salvaged materials to be refurbished and reused: tiles and interior doors © Charles-Hippolyte Chatelard.
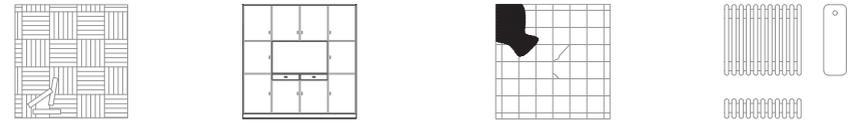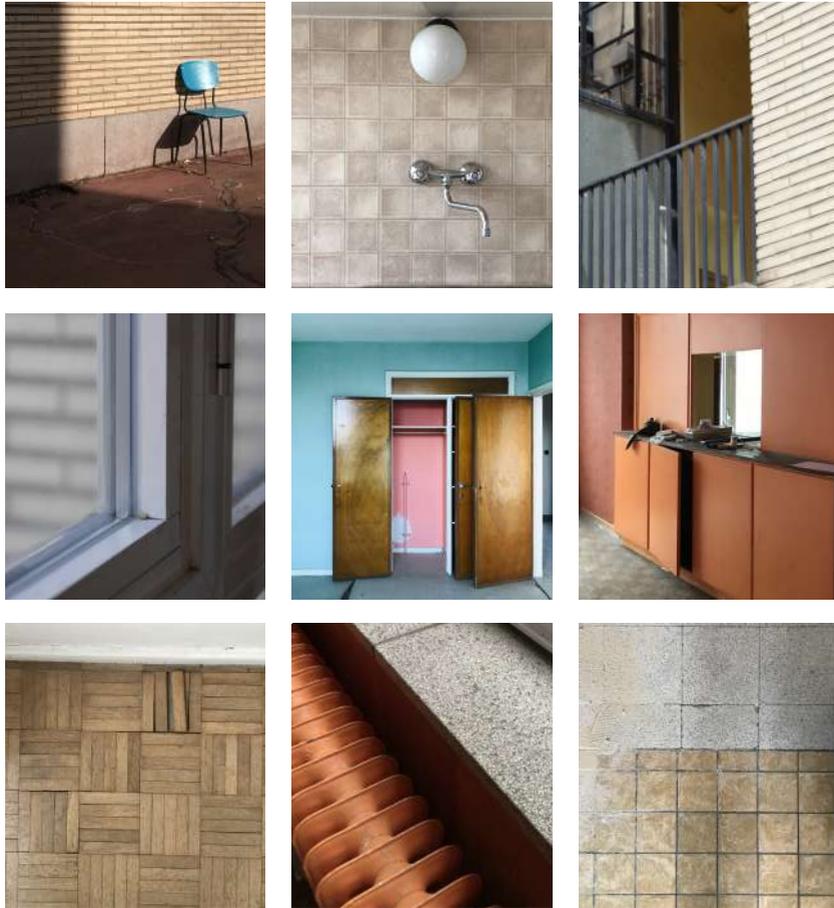
Nr	Local	Sous-catégorie	Date
W.EDL.627	Bloc 2/B / 202.002.101 (202B BGJ BT12)	Parach. / Cuis.	18-02-25

Réemploi

W.EDL.627

Partie basse: à discuter, présence d'humidité dans un coin du meuble
Partie haute : à discuter

P02 - Plan Rez - R+1 Situation projetée — Photo 18 février 2025 à 10:02 — Photo 18 février 2025 à 10:02 — Photo 18 février 2025 à 10:02

Photo 18 février 2025 à 10:02 — Photo 18 février 2025 à 10:02 — Photo 18 février 2025 à 10:02 — Photo 18 février 2025 à 10:02 — Photo 18 février 2025 à 10:02

Photo 18 février 2025 à 10:02 — Photo 18 février 2025 à 10:02 — Photo 18 février 2025 à 10:02 — Photo 18 février 2025 à 10:02 — Photo 18 février 2025 à 10:02

Project "Boulevard General Jacques" - Karbon' & Label - 2020-2026

Above: An assemblage of photos taken during the site visits and used as first "intuitive" inventory to aesthetically explore the qualities, value and charm of existing elements. On the right-hand page: a series of drawing showing the elements that were kept, repaired and reused on site, and below extract of the inventory developed during the execution phase.

To re-compose

<u>Anticipating</u> the deconstruction and re-purposing of materials, both in the short and long term, can become a defining aspect of the design process. Beyond its economic rationale, the decision to expose construction systems (to facilitate their future disassembly and reuse) demands a rigorous attention to detail in execution. Composing means assembling, and assembling is not only about reuse, but also about the boarder act of building, where the care we bring to existing elements gradually extends to what we put in place for the future.

The *Brogniez* project, a socio-medical facility for primary and secondary schools in *Anderlecht*, which involves the renovation of three existing buildings, is a telling example. Guided by the principles of frugality (sufficiency) and circularity, the project focused on basic construction elements, approached with the intention of giving them a compositional role, while manifesting technical assemblies that would allow for future re-composition.

One example is partition walls, carefully made from drywall assemblies and visible technical systems: elements that shape a singular aesthetic vocabulary linked to the future reuse of newly introduced materials. This approach creates a visual language that conveys its own architectural identity, and also facilitates and anticipates the processes of deconstruction and reuse.

Exposed construction systems   *In-situ reused elements*   *Dry assemblies*
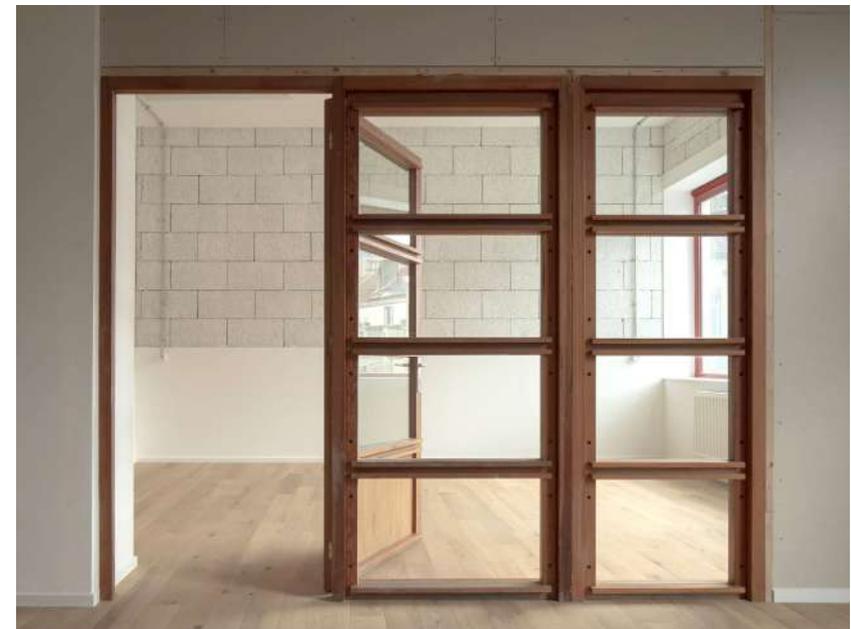
Project "Brogniez» - Karbon' - 2020 -2024   © Maxime Vermeulen

Fermacell panels, for instance, were left unpainted, only protected by a clear varnish, revealing the layout of screw fixings. The hemp-lime block work was protected with a plaster at the base and left exposed above revealing the texture of the material and the logic of its assembly.

This attention to detail and composition extended to the spacing of the fixings and the position of the cable trays (and other technical elements), which were carefully designed to remain visible. In fact, this exposed assembly logic and "raw detailing" were also conceived as pragmatic elements facilitating adaptations and maintenance over time.

Thus, this project offered a rare opportunity to highlight and appreciate work that is often overlooked. By revealing the assembly of these (banal) industrial materials and components, the project required a certain precision and attention (care) in its execution. Although it may not exactly be qualified as traditional craft(wo)manship, it prompted us to rethink how we engage with the ordinary, especially when working with standards materials and constructions systems.

Conclusion

This series of successive and perceptual shifts forms an approach to reuse is rooted in a sense of attachment (Bonnot, 2014)[3] to many small, often overlooked intentions. Though seemingly minor, these gestures collectively contribute to the shaping the project's identity. During the design and construction process, the narratives and imaginaries that highlight the cultural and ecological value of reuse must be actively conveyed, challenged and sometimes defended with an intensity that may seem almost absurd. The paradox lies in the fact that salvaging materials takes time, and often the architect is the only one willing to invest that time, especially when there are no grand gestures to be made.

To shift perceptions and give new relevance to elements as common as a plinth, a false ceiling, or a radiator, the architect - as a "reclaimer/salvager"- needs to re-frame these components. This involves shaping a narrative and producing drawings and documents that transfer a sense of value and meaning to often overlooked elements. In doing so, the architect becomes the narrator of the ordinary, ultimately challenging the very foundations of what we consider valuable in architecture. This sense of re-enchantment thus emerges as necessary condition to defend and support a practice that embrace this banality with care, creativity and conviction.

(3) Thierry Bonnot, L'attachement aux choses, Paris, CNRS, series : « Le passé recomposé », 2014

CULTURAL TEXTURE: THE DIGITAL BRICOLEUR AND THE ANALOGOUS CITY

Exploring AI's Sensitivity to the Cultural Textures On Site.

Marius Grootveld

Veldwerk Architecten
RWTH Aachen

AI sees the world through its smallest parts. Unlike the human eye, which seeks immediate wholeness, the computer vision algorithm processes a scene from the bottom up: extracting features and identifying patterns before identifying the object. A scene is built from its points to its lines to its textures, and finally to its composition. This is opposite to our own way of perceiving and making; we grasp the general composition first, only later defining the elements, ornaments, and traces of use within.

However, as our cities become more emergent, disintegrating into parts and growing as a series of developer-led statements guided less by planning and more by regulation, the 'whole' becomes harder to find. In this fragmented landscape, we may need to reverse our thinking to match the machine's. AI's sensitivity to patterns can offer a new perspective, helping us read the built environment through the texture of its surfaces, identifying histories that might otherwise be overlooked.

This paper explores the potential of generative models to reveal "Cultural Texture," defined here as style beyond its rational conception, but with the addition of all its lived-through traces of use, re-use, wear, and weathering. By focusing on the layers of use, wear, and weathering that have shaped a building over time, this research offers a new methodology for adaptive reuse that engages deeply with the "as found" condition. To operationalize this theoretical stance, this research poses the question: How can generative AI models be constrained to operate as "digital bricoleurs" that read and extend the existing cultural textures
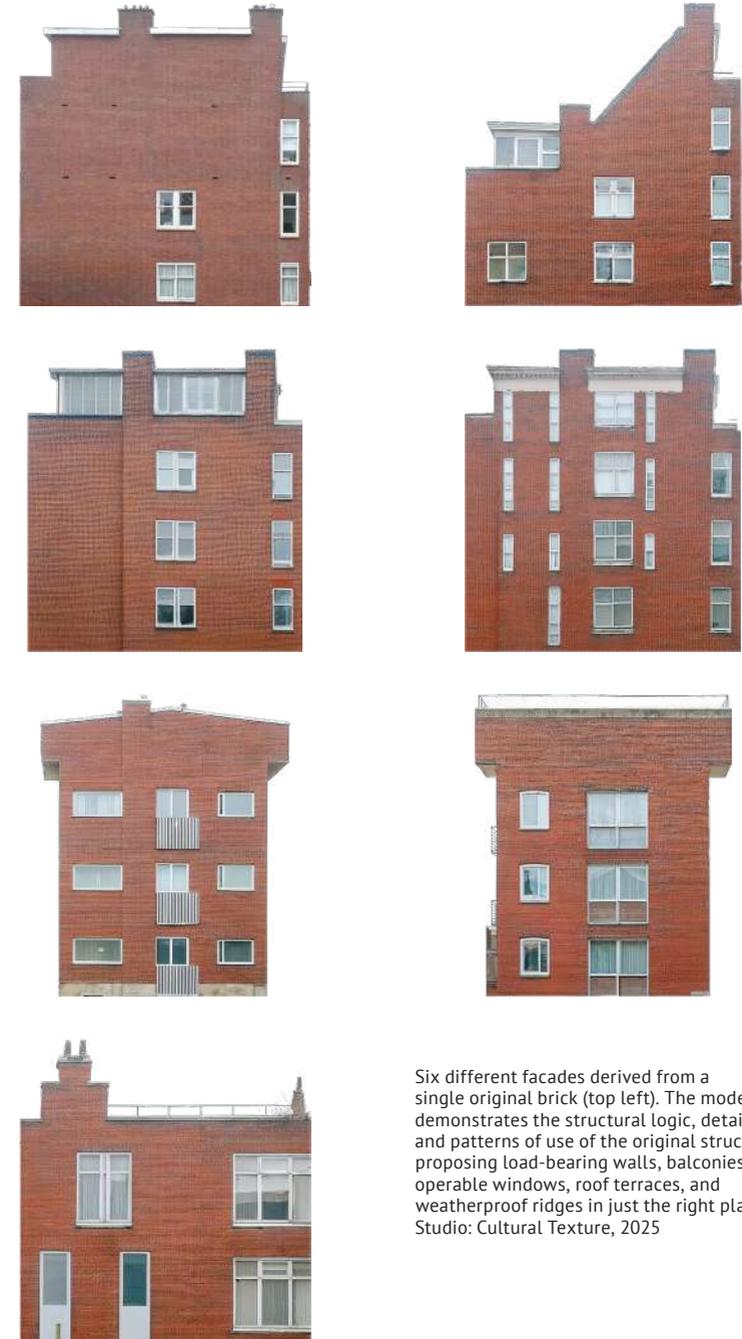
Six different facades derived from a single original brick (top left). The model demonstrates the structural logic, detailing, and patterns of use of the original structure, proposing load-bearing walls, balconies, operable windows, roof terraces, and weatherproof ridges in just the right places. Studio: Cultural Texture, 2025

of a site, and in what ways do the mechanisms of connectionist AI, such as neural networks, parallel the structuralist theories of the 1950s Independent Group and Aldo Rossi, potentially informing a new methodology for contextual design?

In the 1950s, the Independent Group (IG), a collective of British architects, writers, and artists known for challenging the modernist status quo, viewed the post-war city through its disjointed parts. Faced with a disintegrating urban fabric, they developed the concept of the "As Found;" a new way of seeing the ordinary, recognizing how prosaic things could re-energize inventive activity. In their seminal 1953 exhibition Parallel of Life and Art at the ICA, the group sought a coherent visual image through non-formal means: a collection of images from the worlds of science and art sharing a visual likeness between objects of a totally dissimilar nature, alluding to a set of basic patterns for the universe.

In his analysis of the exhibition, architecture critic Irénée Scalbert uses a single photograph from the show to offer a new interpretation. The photo, depicting the separate parts of a typewriter laid out like a taxonomy, prompts Scalbert to suggest that the parts themselves take on new meaning when disconnected from the whole. The focus shifts from the overall meaning to the significance of individual parts. These parts are transformed into symbols, resembling pictograms in a language without structure, awaiting interpretation by the observer. It's fitting that this typewriter, states Scalbert, a machine for transcribing language, rep-

Seven different endings, find the original state. The model picks up on the palimpsests present in the existing fascade and writes a multitude of fictions on how this fascade may have come to be. Studio: Electric Changes, 2024-ongoing, Work by Minkyu Kim

New spaces are created by blending existing spaces within the University of Antwerp, Campus Mutsaert site, borrowing the spatial composition from one and the texture from the other. The generated spaces feel like found spaces that are hidden in an undiscovered corner of the campus. Studio: Electric Changes, 2024-25, work by Pierric Jourdan

Above: A collected building created from a compilation of scans arranged into new configurations, forming new spaces with elements from the original spaces. Studio: The Collected Building, 2022-23, work by Paula Riebel. Below: A reimagining of this space using a style reference of the architecture of Alvar Aalto

resents the connection between all things as languages, a basic set of patterns, parallel and connected. Through the inherent presence of language, a hidden but deeper connection could be formed between the observer and the teeming life of the world.

This disintegration of the whole into parts mirrors the operation of the Large Language Model (LLM). The Generative Pre-trained Transformer (GPT) processes language not by adhering to pre-defined hierarchical syntax (grammar rules), but by breaking text down into its smallest pieces: its tokens. By analysing the patterns and structures contained within these tokens, the model predicts the next word in a sequence, generating coherent text without explicitly "knowing" the rules of language. In the process, by removing our own codes and conventions, we can tap into the larger cultural meaning contained within language itself.

The switch from syntax to pattern finds its origins in image generation. Images have always been treated as patterns of pixels rather than structured rules. It is no coincidence that Ilya Sutskever, who co-authored the pioneering deep convolutional network AlexNet in 2012, alongside Alex Krizhevsky and Geoffrey Hinton, went on to become the Chief Scientist at OpenAI, sparking the generative revolution with ChatGPT in late 2022. Just as computer vision allowed us to ask what cultural meaning is contained in the pattern of an image, LLMs now apply that same logic to text, generating new meaning not from grammatical laws, but from the statistical probability of human expression.

A budget-conscious alternative on Horta's rich BOZAR facade. Based on the detailing of an elderly home by 51n4e it adapts to our contemporary needs while preserving the proportions of the original. Studio: Cultural Texture, 2025

By applying this logic to physical space, completing found patterns and textures, human stories naturally emerge. We may reconsider our understanding of a place: moving away from an "intended space" designed top-down with a fixed meaning, toward a "space of patterns." Here, the traces recorded on surfaces through time predict a deeper meaning that goes beyond original design, telling the story of the space's evolved collective understanding. By tapping into these recorded traces with an image model, we can predict a natural extension of these patterns, allowing them to grow further within a design environment.

The semantic, pattern-sensitive nature of artificial intelligence aligns intriguingly with a structuralist worldview, which posits that meaning is derived from the relationships between elements rather than the elements themselves. It is notable that Geoffrey Hinton, the "godfather of AI" and mentor to Sutskever, completed his studies during the intellectual climate of the 1960s and 70s where structuralism was dominant. While his work in Connectionism (neural networks) abandoned the rigid, rule-based syntax often associated with classical Structuralism, it doubled down on the core idea that meaning is relational. Connectionism rejected the Symbolic AI approach of teaching computers the explicit "rules" of the world, exposing them instead to its "patterns." Hinton's background in psychology and philosophy informs this view: intelligence is not a set of logical rules, but a capability to perceive analogies. He observes that models compress information by encoding basic concepts and mapping the distances between them, a far more

A design research, in collaboration with the London office East, explores using an image-to-image generative model in a participatory context, weighing rough spacial collages by residents with the architectural values contained within the urban design proposal.

efficient method of storing knowledge than treating each piece of information separately.

Another concept introduced by Lévi-Strauss, which shares a parallel with generative AI, is that of the "bricoleur." The bricoleur creates structures using whatever pre-constrained materials are at hand, distinct from the "engineer" who seeks out specific materials to build tools from scratch. In the realm of AI, particularly in LLMs and image diffusion models, the system functions as a digital bricoleur. It does not invent data from scratch but relies on the vast repository of patterns and associations absorbed during training to create new constellations of meaning. When an AI generates an image or text, it synthesizes the structures learned during its training phase, generating statistically likely rearrangements of existing cultural artifacts contained in the dataset and the culture it reflects.

Projecting this structuralist sensitivity onto urban theory leads us to Aldo Rossi and his concept of the Analogous City (La Città Analoga). A close reading of Rossi's The Architecture of the City reveals that his concept of "Collective Memory" is functionally identical to the "Latent Space" of a neural network. A latent space manifests as a cavernous high-dimensional topography, a boundless, compressed archive of potentiality. It is not merely a database, but a spatialized territory where concepts are mapped by semantic proximity rather than linear history. To interact with this space is to engage in a form of digital spelunking; one must traverse the complex vectors and mathematical depths to locate the precise cultural artifact required.

Within this dense matrix, every architectural gesture, style, and typology previously consumed by the model exists in suspension, waiting to be unearthed.

Rossi's conception of the city is similar: a living artefact continuously assembled by its inhabitants using the inherited materials, forms, and memories. Rossi views cities as repositories of collective memory, an intricate palimpsest woven from historical layers. The city as a "dataset", physically manifested in its structure, becomes the primary material for Rossi's architectural interventions, ensuring that each new addition is a continuation of the city's ongoing narrative. Rossi's methodology echoes that of a bricoleur, who creatively repurposes remnants of the past.

This approach is most visibly demonstrated in Rossi's famous Analogous City collage (1976). It is a montage of disparate architectural fragments, arranged not by functional logic but by analogical resonance. When we use AI to perform "Inpainting" (filling in a missing part of an image) or "Style Transfer," we are performing an accelerated version of this exact operation. The AI scans the context, retrieves relevant patterns from its training data, our collective memory, and proposes a completion that fits the existing logic.

The striking parallels in structuralist sensitivity between generative AI and Rossi's analogous approach, envisage an architectural design process where the generative AI would aid as a "digital bricoleur." By learning from the collective memory encoded in architectural forms, textures, and spa-

Building renewal in a post-growth society, using fragmentary generative design. The generated design picks up on textures and materials used in the context as found. Studio: Lost & Found, 2023-24, work by Cristian Moscoso.

Find and replace, a regeneration, for the corner of Bovenbouw's Cadix Project,Antwerp, weighted to the surrounding projects and to the Firefly dataset. Veldwerk, 2024, (original photo: Filip Dujardin)

To bring the sites to the digital realm we scanned, modelled and textured the projects in detail. Always using the textures as found taken from the photograph never substituting them for an representational alternative. The 3d models acted like 3d photo collages allowing us to peer into the photographs from different angles. Work by Malte Mittelstädt

tial relationships, the AI can treat the collected material of our cities as "cultural seeds." These seeds can be replanted within the design process, allowing the AI to propose interventions deeply rooted in the analogical patterns of the site, extending the codes and conventions of our built environment.

In his post-structuralist text Structure, Sign, and Play, Jacques Derrida reinterprets Claude Lévi-Strauss's structuralist theory, arguing that even though a concrete science may reveal an underlying structure, no definitive truth can be derived from it. He contends that any attempt to fix a "center" to the structure fails, as that center would paradoxically need to exist outside the structure to encompass it fully, contradicting Lévi-Strauss's central premise that nothing exists outside the whole. Consequently, Derrida suggests that we can only navigate the structure by becoming both observer and author in a constant state of freeplay. Generative AI embodies this specific duality: it operates structurally, relying on the mathematical logic of high-dimensional latent space to map relationships, yet it is experienced post-structurally. The designer engages with it phenomenologically, not to retrieve a singular historical truth, but to navigate cultural patterns in a state of endless permutations and creative play.

Drawing a collective architecture

Gaël Biache
Jean-Nicolas Ertzscheid
Florent Revel
Benoît Streicher

UN1ON

KaléidosCOOP is an interior landscaping project shaped through dialogue and shared authorship. Located in Strasbourg, this cross-border third place brings together twenty organisations from the social and solidarity economy. From the outset, their commitment to collective governance led us to reconsider both our tools and our position as designers, approaching architecture as a relational process rather than a fixed object. To what extent can architectural design genuinely emerge from shared decision-making?

In architectural discourse, participation is too often confined to consultation or marginal user input. Yet history offers powerful precedents. Frei Otto's Ökohaus (Berlin, 1987) proposed a cooperative housing framework adaptable to individual narratives, while Hermann Hertzberger's Central Beheer building (Apeldoorn, 1972) offered a robust concrete matrix deliberately left open to appropriation. Though rarely framed as participatory, both works shift architecture from authorship to agency, demonstrating how dialogue, open structures, negotiated rules, and spatial generosity can enable collective engagement over time.

Our contribution does not aim to catalogue participatory models or propose new methods. KaléidosCOOP is a project—an empirical architectural experiment. Through this graphic narrative, we seek to illuminate the tools, exchanges, and iterative adjustments that shaped this collective design process, offering a modest contribution to ongoing research on cooperative and relational practices in architecture.
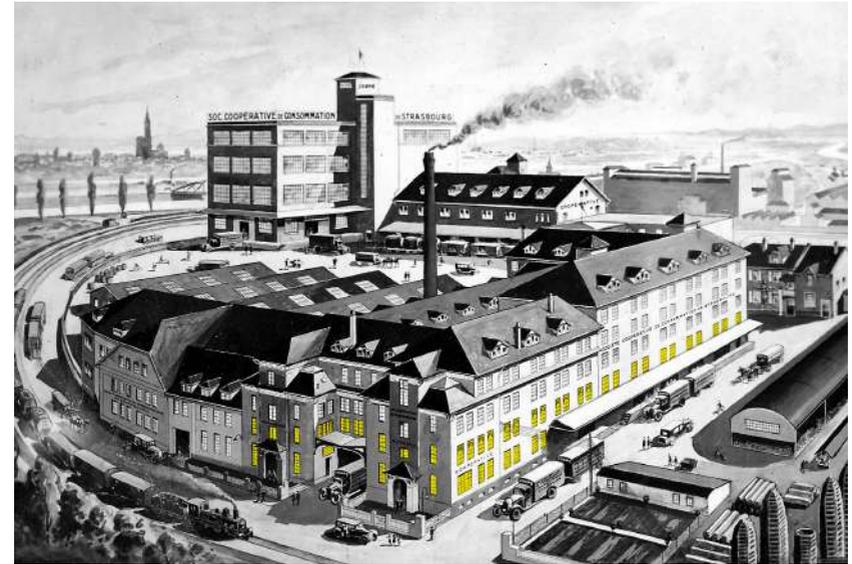
The COOP
An iconic piece from Strasbourg's industrial past.

During the competition, by reading between the lines of the brief, we understood that the multiple project owners did not want a fixed architectural design. On the contrary, it was to be conceived collectively, allowing everyone to participate in decision-making. Curious about participatory processes, we embarked on this journey with as much enthusiasm as questions.

How can we ensure meaningful participation? How can the design process be shared with project owners and users? To what extent can the design process be collective? How can participation be made active and effective? How can architecture be collaboratively defined so that it reflects the philosophy and practices of the social and solidarity economy? More broadly, how can architectural practice serve a democratic process?

And also, how not to kill the existing ?

From the beginning, our aim was not to confine participation to colour choices, but to address core architectural questions.
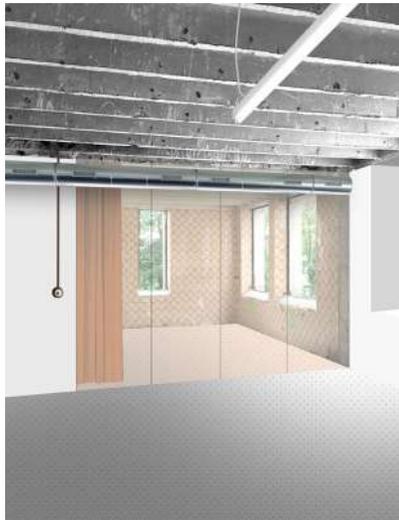
First intention.
Do not paint everything white.
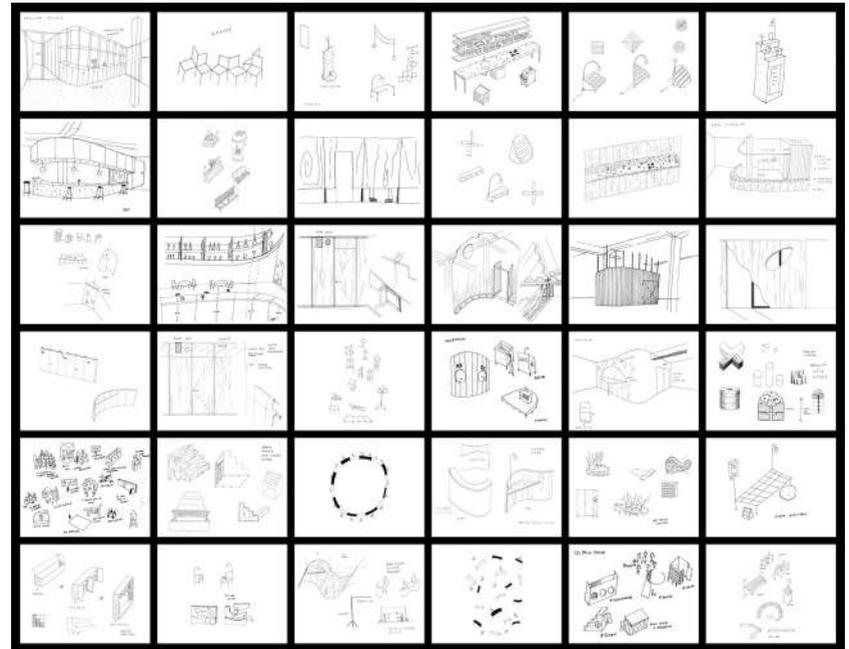
Series of drawings.
Not necessarily meant to fulfil all expectations.

We brought key design concerns—such as spatial organisation, atmosphere, materials, and furniture—into votes and debates, deliberately leaving open issues we would usually control. By choosing to listen before acting, we created space for participation and discussion, positioning ourselves as both designers and mediators, seeking the best compromise between a programme and an existing building, and between multiple clients and a single project.
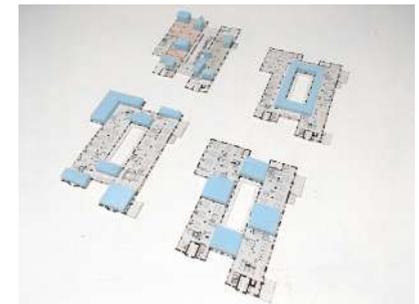
Series of models.
Testing organisations.
Discuss interactions...

Rather than delivering a "finished" project, as is often expected in French competitions, we proposed a collective process based on workshops and dialogue. Our challenge was to enable a truly collaborative design, allowing the project to emerge collectively. We aimed to address fundamental issues beyond aesthetics or furnishings, keeping the design open to research, iteration, and unforeseen discoveries.

We proposed a series of three complementary and interlinked thematic workshops to discuss and vote on all the key issues related to the project and its design. In the first phase, through three contrasting scenarios, we focused on spatial organisation and the interactions between program elements. The layout and its organization became the core of the debate, without losing sight of the accompanying technical aspects.

Three spatial layouts generate contrasting interactions: the loop creates a continuous space around the atrium; the ring contrasts a closed center with an open periphery; and the block alternates between open areas and private zones. The debate focused on these interactions—between program and existing elements, structure and users.

Shared Working Space / Large Open Space

Meeting Space / Small Rooms

Post It meetings during pandemic.
No fear, lots of fun.

In the second phase, using a wide range of building materials, we discussed the project's atmosphere, specifically addressing how to approach the existing structure to enhance it.

Finally, specific furniture elements that would define and activate the spaces were selected through a broad mosaic of proposals.

By accepting that we could not predict the outcome of each workshop, we were ready to fully embrace uncertainty. We deliberately exposed ourselves to risk, leaving open questions we would normally control, ensuring that the project remained alive and evolving. Fortunately, decisions were reached relatively easily through intense discussions and voting sessions.

Series of model. Questionning tools.

To make the process truly collaborative and ensure that everyone could express themselves and take part in decisions, it was essential to keep everyone equally informed. We therefore needed to communicate our ideas as clearly as possible so that everyone could understand them. For this purpose, we mobilized various tools, none of which were particularly revolutionary.

Plans guided discussions on internal organization and the relationships between uses, people, and programs. Collages and models explored atmospheres and materials. Quick sketches tested ideas in real time, while detailed drawings clarified construction. Large printed boards made the evolving design visible. In the end, coloured post-its, for example, proved to be an incredibly effective way of facilitating dialogue and summarizing ideas. They enabled everyone to vote, annotate, and shape decisions together.

Testing materiality... Discuss materiality.

The ceiling as a protagonist. How to liberate ground area to welcome life?

Technique as architecture.

Reused materials became fixed furniture elements, activating the freed-up spaces. Orange PMMA railings from 1970s housing, ventilation grilles from a former auditorium, mismatched tiles from Leroy Merlin, and leftover solid wood flooring from Batibois were all reshaped and reimagined. Beyond their practical function, these pieces of furniture encourage interaction.
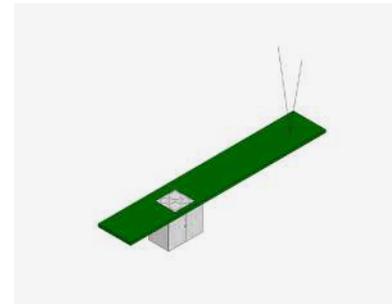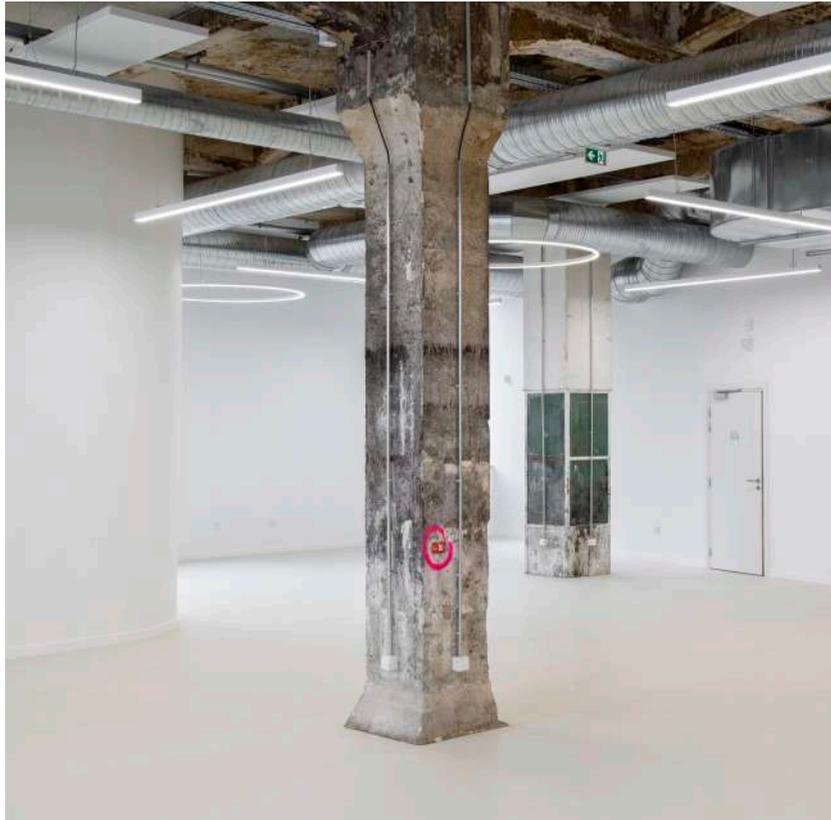
Wherever possible, all interventions aim to allow the existing structure to breathe.

The project proceeds by adding successive layers.

We saw the participatory process as an opportunity to challenge the usual methods of architectural production and design. Through this open and inclusive practice, we aimed to re-examine our role as architects, exploring the potential of a method based on broader knowledge sharing, enriched by intense exchanges. Beyond this particular project, we continue every day to foster collective discussions, exploring paths without preconceptions and always remaining open to spontaneous encounters.

How to facilitate decesion making ?

Architecture fades away to support and celebrate life. An explosion of joy.

The interior spaces form a background.

We believe the project embodies the possibility of a practice that places users at the center of the architectural debate. It outlines a truly democratic approach, focused less on authorship and more on relationships. Here, design serves an open ecosystem in which roles remain fluid, and the architect acts as a catalyst rather than a master builder. KaléidosCOOP reflects this vision of architecture as a driver of cooperation and social transformation.

A cheerfull mess.

CHAPTER 3

RESILIENCE AND HUMAN-CENTEREDNESS

A LIVING LAB

Design, Development and Implementation of Circular Renovation Strategies

Lieven De Groote
Ana Castillo

MAKER architecten

How do we approach buildings that are barely 50 years old but are in urgent need of renovation? And how can we reconcile seemingly conflicting demands, such as heritage value and energy efficiency or circular performance? The former student housing on the VUB (Vrije Universiteit Brussel) campus in Elsene, designed by architect Willy Van Der Meeren in 1972, served as the ideal setting to explore the relationship between heritage preservation and modern requirements for sustainability, energy efficiency, and economic feasibility.

The WVDM Living Lab bridges theory and practice in circular construction.

For this project, MAKER, in collaboration with Origin, VK, VITO, and Beneens, conducted research into circular renovation strategies, which were then implemented in the pilot project. The project provides an in-depth, holistic analysis and demonstrates that the "as found" should not only be viewed as a legacy of the past, but also as an active contributor to the sustainable development of our society.

'layering' strategy on the ground floor (© Séverin Malaud)

Context

Shortly after the founding of the VUB, against the backdrop of societal upheavals following the May '68 protests, Willy Van Der Meeren made a groundbreaking contribution to modern architecture with his design for student housing. The architectural expression of these buildings was directly related to their structural logic. Van Der Meeren used three-dimensional modules, prefabricated in concrete using the patented Variel construction system of Swiss architect and entrepreneur Fritz Stucky [1]. This system not only allowed for rapid construction and cost reduction, but also embodied Van Der Meeren's commitment to industrialization and modular building: it wasn't just about constructing functionally in an economically responsible way, but also about creating architectural added value. By freely connecting, stacking, and combining the prefabricated modules, Van Der Meeren created a dynamic whole that challenged the prevailing prejudices against prefabrication. He also used color to provide additional visual distinction and an aesthetic identity. The structural details of the student housing demonstrate Van Der Meeren's mastery in building technology and materiality [2].

placement of the Variel-modules (photographer unknown, 1973, Archive Technical Service VUB, Brussels)

student housing units at the campus of the VUB (Hilde Braet, circa 1990, Centre for Academic and Secular Archives (CAVA), VUB, Brussels)

The more than 300 modular student dormitories were once at risk of demolition. Today, they are being repurposed for a new, versatile use. The 12 modules involved in this pilot project not only serve as a catalyst for preservation but also pave the way for transitioning the remaining buildings to a circular renovation model. The WVDM Living Lab is an initiative focused on co-creating sustainable renovation strategies, with respect for the value of the buildings and the ambition to preserve, recover, and reuse as many materials as possible.
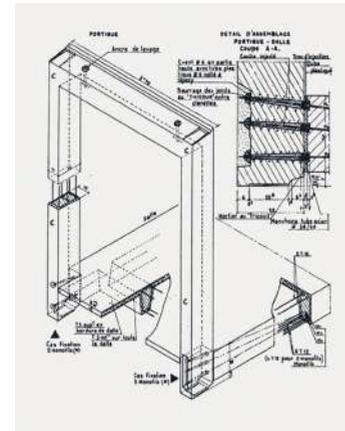
axonometric drawing of the Variel structure (Jenatsch G.-M., Krucker B., 2006, Werk-Serie. Fritz Stucky: Architekt und Unternehmer, Zurich)
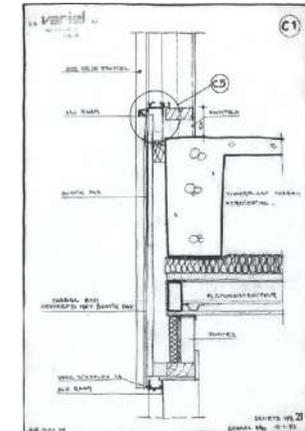
detail of the facade (Willy Van Der Meeren, January 1973, Archive Technical Service VUB, Brussels)

Inspiration

The project starts with the question: What can we learn from post-war architecture in terms of circular building? In the rationality of post-war modern architecture, several principles of change-oriented building can be discerned, such as constructive honesty, skeletal structures, open plans, modularity, movable interior walls, and demountable (curtain) facades. In the renovation, the primary load-bearing structure,

building volume, and urban footprint are preserved, while also maintaining the principles of prefabrication, modularity, and adaptable construction with minimal material use. The clear rhythmic composition of the facade is not only an important architectural element but also reflects the internal workings of the building. The aim is also to drive social progress through high-quality, progressive architecture.

The team identified six design principles that are not only characteristic of modernist thinking but also linked to Van Der Meeren's original design [3]. These are:

1) The building as *machine à habiter*, where functional and circular aspects take precedence over form, and the bare construction itself also serves as the finishing, 2) Modular standardization, 3) Adaptable construction, 4) The use of collective facilities based on social ambitions, particularly in outdoor spaces and roof areas, 5) The use of colour to animate the rational architecture and create a sense of place and orientation, and 6) The harmony between architecture and nature, e.g., by approaching water, energy, and materials in a holistic framework.

The study also highlighted scalability on the site itself. In addition to the 12 modules involved in the project, the student village consists of over 300 other modules that are due for renovation. By extending the various infrastructures and flows (energy, mobility, social infrastructure, materials bank, green spaces, etc.) throughout the entire village, a truly urban ecosystem could be realized.

Strategies

The four developed renovation strategies vary in nature and offer circular solutions for different specific challenges and conditions.

strategy 1: tent   strategy 2: cocoon   strategy 3: layering   strategy 4: fur
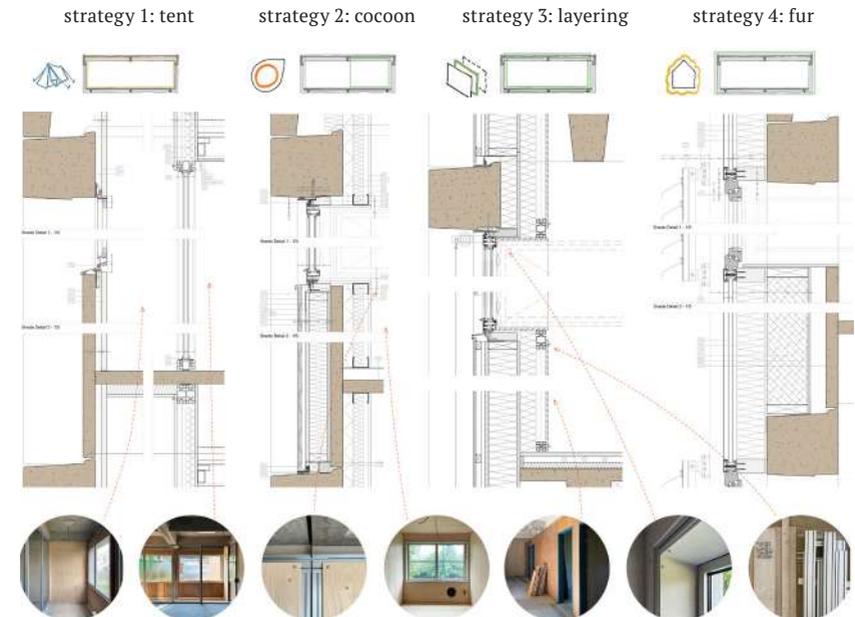
details and application of the four strategies (© MAKER architecten)

the various infrastructures and flows in an urban ecosystem (© MAKER architecten)

Tent: Questions the often excessive material input in renovations. It emphasizes preserving the existing structure with minimal material use, a limited budget, and basic comfort. Achieving airtightness of the building envelope is central. This strategy does not require a building permit and primarily focuses on (transitional) renovations that aim for a minimal use of resources.

Cocoon: Challenges the need for uniform comfort throughout the building. Instead, comfort is adjusted according to the space's use. A "cocoon" within the module provides high acoustic, thermal, and architectural performance. Technical installations are incorporated using a plug-and-play approach. Other spaces receive only basic comfort. Hotels, temporary accommodations, flexible programs, or different summer–winter uses represent potential programmatic uses for this strategy.

'tent' strategy on the ground floor
(© Séverin Malaud)

'cocoon' strategy on the upper floor
(© Séverin Malaud)

Layering: Focuses on a change-oriented buildup of the building envelope. The envelope is a complex assembly where components often have different lifecycles and maintenance needs. Techniques are integrated accordingly. This layered strategy considers adaptability, with inner layers designed for reversible modification to suit orientation, function, window openings, and technical systems. The strategy is suitable for programs with changing technical installations and finishes, such as offices and multipurpose spaces.

Fur: Aims for constant, continuous comfort. The entire structure is insulated, and thermal bridges are efficiently resolved. This strategy uses materials with minimal environmental impact, high-performance insulation, and passive techniques. The building's inertia allows for effective energy storage, providing thermal mass, absorbing heat during the day, and releasing it at night to stabilize indoor temperatures. This strategy is aimed at programs characterized by consistent and continuous use.

The strategies were elaborated through detailed design, implementation, and evaluation. The assessment was based on four key pillars: energy, heritage, sustainability, and economy. The lab believes that these aspects cannot be considered in isolation in a well-thought-out, innovative renovation project. Contrary to what is sometimes assumed, they are not only compatible but can even strengthen one another. The lab's goal is to identify and demonstrate synergies between them. The focus on heritage is embodied in a design where 'reversibility' is key: the proposed interventions are reversible, preserving the heritage and minimizing environmental impact through the future reuse of materials.

For each of the four proposed strategies, from *'Tent'* to *'Fur'*, various solutions were developed that could be used in different living situations, from temporary living to adaptable lifelong housing. Housing is often combined with an additional function, such as office, studio, collective workspaces, or outdoor spaces like bike parking, covered terraces, or open-air classrooms.

Ultimately, 16 design scenarios were developed. Techniques were also concretely worked out, with special attention to passive strategies, responsiveness, adaptability, etc., in line with the basic principles of each renovation strategy. The scenarios show that the flexibility of Willy Van Der Meeren's modular student housing can be enhanced through interventions that not only address sustainability, but also the functionality of the building.

Spiderweb

To make an objective comparison, the strategies were carefully calculated and evaluated. In terms of energy, the focus was on the energy efficiency of technical installations, thermal performance of building components, and the adaptability and responsiveness of HVAC systems and controls. For heritage value, a qualitative assessment was made of the concept, materiality, visual quality, and collectivity. Regarding sustainability, material input, environmental impact, and adaptability were key factors. Finally, the economy was evaluated based on construction cost estimates, the 'total cost of ownership,' and space utilization (especially the thickness of wall assemblies). For each of these aspects, various tools were used, including EPB software, a specially designed framework for assessing

heritage values, WBCSD Circular Transition Indicators (CTI), Disassemblability Index (LMI), and TOTEM (Tool to Optimize the Total Environmental Impact of Materials).

The calculations for the four different strategies were plotted on a spiderweb diagram, allowing for a visual comparison of the strategies within one holistic perspective, and assessing them against the original goals.

EV 1 TOTEM
EV 2.1 LMI (build.)
EV 2.2 LMI (techn.)
EV 3 CTI
EV 4 Responsiveness
EV 5 Adaptability
EV 6 Energy eff.
EV 7 U-value
EV 9.1 Standardisation
EV 9.2 Natural daylight
EV 9.3 Flexibility
EV 9.4 Cheap living
EV 10 Materiality
EV 11.1 Facade rhythm
EV 11.2 Colour integration
EV 13 Space occupation
EV 14.1 TCO (build.)
EV 15 Estimation
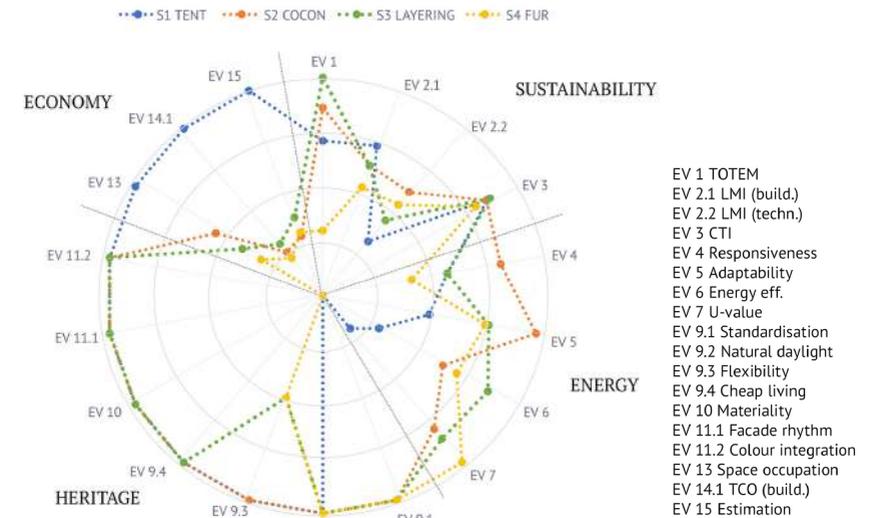
spider diagram showing evaluations by pillar and application of the strategies (© MAKER architecten)

Scalability

Circular construction inherently requires tailored solutions—each project faces different constraints related to existing structures, the availability of reclaimed materials at a certain time and place, spatial and technical constraints in terms of reversibility, and client requirements. The four strategies were deliberately designed to be specific, ensuring the lowest possible environmental impact for each unique context. At
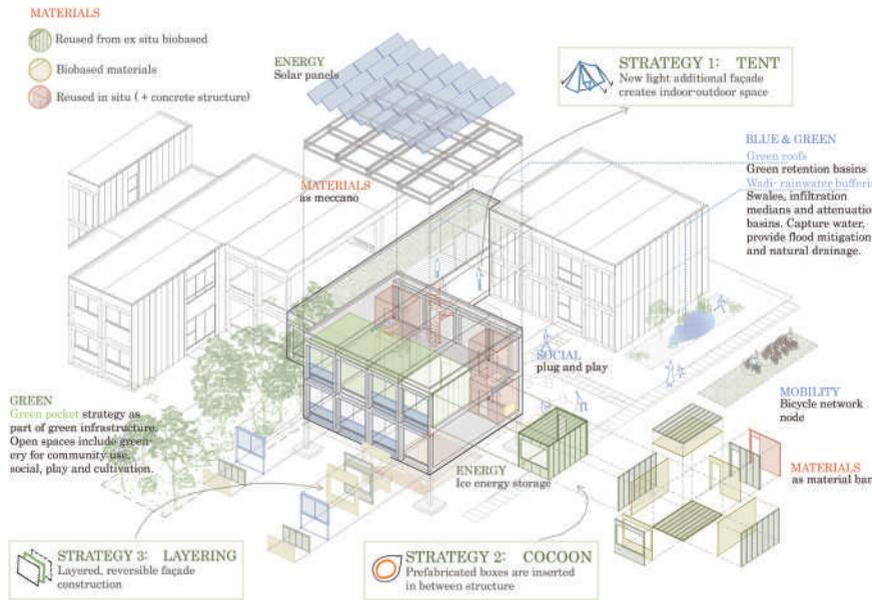
overview application of the strategies (© MAKER architecten)

the same time, the broader challenge was to develop scalable and replicable solutions without losing the project-specific adaptability that circular construction demands. Research was carried out into system-based approaches, prefabrication, and standardization. These efforts support the development of an open material bank—composed of interchangeable, reusable, and standardized components and detailing.

Three of the four strategies were ultimately implemented in the pilot project (*Tent, Cocoon* and *Layering*). While the strategies envisioned different construction details and use scenarios during the research phase, they were translated during the implementation phase into a shared and compatible building system that enables an evolutionary use over time.

We start with a 'casco' that meets basic needs and comfort for any program. The strengths of the 'as found'—such as its thermal inertia and the modularity of its concrete elements—are fully leveraged and enhanced with a well-performing envelope made of bio-ecological materials. This provides a flexible base onto which reversible layers can be added, depending on specific use cases.

Our focus lies on the process rather than a fixed end result.
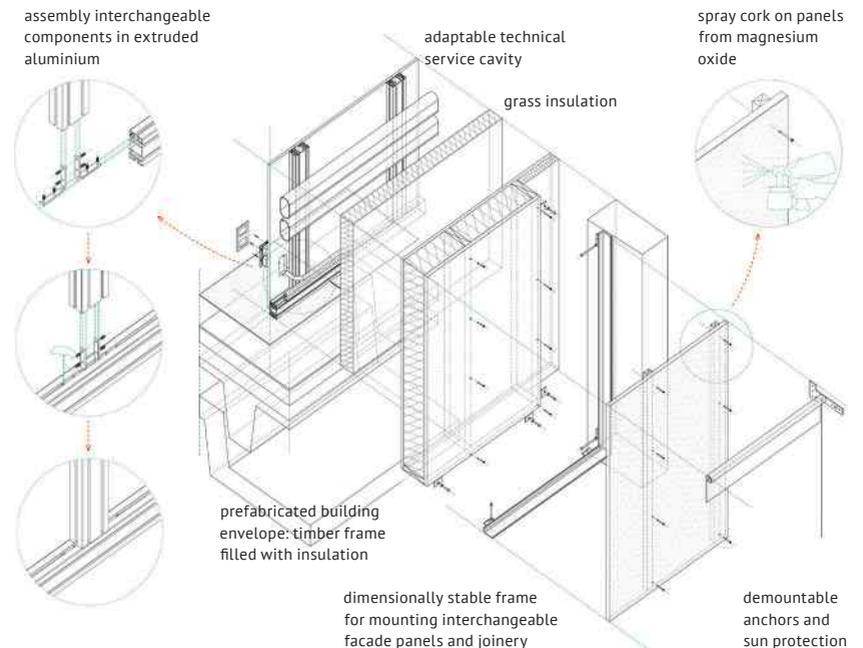
exploded axonometry of the facade layers (© MAKER architecten)

Conceiving the building as permanent limits flexibility and experimentation. Instead, the resilient framework of the modular structure allows us to work with standardized, compatible, and interchangeable components—assembled like a meccano set. The open material bank is scalable and generic in concept but can be customized to suit different applications. The goal is not only to standardize solutions through modularity but also to enhance reuse opportunities and reduce financial impact by maximizing compatibility. This approach fosters a dynamic, user-driven architecture—one that continuously reinvents itself in response to change and emerging challenges.

Reuse

During the implementation phase, significant effort was made to reuse materials released during the renovation, such as the modular concrete structure, concrete sanitary units, terrace tiles, and pressed wood panels (Fontex panels). From ex situ projects, sanitary fixtures, lighting fixtures, insulation materials, carpet tiles, and kitchens were recovered. New materials were chosen for their bio-ecological properties, such as timber building envelopes, cork cladding, and grass-based insulation.

The form follows the assembly method and the availability of materials.
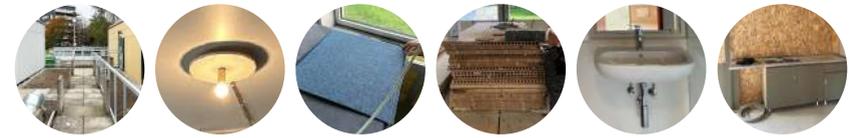
terrace tiles   *lighting fixture*   *carpet tiles*   *Fontex panels*   *sanitary fixture*   *kitchen*

reused materials in layering strategy
(© Séverin Malaud)

concrete structure with spray cork facade
(© Séverin Malaud)

The final result reflects how components are reversibly assembled and the patina of reused materials. Like a machine à habiter, the renovation is part of an ongoing process of activating materials and functions—a living system in constant transformation.

1. WOUTERS I., VAN DE VOORDE S., DE KOONING E., '3D Variel modules in precast concrete in Belgium (1969-1981). The work of Fritz Stucky and Willy Van Der Meeren', in: Van Balen K., Verstrynghe E. (eds.), *Proceedings of the Tenth International Conference on Structural Analysis of Historical Constructions*, Leuven, 2016, p. 953-960.
2. VAN DE VOORDE S., ELSEN S., GALLE W., WOUTERS I., DE GROOTE L., CASTILLO A. ET AL., 'Erfgoed in transitie. Innovatieve renovatiestrategieën van het WVDM Living Lab', in: *Erfgoed Brussel 038. Focus 1939-99*, Bussel, 2025, p. 142-167.
3. See, among others, VAN DE VOORDE S., WOUTERS I., BERTELS I., *Post-war housing in Brussels: Student houses by Willy Van Der Meeren on the VUB campus in Elsene 1971-1973*, Vrije Universiteit Brussel, Brussel, 2016, and, COHEN, M. (2016). 'Willy Van Der Meeren's Ieder Zijn Huis: Saving a Fragile Giant', in: *Docomomo Journal*, (54), 2016, p. 66–71.

HOW TO STEAL A BUILDING

Adapting, recycling and de-constructing in the inner city of Johannesburg.

Dr Heather Dodd

Savage + Dodd Architects
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Johannesburg is a city in flux. Established in 1886, the city has been built and re-built several times since its inception. Buildings were quickly built and then rapidly replaced by another - larger and more fashionable, often leaving little trace of what existed previously. Buildings were themselves responses to an extractive economy that governed the city's development. Material flows from a mining economy were inscribed in the built environment, shaping building practices and embedding early forms of material reuse as part of the city's architectural and spatial development.

Left: An early photograph of Johannesburg depicting a city being established in between the mine dumps (Cartwright 1965:82) contrasted with (Right) a current view of Johannesburg (Savage + Dodd Architects 2022)

An early example of this, Corner House, built by Ekstein and Co at the turn of Twentieth Century was a sequential iteration of buildings on the same site. An early expression of a deliberate material circularity can be seen in the re-use of the olive-green cast-iron balustrades taken from the second Corner House (demolished in 1903) in the building of 'Dolobran' (1906), a house commissioned by Sir Charles Llewellyn Andersson, a prominent speculator and businessman in early Johannesburg.

This deliberate 'recycling' demonstrates that material transfer and reuse formed part of early Johannesburg's building economy, creating a precedent for the re-purposing of materials in contemporary artefacts.
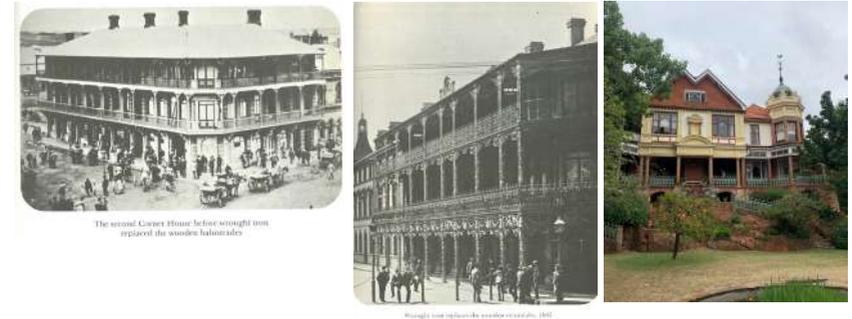
From left to right: Repurposing buildings and materials; Second Corner House, Corner House 1895 with timber balustrades replaced with wrought iron work (Cartwright 1965:91,153) and the re-used balustrades in Dolobran (Munro 2024)

As the inner-city economy changed in the immediate post-apartheid era with corporate urban flight and the de-industrialisation of the inner-city economy, many former office and industrial buildings stood vacant and available for adaptive re-use. This represented a large material and spatial resource with the potential to drive change at multiple scales and economies.

The re-use and adaptation of buildings, primarily for residential use, shifted the city away from being solely a place of 'work' toward a more integrated urban environment - a significant transformation given Johannesburg's history of spatial segregation. Over the past few years, the impact of this practice of adaptation has reshaped the inner city into a more complex and dynamic place, where both formal and informal processes contribute to a nuanced understanding

of urban transformation and the diverse actors driving it. In this way, the built environment is reshaped, building by building, gradually reconfiguring the functionality of the city itself - perhaps best understood as a form of urban 'repair'.

Yet this transformation is fragile, the trajectory is not always forward. It can be disrupted through multiple events including illegal occupations, fire and the stripping of buildings for their materials, prevalent within the context of contemporary Johannesburg.

What is there today may not be there tomorrow.

Adaptation and re-purposing of buildings requires an understanding of the spatial, material and structural possibilities of the existing. The design process is predicated on these possibilities. It is a tactical decision-making process; reshaping space through critical interventions requires both the taking away of elements - demolition and additions to maximize the potential of the building. This is usually based on a degree of certainty and understanding of the existing.

But what happens when a building is 're-mined' and stripped for its materials. In questioning the boundaries of 'circularity' in an informal economy, this essay examines how informal material extraction from buildings reshapes the design process itself, altering the assumptions that typically underpin adaptive reuse. As architects we engage in the deliberate 'deconstruction and reconstruction'

of buildings as an adaptive design process focused on limited interventions for maximum impact and we are challenged by the act of 'theft' – of elements of buildings disappearing. This suggests an environment of uncertainty, unpredictability and the need to continually reframe constraints in relation to opportunity.

Rapid and continual change - through processes that are largely informal requires flexibility and resilience in design responses, demonstrating a practise that is agile, tactical and can adapt quickly to circumstances .

In this visual essay, the work of Savage + Dodd Architects in two projects is presented as a reflection of a tactical practice of making, adapting and un-making (buildings) within these fluid urban contexts. These projects, Paris House and the Joubert Street Post Office, were selected because they operate as contrasting cases: one demonstrating intentional adaptation; the other revealing how informal material economies can disrupt and redirect the design process. The projects' trajectories are documented through both diagrams and open-source photographic record to document the trajectory of the process and speculate on often unanticipated processes that shifted and shaped the final outcomes.

Floorplate as site, roof as real estate – a spatial approach

In developing a spatial practice for adaptive reuse, we approach buildings as sites of tactical intervention, explored through a diagrammatic drawing technique showing a series of deconstruction, assemblage and adaptation options. These diagrams operate as analytical tools, mapping how the building could be cut, opened, reassembled or intensified, and later documenting how unforeseen material changes altered these possibilities.

Our strategy is to maximise the potential of the building envelope, working within the floorplate as a site and the external façade perimeter skin. We create inner courtyards and light wells by extracting areas of the floor slab, while maximising FAR through rooftop additions. In this, it could be said that we are working from the inside out

and are in fact engaged in the act of spatially 'stealing' space. Our methods lie within conventional architectural documentation practice, and this approach is strongly tied to the construction technology of the building; concrete framed with brick wall infill and steel framed windows. Projects must be completed quickly. The best strategy for recycling buildings is to use what is already there.
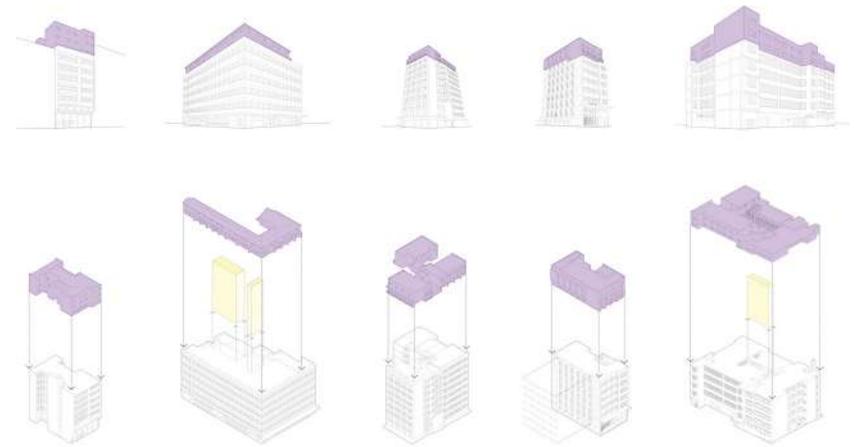
Tactics for Transformation. A retrospective diagrammatic exploration of adaptive re-use of buildings in the inner city of Johannesburg undertaken by Savage + Dodd Architects 2015 – 2019. Paris House on right hand side. (Savage + Dodd Architects)

Paris House, Doornfontein

Paris House (2019) - the redevelopment of three adjoining industrial buildings in Doornfontein, Johannesburg, uses this tactical approach. The floorplate was conceptualised as a site to be divided into residential apartment units. The building façade with its steel ribbon window and face brick panels, with modular and uniform rhythm suggests both the possibility and a certain extent of flexibility of the internal division. Taken together, the floorplate is configured much like a set of puzzle pieces. The roof was conceptually seen
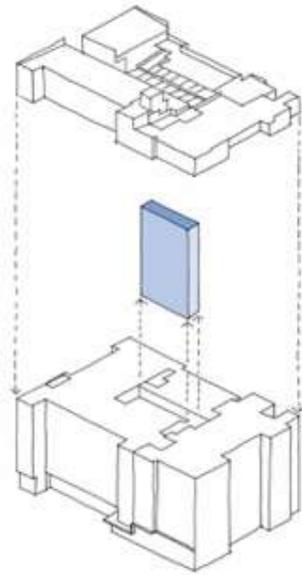
Paris House.

The diagrammatic illustration of design strategy of extrusions and additions.

Photos of courtyard during construction and completed. (Savage + Dodd Architects

as a piece of urban real estate, within a broader spatial strategy in which existing structural capacity, circulation and building rights were treated as assets from which new residential opportunities could be realised – here through the construction of duplex units. The strategy was to open up existing light wells to form a larger internal courtyard enabling considerable residential density.

The outcome was an affordable housing scheme with a variety of unit types, from studios to self-contained units, co-living clusters and single rooms sharing amenities.

The images and diagrams included here are not merely illustrative; they record the sequence of tactical operations—

Top: Paris House Roofscape as site and Floorplate as opportunity, Bottom: Completed rooftop duplexes and units (Savage + Dodd Architects. 2019)

cuts, extractions, insertions and additions that shaped the building's transformation.

Joubert Street Post Office. The case of the disappearing building. Known and unknown material economies

The design approach of considered reshaping and re-use of the existing building fabric was radically challenged in this project where, during a prolonged design period delayed by budget constraints, a building was systematically stripped for salvageable materials by others.

The building was a former post office with fourteen office floors, built in the late 1980s in a 'post-modern' style. Clad in black granite with large aluminium windows, it was already an anachronism, stylistically and functionally, by the time it was completed in the dying days of urban apartheid, where the city was on the cusp of major change.

Though long vacant, it remained in near-pristine condition when the client, a municipal housing company, acquired the building. When we walked through the building, it looked to us as if the occupants had simply closed the building and not come back. Although dark and covered in layers of dust, the richness of material possibility and the potential for the re-use of elements, from internal granite fixtures to door hardware beckoned.

The first tasks related to restoring electricity supply to the building and pumping out three basement levels of water. This while engaging in several design iterations of a changing client brief.

A process of 'informal' stripping began during our appointment and continued as we worked through several design and feasibility iterations. As delays in the project persisted and the project's future became less certain with cuts to the housing company's budgets, the concrete-framed structure with suspended granite cladding was gradually 'mined'; all internal metal fittings and aluminium windows across fourteen storeys were removed over several months. The contract was cancelled in 2020 without the conversion of the building for social housing being realised.

The stripping continues.

Joubert Street Post Office. The conflicts between the problems and the potential.Left: Water in basement. Right: Internal floor areas (Savage + Dodd Architects. 2016
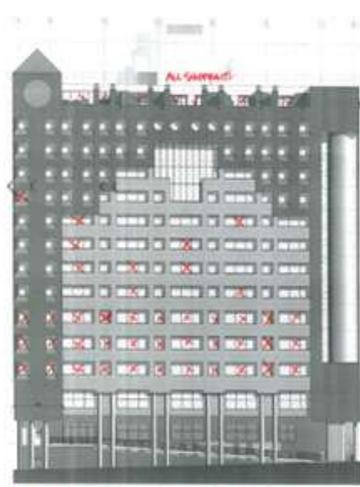
Left:
Google Street View Screen capture showing the progressive stripping of the building. In 2015, the windows were systematically removed, by 2025 the buildings was being stripped of its external granite cladding.

Top 2015

Middle 2017

Bottom 2025

(Google Street View.2025)

Top Right:
Architects mark up of missing windows, 2016.
(Savage + Dodd Architects)

Many questions are unanswered, such as - what is the scale of the stripping operation, are elements such as windows removed for re-use or re-sale as complete building elements or for recycling for their material content. How and why are materials that seemingly have limited recycling value such as granite cladding being removed and where do they end up?

Critically, the changing condition of the building directly impacted on possible design and construction trajectories. As a contemporary piece of construction with suspended cladding, the removal of window elements, their cills, framing and closure elements resulted in a continual process of rethinking the façade design construction and by extension the internal configuration. This is in direct contrast to the older conventional concrete frame with brick façade of Paris House. How to replace these became a technical and financial challenge, fundamentally altering the anticipated façade strategy and introducing uncertainty into the design process in response to ongoing material loss. This necessitated constant adaptation into a shifting material reality. This also relates to the scale of change; the removal of redundant material such as the old lift motor or steel window gondola was of little consequence, but the removal of fourteen storeys of windows significant. Unbelievably, viewing the building in 2025, even the granite cladding is being systematically removed and the steel supporting sub-structure, chemically anchored into the concrete structure is being hacked out.

The architect's job shifted to the documentation and reporting on the ongoing theft from the building, even as far as filing police reports.

The building became a material bank, resulting in a significant loss of architectural and economic value - but for whose benefit?

Clearly the scale of this, conducted from the inside of the building is a large-scale operation involving multiple points of an - unknown to us – logistics chain.

This project stands as a counterpoint to planned transformation, an incomplete and reactive process shaped by external, informal material economies. This raises critical questions about the changing nature of architectural practice in relation to informal and sometimes unknown or understood economies.

Joubert Street Post Office: Photos of façade from inside out showing progressive stripping of window and window elements. (Savage + Dodd Architects. 2016)

Conclusions. Material vs Spatial Banks.

If the future lies in understanding material recycling and materiality, then this tied to an understanding of how to make buildings in order to unmake them. Thus, embedding flexibility to allow adaption to unknowable futures. The two projects presented here reveal the spectrum of conditions under which adaptive reuse operates in Johannesburg, from controlled spatial transformation to volatile, externally driven material extraction. Considering the two projects

discussed in this essay, one might consider Paris House as a 'spatial bank' and the Joubert Street Post Office as a 'material bank'. Paris House demonstrates how spatial adaptability can be intentionally cultivated, while the Post Office exposes how informal economies can destabilise design assumptions and require architectural practices that are responsive, forensic and iterative.

Whilst clearly, the stripping of a building within the described context was not a positive outcome, the lessons learnt are related to how we conceptualise the making of buildings – from the inside out or the outside in, and the relationships of spatial adaptability in urban transformation.

Together, these cases suggest that designing for circularity in Johannesburg must also involve designing for uncertainty, and recognising that material flows may exceed, resist or redirect architectural intention.

References

Heritage Portal. "Dolobran Mansion Sits Smugly among Baker's Joburg Icons." Accessed July 18, 2025.

https://www.theheritageportal.co.za/article/dolobran-mansion-sits-smugly-among-bakers-joburg-icons

Cartwright, A. P. The Corner House: The Early History of Johannesburg. Cape Town: Purnell & Sons, 1965.

SECOND CHANCE

Architecture as an Evidential Practice

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Interpreting Clues

"If reality is opaque, there are privileged zones - spies, clues - that allow one to decipher it."[1]

Between 1874 and 1876, the Italian art critic and politician Giovanni Morelli, writing under the pseudonym Ivan Lermolieff, published articles in the German periodical *Zeitschrift für bildende Kunst.* Through his writing, Morelli introduced a new method for distinguishing original works of art from imitations by analysing elements considered secondary within a painting. He, in fact, identified distinctive traits of artists' styles by carefully cataloguing details such as fingers, nails, and ears. According to the 'Morellian method', in those apparently marginal elements, generally rendered with less control, the artist's individuality freely emerged, consequently enabling the art critic to unmask forgeries.[2] Morelli's analytical approach introduced a way of seeing based on empirical observation, a form of knowledge grounded in the reading of traces.

The emergence of such an attitude of attention to minor detail by the end of the 19th century is the focus of the essay entitled Clues: Roots of an Evidential Paradigm (1986), in which historian Carlo Ginzburg traces the birth of an epistemological model that establishes a correlation between the traces Morelli sought in paintings, the clues

that Arthur Conan Doyle's fictional detective Sherlock Holmes discovers, and the symptoms Sigmund Freud identifies in his patients. The architect, like the art historian, the detective, and the psychoanalyst, can also draw on inductive and circumstantial intelligence to understand complex phenomena. In architectural practice, "the evidential paradigm represents a fundamental shift of the theoretical axis away from the certainties of formal knowledge, used to confirm reality, towards an open attitude of inquiry that defines its own action through the continuous discovery of new conditions and possibilities."[3] Paying attention to what fragments can reveal, and attributing value to the partial and the situated—as Ginzburg, as a historian, is accustomed to doing— transforms architectural reasoning into an interpretative act based on clues and material traces, aimed at the production of meaning and knowledge through the open-ended processes of designing and making.

In the projects below, the focus is on the exploration of design strategies developed by ErranteArchitetture when operating on existing buildings in marginal contexts. These strategies are tested in situations where projects, subjected to the influence of contingent events, confront designers with the need to deviate from automatisms, building conventions, and traditional disciplinary tools. Such shifts are considered (fruitful) crises, providing unique opportunities for a deeper examination of an opaque and changing reality. Through a deliberate act of

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1   Carlo Ginzburg, "Spie. Radici di un paradigma indiziario," in *Miti, emblemi, spie: morfologia e storia* (Torino: Einaudi, 1986), 191. *Authors' translation.*
2   *Ibidem*, 158-209

3   Marco Navarra, *Dell'informe. Piccola filosofia pratica per l'architettura* (Siracusa: LetteraVentidue, 2022), 25. *Authors' translation.*

defamiliarisation, things are observed "as if they made no sense at all: as if they were a riddle", to use Viktor Šklovskij's words describing the artistic procedure that revives perception of the real.[4] This act transforms observation into a critical practice, allowing extant fragments and details to operate as epistemic devices.

The necessity to reconsider architectural design in light of unexpected events encourages close attention to seemingly negligible aspects of reality. Those clues, however marginal, become resources for designing new life cycles for architecture and the people who gravitate around it. The gaze directed towards the fragment coexists with a tension toward the totality. This change of perspective transforms scarcity, ordinariness, error, and recycling into a field of experimentation and a means of creative expression.

In both experiences, ex abrupto, the scarcity of material resources, as well as an altered time frame, invests what is already present with a new scale of values and transforms an impasse into an opportunity for invention. In this process, observing and cataloguing what is already available in search of traces is an operation entirely analogous to that carried out by the primitive hunter. Utilising the circumstantial rationality characteristic of hunting, the architect endeavours to detect faint clues and reconstruct narratives, refining his perspective through each progression and progressively transforming the selected traces into project material. Beyond the existing

building, also waste, available materials, tools, professional knowledge, and skills emerging from the context, together with the willingness of non-specialised actors to collaborate, impact both the process and the final result. Together, these multiple resources transform the project site into an archive of knowledge and possibilities.[5] This article explores how ErranteArchitetture, in investigating change in search of new meanings, has translated the evidential paradigm into design practice. In this framework, observation and interpretation of the traces, has proven to be an effective methodological tool to cultivate adaptability and responsiveness.

Bosco Colto

Bosco Colto pavilion, ready to host open-air lectures, presentations and concerts. Photo: Peppe Maisto

In August 2022, ErranteArchitetture took part as a tutor in Bosco Colto, a self-construction workshop aimed at building a pavilion in the Santo Pietro cork forest in central Si-

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4   Carlo Ginzburg investigates Viktor Šklovskij's artistic concept of ostranenie (defamiliarisation) in his essay *Occhiacci di legno. Dieci riflessioni sulla distanza* (Macerata: Quodlibet, 2019), 16.

5   For materials on-site catalogues as a generative practice to produce situated knowledge, see Lidia Gasperoni, "On-site Catalogues: Reassembling Situated Materials," *Candide*, no. 24/25 (2024): 1–19

cily. Before the workshop began, ErranteArchitetture and the workshop director conducted an online survey of the forest, identifying a derelict structure once used as a resting place for horses. Located near a cooperative for people experiencing mental distress, this modular construction offered potential for reuse. The designers envisioned transforming the space between the two building sleeves into an open-air didactic area, equipping the modules with wooden platforms. By mutual agreement, the architects were tasked with calculating the quantities of fir wood, lath, and boards—materials considered appropriate for self-construction—required to realise the pavilion.

Once on site, new findings reshaped the process. The structure, thought to consist of prefabricated modules, revealed geometric irregularities. These anomalies became a focus of investigation, recorded by tutors and students using labels and on-site drawings complete with descriptions and measurements. During this initial observation phase, a detailed collective drawing was produced, representing the "as found" structure and its relationship to the surroundings. Both natural and artificial materials, signs of human
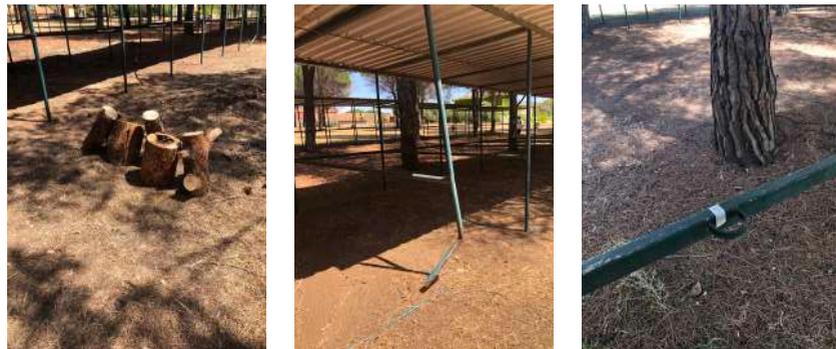
Bosco Colto pavilion, catalogue of clues during the investigation phase. Photo: ErranteArchitetture
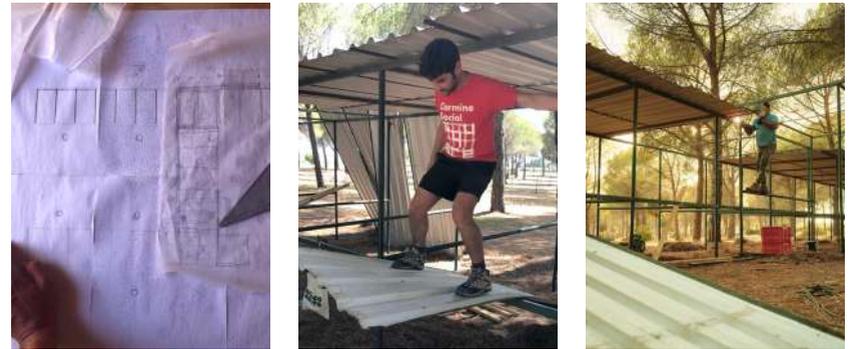
Bosco Colto pavilion, collective drawing produced by tutors and students, followed by collective actions of deconstruction, cutting, rotation, tilting and welding of the existing structure. Photo: ErranteArchitetture / Piermanuele Sberni

activity, and traces of past incidents were catalogued: the seriality of planted trees, felled and fallen trunks, subsidence, misalignments, and spontaneously grown prickly pears. These observations, attentive to minor details, provided clues that suggested new design narratives based on situated istances.

The last-minute unavailability of the planned wood supply prompted a reconsideration of the design approach: subtraction, reduction, and harvesting, rather than the addition of external materials. On-site materials, despite their scarcity and neglect, were re-evaluated, acquiring new value through their combinatorial potential. The resulting catalogue, initially limited to the structure and its immediate surroundings, expanded to include the know-how, time, and commitment of local artisans and volunteers, including psychiatric patients. Clues oriented the project: the existing structure was collectively deconstructed, cut, rotated, and welded, giving rise to a new organism. Corrugated roof sheets were partially dismantled and reused to create platforms. A new entrance, formed by rotating part of one of the existing sleeves, was covered with folded

roofing slabs to serve as an elongated planter for recovered prickly pears. Logs and other found elements contributed to the pavilion's interior design. A light green agricultural fabric—one of the few new materials—wrapped the structure, distinguishing the interior from the exterior.

The project demonstrates that within the process itself lies the potential to transform scarcity, contingency, and error into generative conditions for rethinking how architecture is conceived and made.

Casa BM

The second project, Casa BM, similarly explores a situation in which material resources are scaled down and redefined during the construction process. In this case, the principles developed for the Sicilian pavilion are transposed into the more complex context of building a house.

Casa BM is located in a village in the Valle Po, a valley in the Cottian Alps, southwest of Piedmont. The project in-

Casa BM, the new composite façade on the south front of the existing building, realised in collaboration with a local joinery company. Photo: Luca Bosco

volves refurbishing and expanding an abandoned 1970s house, a five-year process marked by fluctuations in the clients' finances, the contractors' expertise, and material costs.

If the house's partial demolition, consolidation, and structural extension were completed in the first construction phase, following a linear process, the post-pandemic period represented a second phase of the construction site. Here, the project had to be re-envisioned to address unpredictable external factors. New strategies were introduced, involving reduction, adjustment, and approximation—transforming a contingent horizon into an opportunity to explore alternative approaches. The construction of the building's envelopes, interiors, and accessory structures falls within this phase. The project in fieri thus became the subject of an act of overwriting, turning construction into a search for possibilities. This process involved investigating artefacts, waste, available stock, and ordinary building materials, as well as simplified construction techniques,
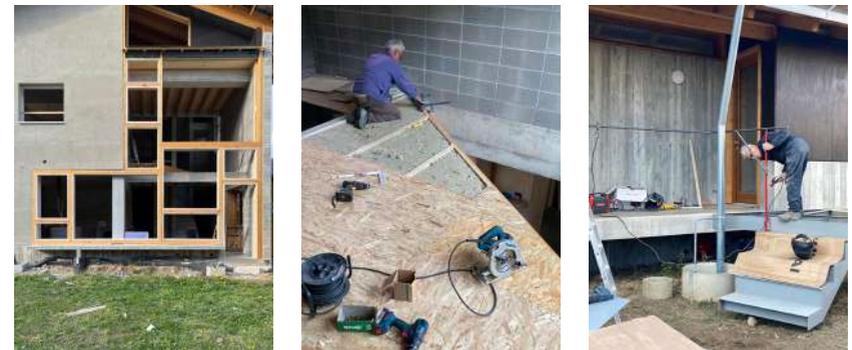
Casa BM, the adoption of a do-it-yourself approach and the inclusion of non-specialist knowledge guided the design of easily realisable architectural solutions. The glazed façade was assembled from standard windows set within a bespoke timber structure built on site. The timber floor, parapets—conceived as assemblages of semi-finished elements—and downpipes—fixed with bent metal supports attached to prefabricated concrete pipes—all employ simplified building methods that enable self-construction. Photo: ErranteArchitetture
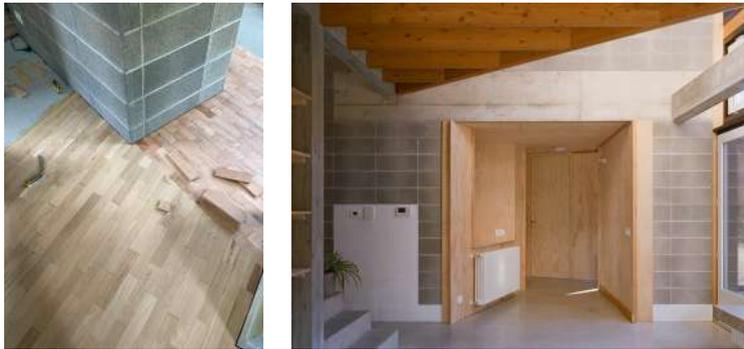
Casa BM, the investigation of semi-finished product stocks and economical building materials oriented the project. Wood panelling, shelving and fixed furnishings were all produced on site with limited tools and visible fixings.
Photo: ErranteArchitetture / Luca Bosco

local expertise, and the contribution of non-specialised participants. A multiplicity of clues guided this process, gradually transforming the project itself. Though this approach inevitably introduced inaccuracies and construction errors, ErranteArchitetture's direct engagement on site, alongside traditional studio practice, turned the work into a fertile ground for experimentation, continuously adapting to on-site conditions.

This phase required assessing the availability and skills of potential collaborators—both individuals and local contractors—with the aim of identifying and tailoring the most viable solutions. The construction systems of key nodes emerged from negotiations with local firms, producing hybrid solutions that combined traditional craftsmanship with project-specific needs. The large south-facing façade exemplifies this collaboration. Moreover, the adoption of a do-it-yourself approach, and the inclusion of non-specialist knowledge and tools—from architects, owners, and friends—encouraged the design of architectural solutions that were simple and easily realisable. Chilean pine ply-

wood panels, standard battens, and varied wooden flooring stocks are economical, semi-finished products whose recognisability and compositional clarity are retained. Their use, governed by a limited set of shared rules between architects and builders, reflects a strategy aimed at eliminating the superfluous and accepting imperfection, privileging spatial quality instead. Approximation and simplification emerge, for instance, in the transversal use of semi-finished elements: concrete blocks serve as cladding, interior partitions, garden borders, and paving for surface-water regulation.

Simple self-construction assemblies reduced the distance between owner, user, and builder: "Material objects, created through human labour, are imbued with symbolic meaning—personal, familial, and social—that is perpetuated and reinterpreted across generations".[6] This direct involvement is inseparably linked to affective aspects projected onto things. The strengthening of bonds between in-

Casa BM, The ductility of the concrete blocks. Cladding the living area. Dividing walls across both floors. Garden borders. Paving to manage surface water on the slope down to the basement. Leftover blocks of different thicknesses, which would otherwise have been discarded due to the small quantity of remaining material, were reused to build the kitchen walls, whose design is defined by the sequence of partitions with varying thicknesses. Photo: ErranteArchitetture

6   Remo Bodei, *Generazioni. Età della vita, età delle cose* (Roma–Bari: Laterza, 2015), 85. *Authors' translation*

habitant and space transforms the house into a home rich with stories and memories—a familiar artefact to be cared for through repair and open to exploration through future modifications.

Among the strategies adopted, the on-site cataloguing and reuse of materials and components from demolition ensured the preservation of unique and valuable elements otherwise destined for discard. According to this, the external paving, was made from reused roof beams transformed into steps connecting the southern terraces; stone slabs from a nearby ruined building define the entrance area, and granite steps from the original staircase were reused to form garden paths. The garden itself became a patchwork of cultivated and native plants—formal shrubs preserved from the pre-existing garden alternating with spontaneous vegetation, as well as plants recovered from nearby landslides or collected along roadsides.

In general, resources are not employed to conceal ordinary elements but to reveal their latent potential. This approach

Casa BM, the cataloguing and reuse of materials from the site and its immediate surroundings. Steps from the demolished staircase of the original building define the paths around the house, while stone slabs from a nearby ruin mark the entrance area. The garden forms a patchwork of 'domestic' and 'wild' plants—some purchased, some preserved, others arrived by chance or found along the roadside. Photo: ErranteArchitetture

Carpenter Sofa and Carpenter Chair, furniture exploring the aesthetic potential of semi-finished materials. Photo: ErranteArchitetture

transforms the dynamics of construction into a field of discovery, where Ginzburg's evidential paradigm, Ingold's anthropology of making, and Bodei's philosophy of everyday objects converge in a poetics of the ordinary, grounded in attentive observation.

This pursuit of revelatory traces found a clear expression in the Carpenter Sofa and Chair projects, realised during the construction of Casa BM. The spontaneous gesture of a worker, who almost instinctively assembled a seat from found fragments of metal gabion on site, became the spark for a series of design explorations. Both Carpenter, reflecting on the reuse of waste, the aesthetic potential of overlooked elements, and semi-finished materials, exemplifies the use of montage as a critical practice. Likewise, in the Casa BM, construction errors and process accidents—data as marginal as they are revealing—are transformed into design potential. In this regard, the new ridge beam of the existing building, whose geometry resolves its non-barycentric position relative to the median axis, and the metal bracing on the ground floor, both transform structural needs into didactic as well as aesthetic experiences.

Casa BM, the design potential of technical requirements and construction errors. The metal bracing on the ground floor, the kitchen hood—designed to address a spatial misalignment—, and the new ridge beam—whose geometry resolves its non-barycentric position in relation to the existing building's median axis—turn necessities into vivid, didactic and even aesthetic experiences. Photo: ErranteArchitetture / Luca Bosco

The legibility of these additions is, here and there, signalled by red paint.

From Clues to Constellations

When the project is challenged by a changing framework, the epistemological model proposed by Ginzburg promotes the acquisition of situated knowledge that extends beyond the confines of the architectural site[7] , incorporating both human and non-human actors. With the attitude of the bricoleur[8] —observing, weighing, manipulating materials, and rethinking tools—architects avoid the stance of external observers and instead establish relationships of "correspondence" with the world.[9]

The two projects presented illuminate a perspective from which to face contingency, to learn from it through that practical and observational engagement that Ingold calls the "art of inquiry". Drawing attention to apparently secondary aspects and anomalies is, for ErranteArchitetture, an exploratory practice instrumental in shifting attention towards the processes that shape reality. The material traces of time, adaptation of use, and unforeseen events are fragments that, recomposed, shape a new whole open to interpretation. ErranteArchitetture's practice recognises in overlooked details—traces of real or presumed processes—those spaces of ambiguity and incompleteness capable of activating a profound involvement and a deeper knowledge. Through the mapping and imaginative recomposition of fragments, the project constructs meanings. Within this Benjaminian "constellation of fragments"[10] , everything is included: "even the 'keepsakes', more or less useless, more or less affectionately preserved [...] become valuable assets for the project,"[11] helping to face today's and future crises.

7   On the agency of architectural sites as a design resource, see Albena Yaneva and Brett Mommersteeg, "How Does an ANT Approach Help Us Rethink the Notion of Site?," in *The Routledge Companion to Actor-Network Theory* (London: Routledge, 2019), 306–317

8   According to Claude Lévi-Strauss's definition in Il *pensiero selvaggio* (Milano: Il Saggiatore, 1964)

9   Tim Ingold, Making: *Anthropology, Archaeology*, Art and Architecture (London: Routledge, 2013).
10   Walter Benjamin, *The Arcades Project,* trans. Howard Eiland and Kevin McLaughlin (Cambridge, MA: Harvard University Press, 1999)
11   Renato Bocchi, "Recycle," in Recycled Theory: *Dizionario illustrato / Illustrated Dictionary* (Macerata: Quodlibet, 2016), 482.

CHAPTER 4

PROCESSES OF RECLAMATION AND CONTEXTUAL MINING

RAAMLAND

Assemblages, on-screen and on-site

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Basing architecture on locally gathered reclaimed materials is becoming increasingly common. Such practice often downplays the role of representation, as design can be developed primarily through mock-ups using materials at hand.[1] *Raamland*,[2] a pavilion and community garden in Bruges designed by the authors' studio Norell/Rodhe, explores an alternative approach in which representation supports an extended design process. This involves documenting and assembling elements and materials on-screen, in a real-time rendered model, both before and in parallel with their assembly on site. This approach, which enabled much of the design to be developed remotely, has implications in which representation plays a crucial role. The rich materiality of the model became a means of overcoming the 'layers of abstraction' that make conventional CAD drawings ill-suited to reuse practice.[3] Access to this materiality during the design process gave agency to the unique characteristics, such as texture and colour, that reclaimed materials typically possess. Constructing on-screen assemblages with these characteristics present provided a way to test combinations of different forms and materialities, something that would normally require direct access to the material on site. Ultimately, the project yields a layered architecture that celebrates the diverse origins, histories, and temporalities of its constituent materials.

1   See Urszula Kozminska and Bie Plevoets, 'On Unbuilding: Overarching reflexions on Practices in Research #05 Demolitions and Deconstructions', *Practices In Research*, issue #05 (December 2024), pp. 377- 401 (p. 391).

2   *Raamland* was commissioned for the 2024 Bruges Triennial: Spaces of Possibility. Design: Norell/Rodhe, Daniel Norell and Einar Rodhe. Curators: Shendy Gardin and Sevie Tsampalla. Local architects: Dertien 12. Main contractor: HuisMus bv.

3   Maarten Gielen in Giovanna Borasi, Maarten Gielen, and Konstantinos Pantazis, 'Specifying from a Broader Catalogue', *Canadian Centre for Architecture*, 2017 <https://www.cca.qc.ca/en/articles/issues/24/into-the-material-world/53665/specifying-from-a-broader-catalogue> [accessed 6 August 2025].
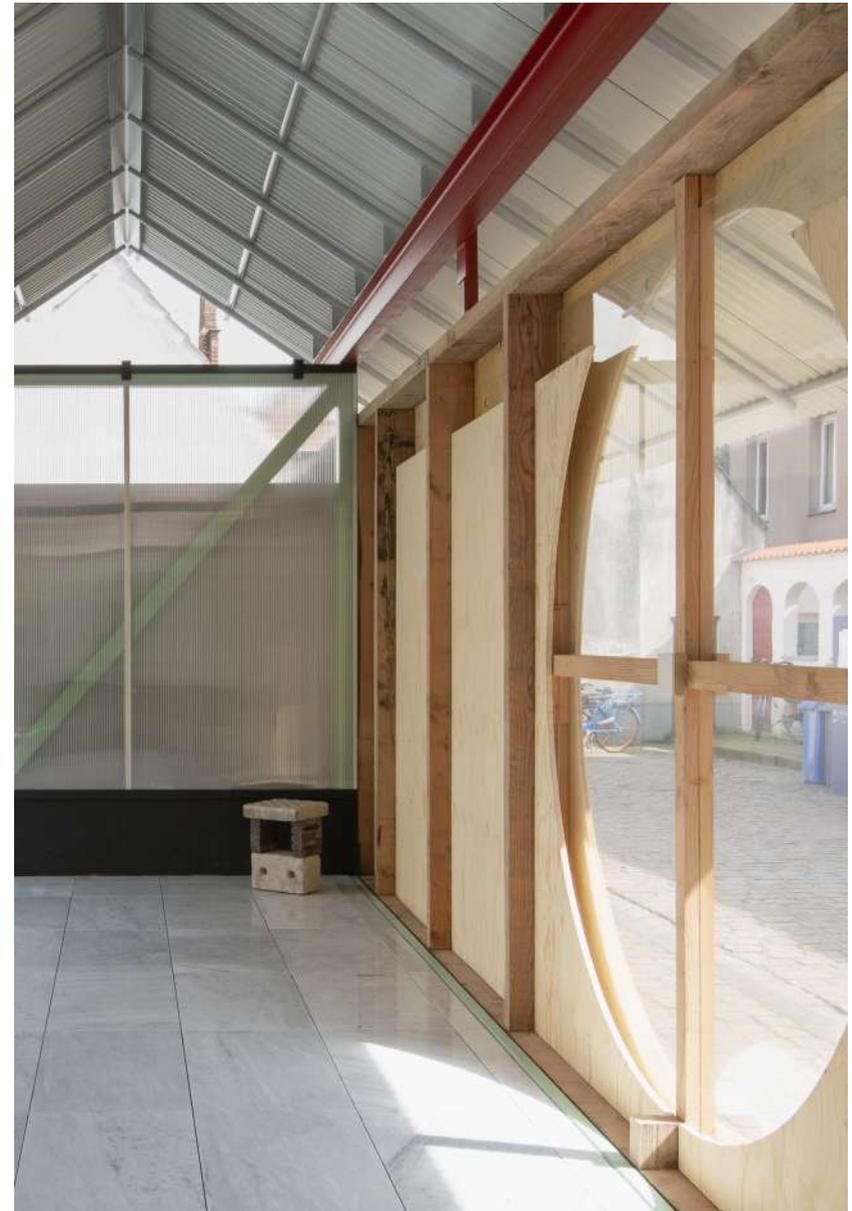
Norell/Rodhe, *Raamland* (2024). The design and construction were based on reclaimed materials gathered from various contexts, including wall panels from an abandoned club in Oostende, second-hand Carrara marble tiles from Brussels and timber studs and plywood sheets from previous triennials.

To source materials, a series of excursions were undertaken to locations in the region such as recycling plants (first row), reuse retailers (second and third row), and a warehouse where leftover materials from previous triennials were stored (fourth row). Taking cues from Alison and Peter Smithson's notion of as-found, this involved understanding 'how the existing built fabric of the place had come to be as it was', as well as gathering and assembling materials 'where the art is in the picking up, turning over and putting with...'[4] Building a catalogue of objects was a design-oriented activity, characterised both by chance encounters with special finds that spurred the imagination and by a systematic process of surveying and sorting.

4   Alison and Peter Smithson, 'The "As Found" and the "Found"', in *The Independent Group. Postwar Britain and the Aesthetics of Plenty,* ed. by David Robbins (The MIT Press, 1990), pp. 201-202 (p. 201).

Found elements and materials were measured and represented using texture-mapped models, with textures derived from photographs. The realism of these models in a real-time rendering environment makes it possible to assess the condition and characteristics of each piece in ways that extend beyond what regular wire-frame models can offer.[5]

5   Precedents for this approach that favours realism over abstraction in representation of material include drawings of elements for Sala Beckett by Flores + Prats.

MATERIALS TO LOOK FOR: LINEAR ELEMENTS FOR THE GARDEN WALL

The wall facing the garden needs a series of linear elements that covers and protects the fastening of the fabric. This includes both vertical elements around openings, as well as horizontal metal profiles along the bottom edge.

Vertical elements
The wall needs in total four vertical elements, measuring ca 2500 mm in height, depth ca 100-160 mm, and width ca 80-150 mm. Contrasting against the white fabric, these elements can vary in colour and materiality. It would be good to have around 6-8 objects and test these on site once the screen wall is in place.

Horizontal elements
The top and bottom of the wall is covered with metal profiles. The top profile is already found (bought at Heindryckx) whereas bottom profiles need to be located. Since ground is uneven, these profile may vary in height and/or be doubled where needed.

| Metal beam HEA 114x120 mm or IPE 120x64 mm | Circular metal profile D = 100-150 mm | Wooden column D = 120-150 mm | Aluminium profile 80x160 | Wooden column D120 | Concrete and brick lintel |
| Heindryckx? | Heindryckx? | Reused mast from sailing boat? | Heindryckx? (Similar to the shorter elements that has been transported to TBW) | ? | Allready at TBW |

Rather than serving as a static vision of an anticipated result used to sell a proposal, rendered models became a tool for working remotely with a specific set of available resources. The continuously updated model served as a means to test compositions of elements against one another.

Norell/Rodhe, *Raamland* (2024). The project deliberately extended the search for material beyond valuable items available on the market, such as doors from reuse retailers, to include waste materials such as concrete and brick beams and stone fragments.
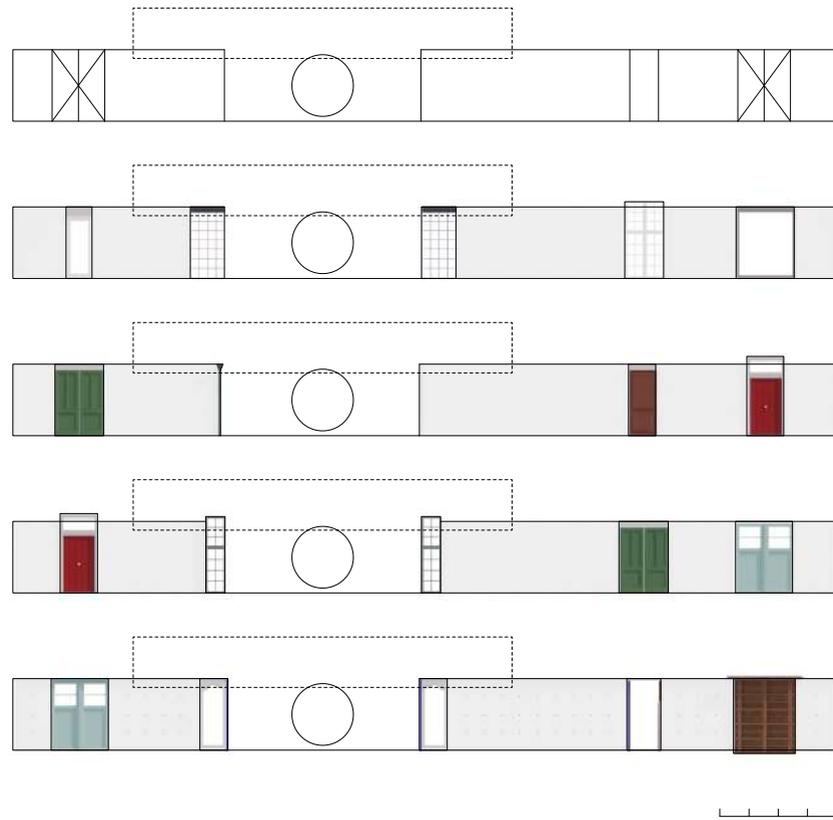
Testing different elements against one another was carried out both at a detailed level in three-dimensional views and in elevation studies. The garden façade elevation featured a composition of doors, windows, and framed openings set against the abstract white surface of a fabric that had been reused from a previous triennial installation.

Loosely formed assemblages were developed into the pavilion and garden furniture through an iterative process of on-site and on-screen studies. Close collaboration with the contractor HuisMus bv, led by Tim Van Gaever (pictured), was essential.
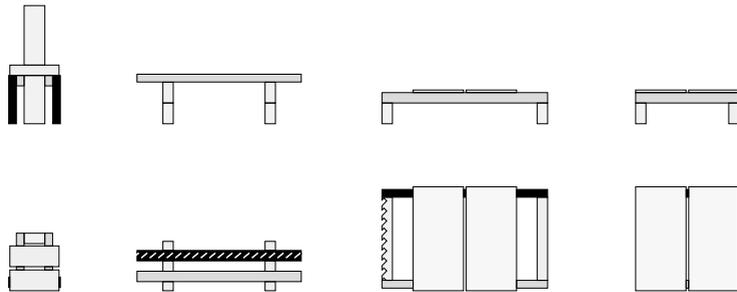
Furniture assemblages were developed by combining spontaneous on-site testing with analytical studies in drawings. This attuned the authors to different qualities that used objects possess, from reading their histories through features that reveal their 'other lives' to assessing them for what they might become, that is, for their potentiality as building materials.[6]

6   For a precedent for this way of viewing materials, see Tim Ingold, 'The Materials of Life', in *Making: Anthropology, Archaeology, Art and Architecture* (Routledge, 2013), pp.17-32 (p. 17).

Norell/Rodhe, *Raamland* (2024). The community garden furniture was constructed from reclaimed elements gathered from various contexts, including aluminium profiles from a metal recycling plant, marble blocks that had once formed steps in a grand staircase, and a mantelpiece sourced from an exclusive retailer for antique building elements.

In addition to supporting assemblage studies, the real-time rendered model worked as an immersive environment for walkthroughs during online meetings with collaborators such as the local architect or contractor. These on-screen discussions were made viable by the authors' numerous in-person visits, during which relationships with both materials and people had been established.

The real-time rendered model was complemented by a set of annotated construction drawings that were based on the model.

Norell/Rodhe, *Raamland* (2024). The steel structure and roof cladding were the only parts of the project not based on reclaimed material. These elements were instead prepared for future reuse, for example by avoiding construction methods that would compromise the structural integrity of the beams, such as drilling and bolting.

Norell/Rodhe, *Raamland* (2024). Once integrated into the pavilion, the gathered elements such as doors and windows established visual relationships with elements in the surrounding urban fabric to which they originally had belonged. In this way, the pavilion became a 'representation' of a category of materials that, for one reason or the other, had been discarded. This ability to 'speak' for streams of material with a low visibility in society became a defining feature of the architecture of *Raamland*.

EMERGENT SITES

Two projects to reflect on situated design practice

Roland Reemaa
Laura Linsi

LLRRLLRR
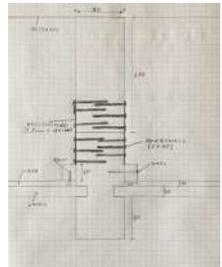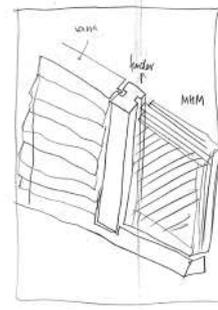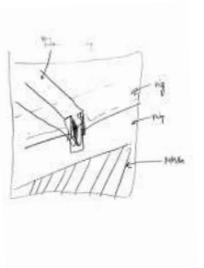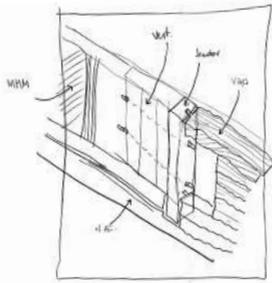
Design and construction process of a rural timber house.
Photography & drawings: LLRRLLRR, Agu Trolla

SITUATED PRACTICE

The title of this article refers to projects that are not only shaped by material flows, but by site specific social contexts and interactions that arise during design stages. The following two projects – a 140 sqm rural log house refurbishment and a design for an art biennale within an 20 ha industrial harbour territory – explore how on-site observations, surveying of existing resources, active interaction with contractors and the recognition of skills, beyond material availability, impact the development of a design proposal, built project and generate knowledge on the construction site.

Located peripherally in Estonia and Latvia, the projects are shaped by locally specific collaborative acts between the architect and the contractors. Materials, such as timber and concrete, can be considered here as objects of knowledge, which become active agents, not merely passive resources. While these materials form the core of the projects' reuse strategies, it is mostly the dialogues with project stakeholders that turn the inert material into vibrant matter (Bennett, 2010).

The two projects reflect theories of situated practice (Haraway, 1988), which avoid generalised knowledge imposition and rather rely on specific knowledge that emerges from their context. Haraway critiques the notion of objectivity and questions power fields (such as in science, capitalism, colonialism, male supremacy) that gatekeep universal knowledges. As an alternative, she refers to writings

Photography: Tõnu Tunnel
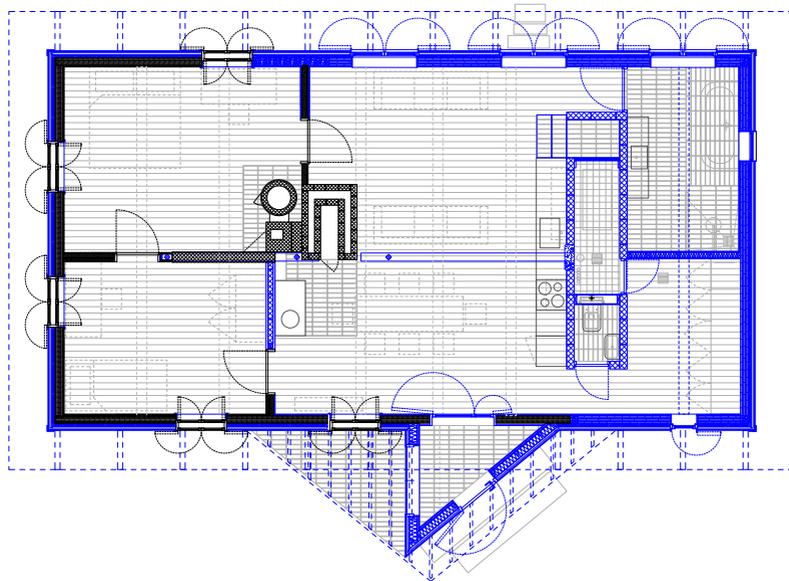
1:20 model and ground floor plan, with blue indicating new elements and black retained parts. A new masonry plumbing core mirrors the original heat-retaining stove, while also enclosing stairs to attic. The design is collection of traditional and contemporary timber detailing adhering to bioregional material use for insulation, finishing and local reuse.

by Sandra Harding, who calls for a "radical multiplicity of local knowledges" and learning from others' perspectives. "Situated knowledges require that the object of knowledge be pictured as an actor and agent, not as a screen or a ground or a resource" (Haraway, 1988).

I argue that architectural design stages should not be considered only as successive steps to agree upon an ultimately fixed object, but instead as active processes for instigating further material means to the construction site, encouraging local knowledge production and allowing materials to become active agents next to designers and contractors.

RURAL MINING

The residential log house extension and repair in the Estonian countryside of Karula was built in collaboration with a traditional carpenter Agu Trolla. The brief was to add wet rooms, while adhering to local natural protection area volumetric regulations. The design mirrors the old brick heat-retaining stove with a new plumbing core – a design move that also avoids freezing of water pipes in the building perimeter, a common risk during subzero winters.

From the start, we aimed to adhere to bioregional principles, such as learning from old buildings, extending the lifespan of the existing ones, and designing new links in material flows (BC architects & studies, 2024). In relation to Haraway's notion of situated practice, the bioregional approach must also be seen as place-based knowledge. According to Bruce Evan Goldstein, the "concept of consti-

tuting the known world (and place) through active participation with nature and others implies that knowledge is rooted in both individual sensation and culture" (Goldstein, 1998). Following Goldstein's ideas, a carpenter's understanding of building and construction in a place is based on the interaction of forest, forestry, weather, seasons, sawmills as well as personal experience and lived know-how of a region.

The construction included replacing dry-rotted timber, rebuilding stone foundations, reusing floorboards, reusing bricks and sliced brick slips for flooring from an abandoned farm nearby, using recycled and new clay rendering on reed mats, and adding exterior insulation with woodfibre panels and paper waste cellulose. During the conservation and repair of the existing structure, the exterior walls of the extension became a subject for experimentation in collaboration with the carpenter, who sources windthrow and second-grade timber after storms and forest clearances. The lower-grade timber was planked and built up layer by layer as MHM wall panels. The panels were built in-situ, rather than prefabricated and craned to site, which was not feasible for a small extension on a rural hilly site. The bespoke technique allowed tight joinery between old log walls and the new panels, while achieving similar vapour diffusion, enabling even moisture transfer, preventing condensation build-up and allowing for seamless interior finishing of clay rendering on reed mats and continuous paper waste cellulose insulation on the outside.

The construction technique came about as a result of numerous site visits. Due to a limited budget, a log extension was not feasible, and the default option to use concrete masonry blocks too big of a departure from the project ethos. As architects, we suggested the MHM system. The carpenter had no previous experience with it but he contributed with comprehensive skills and knowledge of the available timber stock from his material bank and local sawmills. The alternative solution to build on-site layered MHM became a good fit within the budget, and furthermore offered the contractor new opportunities of making use of local sawmills, his own material bank and allowing him to prototype a local solution to this and his other similar projects within the region.

In the case of low budget rural projects, the tendency to replace traditional skills with off the shelf products, such as concrete masonry blocks, can be seen as a standardised, practical and market-driven solution – a direct result of objective knowledge as criticised by Haraway. While according to the bioregionalist approach, the objective should rather be on "face-to-face encounters to develop a common knowledge base", "social, subjective, and experiential basis", and "knowledge [that] is constantly regenerated through the active participation of the individual (mind and body) with place and culture" (Goldstein, 1998).

Instead of focusing on the final built project, the objective of a situated design practice can therefore be getting to know skills, machinery and materials, and aiming for construction, where material means of production can be re-

Timber house in various construction stages from top left: timber climatising and joinery while retaining old walls with existing render; planking for new MHM walls and interior finishing; expressive steel beams, where one of the original walls is removed; newly finished MHM walls on bottom log ring-beams. Axonometric diagram unfolds all new (blue) and retained, repaired (black) elements.

Photography: LLRRLLRR
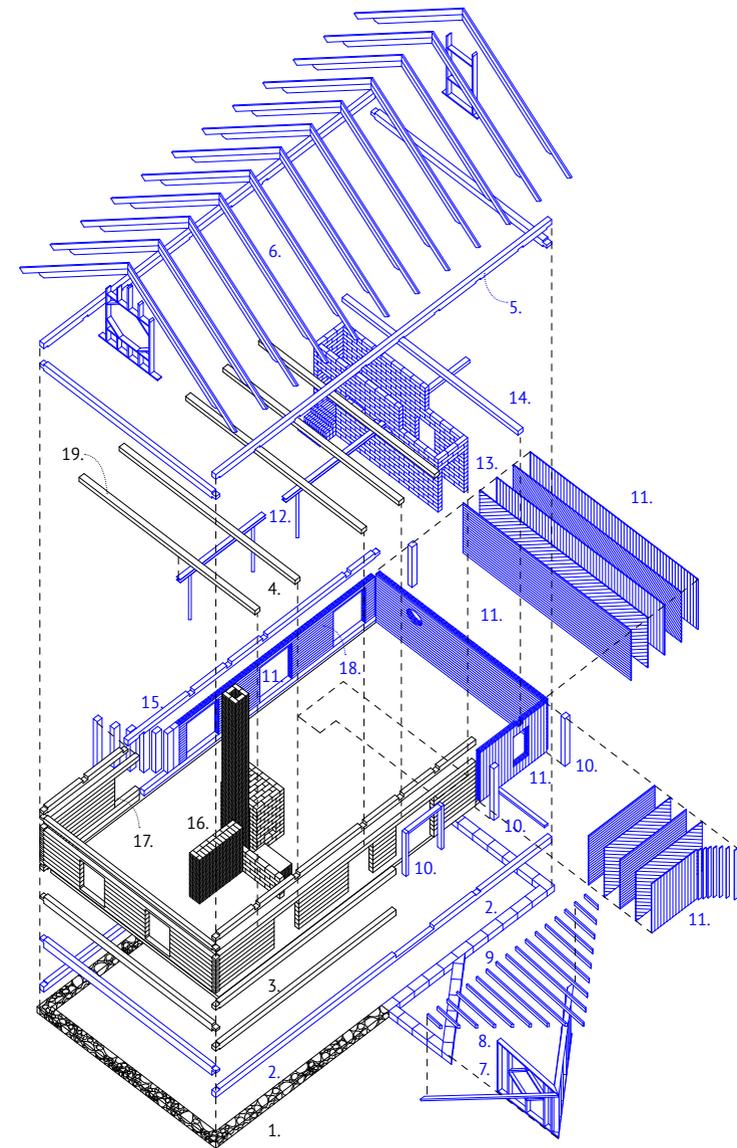
1.) Stone foundation repaired 2.) Solid timber base ring 3.) Log repairments 4.) Solid timber beams repaired 5.) Solid timber top ring 6.) Modular rafters 7.) Stud wall 8.) Rafters 9.) Block foundation 10.) Solid timber frame post 11.) In-situ MHM walls 12.) Steel frames 13.) Block core for stairs and technical room 14.) Solid timber beam 15.) Vertical log wall 16.) Woodburning chimney, warm wall and kitchen 17.) Reed & clay rendering repaired 18.) Reed & clary rendering continued 19.) Recycled floorboards, repaired with new parts

Cutting through walls to allow new access for a temporary exhibition, while improving harbour warehouse use for after the event. Below a mapping of rubble within the port that was used to discuss logistics for moving them around the territory.

turned to the immediate producer and worker. Sérgio Ferro critically describes the final product (i.e. building) exclusively producing capital, while the making process of it (i.e. building site) is dispersed into specialised labour, subordinated only towards the production of the former. Similarly, the work of an architect is subordinated to capitalist aims by bringing the dispersed labour together to deliver the final product. "The true dimension of architectural form" should, according to Ferro, allow manufacturing that is not subordinated to market forces and follow the intrinsic knowledge, skills and availability that could return the material means of production to the construction workers and building site (Ferro, 2024).

HARBOUR LIFTING

Responding to an invited competition for the 2020 international art biennial RIBOCA2 in Riga, Latvia, our proposal took inspiration from the industrial scale of goods and material flows in an operating harbour, which was the designated site for the temporary event. Instead of responding with fixed design solutions, we proposed a narrative and a strategy about incorporating circular design principles for the half a year long project by using locally found materials and ensuring the site could return to industrial use after the event. While the Andrejsala port was chosen as a venue by the organisers, we offered to instigate further collaborations with its operators and to make use of available materials, equipment, and skills on the vast 20 hectares territory.

Jane Bennet discusses the notion of assemblage, following Deleuze and Guattari's concept, as "ad hoc groupings of diverse elements, of vibrant materials of all sorts". She writes, "the effects generated by an assemblage are, rather, emergent properties, emergent in that their ability to make something happen (a newly inflected materialism, a blackout, a hurricane, a war on terror) is distinct from the sum of the vital force of each materiality considered alone" (Bennet, 2010). Following Bennet's construct, a port in Riga can also be seen as an assemblage of human and nonhuman relations, including global shipping routes, post-soviet brownfields, as well as COVID-19 economic disruptions that allowed the harbour to open to a public event, and an art event with producers, curators and architects, which as an "energetic pulse" (Bennet, 2010) reoriented the assemblage towards an unexpected collaboration.

The most effective grounds to collaborate with the port was firstly to survey their 20 ha territory that is mostly closed to public . This included locating potential construction materials from their brownfields for our design proposals, which gave the port an overview of their rubble at overgrown and unused sites, locating and making good hazardous situations such as recovering manholes, removing old barbed wires fences. The survey consisted of maps, photos, measurements and locations of concrete blocks and construction rubble. It gave the port an incentive to clean up its territory, which was due to open to public. The know-how on the manoeuvring of heavy-duty machinery (forklifts and wheel loaders) became important in the design, which allowed utilising 1,5 tn concrete barriers as walls for inte-

rior spaces and various rubble to be turned into furniture and pavement mosaics for accessibility across the territory. Circular design principles were employed throughout, such as re-using existing elements, sourcing materials from site and specifying dry connections for lightweight structures for neat disassembly and making use of heavy items that only local machinery can move. After the event, when the port continued their work, most of the architectural interventions were disassembled with little or no waste.

Secondly, together with the port master, we explored how temporary curatorial requirements, such as new cabling, lighting, roof repairs and openings into existing walls, would benefit the port's everyday operations after the event. For the main 3-storey 18,000 sqm venue, new passages were cut into masonry walls that would fit the curatorial art experience as well as the port workers' routes. The most expensive new installation was the cabling and lighting, which was carefully coordinated by the architect to fulfil scenographic and high standards for contemporary art, while suitable to use after the event for an evenly lit warehouse.

Rightfully on a site like this, the independence from global capitalist power fields is not challenged. Important to this article though, is the architect's role to design processes, which emerge from social contexts, interactions and the close collaboration with the port operators. Besides coordinating a major art event by following circular material principles and creating little waste, which temporary events like this often do, the project also materialised in better post-
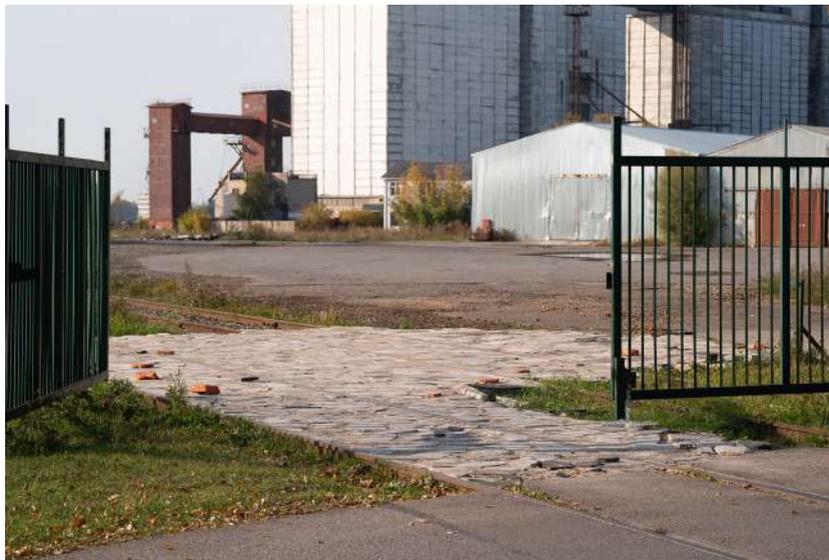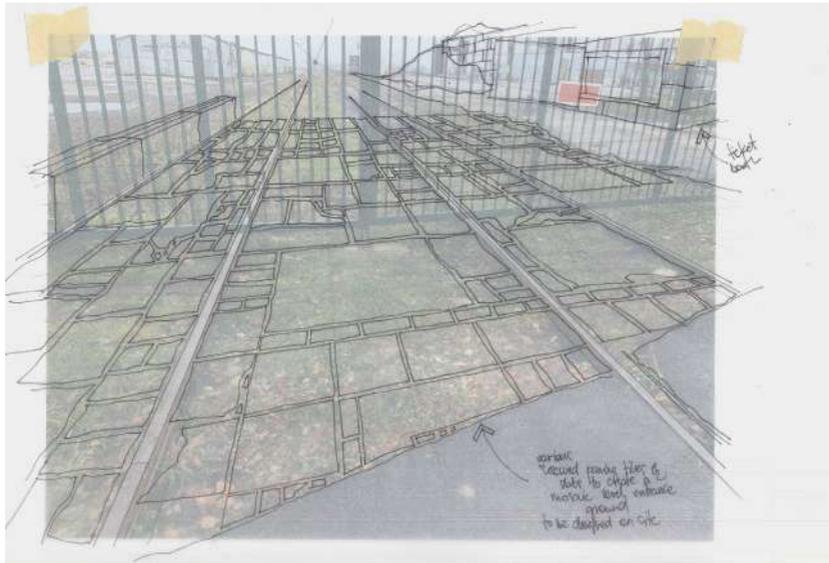
Pavement sketch about turning rubble from the territory into mosaics, which gave wheelchairs access to the industrial port and making use of industrial concrete barriers as a cafe, ticket booths and other public areas. All materials were redistributed after the temporary 3-month event.

Photography: divi melni sulni

event warehouse and territorial conditions. Such processes reflect Haraway's idea of "learning from others' perspectives" and Bennet's concept of "emergent properties". The architects are not positioned on top of the design pyramid, but as active agents among human and non-human.

IN PRACTICE

The two projects exemplify architectural practice, where spatial and material solutions are guided through available skills, experiences, materials, multiplicity of local knowledges, and blurred or partial authorship over design. Crucial to it are active on-site interaction with contractors and the concept of "emergent properties" (Bennet, 2010), which reinforces the idea that non-human matter can initiate discussions and actions, and revaluate the accustomed and standardised construction processes.

Pursuing a design with openness to potential alternative solutions on the construction site requires managing volatile expectations about timescale, budget, responsibility and insurance – factors that normally shape the design development stage. Hence, a similar attitude and procurement would currently be challenging to apply to, for example, large public commissions, where tenders are highly competitive, budgets punctually prescribed and value engineering already embedded into initial design proposals. Such efficiency is based on standardised norms, industrialisation of construction and materials, separation of skilled workers, including architects. According to Ferro (2024), "Until the finishing of the product, design is a means [...]

to channel the fragmented work of the labourers into this stage at which it is ready to be marketed."

Overseeing universal processes in a seemingly disembodied neutral viewpoint is an illusion of a "god-trick", as Haraway (1988) writes, when discussing the question of "objectivity" in science and Western cultural narratives, which have evolved around male supremacy, capitalism, commercialisation and governing mind and body relations. She claims a simple moral that "only partial perspective promises objective vision. [...] Feminist objectivity is about limited location and situated knowledge, not about transcendence and splitting of subject and object." Perhaps "scaling up" situated practices is an oxymoron at first instant, yet further methodological ways of observing, surveying, and interacting with a site and contractors, would open up the architectural discourse beyond a final object and generate new knowledges and qualities, which not only serve the end user, but as well other parties involved in the multidisciplinary construction field.

Haraway, D.J. (1988) 'Situated knowledges: The science question in feminism and the privilege of partial perspective', Feminist Studies, 14(3), pp. 575–599.

Bennett, J. (2010). Vibrant Matter: a Political Ecology of Things. Durham: Duke University Press.

Ferro, S. (2024). Architecture from Below: An Anthology. London: MACK.

Goldstein, B.E. (1998). Combining science and place-based knowledge: Pragmatic and visionary approaches to bioregional understanding. In: M.V. McGinnis, ed. Bioregionalism. New York: Routledge, pp. 157-170.

BC architects & studies (2024). A Manual for Bioregional Design, in: Issue No°1 Biogregioning, Future Observatory Journal, London. Website: https://fojournal.org/essay/a-manual-for-bioregional-design/

GRAMMA

Athenian Grammar

Benoit Durandin
Camille Rouaud

Studio Gramma

Walking the streets of Athens, one cannot help but notice the repetitive and consistent nature of its architecture. The apartment blocks called polykatoikia-es display a grammar whose vocabulary they vary. This sophisticated housing unit designed by Greek architects in the early 1930s, is characterised by a modern architectural language, though its expansion during the post-war urbanisation boom was rather a vernacular process.

The consistency applies not only to their external appearance, with their tiered balconies shaded by long rows of awnings but also to the mundane and conventional elements that constitute their domestic spaces. Dilapidated or simply discredited in the course of current renovations processes, these elements are discarded from houses and put out in the streets like desecrated offerings laid before the temple.

Gramma aims to documents this phenomenon, to collect and archive materials and seeks a new grammar of use and form for those components through hands-on experiments.

1. It's said that in Greece, the strangest events happen in broad daylight. While in some places, darkness must be so opaque as to obscure the eyes for mysteries to unfold, here it is under the most intense light and in plain sight.

2. Every day as we walk through the streets of Athens, we can see items ripped from buildings undergoing renovation thrown into dumpsters or simply left on the pavement. There is most certainly one of these dumpsters filled with rubble and pieces of interior architecture on your street right now.
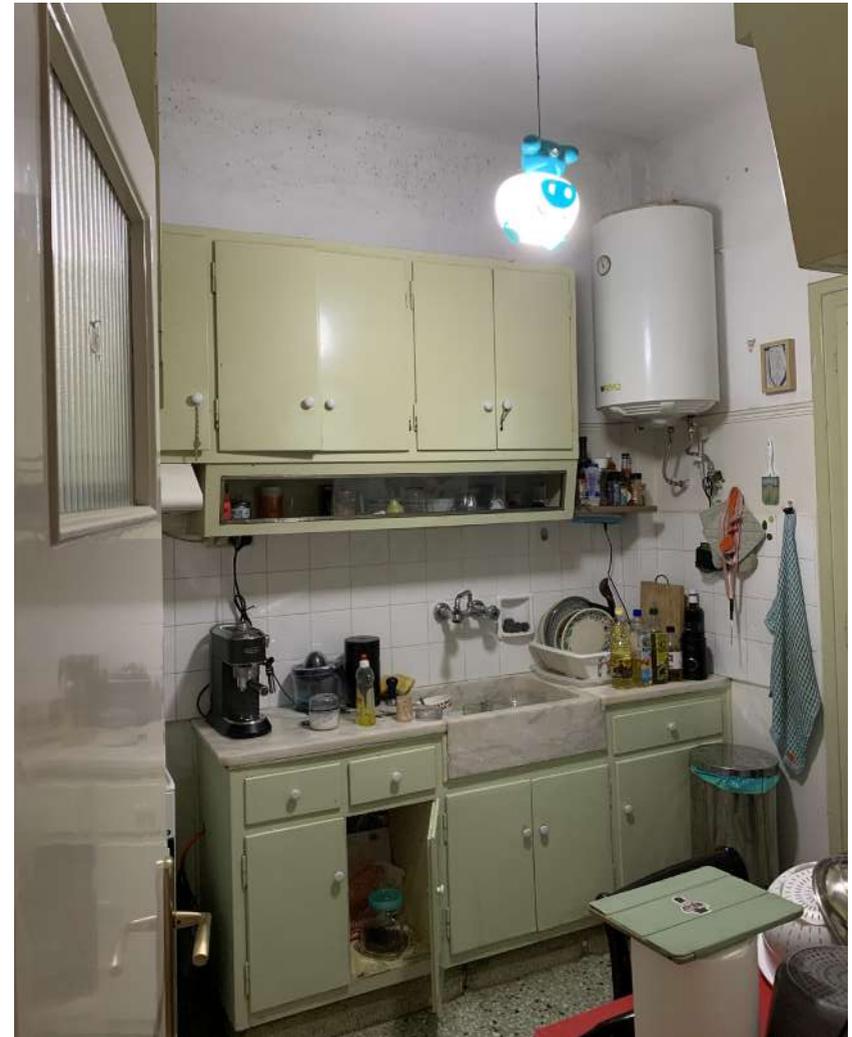
3. Gradually all these elements previously hidden, yet known to all, are being thrown out onto the street to be destroyed and replaced. What was once unique, the result of rapid urbanisation where local artisans produced one-of-a-kind interiors with limited means and vocabulary, is now being discarded.
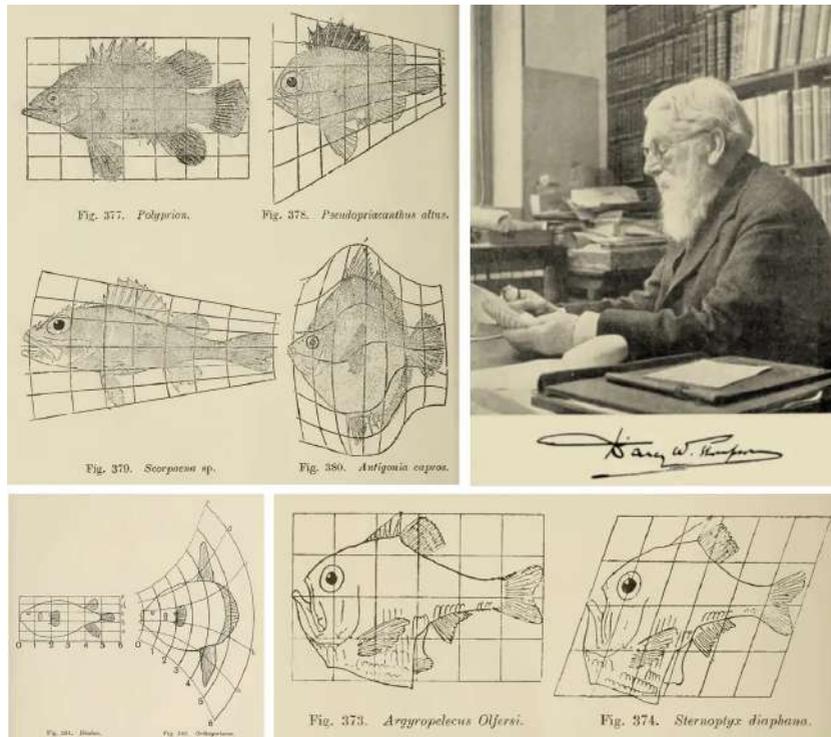
4. If no polykatoikia interior is exactly like another, none differs fundamentally from another. The adequacy of this endemic production to its socio-cultural environment has proven to be durable. A majority of Athens' inhabitants still live in a space that extends into hundreds of thousands of others.

5. Elements such as marble sinks, mosaïko, wooden shutters, kitchen cabinets, and glass doors constitute a shared affective, cultural, popular and architectural memory. While the materials may not all have been locally sourced, the designs and craftsmanship were. These common specific skills are now lost to most athenians.
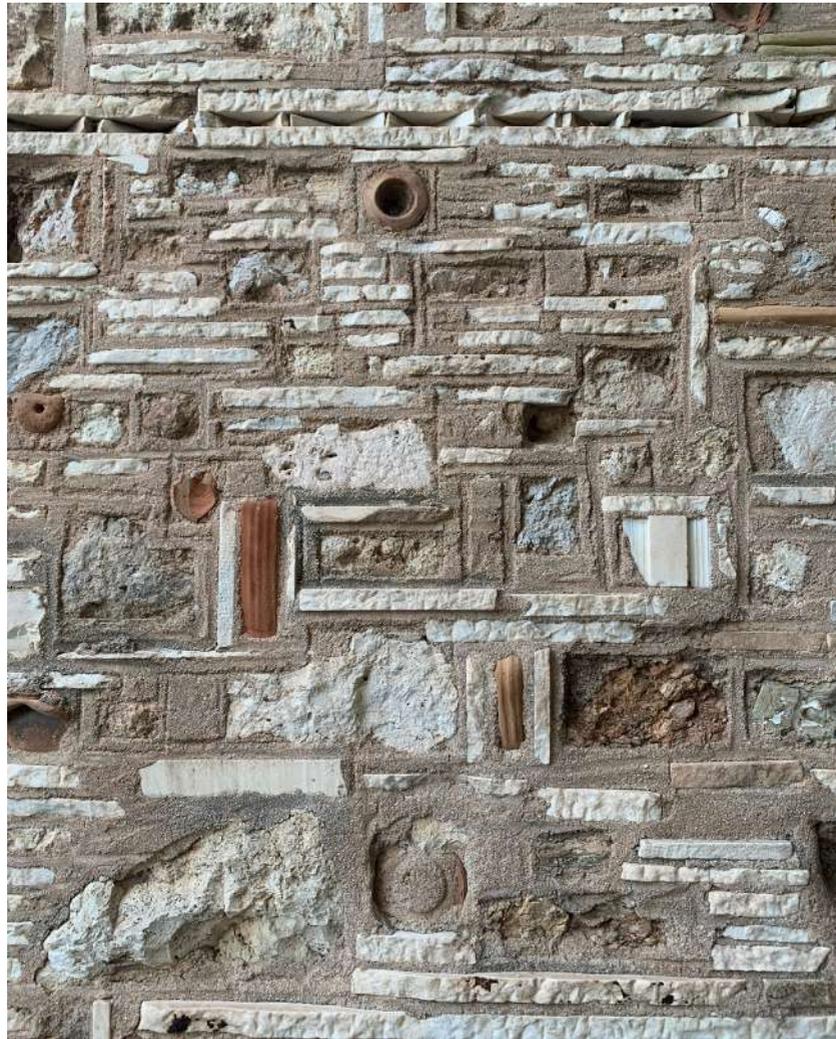
6. Paradoxically, we found ourselves in possession of abundant conventional elements with almost no market value, yet impossible to reproduce. In a finite world, the solid and plain materials they are made of demand more care and less frivolity.

7. If the prospect here is not to resurrect a model that no longer exists in a radically changed socio-economic context, certain of it singularities —local, artisanal, and sustainable— remain relevant and seem to be paving the way to a more desirable future.

8. We find ourselves in a strange spatio-temporal loop, doing the archaeology of a defunct world whose remains are put on the pavement every day. We have begun to shelter some of these architectural elements in cellars where they rest like ghosts waiting to come back and haunt the world.

9. Across Europe, initiatives are being set up to dismantle, treat and resell recycled construction elements. The absence of a mass industry in Greece preventing any standardisation, the context happens to be different. The tools developed elsewhere are difficult to adapt and would only perpetuate this model of a city under influence.

10. What then? What to do? The romantic movement made Greece a laboratory, turning it in turns as the mirror in which to look at oneself and as the oracle to question, to guess one's destiny. It has since then never ceased to be a fertile palimpsest on which histories are written.

11. To ensure the project's continued relevance and impact, it's crucial to employ "*mêtis*"—a blend of wisdom, craft, and cunning—to deftly define its relationship with work and the economy. It must remain grounded in the current political landscape, to effectively return its transformed materials back to the city.

ICONOGRAPHY

1. *The Incredulity of Saint Thomas*, Caravaggio, oil on canvas, 107x146cm, ca.1603

2. [GR]*Kadòs* [EN]Container, bin | container of various sizes for collecting garbage.

3. *Ben's Kitchen*, photography by GRAMMA

4. D'arcy Thompson, *On growth and Form On growth and Form*, 1917

5. Gramma's material archive : marble sinks, photography by GRAMMA

6. Dimitris Pikionis, *Church of Agios Dimitrios Lombardiaris,* photography by GRAMMA

7. Gramma's material achive : marble slabs, photography by GRAMMA

8. 2025.05.02 - 13:06:11 - Aristotelous 98, Athens, Plateia Viktoria - photography by GRAMMA

9. 2024.01.17 - 07:54:33 - Krissis 44, Athens, Kypseli - photography by GRAMMA

10. 2024.05.11 - 11:31:37 - Dafnidos 10, Athens, Kypseli - photography by GRAMMA

11. De Latour Georges, *The Cheat with the Ace of Clubs*, oil on canvas, 1630-34.

12. 2024.09.30 - 13:53:48 - Palamidiou 76, Athens, Akadimia Platonos - photography by GRAMMA

BIBLIOGRPAHY

Agamben Giorgio, *Profanations*, Paris, Rivages, 2006

Costes Sophie, Davila Thierry, Yee Lydia, *Gordon Matta-Clark Open House*, Collection Mamco, Les Presses du Réel, Genève , 2020.

Detienne Marcel, Vernant Jean-Pierre, *Les Ruses de L'intelligence, La Métis Des Grecs*, (1974) Flammarion, Paris 2018.

Le Guin Ursula K., *The Carrier Bag Theory of Fiction*, (1986), Cosmogenesis, 2020.

Parrino Steven, *The No Text, (1979 - 2003)*, Les Presses du Réel et Abaton Book Company, New York 2003.

Pikionis Dimitris, *Elaboration and Improvisation, in Dimitris Pikionis, Architect 1887- 1968. A sentimental Topography*. London: Architectural Association, 1989

Schmitz-Hübsch Kilian, *Athen's Polykatoikias 1930 - 1975*, color photographs by Kleanthis Dimitris, Verlag Kettler, Dortmund, 2023.

Teocharopoulou Ioanna, *Builders, Housewives and the Construction of Modern Athens*, Athens, Onassis Foundation, 2022.

Venturi Robert, Venturi Robert, *Complexity and Contradictions in Architecture*, New York, MoMa, 1966.

12. The first tools developed were akin to those of foraging or even scavenging, building slowly the archive. The project must now take the form of a workshop. A laboratory where all these elements will be recombined to forge new meanings and where the search for a new grammar can operate its magic.

CHAPTER 5

[DE]NORMED AND [DE]CATEGORIZED APPROACHES

COMPOSITE PRACTICE

Interdependence in the design-build process

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Demolition and reconstruction are the norm in today`s construction. While monuments are subject to stringent preservation requirements, day-to-day buildings are exposed to the 'delete > enter' method — a 'tabula rasa' approach involving complete demolition followed by reconstruction. However, in times of resource scarcity, ecological realities require us to reconsider this approach. Demolition is an outdated model. The primary task in contemporary construction practice is the transformation of the existing building fabric. In addition, transforming the existing fabric is resulting in a shift of professional practice, whereby the conventional chronological process is being superseded by an iterative approach. The design phase, which is primarily conducted in an office environment prior to the construction phase and away from the site, is evolving into an in situ, dialogical examination of existing structures involving the relevant actors in an collaborative hands-on venture. The process itself merges into a

combined design-construction phase (Trachtenberg, M., 2010).

During the transformation of a building, fragments of older layers inevitably become integrated into new ones. This phenomenon can be attributed to the fact that the life cycles of the various building layers – such as structure, envelope, building services, room sequence and furnishings – are subject to different dynamic change processes over contrasting periods of time (Brand, S. 1955). Significant ecological potential is realised by preserving buildings when resources are viewed as valuable contributions rather than limitations. However, this presents architects with additional challenges. Alongside the implementation of design objectives in terms of spatial planning, use and construction, architects must consider existing resources as an additional design parameter. The preserved architectural elements, or fragments thereof, form the basis of the design task.

This is followed by an comprehensive analysis of previous authors' thought processes and ideas, as well as the building's construction lines and compositions. The findings from this investigation will inform the subsequent development of the intervention. The architecture of the existing building lends itself to reinterpretation, inscription and overwriting, resulting in the concept of the palimpsest. The elements incorporated into a building are meticulously proportioned in relation to each other, considering scale, texture, and material, thereby forming composites. The integration of diverse materials in composite design fosters the strengthening of interelement bonds, thereby ensuring the construction's resilience and establishing continuity within the cultural and architectural context of the building (Rogers, E.N. 1975). It is through this ongoing dialogue between adaptation and innovation that the different layers are arranged in relation to one another, thus creating spatial assemblages.

Reshuffling components

The wooden chamber doors that were on site prior to the transformation of the Berlin apartment in a 1908 building played a significant role in the transformation process. Given that they have remained largely intact despite the financial crisis of the 1920s and the Second World War, not to mention the change of state given the location of the building in the former GDR, demolition seemed unthinkable. The significance of the woodwork is recognised in relation to both its historical context and its intricate craftsmanship and materiality.

Assuming that every intervention involves a loss of the existing (Burckhardt, L. 1982), we decide to minimise our intervention. Implementing a double wall between the kitchen and bathroom, which serves to modernise the facilities. Furthermore, the repositioning and repairing of the chamber doors create a circular route through the spaces, thereby establishing a variety of connections and perspectives.
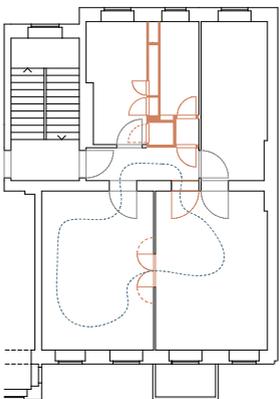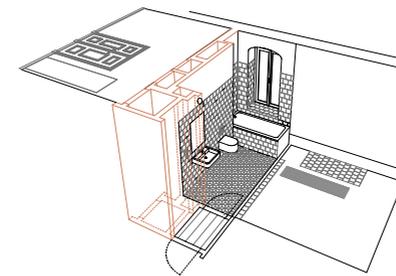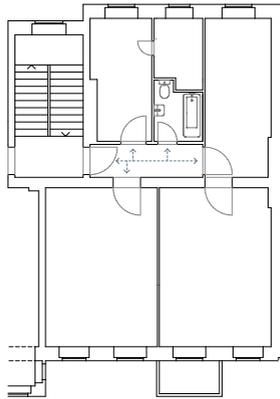
The renovation of a 1908 Berlin apartment is characterised by the typology and technical possibilities of the time: brick walls, wooden beam ceilings and timber-framed partitions.

A double wall between bathroom and kitchen houses installations.

Additional openings between rooms allow for permeability and new perspectives within the spaces, creating an internal promenade.

Existing chamber doors are reused to create cupboards.

Door panels found in the basement are repaired and supplemented with wooden frames.
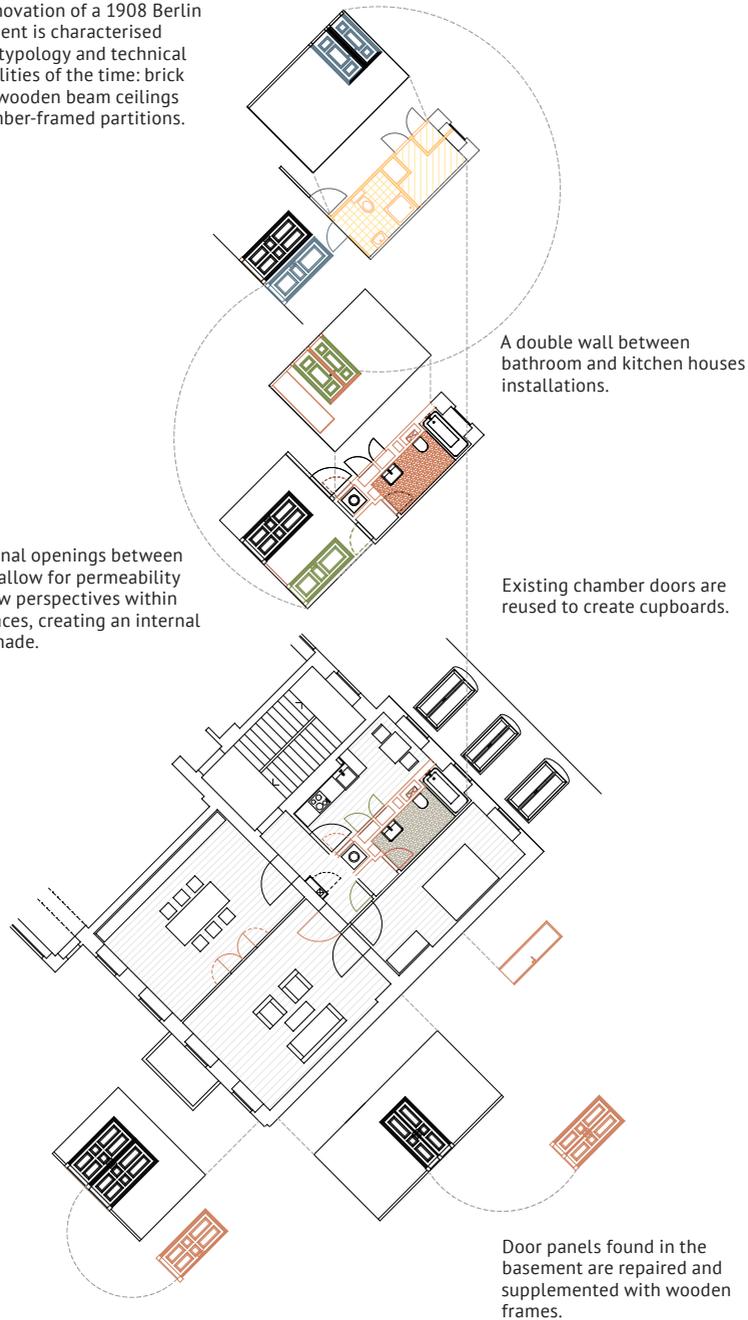
Forward removal

The dual character of the 1940s twin house for farm workers forms the basis and inspired its conversion into a community house. The dual presence of building elements on site enabled the combination of intact fragments to create new structures. In instances where it was feasible, the materials were exposed and restored in order to achieve equilibrium with the heterogeneity of the composites. Removing the partition wall between the two units created space for an additional window, letting more light in. The two staircases were removed and their components utilised to construct a new staircase, which was relocated towards the entrance, thereby creating space for a bathroom on the upper floor. The brick walls were stripped of all layers and covered in the interior with a thin layer of slurry, a technique used to
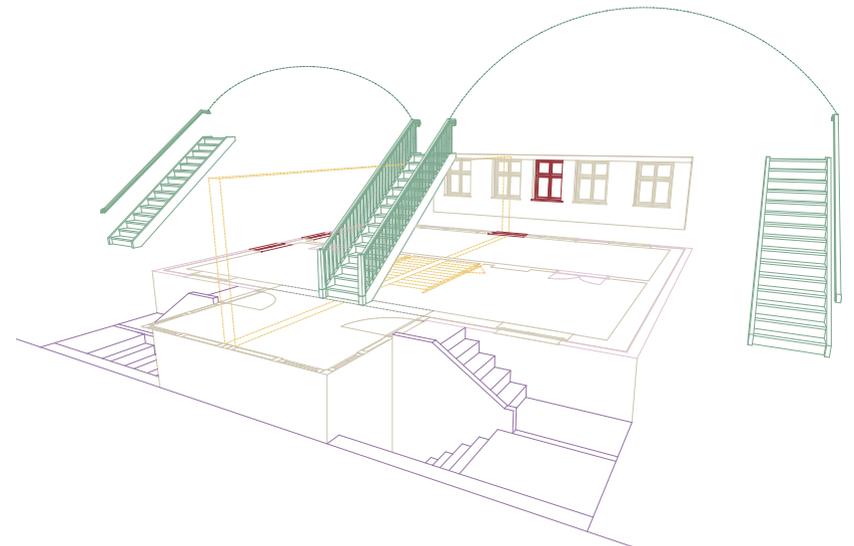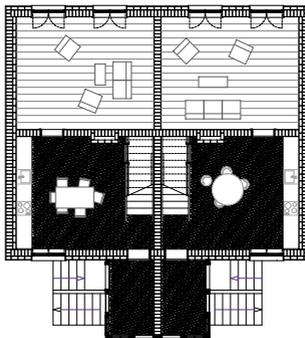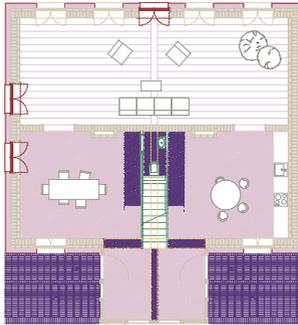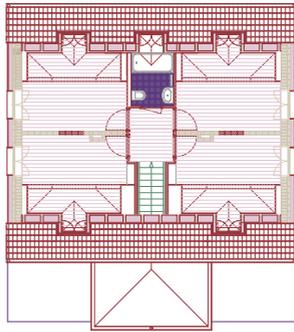
harmonise the different coloured bricks while exposing the texture of the masonry. In order to create a smoother surface for the constructive connections, the joints between the brickwork and the adjacent building elements are plastered in strips. The exterior of the building was insulated with hemp and subsequently plastered in a broom-finish texture. The application of a plaster profile facilitated the completion of the transition from the façade to the roof. The external staircase was constructed using salvaged bricks from a nearby barn. In the entrance area, gaps in the terrazzo flooring created by removing the walls were filled with a lighter aggregate to create a finish resembling a patchwork rug.

The site as an impetus for ecological action

In the process of transformation, the parameters of the existing building are the anchor for the following design. The identification of the structure's characteristic elements enables the proposition of potential ecological design solutions for the site. While the integrated planning and construction process is a complex undertaking, it offers a continuous dialogue with the construction, the client, planners and builders in an in-depth approach. However, this process is characterised by unpredictability when compared to a linear preliminary design phase followed by a construction phase.
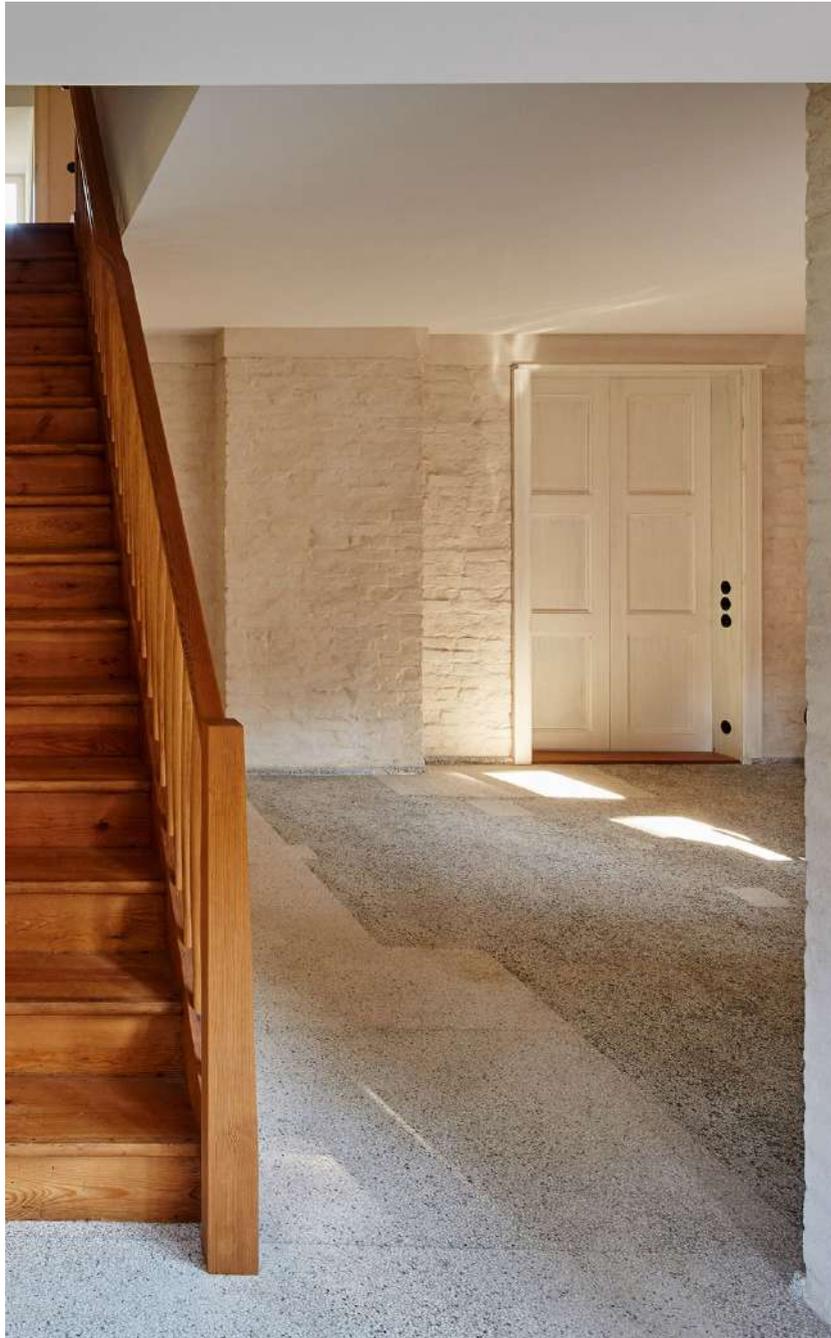
The combined phases challenges architects to continually re-evaluate and adapt their decisions at each stage of the process. Furthermore, designing with composites leads to changes in the design aesthetics. Alberti's conception of architectural perfection, based on the notion of an unchangeable whole (Alberti, L.B. 1452), is superseded by a methodology that accommodates apparent inconsistencies and unequal matches within a composite practice. The individual composites establish equilibrium by balancing a variety of individual solutions, both within themselves and within the overall composition. The combination of different materials is pivotal both in enhancing the bond between the composites, thereby ensuring the construction's resilience, and in terms of cultural-architectural continuity. Designing with composites is an invitation to embrace the idea that the built environment is unfinished and has yet to be transformed (Häring, H. 1947).

Alberti L. B., (1443–1452), De re aedificatoria
Brand, S., (1995), How Buildings Learn: What Happens After They're Built
Burckhardt, L., (1982) in Ritter, M. & Schmitz, M. (Eds.) (2022), The Minimal Intervention
Häring H., (1947), Die Welt ist noch nicht ganz fertig in wohnen arbeiten sich erholen
Rogers, E. N., (1975), Continuità o Crisi?, Casabella Continuità
Trachtenberg, M., (2010) , Building-in-Time: From Giotto to Alberti and Modern Oblivion

Photography: Maximilian Meisse, BrünjesTyrra Architekten

Adaptation

Exploring circularity and flows through a process of making.

Roz Barr

Roz Barr Architects

History informs us of what once was, and, in our recreating and uncovering of past places into new spaces, is ultimately the everyday evolution of architectural practice.
It can contextualise a thought or a process of making or construction. Through careful adaptation and re-ordering of places, one can transform the familiar into the extraordinary.

The development of ideas is informed through an understanding of tectonics, materiality and context, which provides unity in defining a new form of architecture.

There is an economic factor that enriches the language of an architectural solution. This does not mean "economy" in monetary value, but an efficiency and understanding of a singular material approach that offers a tectonic solution and gives poetry to its construction. The architecture not only fulfils the brief or condition but also provides an architecture that is impactful and memorable.

The protection of the main entrance façade of Amiens Cathedral during World War I in 1915.
Hessian sandbags were stacked and stabilised using parachute cables to stabilise the construction.

Oculus, a temporary Public Space in central London 2012
This new public space in central London formed the centrepiece for the London Festival of Architecture. Constructed entirely from Hessian Grade Sandbags, which were filled with sand, dredged locally from riverbeds in the south of England, we constructed the space in 3 days. The project was built in a disused car park, and at the end of the Festival, the sand from the sandbags was given to local children's play areas for sandpits, and the bags were returned to the supplier. The success of this project demonstrated that car parking in central city locations should not be encouraged, and these empty plots could be turned into places of recreation for public use, and to reduce cars within dense urban areas.

Aerial image of bench detail at Oculus, London Festival of Architecture 2012.
This space created a place for the public to rest or meet and removed the cars allowing office works and residents a place to enjoy.
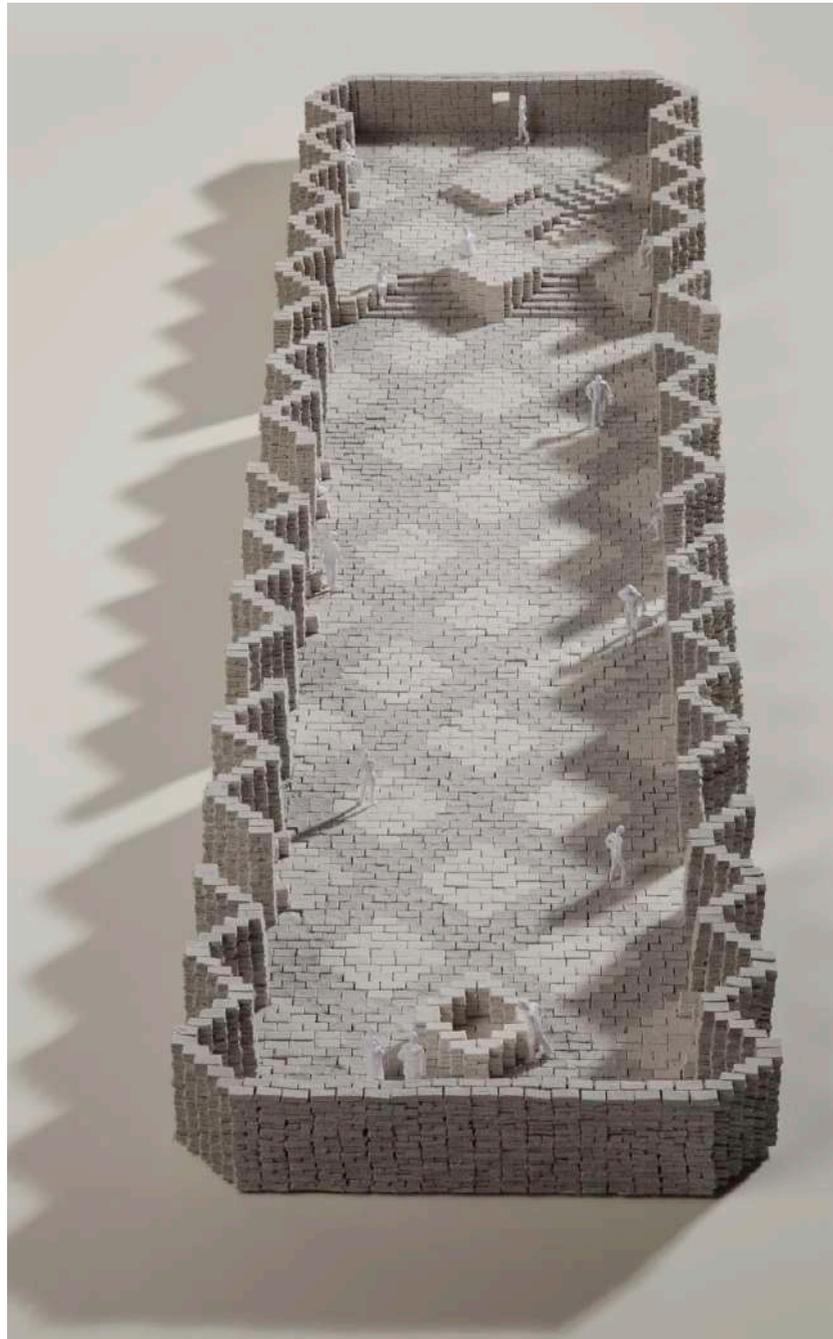
Masegni – proposed Walled Garden, San Giorgio, Venice – 2013.
Aerial view of 1:50 Clay model (opposite).
We were invited to design the fourth Cloister at San Giorgio for the Venice Art Biennale 2013. The Walled Garden was constructed entirely from WW1 Hessian Sandbags. The wall was 4.5M high, and it was a collaboration with engineers at Cambridge University to prototype the construction.
 Concept clay model above showing detail of sandbag paving and seating at 1:20 (above).
The word "Masegni" is the Italian name for a type of Venetian paving slab used within the city.
Palladio's external paving at the entrance to San Giorgio inspired the patterning of this proposal.

The original Tin Tabernacle was constructed as a temporary place of worship at St Augustine's in Hammersmith in 1903. This temporary structure, made from timber and clad in corrugated tin panels, was demountable; when the new church was complete, it was usually transported to another site.

Conceptual model of Tin Chapel for a new pavilion at St Augustine's Church as part of the London Design Festival in 2018.

The Tin Chapel – temporary pavilion at St Augustine's, as part of the London Design Festival. Roz Barr Architects designed and built this structure using softwood timber for the main structure and clad externally in corrugated aluminium sheets. There was a deliberate choice to use standard low-cost construction materials that demonstrated how these materials can be detailed to create beautiful forms. The internal structure was lined in stained plywood and exhibited elements from the construction of the church. 2018.

Model of Garden History Museum New Gardeners Lodge, Lambeth London 2022
This new pavilion at the Garden History Museum in London was for a 15 metre high tower constructed using structural timber and load-bearing chalk blocks that sat on a hempcrete plinth. The chalk blocks were stacked around the timer frame using a traditional form of construction with internal insulation.

Tottenhoe Chalk Quarry, Bedfordshire, UK. This is one of England's oldest and still working chalk quarries and is of major significance to Historic England. Circular economies within construction and the sources of which we specify materials. Natural materials such as stone and timber have traditionally been used to construct our environments. This sustainable source gave identities to the vernacular of places. Many quarries are no longer in use due to the desire to build with concrete and steel, but the sustainability and significance of building in stone and its importance as a vital resource is highlighted through this research.
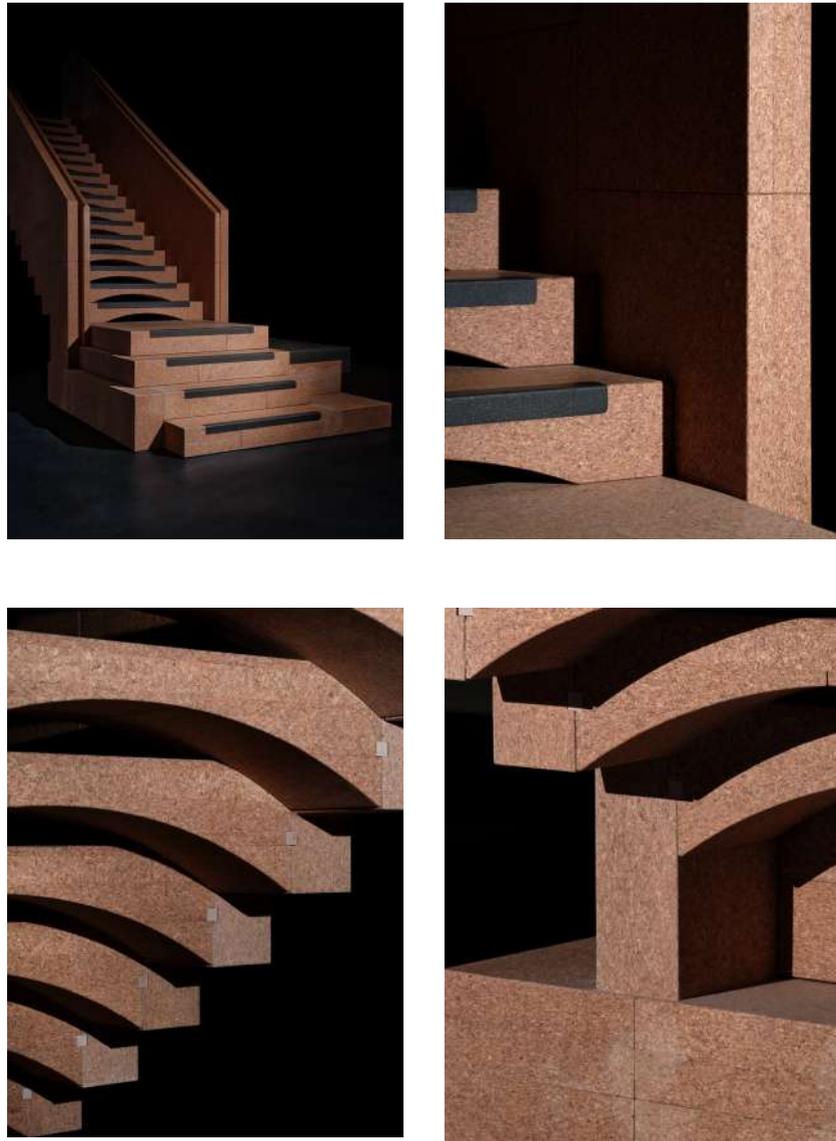
Load-bearing Cork Staircase, The Building Centre, London
This load-bearing staircase was made entirely from cork. The interlocking cork treads and balustrade were detailed similarly to traditional masonry construction, and each block was secured with a timber dowel and glued. We completed the staircase in 2020, and the cork blocks were supplied by Amorin in Portugal. This project defines how natural materials can be applied to offer structural and aesthetic solutions, omitting the need for additional materials such as steel.

MIENS — Porche de la Vierge dorée, protégé par des sacs, en 1915
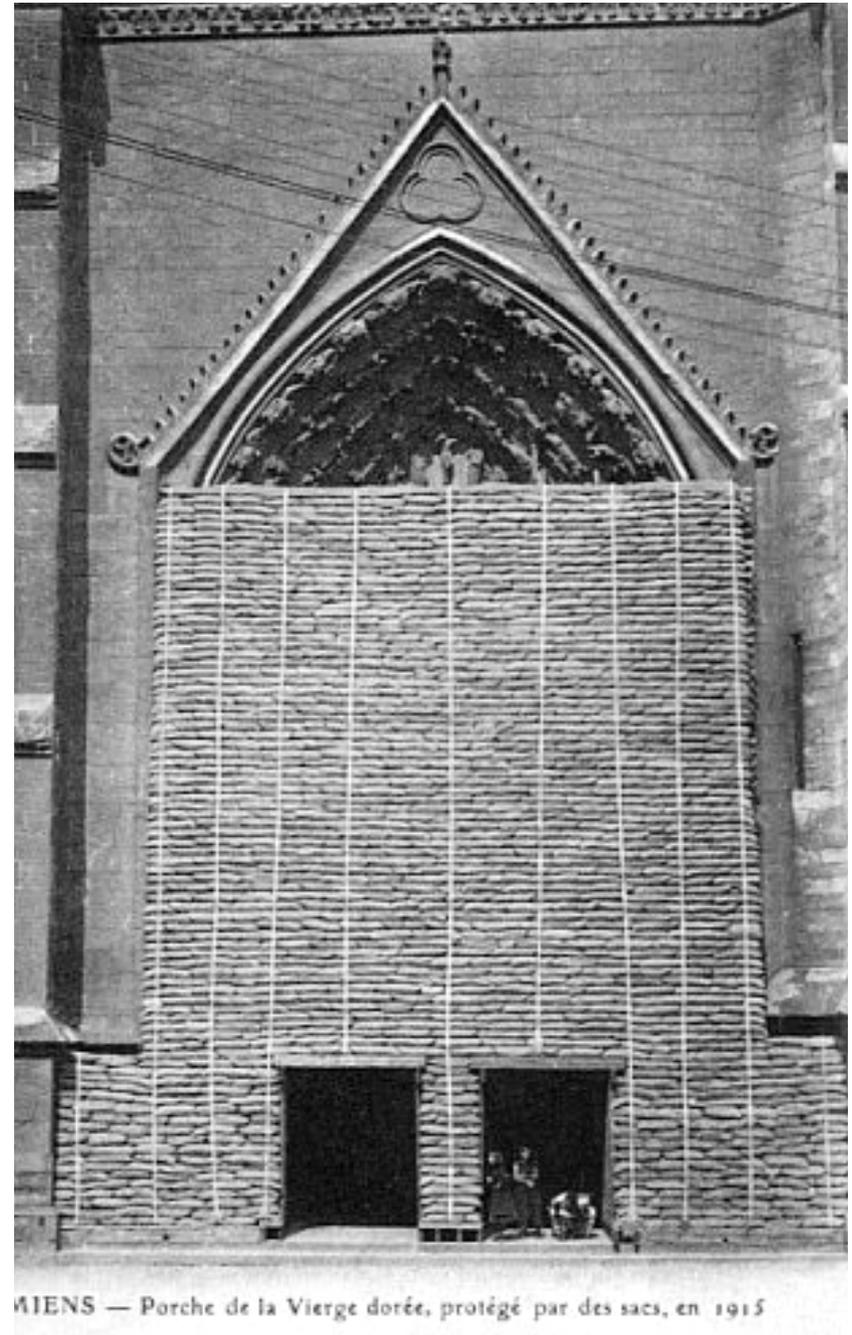
IN THE ACT OF MA(KIN)G

Kinship-centered practice shift

Martina Genovesi
Caterina Malavolti

Every Island

Response-ability[1] is about both taking care and being taken care of.

Could the focus shift from human-to-human relationships to the synergies and transformations that occur in architectural practice through the mediation of materials? Moving beyond an anthropocentric perspective and drawing on Donna Haraway's concept of *sympoiesis[1]*, literally 'making with', we reflect on architecture as a collaboration with other entities, sharing paths with *actants[2]* of different shapes, roles, and wishes. The non-human, alongside humans, play a crucial role in shaping architectural processes and in understanding how social, scientific, and technological systems operate.

Within this framework, *making kin[1]* becomes central to practice, prompting us to question how we design, build, and maintain relations. Reflecting on past projects and processes, we observe how the inherently collaborative nature of architecture compels us to adopt responsible approaches. Rooted in the reflections opened by the project *La Chimera[3] (fig.1 and 24)* and and subsequent works, we have come to recognise that collectivity exceeds human interaction and encompasses a broader constellation of *actants[2]*.

In this reading of our own experience mediated by past projects, in an attempt of outlining a kinship-centered practice, different lenses emerge to support and facilitate the reflection: maintenance, custodianship and generosity.

fig.1. *La Chimera*, Every Island, 2024, proposal for Base Milano Festival di Architettura.

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[1] *Haraway, Donna. Staying with the Trouble: Making Kin in the Chthulucene. Durham, Duke University Press, 2016.*
[2] *Latour, Bruno. Reassembling the Social: An Introduction to Actor-Network-Theory. Oxford, Oxford University Press, 2005.*

[3] La Chimera is a mechanical structure that requires all parts to engage to come alive. Since no system exists in isolation, it is sustained through interdependence and co-creation. The installation translates this notion through principles of physics and weights, examining how movement and collective action generate dynamic configurations for collective uses.

fig.2-3. Washing/Tracks/Maintenance: Outside, Mierle Laderman Ukeles, 1973, Wadsworth Atheneum Museum of Art.
During the residency at Cas-co Leuven (2023), drawing inspiration from Mierle Laderman Ukeles's writing Manifesto for Maintenance Art 1969!, we focused on observations and physical permanence in the space as the driving direction of our research.

maintenance, as an act of care, is a two-way binding.

fig.4. the Body is the Building is the Body, Every Island, 2023, Cas-co, Leuven, Photo by Fabrizio Vatieri:
Overview of the exhibition space.
When maintaining a building, the building teaches us its stories, and leaves margin for uncertainty and invention over what we don't grasp. Speculations made over the physical characteristics and the unclear history of past uses of the empty exhibition space were directly tested through a series of site-specific interventions made over the months of residency.
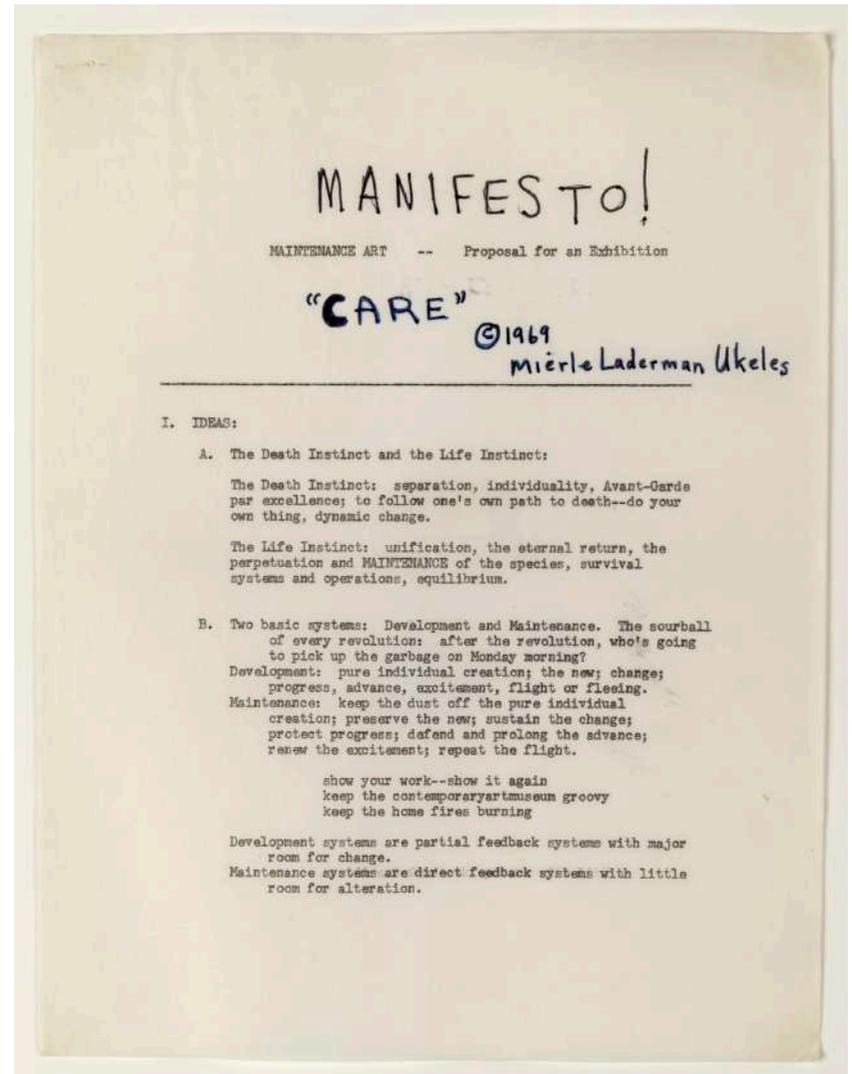
fig.5. Manifesto For Maintenance Art 1969!, Mierle Laderman Ukeles, 1969

Maintenance is the aftermath of completion, and exists within defined limits: time-wise it works by protecting an abstract image that via time gets distorted, space-wise it functions within given borders: maintaining as caring for a place we belong to, we own, we use: we need a place, hence we maintain it.

fig.10-11. *Shifting Territories*, 2023, Every Island and Bebe Books, Bruxelles: A bag find a new owner and house

custodianship, as interdependency
between physical means and their owners.

fig.6-7-8-9. *the Body is the Building is the Body*, Every Island, 2023, Cas-co, Leuven, Photo by Fabrizio Vatieri: Details of some of the interventions developed during the residency.
Through attempts at fixing, overlayering and mimicking the traces manifested by the existing materials, we performed maintenance as the ultimate act of care towards the given space, shifting the focus from the architectural tension of reaching a definitive completed state to the evolving and unfinished temporal dimension of the aftermath.

fig.12. *Shifting Territories*, 2023, Every Island and Bebe Books, Aalst, Photo by Romy Berger: The mountain of bags assembled.
The moment a material is integrated into a project, a relationship of accountability emerges, concerning the material's future, whether through reuse, transformation, or disposal. In temporary and self-initiated projects, limited resources often dictate a continuity of material trajectories.

fig.13-14. Welcome (a) Ceremony, 2021, Every Island, Bruxelles, Photo by Maxime Pranato (top) and *the Body is the Building is the Body,* 2023, Every Island, Cas-co, Leuven, Photo by Fabrizio Vatieri (bottom). From a dinner table to a window the same material is reused changing meaning and use throughout different projects. Beyond the necessary logistics of sorting, storing, and transporting, materials become a form of intellectual and physical baggage and, over successive projects, they shift in meaning depending on space's opportunities and challenges.
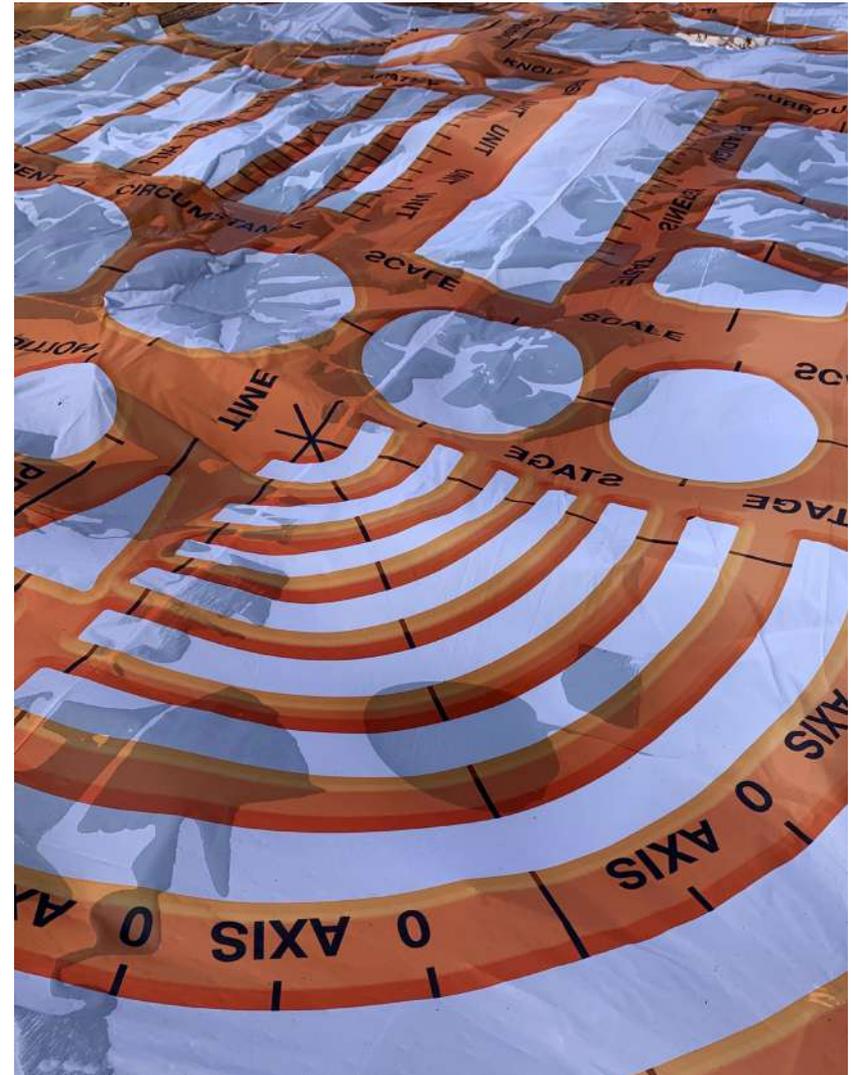
fig.15. Shifting Territories, 2023, Every Island and Bebe Books, Aalst / *Landscapes where we meet,* 2023, Every Island for 019 and Cas-co, Leuven, Photo by Romy Berger. The almost 60sqm flag designed to be hung for some months in a public space in Leuven, found a new role as an horizontal surface during the events organised for the Shifting Territories project. The tool, normally applied for the development of small scale models and design plans, is hereby conversely enlarged to architectural dimensions, taken down from the flag pole the scale is put suddenly in relationship to the user's bodies.

fig.16-17-18. A Comparative Dialogue Act, 2024, Every Island and Andrea Mancini, Luxembourg Pavilion Venice Art Biennale: Photo documentation of the visit to the TAM atelier for developing the curtain for the pavilion.

generosity, as a base approach in the act of harvesting.

fig.19. A Comparative Dialogue Act, 2024, Every Island and Andrea Mancini, Luxembourg Pavilion Venice Art Biennale, Photo by Delfino Sisto Legnani: Overview and details of installation space.
For the Luxembourg Pavilion at the 60th Venice Art Biennale, we faced for the first time the challenge of designing a sound infrastructure. Given the particular characteristics of sound isolation and transmission that the space was required to have, the subject of borrowed technical materials from other fields became a necessity.

fig.20. A Comparative Dialogue Act, 2024, Every Island and Andrea Mancini, Luxembourg Pavilion Venice Art Biennale, Photo by Delfino Sisto Legnani: Detail of the glass wall transmitting the sound. Sound and space are tuned: the spatial elements – floor and walls – are turned into sound devices, progressively shaping an immersive experience through the use of vibrations to transmit high and low frequencies of the difference dialogues composed by the invited resident artists.

fig.21-22-23. A Comparative Dialogue Act, 2024, Every Island and Andrea Mancini, Luxembourg Pavilion Venice Art Biennale, Photo by Delfino Sisto Legnani: View and details of the insulating curtain main facade (top and bottom left) and an example of an insulating jacket for industrial machinery (bottom right). In developing the design for the soundproof curtain, a system of insulating jackets normally applied for the insulation of ducts and machinery was researched. The custom-made elements are the result of months of exchange we had with the production facility, a joint act of sharing knowledge, to achieve a new result.

This projects driven narration doesn't have the ambition of reaching a complete methodology definition.

All these examples though contribute to portaying concrete practices of mediation around materials that can guide design intent and manifest on different levels, from logistics and production processes, to more immaterial infrastructures revolving around ownership and responsibility.

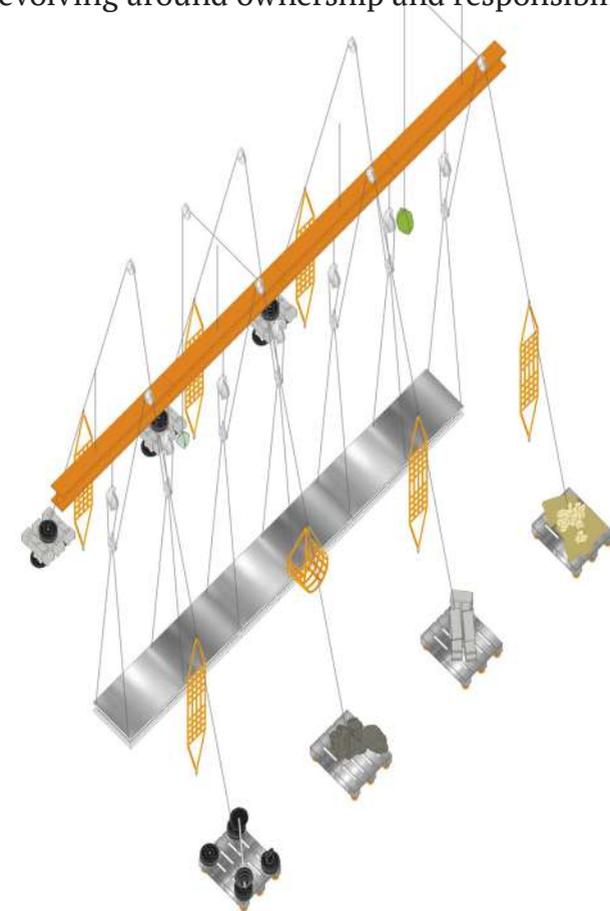*fig.24. La Chimera*, Every Island, 2024, proposal for Base Milano Festival di Architettura.
La Chimera is constituted of different elements in a precarious and shifting equilibrium: it embeds surrounding elements to create another type of machine, not dedicated to production but to interdependence. A lowered beam, a system of pulleys, harnesses hung, allowing user's bodies to become part of the system by wearing them.

Selected bibliography

- *Haraway, Donna. Staying with the Trouble: Making Kin in the Chthulucene. Durham, Duke University Press, 2016.*

- *Latour, Bruno. Reassembling the Social: An Introduction to Actor-Network-Theory. Oxford, Oxford University Press, 2005.*

- *Mierle Ukeles, et al. Mierle Laderman Ukeles - Maintenance Art. Munich London New York Delmonico Books, Prestel Munich London New York Delmonico Books, Prestel [New York] Queens Museum, 2016.*

Every Island

Every Island is a collective founded in Brussels in 2021. Their spatial research focuses on the role of performativity in architecture, which translates into volatile building projects, design, and installations. Each project develops space to enable unforeseen uses, thus questioning inherited binary and normative models. Space becomes a design tool to negotiate an expanded common ground, where perception, action, and projection operate as a single field. Every Island currently consists of Martina Genovesi, Alessandro Cugola, Juliane Seehawer, and Astrid Lykke Nielsen. Caterina Malavolti and Damir Draganic are co-founders and past members.
https://www.everyisland.xyz/

RECLAIMING THE ARCHIVE

Recovery of Knowledge and Timber at Cowan Court, Cambridge

Dylan Radcliffe Brown

6a architects

Cowan Court, Churchill College, Cambridge University, or '302' in the archive folder on 6a's server, completed in 2016. Archiving a project is the final task in a series both ceremonial and mundane which mark the end of a completed project. 6a has for decades now produced 'Grey Books' as part of this process; beautiful grey, hardback books containing a project's 'as-built' drawing set, photographs, and summary texts. These books stay in the office and are, on those rare occasions, particularly bewitching ways to review old projects compared to the usual RSI-inducing folder-diving. But after the Grey Book is finished and sat on a shelf the project folder is finally digitally archived, making its way to the server rack which hums beside the kitchen to be occasionally investigated during a hunt for that one detail relevant to the current 'live' project.

Knowledge management describes the way a group of people like a studio holds knowledge across changing faces, practices and technologies. An architect's knowledge is complex and part of why training lasts a lifetime. That knowledge is, more than many careers, gained empirically through visiting and observing buildings; a tacit knowledge not easily articulated but importantly shared with colleagues and close collaborators - what Etienne Wenger calls a 'community of practice'[1]. Equally, architectural knowledge is explicit; concretely learned and transferred in books and drawings. The beauty of construction drawings might be their combination of explicit knowledge concealing many contributors' unspoken tacit knowledge. Similarly,

a project archive, and the documents within it, appear explicit 'evidence' but are tinged with the tacit. Returning to '302' to research its contents meant navigating through an old folder system, photos from old Iphones, and notes written by unknown initials. But the return was worthwhile.

Across its facade, Cowan Court reuses 1800m^2 of timber reclaimed from French freight trains carrying cargo across Europe. The scale of reuse and material salvage is impressive for the quantum but also within its context; a design-and-build procurement without contemporary precedent at the time, and all before the term 'circular economy' was heard in most architecture practices. According to research, between 1998-2011 the reuse of timber in the UK fell between 90-98%. When compared to total timber consumption, this is equivalent to a reduction in reuse from 9% to 0.4% in just 13 years[2]. Researching the '302' archive was a means to determine the methods and practices used by 6a, and draw that knowledge forward toward new reclamation challenges today. Sorting through the detritus of archive material has been an attempt to uncover a clear route through which reuse became possible, if one ever existed, and glean new lessons from an old project.

My research followed no pre-determined methodology, initially collecting materials relating to the building element by simply word-searching 'cladding' and 'oak', as well as scouring every folder of photos and drawings. Relevant materials were collected into bins, sorted initially by medium

1   Avermaete, T. P. L., Buchert, M., Gosseye, J., & Havik, K. M. (2023). *Tacit Knowledge in Architecture, A Quest.* (pp. 3-13). TACK Publishing Platform.

2   Defra (2011) C&D reclamation survey 2011, and BigREc Survey (2007) available at https://futureuse.co.uk/resources/bigrec-survey-2007/

	TIMBER TYPE	SIZES (mm) W x H x D	MERCHANT LOCATION (Distance From Cambridge)	TIMBER SOURCE	AVAILABILITY	PROCESSING	WAITING TIME	TRADA ASSESSMENT	Pricing (£/sqm)	RISK	NOTES
ASHWELLS	Sea weathered european oak	2800 X 140 X 30	Essex (59miles)	Hastings	300-400sqm	Selection Cutting Assessment	6 months for 1500sqm	Required	40	Potential accelerated degradation due to salt content	Sea weathered oak is not common. Sourcing additional oak could be problematic. Potential integrity issues.
HOWARD GIBBONS	Sea weathered european oak	Unknown	Somerset (231miles)	UK	Unknown	Selection Cutting Assessment	Unknown	Required	Unknown	Potential accelerated degradation due to salt content	Sea weathered oak is not common. Sourcing additional oak could be problematic. Potential integrity issues.
RANSFORDS	Timber frame barn european oak	Unknown	Daventry (70miles)	UK	Unknown	Selection Cutting Assessment	Unknown	Required	Unknown	N/A	Timber frame weathered oak is very common. Many potential sources. Appropriate for outdoor conditions.
ANTIQUE WOODEN FLOORS	Railway carriage french oak	140 x 2800 x 45 160 x 2800 x 45 190 x 2800 x 45 220 x 2800 x 45 280 x 2800 x 45	Lille (433miles)	Lille, France	up to 800sqm	Selection Assessment Thinning	N/A	Required	130-145 depending on thickness	N/A	Easily available. Already cut into planks with lap joints. Appropriate for outdoor conditions.
VASTERN TIMBER	European green oak	1800 - 3500 lengths 4000 finger jointed fixed length. 150 wide	Swindon (137miles)	UK	Sufficient	Drying time	1 year	N/A	40	N/A	Easily available. Purchased as planks. Appropriate for outdoor conditions. May require treatment
A.C. TIMBER	European green oak	Unknown	Ely (17miles)	UK	Sufficient	Drying time	1 year	N/A	Unknown	N/A	Easily available. Purchased as planks. Appropriate for outdoor conditions. May require treatment

Table 1. A project architect at 6a produced this table when deciding between different oak suppliers.

Table 2. Author's own produced while scanning, highlighting and organising the archive for relevant information and quotes.

(drawings, images, presentations, reports, text). In parallel I spoke with Tom Emerson & Steph Macdonald about the project and their memories of the cladding selection and design. The volume of textual material in the archive folder was surprising, and meetings in particular revealed much more uncertainty than expected – moments of conflicting priorities, as well as key decisions made. Having collected the text I began structuring sequential events along thematic threads.

Both my research and 6a's reuse process then involved spreadsheets. So little seen in architectural publications, the spreadsheet clearly maps multiple datasets for easy comparison. *Table 1* was made by one of Cowan Court's project architects to compare possible timber sources at the time when 6a was deciding between new and reclaimed. The rows illustrate the key information: timber type, location, source, availability, sizes, assessment, processing, lead time, cost, risk, notes. But through my analysis the single 'risk' category in retrospect appears misleading. For me the schedule actually identifies many categories of risk, with all columns representing principal risks involved in the use of salvaged material. Accordingly, my own sorting followed suit, simplifying 11 columns into 4 categories: appearance, procurement, and performance, to which I added a final category; assembly. *Table 2* maps key quotes gathered from textual sources relating to each category against when they occurred. In this way, the initial searching, sorting, and eventual structuring of archived knowledge resembles the reuse process. The methodology was materially driven, beginning from what was available; function followed form.

Appearance

The look of a reclaimed material poses risks. Clients, planners, and even architects struggle to reconcile with their patinated or inconsistent appearance. In 2010 this contrasted with the trend toward precise digital renderings. The visual materials I catalogued suggest 6a navigated this conflict with difficulty. Having initially considered silver birch, 6a switched to oak, anticipating that the new cladding would age gracefully and eventually rhyme with the texture and colour of the adjacent 1962 Sheppard Robson-designed college's grey concrete. But renderings flipped between showing it at the early stage or late stage of its look and were limited by the availability of digital textures at the time. Pre-application feedback highlights the lack of nuance you can expect from UK planning offices when assessing 'newness' vs 'oldness'.

"The colours used in the illustrations... give the building a drab and lacklustre appearance. The building should relate to the context of the site in terms of its form and massing, but the materials should give it a sense of individuality and character." [3]

6a moved toward reclaimed timber, having previous experience sourcing it for heritage projects, and placed emphasis on the sustainability, strength, dimensional and visual stability of reclaimed timber over new. 6a relied increasingly on sharing physical samples and photos of the timber. Each potential supplier sent samples which were photographed

against the adjacent college building to test its visual harmony, an image which became crucial to communicate the anticipated appearance and visual quality, and was used in almost every report from thereon.

"SDC tabled new reclaimed oak wagon sample boards from BCA. The samples were produced using a new brushing machine BCA acquired recently. 6a commented that it feels too polished still and lost old patina. 6a questioned whether they can control the machine by applying less pressure and using a softer brush so that it retains the old board quality." [4]

Aesthetics of reuse are highly contested and 6a remained strictly precise about the 'acceptable' look of the cladding until the last. 10 years on the timber looks much the same but has changed in expected and unexpected ways. The previously distinctive frieze has all but disappeared into grey while the lower floors - better protected by their subtle inward stepping - have become darker and more saturated. Designing years later, and with a greater appreciation of circular design, 6a might broaden the 'acceptable' finish of the cladding to allow for a greater visual variety and so increase the number of possible sources or reduce wastage of 'unacceptable' boards.

Assembly

Working with samples allowed assembly testing with increasing precision. After a conversation with BM TRADA,

3   Cambridgeshire County Council (2013) Pre-Application Feedback

4   6a architects (2014) Client Design Meeting Notes

Rendered collages by 6a architects tested various cladding options, limited by the digital textures available at the time.

Cladding's samples at BCA's workshop in France where discussions of the stock's quality and condition were undertaken.

New and reclaimed oak samples are photographed beside the existing college's timber-cast concrete for comparison.
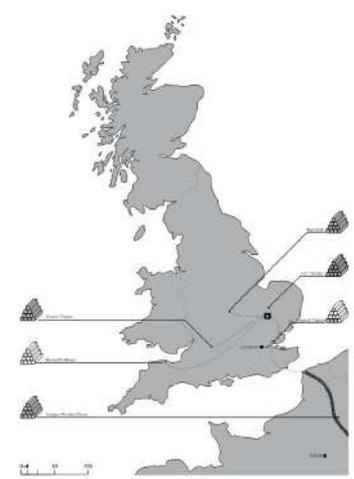
6a mapped the six potential timber sources available at the time, focusing on UK provenance or as near as possible.
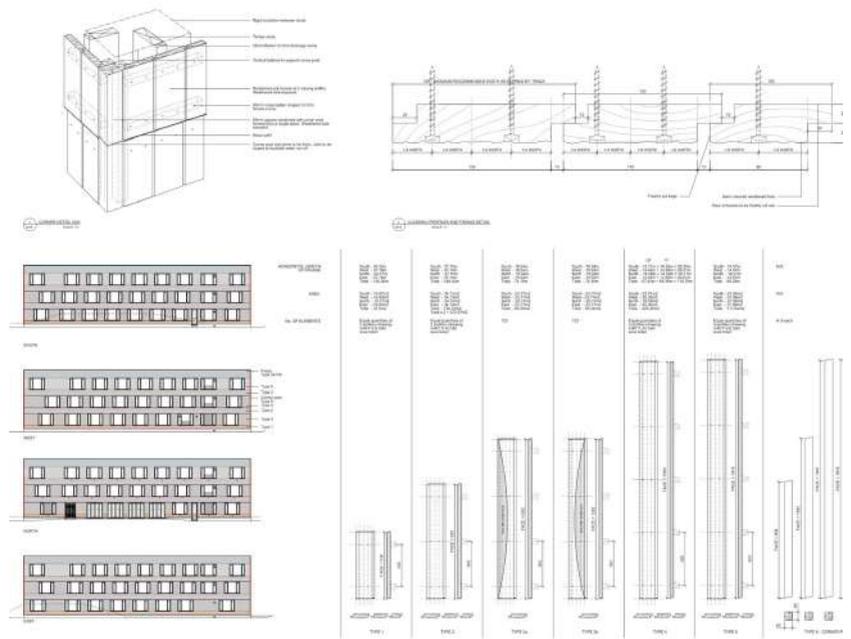
6a produced a comprehensive detailed drawing set for the cladding package prior to tendering. The drawings communicated the precise design as well as articulating the numerous complexities in working with and assembling a reclaimed material; knowledge gained in conversation with BCA.

The contractor (SDC) employed many in house builders and owned a large workshop in which they were able to fabricate a full-scale mock-up of the building corner. On site, the mock-up was shown to all subcontractors before starting work so as to communicate the project holistically.

UK's timber research specialists, 6a developed the design to use a half lap detail. Small physical samples were built in the 6a workshop and reviewed. After selecting BCA Materiaux Anciens as the supplier, 6a visited their site in France where they had mocked up larger samples and key junctions. BCA's samples were eventually brought to site. 6a highlighted them as essential to visit during tendering so that contractors could see the testing undertaken to date.

"*Contractors are invited to inspect the above sample boards for the reclaimed oak cladding (H21/110A, 110B & 111A) currently stored at the roof of the boiler house in Churchill College. The sample boards set out the standard of workmanship, milled/ machined edge profile, plugs to bolt holes, surface treatment and finish.*" [5]

It was during early discussions with the appointed contractor SDC where it was decided that the cladding would be pre-assembled into panels to reduce construction time. Though not recorded in discussion at the time, in retrospect this contractor proposal aided the use of reclaimed material by reducing the number of parties working with the boards - concentrating those skills at a joinery workshop, and making the on-site work a more industry-familiar assembly. Upon site possession SDC built a full-scale mockup to demonstrate to workers and stakeholders various assemblies. 6a in turn further re-photographed, re-annotated, and re-made drawings in response to the mock up as part of a cyclical review which calibrated the cladding's assembly among 6a, the client, BCA and SDC.

5   6a architects (2014) Architect's Specification

Collating and structuring the continuous iterations of details, annotations, conversations, made my archival research equally cyclical, reorganising documents and quotes in new configurations for understanding and interpretation. What stands out in 6a's derisking of the reclaimed cladding's assembly was the gradual and careful scaling of tests, first by 6a then BCA then SDC - a process by which the material uncertainty, tacit and explicit knowledge, was passed like a baton with increasing certainty toward the final construction.

Performance

The technical performance expected of external cladding, compared to elements of structure for example, is not complex but nevertheless was questioned by the clients regarding durability. Like the close collaboration with BCA and SDC, 6a consulted with TRADA repeatedly. 6a read TRADA guidance, identified the potential to have them assess reclaimed timber, then spoke with them on detailing, developing an outline specification for costing. Eventually a comprehensive architectural specification for the cladding was written in collaboration with TRADA for the project tendering. Finally, TRADA had one of the wagon timbers sampled and they issued a short document which outlined the timber's quality, noting it to be of greater strength and durability than modern, forestry grown oak. TRADA's report was neither a warranty nor certificate, covering only a very small performance criteria, and the client's acceptance of this is atypical and arguably unscalable.

Current reuse guidance suggests the input of a reuse expert to formally establish the technical requirements, determine a method and carry out evaluation to write a product-specific technical report on its fitness for use[6]. At Cowan Court this role appears shared between TRADA and BCA, but without conscious methodology. Retrospectively scope gaps occurred in testing against multiple performance criteria. Several months after completion, previously unidentified chemicals absorbed by the wagon timber (over decades in use as freight carriers) seeped out and, without changing in appearance themselves, reacted with the bio-based coating used on the new oak windows. No damage occured but, with 6a no longer appointed, Churchill College elected to re-coat their windows with a more synthetic coating which tinted the window frames unfavourably.

Procurement

The sourcing, payment, and storage of reclaimed material represents one of the largest risks in reuse today. In the UK, the major secondary material resellers still rely on a 'buyers beware' principle for the exchange of goods[7]. Throughout the project Churchill College was understandably wary. 6a's first derisking involved persuading the College that a 2-stage tender would provide efficiencies, leaving the team time to develop it as a specialist package in parallel to SDC initiating their own contractor design packages. Isolating

6   Florence Poncelet, Mona Nasseredine. (2021). Evaluating the technical performance of reclaimed building materials. [Online]. FCRBE.

7   Little research data exists on the proportion of UK resellers offering more than a caveat emptor for secondary materials, but 5 of the UK's largest secondary material markets approached by the author all operate under this principle.

the cladding's design gave time to ensure BCA's stock was suitable.

"[Churchill College] did not object the proposed cladding but asked 6a to look into alternative sources as a fall-back option." [8]

During this period 6a produced a 2nd Timber Report which assessed BCA's entire stock and determined the quantity required for Cowan Court as 917m^2. By splitting the 65mm boards in two and using both aged faces the total stock became 1760m^2. While this sounds like a large oversupply, BCA advised that, based on prior work with the boards, 50% wastage was realistic. Today, such a large wastage rate could potentially be designed out, either reusing the wood chip waste as soil topping in the courtyard garden, or designing a facade which optimised the use of many different board lengths, enabling more 'off-cuts' to be used.

In the end, 6a's report recommended that Churchill College buy the entire stock themselves and have BCA process the boards, rather than SDC. Six months ahead of tender, with no tolerance on stock, the client could not risk BCA selling any of their stock. Tom retells the critical moment during which the Cowan Court Committee, represented almost entirely by academics, made their decision on reclaimed timber. Tom was asked if a facade like this had ever been done before, to which one would usually have to answer "yes" and show five recent examples. At the time 6a hadn't come across any examples so Tom had to say "no". After a moment's silence one member spoke up...

8   6a architects (2013) Design Team Meeting Minutes

"so you mean we'll be the first" [9]

A client decision of this kind - showing appetite for reuse without precedent - is pioneering and rare, and I suggest is still in dire need today. No minutes of this meeting could be found on the server and so my research risks its interpretation on Tom's anecdotal retelling - that reuse depended on a decisive moment. But this story is also blended with the archive's evidence - that 6a and all their collaborators worked rigorously to make the oak's procurement, performance, assembly and appearance as transparent and risk free as possible throughout, and that Churchill College's leap of faith was simply part of a continuous process of risk stewardship.

Embodied Energy / Embodied Knowledge

Cowan Court was designed before embodied carbon targets or 'materials reused by weight' existed. The WCLA which I completed for Cowan Court as part of my role as Sustainability Lead shows it from only one angle. Cowan Court will produce 333 kgCO2/m^2 over its lifetime[10]. Including sequestration it will produce only 255 kgCO2/m^2, equivalent to an 80% reduction from the RIBA's BaU benchmark. In this calculation the cladding represents less than 0.1% of these emissions.

9   Tom Emerson (2025) Anecdotal retelling of the Client Design Meeting on July 2014
10   WLCA completed in 2023 using OneClick LCA software in accordance with EN 15978 using Bill of Quantity data and EPDs for stages A1-5, B4-5, C1-4, D.

The pressure to quantify sustainability today elevates explicit knowledge in architecture, but archival research recovers a much broader spectrum of knowledge. Sifting through the old '302' project folder - in issued sketches, meeting minutes, contractor's comments and architect's reports - what emerges is 6a as part of a constellation of consultants, experts, suppliers, clients and contractors, all working through risks in a trajectory toward tolerance. Not in isolation, but reliant upon a shared, tacit knowledge in a 'community of practice'. 6a's stewardship recognised the complexity and ambiguity reuse can raise, and designed tolerance in both the building and process. Doing this successfully relied on accepting that complete certainty was not possible, and not every risk needed resolving. Instead, close observation of risk - in drawing or writing or conversation - can be enough.

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Faces past and present from 6a architects' visit to site during construction in 2015.

Half lap: the aged faces of the timber are most visible, but set apart offer a glimpse of the (temporarily) new oak beneath. ©Johan Dehlin

EPILOGUE

RE-MEDIATING PRACTICES

Working in Flux Circularity, Uncertainty, and the Transformation of Architectural Practice:

Notes from a plenary conversation, Brussels, May 21, 2025

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The 2025 edition of Practices in Research brought together a diverse group of architects, researchers, and educators whose work confronts the complexities of circularity and working with the as found. Under the theme *Re-mediating Practices*, the conference explored how circularity influences not only materials and construction processes, but also the instruments, cultures, and epistemologies of architectural practice[1] .

Across the presentations, it became evident that circularity and practices of adaptive reuse are not merely a technical frontier—they are inevitably reshaping the nature of architectural practice. What follows is a reflection on the key themes that emerged from the concluding panel: uncertainty, archiving, collaboration, pedagogy and scalability. Collectively, they sketch, a picture of a profession in transition, and negotiating new modes of working at the crossroads of environmental responsibility and cultural imagination.

[1]   The conclusions of the PIR5 Conference sketch the shift in policy and practice of architecture towards Demolitions and Deconstructions in recent years very clearly, this conference continues to investigate how circularity impacts practice.
Kozminska, U., & Plevoets, B. (2024). PiR#05 - ON UNBUILDING. Practices in Research, 5, 377–401. https://doi.org/10.5281/zenodo.14537154

The unpredicted – Architecture in a state of uncertainty

One of the clearest threads across the conference was the pervasive presence of *uncertainty*. Circular practices rarely begin with a blank page; they begin with the messy, unfinished realities of existing buildings, existing materials, and existing social conditions. Many projects described a process defined less by control than by *constant adaptation*, where material availability fluctuates, structural surprises emerge once demolition and strategic removal begins, and stakeholders enter and exit the process in unpredictable ways.

Architects described working with the "uncertain self" of the building site—an entity that reveals itself gradually, in layers, and often in contradiction with expectations. Redrawing existing elements becomes an act of careful observing, design becomes a negotiation with what is already there. In this context, the architect's role shifts from that of an orchestrator toward that of an *on-site performer*, responding in real time to new constraints, opportunities, and discoveries. Reactivity is mandatory.

Also, improvisation becomes a necessary skill—not only for architects, but for everyone involved in the execution:

clients, contractors, residents, craftspeople, and so on. Improvisation here refers to the capacity to act, decide, and design in response to conditions that cannot be fully anticipated in advance. Rather than following a linear sequence from concept to execution, architects operate within evolving circumstances—materials reveal themselves gradually, structural conditions emerge during dismantling, and social or logistical parameters shift throughout the process. Improvisation is embedded in knowledge. It relies on material understanding, construction expertise and accumulated experience, allowing architects and collaborators to make informed decisions on site. It is closely tied to observation, attentiveness, and responsiveness, turning the building process into a form of real time negotiation with the existing.

The time of architectural work stretches and shifts: it can culminate in the moment of construction, or extend into *post-occupancy* and *maintenance*, acknowledging that circular buildings live through multiple cycles of adaptation.

Circularity spreads the focus of the design and the construction process from the here and now, to *the past* to tracing resources and to *the future* to avoid obsolescence and waste. One contribution mentioned how through this lens of circularity our claim, or possible need, to being in control, of establishing a certain predictability and permanence in architecture becomes questionable. As we are pushed to reconcile with the extracted and built past as much as the future life cycles of sites, materials and buildings, things become more circumstantial, more in flux, and rather gain

what they claimed to be an almost constant temporariness that we are now often designing for. [2]

Circularity and working with reclaimed materials dictates us to embrace an *expanded notion of time*, where buildings are not completed but continuously becoming. What emerges is a form of practice defined by alertness, responsiveness, and humility that can span from the mindset of a bricoleur to being an expert and leading large scale transformation projects.

2   Wider discussions within practice also highlight the friction between linear timelines and the cyclical temporality circularity demands. For instance the harsh realities that were discussed in depth in the Belgian magazine A+ "Circularity therefore challenges not only the profession but the entire system in which it operates—a system that has until now been governed by tight timelines, siloed areas of expertise among stakeholders, and a flow of materials closely tied to the market." Rotor ed. (2024) Material Flows, Vol. 310, A+, Brussels.

Archiving and evaluating: Instruments for Tracking, Tracing, and Transforming Materials

If circularity requires openness to unpredictability, it also demands a very careful attention to *documentation.* Many presenters showed how their work depends on methods of archiving — maintaining a precise overview of resources, understanding the provenance of elements, and tracking the logistics of how materials travel through time.

Circular processes generate their own aesthetic language— one that is layered, hybrid, and often resistant to standardization. Presentations featured new kinds of representational documents: harvesting maps, urban mining sketches, life-cycle diagrams, CO_2 calculations, parametric inventories, and AI-generated images used to envision possibilities. They deal with evaluating the existing by calculating or reshaping the value of what is already there. They visualize *flows, potentials, and uncertainties* rather than fixed geometries.

At first glance, some of these tools seem to remove from architectural representation. Yet it is maybe precisely in these dry, tabular documents that circular practice gains

its operational clarity. They provide a way to *anticipate uncertainties,* compare options, assess impacts, and navigate constraints that would otherwise remain invisible.

In this sense, a productive tension is highlighted: between *abstraction*—the ability to zoom in and out and anticipate on uncertainties —and precision, the capacity to measure, catalogue, and redraw from the "real" and existing.

This tension requires to look at resources with new eyes. The ability to have a strong understanding of materials and construction processes affords a know-how that can enable the possibility to improvise. The ability to abstract, forgetting to view something for what it can become through acts of translation, of abstraction, displacement of recontextualization and translation change its meaning. As part of this new way or ways of seeing, several ideas or concepts were referenced such as "*as found*" in the sense of Alison and Peter Smithson "the art is in the picking up, turning over and putting with."[3] or regarding the "*making*" from Tim Ingold who uses the paper clip as a simple length of wire that can be unravelled and bent, representing how the world is made of materials and possibilities that are not fixed but are shaped through our engagement with them, much like how his theories about "making" and the relationship between humans and their environments are

dynamic and generative rather than static. [4]

3   Smithson A. and P., 'The "As Found" and the "Found"', in David Robbins, ed., The Independent Group. Postwar Britain and the Aesthetics of Plenty (Cambridge, Mass.; London: The MIT Press), pp.201–202
4   Ingold, T. (2013). Making: Anthropology, archaeology, art and architecture. Routeledge

Entangled Practices: Beyond Specialist Knowledge

Circularity also reshapes how architects collaborate. Several projects presented involved forms of *non-specialist knowledge* and *situated knowledge*[5], reflecting the increasing complexity of adaptive reuse.

Workshops with residents, participatory design sessions, engagements with demolition and dismantling teams, collaborations with artisans, and partnerships with material brokers appeared across the sessions. These forms of entanglement acknowledge that architectural knowledge alone is insufficient for navigating the circular economy.

Circular projects become shared endeavours in which architects act as: *mediators* between actors, *interpreters* of material histories and *translators* of the potentiality of materials and resources, *facilitators* of workshops and collective decisions, *listeners* to communities with lived experience of the place and *negotiators* of compromises between ideal scenarios and on-site realities These might

have been among the less visible tasks of architects – working on circular projects or not - that are now explicitly brought to the front.

From the perspective of how circular architectures are received, residents' expertise also appears to be enhanced. Reused and reusable materials increasingly carry meaning. They link past or present uses to future possibilities, creating emotional and narrative layers that shape how inhabitants experience their environments. Several speakers emphasized the affective dimension of circular architecture: materials are not simply reused for efficiency, but for the stories they bring with them. The use of circularity also entails a new approach to building maintenance, a shift in the long term relationship with materials.[6]

In the built work this results in aesthetics expressing the visible sum of disparate parts, the layering of multiple histories, hybrid structures combining old and new, uneven degrees of permanence, details shaped by availability rather than intention. These outcomes challenge conventional ideals of cohesion or purity. They also foreground an emerging *ethics of aesthetics*: the architect makes choices about what to reveal, what to disguise, and what to celebrate which can become critical acts of communication. How do we negotiate these decisions with clients and contractors? With users? With regulations?

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5   Haraway, D. (2013). Situated knowledges: The science question in feminism and the privilege of partial perspective 1. In Women, science, and technology (pp. 455-472). Routledge. was mentioned in some of the presentations and recognizes all knowledge being partial and shaped by the observer's specific, situated perspective. This viewpoint also means an architects role, attitude or position is anchored in a history, culture, and physical body, embracing and accountable for partial, embodied viewpoints.

6   Pauline Lefebvre insightfully highlighted this in her contribution to A+310. Rotor ed. (2024) Material Flows, Vol. 310, A+, Brussels.

Pedagogy: Teaching attitudes

If students are to work with uncertainty, availability, and material histories, then the *teaching environment* must also be reconsidered. But how can one teach improvisation, inventorying, and tactical moves, in a discipline that, until now, has most often been religiously taught following a classical design strategy—from sketching to, only at the very end of the process, its actual construction?

Learning increasingly unfolds in direct engagement with construction sites, material inventories, and ongoing transformations, where design decisions are tested against logistical, technical, and social constraints. Instruments that have long remained peripheral to architectural representation—such as logistical spreadsheets, inventories, and on site documentation—prove to be central instruments for organizing work, negotiating feasibility, and coordinating actors. Rather than aiming for refined formal outcomes from the outset, training emphasizes the capacity to respond to constraints, adjust intentions, and work productively with what is already present. Design processes may therefore begin not with a fixed programme or site definition, but with the careful assessment of available materials, existing conditions, and potential reuse streams. Developing such modes of practice requires cultivating expertise that combines material knowledge, on

site responsiveness, tactical improvisation, and an ability to operate across interconnected systems.

Such questions point to a broader transformation in architectural pedagogy. Instead of privileging abstract form-making, education might embrace *resource-based design, temporal thinking,* and *collaborative processes.*[7]

Concepts such as *vital materialism*[8] —which positions matter as active, relational, and influential— were brought up in several presentations and are finding resonance in architecture schools. They help reframe materials as more than resources: they are participants in design. This shift illustrates the growing convergence between architectural practice, ecological thinking, and contemporary philosophy.

Training the next generation in terms of circularity requires teaching them not only the right skills, but also certain attitudes: attentiveness, adaptability, humility, care, and a willingness to engage with the complexities of materials and their histories.

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7   As educators like Charlotte Malterre-Barthes argue, reforming architectural schools may be necessary if we are to shift the discipline toward building less—and differently.

8   Bennett, J. (2020). Vibrant matter: A political ecology of things. Duke University Press.

Strategies, Success Stories, and the Question of Scale

Finally, many of the projects and presented were remarkable practices—*built manifestos,* often realized under the pressure of specific opportunities or collaborations. They demonstrate ingenuity, courage, and optimism. Yet they also reveal the systemic challenges that circularity still faces.

Key questions emerged at the end of the day:

How can one-off experiments be scaled up?
What conditions—legal, financial, logistical—must change for them to flourish widely?
Why do we mostly hear success stories? How can the architecture profession share and learn from the failures, setbacks, delays, and negotiations that also shape circular work?
What can be changed in processes to better reflect the time investment and implementation of responsibilities required for detailed inventories, on-site adjustments, and participatory processes?
How can circularity gain more *planetary impact,* beyond exemplary prototypes?

Several presenters demonstrated the importance of *mock-ups and 1:1 testing* or on-site decision making, which provide a tangible way to navigate uncertainty, test norms or engage with communities. But these too require time, space, and support that many practices cannot easily secure. They also come with responsibilities that are not always clear from the start. Responses include a wider pre-design phase, but also an entanglement of construction documents and construction period where improvisation can happen while constructing.

An observation was on the *few behind-the-scenes documents* in the presentations. Despite the day's theme of representational instruments, few working files—emails, spreadsheets, negotiation diagrams, annotated dismantling plans—were shown. This absence raises questions about what we consider legitimate architectural representation, and whether the discipline is ready to embrace the operational messiness of circular practice.

If the spreadsheet is becoming a central design tool, why does it remain invisible?
What does this say about architectural culture?

Conclusion: Toward a Re-Mediated Practice

The 2025 *Practices in Research* conference revealed that circularity is not a supplementary layer to be added to architectural practice. It is a transformative force reshaping the fundamental nature of the discipline.

It influences:

how architects observe,
how they collaborate and with whom,
how they draw and document,
how they manage time and resources,
how they navigate uncertainty,
how they communicate aesthetics,
how they imagine their role in a world of finite materials.

Circularity requires both *improvisation and precision*, both *technical rigor and cultural intelligence*. It invites practitioners to rethink representation—not as depiction of form, but as the articulation of processes, negotiations, and possibilities.

Most importantly, circularity reveals architecture as a practice of *care*: for materials, for stories, for communities, and for the planetary systems that sustain us.

The challenge ahead is not simply to refine these emergent and implicit methods, but to make them *visible, shareable*, and *scalable*. The remaining question is not on becoming circular or not, it is about how to make circularity evident. This will require suitable instruments, strong institutional support, adapted forms of teaching, and engaging narratives about what architecture is and what it is capable of becoming.

Practices In Research
Issue #06
Re-mediating Practices
December 2025

In Practice - interuniversity research group of practising architects
www.architectureinpractice.eu