COMPOSITE PRACTICE

Interdependence in the design-build process

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2025 N°6

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 Demolition is an outdated model.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fabric is resulting in a shift of professional practice, whereby the conventional chronological process is being superseded by an iterative approach.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

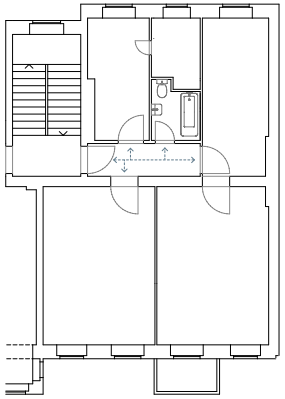
combined design-construction phase (Trachtenberg, M., 2010).

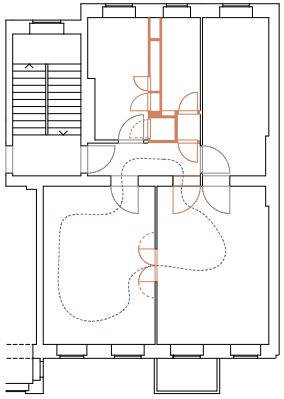
During the transformation of a building, fragments of older layers inevitably become integrated into new ones. This phenomenon can be attributed to the fact that the life cycles of the various building layers – such as structure, envelope, building services, room sequence and furnishings – are subject 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.

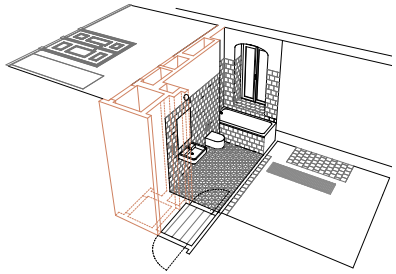
Reshuffling components

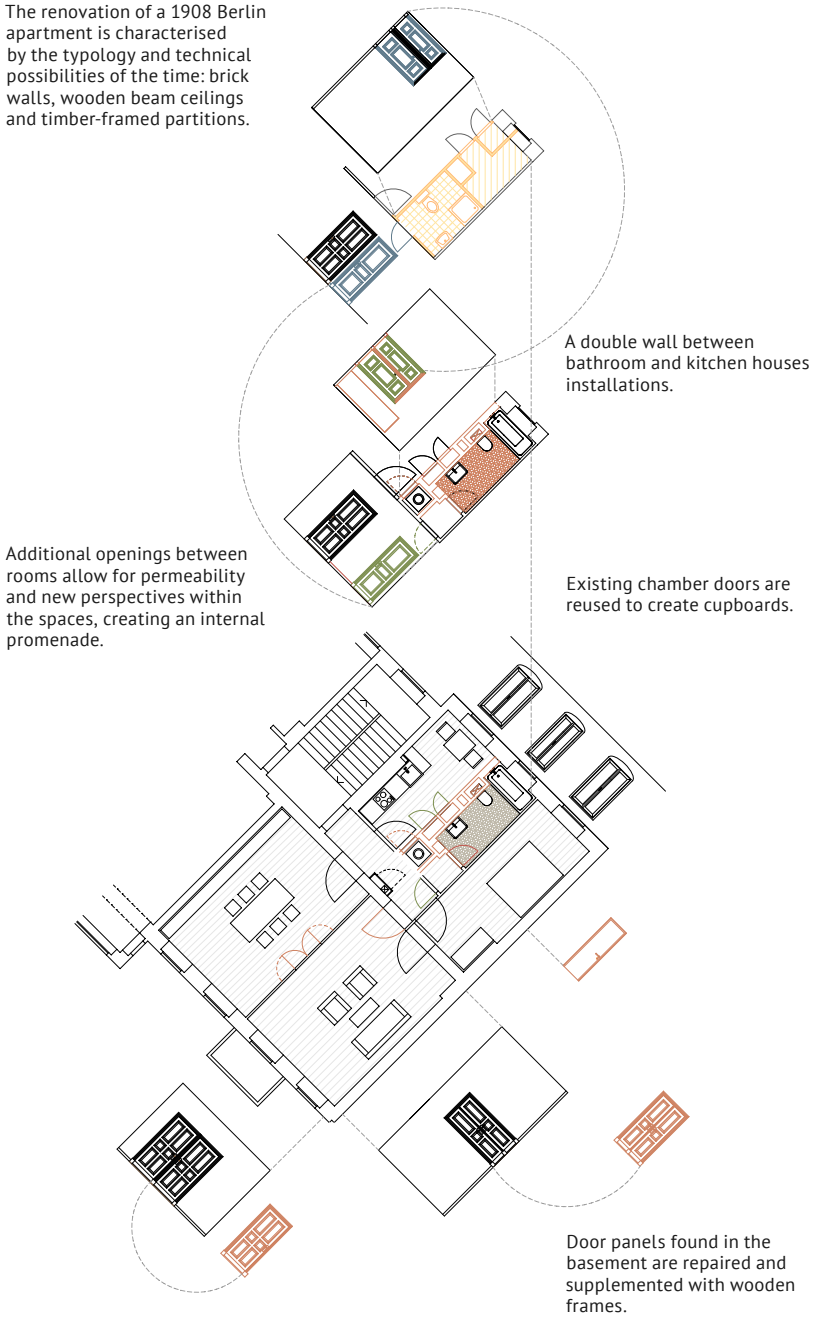
The wooden chamber doors that were on site prior to the transformation of the Berlin apartment in a 1908 building played a significant role in the transformation process. Given that they have remained largely intact despite the financial crisis of the 1920s and the Second World War, not to mention the 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.





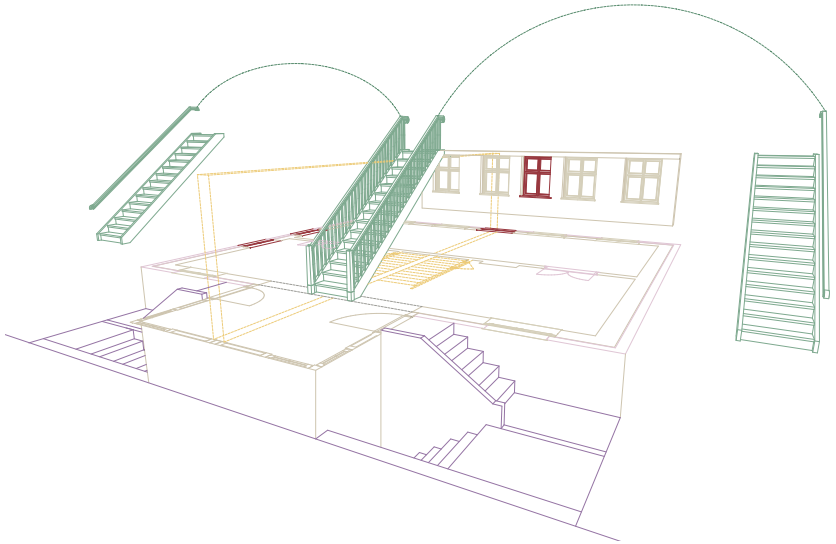
Assuming that every intervention involves a loss of the existing (Burckhardt, L. 1982), we decide to minimise our intervention. Implementing a double wall between the kitchen and bathroom, which serves to modernise the facilities. Furthermore, the repositioning and repairing of the chamber doors create a circular route through the spaces, thereby establishing a variety of connections and perspectives.

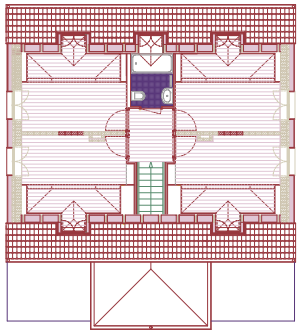


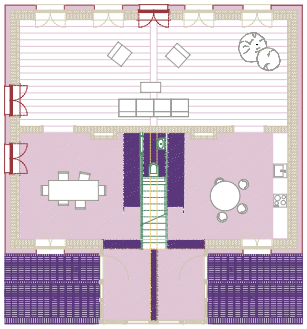


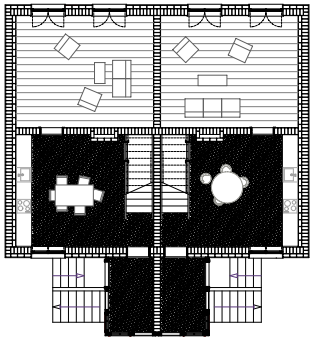
Forward removal

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

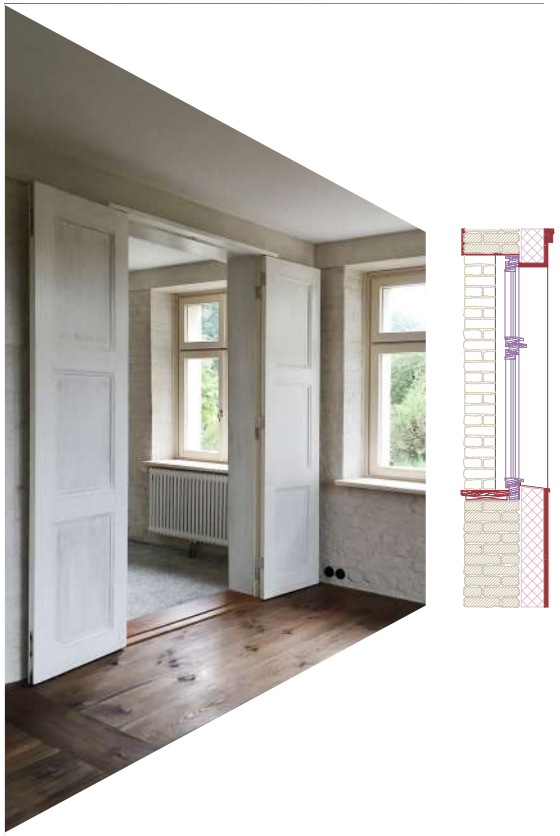






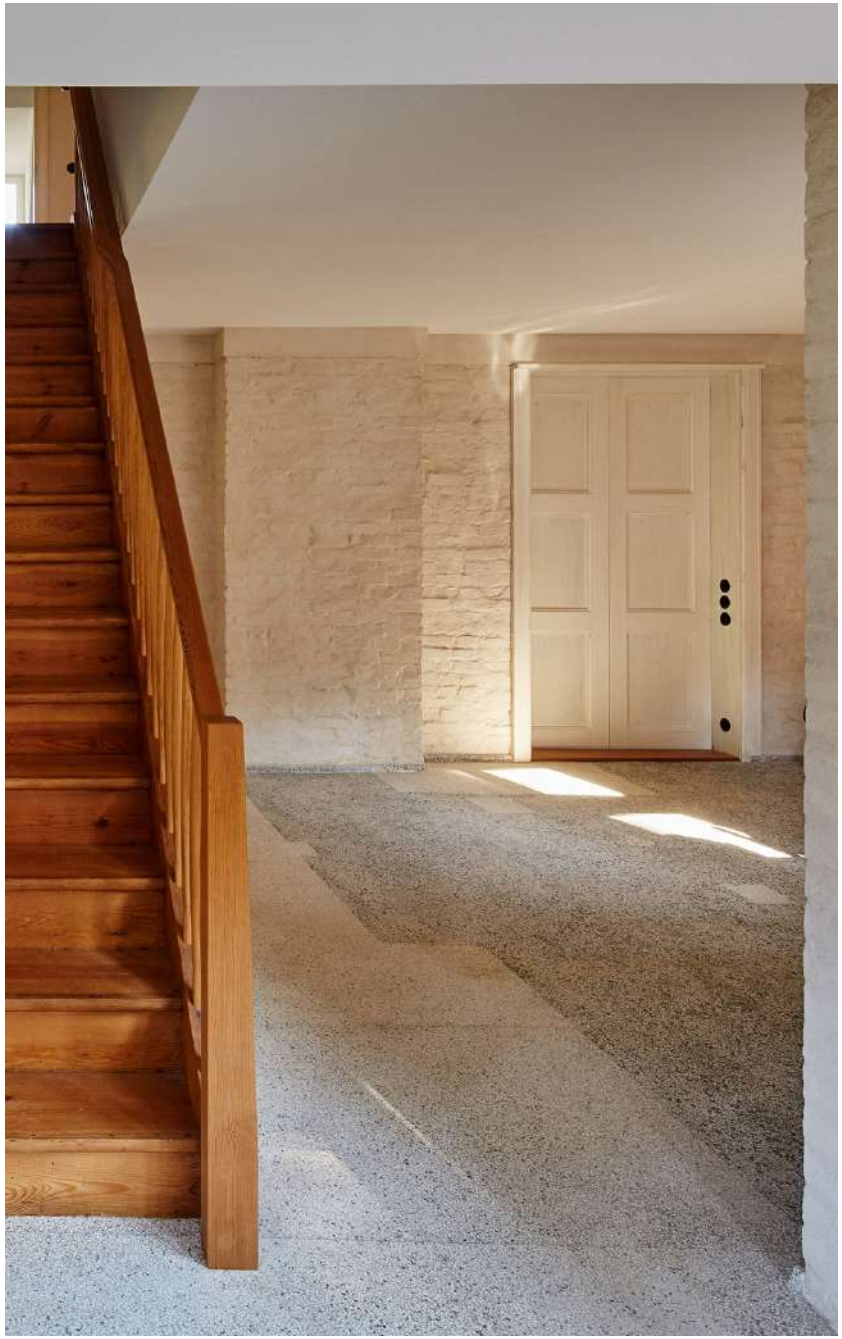


harmonise the different coloured bricks while exposing the texture of the masonry. In order to create a smoother surface for the constructive connections, the joints between the brickwork and the adjacent building elements are plastered in strips. The exterior of the building was insulated with hemp 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

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