

RECOMMENDATION 8: Prioritise Retrofitting

KA13 OFFICE & COWORKING

Mad arkitekter

Location/Country

Kristian Augusts gate 13, 0164
Oslo, Norway

Timeline

2017-2021

Project type

Building project.
Renovation/retrofit

Climate zone

Continental

Area

4 300 m²

Source of funding

Private real estate investments

Partners

Entra, Mad arkitekter, Spaces,
Scenario interiørarkitekter,
FutureBuilt, Insenti,
Haandverkerne

Type of project

Use of reused or recycled
content in new products and
buildings

Website

<https://mad.no/prosjekter/kristian-august-gate-13>



Project Description

KA13, located in central Oslo. A formerly dilapidated building has become a bright and fully revitalized, modern office- and coworking space. The project consists of two parts: rehabilitation of the existing building and a new extension, as well as upgraded technical facilities.

The extension is predominantly made from a wide range of reused building materials, sourced from different construction sites around Norway. In numbers, KA13 has achieved a local reuse of ca. 80% and emission reductions of ca. 70% for the project as a whole. The programming has remained unchanged with offices on all floors above ground level. However, some new functions have been added, such as communal functions and roof-top terraces, adding value to the project. KA13 stands as a monument to reuse, but the journey has been challenging and eventful.

The reuse process is different from regular construction, and the project is heavily affected by the materials that were available during the project period. The client, known for high quality and future-oriented projects, wished to lead the way with an innovative project. Mad arkitekter has been working with reuse and the transformation of buildings for quite some time, acquiring useful skills and knowledge.

However, extensively reusing single building components, as done in KA13, is a groundbreaking process. This required strategies fine-tuned through interdisciplinary processes, where all disciplines were tightly involved every step of the way. Each material had to be sourced, examined, and prepared individually, considering factors such as cost, service life, functionality, and aesthetics. Buildings account for a large part of our resource use in terms of materials, energy and waste.

The way KA13 challenges established norms is a big step towards increased sustainability. In addition, the preservation of buildings is highly valuable for contextual identities and history, which makes a profound contribution to a more sustainable society.

A predominance of materials used in KA13 came from donor-buildings within a short distance. Mad arkitekter has reused concrete slabs from old government facilities and steel structures from warehouses, with the windows coming from an incorrect order made on a different project. The railings are sourced from an old swimming hall and the facade cladding consists of panels from various projects around Oslo.

Old radiators, doors, wall coverings and even furniture was saved from the original building and carefully restored. The key takeaway is that large-scale reuse is both feasible and achievable. This project has played a crucial role in driving innovation and creating new business opportunities. It also sparked a movement within the construction industry, bringing attention to the regulatory challenges of implementing a circular economy. As a result, the government has revised national regulations to facilitate reuse.

How does the project implement aspects of recommendation 8: Prioritise Retrofitting?

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Photo Credits

Mad arkitekter, Kyrre Sundal

Environmental Aspects



Has LCA been conducted for the project?	YES
Have efforts been made to minimise whole life cycle energy consumption (construction and operation) in the project?	YES
Is active solar energy used?	NO
Does the project design allow utilization of passive solar energy?	NO
Is geothermal energy used?	NO
Is wind energy used?	NO
Is solar water heating used?	NO
Has energy consumption been monitored?	YES
Have efforts been made to minimise whole life cycle water consumption (construction and operation) in the project?	YES
Have water management strategies (water reuse, water treatment on site, others) been used?	YES
Has the project considered protection of sites with high ecological value?	YES
Has the project considered protection of soil health?	YES
Have efforts been made to reduce whole life carbon (construction and operation) in the project?	YES
Has landscaping used to improve sustainability?	YES

Project results

KA13 accomplished several important sustainability goals. It significantly reduced its environmental footprint by reusing materials, cutting CO₂ emissions by 70% compared to traditional construction methods, and achieving an 80% reuse rate of building materials. The project also showcased the practicality of circular economy principles.

Environmental and socio-economic Impacts

The project reduces environmental impacts by minimizing waste, conserving materials, and cutting CO₂ emissions, while promoting a circular economy. Socio-economically, it creates jobs, supports local businesses, and fosters new startups in circularity, serving as a model for future sustainable development.

Is the project undergoing monitoring?

The KA13 project is being monitored for sustainability outcomes over several years post-construction, focusing on energy consumption, material performance, and environmental impact. Initial observations show significant results and positive feedback on reuse strategies. This pilot project attracts hundreds of visitors each year, showcasing its innovative approach.

How is the project pushing learning and understanding of circularity in the built environment?

The KA13 pilot project promotes learning and understanding of circularity in the built environment by serving as a practical demonstration of reuse. It integrates innovative reuse strategies and materials, offering real-world examples for industry professionals and stakeholders. All experiences from the project and process have been documented in a report that is publicly available.

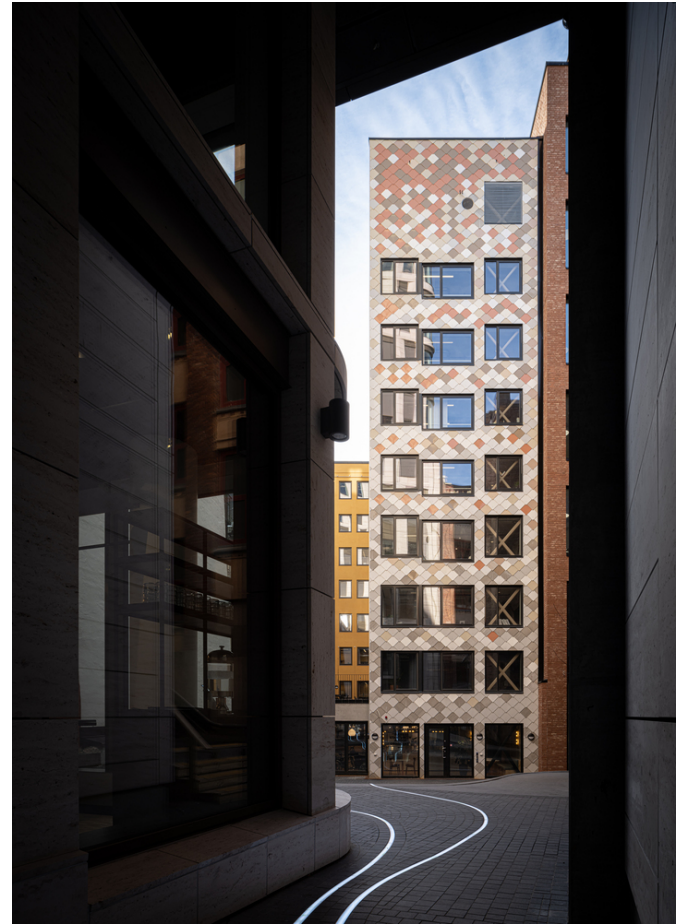
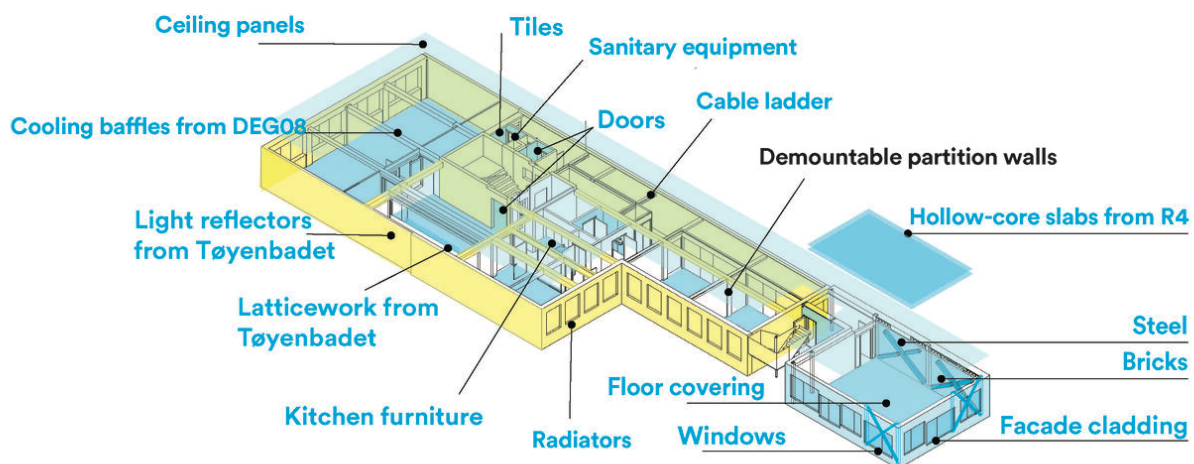


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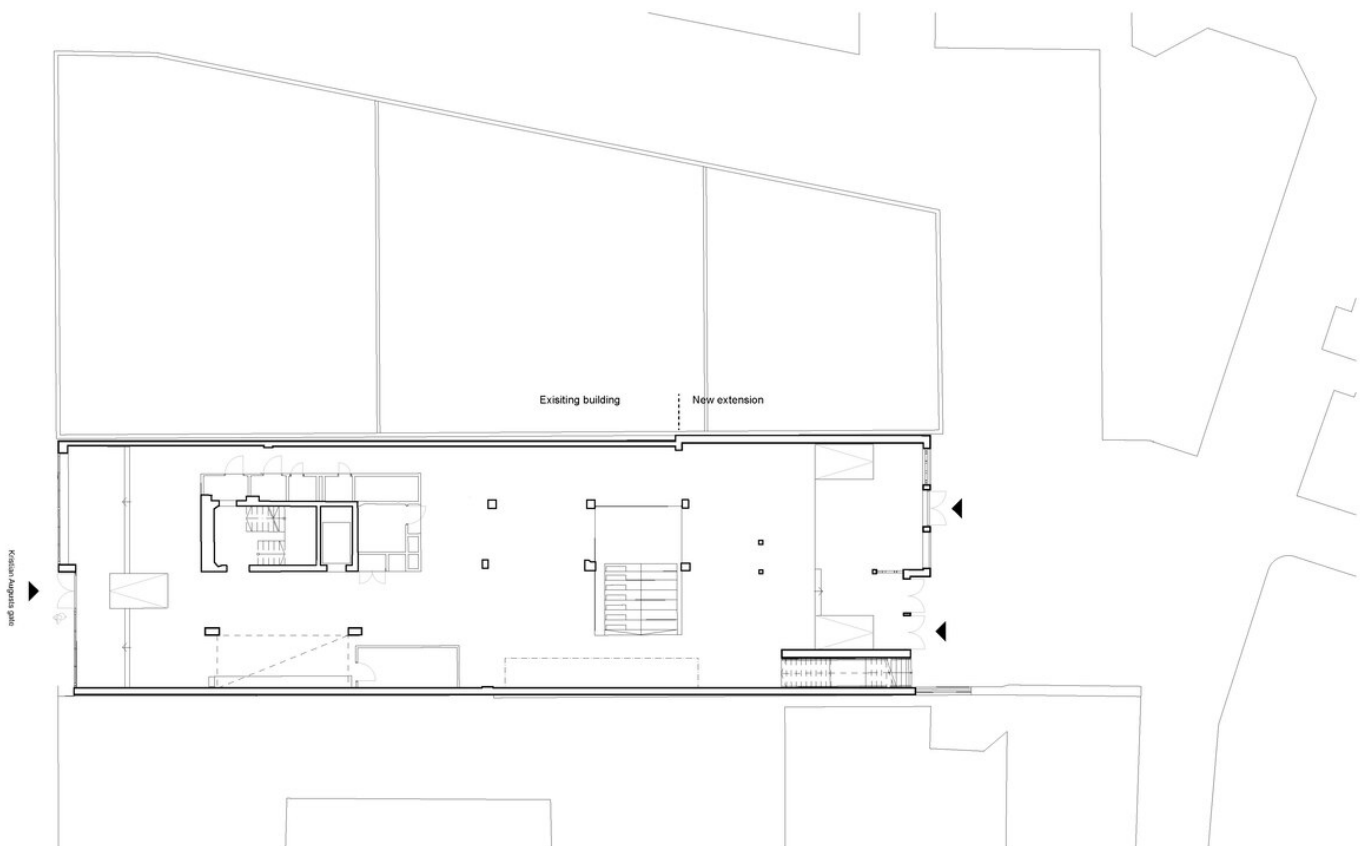


3D Floor Plan

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Section
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Floor Plan
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