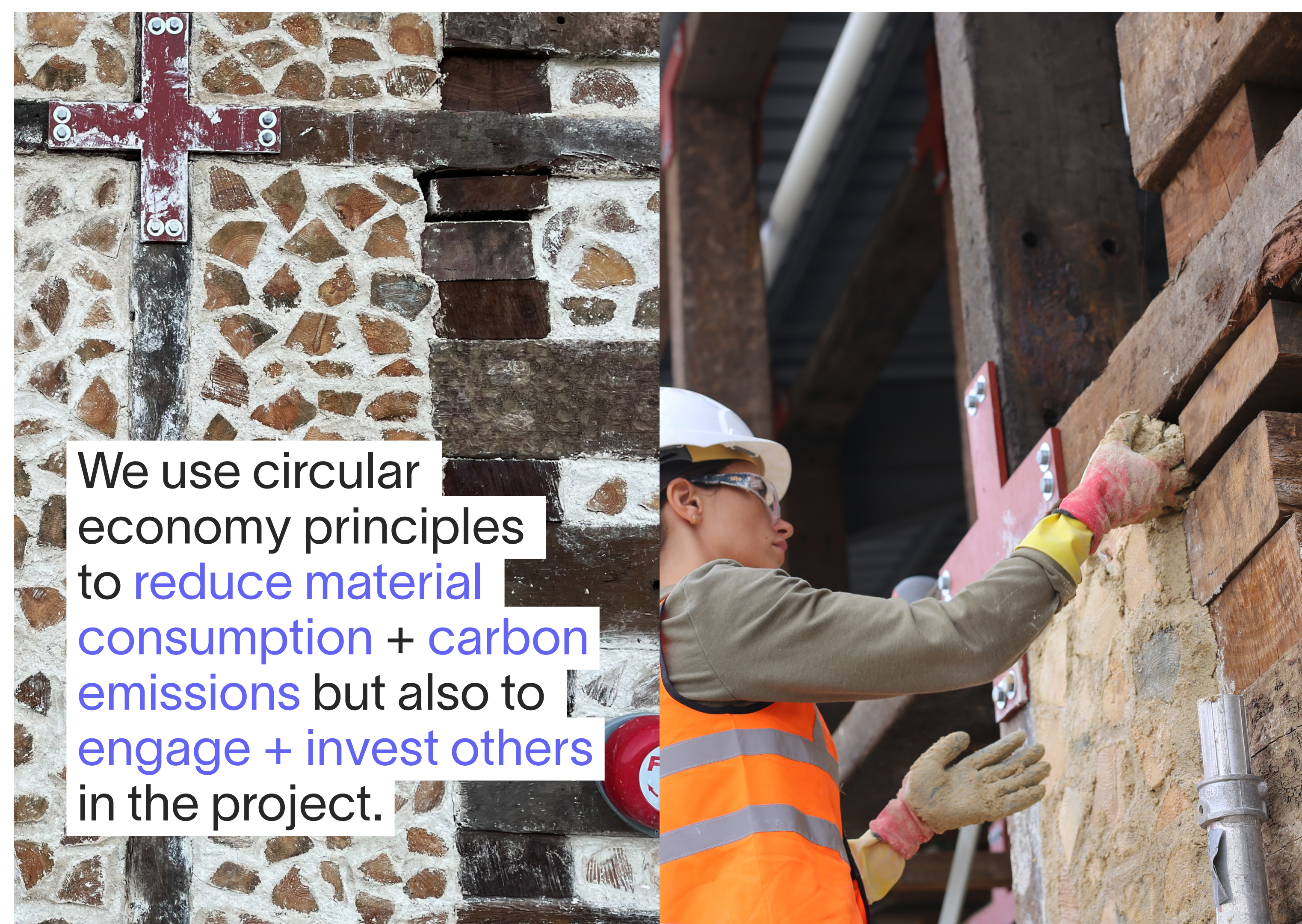


# Over 1000 Volunteers Are Building London's Largest Circular Economy Building

Jan Kattein Architects

CIRCULAR ECONOMY WORKS



We use circular economy principles to reduce material consumption + carbon emissions but also to engage + invest others in the project.

Operational carbon reduction has been the main focus of the industry for the last decade. During the past years, retrofit has led the discussion. The recent IPPC AR6 Synthesis Report on Climate Change emphasizes the need for an even more determined approach. The need for eliminating carbon from the construction process itself is more pressing than ever.

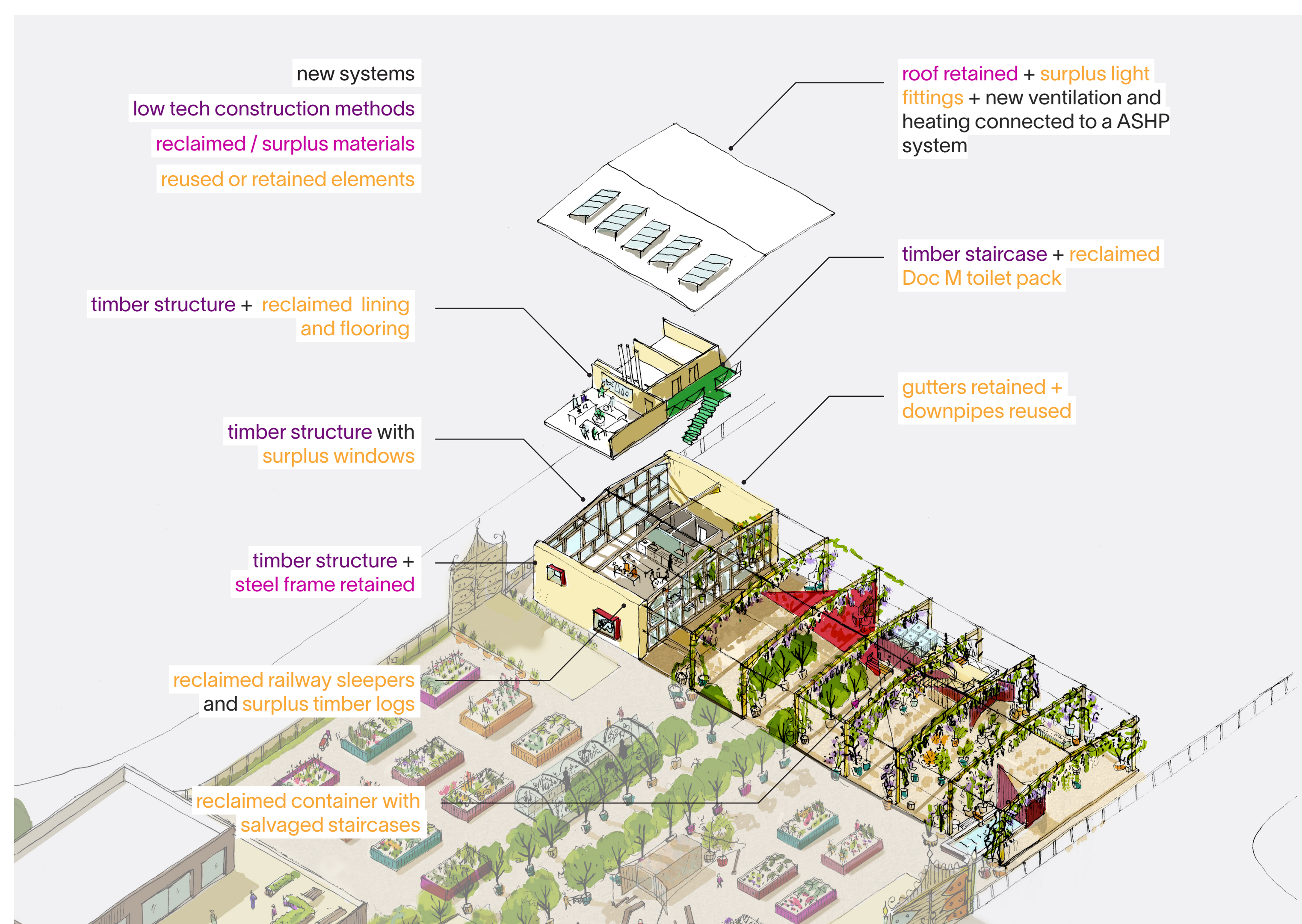
buildings at the Story Garden and at Ebury Edge. This summer we will complete one of the most ambitious circular economy buildings attempted in the UK in decades. The 300 sqm educational building located in Canada Water forms part of the Paper Garden, an educational community for environmental charity Global Generation.

JKA have been working on circular economy projects for the last ten years. We started by re-conditioning old school furniture to fit out our Switchboard Studios workspace building in East London. Our first full circular economy built was the King's Cross Skip Garden where architecture students from the Bartlett built a series of small buildings entirely from reclaimed materials. Since then, we have delivered pioneering demountable

Working closely with British Land, Aecom, Watermans, Sweco, Mace, Wates and BRCS we took a radical approach and repurposed a disused industrial shed, retaining its structural steel frame and concrete slab. We then developed a flexible and adaptable design framework that would allow us to incorporate reused materials as they became available and low tech construction methods easy to learn for volunteers.



We enable communities to learn + discover together



The new walls are made from cordwood, an age-old construction method using short length of timber logs from tree pruning bedded in lime mortar. We used a cavity wall construction for advanced thermal performance. The corner quoins are made from reclaimed railway sleepers donated by Network Rail. The floors are made from 200 doors reclaimed from a police station that is being demolished locally and the windows are upcycled reject stock donated by Nordan.

The project has required us to re-design the entire construction process to facilitate experimentation, adjustment and participation within the confines of a modest construction budget. wBuilding has become an integral part of Global Generation's engagement activities with corporate- and community volunteers of all ages participating. Working in this way we have to date rallied 1000 people to the cause who will take the message about the project back to their communities.

Built from 60% reused materials (measured by volume), we are easily exceeding the LETI (Low Energy Transformation Initiative) 2030 target. In fact, we are 7 years ahead of one of the most ambitious targets set by any organisation in the UK.

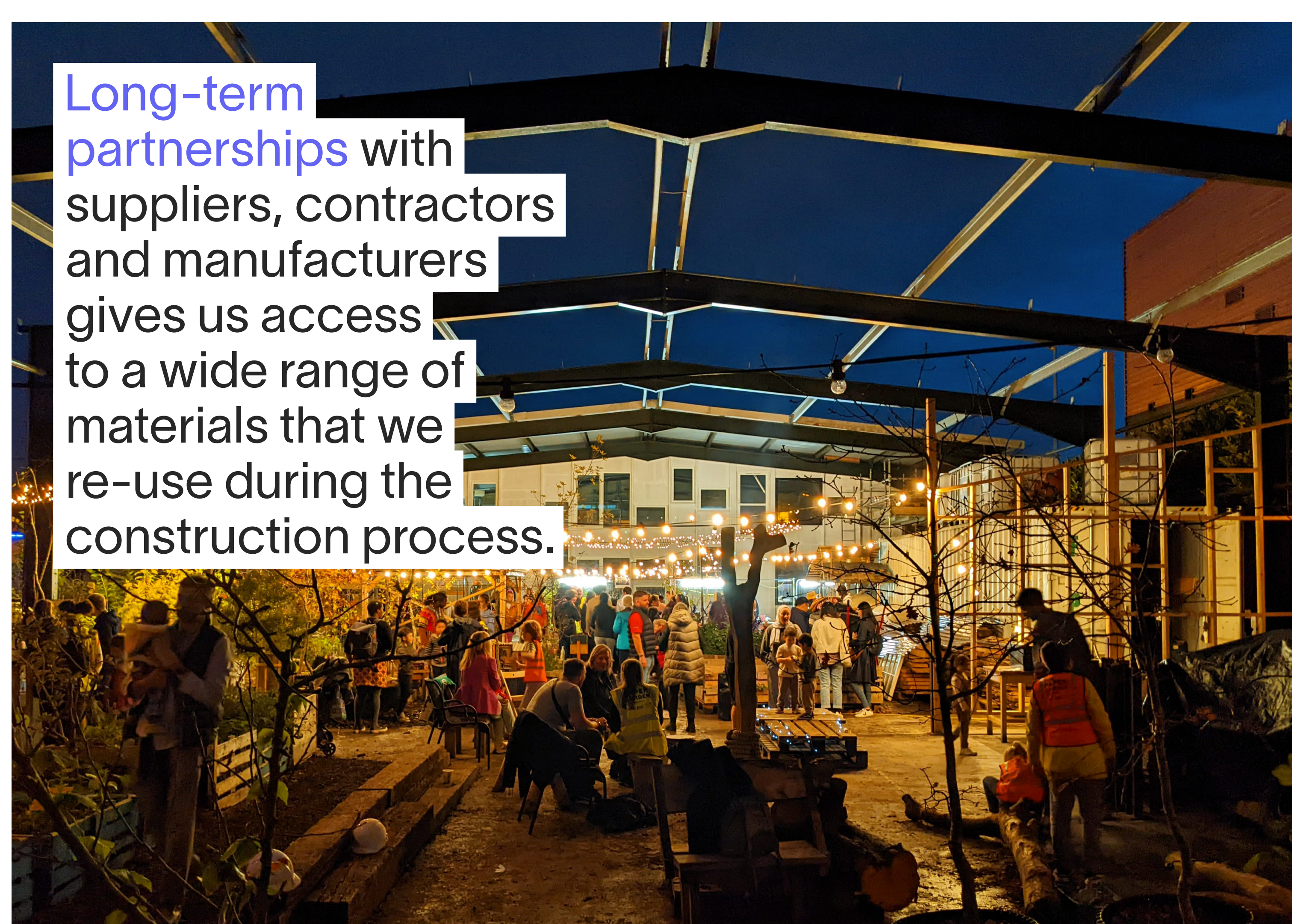
With an uncompromising focus on reuse, the project sets a precedent for sustainable construction whilst unleashing the potential of the construction process itself to convey skills and contribute to greater community coherence in an area of London that is changing.



Using prototypes and mock-ups we reinvent vernacular construction techniques to respond to contemporary challenges.



Developing a flexible design framework allows us to adapt and change details and respond to materials becoming available.

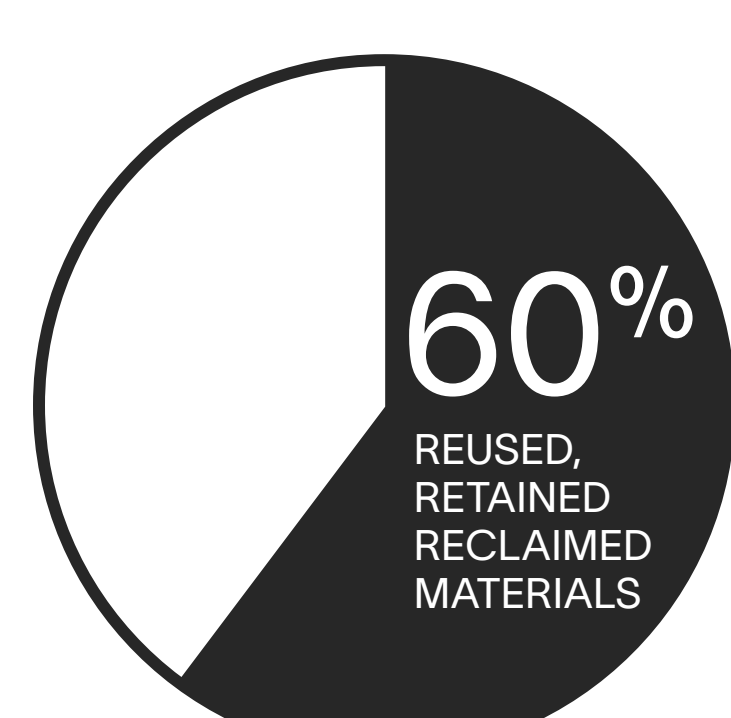


Long-term partnerships with suppliers, contractors and manufacturers gives us access to a wide range of materials that we re-use during the construction process.

ENVIRONMENTAL VALUE

EDUCATIONAL VALUE

COLLABORATORS



Jan Kattein Architects  
Global Generation  
British Land  
AECOM  
BRCS

# JKA

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