OUT NOW: Material Cultures' handbook for the post-carbon future of architecture

Essay collection Material Reform makes the case for a reconciliation between the built and natural worlds



Material Cultures is (L-R) George Massoud, Summer Islam and Paloma Gormley. Portrait by Ryan Prince.

"Revolutions are easy to talk about, and perhaps, in an abstract sort of way, easy to imagine. But they are not so easy to start, let alone carry through." – Material Reform, introduction

Since it was established in 2019 not-for-profit design and research practice Material Cultures has been exploring, prototyping and championing a new model of architecture for the UK – a decarbonised built environment, created from local and bio-based materials, that is regenerative, sustainable and scalable.

They have just written their first book. Launched on 10 November 2022 by MACK, Material Reform distils the practice's four years of thinking, research, prototyping and building into an accessible pocket-sized guide to reshaping architecture for the post-carbon future.



Regenerative Resources

Construction is a material and logistical practice that involves moving large quantities of material from one place to another, often with many intermediary steps along the way. However, the standard tools and commercial structures used by people who are involved in making decisions about what and how we build are focused almost exclusively or the site of assembly. This focus ignores or obscures the places where the materials came from, and the many sites involved in processing, transportation and distribution.

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This limited view-finder means that many who are concerned with the ecological impact of construction focus on the functionality of the final building. This has led to a focus on buildings with low on-going energy use, and that generate new habitats, including areas for growing, nesting and farming algae. Whilst there is nothing wrong with including these elements in new buildings, they often fail to come near to balancing out the energy use and habitat loss involved in the wider process from the sites of extraction to the site of assembly. For construction to make a genuine contribution to the regeneration of ecosystems and resources, we need to engage with the whole material chain involved in getting to the moment of construction - a set of connected sites and processes that can usefully be called the construction chain. We need to reorientate action in this field away from the site of assembly and towards a construction practice based on collaboration with people engaged in regenerative resource management.

In 144 pages, architects and Material Cultures directors Paloma Gormley, Summer Islam, and George Massoud provide a clear and compelling blueprint for an alternative set of cultures, systems and ecologies for the built environment.

"Our current modus operandi can't support the kinds of futures we envision for ourselves and those to come. As architects, builders, and citizens, we must urgently rethink our relationship to the land and to each other to produce new forms of material practice, culture, and economy in solidarity with people and our landscapes."

- Paloma Gormley, Material Cultures

Material Reform is organised into 19 chapters, each one comprising a short essay or conversation exploring a distinct topic such as land use, extraction, agriculture, regenerative resources, and supply chains, as well as deep-dive focuses on specific

materials including clay, soil, straw, stone and timber. In each, the Material Cultures team unpack the infrastructures that shape the existing architectural industry and the destructive ecologies it fosters, and consider how more holistic approaches to the built environment might be formulated and implemented.

"The building practices dominating contemporary architecture are rooted in the exploitation of people and the degradation of our landscapes. How can architecture, construction and the built environment shift away from a degenerative practice by rethinking our relationship to the land for the benefit of all life?"

- George Massoud, Material Cultures

Woven through the book, a powerful visual essay featuring photography by Jess Gough lays bare the processes that have transformed industrialised landscapes, underpinning Material Cultures' argument that a new relationship with materials is needed if we are to realise a sustainable post-carbon future, not just for humanity, but for all living things.



The built environment affects everyone, but many of the ideas and themes explored in the book are usually siloed in the realms of material science and expressed in

academic language. Conscious of this, Gormley, Islam and Massoud have written Material Reform to be accessible to as wide an audience as possible, establishing a clear language and a concise, visually rich format, supported by a detailed glossary and recommendations for additional reading. The compact, pocket-perfect format – unusual for a book of this kind – further increases its accessibility: it is just as suited to being a companion on the commute as it is an essential reference in the architect's studio.

"We believe that in order to effect significant change, we need to engage with a larger audience, working across disparate industries and at multiple scales. We hope this book will invite more practitioners to engage with the urgency of our social and environmental crisis and the ways in which construction can drive positive change."

- Summer Islam, Material Cultures



Material Reform is the first book in the new architecture list launched by visual arts publisher MACK. It includes an introduction by Charlotte Malterre-Barthes, Assistant Professor of Architecture at the EPFL (Ecole polytechnique fédérale de Lausanne), and photography by Jess Gough. It is co-authored with Amica Dall.

Material Reform is now available to order for £18 from mackbooks.co.uk.

Notes to editors

For more information about Material Reform, and Material Cultures' research and practice, please contact materialcultures@zetteler.co.uk.

Material Reform

A critical sourcebook for reshaping architecture for a sustainable, post-carbon future

Paperback

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Environmental impact assessment URGE Collective

As befits a book written in response to climate emergency, Material Reform includes a detailed breakdown of the environmental impact of its own development and publication. An in-depth CO2e breakdown, calculated by by Alexie Sommer and Ralf Waterfield of URGE Collective, and covering every aspect of production from email exchanges between the team to the glue used in binding, is included, providing total transparency. 51% of the book's impact is in its distribution, 43% in production and 16% in photography.

On the assumption of 2,800 copies sold, each copy of Material Reform represents 500g CO2e – the equivalent of three hours of Netflix viewing.

Material Cultures

Material Cultures is a not-for-profit organisation led by Paloma Gormley, Summer Islam, and George Massoud, with a view to transforming our built environment for the post-carbon future. The practice combines design, practical research and action to develop, refine and champion natural, low-carbon construction materials and

methods, including prototypical designs for regenerative, zero-carbon housing, employing natural, UK-sourced materials. Examples include the Flat House at Margent's Farm in Cambridgeshire constructed from low-carbon timber prefabricated hempcrete structural panels, and the practice's current work on the Phoenix Project – comprising hundreds of timber and hempcrete homes in Lewes, East Sussex.

materialcultures.org





Flat House (2019) at Margent Farm, Cambridgeshire, pioneered the at-scale use of pre-fabricated hemp-based panels in housing construction.