

SUSTAINABILITY POLICY



POLICY AIMS

Keith Williams Architects' sustainability objectives aim to ensure that our building designs are holistically environmentally sustainable in their conception and implementation. The considerations of climate change are setting the agenda for much of way we live our lives and will do so in the future. We fully embrace the urgency of climate change issues and design and build with future generations in mind, working to address the genuine need to find solutions to the challenges the world now faces.

Together, building and construction are responsible for 39% of all carbon emissions in the world (World Green Building Council). The pressing need to reduce carbon usage is defining how our cities will be made in the future including the contribution that each building makes to this aim. This is a key driver for change in the design of the built environment.

UK Architects Declare, to which we subscribe, along with LETI, a network of over 1000 built environment professionals, and others, are working to put the UK on the path to a net zero carbon future. The RIBA have also issued guidance to set a practical agenda for best practice within the profession.

KWA embrace all of these initiatives.

We have for more than 20 years, considered low energy principles as a fundamental element in the conception of all our buildings. We are convinced that in architectural and building terms, the most sustainable building is one that is beautiful, well designed, integrates low energy use and sustainable construction at the heart of its conception, is suitable for its purpose, is capable of simple adaptation/ expansion and is well built. Thus it will not be redeveloped for many decades to come making the best use of embedded carbon resources.

Through the implementation of this policy and these initiatives, Keith Williams Architects seeks to lead the way in the design and delivery of a low carbon architecture as standard, which we see as a necessary response to the Climate Change emergency.

Working closely with our clients, we hope to contribute as much as we can to the target of reaching net-zero global emissions by 2050 or earlier.

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SUSTAINABILITY POLICY METHODOLOGY

Working with our clients and with appointed design and construction teams, key areas of design and research that underpin our sustainable design methodology for each project include:

- evaluating Whole life Carbon
- careful orientation of each building to work with the environment not against it
- careful detailed design of the building envelope to maximise solar screening, shading canopies, insulation and the like to control the impact of direct solar gain on the building
- employing a “fabric first” rather than an “M&E plant first” approach to environmental design reducing the capital spend and energy consumption in use
- utilising natural ventilation wherever possible
- providing enhanced levels of air tightness to reduce heat gain/loss through infiltration
- using nighttime passive cooling techniques wherever feasible
- designing toward Net Zero Carbon usage

WHOLE LIFE CARBON (embodied carbon)

The carbon footprint of all things is now a key consideration in terms of balancing short term advantage with long term sustainability objectives. The analysis of the carbon use of a building throughout its life cycle is a complex computation, however it is clear that the maximisation of use of pre-existing structures must be a core consideration. At the outset of any project a clear analysis of the merits of new structures replacing old should be undertaken, and where possible retention of existing fabric (together with its retained carbon investment) should be evaluated to determine the most appropriate design strategy for each project.

Where retention is not feasible, careful material and constructional choices have to be made to minimise embodied carbon usage during its lifespan with a “cradle to the grave” approach. With careful design this should not be to the detriment of either functional or aesthetic considerations but sit alongside as a logical consequence of their relative merits.

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NEAR ZERO CARBON BUILDING USAGE

At its most straightforward, reducing the direct energy use of buildings to a level where there is no net contribution to carbon use is a simple objective but requires very careful consideration of detail at all levels of design and construction.

Key topics include:

- full consideration of on-site modes of delivering energy from renewable sources
- computer modelling of environmental performance of the proposed building at all key design stages
- detailing for high insulation and robust air tightness
- designing to facilitate passive heating and cooling techniques
- Working with contractors and suppliers to ensure build quality and specification meet required performance criteria.
- target to exceed minimum standards set by central government wherever possible

ASSESSMENT SYSTEMS

A variety of assessment systems exist to validate the performance of buildings both in design and in operational phases. BREEAM, LEED, PassivHaus and others have made a valuable contribution to making sustainability aims clear.

Our clients have set and will continue to set high expectations for achievement within the rigour of these systems, placing the fundamental needs of our their projects and the environment at the core of the design process.

Through the implementation of this policy and these initiatives, Keith Williams Architects seeks to lead the way in low carbon architecture in its design and delivery as a necessary response to the Climate Change emergency.

A handwritten signature in black ink, appearing to read 'K Williams'.

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founder + director of design

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