



CENTRED ARCHITECTURE

SUSTAINABILITY MANIFESTO

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One of the central guiding principles of Centred Architecture is a consideration of climate change issues and a desire to reduce the impact of the buildings they design on the planet. There have been numerous significant milestones in the evolution of the climate change discussion;

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- 1760 The start of the industrial revolution.
- 1896 The first calculations of the projected Greenhouse Effect were published.
- 1965 the landmark report 'Restoring the quality of our environment' by the US Advisory Committee warned of the harmful effects of fossil fuel emissions.
- 1972 John Sawyer publishes his study 'Man-made carbon dioxide and the Greenhouse effect'. These theories were substantiated by British scientist James Lovelock in 1973.
- 1979 World Conference of the World Meteorological Organisation.
- 1985 The discovery of the hole in the Ozone layer over Antarctica.
- 1985 joint UNEP/WMO/ICSU conference on the 'Assessment of the role of Carbon Dioxide and other greenhouse gases on climate variations and associated impacts'.
- 1988 WMO establishes the Inter governmental panel on climate change (IPCC).
- 1992 UN Conference on Environment and development in Rio de Janeiro.
- 1997 UN Conference of Parties meeting in Kyoto, Japan.
- 2015 UN Conference of Parties meeting in Paris, France.





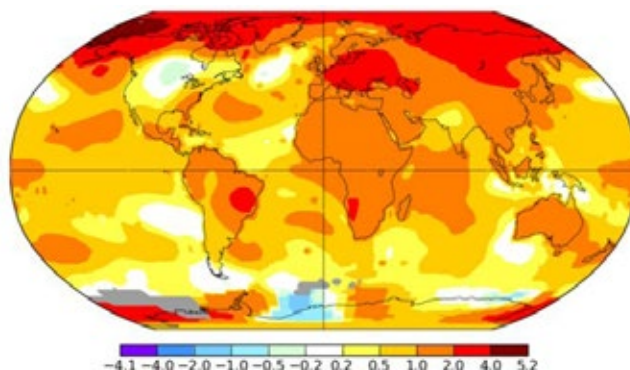
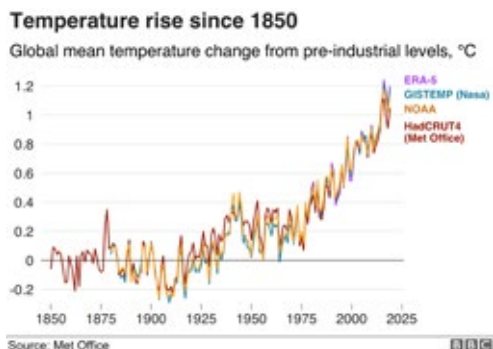
It was not until Kyoto in 1997 that there were legally binding, global green house gas reduction targets.

Then, in 2015, the Paris Agreement facilitated the legislative advances to begin to curb continued and significant climate change. It was unanimously adopted by every Government in the world – 189 nations - in the biggest demonstration of international co-operation ever seen.



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21•CMP11

The current trajectory could see a rise in global temperatures between now and 2050 of +4 - 5c degrees. The 2015 'Paris accord' saw international commitments to restrict the impact of global warming to +2c , but ideally 1.5c degrees above pre industrial levels, necessary to avoid irrevocable change in life on earth.



Met Office graphic illustrating global mean temperature rise since the industrial revolution.

Nasa graphic showing the difference between the 2019 global temperatures and the long term average.

In terms of the built environment, this means that by 2050 the UK's net building stock will have to be zero carbon in operation as a minimum and optimistically carbon positive.

This 'problem' has 2 very significant parts. Firstly we need to halt a worsening situation - the new buildings that we design, build, operate, maintain, repair and sometimes demolish. The design, construction, occupation, maintenance and demolition of the worlds built environment is responsible for over 45% of the worlds CO2 emissions. It also consumes about 50% of all raw materials annually.

Secondly, we then we need to address the wrongs of 260 years of un-shackled development, exploitation and consumption. We need to retrofit, re-use and re-appropriate our existing buildings, some of which date pre industrial revolution.

Whilst 'carbon' (both embodied and in operation) rightly attracts much of the negative headlines, CA recognize that the sustainability discussion is much broader than a single issue, and includes water, air, biodiversity and material resource (as part of a circular economy).



Equally, health and well-being from a central part of our thinking as they continue to move up the agenda. The large majority of us now work from (and spend more time generally) home. Healthy buildings contribute significantly both to our physical and emotional well-being and contribute significantly to social and community sustainability, which also continue to grow in significance.

Centred Architecture have long believed in design as a holistic process, respectful of both people and the planet. Our unique methodology of 'Brand before Building', making the buildings users experience central to the design process means that we are ideally placed to interrogate both the micro and macro decisions that are equally important in a buildings 'carbon life cycle'.

We recognise that the time to merely 'comply' with legislative changes is past, and that the actions that are now necessary are more wide ranging and deeper than we ever thought. As Architects we take a leading position with clients in our work to optimise a project's opportunities in all of these areas wherever possible.



SUSTAINABILITY IDEOLOGY TO GUIDE OUR WORK AND PRACTICE:

1. To embed the sustainability agenda into the DNA of every decision that we make at project and practice level
2. To evaluate all new projects against the aspiration to contribute positively to mitigating climate breakdown and promote bio diversity principles. We assist the client to adopt this approach, to identify their objectives and ambitions as well as commercial opportunities
3. To adopt more regenerative design principles, with the aim of designing architecture and urbanism that goes beyond legislative compliance and the standard of net zero carbon in use
4. To work with clients to identify opportunities and strategies to upgrade, adapt, retrofit and re use existing buildings and resources where ever we can as a first principle. Recycle only when re use is not possible and build new only when it is the only viable alternative.
5. Apply a holistic design approach that considers embodied carbon, carbon in operation, water, and materials as part of a circular economy at every stage of a project, from inception, to occupancy, and throughout the life cycle of the building. Target net zero whole life cycle carbon for new and retrofitted buildings by 2030.
6. To recognise and optimise our works role in contributing to social sustainability, health and well-being and enhanced bio diversity.
7. To communicate with the wider design team the sustainability and whole life cycle carbon ambitions of a project and collectively seek to optimise the outcomes through regular communication and review.
8. We will seek to accelerate the shift to low carbon and healthy materials that are responsibly and ethically sourced.
9. To minimise the wasteful use of resources in architecture and urbanism, both in quantum and in detail
10. To apply a fabric first and passive approach to reducing energy requirements.
11. In the design of our buildings we target <55kWh/m²/y operational energy use for non-domestic buildings and <35kWh/m²/y for domestic buildings by 2030.

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12. We aim to use low carbon heating and sources of power generally, avoiding all new connections to the gas grid and fossil fuel boilers by 2025.

13. Similarly we will target water usage of 10 litres/person/day for non-domestic buildings and 75 litres/person/day for domestic buildings by minimising water demand, optimizing building systems, and re-using rainwater on site.

14. Communicate the ambitions of the project in terms of sustainability, whole life cycle carbon assessment and construction waste to the contractor and sub-contractors.

15. We will aim to monitor and evaluate the building post occupancy to monitor performance in carbon and energy terms, to learn lessons of successes and failures, and to identify improvements with the client.

16. We will relentlessly share knowledge across projects within CA and with those outside of the office such as clients or fellow consultants as part of a process of continuous knowledge sharing, analysis, self-reflection and improvement.

17. As a practice embrace technological advances and BIM on every project to optimize building design, efficiencies, coordination and performance, as well as in our working practices.

18. Practice what we preach - we regularly review our own internal processes and working practices to identify better ways of doing things around such issues as how we travel to site and how technology can reduce this impact or how ethical our chosen suppliers are, to continued development and improvement, to share knowledge and reduce our own carbon footprint and recognising the importance of health and well-being working in the construction industry

As a practice, in our business and in our projects, as well as our every day lives, we strive to take individual and collective responsibility for our decisions, our planet and how our work positively contributes to our environment. We aim to work with clients and consultants alike who share our beliefs and goals, but we also recognise our role in leading and educating to realise opportunities and potentials that at first are not apparent, and to optimise the positive contribution our buildings and the urban environments that we design can make to our society and to our planet.



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