

# Building Performance & Sustainability Services



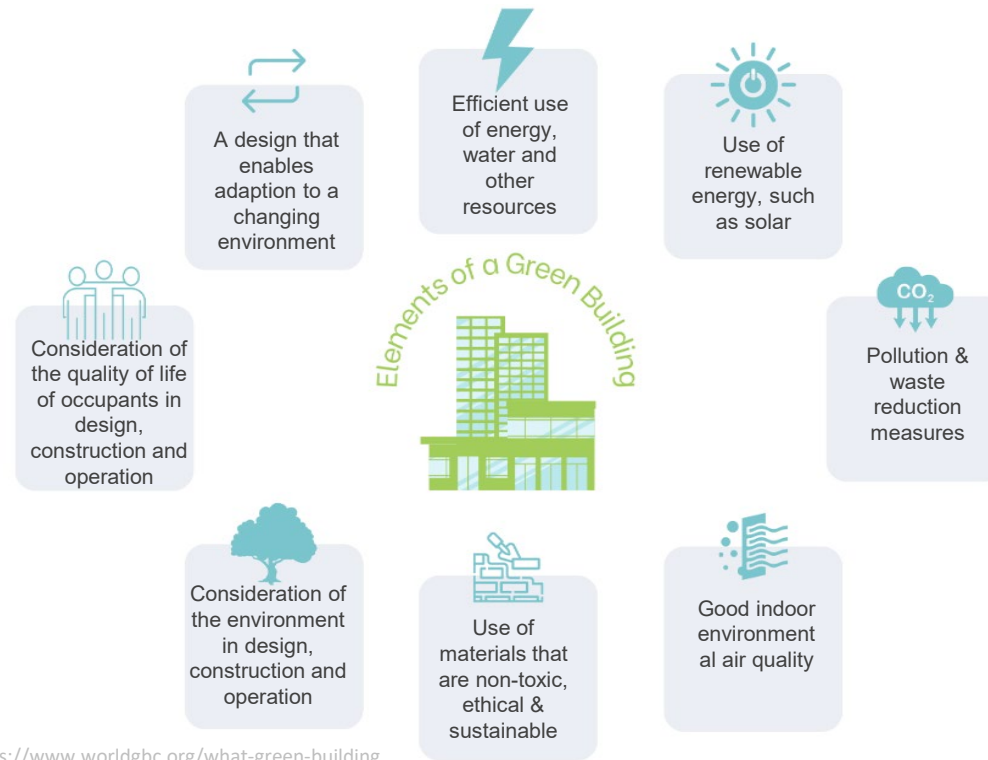
Hannan  
Associates  
MEP Design Solutions

# Sustainability & The Built Environment

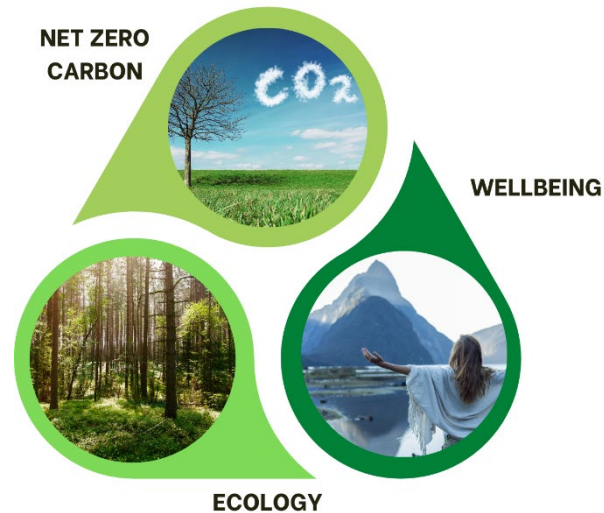
There has been an increase in awareness of the negative ways in which the built environment can impact the climate, natural environment and its occupants and the need for more sustainable buildings.

Most new developments now have a sustainability strategy and an increasing number of clients are seeking direction in relation to the best ways to develop this strategy and meet their targets, as they face increasing pressure from investors and occupiers.

At Hannan Associates we believe green building design is more effective when approached in a holistic way incorporating all the individual elements and is the result of extensive collaboration and teamwork from each member of the project team.



# How can we help you?



## Holistic Approach

As Building Services Engineering Consultants, sustainability has always featured at the heart of our design process and we know we have a big part to play in helping our clients & the built environment meet their green objectives.

We provide a wide range of sustainability focused advice using in-house engineers and specialist partners to define ways of achieving sustainability targets related to..... **Net Zero Carbon, NABERS UK, BREEAM, Ecology and Wellness.**

We help our clients develop targets and strategy bespoke to their own individual requirements. These targets can be used on single developments but also as a basis for future projects.

We are at the forefront of change in relation to the way buildings are modelled to meet the demands of evolving building regulations and guidance from professional bodies such as UKGBC and LETI, who are driving carbon targets for construction towards the 2050 net zero government commitments.

Our involvement includes pilot schemes for modelling energy and carbon in use for new buildings, such as Design for Performance (DfP) and NABERS UK and this experience enables a valuable contribution to development masterplan and individual building sustainability.

# Sustainability Services

## Strategy

- Consultation on Suitable Sustainability Standards and Certification.
- Net Zero Carbon Feasibility Study
- Net Zero Carbon Strategy development

## Design

- Design Stage Operational Energy Modelling
- Design Stage Embodied Carbon Assessment
- Design of MEP Services to Comply with Chosen Sustainability targets.
- Pre-Assessments for BREEAM and other sustainability standards.

## Construction

- Monitoring of MEP Services installations
- Design Stage Certification for BREEAM and other sustainability accreditations.
- NABERS UK Design Stage Assessments

## Post Construction

- Post Construction Stage Certification for BREEAM and other sustainability accreditations.
- Post Occupancy Operational Energy Modelling.
- Achieving a NABERS UK Star rating (around 2 years after occupation).

# Frequently Asked Questions

## What is Net Zero Carbon?

Net Zero Carbon relates to the reduction of greenhouse gas emissions, the majority of which are Carbon Dioxide.

The UKGBC's current definition of Net Zero Carbon divides the process into two parts:

### **Net zero carbon – Construction:**

*“When the amount of carbon emissions associated with a building’s product and construction stages up to practical completion is zero or negative, through the use of offsets or the net export of on-site renewable energy.”*

### **Net zero carbon – Operational Energy:**

*“When the amount of carbon emissions associated with the building’s operational energy on an annual basis is zero or negative. A net zero carbon building is highly energy efficient and powered from on-site and/or off-site renewable energy sources, with any remaining carbon balance offset.”*

## What are the Net Zero Carbon Targets?

The [Paris Agreement](#), set in 2015, aims to limit the average global temperature rise to well below 2°C. In line with this, the [World Green Building Council](#) are guiding the construction and property industry towards achieving Net Zero Carbon for all buildings by 2050.

There are various options for demonstrating carbon reduction in the design and construction of buildings including the UK Green Building Council's Net Zero Framework.

The UKGBC's Net Zero framework provides Operational and Embodied performance targets which cover office and residential type buildings and sets a gradual trajectory of carbon reduction figures from 2020 to 2050 for clients and project teams to follow.

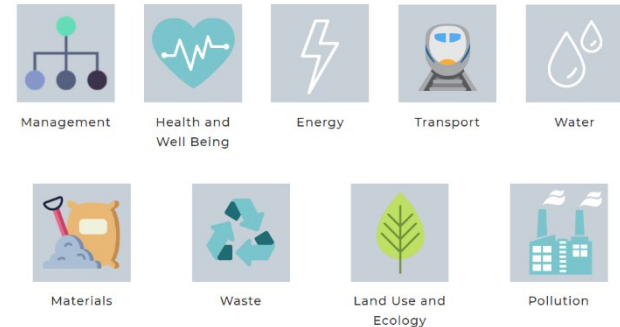
## Why do we need to achieve Net Zero Carbon?

Climate science research has shown that in order to halt climate change, carbon emissions, which cause a warming effect, need to fall by about 45% from 2010 levels by 2030. Globally the built environment is responsible for almost half of greenhouse gas emissions and therefore has a big part to play in helping to meet net zero carbon targets.

## How does Net Zero Carbon align with other sustainability goals and assessment methods?

Net Zero Carbon is an integral part of a much wider systemic shift towards a more sustainable built environment, and it should be considered holistically alongside other elements of sustainability such as Biodiversity and Health & Wellbeing and other methods for assessing the green credentials of buildings.

In terms of accreditations, [BREEAM](#) measures a much broader range of sustainability factors, but it does include some assessments of operational & embodied carbon and passive building design improvements.



[NABERS UK](#) provides a rating for the operational energy efficiency of office buildings, measuring and verifying the actual energy use of existing offices, providing a rating from 1-6 stars to help building owners accurately target, measure and communicate the energy performance of their buildings, demonstrating whether they are on a net zero carbon trajectory. Though, it is not viable to obtain readings for the accreditation until year 2 of occupation of the building and this is very dependent upon the occupier.

# Contact Us



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