

SUSTAINABLE BUILDING CERTIFICATIONS

PRACTICAL GUIDE

This Practical Guide will introduce you to some of the main certifications in sustainable construction and the principles behind achieving a score or rating.



IN A SNAPSHOT

There are a variety of certifications that aim to provide independent assessments and assurance that a building meets certain thresholds of sustainability. Typically, each standard will have a set of criteria that buildings are graded against to see how they perform. These are tailored to building types (e.g. school, hotel, office) to ensure appropriate assessment. Different schemes prioritise certain elements of sustainability. Some, focus on the health and wellbeing of building users whereas others focus more on materials or energy efficiency; as we know, sustainability is a holistic discipline! Different certifications may be more or less suitable for your building depending on what the goals of the project and development are.

Why is it important?

The more buildings that aim to achieve these certifications, the more sustainable the industry and built environment can become. They set standards and demonstrate demand for sustainability that can also help elevate the ambition of government building codes and regulation, workforce training, and corporate strategies. This means that credibility and comparability around sustainable construction is enhanced by using established metrics and criteria, marketability for sustainable buildings increases and buildings have a better chance of being compliant with future, more stringent legislation.



Keep an eye out

The Net Zero Carbon Building Standard - a science-based, industry agreed methodology to define net zero buildings - will be launched for beta testing in the UK later this year.

What certifications are available?

This list, which is by no means exhaustive, shares some of the certifications most commonly used in the UK. A full list can be found on the [World GBC website](#).

1 | BREEAM UK

BREEAM is an internationally accredited scheme which aims to holistically assess multiple sustainability criteria from land use and materials to energy and water efficiency. In the UK, it is administered by the BRE, but internationally it is often administered by a country's local Green Building Council. There are criteria depending on building type and whether it is a new build or a retrofit. The standard specifies and measures performance at different stages with criteria around carbon emissions, biodiversity protection, circular economy principles and many more. Once complete, it receives a BREEAM certification score and rating from independent assessors.

2 | NABERS UK

NABERS UK was adapted from the Australian NABERS scheme by BRE and is now administered by CIBSE. NABERS UK runs a Design for Performance standard and an Energy for Offices standard. In the first, assessments are carried out at the start of a development to determine what rating the building is aiming to achieve. The design process then optimises energy efficiency and extensive modelling is carried out to ensure the building performs as designed avoiding the 'performance gap'. Operational energy data is then measured over 12 months so the building can receive a rating. For existing buildings, the Energy for Offices scheme measures energy efficiency and rates its performance against established benchmarks by licensed assessors.

3 | LEED

LEED was developed in the USA by the US Green Building Council and is administered by the Green Building Certifications Institute. It operates similarly to BREEAM, where assessors analyse across a building's lifecycle against a set of sustainability criteria. There are separate sets of criteria for almost all building types that aim to ensure that developments do not dramatically worsen climate change, are healthy spaces for people, protect and restore nature and biodiversity and promote sustainable resource use. Projects are assessed and awarded points to then receive a level of certification. LEED has been adopted internationally, but particularly in North and South America.

4 | PASSIVHAUS

Passivhaus aims to encourage low energy, high quality, environmentally friendly buildings that go above current building regulation standards. The standard is assessed against established targets to aim to produce net-zero buildings for the future. For retrofit projects, there is an EnerPHit scheme, where the existing structure of the building means that it would not be possible to achieve the thermal comfort and energy efficiency requirements of the Passivhaus standard. Individual Passivhaus Certifiers are accredited by the Passive House Institute.



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5 | FITWEL

The [Fitwel certification](#) is focused on human health and physical activity. There are scorecards for different building types, and these are assessed based on walkability, local public transport availability and access to green, outdoor spaces.

6 | WELL

The [WELL Building Standard](#) is another wellbeing certification, administered by the International Well Building Institute, which prioritises intentional healthy choices in design and construction to optimise the benefits for users. It ensures the implementation of health and wellbeing strategies and looks at features such as air quality, thermal comfort and accessibility, nourishment, mind and community to assess occupant health and wellbeing holistically.

7 | HQM

The [Home Quality Mark](#) (HQM) is a sustainability certification developed by the BRE that covers multiple sustainability criteria, similar to BREEAM but tailored to a residential development or building. It looks at factors such as energy, water, materials, transport, and even elements like digital connectivity - anything that will affect the home's occupants.

How can it be done?

Which certification to use will depend on the type of development, priorities of your client, and local or national regulations and legislation. Generally, the below steps need to be taken for most certifications.

1 | Carry out a pre-assessment

Once you have determined the appropriate or required certification and score or rating, a licensed Assessor should develop a 'pre-assessment' for the project for the project outlining what, and how, criteria will be met in order to achieve this. There are many sustainability consultants who offer this service.

2 | Assign responsibilities

It is vital that all project stakeholders are aware of what is required from them at what point in time, and the impact of their work on the certification result from very early project stages. Many certifications require actions to be taken even in advance of planning permission being granted.

3 | Seek expert advice

Consult with a variety of experts from different disciplines (e.g. an ecologist, an acoustic consultant, etc) at appropriate moments throughout the certification process.

4 | Continue communication

Through design and construction, there should be communication and collaboration between different crossdisciplinary teams and continued review to ensure that initial targets and requirements are being followed.

What to watch out for

Sustainability is an evolving discipline. These certifications provide useful metrics and guidelines, and can be effective tools for assessing a wide range of sustainability criteria and allowing comparability between buildings. That being said, it is important to remember other crucial sustainability aspects that may not have been considered.

1 | Choose the right one

There's a large collection of certifications available. The aim is not to collect as many as you can, rather to use certifications that are relevant to your project, your stakeholders and your sustainability aims.

2 | Beware of embodied carbon

Many certifications have criteria around operational carbon emissions (those created while the building is in use) However, most of these still don't fully account for the impact of embodied carbon emissions (those created during resource extraction, construction, transportation, etc) It is vital that embodied carbon is considered on a project, regardless of what the criteria might be for your project's certification.

3 | They are being constantly updated

The fast-paced nature of the sustainability landscape means that the definition of 'best practice' changes over time, so certifications are constantly playing catch-up to update with new versions. Be conscious that a building with impressive certification credentials may still not necessarily be at the cutting-edge.

4 | Unintended outcomes

Though the goal of these certifications is generally to reduce carbon emissions and create a more sustainable built environment, there can be loopholes or situations that may reward the less sustainable solution. For example, using energy efficient mechanical systems may, in some circumstances, be rewarded more than a building with natural ventilation or lighting when the most sustainable way would be to use no energy at all.

5 | Performance gaps

Some certifications only evaluate the sustainability of a building up to the point at which construction finishes. They often do not evaluate on-going operations of a building to see how it performs compared to predicted or [designed performance](#). This can lead to projects designed to be 'green', that are less than in practice. There are certifications available that explicitly assess a building's sustainability performance in-use.

Fundamentally, certifications shouldn't be the end goal, but they are a valuable part of building a highly sustainable, low-impact