The buildings we build today will exist for decades to come; we must get them right. The BREEAM New Construction scheme offers a powerful toolkit through which stakeholders can optimise their environmental, social and governance related outcomes whilst creating value that sustains throughout the life of the building.

- BREEAM UK New Construction was developed in the 1980’s and is the world’s longest standing certification scheme, driving better sustainability outcomes throughout the non-domestic, built environment sector.

- The scheme offers different assessment routes which can assess phased developments and be applied to fully fitted, shell and core, and shell only projects. The assessment scope and route should be considered when determining which overall, final rating to target.

- The scheme can be applied to non-domestic building types, including commercial, public, multi-residential, hospitality, assembly and leisure. In unique circumstances, bespoke assessments can be undertaken where a particular building type cannot be assessed through the common framework.

- The scheme has influenced the construction industries regulatory framework, and movement towards better practices and better outcomes.

- Minimum standards provide an extra level of performance assurance to planners, investors and other specifiers while tradable credits give greater choice for developers and project teams.
Introducing the BREEAM Family
BREEAM UK New Construction*
  o Context and Purpose
  o Scope
  o Ratings
  o Assessment Routes
  o Used by?

Acknowledgements

*Guidance within this document is based upon the ‘BREEAM UK New Construction 2018,SD5078 Issue 2.0’ technical manual which is currently available at [www.breeam.com](http://www.breeam.com)
The building sector’s environmental debates may have evolved from the oil crisis of the 1970s to today’s focus on low carbon construction and climate resilience, wellbeing, data and fourth industry transformation. However back in the 1980s ‘low energy’ buildings and the gap in credible measurements and standards was an emerging topic. It was during this time that the BRE was approached by a Canadian developer consortium operating in London who wanted a robust differentiator that could showcase the performance of their buildings. By the end of the decade BRE, in partnership with architects ECD and developers Stanhope Plc, launched the first BREEAM scheme for offices type buildings.

Today BREEAM is a family of schemes which drive standards across the entire built environment sector life cycle, and empowers those who deliver it.

The BREEAM Family includes:
- **BREEAM Communities**: for the master-planning of a new communities
- **CEEQUAL**: for newbuild infrastructure projects
- **BREEAM New Construction**: for newbuild multi-residential and non-domestic buildings
- **Home Quality Mark**: for new homes
- **BREEAM Domestic Refurbishment**: for home refurbishments
- **BREEAM Refurbishment and Fit Out**: for multi residential and non-domestic building fit-outs and refurbishments
- **BREEAM In-Use**: for existing buildings
Introducing the BREEAM Family cont.

All schemes are tailored to the individual build, use and life cycle stage of the projects that they assess, and the local context. They are operational in over 70 countries, including the US and China, and represent over 70% of the certification market across Europe.

Acting globally, whilst influencing locally.

The family of schemes operate through third party certification. BRE Global; the scheme operators, do not assess a project’s performance against our schemes criteria but instead train and license sustainability professionals, BREEAM Assessors, to act in this capacity. BREEAM Assessors (and other associated professionals) work with the project team to embed sustainability from the onset, collate evidence and establish the project’s rating. They submit assessments for verification and certification. The whole process is accredited by national accreditation bodies which, in the UK, are UKAS; the United Kingdom Accreditation Service.

Ensuring rigor and impartiality, and increasing confidence.

Schemes are underpinned by a core science base which drives good practices across the whole sustainability spectrum and provide measures of performance against a scaled rating system. Through a series of update cycles, each scheme evolves to reflect advances in science, technology, policy and business. Each update is driven and supported by stakeholder feedback and engagement, and through evaluations of the schemes’ impact on industry. Furthermore, proceeds from certification activities are gifted to the BRE Trust, the BRE’s parent organization, who reinvest in research and advancement projects, which in turn inform the standards/assessment criteria.

BRE is one of very few organisations where new science and thinking can be directly channeled into market transformation.
And so, over the past 28 years, the BREEAM Family has supported and driven progress and innovation; providing confidence to stakeholders along the way. To date, over 530,000 certificates have been issued and approximately 3,000 assessors licensed. As the longest standing schemes, they have influenced the development of many other standards and assessment methodologies (within BRE and beyond) and has driven regulations at both national and international levels.

They are used to create value and capacity by a range of stakeholders including; end clients, building users, consumers, supply chains, financiers, developers, project teams and researchers. As well as local, national and international governments, and NGO’s.

Now operational in over 80 countries they are the world’s leading sustainability certification schemes for the built environment.
Supporting better, higher quality homes for industry and consumers

Maximising efficiencies and opportunities during refurbishment and operation; reducing the performance gap and optimising the existing stock

Improving public realm and infrastructure by reducing negative impacts and disruption whilst recognising good practice.

Engaging people with their built environment and empowering communities to thrive

Driving performance across non-domestic use types; education, commercial, retail, healthcare, multi-residential, leisure, defence and security etc.
Context
Buildings account for almost 40% of carbon emissions generated globally, making them one of the most significant contributors to our carbon footprint. Rising energy prices have increased the significance of running buildings efficiently whilst the average British person spends 90% of their time within a building which can significantly affect physical and mental health. Furthermore, the majority of the buildings we construct today are likely to still be in use in 80 years and in some cases even longer.

It is essential that we develop buildings that are adaptable, efficient and that provide positive environments for occupants that inherently support wellbeing.

The New Construction scheme aims to support the sector in doing just this, by developing a next generation of non-domestic buildings which we can all be proud of.

Purpose
The New Construction standard was developed to assess the design, construction, intended use and future-proofing of new non-domestic buildings, including the local environment surrounding the building.

It supports the industry in mitigating the life cycle impacts of new buildings on the environment in a robust and cost-effective manner, whilst creating spaces that promote wellbeing for its users.

Ultimately buildings are about people, they have to work for us, whilst having as little impact on the environment as possible. BREEAM UK New Construction provides a holistic set of principles which balance all these priorities, resulting in buildings that are better for people and planet.
BREEAM has been influential in encouraging the construction industry to move toward better practices and better outcomes...

For example, in 1986 a toilet cistern typically held 9 litres of water, more than four times the recommended adult daily water intake. As a result of BREEAM encouraging a 6 litre flush volume at a time when no UK manufacturer had made one, Ideal Standard developed a fully licensed, compliant fitting. Four years later this performance level became a regulatory standard. As a result of this untold quantities of water have been saved and low flush WCs are now ubiquitous.
The New Construction standard can be used to assess most types of new non-domestic buildings and new-build extensions to existing buildings. It uses a common framework that is adaptable, depending upon the building’s type and location.

It is not applicable to new self-contained dwellings which should be assessed under the HQM standard.

In unique circumstances, bespoke assessments can be undertaken where a particular building type cannot be assessed through the common framework.

The standard is applicable to the following non-domestic building types, including:

- Commercial – Offices, industrial, retail
- Public – Healthcare, education, prisons, courts
- Multi-residential – Student accommodation, care homes
- Hospitality – Hotels, hostels
- Non-residential institution – Community centre, libraries etc.
- Assembly and leisure – Cinema, recreational centre etc.
- Other building – transport hubs, creches etc.
In order to achieve a rating, the project must achieve credits by complying with assessment issues while also meeting any relevant minimum standards. Unlike HQM however, there are no mandatory entry requirements.

Credits are then weighted by sustainability category and equated to a performance score which determines the final overall rating which can be either Pass, Good, Very Good, Excellent or Outstanding.

### Minimum standards

To ensure that all BREEAM New construction projects consistently deliver on some important issues, the scheme sets out minimum performance standards in several key areas (energy, water, and waste for example).

There are 11 issues which include minimum requirements. There applicability varies depending on the BREEAM rating level, with more minimum standards as the levels increase. As such, to achieve a Pass there is only 1 minimum standard, Good has 3, Very Good has 6, Excellent has 10 and Outstanding has 11.

The following table provides an overview of the minimum standards required for the Good, Very Good and Excellent ratings.

<table>
<thead>
<tr>
<th>BREEAM Rating</th>
<th>% Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding</td>
<td>≥ 85</td>
</tr>
<tr>
<td>Excellent</td>
<td>≥ 70</td>
</tr>
<tr>
<td>Very Good</td>
<td>≥ 55</td>
</tr>
<tr>
<td>Good</td>
<td>≥ 45</td>
</tr>
<tr>
<td>Pass</td>
<td>≥ 30</td>
</tr>
<tr>
<td>Unclassified</td>
<td>&lt; 30</td>
</tr>
<tr>
<td>BREEAM Issue</td>
<td>Summary of Issue</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Man 03 Responsible Construction Practices</td>
<td>Aims to ensure responsible construction management is practiced on development sites.</td>
</tr>
<tr>
<td>Man 04 Commissioning and handover</td>
<td>Aims to make sure that a schedule has been put in place for commissioning.</td>
</tr>
<tr>
<td></td>
<td>This includes developing a testing schedule and allocating responsibilities.</td>
</tr>
<tr>
<td>Man 04 Commissioning and handover</td>
<td>Requires of two building user guides to be created including a non-technical</td>
</tr>
<tr>
<td></td>
<td>guide for building occupiers and a technical guide for facilities managers.</td>
</tr>
<tr>
<td>Man 05 Aftercare</td>
<td>Commits the building occupier to completing commissioning activities for a minimum of 12-months post occupation.</td>
</tr>
<tr>
<td>Ene 01 Reduction of energy use and carbon emissions</td>
<td>Aims to highlight the importance of energy efficiency. Requires a minimum energy performance backstop which equates to four credits.</td>
</tr>
<tr>
<td>Ene 02 Energy monitoring</td>
<td>Requires the installation of an energy metering system</td>
</tr>
<tr>
<td>Wat 01 Water consumption</td>
<td>Encourages the use of less water through application of efficient water fittings</td>
</tr>
<tr>
<td>Wat 02 Water monitoring</td>
<td>Requires the installation of a water metering system on mains water supply</td>
</tr>
<tr>
<td>Mat 03 Responsible sourcing of construction products</td>
<td>This minimum standard requires that all timber used is legally harvested and traded as per the UK Government’s Timber Procurement Policy.</td>
</tr>
<tr>
<td>Wst 03 Operational waste</td>
<td>This issue ensures that buildings provide a designated space for the segregation and sorting of waste, including recycling.</td>
</tr>
</tbody>
</table>
### Fully-fitted

This assessment and certification route is available for buildings which are being fully fitted and completed on handover.

### Simple buildings

This option is available where a building has building services that are predominantly of limited capacity and are local in their deliver. They are largely independent of other systems in the building fabric and without complex control systems. Where certain types of more complex systems are present (a list is provided within the [New Construction technical manual](#)) then this assessment route cannot be used.

### Shell and core

This option is available where the developer's scope covers shell works plus core building services. Core building services relates to the installation of central or communal transportation systems, water systems, fit-out of common areas, central mechanical and electrical systems including HVAC, but without local fitting of systems within tenant areas. The systems will typically be centralised with capped off distribution to each tenanted area (for future connection as part of a tenant’s fit-out works).

This does not include the full scope of a typical Category A fit-out, due to the fact that the specification of items such as ceiling finishes, raised floors and the zoning of local services above the lettable floor area and other Category A works are not typically finalised until the space undergoes final fit-out according to the tenant’s specification.

### Shell only

This assessment and certification option is available where the developer’s scope of works covers new-build development of the fabric, substructure and superstructure of the building only, including:

- External walls, windows, doors (external), roof, core internal walls, structural floors.
- Hard and soft landscaping areas (where present and within the scope of works).
Developers
- As a framework for achieving more sustainable project outcomes and subsequently higher capital/rental value.

Consumers/occupiers
- To increase energy efficiency and employee productivity as well as to publicly demonstrate commitment to CSR and the environment.

Planners
- To ensure that objectives relating to sustainability and quality of developments are being achieved and robustly monitored.

Real Estate Investors
- To manage risk and safeguard returns over the longer term

Since its launch, BREEAM has gone on to certify over 590,000 assessments across all stages of the building life cycle. BREEAM New Construction remains at the forefront of this.
Whitbread Premier Inn, Tolworth
‘We open a large number of new hotels and restaurants every year. Every new opening is an opportunity to reduce our energy use, carbon emissions and water use by ensuring high standards of energy and water efficiency in our new buildings. By setting a minimum standard of BREEAM ‘very good’ we can ensure that our new buildings meet a high sustainability standard.’

Cian Hatton, Head of Environment and Energy at Premier Inn and Restaurants

Water saving techniques implemented, such as greywater recycling, have contributed to 50% water reductions (against notional baseline).

The project scored highly across all credit categories and was additionally awarded 5 innovation credits for BREEAM AP, Low or Zero Carbon Technologies, Water Metering and Construction Site Waste Management. Overall it achieved an Outstanding rating.
This resource is the output of a number of BREEAM engagement initiatives and has been produced through a combination of workshops, meetings, written consultation and individual feedback. It has been led and developed by Charlene Clear, Jonathan Gilbert and Charlotte Hardy of the BRE Group. We are grateful to all those who have contributed including those from the BREEAM assessor and developer networks, and specifically to the individuals and organisations below…

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