BREEAM, Home Quality Mark and CEEQUAL Stakeholder Guidance:

The Value Case

Version 1.0
The BREEAM Family enhances, and creates value for multiple stakeholders across all pillars of the sustainability spectrum not just during the initial construction and occupation of our built environment, but throughout its entire life.

- BREEAM assessed buildings achieve an average 22% reduction in CO\textsubscript{2} emissions.

- BREEAM schemes embed both direct and indirect interventions which enhance climate resilience, such as flood protections, and reduce the risks to property and people.

- A modest increase in certificate related capital costs (<1%) could be paid back in less than 5 years from savings on energy and water.

- The World Green Building Council (2013) states that green certified buildings sales prices can increase by up to 30%, and that BREEAM certification can increase rental rates by up to 24.9% (compared to conventional, code-compliant buildings).

- Staff costs represent approximately 90% of a businesses operational costs whilst good air quality has been found to increase staff productivity by 8-11%. BREEAM schemes support healthier built environments and healthier, happier staff which can save businesses money.

- 70% of respondents to the GRESB 2016 survey considered green certification as a key risk management tool.

- Poor quality homes in England cost the NHS £1.4bn per year, and wider society £18.6bn, whilst 1 in 10 households live in fuel poverty. BREEAM schemes, including the Home Quality Mark, are holistic and can help alleviate fuel poverty whilst supporting better public health outcomes.

- Initial analysis suggests that at least 40% of BREEAM's assessment criteria positively supports social outcomes and therefore the creation of social value.
Contents

- Introducing the BREEAM Family  p1-3
- Creating Value for Multiple Stakeholders  p4
- The Research Base  p5
- The Climate Change Case  p6-8
- Uplifts in Sales and Rents  p9
- Creating Productive Places  p10
- Reducing Operational Utility Costs  p11-12
- BREEAM as a Preferential Investment  p13
- Protecting Public Health Over the Long Term  p14
- Creating Social Value  p15
- Appendices
  - 1 - Approaching Cost and Value Calculations  p16-17
  - Acknowledgements  p18
Introducing the BREEAM Family

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 new communities
- **CEEQUAL**: for newbuild infrastructure and public realm 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
Over the past 28 years, the BREEAM Family have 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 have driven regulatory advancements 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.**

Further information specific to each scheme can be found in the associated resource packs aligned with this guidance.
Introducing the BREEAM Family cont.

- 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
- Driving performance across non-domestic use types; education, commercial, retail, healthcare, multi-residential, leisure, defence and security etc.
- Engaging people with their built environment and empowering communities to thrive
- Improving public realm and infrastructure by reducing negative impacts and disruption whilst recognising good practice.
BREEAM was created as a cost-effective means of recognising sustainable performance, and to help create additional value through the varying life cycles of the built environment.

It is a multi stakeholder scheme which acts as a common language for planners, investors, developers, design and construction teams, occupiers and NGO’s to embed good practice, build in resilience and use resources more efficiently.

The diagram to the right explains the key ways in which the BREEAM schemes add or create value for each stakeholder group and industry as a whole.
Considerable research exists, from a variety of stakeholder perspectives, which helps to unpack the value of certification, not just at the building level, but also to building users, society, and National GDP. These will be drawn upon throughout and can be freely accessed via the BREEAM websites resources section.
The Climate Change Case

Evidence compiled from an analysis of nearly 300 BREEAM assessments conducted across the UK demonstrates that certified buildings can achieve significant energy and carbon emission reductions over time.

A 2015 BRE study found that BREEAM assessed buildings achieved an average 22% reduction in CO₂ emissions.

And in 2015, BRE made the COP21 Climate Pledge in advance of climate negotiations in Paris to deliver over 9,000 certified building with emissions savings in excess of 900,000 tons of CO₂ between 2016 and 2020.

Stakeholders advocating and using BREEAM schemes can be assured that they are positively contributing to a radical reduction in carbon emissions.
Throughout each scheme there are direct and indirect criteria which drive positive climate action. These are drawn out in the BREEAM Climate Change Mitigation, Resilience and Adaptability Briefing Paper.

A variety of resilience issues are addressed aimed at ensuring that our built environment is robust, and flexible enough to cope with changing climatic conditions, changing lifestyles, changing demographics and business needs. This includes criteria for flood risk prevention and adaptation, efficient water and energy use, materials resilience, thermal comfort and extreme weather risk management.

For example, all BREEAM schemes address issues such as flood resilience which help to ensure that, in the event of a flood, the building design has considered its impacts and ways to mitigate them.

Implementing appropriate measures helps prevent these events from significantly impacting on the building and its day to day running. This ensures business continuity, keeping people in jobs.

“By taking action to prepare for flooding, most businesses can save between 20 - 90% on the cost of lost stock and movable equipment, as well as some of the trouble and stress that goes with such an event.”

Environment Agency
Although not always obvious from a first glance at a BREEAM scheme technical manual, climate change mitigation, adaptation and resilience is a golden thread which will run through, and into, every certified project.

Buildings and places that actively play a part in reducing the adverse impact of climate change, in addition to building in resilience measures not only align with policy objectives and wider global agendas, but are also contributing to the creation of a healthier economy and safer population.

Clock View, Liverpool BREEAM Excellent
Clock View in Liverpool, a mental health facility, included finishing and detailing of a highly robust nature. For example, the render wall system is anticrack and high impact resistant and the silicone-based top coat is rot resistant, non-swelling and UV stable. These interventions were driven by climate resilience objectives.
There is clear evidence that BREEAM certified buildings can increase returns on investment, rental rates and sales premiums.

A 2013 World Green Building Council report stated that green certified buildings sales prices can increase by up to 30%, and that BREEAM certification can increase rental rates for buildings up to ranges between 19.7% and 24.9% compared to conventional, code-compliant buildings’.

Furthermore, an analysis carried out by Landsec on 101 of their property assets (launched in a 2018 UKGBC report) showed BREEAM certification as a significant variable in rental performance.

In this study, BREEAM Excellent assets outperformed non-certified assets by more than 100%, with an average contracted rent of £47.5/ft² vs £23/ft², with 28% of variability in the contracted rents explained by BREEAM certification.

“BREEAM Excellent assets outperform non-certified assets by more than 100%” (Landsec, 2018)
There is a growing evidence base to support the cost savings that can be made as a result of happier, healthier, more productive staff.

A World Green Building Council report from 2014 stated ‘Staff costs, including salaries and benefits, typically account for about 90% of a business’ operating costs. It follows that the productivity of staff, or anything that impacts their ability to be productive, should be a major concern for any organization’.

The same report found that better indoor air quality can help improve staff productivity levels by as much as 8-11%.

BREEAM schemes help create workplaces with good indoor air quality, good daylighting and better thermal and acoustic comfort than the typical average. In doing so, certified work spaces are not only likely to reap returns on investment but also on staff operating costs.
There is clear evidence that green buildings have lower utility costs compared to those simply designed to the building regulations minimum.

A report written by BSRIA suggested that the use of green certification schemes would result in ‘significant life cycle cost savings’ and included a property industry survey which gathered clients’ views on value. The findings suggest that the number of clients who had paid a ‘green premium’ to develop a sustainable building was evenly matched with those who had experienced no capital cost uplift.

One respondent commented…

“We would have done it all anyway as we are driven by what the market wants, and sustainability features highly on this.”

Furthermore, Sweett Group and BRE research forecasted that what could be modest increase in capital costs (1%), could be paid back in typically less than 5 years, from energy savings and in less than 2 years from water savings. Once the payback point was reached, the building could then make substantial long term savings over its life.
This graph represents the results from the Sweett Group and BRE Research which modelled potential payback savings from utility bills each year for three case studies; a school, an office and a health center across 3 payback scenarios. All three case studies were able to demonstrate a return on investment within a reasonable time period, the most substantial being within the office type building.
There is a growing trend of financiers recognising green certified developments as lower risk and therefore offering lower investment rates.

In the 2016 GRESB assessment (a benchmarking tool used in real estate) participants were asked to select their main priorities when managing risk. Green building certification was highly placed, with approximately 70% of the participants including it within risk management for their businesses.

In 2017, Government also signalled its support for “Green Mortgages” in the Clean Growth Strategy which led to the Green Finance Task Force accelerating the growth of green finance. This follows the LENDERS project which demonstrated that more accurate predictions of household energy bills could be utilised in the mortgage process to make better affordability calculations.

Energy efficient homes done well, should only have positive outcomes for occupants and the wider environment including lower rate mortgages. However, industry is yet to reach a point where all homes labelled as “energy efficient” actually perform as intended in use. This is why the Green Finance initiatives must tie in with Government and Industries work to deliver high quality homes.

Delivering quality is a key theme for the Home Quality Mark and so it will help ensure a robust positive outcome for consumers and the financial sector who live in, or lend to a household with HQM certification.

Like other BREEAM schemes, it will also help optimise the carbon and energy saving performance in the first instance – a double advantage.

Furthermore, the Better Buildings Partnership commercial property network noted that building ratings and certifications are “increasingly seen within the real estate industry as a mark of quality and attractiveness”.

“There’s a growing body of research suggesting such sustainability characteristics can have a positive impact on value through higher rental premiums, higher occupancy rates and reduced obsolescence. Therefore, lending against such properties should reduce the risk of the borrower’s inability to make the repayments over the term of the loan.”

(Building Better Partnerships, 2015)

Investors want high quality properties with low risk, and certified buildings are seen as such.
‘The full cost of poor housing (2015)’ report published by BRE, and relatable reports prior to this, have prompted an awakening by industry professionals which has led to action against building outcomes which could detrimentally impact on public health.

The latest findings suggest that poor quality homes in England cost the NHS £1.4bn per year, and wider society £18.6bn.

The revised methodologies which underpin this research expands the cost estimates to include medical costs, lost education and employment opportunities, while the definition of poor housing includes all sub-standard housing and not just those with serious hazards.

Furthermore, BRE has been measuring fuel poverty on behalf of the UK government since the 1990. It is identified in 2 ways:

1. The Hills LIHC definition identifying those with an income below the official poverty line coupled with higher-than-average fuel costs (in England).
2. Households spending more than 10% of their household income on fuel in order to heat their home (rest of the UK)

It is thought that 1 in 10 households are in fuel poverty and are placing themselves at risk by not heating their homes sufficiently to prevent ill health.

Research by National Energy Action and climate-change charity E3G supports this and claims that 9,700 deaths each year could be avoided through tackling fuel poverty.

As such, not only would actions to alleviate fuel poverty support a more financially secure NHS, they would directly improve the quality of life for those people most in need.

The Home Quality Mark directly targets these issues through assessment criteria driving good levels of ventilation, air quality and daylighting. It also supports appropriate levels of building fabric, insulation and effective energy monitoring. Crucially, it has a strong focus on overall construction quality and delivery, helping to reduce performance gap related issues and includes minimum requirements for consumer information ensuring people can operate their home effectively.

These are common threads throughout all BREEAM schemes.
There are a variety of definitions of social value mostly stemming from the 2012 Social Value Act which describes the additional societal benefits to be leveraged from smarter public service commissioning. Because of this, definitions largely consider social value in relation to services, rather than goods or works however the broad concepts are applicable to the built environment. As such the Act is increasingly being used by public sector procurement teams to secure better outcomes from construction activities.

Much of this has been driven by progressive local authorities; Harrow, Coventry and Shropshire for example. It seems however that the planning profession is yet to catch up with fewer examples of social value concepts being used in local policy requirements.

However, the built environment sector is starting to develop its own social value indicators and common themes throughout the varying toolkits can be used to determine a projects performance in relation to its social impact. The 2018 UKGBC Social Value in New Development report helps bring together what is a somewhat disparate taxonomy.

Unsurprisingly, communicating the extent to which BREEAM schemes influence and drive higher levels of social value is becoming more important and initial analysis suggests that at least 40% of BREEAM schemes assessment criteria positively supports social outcomes and therefore value in some way.

This spans a wide range of subject areas such as those linked to better public health (good air quality, daylighting etc.), the incorporation of active design principles (such as those defined by Sport England), considerate construction practices (good site management, employee conditions and HSE) and comprehensive, well integrated stakeholder engagement.

As such, BREEAM stakeholders are able to use certification not only as a way of demonstrating environmental and commercial performance, but also to clearly and definitively showcase the social value of their projects and building programs. This not only benefits the people interacting with BREEAM certified buildings and places but also supports the evolution of the broader narratives of ‘value’ for the greater societal good.
Appendix 1 – Approaching Cost and Value Calculations

The costs of certification should always be looked at in conjunction with benefits and value, this includes (but is not limited to) any uplift in sale/rental prices, speed of sale/reduction of voids, more efficient planning, financial incentives such as lower lending rates (commercial and personal) or simply binary financial decisions.

In general, cost can be broken down across 3 elements:

1. The BRE certification costs
2. The assessment costs
3. The design, specification and process uplift costs

1. BRE Costs of Certification

This pays for the maintenance and development of BREEAM schemes which includes the product and systems, technical documentation, scientific research, marketing, operational aspects such as the customer service and assessment support, quality auditing of the assessments, governance of the scheme and UKAS accreditation.

For example, costs for HQM certification vary from £45 per dwelling or £40 for affordable units and then down to £28 per dwelling on large sites (based on 2019 fee’s).

The costs relating to other schemes vary and advice should be sought from the BREEAM Office and/or a BREEAM Professional when considering this element of project or policy viability.
Appendix 1 – Approaching Cost and Value Calculations cont.

2. Assessment Costs
All projects are assessed by assessors who are trained and licensed by BRE, but are from independent companies/organisations. They carry out assessments, which are then sent to BRE for quality auditing and certification.

BRE does not recommend prices or offer the services of an assessor, this ensures independence as scheme operators and certifiers.

Assessors may combine additional services such as architectural design, energy consultancy/calculations, ventilation and planning support with certification costs. While these services can be linked to certification, they may well have been needed regardless and/or form part of a local requirement or procurement/finance arrangement.

Assessors may work for large multinational, multidisciplinary companies or, at the other end of the scale, be SME’s or just a few employees. This diversity reflects the building industry. It is advisable to obtain a variety of quotes and ensure full understanding of what is/has been charged.

3. Optimised Build and Process Costs
These are costs within the control of the project. They might be associated with improving the performance of the building or scheme, such as increasing the insulation or installing different technologies, or they may be process costs to ensure the quality of the build. These costs depend on what and how the project currently builds, the local policy standards and what rating the project is targeting.

In the case of the HQM, if the developer is still building to 2006 Part L and wants to jump to HQM 5 stars, the uplift in costs is reflective of the uplift in performance and is likely to be considerable. If the developer is already building to Code Level 4/London Plan/Passivhaus, there may be more of a moderate uplift.

The ‘Delivering Savings and Payback’ report referenced on page 11 of this resource pack provides an indication of BREEAM related costs. The Government Cost analysis of Code for Housing Standards Review may also be useful.
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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