BREEAM In-Use
Driving sustainability through existing buildings
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Executive Summary

The provision of accommodation and its servicing, present major costs for business; in many cases these are second only to staff costs. They also result in a large part of their environmental social impacts. The largest percentage of carbon emissions associated with a building’s life cycle occurs within its operational phase. A building and its occupants will consume energy, water and materials; and produce waste and emissions. During its life, these operational activities place pressure on resources, and impact the local and wider environment. As an integral part of its BREEAM assessment schemes, BRE Global has developed BREEAM In-Use (BES 5058), a Standard and certification scheme for non-domestic buildings in their operational phase.

BREEAM In-Use provides building owners, facility managers, investment managers and building occupiers with a consistent and credible means of determining the impact and performance of their buildings, and determining areas for improvement. There are many environmental assessment tools available but BREEAM In-Use is unique in incorporating the following aspects:

- The assessment methodology can be used within an international context and is tailored to climatic zones
- It offers independently recognised certified outputs
- It allows assessment of the physical building fabric and its services, building management practices and operational management practices
- The assessment methodology can be applied to the majority of building types allowing comparability and common procedures across a property portfolio
- The assessment methodology is applicable to buildings of all ages and types; not just those considered to be ‘green’
- The scheme takes a holistic approach; it reviews a wide range of environmental categories collectively
- The assessment process encourages year on year improvements
- It incorporates an easy to use assessment/management online process
- The assessment process is not overly prescriptive allowing flexibility in the answers given. Not all of the questions need to be answered to gain a BREEAM In-Use rating

The majority of environmental assessment tools available focus on one environmental category, such as energy, and look at one assessment area only. By limiting the assessment criteria the results of these environmental tools give a limited picture of the overall environmental impacts of a building, which can distort the decision making process and lead to unforeseen consequences when actions are taken to improve performance. The BREEAM In-Use assessment gives a clear overview of a buildings environmental performance and can lead to informed management decisions.

This Briefing Paper provides an overview of the BREEAM In-Use Standard, why it was developed, the benefits it provides to buildings and stakeholders, and how the scheme operates.
Background

The building sector alone is responsible for more than one third of global Greenhouse Gas (GHG) emissions. A building’s operational phase accounts for 80-90% of its total emissions, due to energy use for heating, cooling, ventilation, lighting and appliances [1]. Additionally, the maintenance and operation of buildings can adversely affect the environment in many other ways including: resource depletion, habitat destruction, pollution and storm water runoff [2]. Costs associated with these inputs are often second only to staff costs and so should be a key target for businesses looking to reduce overheads.

In addition to the environmental impacts of buildings there are many financial incentives for reducing environmental impacts. Average commercial buildings waste 30% of their energy costs through inefficient or unnecessary energy use [3]. Studies have indicated that UK businesses could save up to £23bn through low cost or no cost improvements in the efficient use of resources [4].

Existing non-domestic buildings account for 7.6% of the United Kingdom’s building stock [5][6]. Outside the UK, in-use non-domestic buildings also account for a significant proportion of existing properties. Due to the long life expectancy of a building, most existing buildings will still be in use for many years to come; highlighting the need to monitor and reduce their environmental impacts [6]. Consequently, in order to meet ambitious consumption reduction targets set by local and regional governments, existing buildings will need to be upgraded [7].

BREEAM In-Use

The quantity of existing non-domestic buildings, potential impacts and financial incentives confirm the need for robust and credible ways of consistently measuring and reporting on the impacts of the existing built environment. Without imposing major burdens for data collection surveying and auditing which can be costly and time consuming.

In 2009 BRE Global developed BREEAM In-Use, (Environmental and Sustainability Standard BES 5058). This is an assessment and certification scheme designed to help building owners, facility managers, investment managers and building occupiers measure and reduce environmental impacts, and improve the performance of existing non-domestic buildings in a cost effective and low risk way. The assessment criteria were designed in such a way that all building types can use the BREEAM In-Use process. Buildings that initially score a low overall assessment rating have the opportunity to make future year on year improvements and buildings that score high in their initial ratings can strive to maintain their rating by making on-going improvements. It also builds on internal review processes to achieve optimal results in building performance and management.

The standard was developed to ensure compatibility with major regulatory and corporate reporting systems, including ISO 14001; Energy Performance of Buildings Directive (EPBD), and the Global Reporting Initiative (GRI). It has a structure that enables the standard to be adaptable to future changes and regulatory requirements. This framework provides a credible and accessible framework for measuring and benchmarking performance. It gives users the opportunity to achieve formally certified ratings which are universally recognised and understood.

Within BREEAM In-Use, the term asset is used to define the boundaries of the assessment or the common areas. An asset may represent the entirety of a building, or a particular part, such as a single floor. In such cases, the scope of the BREEAM In-Use assessment includes all relevant amenity and service areas; used by occupiers and systems which may include shared spaces as these contribute to the impacts of the outputs.

The assessment process is broken down into three parts (listed below). Undertaking all three assessment parts will determine the asset’s overall environmental performance. Each assessment part can be conducted in isolation. Clients are, however encouraged to assess against all 3 parts to see the overall environmental impact of their asset.

BREEAM In-Use assessment parts:

- Part 1 – Asset: the performance of the asset
- Part 2 – Building Management: the management of the asset
- Part 3 – Occupier Management: the management of building users and services

In addition to specific actual performance data the scheme also provides normalised data about the asset’s environmental performance in the form of 10 Key Performance Indicators (KPIs).

Assessment Scope

BREEAM In-Use covers major environmental issues that affect buildings throughout their operational life. It captures data across nine key sustainability categories (see table 1), and translates them into a robust and authoritative sustainability rating based on the well-established and widely respected BREEAM standards. This holistic approach provides the opportunity to assess and benchmark assets across a large range of environmental issues collectively.
<table>
<thead>
<tr>
<th>Environmental Category</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy</strong></td>
<td>Recognising systems, controls and management policies which reduce the overall energy consumption of a property. Assets are assessed for the robustness of management practices relating to renewable electricity generation, energy efficient technology infrastructure, energy usage awareness of occupiers, and other management policies, activities and technologies which reduce the consumption of energy of a property. Reductions in energy also result in a reduction of CO(_2) consumption.</td>
</tr>
<tr>
<td><strong>Water</strong></td>
<td>Measuring the degree in which water consumption and demand is minimised within a property. Assets are assessed for the robustness of management practices relating to the implementation of leak detection systems, monitoring water consumption data, fitting waterless urinals, and other management activities and technologies which reduce the demand and consumption of water.</td>
</tr>
<tr>
<td><strong>Materials</strong></td>
<td>Recognising the risks to the property and its occupiers associated with security, fire and other naturally occurring events, as well as ensuring good maintenance of equipment and material procurement methods. Assets are assessed for the robustness of management practices relating to the implementation of emergency plans, utilisation of fire and intruder alarm systems, consideration of the environmental impact when procuring materials, and other management activities which may have an impact on the property or any procured materials.</td>
</tr>
<tr>
<td><strong>Pollution</strong></td>
<td>Measuring the degree in which activities and processes within a property produce minimal pollution to the environment. Assets are assessed for the robustness of management practices relating to managing drainage, light, emergency-procedure and noise polluting impacts of the property, mitigating risks associated with flooding, utilising technologies which do not emit nitrogen oxides, and other management procedures and technologies which reduce the polluting impact of the property.</td>
</tr>
<tr>
<td><strong>Land Use &amp; Ecology</strong></td>
<td>Measuring the degree in which activities undertaken on the property site result in minimal impacts to the local environment. Assets are assessed for the robustness of management practices relating to the presence of green areas on site, the implementation of a biodiversity plan, contribution to ecology or biodiversity enhancements, and other activities which reduce the impacts to the local environment.</td>
</tr>
<tr>
<td><strong>Health &amp; Wellbeing</strong></td>
<td>Measuring the degree in which activities undertaken and spaces within and around a property support a healthy and comfortable environment for occupiers. Assets are assessed for the robustness of management practices relating to the recording and management of comfort levels related to temperature, air quality, illuminance levels and acoustics, the provision of personal or zoned control systems, the recording of satisfaction, productivity and skills of staff, and other activities, policies and technologies which improve the health and wellbeing of all property occupants.</td>
</tr>
<tr>
<td><strong>Waste</strong></td>
<td>Recognising the implementation of policies and systems to reduce waste production, and improve levels of segregation and recycling. Assets are assessed for the robustness of management practices relating to providing adequate space for recycling activities, improving occupier awareness and managing occupier activities, monitoring waste production and segregation and other management procedures and activities which improve the impacts related to waste generation.</td>
</tr>
<tr>
<td><strong>Transport</strong></td>
<td>Recognising the implementation of policies to record and improve the impacts related to transport, the ability of stakeholders to utilise alternative means of transportation, and the proximity of local amenities. Assets are assessed for the robustness of management practices relating to the provision of facilities to promote cycling, closeness of amenities, transport policies (including review processes and the awareness and understanding of stakeholders), and other activities and strategies which are implemented to reduce the impact of transportation.</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Measuring the degree in which management policies and systems consider environmental impacts and stakeholder awareness and understanding. Assets are assessed for the robustness of management practices relating to the level of implementation of environmental management, the provision of information and training to occupiers and other stakeholders, the implementation of procurement management, and other management activities which affect the sustainability of the property and the activities of its occupiers.</td>
</tr>
</tbody>
</table>
An International Scheme

Many property portfolio managers and occupiers are international businesses which necessitate comparisons across national boundaries. Since the launch of BREEAM In-Use in 2009, there has been a significant uptake around the world. This global interest has prompted BRE Global to develop a scheme which accommodates a diverse, international market. The uptake of BREEAM in-Use outside of the UK is significant and growing. The flexibility of the scheme allows for assessments of all varieties; buildings of all ages, across different industry sectors have implemented the standard. The BREEAM In-Use question set has been reviewed and modified to ensure that it has been fully internationalised. BREEAM In-Use is operated by BRE Global and a number of National Scheme Operators (NSOs) using a common core question set.

Benefits of BREEAM In-Use

Whilst the BREEAM In-Use assessment and certification scheme enables building stakeholders to reduce the environmental impact of a building, improve its management and the management of key activities, these are not the only benefits that will be gained by undertaking the assessment. The benefits are far more wide-ranging and relate to broader business benefits.

Corporate Level Benefits

The BREEAM In-Use scheme enables the performance of entire asset portfolios to be viewed, enabling property benchmarking and the identification of high performing and underperforming assets. By enabling a direct comparison between assets, portfolio owners can quickly identify those assets which are underperforming, determine the areas of concern, and determine where refurbishment or disposal would be beneficial in meeting corporate environmental policies. Reviewing the building and occupier management processes can identify quick, simple and cost effective measures to improve environmental performance. Portfolio owners can also identify those assets which have been particularly successful, and potentially utilise strategies and technologies employed by these assets to improve the remainder of the portfolio.

Occupant Level Benefits

BREEAM In-Use provides a means of identifying priorities for investment to improve performance. Investment in properties to improve their BREEAM In-Use ratings is likely to result in the reduction of overall running costs due to reduced resource consumption, building services and material failure and improved monitoring of systems and maintenance with its high costs and disruption etc. Improvements to assets can increase employee satisfaction leading to higher levels of productivity and staff retention/recruitment [8].

Benchmarking

The ability to compare assets across a portfolio allows for robust assessment benchmarking and improvement of targets, based on the average, maximum and minimum performance. Statistical data generated by BRE Global is published regularly and enables users to compare their assets against similar properties assessed under BREEAM In-Use.

Due to the way that assessments are recorded and displayed, benchmarking can be applied at multiple levels of an assessment:

- Individual questions within the assessment
- Particular sustainability categories
- Entire assessment ratings (per BREEAM In-Use assessment part)
- Internally across an organisations’ portfolio of assets

Corporate Social Responsibility

In undertaking the BREEAM In-Use assessment, companies are able to reassess, improve and credibly demonstrate their environmental status in terms of Corporate Social Responsibility. This helps to ensure that they function in an ethical manner and take responsibility for their actions, considering all stakeholders (including tenants, the community etc) as well as the environment.

BREEAM In-Use provides the opportunity to:

- Reduce the overall operational costs of an asset
- Optimise an asset’s overall environmental performance
- View the overall performance of a portfolio of assets
- Create benchmarks for improvement
- Optimise the environmental performance of existing management systems
- Enhance the value and marketability of property assets
- Provide a vehicle to evaluate and improve Corporate Social Responsibility (CSR)
- Independent verification
- Enhanced internal review and auditing processes
- Rationalise property and management metrics
- Provide a transparent platform for landlords, owners and tenants to identify and negotiate building improvements
- Provide a route to compliance with environmental legislation and standards, including ISO 50001 and ISO 14001
- Facilitate engagement with staff in the identification of productivity improvements and sustainable business practices
- Manage risks of:
  - Environmental habits
  - Loss of productivity
  - Property declaration
  - Loss of image
In undertaking the assessment, stakeholders are able to quantify the degree to which they adhere to good practice in their actions across a range of different categories (Health and Wellbeing and Land Use and Ecology, for example). This facilitates demonstration and credible reporting of their achievements in these areas, as part of a Corporate Social Responsibility report, and raises awareness and encouragement of the overall improvement of these areas. Corporate responsibility encourages a sustainable business, can help to increase profits, retain staff and attract new customers.

**Comfort and Safety**

As well as encouraging and measuring the environmental impacts of an asset, or portfolio of assets, the BREEAM In-Use assessment also promotes a healthy, comfortable environment for building occupiers. The assessment considers occupier aspects such as thermal and acoustic comfort, user control of lighting and other building factors which affect occupier comfort.

The standard also encourages the implementation of risk reducing measures, ensuring that an asset is as safe as possible against fire, flooding, vandalism etc.

**Marketing**

By investing time and money to actively seek and improve on BREEAM In-Use certification, asset owners, and building managers can positively market their assets in terms of ratings achieved and their continual commitment to the environmental improvement of assets. BREEAM In-Use certification provides assets with green credentials that are known to potentially lead to higher occupancy rates, higher future capital value and lower tenant turnover.

**BREEAM In-Use Case Study: MET Office, Exeter, UK**

Constructed in 2003, the building was designed to minimise its overall environmental impact, while providing a comfortable and productive work place. Prior to its BREEAM In-Use assessment, this modern building received a BREEAM bespoke design and procurement certification rating of ‘Very Good’.

The MET Office is a prime example of an organisation striving to improve the environmental performance of its building throughout each life cycle stage; even after receiving high scores at the construction stage, the MET Office decided to conduct a BREEAM In-Use assessment to determine and optimise the asset’s environmental performance during the operational stage of the building.

The organisation opted to certify the building against all three parts of the BREEAM In-Use standard collectively. This allowed them to understand not only the performance of the asset, but whether management practices and occupier activity within their building were optimal. They received initial BREEAM In-Use assessment ratings of Very Good (Part 1), Excellent (Part 2) and Excellent (Part 3).

These high scores demonstrated a positive initial performance, however the MET Office has utilised the assessment results to continually improve. The assessment’s individual environmental category scores facilitated the identification of areas that could be improved; notably the building’s use of energy. In response, they have since reduced the asset’s energy consumption significantly, and are continuing to make innovative adaptations to the building.

This case study showcases how an asset can use the BREEAM In-Use standard for continual improvements over time; recognising how the building is currently performing, identifying areas for improvement and investing in change to further improve.
Using BREEAM In-Use

The Standard has been produced to enable the assessment of the environmental performance of the building, the operations of the building, how clients are managing their activities within the building, or a combination of the three.

The BREEAM In-Use system operates entirely online allowing assessments to be conducted anywhere in the world. BREEAM In-Use scores are produced instantaneously; users can therefore see the impact of each answer option selected.

The online system acts as a central database, whereby organisations can securely enter data on the nine environmental issues and manage the 10 BREEAM In-Use KPIs. The interface facilitates the entire assessment process from the entry of basic building details to certification outputs. Dynamic functionality within the system enables users to complete the BREEAM In-Use questionnaire section by section, with the capability to view the scoring effect of all entries.

Part 1: Asset - the inherent performance characteristics of the building based on its built form, construction and services.

BREEAM In-Use allows an assessment to be carried out on a building’s built form and services; this is of great benefit, as buildings can be assessed even if they did not have the opportunity at the new construction phase. By assessing the asset's performance, refurbishment opportunities will be highlighted.

Part 2: Building Management - the management quality and practices related to the operation of the building.

Assets are assessed in terms of the management practices in use within the building; these include the management of key resource such as energy, water and other building related consumables, as well as environmental impacts such as carbon and waste generation.

A building’s (in-use) performance depends upon both the physical features of the building and the robustness of the management systems. Whilst an asset’s physical attributes can be of high standard, if the asset is not managed in accordance with good property management practice, its performance can be diminished significantly [8]. Physical features of the building need to be coupled with high standards of management across the various different environmental issues. The assessment methodology is applicable to buildings of all ages. Part 2 of the BREEAM In-Use standard allows users to identify and address these management issues and as a result achieve optimal performance. Buildings that have not been designed with a sustainable emphasis will also benefit from strong building management; building system efficiency can be optimised where good building management practices are adopted.

Part 3: Occupier Management - the understanding and implementation of management policies; staff engagement and measuring performance against Corporate Social Responsibility (CSR) targets.

This part is focused on the activities being carried out within the building and it concentrates on the behaviours and management of occupiers and business activities. It evaluates the quality of understanding and the operation of management systems, and is independent of the inherent environmental quality of the building itself. It does include elements relating to the building management from Part 2. Benefits as a result an assessment to Part 3 include increased productivity of staff, employee satisfaction and retention [8].

BREEAM In-Use Assessment Ratings

In order to determine the rating score, the individual environmental category scores within an assessment part are adjusted with a pre-determined weighting, unique to the category and assessment part, and totalled; giving the overall assessment part rating. These environmental weightings are fundamental to the assessment methodology as they provide a means of defining, and therefore ranking, the relative impact of environmental issues. Scores are categorised by six ratings, ranging from ‘Acceptable’ (one star) to ‘Outstanding’ (six stars). The ratings show overall performance of the asset and its management systems. The BREEAM In-Use ratings are shown in table 2.

Table 2 BREEAM In-Use Ratings

<table>
<thead>
<tr>
<th>Assessment score (%)</th>
<th>Assessment rating</th>
<th>Star rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10</td>
<td>Unclassified</td>
<td>-</td>
</tr>
<tr>
<td>≥10 to &lt;25</td>
<td>Acceptable</td>
<td>★</td>
</tr>
<tr>
<td>≥25 to &lt;40</td>
<td>Pass</td>
<td>★★</td>
</tr>
<tr>
<td>≥40 to &lt;55</td>
<td>Good</td>
<td>★★★</td>
</tr>
<tr>
<td>≥55 to &lt;70</td>
<td>Very Good</td>
<td>★★★★</td>
</tr>
<tr>
<td>≥70 to &lt;85</td>
<td>Excellent</td>
<td>★★★★★</td>
</tr>
<tr>
<td>≥85</td>
<td>Outstanding</td>
<td>★★★★★★★</td>
</tr>
</tbody>
</table>

Linklaters LLP, One Silk Street, London, UK

One Silk Street has been occupied by Linklaters since the 1990s. In 2010, the 1960s building was extensively refurbished. At this point a wide number of policies were implemented, covering impacts from waste, energy and water usage, to the provision of user guides and local food procurement policies for hospitality.

Linklaters were satisfied with the built form and technologies employed at One Silk Street, as these had been assessed by BREEAM as a refurbishment. They elected to pursue Part 2, the building management section of the BREEAM In-Use scheme, to determine the success of their policies and the overall strength of the building management. The firm was keen to ensure that its management of the premises maximised the benefits of its refurbishment.

One Silk Street was the first building to achieve an ‘Excellent’ (five star) rating for Part 2; despite their high score, the process identified those areas where policies had not been fully implemented, holistically written, and most importantly, properly publicised within the organisation. With extensive metering, monitoring and targeting already in place, Linklaters are committed to maintaining their ‘Excellent’ rating, with a view to pushing for ‘Outstanding’.

One Silk Street demonstrates the adaptability of the BREEAM In-Use scheme; through its ability to allow users to undertake the individual parts of the assessment, which are most applicable to the individual organisation and circumstance. The assessment increased awareness across the company’s property management functions and to those teams who are responsible for sustainability.
**BREEAM In-Use KPIs (Key Performance Indicators)** – Data input during assessment is used to calculate a number of KPIs to allow comparison within a portfolio, with similar building types or more generally across the property sector. These KPIs represent a set of measures that focus on those aspects of environmental performance that can be used to measure consumption and emission targets. The KPIs do not directly relate to the BREEAM In-Use ratings and are provided to assist in robust reporting of specific performance levels.

There are 10 KPI outputs within BREEAM In-Use (see table 3), relating to energy, transport, water and waste (e.g. CO₂ footprints, water consumption levels and waste to landfill figures). The KPIs are quantifiable normalised metrics based on Gross Internal Area (GIA), Full Time Equivalent staff (FTE) and percentage figures that reflect environmental performance; as KPIs are normalised figures, they are directly comparable across a portfolio of properties.

KPIs provide organisations with a means of measurement that can be used year on year to measure continued performance throughout a building’s lifetime. In addition, KPIs can act as a facilitator for establishing baselines and for organisational benchmarking against industry standards. There are two KPI reporting options available, verified and unverified KPIs. Verified KPIs are independently validated by a BREEAM In-Use licensed Assessor, are quality assured and can be externally promoted. Unverified KPIs can be used internally to inform decision making.

Table 3 BREEAM In-Use KPIs

<table>
<thead>
<tr>
<th>KPI</th>
<th>Description</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPI 1</td>
<td>Building CO₂ (kgCO₂ eq pa per m² GIA)</td>
<td>The mass of CO₂ eq per square metre of the asset (GIA⁴) arising from direct fuel use at the asset (for electricity, heating and cooling) consumed during the reporting year.</td>
</tr>
<tr>
<td>KPI 2</td>
<td>Building CO₂ (kgCO₂ eq pa per FTE)</td>
<td>The mass of CO₂ eq per Full Time Equivalent5 personnel employed at the asset arising from the fuel and electricity consumed by the asset during the reporting year.</td>
</tr>
<tr>
<td>KPI 3</td>
<td>Business CO₂ (kgCO₂ eq pa per m² GIA)</td>
<td>The mass of CO₂ eq per square metre of the asset (GIA⁴) arising from business travel by personnel (based at the asset) and from goods (dispatched from the asset) during the reporting year.</td>
</tr>
<tr>
<td></td>
<td>Staff CO₂ (kgCO₂ eq pa per m² GIA)</td>
<td>The mass of CO₂ eq per square metre of the asset (GIA⁴) arising from business travel by personnel (based at the asset) during the reporting year.</td>
</tr>
<tr>
<td></td>
<td>Goods Transport CO₂ (kgCO₂ eq pa per m² GIA)</td>
<td>The mass of CO₂ eq per square metre of the asset (GIA⁴) arising from business travel associated with goods (dispatched from the asset) during the reporting year.</td>
</tr>
<tr>
<td>KPI 4</td>
<td>Staff Commute CO₂ (kgCO₂ eq pa per m² GIA)</td>
<td>The mass of CO₂ eq per square metre of the asset (GIA⁴) arising from personnel travel to and from the asset during the reporting year.</td>
</tr>
<tr>
<td>KPI 5</td>
<td>Total CO₂ (kgCO₂ eq pa per m² GIA)</td>
<td>Total mass of CO₂ eq per square metre of the asset (GIA⁴) arising from the fuel and electricity consumed by the asset, business travel of personnel based at the asset and transport of goods despatched from the asset, during the reporting year.</td>
</tr>
<tr>
<td>KPI 6</td>
<td>Building Primary Energy (kWh pa per m² GIA)</td>
<td>The kilowatt hours per square metre of the asset (GIA⁴) of fuel and electricity consumed by the asset, measured in terms of primary energy⁶ equivalent, for the reporting year.</td>
</tr>
<tr>
<td>KPI 7</td>
<td>Water Consumption (m³ pa per m² GIA)</td>
<td>The cubic meters of water consumed by the asset in the reporting year per square meter of the asset (GIA⁴).</td>
</tr>
<tr>
<td>KPI 8</td>
<td>Total Waste (tonnes pa per m²)</td>
<td>The tonnes of waste removed from the asset during the reporting year per square metre of the asset (GIA⁴).</td>
</tr>
<tr>
<td>KPI 9</td>
<td>Proportion of Waste Recycled (%)</td>
<td>Percentage of total waste produced by the asset which is recycled.</td>
</tr>
<tr>
<td>KPI 10</td>
<td>Proportion of Waste to Landfill (%)</td>
<td>Percentage of total waste produced by the asset which is sent to landfill.</td>
</tr>
</tbody>
</table>

1CO₂ eq Carbon Dioxide (CO₂) equivalent: a measure of the global warming potential of different greenhouse gases in relation to that of carbon dioxide; it is defined as the amount of carbon dioxide that would give the same warming effect as that of the greenhouse gases being emitted.

2kgCO₂ eq Mass (in kilograms) of CO₂ equivalent

3pa Per annum

4GIA Gross Internal Area: the whole enclosed area of a building within the external walls, taking each floor into account and excluding the thickness of the external walls.

5FTE Full Time Equivalent: a unit which is used to measure the people employed, or studying in a comparable way, even if they work or study a different number of hours per week. A full time employee or student is counted as 1 FTE, a part-time worker/student will be measured proportionately to the number of hours they work in comparison to a full time person.

6Primary Energy which has not been subjected to any transformation or conversion process. [9]
Certification

Organisations can use BREEAM In-Use as a self-assessment tool and are encouraged to certify scores against any of the three parts of the BREEAM In-Use Standard. To formally certify an asset users are required to engage the services of an independent BRE Global licensed BREEAM In-Use Assessor. The Assessor verifies the answers given in the BREEAM In-Use online questionnaire, validates the evidence and requests certification from BRE Global on the clients’ behalf.

Certification provides independent third party confirmation of the environmental impact of asset and/or management systems, and authenticates data in order to promote improvements to an asset. Certifying against the standard also offers a means of compliance with mandatory disclosure energy emissions initiatives [2]. Certificates are valid for a period of one year with a simple and cost effective renewal process in place. The renewal process can be activated at any time. Certification allows clients to view data across their entire property portfolio, in terms of category scores and overall ratings; allowing clients to be able to easily make management decisions (see Figure 1). Clients can only promote their BREEAM In-Use rating if the assessment has been certificated.

EDF Energy – Comparison of properties within a portfolio

EDF Energy opted to use BREEAM In-Use when searching for an independent and reliable assessment methodology to benchmark the environmental performance of their buildings across their entire portfolio. The BREEAM In-Use standard was used on assets throughout the UK and France, and the results enabled EDF to identify areas in which buildings were performing well and where there was scope for improvement.

The portfolio contained a large number of assets, with a disparate range of properties and locations. Applying the standard to this range of properties facilitated organisational benchmarking, and provided the opportunity for in-depth comparisons to be carried out between buildings; from a high level indicators, down to evaluation by specific environmental category.

Following the initial assessments, EDF have worked alongside BREEAM In-Use Assessors post-certification to gain further understanding on how to further improve their assets, and are implementing positive measures to achieve this.

“We were seeking a robust methodology that was efficient, effective and easy to use to self-assess the environmental performance of our building portfolio – BREEAM In-Use provides this” Simon Marshall, EDF Energy

Figure 1 – Portfolio overview of Part 1: Asset rating performance, comprising of individual environmental category contributions
BREEAM In-Use in Operation

Many organisations use the BREEAM In-Use scheme, with the driver to use the scheme varying widely between organisations. The way in which organisations conduct assessments also varies. One approach is to conduct the assessment and certification process to observe how an asset is currently performing, using these results to make improvements and then using the scheme again at a later stage to re-assess and certificate, verifying such improvements. BREEAM In-Use assessments can be conducted in a number of ways:

- Conduct an assessment and make improvements before requesting certification
- Conduct an assessment and request certification based upon how a building is currently performing
- Conduct an assessment and request certification to verify assessments and allow external reporting of performance
- Conduct an assessment to inform internal decision making and management objections. Re-measurement allows year on year review
- Re-assess/certify to show the level of improvement brought about by changes implemented to an asset

While some building owners choose to use the BREEAM In-Use scheme to market sustainability credentials, others use pre-assessments as an internal and/or continuous method of performance management; users input their data into the BREEAM In-Use question set and use the dynamic scoring dashboard to make educated decisions as to what changes can be made to the asset and management practices in order to improve the overall rating. The assessment is open for a period of a year or until certification, whichever comes soonest. Before renewal, users have the opportunity to use the online system as a management tool within this period prior to requesting certification. The renewal process can be activated at any time.

Summary

BREEAM In-Use provides an authoritative credible reporting measurement of sustainability, which can be used to differentiate an asset in a competitive market, and support organisations in meeting ever increasing emission reduction targets and measure the effectiveness of sustainability initiatives. BREEAM In-Use is based upon a widely respected methodology allowing internal measurement of review. It provides a cost effective and flexible assessment and certification process allowing for assessments across a range of different building types, with no geographical barriers. BREEAM In-Use International can be used to compare and benchmark assessment data at an international level and NSO schemes ensure that BREEAM In-Use is of local relevance. The benefits gained from the transparency of assessments and comparison opportunities are vast and allow for informed management decisions to be made, along with the tangible benefits associated with such an assessment. The principle aim of the BREEAM In-Use Standard is to provide robust and accessible measurements for benchmarking and reporting as well as practice of continual development; assessments can be utilized to benefit an asset throughout its operational life.

For more information on the BREEAM In-Use scheme please visit: www.breeam.com/inuse. If you would like to contact the BREEAM In-Use Team please email inuse@bre.co.uk
References


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