



BREEAM In-Use

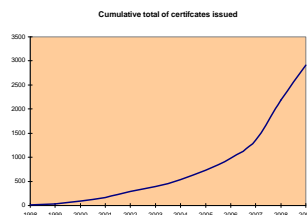
Driving sustainability in existing buildings

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BREEAM

- **BREEAM is the world's longest established and most widely used environmental assessment method for buildings**
 - Created in 1988 and launched in 1990
- **Over 116,000 buildings certified, over 714,000 buildings registered**
- **Network of over 2200 licensed assessors**
- **Recent studies have shown that BREEAM has helped save 4.5 million tonnes of CO₂ since its inception**



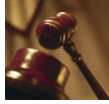
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BREEAM Family

Bespoke



Courts



Code for Sustainable Homes



Ecohomes



EcohomesXB



Healthcare



Industrial



International



Multi-residential



Prisons



Offices



Retail



Education



Communities



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What is BREEAM?

- BRE Environmental Assessment Method
- Certification scheme
- Measure of sustainability
- Independent & credible
- Customer focused
- Credits and evidence based

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BREEAM aims to.....

- **Improve the environmental performance of buildings**
 - By demonstrating improvements over building regulation
 - Recognising and encouraging industry best practice
- **Work towards government and global long term targets**

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BREEAM key drivers

- **To demonstrate a commitment to partner organisations**
- **Reduced maintenance costs**
- **Reduced running costs**
- **Healthy and comfortable internal environment**

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BREEAM key drivers

- **Increased level of occupant satisfaction**
- **Reduced dependence on private car ownership**
- **Outperforms market developments - increased saleability**
- **Improved developers image with public and investors**

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What are the benefits of BREEAM?

Environmental, Social and Economic benefits:

- **Functionality, flexibility, maintainability, durability**
- **Lower embodied and operational environmental impacts**
- **High user satisfaction, quality and control**
- **Demonstrating best practice**
- **Promoting environmental credentials**
- **Supporting a corporate environmental strategy**
- **Creating better work and healing places**

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BREEAM Categories

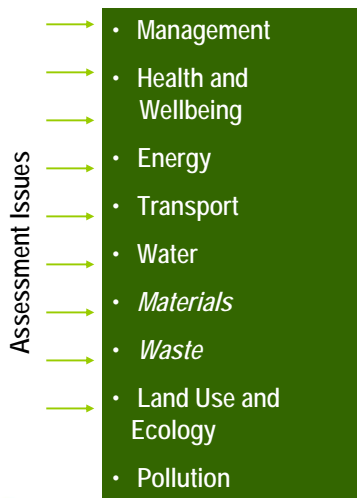


- Management
- Energy
- Water
- Land Use and Ecology

- Health and Wellbeing
- Transport
- Materials
- Waste
- Pollution



Scoring



BREEAM Score

PASS	30%
GOOD	45%
VERY GOOD	55%
EXCELLENT	70%
<i>OUTSTANDING</i>	<i>85%</i>



BREEAM in Ireland

- **Relevance of BREEAM:**
 - Extensively used in Northern Ireland. Examples in the Republic.
 - Strong similarities with UK:
 - *Climate*
 - *Construction techniques, technologies and standards*
 - *Culture and society*
- **BRE Ireland**
 - Local focus
 - Adaptable method tried and tested – BREEAM International
 - Experience and ongoing development from UK and internationally
 - Links to:
 - *Regulation*
 - *Best Practice*
 - *Policy Objectives*

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Recent Activity

- **25 buildings registered**
- **8 buildings assessed**
- **In excess of 10 Assessor organisations**
- **Development of BREEAM Prisons**
- **OPW specifying BREEAM?**
- **Pre-assessment activity**

Northern Ireland

- **Adapting Code for Sustainable Homes**
- **220 buildings registered**
- **100 assessments**

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Buildings

Buildings assessed so far....

BREEAM Excellent – RDS Offices, Simmonscourt

BREEAM Very Good – Office Buildings, Dublin

BREEAM Good – 2 Ecohomes, 1 Office

BREEAM Pass – 1 Office

All Assessed using the UK BREEAM Standards

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BREEAM Ireland

- Environmental Assessment Method specific to Ireland.
- Assess existing BREEAM methodologies
- UK, European and International examples
- Irish based Assessor network
- Irish based certification scheme
- BREEAM International

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Existing buildings the biggest challenge?

Domestic buildings

- Approx 1.5 million homes
- Relatively new housing stock 70% of homes built since the 1960s
- Energy Efficiency Regulations not introduced until 1991
- 75% housing built before 1991 (**SEI report 2005**)

Non-domestic buildings

- Approx 130,000 buildings
- 66% rated below a C rating BER
- Equates to 16%-18% of Ireland's total CO₂ emissions

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BREEAM In-Use



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- BREEAM In-Use is a new scheme to help building owners and occupiers to improve the environmental performance and reduce running costs of existing buildings.
- It consists of:
 - a standard
 - An easy-to-use assessment methodology
 - and a 3rd party certification process
- Providing a **clear and credible route map to improving sustainability**

BREEAM In-Use - benefits

- Reduce operational costs
- Enhance the value and marketability of property assets
- Give a transparent platform for negotiating building improvements with landlords and owners
- Route to compliance with environmental legislation
- Greater engagement with staff in implementing sustainability
- Provide opportunities to improve staff satisfaction with the working environment
- Demonstrate your commitment to CSR
- Improve organisational effectiveness
- Provide a genuine badge of proven sustainability

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BREEAM In-Use - functionality



- Quick and simple
- Detailed information to be added over time
- Separate physical characteristics from management and organisational matters
- Incorporates EPCs and DEC's
- International portfolios
- Self assessment
- Independent certification

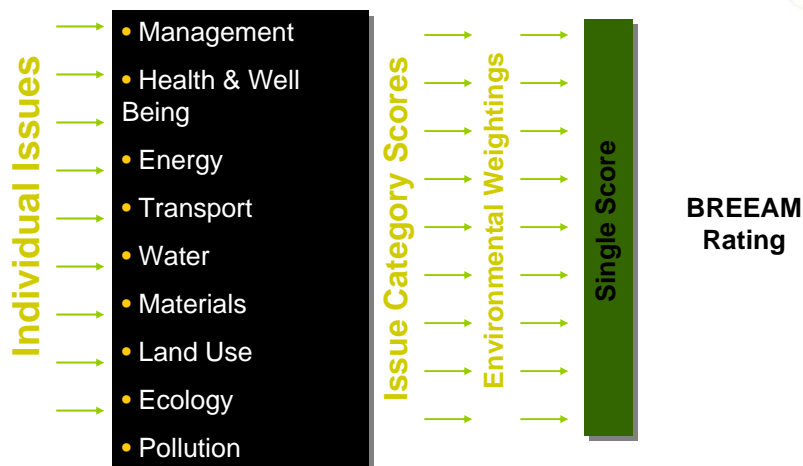
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BREEAM In-Use - Three-Part Standard

- **Asset performance** - the inherent performance characteristics of the building based on its built form, construction and services
- **Building management performance** - the management policies, procedures and practices related to the operation of the building; the consumption of key resources such as energy, water and other consumables; and environmental impacts such as carbon and waste generation
- **Organisational effectiveness** - the understanding and implementation of management policies, procedures and practices; staff engagement; and delivery of key outputs.

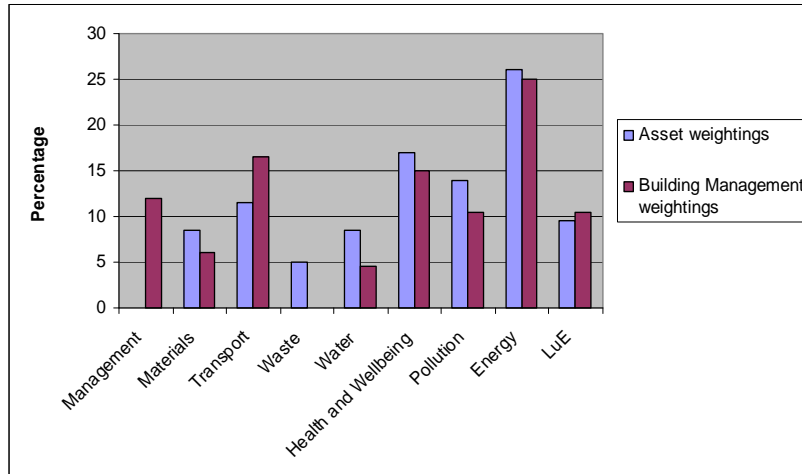
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BREEAM In-Use – Environmental categories



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BREEAM In-Use – Category weightings



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BREEAM assessment ratings

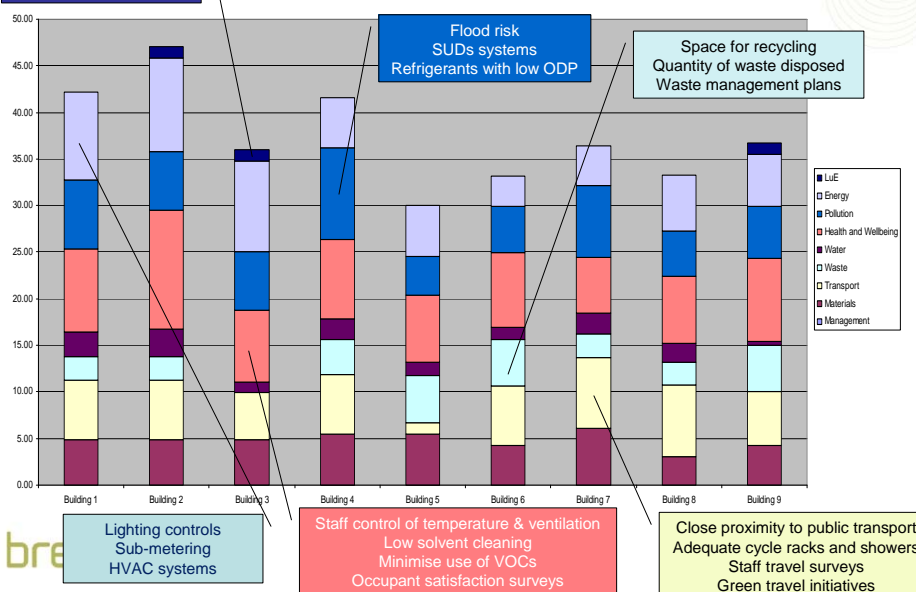
Assessment score	Assessment rating
< 10	Unclassified
10 – 25	★ ACCEPTABLE
25 – 40	★ ★ PASS
40 – 55	★ ★ ★ GOOD
55 – 70	★ ★ ★ ★ VERY GOOD
70 – 85	★ ★ ★ ★ ★ EXCELLENT
> 85	★ ★ ★ ★ ★ ★ OUTSTANDING

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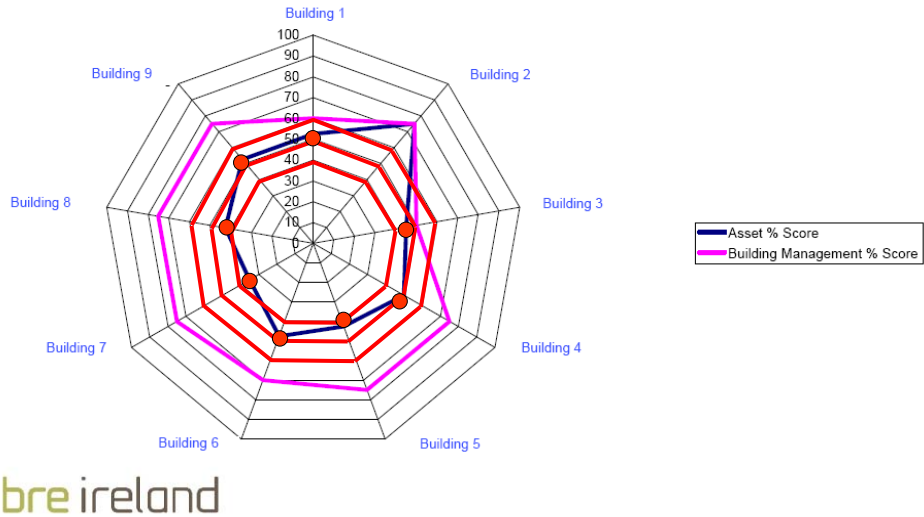
Scope of Asset & Management questions

Category	Asset	Management
Energy	BER rating, lighting & control, cooling system, sub-metering	DEC rating, annual energy use, trained building managers
Water	Water meters, low water using WCs, auto leak detection	Annual water consumption
Transport	Close proximity to public transport, adequate cycle racks & showers	Staff travel surveys, green travel initiatives, home working policy
Waste	Space for recycling waste	Waste management plans, quantity of waste disposed, waste targets
Management		Environmental management system, staff training, environmental purchasing
Ecology	Green roofs, bat boxes	Ecological survey of site
Health & wellbeing	Staff control of temp & ventilation, glare control features	Minimise use of VOCs, low solvent cleaning, occupant satisfaction surveys
Materials	Maintenance policy in place, approved alarm systems	Reduce use of hazardous materials, enviro risks of fire incidents
Pollution	Flood risk, SUDs systems, refrigerants with ozone depletion potential	Policy for reducing surface water runoff, survey for land contamination

BREEAM In-Use



BREEAM In-Use – Comparing buildings



Cost analysis - example

Category	Question	Recommendations	Quantity	Unit cost	Total Cost	ROI	Assumptions	Refurb Level
Energy	What proportion of fluorescent lamps have high frequency ballasts?	Replace fluorescent lamps to achieve 100% high frequency ballasts	60	£100	£6k	3 years	Allows complete fitting, approx 75nr total fittings per floor and 20% replacement, 15/floor = £60nr	2

Minimum investment to improve rating?

Return on investment <3 years?

1. Tune up and minor refurbishment
2. Intermediate refurbishment
3. Major refurbishment
4. Complete refurbishment
5. Demolition

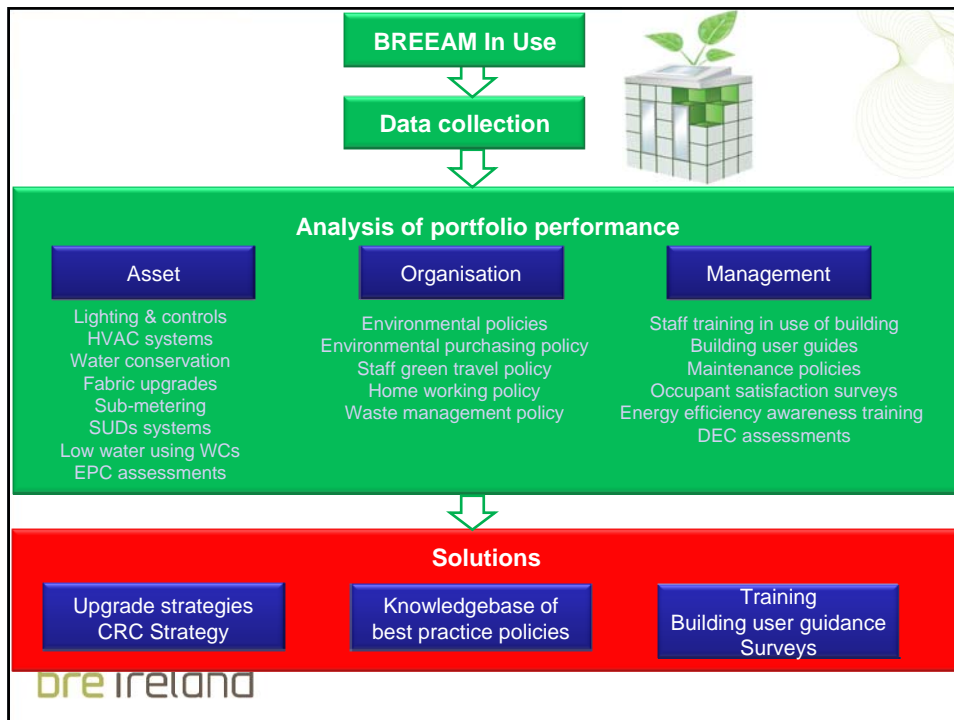
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Reference	Question	Answers
MAND1001	Are the occupying organisation's staff trained on the operation of the building and building services?	Don't Know
		No
		Yes - Facilities Management staff
		Yes - Facilities Management staff & Management staff
		Yes - All staff
MAND1002	Are the occupying organisation's staff trained on the operation of the building and building services?	Don't Know
		No
		Yes
MAND1003	Has a building user guide been prepared for the building and is it freely accessible to all the occupying organisation's staff ?	Don't Know
		No
		An environmental policy has been developed
		The company has developed an environmental plan including scope, objectives and targets
		The plan has been disseminated throughout the organisation and responsibilities have been set
		The environmental management system has been accredited to ISO14001 or BS8555
MAND1004	Has the occupying organisation developed an environmental policy, plan or management system?	Don't Know
		Targets have been set for energy use performance improvements
		Targets have been set for energy & water use performance improvements
		Targets have been set for energy & waste/recycling performance improvements
		Targets have been set for energy, water & waste/recycling performance improvements
		Targets have been set for all of the above, including other resource performance and sustainability indicators
		Other
MAND1005	Does the occupying organisation have an environmental policy in place that requires improvement targets to be met?	Don't Know
		Yes
		The building is single tenancy
		No
		Yes
MAND1006	Do tenant representatives within the building have a committee that meets regularly to discuss building and environmental issues?	Don't Know
		No
		Yes

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Reference	Question	Answers
MAND1007	Is a full set of building operation and maintenance manuals available for viewing by building occupants?	Don't Know
		No
		Yes
MAND1008	Is there a public notice board or display area present within the building for the provision of public notices?	Don't Know
		No policy in place
		Those required to maintain the building
		Those required to maintain the building and as a result of CHURN
		All of the above plus those required for any refit or refurbishment work
MAND1009	Is there an environmental/sustainable purchasing policy in place, if so which of the following materials, products and services requirements does it cover?	Don't Know
		No
		Yes
		The occupying organisation actively reduces the usage of hazardous materials
		the occupying organisation works with supply chain to help reduce environmental impact
		Environmental impacts of materials are taken into account with targets to reduce negative impacts
		CO2 emissions arising from transport of materials are taken into account and targets set to reduce CO2
		Two of the above initiatives are in place
		Three of the above initiatives are in place
		Four of the above initiatives are in place


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Stage 1 - Getting started with BREEAM In-Use

- **BREI briefing client team (2 hour workshop at client offices)**
 - Present BREEAM In-Use, explain data requirements and assessment process
 - Discuss and agree overarching client objectives and whether to assess against buildings against asset, management or organisation parts of BREEAM In-Use (or all three)
 - Suggest how client could use BREEAM In-Use to drive property performance
 - Discuss and agree plan for getting started with BREEAM In-Use
- **Client team collect BREEAM In-Use data (allow 1-2 weeks)**
 - Client collects BREEAM In-Use information using Excel spreadsheet
 - BRE provides technical helpline advice to support client and answer any queries
- **BREI analysis of results (within 2 weeks of receipt of client data)**
 - BRE scores client buildings and provides recommendations for improvements
 - BRE provides certificates against asset, management or organisation parts of BREEAM In-Use (or all three)



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