

## Green building certification BREEAM Europe 2009

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B4F | Building for the future srl

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### Introduction – Green building

- Real Estate : key role in sustainable development
- Construction sector: “the 40 % industry”
- How to quantify sustainability ?



Certification

### Table of content

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- Environmental certification BREEAM Europe
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### Objectives

- Reduce environmental impacts of buildings
- Provide a credible environmental label
- Allow a transparent comparison of buildings
- Set criteria and standards over and above those required by legislation
- Challenge the market for more innovative solutions
- Stimulate the demand for sustainable buildings
- Allow organisations to demonstrate their progress towards achieving their CSR objectives

## The choice between ...

- HQE (France)  
Haute qualité environnementale
- LEED (USA)  
Leadership in Energy and Environmental Design
- EMAS (Europe)  
EU Eco-Management and Audit Scheme
- LEnSE  
EU Framework Project
- BREEAM (UK /International)  
Building Research Establishment's Environmental Assessment Method.
- VALIDEO (Belgique)
- DGNB (Germany)  
Deutsche Gesellschaft für nachhaltiges Bauen e.V.  
German Sustainable Building Council
- CASBEE (Japon)
- GREENSTAR (Australie)
- ...



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## Breeam – Valideo - HQE

breeam



Long experience	Recent system, partly based on Breeam/HQE	Recent system
International system, local/regional conditions	National (BeLux)	Mostly national
Excellent (worldwide) reputation	No reputation (not yet)	Many critics
Independent (charity)	Commercial	Independent
Voluntary base	Voluntary base	Voluntary base
Multi-criteria approach	Multi-criteria approach (-) biodiversity / ecology (-) LCC – life cycle cost (+) building adaptation	Multi-criteria approach (-) "shopping list"
Model for all other schemes	In discussion with Breeam	Merged with Breeam (ongoing process)

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## Why breeam Europe ?

- **Holistic and multi-criteria** approach, Breeam measures the **environmental performance** of buildings throughout their **life cycle**
- **European** method
- **Independent** certification on voluntary base
- International reputation - Identified by the **OECD** as the **best known** and the **most widely used** tool for measuring environmental performance
- More than **20 year of experience**, over 117,000 buildings certified, over 714,000 buildings registered



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## Why breeam Europe ?

- Bridges between HQE et BREEAM
- BREEAM NL: launched
- Spain and Latvia: Agreement signed
- Belgian Sustainable Building Council: feasibility study to adopt BREEAM for the Belgian market
- Turquie, Belgique, Russie, Scandinavie mais aussi Liban, Brésil, Israël en-dehors de l'Europe en cours de discussion
- Création d'une nouvelle gouvernance pour le référentiel et d'un outil de benchmarking européen



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## breem section.

<b>Management</b>	Management of the Construction process
<b>Health &amp; Wellbeing</b>	Health and wellbeing for building's users and neighbors
<b>Energy</b>	The energy performance and control
<b>Transport</b>	Site access for public transport and gentle mobility
<b>Water</b>	Water management
<b>Materials</b>	Impact of chosen materials
<b>Waste</b>	Waste management during construction process and building occupation
<b>Land use and Ecology</b>	Impact of the project on land use and ecology
<b>Pollution</b>	Prevention of pollution

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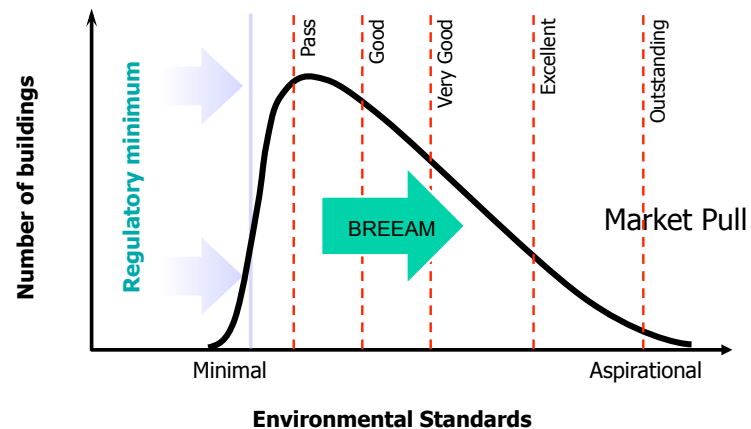
## breem international rating system

Categories	BREEAM Europe 2009	BREEAM Gulf
<b>Management</b>	12%	8%
<b>Health &amp; Wellbeing</b>	15%	15%
<b>Energy</b>	19%	13%
<b>Transport</b>	8%	6%
<b>Water</b>	6%	30%
<b>Materials</b>	12.5%	9%
<b>Waste</b>	7.5%	5%
<b>Land use and Ecology</b>	10%	7%
<b>Pollution</b>	10%	7%



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## breem : setting the standard



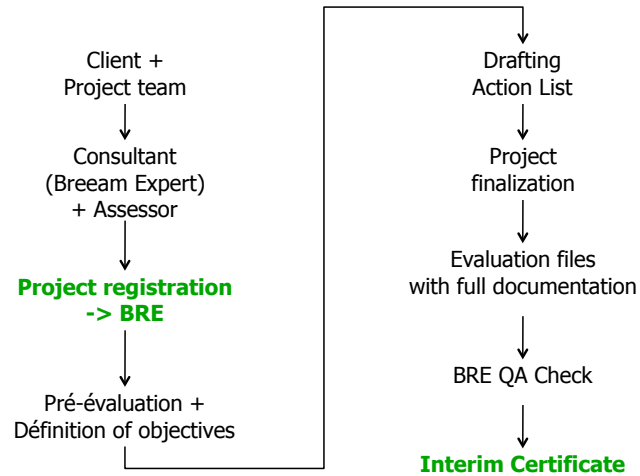
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## breem stages of evaluation

- **Pre-assessment**
  - Indication about potential score
- **Design stage - interim certification**
  - Based on specifications and pre-development information
  - Options for shell & core or fit-out assessments
- **Post construction review – Final certification**
  - 'As built' review and verification of design stage assessment
  - Full assessment, carried out post construction (but limited potential to influence performance)
- **BREEAM In Use**
  - Environmental management tool for property portfolios
  - Formal certification possible

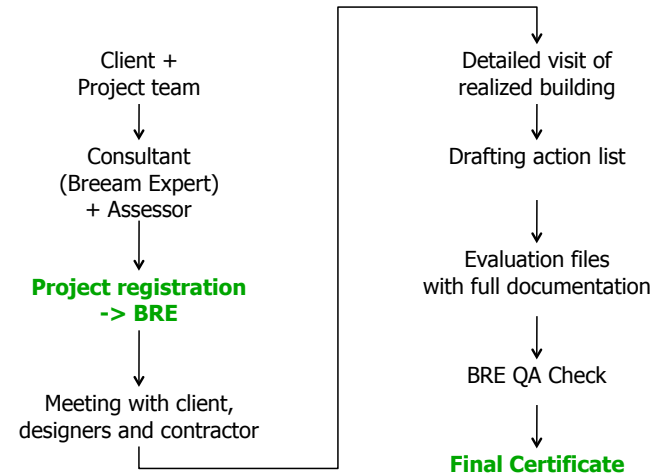
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## Certification process (Design stage)



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## Certification process (PCR stage)



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## Scope of BREEAM



- Offices
- Industrial
- Retail
- Education
- Healthcare
- Prisons
- Courts
- Bespoke
- Data centres
- Under development
  - Fire stations
  - Visitors centres etc
- Multi Residential
- BREEAM In Use
- BREEAM Communities
- International
  - Europe (Commercial)
  - Gulf (all building types)
  - Bespoke International (all others)
  - BREEAM In Use
  - BREEAM for Communities

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## BREEAM Europe Scheme



- Certified Projects :
  - More than 30 projects in 13 countries
  - At least 6 projects in Belgium
- Projects under review : At least
  - 41 retail projects in 12 countries
  - 72 office projects in 16 countries
  - 8 industrial projects in 7 countries
  - 25 projects in Belgium
- In total more than 150 assessments in 26 countries (outside UK and Netherlands)



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## Breeam – Valideo – HQE – Leed Belgium Market



En Belgique	Nombre de projets certifiés	en cours d'évaluation
BREEAM	6	> 25
HQE	2	3
Valideo	4	> 10
LEED	0	8 (only U.S. Army)

October 2010

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## BREEAM in Belgium



### ■ CERTIFIED PROJECTS

- Atlantis (Access and Bridge buildings), Brussels (Codic) – VERY GOOD
- Mediacité shopping centre, Liège (Wilhelm and Co) - VERY GOOD
- Arval Building, Zaventem (Codic) – VERY GOOD
- Froissart 95-99 (Fedimmo) - EXCELLENT
- Science Montoyer (Fedimmo) – EXCELLENT



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## BREEAM in Belgium



### ■ REGISTERED PROJECTS

- Airport Plaza office buildings, Brussels (CBRE)
- Site Boch La Louviere (Wilhelm and Co)
- Le Marquis Building (AEW Europe)
- Imperatrice (BEFIMMO)
- Gateway – Brussels (The Brussels Airport Company)
- EXOS, Leuven (CIP)
- Rive Gauche, Charleroi (Saint-Lambert Promotion)
- Waterloo City Centre, Waterloo (ING Real Estate)
- ...



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## Legal / contractual implications



### ■ Owner

- Formal intention taken during design must be respected on the PCR stage

### ■ Users

- Obligation related to the fit out
- Obligation related the use of the building



Green lease contract



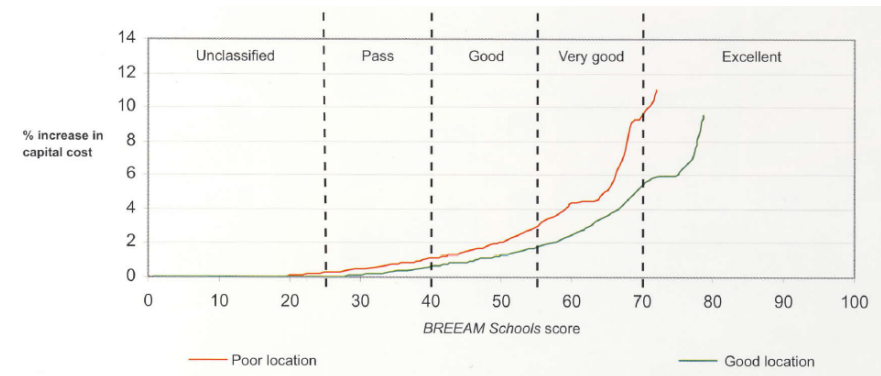
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## Increase in capital cost

	Pass	Good	Very Good	Excellent
Home	0 – 0.1	0.3 – 0.9	1.3 – 3.1	4.2 – 6.9
Office building	-0.4 – 0.0	-0.4 – 0.2	0.1 – 5.7	2.5 – 7.0
Primary school	0 – 0.3	0.7 – 1.1	1.8 – 3.0	5.9 – 9.85
Secondary school	0 – 0.1	0.2 – 0.5	0.8 – 2.7	3.9 – 4.4

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## Increase in capital cost



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## Research study: Value of sustainable buildings

- Collaboration project with
  - Maastricht University
  - IPD – provision of data sample
  - RICS
- Key outputs:
  - Value of sustainable buildings
  - Relation between the performance in specific areas of sustainability (energy, internal environment, transport etc) and the market value
- Started in October 2008

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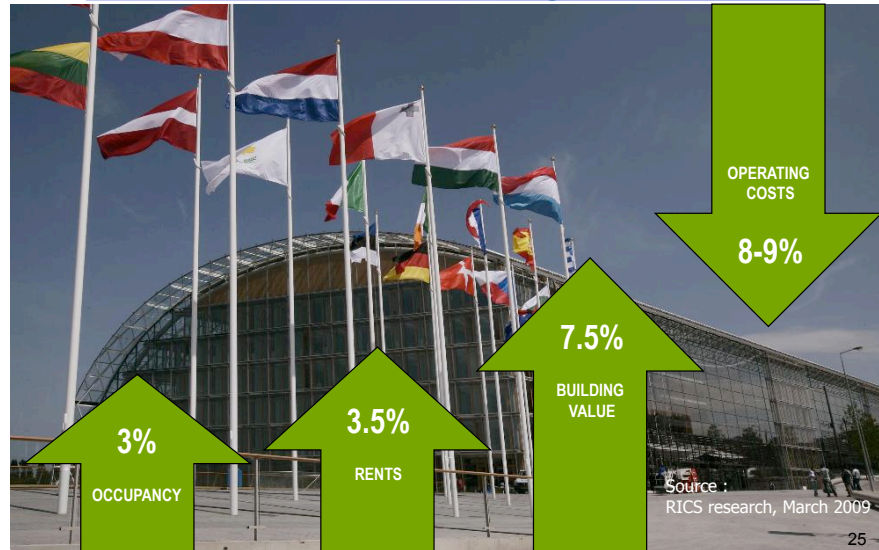
## Research study: Value of sustainable buildings

- Scope:
  - Office buildings
  - Additional study to be carried out for shopping centres
- BREEAM-rated buildings compared to a control sample of non-BREEAM office buildings in close location
- Comparison of:
  - Rental value
  - Actual rent paid
  - Occupancy rate
  - Capital value

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## Value of sustainable buildings



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## References B4F HQ EIB (GdL)



## References B4F Atlantis (UBS / Codic)



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## References B4F Ikaros Zaventem (Arval / Codic)



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## Thanks for your attention

ENVIRONMENTAL CERTIFICATION  
(BREEAM, HQE, LEED)  
DEFINITION OF STRATEGIC  
OBJECTIVES  
PROGRAM OF REQUIREMENTS  
ORGANISATION OF ARCHITECTURAL  
COMPETITION

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