

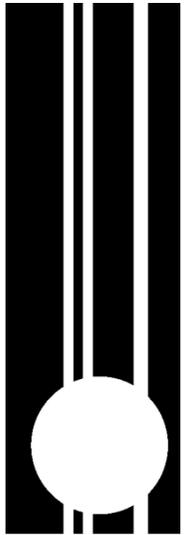
January 2026

BREEAM New Construction V7

BREEAM® ⑦

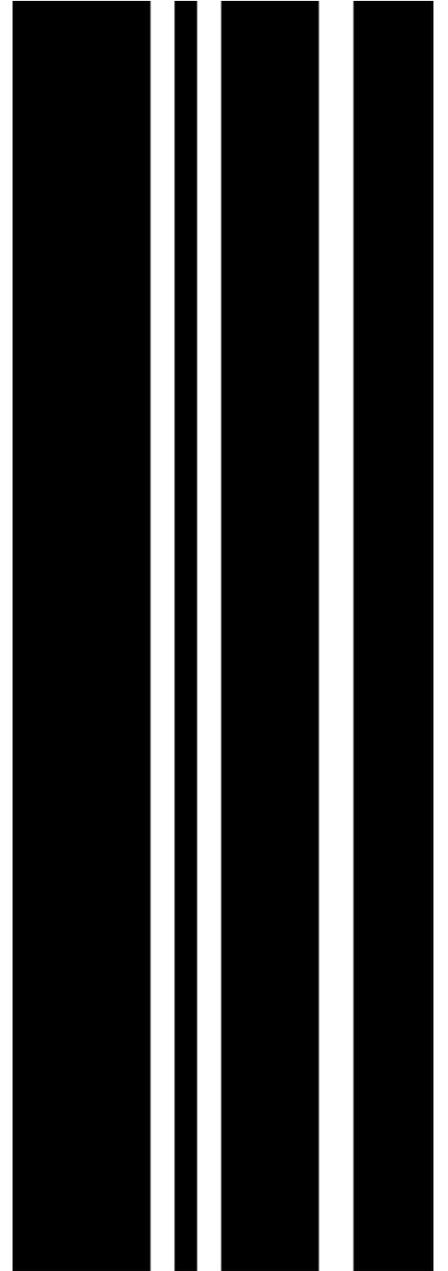
Impact of New V7 Requirements

Closing the Performance Gap in
Buildings



KJ Tait

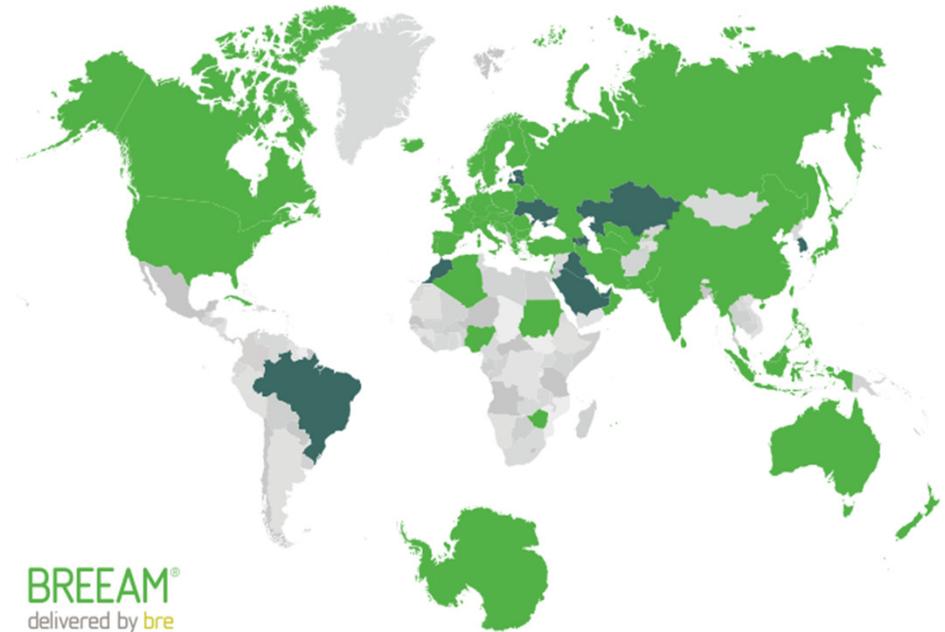
What is BREEAM?



BREEAM

The world's leading sustainability assessment methods for buildings

- Building Research Establishment Environmental Assessment Method
- It is an internationally recognised procedure for reviewing and improving the environmental design and performance of buildings
- Recognised in over 105 countries
- Nearly 3 million registered buildings
- Over 1 million certified buildings.



BREEAM History?

1988:	BREEAM Created	2011:	Major update combing several different sectors
1990:	Launch of BREEAM Offices	2014:	Major update with new climate change credits and dedicated refurbishment scheme.
1991:	Launch of BREEAM Industrial	2018:	Update of New Construction Scheme
1993:	Launch of version for Retail	2022:	Lauch of V6 (minor updates)
1998:	Launch of BREEAM 98 – Major Update	2025:	Lauch of V7 (major updates)
2002-2006:	Annual Update Process with and requirement for PCS		



What is BREEAM?



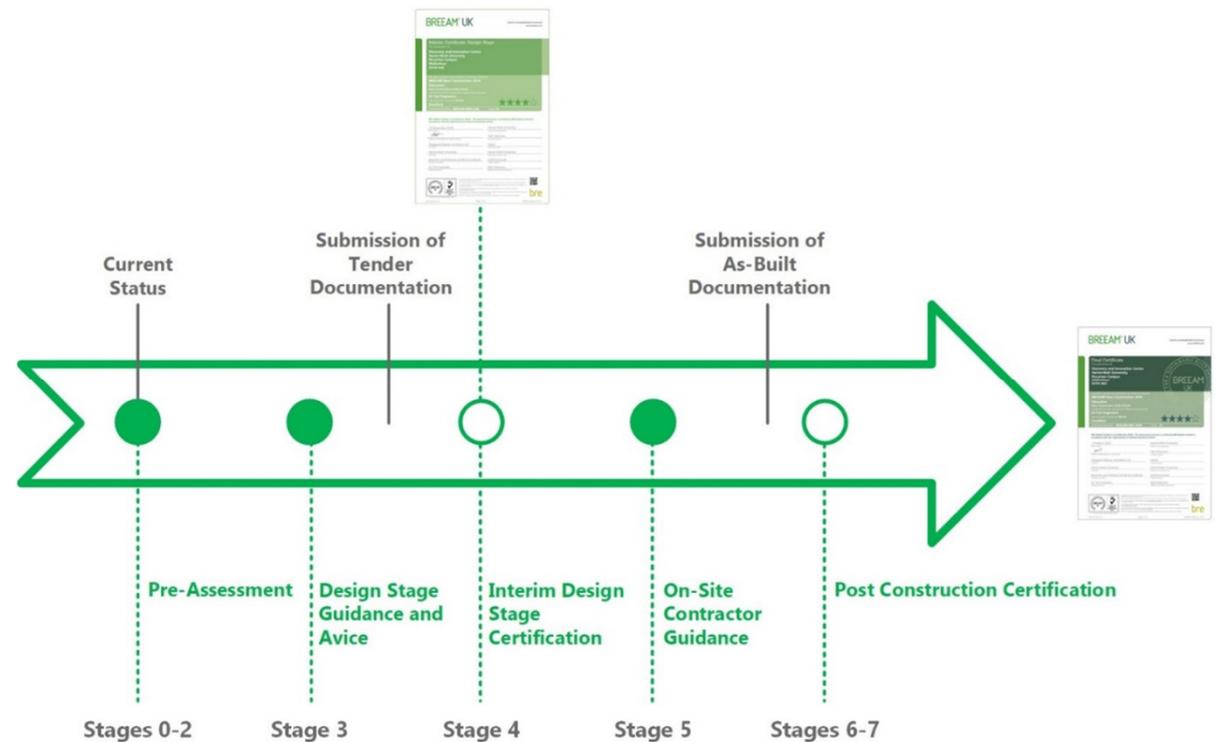
What Buildings does it cover?

- Offices ✓
- Industrial ✓
- Retail ✓
- Education ✓
- Healthcare ✓
- Prisons ✓
- Courts ✓
- Multi Residential ✓
- Bespoke ✓
- New Construction ✓
- Refurbishments ✓
- Fit-out ✓
- Refurbishments ✓
- In-use ✓

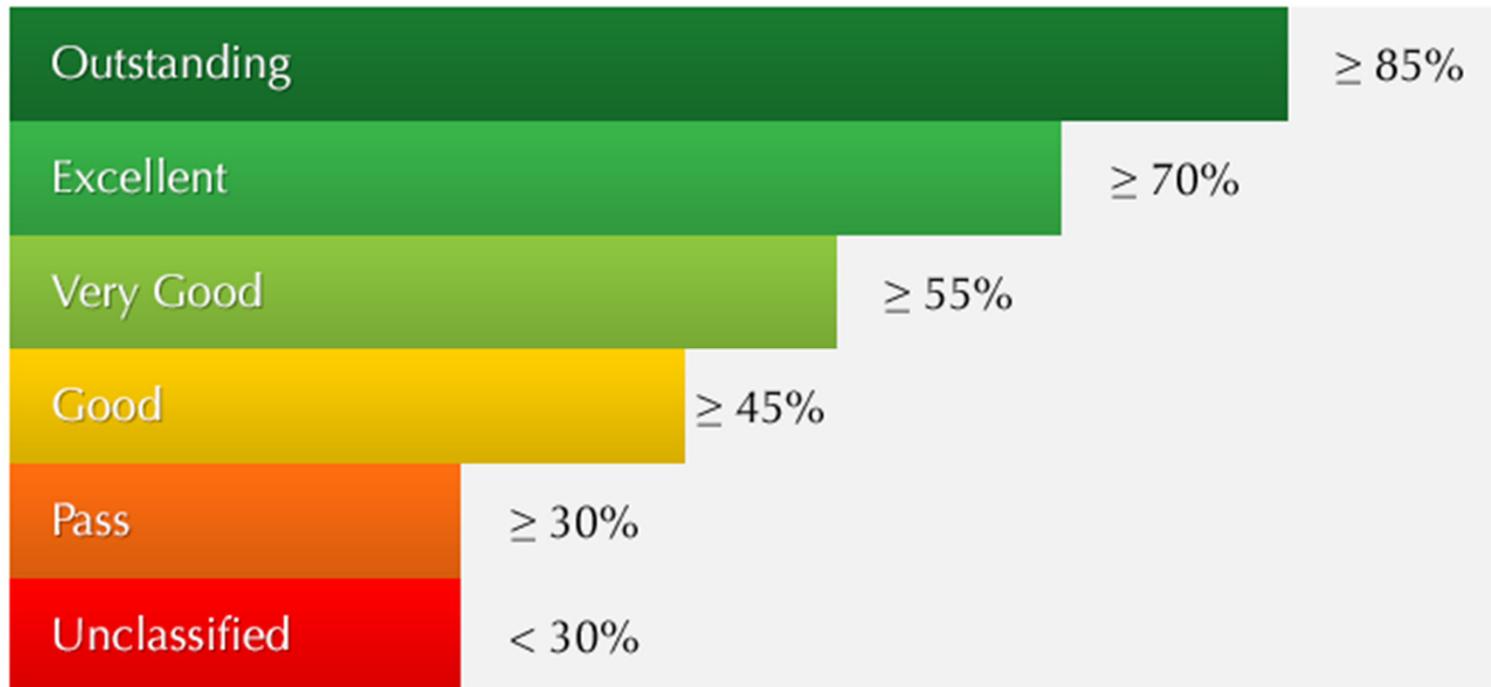
These can all be adapted for the International Market too.

BREEAM has three key stages

- Pre-Assessment
- Interim/Design Stage Assessment/Certification
- Final/Post Construction Assessment/Certification



BREEAM has six certification levels



BREEAM needs to move with the times

Improvements in regulations mean the BREEAM needs to adapt also

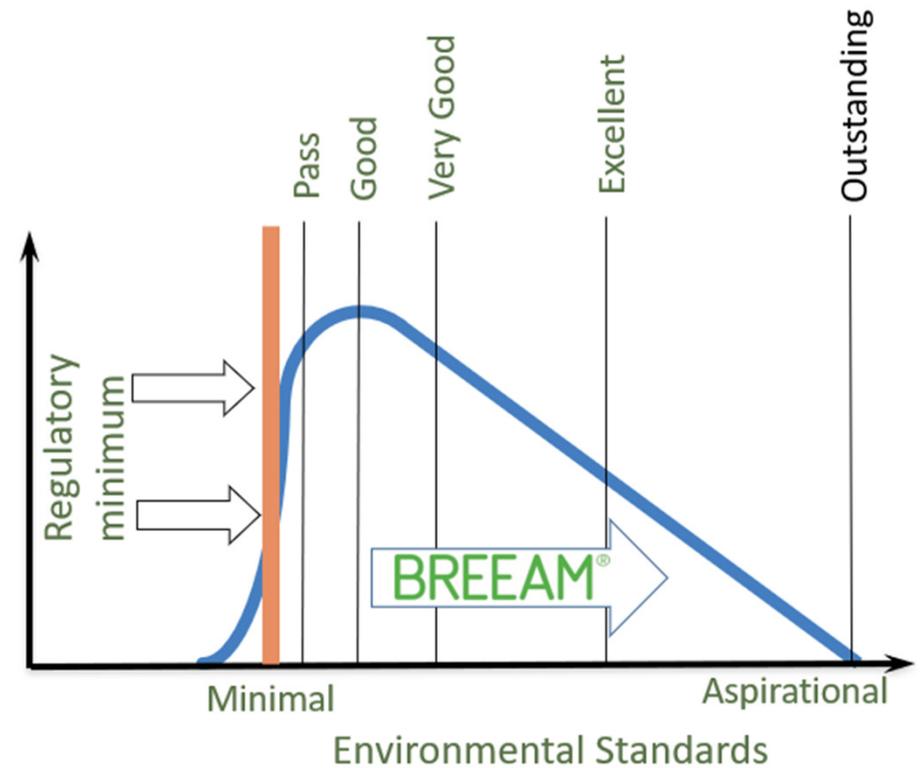
Pass – top 75% - Standard good practice

Good – top 50% - Intermediate good practice

Very Good – top 25% - Advanced good practice

Excellent – top 10% - Best practice

Outstanding – less than top 1% - Innovator



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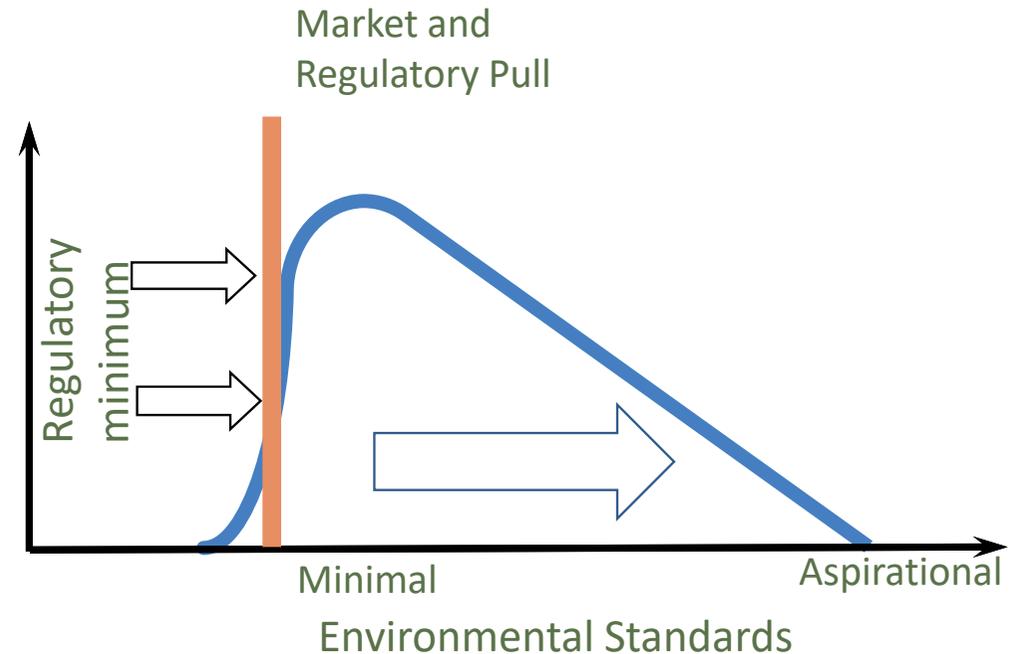
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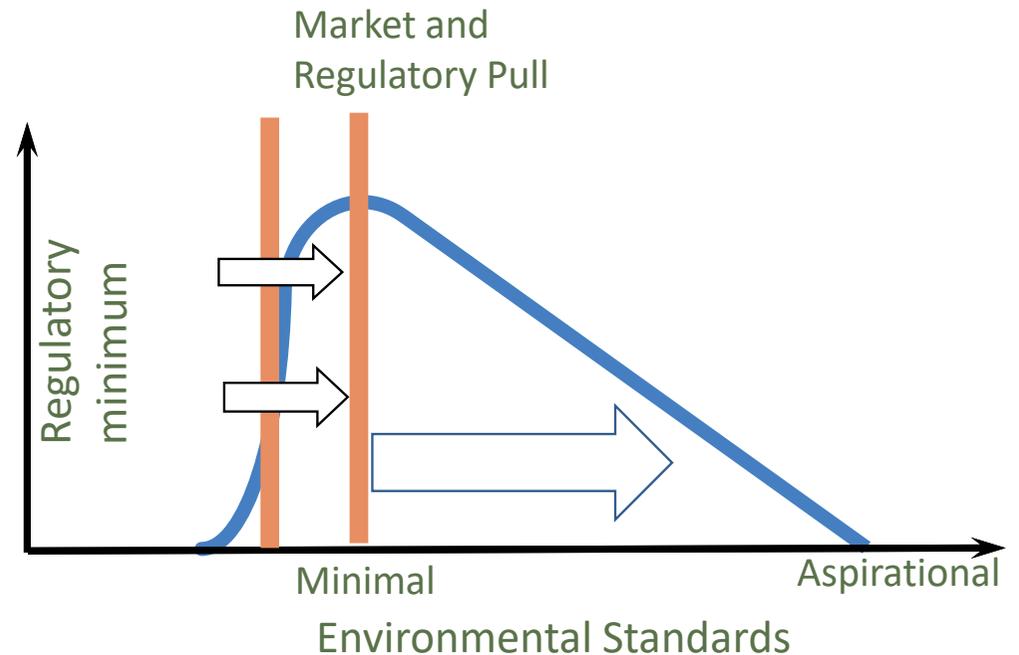
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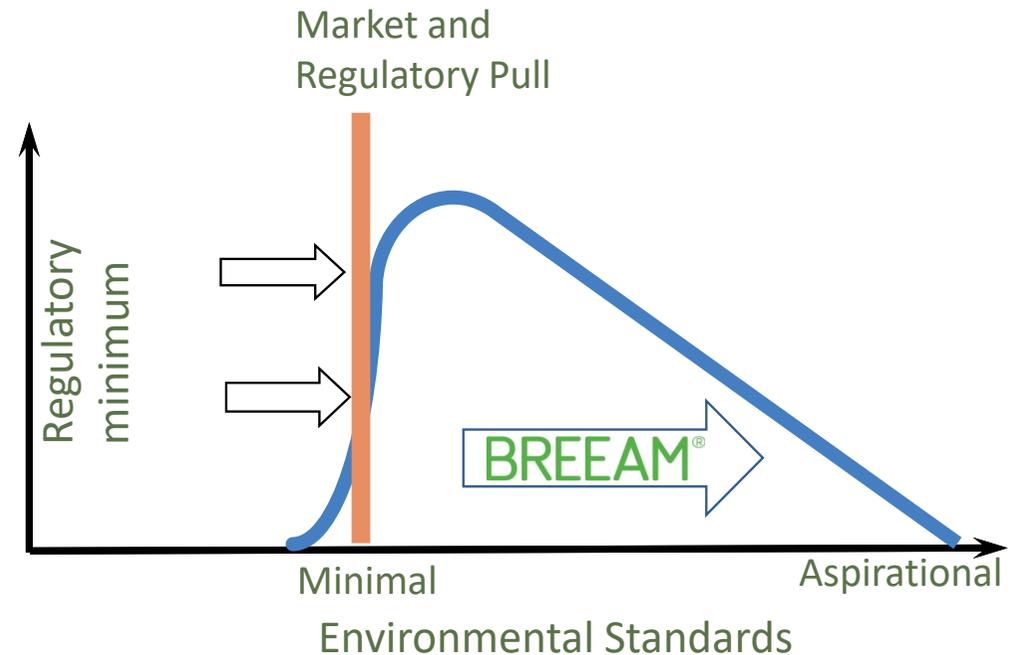
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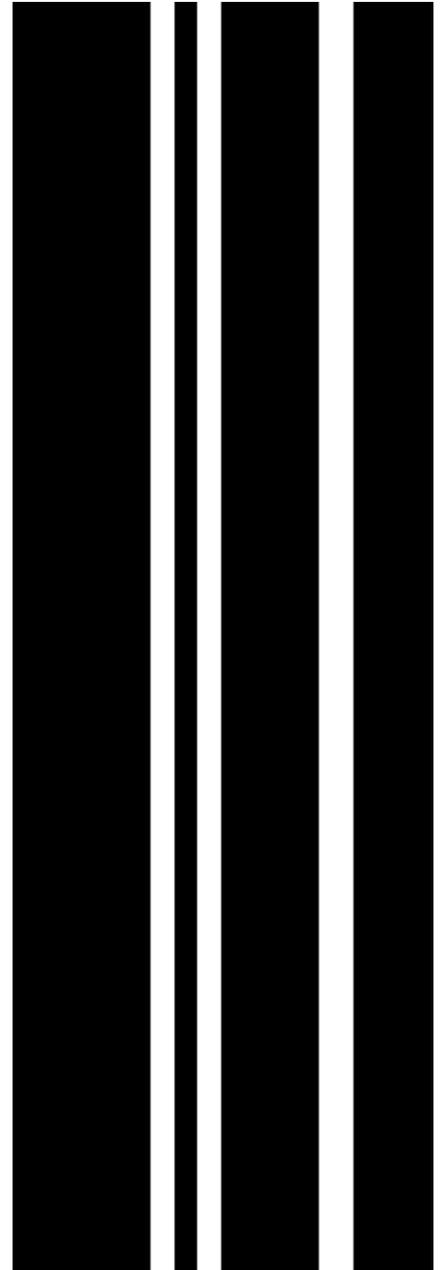
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Excellent – top 10% - Best practice

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**What are the main
changes for V7?**



BREEAM V7

BREEAM V7 is a significant step forward in:

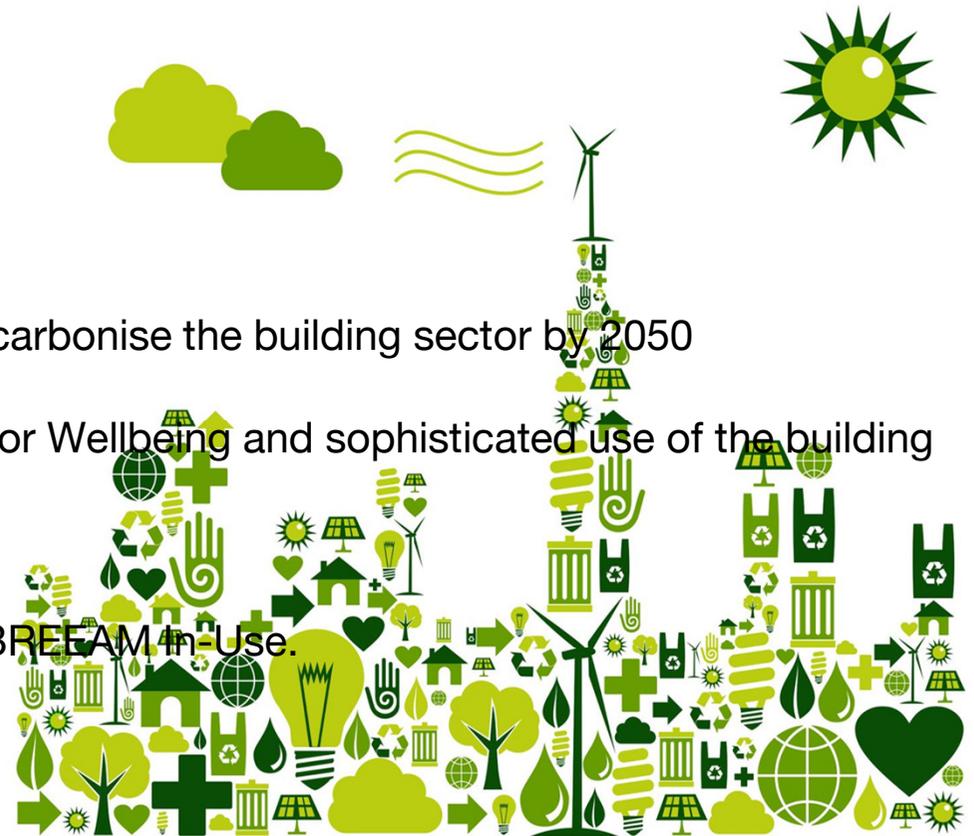
- **Reducing energy carbon emissions**
- **Whole life carbon reductions**
- **Wellbeing of its Users**
- **Building resilience**



BRE has responded to changes in the ever-increasing focus of Sustainability with the introduction of BREEAM V7

The key themes are:

- Decarbonisation – Align with industry objectives to decarbonise the building sector by 2050
- Addressing the Performance Gap – design strategies for Wellbeing and sophisticated use of the building
- Resilience to Climate Change
- Closer alignment with the lifetime of the building and BREEAM In-Use.



Nine key Sections

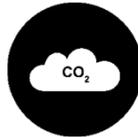
- Management



- Health & Wellbeing



- Energy



- Transport



- Water



- Materials



- Waste



- Land Use & Ecology



- Pollution



Health and Wellbeing

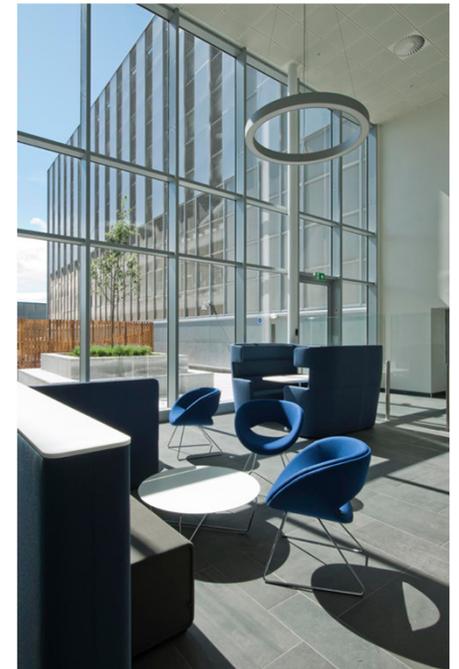


V7 has enhanced its H&W criteria with several new credits focusing on quality of natural light and thermal comfort. Some examples are as follows:

Primary change is separation of natural and artificial light plus a new credit.

Hea 01 – Natural light:

- **Glare Control**
(Evaluating glare from daylight – Daylight Glare Probability or Annual Sunlight Exposure)
- **Daylighting**
(Average and minimum lux levels remain; new tools can be used - EN17037 or IES LM-83)
- **Direct Sunlight to Windows***
(3 hours a day on the spring and autumn equinox to one area: 1 daylight credit min)
- **View Out**
- **Minimum Outstanding rating for % ratio to external wall or floor area**

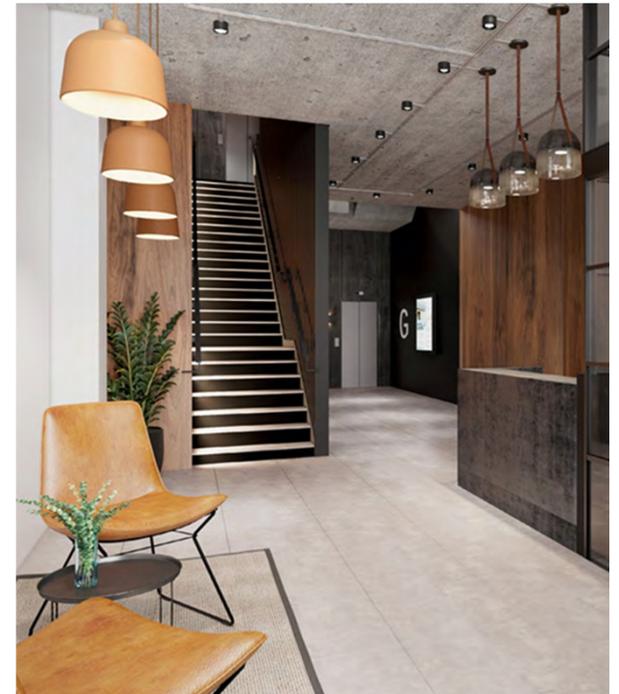


Health and Wellbeing



Hea 02 – Artificial light

- **Flicker**
(Avoid flicker and stroboscopic effects across applicable dimming and colour tuning range)
- **Internal & external lighting**
(now a separate credit)
- **Zoning & occupant control**
(Now a separate credit)
- **Exemplary credit**
(Dimming control/colour tuning requirement with limit of 2700k for afternoon and evening)



Health and Wellbeing



Hea 03* – Non-visual effects of light

- **Pre-requisite** – 1 daylight credit
- **Melanopic Equivalent Daylight Illumination (m-EDI)**
(illuminance of at least 250 lux MEDI for at least four hours during the daytime from noon)

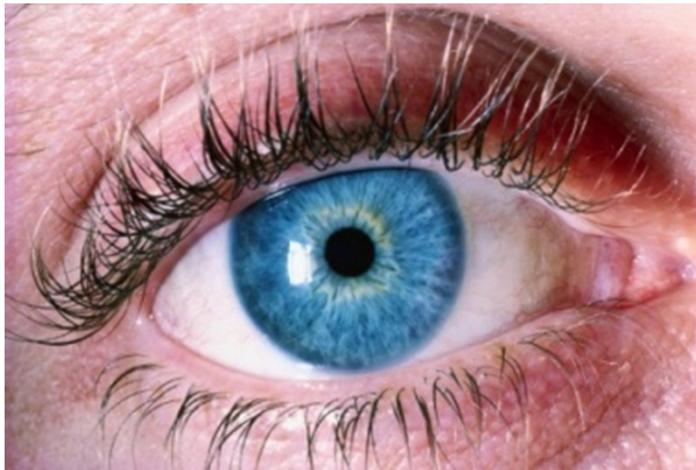


Health and Wellbeing



What does this mean for you (as designers)?

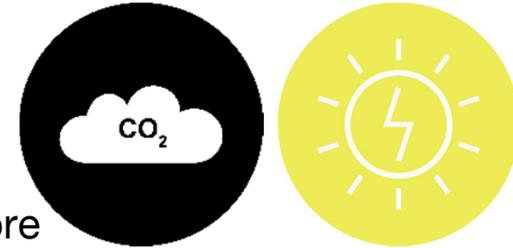
- More Design Team interaction
- Additional modelling
- Alignment with European standards



- ✓ Enhancing occupant mood, productivity and sleep quality
- ✓ Marketability
- ✓ ESG compliance

- ❖ Innovative design
- ❖ Costs associated with modelling
- ❖ Capital cost associated with controls and passive design

Energy



Not only have the credit requirements shifted with new regulations, but it also has more emphasis on Operational Energy.

Ene 02 – Prediction of operational energy and carbon

- Requiring early stage modelling and third-party verification

Ene 03 – Previously “External Lighting”, now “Sub-Metering”

Ene 04 – Low carbon design

- Optimisation of building form and not just “standard” passive design measures

Ene05 – Energy Efficient Equipment

- (Encourage the procurement of energy efficient equipment)

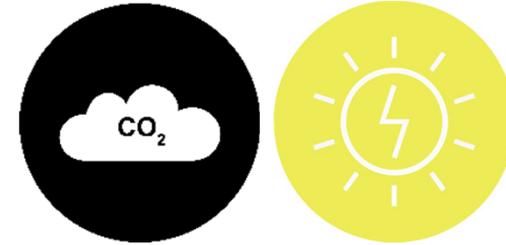
Ene06 – Energy Efficient Systems (Lifts, swimming pools, etc)

Ene 07* – Flexible demand response (Analysis of all fixed appliances)

Ene 08* – Installed Controls (Recognises energy efficient system operation via “smart controls”)



Energy



Ene 02 – Prediction of operational energy and carbon:

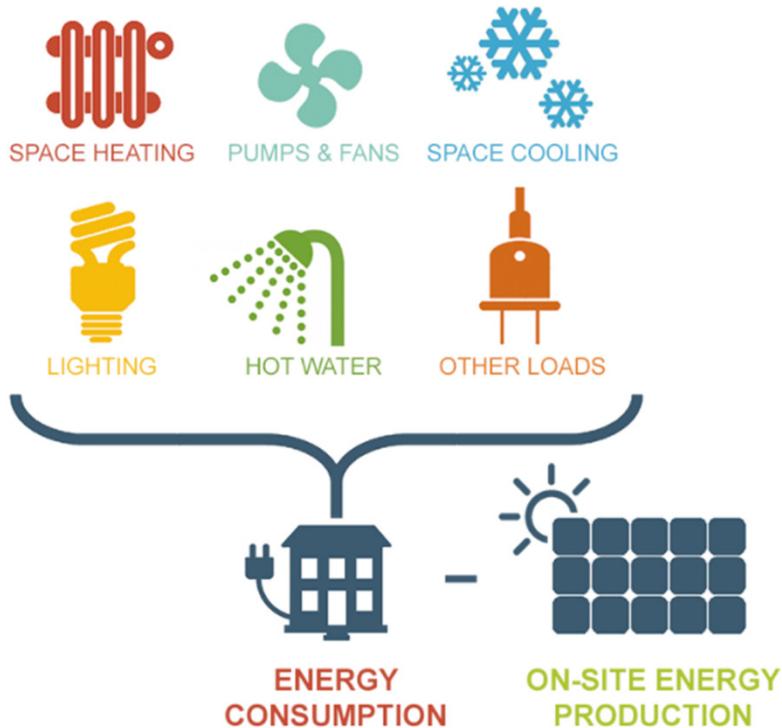
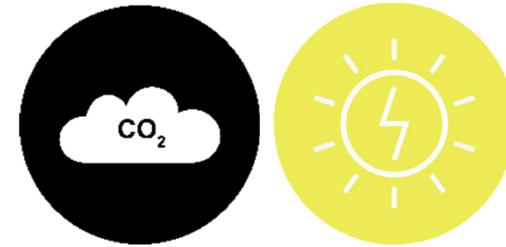
- Up to 5 credits available:
 - **Concept Stage:** define the energy strategy including fabric performance, MEP & benchmarking*
 - **Technical Design:** Calculations to be undertaken by Energy Assessor to CIBSE TM54 plus Risk Assessment

- Up to 7 credits available:
 - New **Operational Energy Performance ratio (OEP_{NC})** c/w min standards.

Table 6.3: Credits awarded according to OEP_{NC}

Operational energy performance score OEP _{NC}	Number of credits	Minimum standard*
≥ 0.1429	1	
≥ 0.2857	2	
≥ 0.4286	3	Excellent*
≥ 0.5714	4	
≥ 0.7143	5	Outstanding**
≥ 0.8571	6	AND
≥ 1.0	7	No fossil fuels on-site (criterion 14)

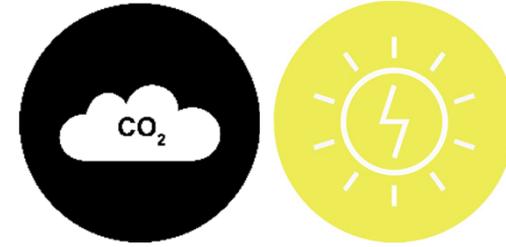
Energy



Ene02 - New Exemplary Credits:

- Providing an energy performance target to the stakeholders
- Third party validation of predictive energy modelling
- Commitment to measure in-use energy aligned with the sub-metering strategy. (Requires commitment of funding by the client for an energy assessor to complete this)
- Man05 Exemplary Credit: Zero carbon transitioning by 2050.

Energy

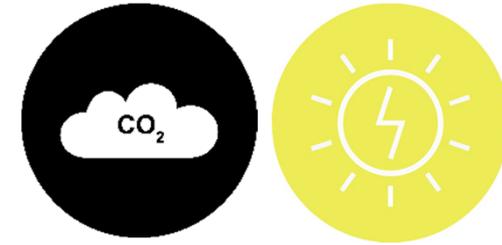


Ene 04 – Low carbon design

- Building form and orientation requires detailed analysis
- Increased credits available for fabric optimisation
(Modelling; now 2 credits available (5 or 10% improvement))
- Free Cooling removed from BREEAM v7
- Heat Pumps are no longer recognised as a Low Zero Carbon Technology!
- One credit for where PV is installed. Further One credit achieved for where generation targets are met.



Energy



Ene 05* – Energy Efficient Equipment:

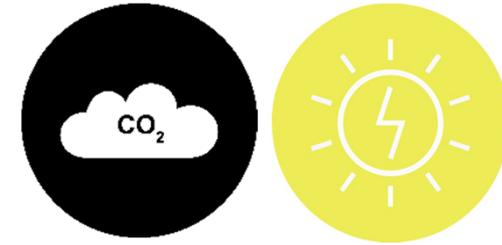
- Determine the in-scope unregulated energy consumption as a ratio of the overall regulated energy demand to provide credits available:

$$\frac{\textit{Total annual energy consumption for all in – scope equipment}}{\textit{Annual energy consumption for regulated end use}} \times 100$$

- The in-scope equipment must meet the minimum requirements of energy labelling efficiency (e.g. Computer monitors must have a D rating or above on the EU Energy Efficiency Labelling Scheme)
- To determine the number of credits achieved, the below ratio is followed:

$$\frac{\textit{Total annual energy consumption for all in – scope equipment that is energy efficient}}{\textit{Total annual energy consumption from in – scope equipment}} \times \textit{Number of credits available}$$

Energy



Ene 06* – Energy Efficient Systems:

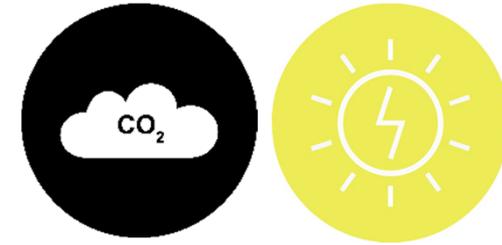
- Determine the in-scope unregulated energy consumption as a ratio of the overall regulated energy demand to provide credits available (In scope systems are listed to be External lighting, Cold Storage, Lifts and escalators, Swimming Pools, Commercial laundries and Cooling systems within server rooms):

$$\frac{\text{Total annual energy consumption for all in – scope systems}}{\text{Annual energy consumption for regulated end use}} \times 100$$

- The in-scope systems must meet the minimum requirements set out in the manual (e.g. External lights must have an initial efficacy of 70 lm/W and controlled to prevent operation during daylight hours).
- To determine the number of credits achieved, the below ratio is followed:

$$\frac{\text{Total annual energy consumption for all in – scope systems that meet the min. requirements}}{\text{Total annual energy consumption from in – scope equipment}} \times \text{Number of credits available}$$

Energy

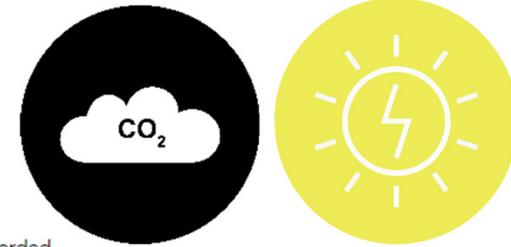


Ene 07* – Flexible Demand Response:

- Number of “points” awarded is determined by the flexible demand capability over the systems present
- Up to **two credits** available:
 - 1 – 3 points = 1 credit;
 - >3 points = 2 credits
- Early consultation with Engineers required.

Systems present	Points available	Flexible demand capability	Points awarded
Electric space heating	1	Operation can be optimised based on signals from the electricity supplier or local renewable sources.	1
Electric space cooling	1	Operation can be optimised based on signals from the electricity supplier or local renewable sources.	1
Electric domestic hot water	1	Operation can be optimised based on signals from the electricity supplier or local renewable sources.	1
Electric vehicle charging points	2	Charging with one-way control based on signals from the electricity supplier or local renewable sources.	1
		Charging with two-way control based on signals from the electricity supplier or local renewable sources.	2
Other systems or equipment with flexible demand capability	3	Present	1
		The battery energy storage system is capable of charging based on signals from the electricity supplier or local renewable sources.	1
		The battery energy storage system is capable of feeding electricity back into the grid.	1

Energy



Ene 08* – Installed Controls:

- Number of “points” awarded is determined by the number of installed controls
- Up to **two credits** available
- Early consultation with Engineers required.

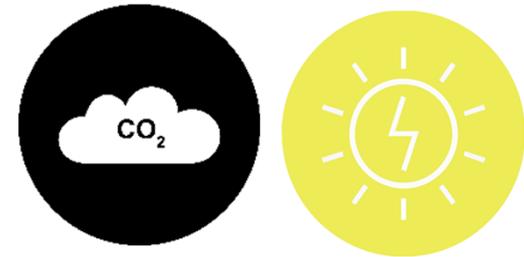
Table 6.18: Installed controls (space heating systems) – points available and awarded

Building service	System type	Points available	Control type	Control functionality	Points awarded		
Space heating	Any	4	Room level heating output – all heat generators	Heating output controlled at the room/zone level	1		
				Heating output controlled at the room/zone level with communication between the room controllers and the building control system and or occupancy detection	2		
			AND				
			Heat generator output – heat pumps	Variable control (e.g., hot gas bypass, inverter frequency control)	1		
				Variable control (e.g., hot gas bypass, inverter frequency control)	2		
			OR				
			Heat generator output – other types of heat generator	Outside temperature sensor	1		
				Load, for example supply water temperature set point	2		
			Systems with a heat distribution medium (e.g., air or water)	Heat distribution temperature	3	Outside temperature sensor	1
						Indoor temperature sensor	2
Variable speed control of pumps and/or	Present	1					

Energy

What does this mean for you:

- Enhanced teamwork at early Concept Design period
- More early-stage dynamic simulation modelling
- New modelling techniques
- Enhanced controls



- ✓ Reduced running costs
- ✓ Reduced energy usage
- ✓ Higher letting performance/marketability
- ✓ Enhanced Wellbeing for the end user

- ❖ Cost associated with modelling
- ❖ Capital cost of sustainability
- ❖ Controllability with Utilities

Water



Wat05* – Prediction of operational Water Consumption:

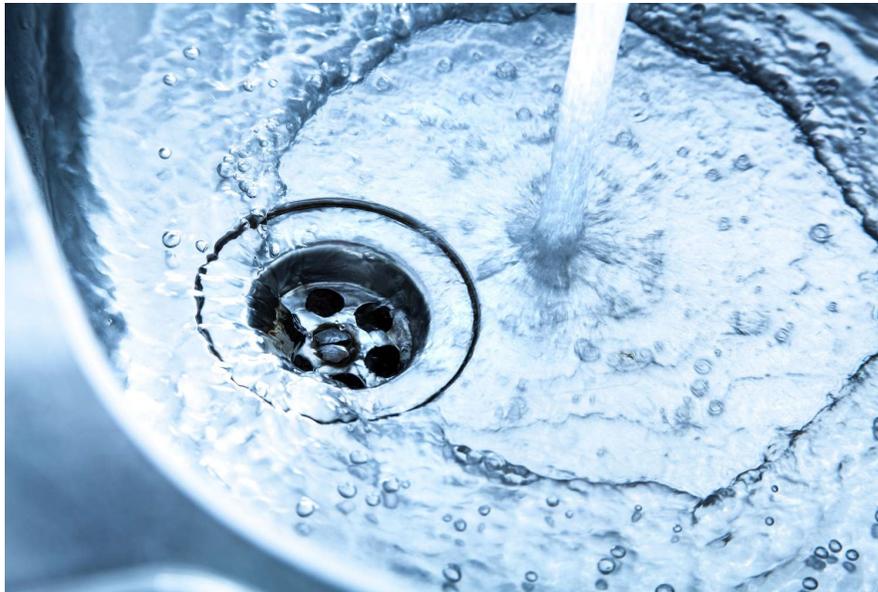
- Wat01 calculator tool uses standard occupancy assumption to calculate the annual water consumption for sanitary-ware water using components.
- Wat05* requires expected operational water consumption for in-use occupancy patterns to determine the annual water consumption.

Wat01	Wat05
Urinals	Swimming & Hydrotherapy Pools
WC's	External Planting
Taps	Vehicle wash stations
Showers & Baths	Cooling Towers
Dishwashers & Washing machines	Systems that use water for heating or cooling

Water

What does this mean for you:

- Earlier review of water systems
- Detailed data gathering



- ✓ Reduced water consumption
- ✓ Potential for reduced energy use

❖ Detailed analysis for operational systems



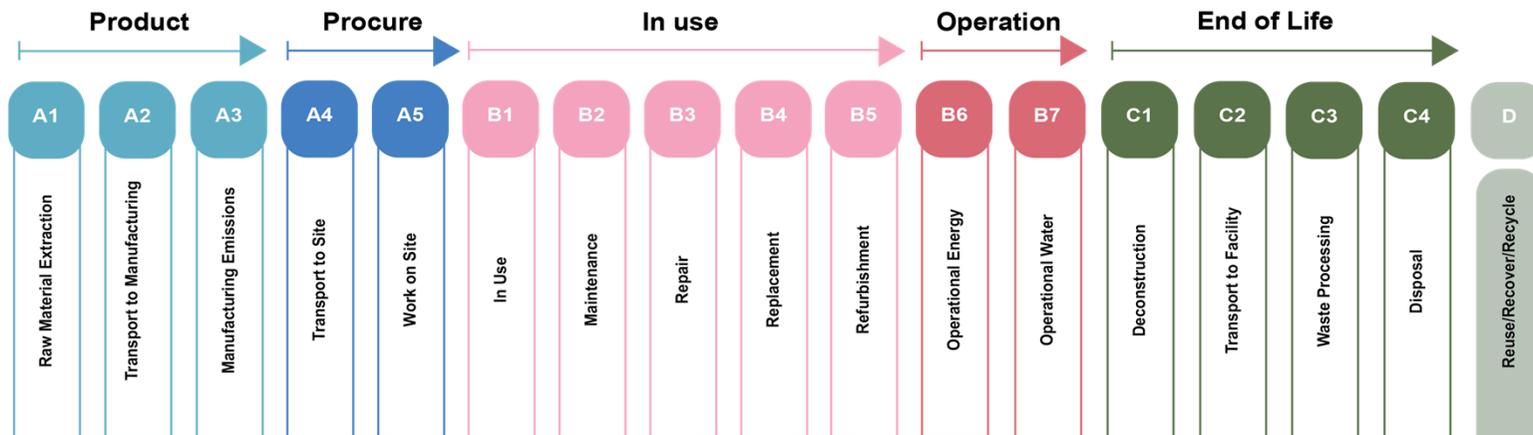
Whole life carbon analysis



Mat 01 - Building life cycle assessment

WLC analysis is a comprehensive assessment of a building's total carbon emissions across its entire lifespan, from raw material extraction to demolition and disposal

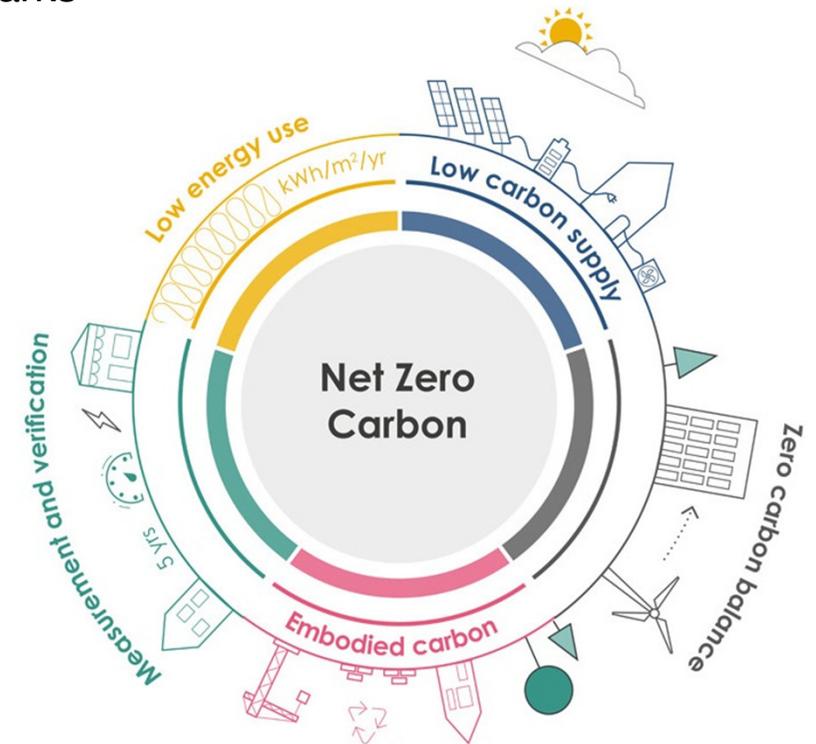
The Whole Life Carbon (WLC) Analysis credits have been completely overhauled.



Whole life carbon analysis



- 7 credits PLUS 3 exemplar credits overall
- Embodied carbon performances are now aligned against benchmarks
- Introduction of three stages rather than two:
 - Concept (2 credits)
 - Technical design (1 credits)
 - Post-construction (2 credits)
 - Benchmark comparison (2 credits + 1 exemplar)
- Two additional exemplar credits:
 - Embodied carbon public data disclosure
 - Third part verification is now required for Outstanding ratings.

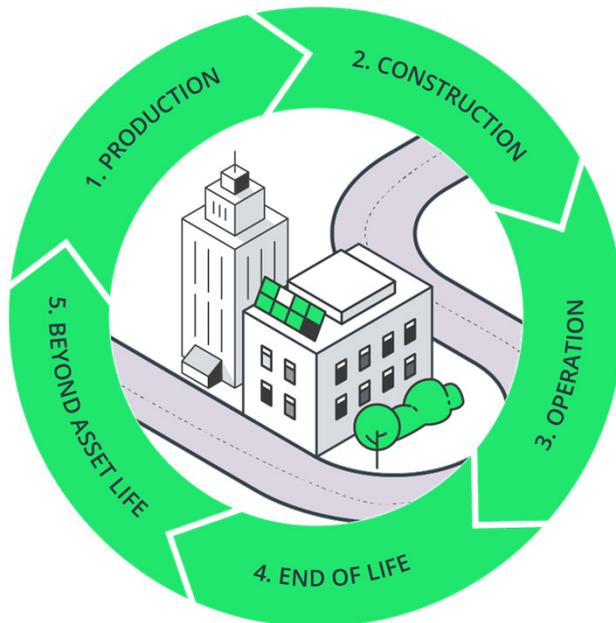


Whole life carbon analysis



What does this mean for you:

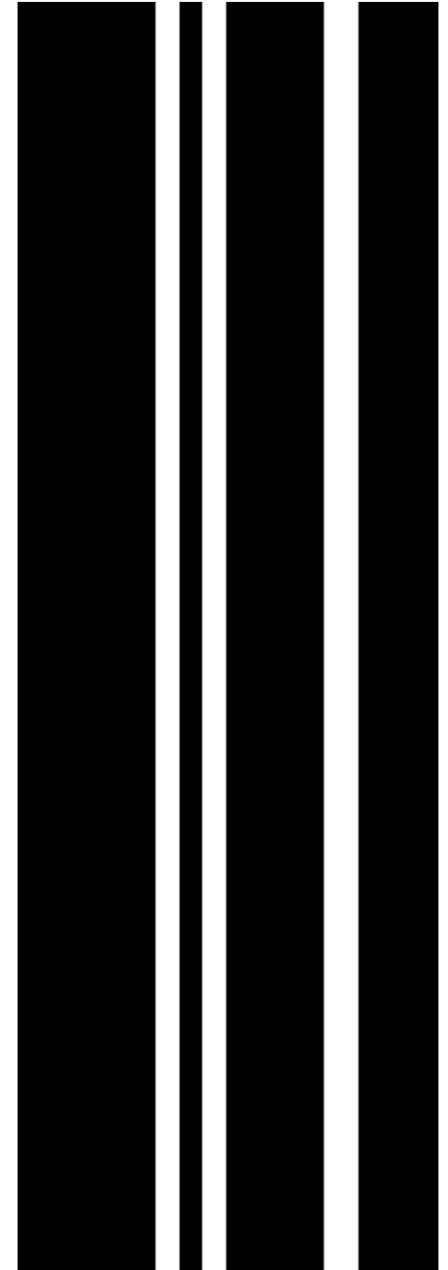
- Additional WLC Analysis modelling
- Harder to gain credits for “just doing a WLC”
- Higher early-stage Teamwork



- ✓ Reduced embodied carbon
- ✓ Marketability
- ✓ ESG compliance

- ❖ Additional WLC costs including third party
- ❖ Potential higher material costs

BREEAM 2018 vs V7?



Working Example

Difficult to accurately predict the score differences between similar buildings using different criteria.

However, we have made a reasonable start based on a current working project.

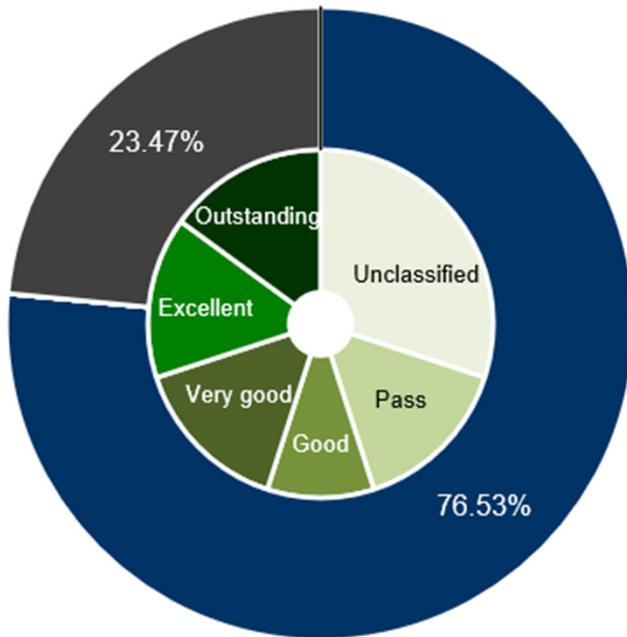
Working Example

Building X – Typical speculative office:

- Six storey new construction building
- Speculative office
- End user unknown
- Built on previously developed land
- Ecology enhancements are available
- City centre site with excellent public transport and sustainable transport
- Early involvement of the Team allowed for Stage 2
- High standard of efficiency and sustainability
- Currently seeking Excellent under BREEAM 2018
- Ideally seeking 6% buffer.

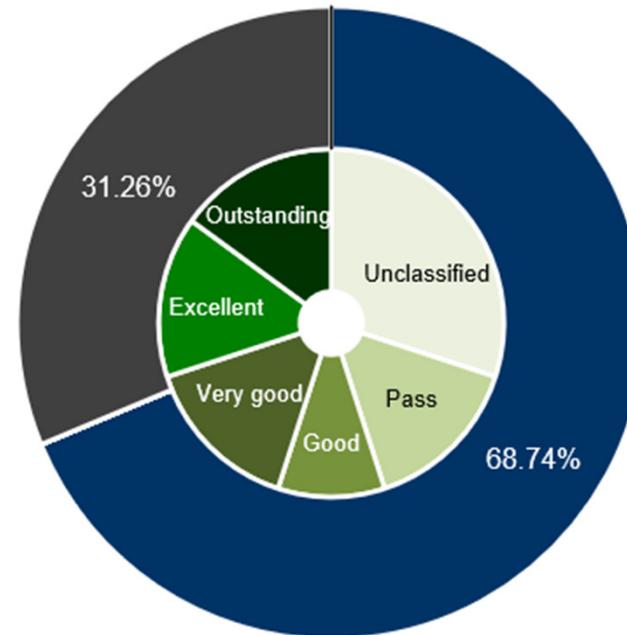
Working Example

BREEAM 2018



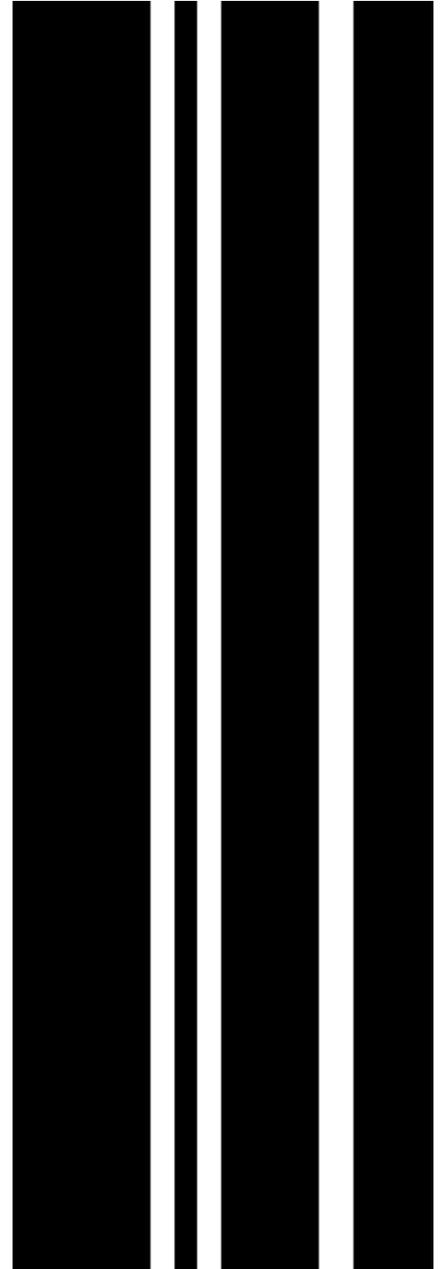
Score of ~76%
EXCELLENT rating
With ideal 6% buffer

BREEAM V7



Score of ~69%
VERY GOOD rating
~8% shortfall over 2018

**When will V7
come into force?**



Key dates:

New Construction V7 came into effect on 30 September 2025

New Construction versions 2018, V6 and V6.1 will be “retired” on **27 January 2026**

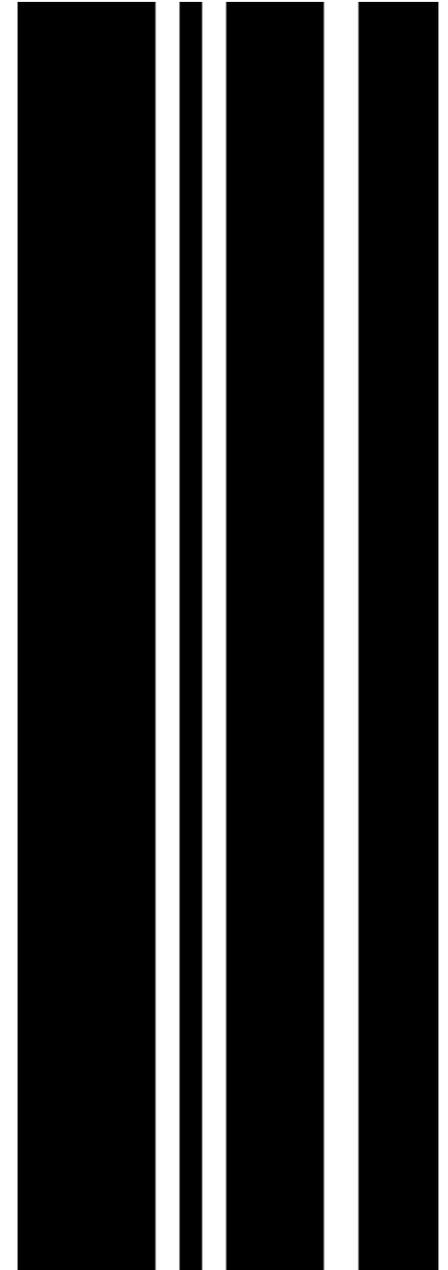
Refurbishment V7 and separated Fit-Out V7 is currently out for consultation, to be rolled-out **Q1/Q2 2026**

BREEAM In-Use V7 – TBC

BREEAM Residential V7 - TBC



BREEAM Bespoke / RFO **case study**



30 Semple Street, Edinburgh

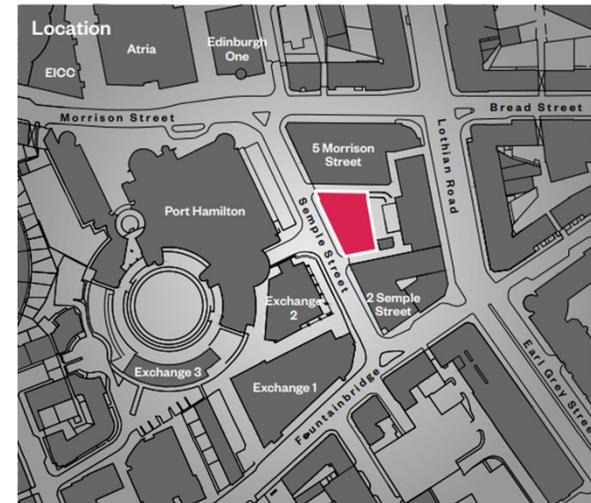
- Refurbishment of an existing office “Excel House”
- Developed by Corran Properties Limited on behalf of CBRE Investment Management
- 57,000ft² of Grade ‘A’ office accommodation
- Two new storeys added to the top of the building
- Completed early 2025
- Architects were MLA
- Services/Sustainability Consultants were KJ Tait
- Main Contractor were Olgivie Construction



30 Semple Street, Edinburgh



- Excel House was originally built in 2001
- Located in the capital's financial district
- “The redevelopment’s aim was to achieve the highest environmental and sustainability accreditations in Scotland whilst creating bright flexible spaces with great amenities”



30 Semple Street, Edinburgh

30 Semple Street achieved*:

- BREEAM Score of 93.2%
- Scotland's first certified Outstanding office rated building
- Scotland's highest rated certified building across all classes
- The world's second highest rated completed fully refurbished building



Final Certificate
The assessment of:

30 Semple Street
Edinburgh
EH3 8BL

has been carried out according to Technical Manual:

BREEAM Refurbishment and Fit-Out 2014: Office

and based on the Assessment Report produced by:
KJ Tait Engineers
has achieved a score of 93.2%

Outstanding ★★★★★

Certificate Number: BREEAM-0122-0169 Issue: 02

30 Semple Street, Edinburgh



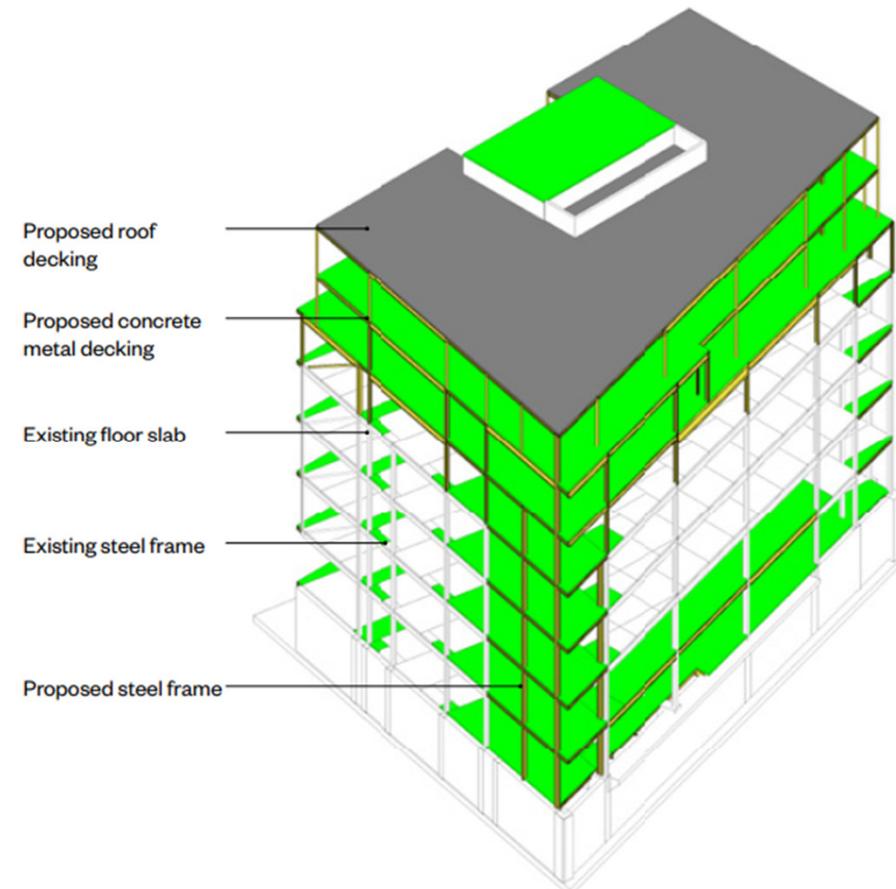
30 Semple Street also achieved:

- 5* NABERS UK rating
- AirRated Platinum accreditation for indoor air quality
- EPC 'A' achieved
- A Circular Economy approach

30 Semple Street, Edinburgh

BREEAM OUTSTANDING was achieved by:

- Client's desire to achieve ESG excellence from the outset
- Early involvement from the Design Team was fundamental
- Early buy-in from the Contractor and pro-active Sustainability Champion
- Reusing the structure and superstructure significantly reduced embodied carbon, minimises construction waste and requirement for new materials.



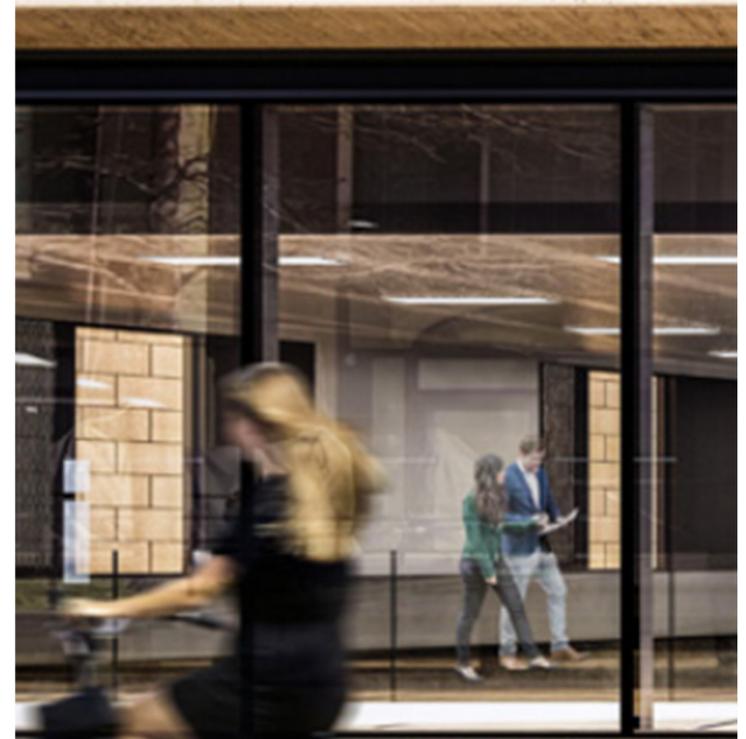
30 Semple Street, Edinburgh



- Decarbonising via the removal of fossil fuels
- Replaced with Hybrid VRF systems
- Installation of Photovoltaics located on the roof
- Highly energy efficient systems including thermal wheel heat recovery
- Increased daylighting c/w daylighting controls to the LED lighting
- Minimising water consumption through careful specification

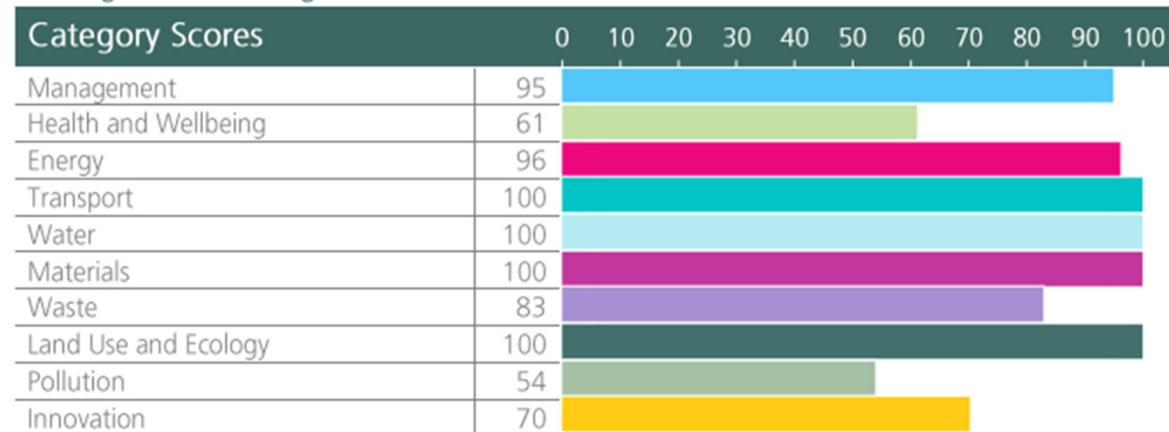
30 Semple Street, Edinburgh

- Reducing energy use through the use of enhanced fabric design
- Double glazing façades with a G-Value of 0.3 and U-value of $1.5 \text{ W/m}^2\text{K}$ (glass & frame).
- Facade systems incorporate thermal breaks and argon fill
- Excellent end of trip facilities
- Electric vehicle car charging

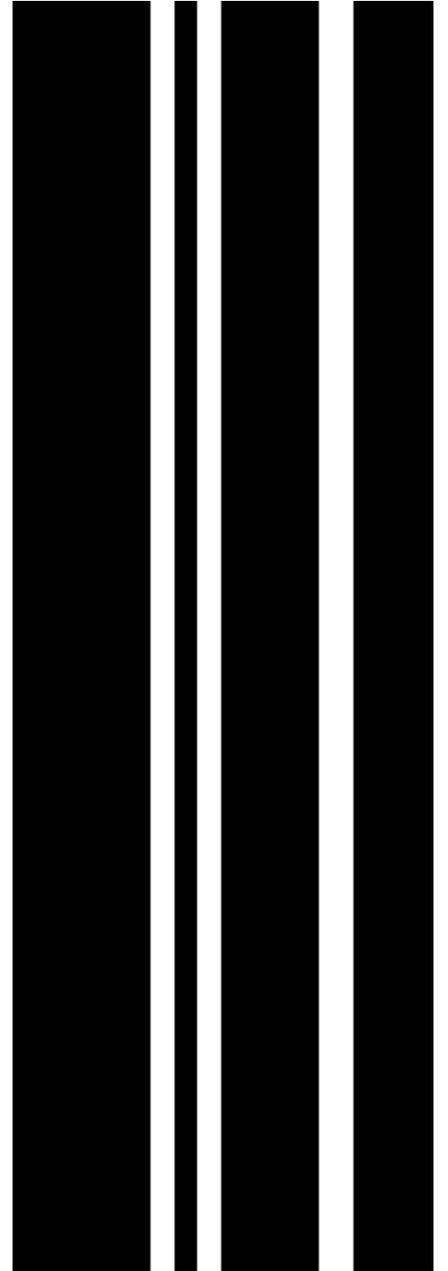


30 Semple Street, Edinburgh

- EPC rating of A (Pre-developed building was C)
- BER of 2.4 kgCO₂/m²/year (40 kgCO₂/m²/year)
- Embodied Carbon of 320 kgCO₂e/m² (A1–A5)
(LETI's target of 600 kgCO₂e/m²)
- Embodied CO₂ Savings through retaining the frame saved 3,300 tonnes of CO₂ (over 50% of what a full rebuild would have emitted)
- Maximum score for Considerate Contractors Scheme
- 100% BREEAM points for Transport, Water, Materials and Ecology (96% Energy and 95% Management)



Summary



V7 summarised:

Generally, V7 looks to:

- Reduce Operational energy/carbon
- Reduce Embodied energy/carbon
- Closing the performance gap
- Increase the Wellbeing of users
- Whilst addressing the whole life carbon across the building lifecycle

V7 summarised:

V7 is a significant leap forward in BREEAM compliance.

It is not just intended to provide sustainability in **theory**; it is encouraging the building industry to actually deliver net zero carbon buildings in **practice**.

It can enhance your marketability as well as enhancing the user experience.

It aligns much more with other certification such as NABERS and WELL.

It can assist with your ESG requirements and EU Taxonomy.

More robust evidence against “green-washing”.

But it does come with its challenges...



Thank You
Questions?