

BREEAM (BRE Environmental Assessment Method) is the most widely used environmental assessment method for buildings. It sets the standard for best practice in sustainable design and has become the leading assessment method used to describe a building's environmental performance.

BREEAM provides clients, developers, designers and others with market recognition for low environmental impact buildings and assurance that best environmental practice is incorporated into a building.

It uses a straightforward scoring system that is transparent, easy to understand and supported by evidence-based research. Using BREEAM on a project has a positive influence on the design, construction and management of buildings and sets and maintains a robust technical standard with rigorous quality assurance and certification. As a low carbon cement replacement, Ecocem GGBS can boost the BREEAM rating for any building type.

BREEAM RATING BENCHMARKS

- Outstanding ≥ 85
- Excellent ≥ 70
- Very Good ≥ 55
- Good ≥ 45
- Pass ≥ 30

ECOCEM'S ROLE IN BREEAM

Ecocem can contribute to several points in the materials section of BREEAM. The materials section recognises and encourages the use of construction materials with a low environmental impact. This specifically refers to the embodied carbon over the full life cycle of the building.

The section is broken down into several credit categories that address specific issues such as durability and responsible sourcing. Ecocem GGBS is the best available technology for lowering the embodied carbon of concrete.

Five of the six credit categories within the materials section of BREEAM can be directly influenced by the use of Ecocem GGBS:

ECOCEM GGBS IN BREEAM		
CATEGORY	ISSUE	CREDITS AVAILABLE
Materials		14
Mat 01	Life cycle impacts	Up to 6
Mat 02	Hard Landscaping and boundary protection	1
Mat 03	Responsible sourcing of materials	4
Mat 05	Designing for durability and resilience	1
Mat 06	Material efficiency	1

ECOCEM MATERIALS CONTRIBUTION

Mat 01 Life Cycle Impacts

BREEAM assesses a building based on certain elements. Within those elements GGBS is a component that can increase the amount of credits available. Element options for the various sections of a building are pre-assessed in the Green Guide for Specification.

GGBS CONTRIBUTION

Some elements listed in the Green Guide include GGBS already. Elements that include GGBS have a high green guide rating which will contribute to the overall BREEAM rating for the building. Other elements from the Green Guide can still be chosen and include GGBS in their specification. These elements will gain an uplift in credits awarded due to the third party Environmental Product Declaration (EPD) held by Ecocem GGBS.

Mat 02 Hard Landscaping and Boundary Protection

SCOPE OF HARD LANDSCAPING

For the purpose of the assessment, hard landscaping can include parking areas, pedestrian walkways, paths and patios. The definition excludes basement parking, access or approach roads and designated vehicle manoeuvring areas, balconies, roof terraces, specialist sports areas and retaining walls.

GGBS CONTRIBUTION

Hard Landscaping materials are assessed under the Green Guide as outlined above. By selecting elements that incorporate GGBS a higher Green Guide rating can be achieved.

Mat 03 Responsible Sourcing of Materials

This category rewards points for the percentage of an element that is responsibly sourced i.e the constituents of concrete. The available credits in this category can be awarded where the applicable building materials are responsibly sourced in accordance with the BREEAM methodology.

GGBS CONTRIBUTION

Ecocem GGBS is a recycled material with a transparent supply chain. The product is certified as "Very Good" under the BES 6001 Responsible Sourcing of Construction Products Standard.

Mat 05 Designing for Durability and Resilience

This credit rewards measures taken to protect exposed parts of the building from material degradation. The relevant building elements must incorporate appropriate design and specification measures to limit material degradation due to environmental factors.

GGBS CONTRIBUTION

GGBS increases durability of concrete and significantly lengthens the lifespan of the element. GGBS enhances durability against all forms of material degradation as listed in BREEAM.

Mat 06 Material Efficiency

To recognise and encourage measures to optimise material efficiency in order to minimise environmental impact of material use and waste. This includes using fewer materials, reusing existing demolition materials and procuring materials with higher levels of recycled content.

It may also include the adoption of alternative means of design/construction that result in lower materials usage and lower wastage levels.

GGBS CONTRIBUTION

GGBS can be used to lower the Portland cement component in a building element. This is done through efficient material specification and can be incorporated from early design stage.

GGBS is a 100% recycled material making it a sustainable procurement option within this category.



GGBS CONCRETE

Concrete can be specified at design stage to achieve credits across a variety of categories for low carbon design, healthier material decisions and durability. By including GGBS in concrete the potential credits available in these categories increases significantly.

GGBS CONCRETE CONTRIBUTION		
ISSUE NAME	POTENTIAL ROLE OF GGBS CONCRETE	CREDITS AVAILABLE
Ene 01 Reduction of CO₂ Emissions	Thermal mass of concrete combined with sufficient ventilation can reduce building cooling requirements.	12
Ene 04 Low Carbon Design	Including concrete in the initial design of a project can improve passive heating and cooling potential of a building due to its thermal mass.	3
Hea 01 Visual Comfort	Concrete can be specified to improve light reflectance or reduce glare in place of other materials.	6
Hea 02 Indoor Air Quality	The use of exposed concrete finishes reduces the need for other finishes that may contain VOC's. Including GGBS in the concrete mix will ensure a whiter and smoother finish to exposed concrete.	5
Hea 04 Thermal Comfort	Concrete can provide higher thermal mass internally than other materials.	3
Hea 05 Acoustic Performance	Concrete provides inherent superior sound insulation properties over other materials.	4
Hea 06 Safety & Security	Concrete can provide excellent fire resistance. The integrity of structures can be guaranteed for even longer against fire when GGBS is used.	2
Man 02 Life Cycle Cost & Service Life Planning	The durability of concrete is greatly enhanced when GGBS is used. Service life and time to repair are greatly extended by using GGBS.	4
LE 01 Site Selection	The increased sulphate resistance of GGBS can extend concrete's lifespan in aggressive ground conditions and help stabilize contaminated soils.	2
Wst 01 Construction Waste Management	GGBS Concrete is a 100% recyclable material and can also be used for sustainable off site manufacturing of precast elements to reduce waste on site.	4

ENVIRONMENTAL PRODUCT DECLARATIONS (EPD)

Where a third party verified EPD is available for a product that forms part of an assessed element, for example a concrete block used in an external wall, the EPD can potentially be used to uplift the element's BREEAM performance.

Ecocem has a third party verified EPD for their GGBS. The carbon footprint of Ecocem GGBS is 42kg CO₂/tonne and can significantly reduce the embodied carbon of concrete.



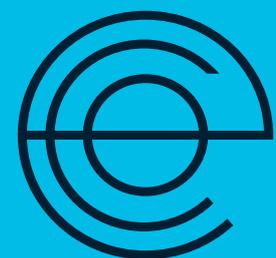
SUSTAINABILITY ASSISTANCE

We have an in house sustainability expert that can assist you to get the most from GGBS on your next BREEAM Project. Our sustainability expert can identify credits that GGBS can contribute to including health and wellbeing, resource efficiency and waste management to improve the final rating of a project.

Contact us today for more information. Visit our website to see our full suite of technical advisory notes.

CERTIFICATION

Ecocem has been rigorously tested in accordance with the EN 197-2 Cement - Part 2: Conformity evaluation and the EN 15167-2: Ground Granulated Blast furnace Slag and has been issued with an EC certificate of conformity by an EU Notified Body and carries the CE mark.



**Innovation
Powering
Sustainability**

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