

THE UGREEN GUIDE FOR

GREEN BUILDING CERTIFICATIONS

LEED . WELL . EDGE . FITWELL .
AQUA-HQE . BREEAM & MORE

*ANA JULIA KFOURI, ENG., LEED AP BD+C,
EDGE EXPERT & AUDITOR*



INTRODUCTION

Sustainable Building Certification is a process whereby a building is assessed and certified as being environmentally sustainable and resource efficient. The certification process generally involves an assessment of the design, construction and operation of the building to ensure that it meets certain standards of environmental and social performance. These standards can include energy efficiency, water conservation, indoor air quality, use of sustainable materials and general environmental impact.

Environmental certifications for buildings are often sought after by building owners, developers, builders and designers who wish to demonstrate their commitment to sustainability and environmental responsibility. It is usually offered by third-party organizations such as GBCI (Green Business Certification Inc.), IFC (International Finance Corporation), among others.

Certification can be awarded at different levels based on the performance of the building and the number of sustainable features incorporated. The certification process involves rigorous assessment, documentation and verification, which can take several months to complete. Once certified, a building can use its certification to promote its environmental credentials to tenants, investors and other interested parties.



Goals:

Sustainable building certifications have become increasingly popular over the years as more and more people recognize the need for sustainable building and green building practices. There are several different certifications available, each with its own set of benefits, costs, and requirements. In this present document, we will go deeper into the following certifications: LEED, WELL, EDGE, Fitwel, AQUA-HQE, BREEAM and DGNB.

The purpose of this document is to present the differences between the certifications mentioned above and the UGREEN Process of working with environmental certifications, facilitating the choice when certifying a building.



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LEED

LEED

Leadership in Energy and Environmental Design (LEED) is a widely recognized certification program that was developed by the US Green Building Council (USGBC). LEED certification focuses on building sustainability and awards points for factors such as sustainable location, energy efficiency, water conservation, air quality and use of environmentally friendly materials. LEED offers certification for a variety of building types, including new construction, existing buildings, homes and neighborhoods.

Main benefits

Environmental

- Saving resources (water, energy, materials...);
- Better indoor air quality;
- Reduction of waste generated;
- Use of lower impact materials;
- Lower CO2 emissions.

Economical

- Better marketing and higher property value;
- Reduced operating costs (lower electricity and water bills);
- Possibility of IPTU reduction (depending on the region).

Types of buildings that LEED supports

LEED certification is suitable for any type of building, from residential buildings, commercial buildings, hospitals, schools, warehouses, airports and everything in between.

The different types of LEED certification

The most common types of LEED certification are LEED for Building Design and Construction (BD+C), LEED for Interior Design and Construction (ID+C), LEED for Operations and Maintenance (O+M) and LEED for Neighborhood and Development (ND).

LEED BD+C

It is intended for new construction projects, including new buildings and major renovations. The certification process assesses the sustainability characteristics of the building from design to construction.

LEED ID+C

It is intended for interior adaptation projects, including commercial and institutional spaces. The certification process assesses the sustainability characteristics of interior spaces, including lighting, heating and cooling systems, and materials.

LEED O+M

It is intended for existing buildings and assesses the sustainability of building operations and maintenance practices. The certification process includes requirements and opportunities for sustainable cleaning practices, energy and water conservation, waste reduction and indoor environmental quality.

LEED ND

It is aimed at developing sustainable and environmentally responsible neighborhoods and communities. It focuses on creating walkable, connected neighborhoods with green infrastructure, resource efficiency, community engagement, and prioritizing health and wellness.



In addition to these four main types of certification, there are also specialized certifications available for different types of buildings and projects. This includes LEED for Schools, LEED for Homes, LEED for Healthcare and others. Each of these certifications has its own specific requirements and scoring system tailored to the needs of each building or project.

Overall, LEED certification is available for a wide range of building types and projects, each with its own set of requirements and scoring system designed to promote sustainable building practices.

LEED Certification Categories

LEED certification evaluates buildings in several sustainability categories, including:

- Location and transportation: encourages projects that are built in sustainable locations, with easy access to public transportation, in addition to promoting construction in consolidated urban locations.
- Energy efficiency: promotes the use of technologies and practices that reduce energy consumption, such as efficient lighting systems, HVAC (heating, ventilation and air conditioning) systems and efficient thermal insulation.
- Efficient use of water: encourages projects that promote water conservation and the use of technologies and practices that reduce water consumption, such as low-flow devices, efficient irrigation and water reuse systems.
- Materials and Resources: encourages projects that use materials and resources efficiently and sustainably, including the use of recycled or renewable building materials.

- Indoor environmental quality: encourages designs that promote indoor environmental quality and occupant comfort, including efficient ventilation systems, use of low-emission materials and natural lighting.
- Design innovation: encourages projects that incorporate innovative ideas and sustainable practices.
- Regional Priorities: Recognizes the specific needs and challenges of each geographic region and encourages projects that address these challenges and promote local sustainable solutions.

LEED Certification Processes

The LEED (Leadership in Energy and Environmental Design) certification process involves several steps, including:

Registration: The first step is to register the project with the US Green Building Council (USGBC), which administers the LEED program. During this step, the project team selects the LEED rating system that best fits their project and pays the registration fee.

Documentation: The project team begins collecting documentation to demonstrate compliance with prerequisites and credits in the selected LEED rating system. Documentation is collected throughout the construction and includes plans, specifications and other documents related to the building. The USGBC provides LEED Online, a web-based platform for project teams to upload and manage their documentation.



Review: Once the work is completed and documentation is submitted, the USGBC performs a review to ensure the project meets prerequisites and achieves the required number of credits for the desired certification level. The USGBC may request additional information or clarification from responsible staff during the review process.

Certification: After the review is complete and the project meets all prerequisites and achieves the required number of credits, the USGBC awards the project a level of LEED certification: Certified, Silver, Gold, or Platinum.

Post-certification: Upon project certification, the USGBC encourages ongoing monitoring and reporting of building performance to ensure that the building continues to meet LEED requirements. The USGBC also offers recertification and reassessment options for projects looking to maintain or improve their LEED certification.

LEED Certification Levels

LEED projects are evaluated in each of the presented categories and receive a score based on their effectiveness in meeting sustainability criteria. The number of points required for certification varies depending on the level of certification sought. To obtain certification, a building must obtain a minimum of 40 points out of a possible 110. The four levels of certification are:

- **CERTIFIED** - 40-49 points
- **SILVER** - 50-59 points
- **GOLD** - 60-79 points
- **PLATINUM** - more than 80 points



LEED Certification Costs

LEED Certification costs, paid directly to the certification body, vary by building type and square footage. Fee amounts start at:

Entry fee: from \$ 1.200

Certification fee: from \$ 2.850

Commissioning service: negotiated directly with the commissioner.

Other values: <https://www.usgbc.org/tools/leed-certification/fees>

In addition to the costs paid to obtain the Seal, consultancy costs must also be considered.



A graphic consisting of several overlapping teal-colored arcs that form a circular shape. The arcs are of varying shades of teal, from light to dark. In the center of this circular arrangement, the word "WELL" is written in a bold, teal, sans-serif font.

WELL

WELL

WELL certification is a performance-based certification program that focuses on the health and well-being of building occupants. The WELL Building Standard was developed by the International WELL Building Institute (IWBI) and focuses on factors such as air quality, water quality, lighting and noise levels. WELL certification is suitable for a variety of building types, including commercial buildings, schools and healthcare facilities.

Main benefits

Social

- Better indoor air quality;
- Reduced exposure to harmful chemicals;
- Better lighting and acoustics;
- Improved water quality;
- Greater thermal comfort for the occupants;
- Overall improvement in the health and well-being of occupants.

Economical

- Better marketing and higher property value;
- Reduced operating costs (lower electricity and water bills).

Types of buildings served by the WELL

WELL certification is best suited for buildings where the health and well-being of occupants is a priority, such as healthcare facilities and schools. However, it is also widely used in residential and commercial buildings that want to demonstrate the internal quality of the environment to their occupants.

The different types of WELL certification

The different types of WELL certification are based on the type of building or space and the specific needs of its occupants.

WELL Building Standard

This is the flagship certification program offered by the IWBI and covers all building types, including new construction, existing buildings and tenant spaces.

WELL Core & Shell

This certification program is designed for builders and building owners who are responsible for basic building elements such as the structure, envelope and mechanical systems.

WELL Interior

This program is designed for tenants who are renting space within a larger building and want to create a healthy and productive work environment for their employees.

WELL Community Standard

This certification program focuses on the health and well-being of entire communities, including neighborhoods, cities and regions.

WELL Certification Categories

There are ten categories that make up the WELL Certification. Each category has its own specific prerequisites and credit points. Here are the ten categories:

Air: Evaluates indoor air quality and levels of chemical and biological contamination.

Water: Evaluates the quality and availability of drinking water.

Food: Evaluates the availability and promotion of healthy and sustainable food.

Light: Evaluates the quality and quantity of natural and artificial light in the space.

Movement: Evaluates space design to encourage movement and physical activity.

Thermal comfort: Evaluates temperature, humidity and ventilation to ensure thermal comfort for occupants.

Sound: Evaluates the acoustic quality of the space and the reduction of unwanted noise.

Materials: Evaluates the selection of construction and finishing materials with low emission of toxic chemicals.

Community: Evaluates the connection between the space and the local community.

Mentality: Evaluates the promotion of a culture of well-being and health in the occupants of the space.

WELL Certification Processes

The WELL certification process involves several steps, including:

Pre-Registration: The first step in the certification process is to register the construction project with the International IWBI. During this phase, the project team responsible for certification provides guidance and support to all involved throughout the process.

Documentation review: After pre-registration, the project team begins to prepare documentation that demonstrates compliance with the requirements of the WELL Building standard. This documentation is collected throughout the construction and includes plans, specifications and other documents related to the building.

On-Site Audit: Once the work is completed and the documentation has been reviewed, an on-site audit is carried out by a WELL Assessor. The assessor conducts a comprehensive review of the design and operation of the building to verify that the project meets the requirements of the WELL Building Standard.

Performance Verification: The WELL Evaluator verifies the performance of building systems, including air quality, water quality, lighting, thermal comfort, acoustics, and the presence of natural elements such as vegetation. This may involve testing various building systems to ensure they are working as intended.

Certification: After the performance check is completed, the building is evaluated based on the number of points achieved in each category. Depending on the number of points obtained, the building can receive Bronze, Silver, Gold or Platinum certification. Once certification is granted, it is valid for three years.

Recertification: To maintain WELL certification, the building must be reassessed periodically. Recertification involves a review of the building's performance over the previous three years, and the project team must demonstrate continued compliance with the WELL Building standard.

WELL Certification Levels

WELL projects are evaluated and given a score for meeting sustainability criteria in each category. Like LEED, to obtain certification, a building must obtain a minimum of 40 points and can achieve four levels of certification:

- WELL Certified Bronze - 40 points
- WELL Certified Silver - 50 points
- WELL Certified Gold - 60 points
- WELL Certified Platinum - 80 points

WELL Certification Costs

WELL Certification costs, paid directly to the certifying body, vary by building type and square footage. Fee amounts start at:

Registration fee: \$ 2.500

Certification fee: from \$0.16/pé² (minimum of \$ 6.500)

Commissioning service: negotiated directly with the commissioner.

Other values: <https://www.wellcertified.com/certification/v2/pricing>

In addition to the costs paid to obtain the Seal, consultancy costs must also be considered.

A graphic consisting of several overlapping teal-colored arcs that form a partial circle. The arcs are arranged in a way that they appear to be layered, with some being more prominent than others. In the center of this circular arrangement, the word "EDGE" is written in a bold, teal, sans-serif font.

EDGE

EDGE

EDGE Certification (Excellence in Design for Greater Efficiencies) is an efficient building certification system developed by the International Finance Corporation (IFC), a member of the World Bank Group. The EDGE certification program is designed to promote sustainable building practices in emerging markets, helping developers and builders create buildings that are environmentally friendly, cost-effective and resource efficient.

Main benefits

Environmental

- Better energy and water efficiency;
- Reduction of CO₂ emissions;
- Lower consumption of materials;
- Greater environmental comfort for occupants.

Economical

- Better marketing and higher property value;
- Reduced operating costs (lower electricity and water bills);
- Possibility of IPTU reduction (depending on the region).

Types of buildings served by EDGE

EDGE certification is most sought after for buildings where resource efficiency is a priority, such as corporate buildings, hotels and hospitals, and others. However, this Seal can also be used in all other building types, such as houses, residential buildings, schools, shops and other buildings.

The different types of EDGE certification

The EDGE certification program offers three different types of certification: EDGE Standard, EDGE Advanced and EDGE Zero Carbon.

EDGE Standard

This is the base level of EDGE certification and requires a minimum 20% reduction in energy, water and embodied energy in materials compared to a reference building that meets local code requirements.

EDGE Avançado

This level of EDGE certification requires a minimum reduction of 40% in energy, 20% in water and 20% in embodied energy in materials compared to the reference building. In addition, the building must meet additional requirements for thermal comfort, ventilation and natural lighting.

EDGE Zero Carbon

This is the highest level of EDGE certification and requires a building to be designed to be NET Zero Carbon throughout its lifetime. This means that the building must generate or purchase enough renewable energy to offset the carbon emissions associated with its operation and energy embodied in the materials. The building must also meet Advanced EDGE certification requirements.

EDGE certification typologies offer a variety of options for developers and builders to design and build sustainable buildings that meet their specific needs and objectives.



EDGE Certification Categories

EDGE certification covers many aspects of building design and construction that contribute to sustainability and resource efficiency. Specifically, EDGE certification evaluates buildings based on their performance in three key areas:

Energy: EDGE certification evaluates the energy performance of the building, including energy use for heating, cooling, lighting, automation and other building operations. The goal is to achieve a minimum 20% reduction in energy consumption compared to a reference building that meets local code requirements.

Water: EDGE certification assesses the building's water consumption and efficiency, including indoor and outdoor water use and the use of efficient appliances and appliances. The goal is to achieve a minimum 20% reduction in water consumption compared to a reference building that meets local code requirements.

Materials: EDGE certification assesses the energy embodied in building materials, which refers to the energy required to extract, manufacture, transport and install building materials. The objective is to achieve a minimum 20% reduction in embodied energy compared to a reference building that meets local code requirements.

EDGE Certification Processes

The EDGE certification process is designed to be simple and accessible for everyone involved. The main steps are:



Project Registration: Developers and builders register their projects for EDGE certification in the EDGE App, providing basic project information such as location, size and intended use.

Design and Modeling: After registration, the EDGE App is used to model designs and make decisions about materials, systems and other features that will help achieve energy, water and resource savings. The EDGE App calculates expected resource savings and certifies the building if it meets the minimum requirements for EDGE certification.

Submission for certification: Once the building design is complete, those responsible can submit the design for audit. The EDGE Auditor will review the design and verify that it meets the Certification requirements. The auditor will generally require documentation to support the design, including drawings, specifications and performance data.

Preliminary Certification: If the building design meets the EDGE certification requirements, the EDGE auditor will approve the design and send it to the Certifier so that the Preliminary EDGE Certification can be issued.

On-Site Inspection: With the building constructed, the EDGE Auditor will perform an on-site inspection of the building. During this inspection, the auditor will verify that the building's performance meets the EDGE certification requirements. The auditor will generally review equipment, systems and performance data to ensure the building is operating as designed.

Final Certification: If the building meets the EDGE certification requirements, the EDGE auditor will approve the project and send it to the Certifier so that the Final EDGE Certification can be issued.

EDGE Certification Levels

Unlike other certifications, the EDGE Seal classifies buildings according to the efficiency achieved, as follows:

- **Certified Edge Level**
 - 20% reduction in energy consumption
 - 20% reduction in water consumption
 - 20% reduction in embodied energy consumption of materials
- **Advanced Edge Level**
 - 40% reduction in energy consumption
 - 20% reduction in water consumption
 - 20% reduction in embodied energy consumption of materials

EDGE Certification Costs

EDGE Certification costs, paid directly to the certification body, vary by square footage. Fee amounts start at:

Registration fee: \$ 350

Certification fee: from \$0,24/m² (minimum of \$ 2.900)

Audit services: negotiated directly with the auditor

Other values: <https://edgebuildings.com/certify/certifiers-pricing/edge-certification-pricing/>

In addition to the costs paid to obtain the Seal, consultancy costs must also be considered.

A stylized graphic consisting of several overlapping, semi-transparent teal circular segments arranged in a ring-like pattern. The segments are of varying shades of teal, from light to dark. In the center of this graphic, the word "FITWEL" is written in a bold, teal, sans-serif font.

FITWEL

Fitwel

Fitwel is a building certification system that focuses on promoting health and well-being in the built environment. Developed by the Center for Active Design (CfAD) in the United States, it aims to meet the need for healthier building designs. Fitwel offers a points-based framework where building projects can accumulate points by implementing strategies that are proven to positively impact people's health and well-being.

Main benefits

Social

- Improved health and well-being of occupants;
- Increased occupant productivity;
- Better lighting and acoustics;
- Improved water quality;
- Greater thermal comfort for occupants.

Economical

- Better marketing and higher property value;
- Improvement in attracting and retaining Tenants;
- Reduced operating costs (lower electricity and water bills).

Types of buildings that Fitwel serves

Fitwel Certification is designed to address a wide variety of building types, including both new construction and existing buildings. The certification can be applied in: office buildings, residential buildings, educational institutions, health facilities, commercial spaces, industries and others.

Fitwel Certification is versatile and can be applied to different types and uses of buildings, aiming to improve the health and well-being of occupants in different environments.

Fitwel Certification Categories

The Fitwel certification is structured around a set of 12 categories known as the Fitwel Scorecard. Each focuses on specific aspects that can have a positive impact on the health and well-being of occupants.

Location: Encourage the location of buildings in areas that promote physical activity, offer access to public transportation, and provide community amenities.

Building Access: Ensure that all occupants have equitable and inclusive access to the building, including persons with disabilities.

Outdoor Spaces: Design outdoor areas that encourage physical activity, contact with nature and social interaction.

Entrances and Ground Floor: Create inviting entry spaces that promote walking and social engagement.

Stairs: Make stairs more visible and attractive to encourage their use over elevators.

Indoor Environments: Improve indoor air quality, access to natural light and create spaces that promote the well-being of occupants.

Workspaces: Design workspaces that encourage movement, reduce sedentary lifestyles and increase productivity.

Shared Spaces: Provide amenities and community spaces that encourage social interaction.

Water Supply: Ensure access to clean and safe drinking water.

Dining Halls and Nutrition: Provide healthy food options and support healthy eating habits for building occupants.

Emergency Procedures: Ensure occupants are well prepared for emergencies and have clear guidelines to follow.

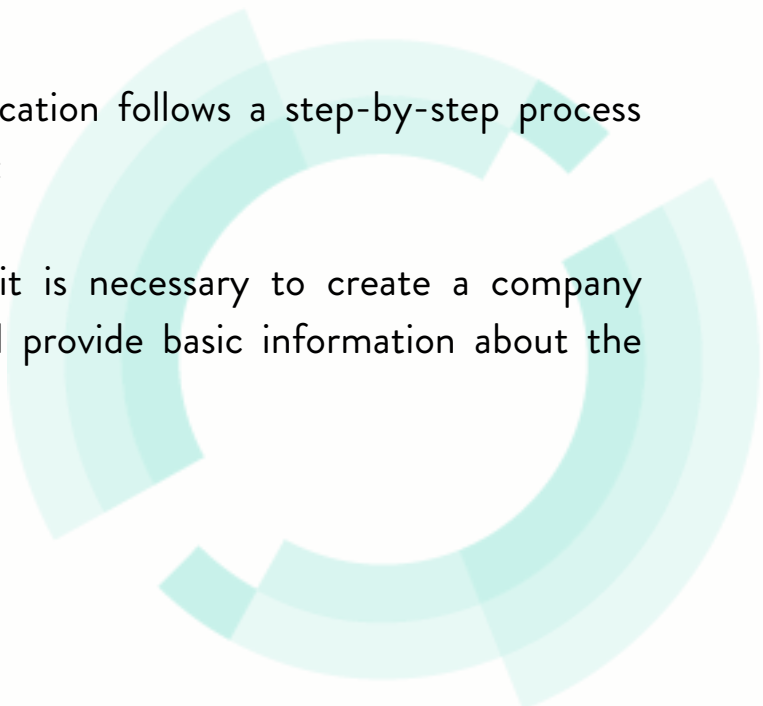
Stakeholder Engagement: Encourage collaboration and communication with occupants to understand and address their needs and preferences.

Building classification is based on meeting the strategies of each category and points are awarded accordingly. The total points earned determine the Fitwel certification level, which can range from one to three stars. The more strategies that are implemented, the higher the level of certification and the greater the positive impact on the health and well-being of building occupants.

Fitwel Certification Processes

The process to obtain Fitwel Certification follows a step-by-step process that includes the following main steps:

Registration: To start the process, it is necessary to create a company account on the Fitwel Platform and provide basic information about the building project.



Assessment: Next, assess which Scorecard standards apply to the project and how to measure these standards using the strategies listed above. These measurements are tracked over time.

Submission of Documentation: All documents related to the project that prove compliance with Fitwel's strategies are sent for analysis.

Review and Verification: Fitwel's certification team reviews and verifies the submitted documents and can provide comments to the project team if necessary.

Certification: Fitwel Certification has three levels. Projects that achieve a score of 125 or higher receive three stars. Scores from 91 to 105 receive two stars, and scores from 1 to 90 receive one star.

Recertification: To keep certification valid, the Fitwel standard for buildings requires annual submissions for recertification. You must continue to meet certification criteria to maintain certified status.

Fitwel Certification Levels

Fitwel certification comes in levels and is rated one, two or three stars based on points earned. Levels are:

1 stars - 90-104 points

2 stars - 105-124 points

3 stars - 125-144 points



Fitwel Certification Costs

Fitwel Certification costs, paid directly to the certification body, vary according to square footage. Fee amounts start at:

Registration fee: \$ 500

Certification fee: from \$6.500 (0-49.999 square feet)

Other values: <https://www.fitwel.org/certification>

In addition to the costs paid to obtain the Seal, consultancy costs must also be considered.





**AQUA
-HQE**

AQUA-HQE

The Brazilian certification AQUA-HQE is widely recognized for its high environmental quality. Although it originated from the French HQE, it was developed in partnership with the Polytechnic School of USP by the Vanzolini Foundation, taking into account the particularities of Brazil, such as climate, culture and regulatory standards.

The acronym AQUA stands for High Environmental Quality and the certificate is awarded after a rigorous assessment of the sustainability of the buildings.

This document is proof that the building offers sustainable options for the well-being of residents. The pillars of developments that receive AQUA Certification generally include:

- Saving water and electricity;
- Maintenance at affordable costs;
- Reduction in condominium fees;
- Quality of life and greater comfort for residents;
- Natural appreciation of the property over time.

In addition, the region where the building is located is also benefited, as certification contributes to environmental socioeconomic development.

Main benefits

Among the main advantages of carrying out construction certification, as mentioned by the Vanzolini Foundation, are:

For the entrepreneur: proof of the environmental quality of the construction; association of the company's image with High Environmental Quality; international recognition; differentiation of the portfolio in the market.

For the user: direct savings in water and electricity consumption; reduction of general condominium expenses (water, cleaning, maintenance and conservation); better conditions of comfort and health; awareness of contribution to sustainable development.

For society and the environment: less demand on urban infrastructure; reduced demand for water resources; pollution reduction; better use of local infrastructure; less impact on the neighborhood; better solid waste management.

AQUA-HQE Certification Categories

Certification requires the implementation of an enterprise management system (SGE) and compliance with the 14 categories of environmental quality of the enterprise (QAE), distributed as follows:

- Relationship of the building with its surroundings
- Integrated choice of products, systems and construction processes
- Construction site with low environmental impact
- energy management
- water management
- Waste management from building use and operation
- Maintenance and permanence of environmental performance
- hydrothermal comfort
- acoustic comfort
- visual comfort
- olfactory comfort
- Sanitary quality of environments
- Sanitary air quality
- Sanitary quality of water



Types of buildings served by AQUA-HQE

The AQUA Certification can be used for any type of building, including residential, commercial, schools, hospitals, ports, airports, neighborhoods, and others. It is also intended for existing buildings.

AQUA-HQE Certification Processes

Obtaining the AQUA-HQE Certification involves a structured process with several stages, from design to building operation, which are:

Commitment and Planning: Initially, the entrepreneur and the project team are committed to the objectives of the AQUA-HQE certification and define specific environmental goals for the project. Identifying stakeholders and drawing up an environmental management plan are important steps in this phase.

Project: During the project phase, the team develops technical solutions and strategies to meet the requirements of the 14 categories of the AQUA-HQE certification. The solutions are integrated into the architectural, structural and facilities design, ensuring their technical and economic viability.

Analysis and Evaluation: The project team performs a detailed analysis of the proposed solutions, verifying that they meet the certification requirements and are compatible with the established goals. Energy simulations, life cycle analyzes and environmental impact studies can be carried out at this stage.

Review and Adjustment: Based on the analysis, the project team reviews and adjusts the proposed solutions, if necessary, to ensure compliance with the AQUA-HQE certification requirements. This may involve redefining goals, selecting alternative materials, or adopting more efficient technologies.

Work Management: During construction, the team and the construction company ensure the correct implementation of the defined solutions and strategies, following the established specifications and guidelines. Environmental management training and practices are carried out at the construction site.

Verification and Commissioning: Upon completion of the work, the project team carries out a detailed verification to ensure compliance with the AQUA-HQE certification requirements and the expected environmental performance. Commissioning of installations and systems is essential to ensure proper functioning and energy efficiency of the building.

Certification: After the previous steps, the project documentation and the results of the evaluations and verifications are sent to the AQUA Certifier, who analyzes the information and, if the requirements are met, grants the certification. Certification levels can be "Good", "Very Good" or "Excellent", depending on the project's performance in the 14 categories.

Monitoring and Maintenance: After certification, it is important to monitor and maintain the environmental performance of the building throughout its lifetime. This includes a maintenance and management plan, regular verification of systems and installations, adjustments and necessary improvements, as well as awareness and training of users and those responsible for the operation of the building.

Recertification (optional): Some projects may choose to obtain AQUA-HQE recertification after a period of time, reassessing the building's environmental performance and updating strategies according to new technologies, regulations and market expectations.

The process of obtaining the AQUA-HQE Certification requires continuous commitment from the project team and those responsible for the operation and maintenance of the building, allowing to achieve a sustainable construction that promotes the improvement of the quality of life and the preservation of the environment.

AQUA-HQE Certification Levels

Within each of the 14 categories, there are four "score" levels that reflect performance on each technical criterion:

- NC (non-conforming, when level B is not reached),
- B (Base, minimum level of AQUA certification),
- BP (Good Practices),
- MP (Best Practices).

In the AQUA system, certification levels are not established; the enterprise is considered certified or not. In order to obtain certification, it is mandatory to seek a level of excellence, called "Best Practices", in at least 3 categories, reach the "Best Practices" standard in 4 categories and reach the "Base" level in 7 categories.

AQUA-HQE Certification Costs

Certification costs vary according to the square footage and type of building. The value is negotiated directly with Fundação Vanzolini and varies from case to case.

In addition to the costs paid to obtain the Seal, consultancy costs must also be considered.

The logo features a stylized circular emblem composed of several overlapping, semi-transparent teal-colored segments that form a ring. The segments are arranged in a way that creates a sense of depth and movement, with some appearing in front of others. The word "BREEAM" is centered within the white space of the ring.

BREEAM

BREEAM

BREEAM (Building Research Establishment Environmental Assessment Method) is a widely used sustainable building certification system developed in the UK. It assesses the sustainable performance of a building, covering energy efficiency, water use, materials, waste management, indoor environment, among others. BREEAM certification involves pre-assessment, design-phase assessment, post-construction assessment and achieving different levels of certification based on the score achieved. It demonstrates a commitment to sustainability, values the property in the market, reduces operating costs, improves the quality of the internal environment and contributes to environmental protection.

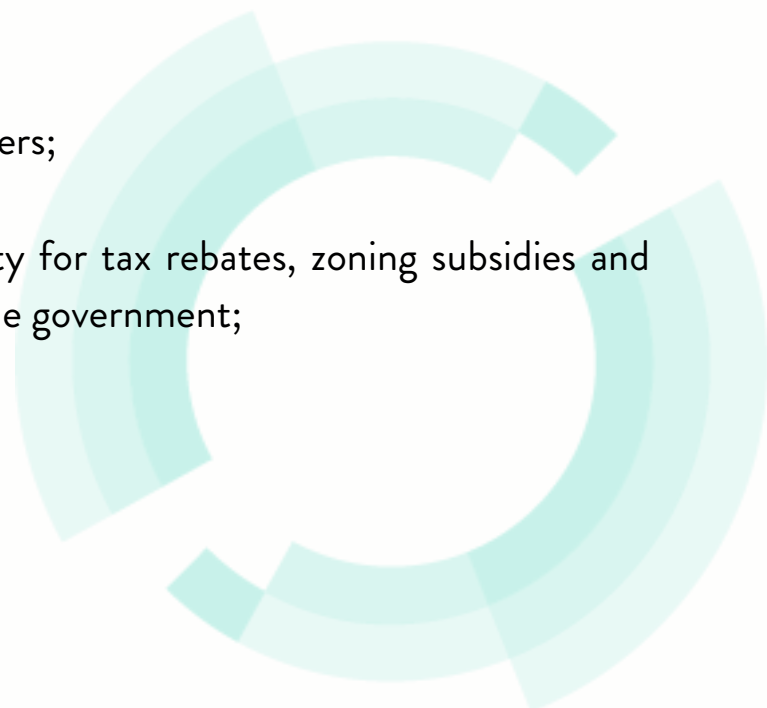
Main benefits

Environmental

- Reduction of waste sent to landfills;
- Energy and water conservation;
- Healthier and more productive environments for occupants, resulting in better quality of life, health and well-being;
- Reduction of greenhouse gas emissions;
- Environmental education and awareness.

Economical

- More attractive buildings for buyers;
- Savings in operating costs;
- Government incentives: Eligibility for tax rebates, zoning subsidies and other financial incentives from the government;
- Higher occupancy rates;
- Increase in equity value.



Types of buildings that BREEAM serves

BREEAM certification is applicable to a wide variety of building types, including commercial offices, retail spaces, industrial facilities, residential buildings, educational institutions, healthcare facilities, hotels, public buildings, sports and leisure facilities, data centers and mixed-use developments. BREEAM's flexible assessment methodology allows it to assess and certify the sustainable performance of these various categories of buildings, encouraging sustainable practices and design across the building industry.

The different types of BREEAM certification

BREEAM offers several types of certification for construction projects at different stages of development, with a focus on sustainability and environmental performance. Here are the main types of BREEAM certification.

BREEAM New Construction

This certification is for newly constructed buildings, assessing their environmental performance and sustainability in different sectors such as office, residential, retail, education and healthcare.

BREEAM In-Use

This certification is for buildings in operation, assessing their environmental performance and management practices, helping owners and managers to improve sustainability over time.

BREEAM Refurbishment and Fit-Out

This certification is for renovation and retrofit projects, assessing the sustainable renovation performance and environmental impact of the modernized building.

BREEAM Communities

This certification is for large-scale development projects or master plans, assessing overall sustainability and impact on the community and environment.

BREEAM Infrastructure

This certification is for infrastructure projects, such as roads, bridges, railways and utilities, evaluating environmental and sustainable aspects.

BREEAM USA In-Use

This version of BREEAM is specific to existing US buildings considering local regulations and standards.

BREEAM can introduce new types of certification or adapt existing ones as needed. Check the official website or evaluators for up-to-date information on the types of certification available.

BREEAM Certification Categories

The main BREEAM certification categories are as follows:

Management: Evaluates how the project addresses sustainability, including environmental policies, monitoring and stakeholder engagement.

Energy: Evaluates the energy efficiency of the building, including the use of renewable sources, energy saving technologies and total energy consumption.

Water: evaluates measures for conservation and efficiency in water consumption, including management practices such as rainwater harvesting and recycling.

Materials: Assesses the impact of building materials, including responsible sourcing, lifecycle analysis, and measures to reduce waste.

Pollution: evaluates measures to prevent and reduce environmental pollution during construction and operation, including controlling air and water pollution.

Waste: evaluates waste management practices during construction and operation, encouraging strategies to reduce, reuse and recycle materials.

Transport: evaluates aspects related to mobility, such as accessibility to public transport, measures for cyclists and pedestrians, and actions to reduce the environmental impact of the building's transport.

Land Use and Ecology: Assesses the building's impact on the surrounding environment, including promoting biodiversity, protecting habitats and responsible land use.

Innovation: Awards extra points for outstanding sustainable features or practices that don't fit in other categories, encouraging continuous improvement and innovation in sustainability.

BREEAM Certification Processes

The process of obtaining BREEAM certification for a building involves the following key steps:

Pre-Assessment and Planning: The project team conducts an initial assessment to determine whether BREEAM certification aligns with sustainability objectives. They establish the desired level of certification and define sustainability goals for the project.

Hiring a BREEAM Assessor: A qualified BREEAM Assessor is selected to guide the project through the certification process. The Evaluator's role is critical to assessing compliance and ensuring BREEAM standards are met.

Design Stage Assessment: The Assessor reviews design plans and assesses sustainability performance against the BREEAM criteria. Areas for improvement are identified and sustainable design principles are incorporated.

Construction and Commissioning: Construction begins, following BREEAM's sustainable design principles. The Assessor monitors compliance during construction and commissioning.

Post-Construction Assessment: Upon completion of construction, the Assessor performs a post-construction assessment, verifying the implementation of sustainability measures. Evidence is collected and submitted for verification.

Certification and Rating: The BREEAM certification body assesses the evidence and, if the building meets the required standards, it receives a BREEAM certificate and rating that reflects sustainability performance.

Continuous Monitoring and Improvement: The building continues to be monitored to maintain compliance with BREEAM standards. The project team may also seek continual improvements in sustainability practices over time.

Throughout the process, collaboration with the BREEAM Assessor is key to meeting specific requirements and ensuring successful certification in line with the principles of sustainable construction.

BREEAM Certification Levels

BREEAM certification has six levels:

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

Each level reflects the project's sustainability and environmental performance, with Outstanding being the highest, demonstrating exceptional sustainability practices. Certification is based on points earned during the assessment process, with higher levels indicating more significant environmental performance.

BREEAM Certification Costs

The costs of BREEAM Certification, paid directly to the certification body, vary by building type and square footage. Fee amounts start at:

Entry fee: from £ 265

Certification fee: from £ 535

Commissioning service: negotiated directly with the commissioner.

Other values: <https://bregroup.com/products/breem/>

In addition to the costs paid to obtain the Seal, consultancy costs must also be considered.



DGNB

DGNB

The DGNB System (Deutsche Gesellschaft für Nachhaltiges Bauen) is a certification system for sustainable construction and urban development. Originally from Germany, it has become widely recognized around the world. The system takes a holistic approach to evaluating buildings and projects, considering environmental, social and economic aspects. The certification process involves a comprehensive assessment and projects can receive DGNB certificates with different levels of recognition (platinum, gold, silver) based on their overall sustainability performance. The system serves as a voluntary standard for developers and architects to demonstrate their commitment to sustainability and responsible building practices.

Main benefits

Ambiental

- Reduction of waste sent to landfills;
- Energy and water conservation;
- Healthier and more productive environments for occupants, resulting in better quality of life, health and well-being;
- Reduction of greenhouse gas emissions;
- Environmental education and awareness.

Economical

- More attractive buildings for buyers;
- Building with higher commercial value;
- Savings in operating costs;
- Access to incentives and subsidies;
- Higher occupancy rates.



Types of buildings served by the DGNB

DGNB (Deutsche Gesellschaft für Nachhaltiges Bauen) certification covers a wide variety of buildings and urban developments. Includes residential buildings such as single-family homes and multi-family complexes, commercial properties such as offices and shopping centers, public institutions such as schools and hospitals, industrial facilities, cultural buildings such as museums and theaters, hospitality establishments such as hotels, and infrastructure projects such as train stations and airports. The certification assesses the sustainability of both new construction and existing buildings that undergo significant renovations.

The different types of DGNB certification

DGNB certification offers different types of certification based on the nature of the project and its sustainability performance. The main types of DGNB certification are as follows:

DGNB New Construction

The certification is awarded to newly constructed buildings that meet the DGNB's rigorous sustainability criteria, including residential, commercial, public, industrial, cultural, hospitality and urban development projects.

DGNB Existing Building

This certification is for existing buildings that have undergone significant renovations or improvements to enhance their sustainability and environmental performance. DGNB evaluates the changes and improvements made to the building based on sustainability criteria.

DGNB Districts

DGNB certification extends to urban districts and neighborhoods, assessing their global sustainability, including urban planning, transport, infrastructure and public spaces.

DGNB Interiors

This certification focuses on the sustainability and environmental performance of interior spaces in buildings, evaluating aspects such as indoor air quality, lighting, materials and occupant comfort.

DGNB Building Components

This certification applies to individual building components or products used in construction, assessing the sustainable performance of these components based on specific criteria.

DGNB certifications have specific criteria adapted to each type, comprehensively assessing projects for sustainability.

DGNB Certification Categories

The DGNB evaluates buildings and urban development projects based on several criteria, grouped into six main categories:

Environmental Quality: Evaluates the environmental impact of the building or project, considering aspects such as energy efficiency, use of resources, emissions and waste management.

Economic Quality: Evaluates the economic viability and efficiency of the building, considering life cycle costs, operating costs and adaptability.

Sociocultural and Functional Quality: evaluates the impact of the building on the local community, its functionality and meeting the needs of users.

Technical Quality: evaluates the technical performance of the building, including construction quality, durability and maintenance.

Process Quality: evaluates the overall planning, design and construction processes, including the use of sustainable materials and innovative solutions.

Location Quality: Assesses the location of the building and its impact on the surrounding environment, accessibility and connection to public transport.

The certification process involves a comprehensive project assessment based on these criteria.

DGNB Certification Processes

The process of obtaining DGNB certification involves the following steps:

Project Registration: The project team expresses interest in obtaining DGNB certification and registers the project with the DGNB organization. They collect the necessary documentation and information related to the project.

Initial Assessment: The DGNB team performs an initial assessment to determine if the project is eligible for certification. This step helps identify any areas that may require improvement to meet the sustainability criteria.

Detailed Assessment: The project team submits detailed information about the building, including designs, materials, construction methods, and sustainable features. DGNB evaluators scrutinize the project based on the categories.

Onsite Audit (Optional): Depending on the complexity of the project and the desired level of certification, an onsite audit may be carried out by DGNB assessors to verify the project's compliance with sustainability standards.

Certification Decision: Based on the assessment results, the project receives a DGNB certification level, based on its overall sustainability performance.

Feedback and Improvements: If necessary, the project team receives feedback on areas that need improvement in order to achieve a higher certification level. They can make the necessary adjustments and resubmit the project for reassessment.

Certification and Recognition: Once the project meets the necessary criteria, it receives official DGNB certification. The project team can then use this certification to demonstrate their commitment to sustainability and gain recognition for eco-friendly practices in design and construction.

It is important to note that the specific steps and requirements for DGNB certification may vary depending on the type of project, its location and any updates made to the certification process by the DGNB organization.



DGNB Certification Levels

The DGNB certification system has four levels of certification:

- Platinum (80%)
- Gold (65%)
- Silver (50%)
- Bronze (35%)

The **Bronze** level is only for buildings in use or existing.

DGNB Certification Costs

DGNB Certification costs, paid directly to the certifying body, vary according to the type of building and square footage. Fee amounts start at:

The values can be found on the DGNB website:

<https://www.dgnb.de/en/certification/path-to-dgnb-certification/scale-of-fees>

In addition to the costs paid to obtain the Seal, consultancy costs must also be considered.

UGREEN PROCESS

Starting a sustainable and efficient project, which aims for an Environmental Certification, involves a careful and structured process to ensure that the best practices are adopted from the beginning of the project. The work process carried out by UGREEN considers all these practices. See our process below.

- **Definition of sustainability objectives:** before starting the project, UGREEN clearly defines, together with those responsible for the project, the sustainability objectives. This helps guide all design decisions that will be made throughout the project.
- **Consider user needs:** A sustainable design must meet user needs efficiently and effectively. UGREEN assists in the creation of design solutions that reduce energy or water consumption, or that use renewable and durable materials.
- **Evaluating material options:** UGREEN helps you choose materials that are renewable, recyclable, durable and have a lower environmental impact. In addition, it considers the stages of the product's life cycle, from material extraction to final disposal.



UGREEN PROCESS

- **Using the integrated design approach:** Integrated design involves collaboration between team members to create sustainable solutions. UGREEN helps bring together sustainability specialists, engineers, architects, designers, among others, to make the team complete.
- **Consider energy and water efficiencies:** Reducing energy and water consumption is an important aspect of sustainable design. UGREEN uses passive design techniques to take advantage of sunlight and wind, and choose efficient lighting fixtures and systems, with the goal of reducing energy. It also encourages the use of alternatives for the use and reuse of water, with a view to reducing the consumption of this resource.
- **Monitor and Evaluate Project Performance:** Regularly monitor and evaluate project performance to ensure sustainability goals are achieved. UGREEN uses the information obtained to make continuous adjustments and improvements.

The project, which follows UGREEN practices, meets the needs of users, reduces the environmental impact and is efficient in terms of resources, thus facilitating the achievement of any of the Environmental Certifications for the building presented.

CONTACT

UGREEN can assist you in the process of obtaining each of the Environmental Certifications presented in this document.

If you want to know more, send an email to contato@ugreen.com.br or sami@ugreen.com.br, and we will contact you.

