

Reviewing the breeam assessment research establishment construction essay

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BREEAM is the Building Research Establishment Environmental Assessment Method for edifices provides an overview of an bing and established a checklist methodological analysis presently used for the environmental rating of the edifice.

This method includes the coincident rating of heat and electricity ingestion that would measure the energy public presentation / efficiency of the edifices. BREEAM is supposed to be the universe ' s most widely used method of reexamining and bettering the environmental / energy public presentation of edifices, where " BREEAM for Offices " is widely used for " reviewing and bettering the environmental public presentation of office edifices " . BREEAM is developed in the United Kingdom by the Building Research Establishment (BRE) in the 1990 ; it includes both a checklist appraisal and a elaborate methodological analysis for both new and bing office edifices, irrespective of tenancy continuances and densenesss. In the bing edifices the appraisal method can be carried out on bing occupied office edifices, by using the " Management and Operation BREEAM " subdivision. Within the " Management and operation BREEAM " subdivision of the appraisal method, energy public presentation issues sing heat and electricity efficiency are covered consequently, and it is the reappraisal of these facets that are of significance to the appraisal of edifice energy public presentation. By and large the appraisal method, is mostly based on checklist appraisal standards, credits the scene of minimal demands with respects to the energy and Co2 emanations (GHG) of a edifice, every bit good as an yearly based reappraisals and coverage processs for both internal and external intents.

The other peculiar countries of involvement in this appraisal method are related to the “ Health and wellbeing ” and “ Energy ” subdivisions.

In the “ Health and wellbeing ” subdivision, factors referring towards indoor air quality are assessed and ranked. The standards in the subdivision includes considerations for HVAC and natural air airing systems, the usage of daylight direction, burden control for temperature accommodations, and the operational conformity of other mechanical services in the edifice including ; Heating /cooling systemsVentilations/humidification systemsLighting systemsDistrict hot H2O systemsThe “ Energy ” subdivision of BREEAM analyses both the heat and electricity ingestion of an bing commercial office edifice. The appraisal recommends audit processs, performed after every three old ages, suggest betterments based on the audits and supervising utilizing old informations. The assessment tool likewise favours care records covering the standardization and operation for all warming and chilling system controls. It is of involvement to observe that this assessment tool is non offered in its entireness except through accredited BREEAM assessor organisations and the checklist appraisal reviewed is based on a pre-assessment checklist. The purported purpose of this methodological analysis lies in evaluation the assessed edifice, in order to compare similar commercial office edifices against a BREEAM public presentation evaluation mark.

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3. 2 LEED system

The Leadership in Energy and Environmental Design (LEED) for Existing Buildings is another method for the appraisal of energy public presentation for bing edifices. It is presently used throughout the United States and is based on the original “ LEED Green Building Rating System for Bettering Building Performance through Upgrades and Operations ” .

In-contrast with the “ BREEAM pre-assessment checklist ” , LEED for Existing Buildings is a “ set of public presentation criterions for the sustainable operation of bing edifices ” which earns the “ LEED 2. 0 ” enfranchisement upon satisfactory conformity. In general, the system addresses constructing operations and public presentation betterments. The focus country of this system is within the subdivisions of energy efficiency public presentation and system ascents towardsThe betterment of edifice energyIndoor air qualityLighting public presentation in relation to “ green ” public presentation criterionsThe LEED EB “ Existing Building ” system works in a similar mode to the BREEAM appraisal, given that credits are awarded for conformity to certain public presentation criterions, and the concluding mark is tallied consequently in a concluding scorecard. However, the public-version of this assessment criterion is significantly more elaborate than that of the BREEAM pre-assessment checklist.

In the “ Energy and atmosphere ” subdivision, 3 requirements are to be satisfied before accreditation of the bing system can take topographic point. These involve the confirmation and confidence that the “ cardinal edifices

systems and elements are designed, installed and calibrated, to run as required " and for the constitution of a minimal energy public presentation for the base edifice systems. 86 Conformity to these requirements are listed within LEED EB with methodological processes, and are benchmarked on building demands based on the United States Environmental Protection Agency (US EPA) Energy Star,,? label and the American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE) 90. 1-1999 system.

Issues referring to the optimisation of energy public presentation focuses on the purpose of " lifting degrees of energy public presentation above the needed criterion to cut down the usage of fossil fuels and to cut down the inauspicious impacts on the environment associated with inordinate usage of energy " , with regulated energy constituents including the HVAC systems, constructing envelope and illuming systems, as per defined by ASHRAE. 87 What is of involvement is the unit of step for public presentation - typically the energy metric, kWh of energy ingestion per square metre of net constructing country - expressed in footings of the one-year energy cost in US dollars in LEED EB. Requirements for conformity involve the proviso of computations demoing that the existent energy efficiency and public presentation of the edifice exceeds those described by ASHRAE. 88The " Indoor environmental quality " subdivision focuses mostly on the constitution of indoor environment conditions for the comfort of the resident.

It includes subdivisions on the constitution of minimal indoor air quality public presentation and the proviso of an equal degree of lighting, airing, temperature control, risky chemical control and C dioxide monitoring for

occupant wellness and comfort. 89 While this may non impact the energy public presentation of a edifice straight, the addition of energy efficiency and low energy usage in a edifice must non be achieved through a via media of these criterions, hence, the reappraisal of the indoor environment is of import in the appraisal of energy public presentation in a edifice.