SUCCESSFUL BREEAM ASSESSMENTS & OPTIMISED VALUE

"Successful BREEAM Assessments & Optimised Value"

TWC Consulting has been helping developers, main contractors and lots of others deliver successful BREEAM assessments for many years, and we've put together this compelling free guide on how to deliver any BREEAM assessment whilst still achieving optimised value.

This guide outlines the importance of the strategic balance, how SBEM, thermal models, dynamic simulation are the secret ingredients nobody told you about, the role of 3rd party consultants, the role of sustainability champions and how to book your free BREEAM workshop at a location of your own choice.

We hope you find the guide of interest and beneficial in the pursuit of your BREEAM projects.

If you require assistance or guidance on your BREEAM projects we are always willing to help.

TWC Consulting are qualified and licenced in all BREEAM schemes, including retail units, education buildings, healthcare facilities, multi-residential, industrial buildings, fire stations, and bespoke units.

TWC CONSULTING
Sustainable Property Consultants

BREEAM Assessments & Optimised Value

BREEAM is an environmental assessment that recognises construction projects for the mitigation of adverse impacts that may occur during the operational and occupational stages of a development. The assessment uses a sliding scale [credit-based] system that has several credits with mandatory status, with all other credits tradable. Upon validation of the targeted credits these are converted into points which, in turn, are converted into an overall rating at either Pass, Good, Very Good, Excellent, or Outstanding.

To get the full benefit of BREEAM requires skill, knowledge and a full understanding of how the scoring systems works. This includes taking full advantage of the many benefits that can arise from simply complying with Building Regulations, Planning conditions and various project aims and objectives.

Optimised value can only be achieved when a strategic balance is achieved between the BREEAM credits, the construction strategy, mechanical and electrical specifications and any specific development requirements/targets.

The mechanical and electrical specifications often provide the greatest opportunities for strategic value. This is due to the crossovers that arise between legislative requirements, project targets and the available BREEAM credits. Significant benefits can get overlooked and the opportunities get lost in the detail, leading to increasing costs and a loss of important design options that could have been considered.

Getting the strategic balance right is not as difficult as it may seem. Where creative design is included alongside sustainable construction materials there is often no need to include costly additions such as renewable energy systems, low carbon technologies, combined heat and power units, etc. This is not to say these systems should not be included – it is to say they shouldn't be included if they are not required i.e. **the main effort is always focused on getting the strategic balance right.**

SBEM & Thermal Models (dynamic simulation) - "the secret ingredients nobody told you about"

SBEM & thermal models (dynamic simulation) are the secret ingredients nobody told you about. Both these calculations provide opportunities for maximising returns, and gaining what TWC Consulting terms ***"the strategic balance".*** This is because the data gained from completing the calculations provides design teams with invaluable information upon which it can act. Knowing how construction specifications impact Building Regulations, Planning conditions, carbon reduction targets, BREEAM credits, etc. enables the team to identify design options that can increase efficiencies and/or reduce costs.

Thermal models (dynamic simulation) are the gold standard within the industry. These type of calculations not only provide compliance with the legislative requirements, they also provide fantastic opportunities to test the energy efficiency of a building well before it's ever constructed - an option that's often overlooked to the detriment of developments.

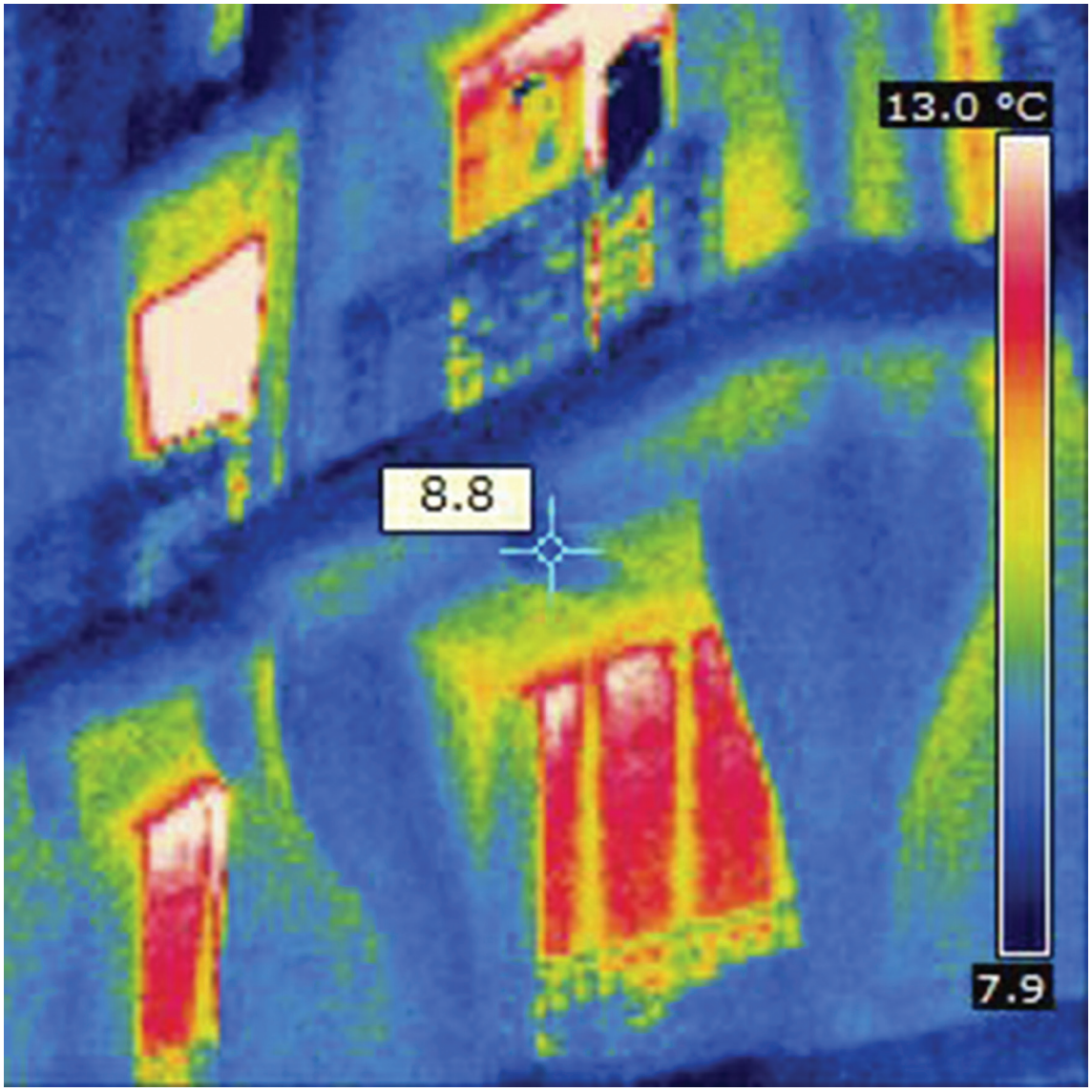
The main advantages and dis-advantages of SBEM & thermal models are listed as follows;

Advantages of SBEM

SBEM stands for "Simplified Building Energy Model" and is a mandatory requirement under Part L of the Building Regulations. The main advantage of using this method of compliance is it's a much cheaper option than alternatives, such as thermal models/ dynamic simulation. This is due to the limited amount of design information it offers up to project teams.

Disadvantages of SBEM

The main disadvantages of using the SBEM is that it only provides limited design information. Therefore, the calculation is used mainly to demonstrate compliance with Part L of the Building Regulations.



Advantages of thermal models (dynamic simulation)

The main advantage of using thermal models is that they provide much more data and design information, so design engineers can make important decisions before a building reaches the advanced stages of design.

Valuable information is available to the design team for detailed analysis. This includes: the thermal performance of individual rooms, air temperatures at hourly intervals, how a room(s) reacts to Solar radiation at various times of the day/month/year, the impact of heat gains arising from people, electrical equipment and lighting occupying a room on a daily basis, plant sizing for heating and cooling, ventilation requirements, shading systems and how they can reduce energy consumption [including shading from nearby buildings], the importance of heavyweight construction materials v lightweight materials, benefits of insulation, lighting design, air-conditioning, renewable energies and much more.

Disadvantage of thermal model (dynamic simulation)

The main disadvantage of a thermal model is the additional costs incurred to complete the simulation. However what is often overlooked is the fact the model can be used to demonstrate compliance with Part L of the Building Regulations (in lieu of SBEM). Therefore, the real uplift in costs is the amount of the simulation minus the cost of the SBEM. When considered against the amount of design information generated, this will always a good investment.

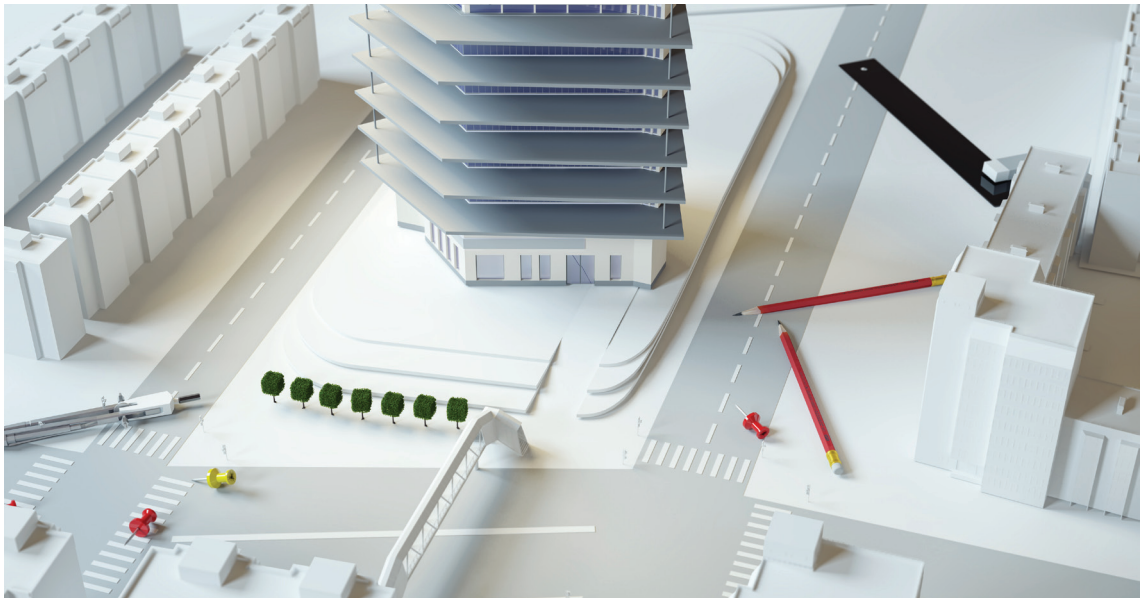
Third Party Consultants - “some you need, some you don’t, and some can cost you a fortune”

All BREEAM assessments require some level of input from 3rd party consultants. These specialists can save a great deal of time, effort and financial costs for an assessment. So it’s vital their role is understood to ensure maximum value is gained from their involvement.

When selecting 3rd party consultants, consideration should be given to their fees based against the value they bring in terms of design information and available BREEAM credits. This is a difficult process to manage as consultant fees are often in line with the BREEAM criteria. However, in broad terms, credits such as life cycle costing, air quality plans and sustainably champions cost much less than other credits such as acoustic performance, renewable/low carbon studies and security specialists.

It's important to scope out the appointment of 3rd party consultants at the earliest stage of the development to ensure there are no discrepancies between what they're appointed to do, and the level of information needed within their final reports. There are occasions when 3rd party consultants are appointed only to find out their final reports do not meet with the BREEAM criteria, and cannot be used to validate the targeted credits i.e. their qualifications and/or membership of organisations are non-BREEAM-compliant.

In addition, several 3rd party consultants are time-barred which can lead to problems with compliance during the final stages of an assessment. To ensure consultants are appointed at the correct time the following outlines the RIBA stages at which they should be appointed:
BREEAM 2014: Sustainability Champion – RIBA Stage 1, Life Cycle Analysis – RIBA Stage 2, Security Specialists – RIBA Stage 2, Low Carbon Feasibility Studies – RIBA Stage 2, Passive Design Analysis – RIBA Stage 2, Climate Change Adaption Analysis – RIBA Stage 2, Functional Adaptability – RIBA Stage 2, Le4 Qualified Ecologist – RIBA Stage 1.



The Sustainability Champion - "bringing another layer of added value to the design team table"

The on-going growth of sustainability, and in particular the introduction of BREEAM 2014 has led to the role of the Sustainability Champion. This is an individual who is responsible for setting goals, targets and objectives on all aspects of sustainability during the progress of a construction project.

It is the role of the Sustainability Champion to facilitate the setting of BREEAM performance targets during the design, construction and occupation stages. Therefore the earlier they are appointed, the greater their value.

The Sustainability Champion is an active member of the BREEAM Accredited Professional [AP] Membership Scheme and/or trained and qualified by British Research Environment [BRE] as a specialist in sustainability, design, construction and assessment. They provide project teams with important BREEAM advice that can safeguard against ambiguity and difficulties during the handover and final report stages.

The appointment of a Sustainability Champion is crucial when assessing projects registered against the BREEAM NC 2014. They need to complete regular site visits in order to highlight shortcomings in compliance and, more importantly, what actions need to be taken to address any issues identified.

The Sustainability Champion has the authority to monitor site activities, to ensure the risks of non-compliance are minimised and to report directly to the client on all BREEAM matters. They attend key progress meetings, and are a must for all projects reaching for higher levels of sustainability.

Free BREEAM Workshop

We're committed to the growth and development of sustainable building design which is why we've created a free BREEAM workshop for all existing and new clients - to dispel some of the myths of completing BREEAM assessments. The workshop provides an opportunity to discuss any BREEAM related topic and advice and guidance will be offered completely free of charge.

The workshop is flexible so it can be designed to cover specific topics and/or designed to cover critical issues, such as how best to scope out the BREEAM assessor's role, why active BREEAM assessors are a much better option than passive ones, the importance of gaining a strategic balance between project targets, construction designs and the benefit of using BREEAM on construction developments.

The workshop will outline how we use a simple and unique system of validating BREEAM credits, and how this process makes BREEAM validation much easier to complete for project teams.

If you want to book a free workshop please contact our administration team at info@twcconsulting.com, including BREEAM Workshop in the subject bar. A member of the team will be in touch to confirm a date, time and location of your choice for the workshop to be held.

DISCOVER HOW WE CAN HELP YOU. HERE'S HOW TO CONTACT US:

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About Thomas Claffey

Author Thomas Claffey is a well-known and respected Sustainable Building Designer and Senior BREEAM Assessor providing advice and guidance on all types of construction developments across the UK. Currently, Thomas is working with main contractors, private & public sector clients, business owners, and managers on how to get the most from BREEAM assessment using advanced construction strategies, value-engineering workshops and credit offsetting.

The distinct advantage Thomas offers comes from his full understanding of the construction process and knowledge of the legal and mandatory requirements that must be implemented on all construction projects.