

The Climate Change Bill set targets for reducing the UK's CO₂ emissions by 30% by 2020, rising to 60% by 2050. Government expects local authorities to lead by example by tackling their own emissions and by encouraging other local organisations to follow suit.

Nearly 50% of all carbon emissions in the UK are from energy use in buildings, and construction accounts for 30% of total UK waste, so it is important that any new buildings are designed and built to higher standards now to meet the long term targets.

59% of carbon emissions in Shropshire Council's own estate are generated from energy use in its buildings. In order to help meet the target CO₂ reduction of 35% by 2014 it is imperative that refurbishments and new construction, work to meet this target. Whilst long term energy prices are difficult to predict, there is little doubt the upward trend will continue. Investing in low carbon buildings is therefore an insurance against future increases in running costs. Shropshire Council will 'Invest to Save' for the future.

Sustainable construction is an integral part of the Council's over-arching **Sustainability, Environment and Climate Change Policy** and aims to minimise the carbon and general environmental footprint of a building by taking a holistic approach to the design, construction and operation processes. This policy guide (along with the Performance Specification Document) sets out how sustainable design and construction principles should be addressed in a comprehensive and coordinated way for new developments by making them an integral part of the design process. This approach avoids the problems and expense of trying to make changes part way through the process when key decisions may have already been made.

To provide value for money, this policy adopts a long-term, whole lifecycle approach to costing buildings. A lifecycle cost versus benefit comparison will be undertaken on all major projects to take into account future maintenance and running requirements (including future energy prices), to inform the upfront investment.

We will continually monitor the market for new technologies and best practices that can be used to improve the energy efficiency of the buildings we construct whilst actively supporting and participating in research to bring new and innovative systems and technologies to the market place.

To ensure high standards of sustainable performance are being achieved we will continually monitor developments and review findings on a regular basis.

This will include:

- Holding post project reviews to identify lessons learned and inform future projects.
- Regularly auditing sites to make sure they are being effectively managed to reduce their impact upon the environment, giving due regard to energy use, biodiversity and pollution.

This policy applies both to new buildings and to any significant extension (over 100m²) and refurbishment of existing buildings. It is based on BREEAM's underlying approach to sustainability, which is divided into key areas. These are as follows:-

Management • Commissioning
 • Construction site impacts • Security

Waste • Construction waste • Recycled aggregates • Recycling facilities

Health and Wellbeing • Daylight
 • Occupant thermal comfort • Acoustics
 • Indoor air and water quality • Lighting

Pollution • Refrigerent use and leakage
 • Flood risk • NOx emissions • Watercourse pollution
 • External light and noise pollution

Energy • CO₂ emissions • Low or zero carbon technologies • Energy sub meeting • Energy efficient building systems

Land Use and Ecology • Site selection
 • Protection of ecological features
 • Mitigation/enhancement of ecological value

Transport • Public transport network connectivity
 • Pedestrian and Cyclist facilities • Access to amenities • Travel plans and information

Materials • Embodied life cycle impact of materials
 • Materials re-use • Responsible sourcing
 • Robustness

Water • Water consumption • Leak detection
 • Water re-use and recycling

Innovation • Exemplary performance levels
 • Use of BREEAM Accredited Professionals
 • New technologies and building processes

The BREEAM scheme awards points for meeting certain criteria in each of the above areas. These points are then weighted for their importance in the overall scheme and they added together to award a rating as detailed in the following table:-

BREEAM Rating	% score
UNCLASSIFIED	<30
PASS	≥30
GOOD	≥45
V GOOD	≥55
EXCELLENT	≥70
OUTSTANDING*	≥85

In addition, there are certain Mandatory points that have to be achieved to gain a rating. These mandatory points vary according to the type of building which is being assessed. Please refer to the BREEAM manuals for further details.

The policy will be applied to all construction related activities including refurbishment, adaptation and new build. The BREEAM covers a wide range of building types and covers activity associated with commercial, industrial, educational, health, community and leisure buildings. There is also a bespoke building assessment.

This will allow the underlying principles of the method to be applied to the majority of construction projects undertaken by the Council and its partners. The criteria for utilisation of the BREEAM will depend on project value and complexity. There may be exceptional circumstances where BREEAM may not be appropriate, for instance buildings which have an historic or conservation status. Further guidance relating to this can be downloaded from www.breem.org

The principles of the application of BREEAM will be based around the following criteria. The detailed guidance and methodology can be downloaded from www.breem.org and will be applied as summarised below:

1. New build or extensions in excess of £500,000 will be subject to a formal assessment and will be expected to achieve a rating of "Very Good". The minimum standard accepted will be "Good".
2. New build or extensions in excess of £1,000,000 will be subject to a formal assessment and will be expected to achieve a rating of "Excellent". The minimum standard accepted will be "Very Good"
3. All refurbishment/adaptation schemes with a construction cost in excess of £1,000,000 will be subject to a formal assessment and will be expected to achieve a rating of "Very Good". The minimum standard accepted will be "Good".
4. All other building projects will not necessarily require a formal BREEAM assessment but will be required to adopt key BREEAM principles as set out in the BREEAM manuals available at www.breem.org. Assessments will be undertaken on selected sites by qualified in-house BREEAM assessors and the expectation will be to attain the equivalent standard to BREEAM "Very Good" with the minimum acceptable standard being "Good".

This policy will be adopted by all commissioners of construction projects throughout the Council. In accordance with PRINCE2 project management principles it will be incorporated into both the business case and project mandate for all. This will ensure BREEAM is used at the design and construction phase, to ensure that sustainability is an integral part of the construction project from the outset. The benefits set out within this policy significantly outweigh any additional cost in undertaking formal assessments.



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