
The BRE Green Guide to Specification

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This document is a summary of the key shortcomings of the BRE Green Guide to Specification (Green Guide) and its use as a planning instrument as well as a means of gaining credits under the Code for Sustainable Homes. The summary has been prepared by the Alliance for Sustainable Building Products (ASBP) as a means of informing the output from the Green Building Guidance Task Group set up by the UKGBC. The main purpose of providing this critique is to suggest how the UKGBC could help to accelerate sustainability advances within the construction products sector

Most of the problems highlighted in this critique would be overcome through the development and use of appropriate Building Information Management (BIM) metrics, and thereby point to the importance of encouraging their development and use.

INTRODUCTION

The purpose of the Green Guide is to provide a credible and easy-to-use assessment tool to measure the environmental impact of construction products, materials and elements. This information is then fed into overall project assessment systems such as BREEAM and the Code for Sustainable Homes. In the context of the current consultation, the shortcomings with the Green Guide are summarised below.

LACK OF CHOICE

The UKGBC wishes to signpost construction practitioners to appropriate metrics to measure sustainability. This is an important and valuable function and will help to embed sustainability within organisations. However, this potential benefit can only be realised if the assessment metrics are recognised in a meaningful way. Currently product manufacturers can only gain credits to help support specification through the Green Guide and its use within BREEAM and the CfSH. Within this context, the BRE is the only gateway. The construction products sector would be better served by creating more choice and ensuring a more competitive environment.

TRANSPARENCY

None of the data used to generate Green Guide ratings is open to public scrutiny. The principle of transparency is a central theme of international LCA standards (ISO 14040). It is common practice to 'black box' sensitive information but not the entire data set. As the UKGBC Task Group have indicated, the principle of transparency is critical to foster trust and learning.

GENERIC APPROACH

LCA standards state that primary data should be used when available. The generic ratings developed in the Green Guide use aggregated (industry average) data. However, it is clear that similar products can have widely different impacts depending on such issues as the origin of the raw materials, the production method or the location of the factory. The generic

environmental profile provides no means of distinguishing between best and worst practice and thereby discourages manufacturers from innovating to reduce impacts.

METHODOLOGY (LCA from cradle to grave)

The UKGBC Task Group rightly points out that environmental assessment of products should be cradle to grave. The Green Guide uses an LCA approach to measure product impact from cradle to grave. However serious questions remain as to whether LCA is the most appropriate tool to measure the complete product life cycle. For example, the impacts associated with product manufacture are real and quantifiable, whereas there are substantial uncertainties for the impacts from gate to grave - such as distance to site, durability (maintenance and replacement frequency) and end of life scenario. Assumptions made about impacts after the factory gate can mask the production impacts. The development of product specific EPDs which can feed into a BIM will help to correct this problem but only provided that the BREEAM / Green Guide system is not the only allowable metric.

METHODOLOGY (Peer Review)

The BRE Environmental Profiles Methodology (used to generate Green Guide ratings) is a peer reviewed LCA methodology. However, the approach of using industry average data, the method of black boxing data and presenting only summary ratings and the method of using a single rating to describe environmental performance are all methods particular to the Green Guide which would not have been subject to peer review and do not meet the requirements of international standards.

METHODOLOGY (Elemental Profiles)

The aggregation of building materials into building elements has many problems. Firstly it is not possible to determine the impact of products within an element. Secondly, building elements are multi-functional (thermal conductivity, thermal mass, acoustic, structural etc) and this complexity cannot be reflected within a simple comparable functional unit. Thirdly, the elemental approach cannot describe the relationship between embodied impact and impact in use. The problems of the Elemental Profiles approach would be overcome by the use of an appropriate BIM where real product impact data (from for example an EPD) is provided and used.

METHODOLOGY (Scope)

In purely LCA based assessment methodologies such as the Green Guide many important sustainability impacts are not considered – such as the sustainability of the raw materials, the impact of the product on human health in use, the wider social and economic impacts.

METHODOLOGY (Sequestered Carbon)

A recent report commissioned by ASBP (Sadler & Robson, 2011) reveals that the carbon store created from aggregated temporary sources (products) is extremely significant. In taking a 160 year after installation snap-shot view, the BRE Environmental Profiles Methodology assumes that almost all the carbon has been released back to the atmosphere and therefore allocates no benefit. Furthermore energy recovered at end of product life is not allocated back to the product. In short the BRE environmental profiles methodology allocates no benefit to carbon storage and no benefit to end of life energy recovery and is thus extremely unfavourable to biogenic products and materials.

Sadler, & Robson. (2011). *Bio-Renewable building materials as a climate change mitigation strategy*. ASBP.