

ENVIRONMENTAL PRODUCT DECLARATIONS

THE IMPORTANCE TO INDUSTRY

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JANE THORNBACK

**Sustainability Policy Advisor
Construction Products Association**

MANUFACTURERS

- CPA - umbrella body for manufacturers
- 43 trade associations and 25 big companies
- An industry with an annual output of £ 50 billion. 4.5% of GDP
- Sector supports the goal of a low carbon, resource efficient built environment
- Believe sustainability is an important business issue
- Main drivers for Sustainability - 2011 PWC / CPA Survey
 - Regulation
 - Major Government Codes and Strategies
 - Brand Image
 - Risk



Impacts

IMPACTS

Photos
Courtesy of BRE



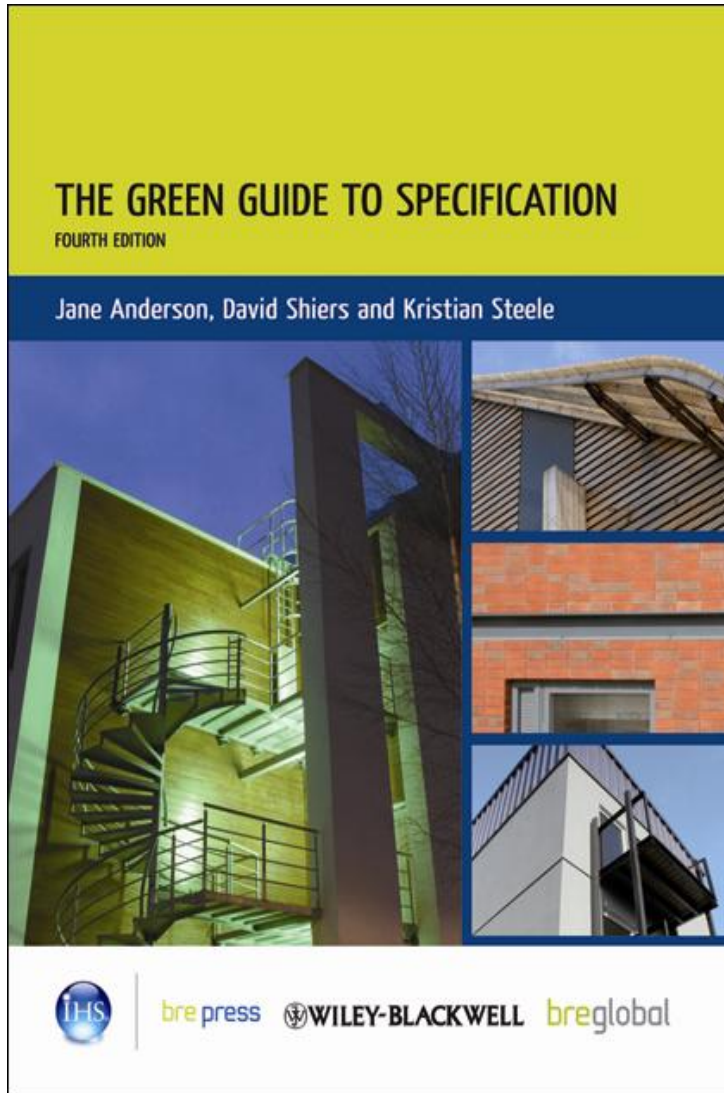
IMPACTS

- All products, not just construction products, have environmental impacts
- How these impacts are assessed is via a formal method called a Life Cycle Assessment (LCA)
- The information produced by an LCA is called usually called an environmental profile or an Environmental Product Declaration (EPD)
- Within the construction product sector, the measurement of environmental impact is not a new activity
- Have been doing this in the UK for 20 years and similar in some other European countries
- All this has led to the development of the topic of today - the European standard EN 15804

DRIVERS – UK

- Societal concerns over environmental issues
- BRE – (was a govt agency) developed Ecohomes / BREEAM
- Materials assessment via an environmental profile methodology
- Green Guide for Building Specifications – A to F rating system using the profiles
- Code for Sustainable Homes uses Green Guide
- Olympics Strategy – Materials / Green Guide
- LEED – now asking for EPD

BRE Green Guide - Impacts assessed



Environmental Issue
Climate Change*
Water extraction
Mineral extraction
Stratospheric ozone depletion*
Human toxicity
Ecotoxicity to freshwater
Higher level nuclear waste
Ecotoxicity to land
Waste disposal
Fossil fuel depletion
Eutrophication*
Photochemical ozone creation*
Acidification*

EUROPEAN SINGLE MARKET

- European Economic Community (EEC)
- Council Directive 89/106/EEC of 21 December 1988
- Laws, regulations and administrative provisions of the Member States relating to construction products aimed to remove technical barriers to trade in the field of construction products in order to enhance their free movement in the internal market
- SINGLE MARKET in Europe for construction products

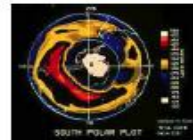
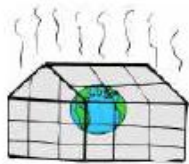
EU CEN 350 PROCESS

- In 2004, the European Commission concern that environmental schemes becoming a possible technical barrier to trade
- Mandate from the EU Member States for harmonisation of these national standards – Mandate M/350
- Process – CEN TC/350 to produce standards for the assessment of the sustainable performance of construction works and construction products.
– includes work strands on environmental, social and economic aspects
- Huge European process / National Shadow Committees / UK BSI B/ 558 Committee
- Review of documents and voting
- Eight standards produced including EN 15804.

M350 - Environmental Indicators

Impact indicators

- Climate Change
- Ozone depletion
- Acidification of Land and Water sources
- Eutrophication
- Photochemical Oxidation
- Depletion of fossil fuel resources
- Depletion of mineral resources



Input Indicators

- Renewable 1^y energy
- Non-renewable 1^y energy
- Renewable 2^y fuels
- Non-renewable 2^y fuels
- Secondary materials (other than fuels)?
- Net Water



Output indicators

- Hazardous waste
- Non-Hazardous Waste
- Radioactive Waste
- Material for recycling
- Material for Energy recovery
- Components for reuse
- *Exported energy*



WHAT INDUSTRY NEEDS

- Sustainability Bundle - brought issues together; provides a common framework
- Performance Focus - at Building level; the role of the product is to contribute to that performance
- Consistency and standardisation of indicators and their measurement
- Linked to Regulation – points to direction of future regulation
- Materials – gives market recognition for innovation and effort

KEY MESSAGES – WHY ITS IMPORTANT (1)

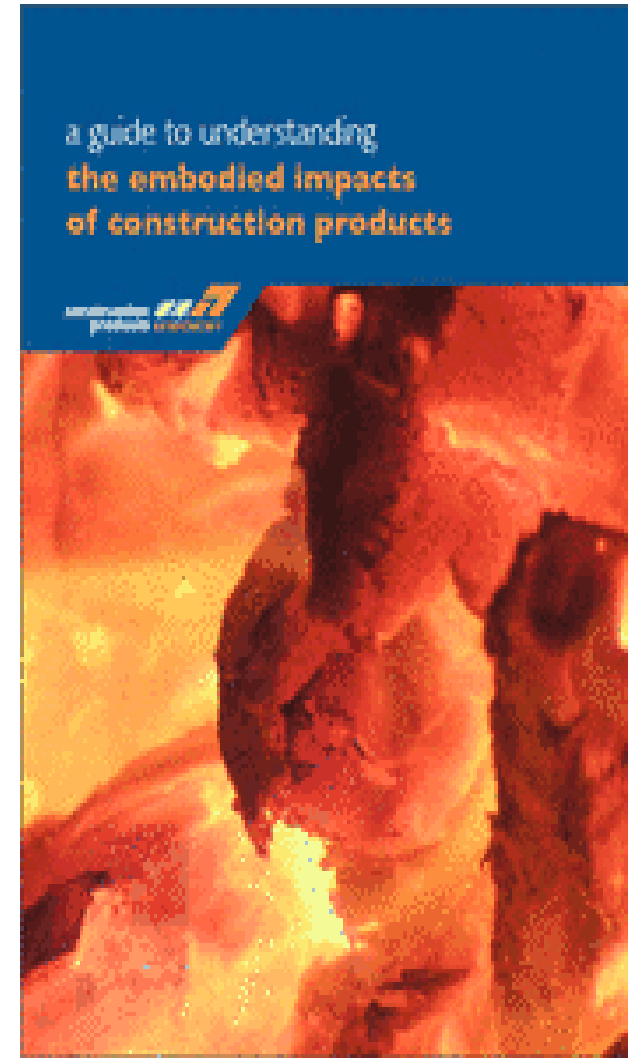
- Manufacturers cannot respond to a multiplicity of different requests for environmental information
- EN 15804 methodology is here to stay – do not need new methodologies
- ISO Standard on EPD under review and aligning with EN 15804
- The methodology is in the context of the product's performance in a building
- The consistent, comparable data emanating form an EPD is the data that will be preferred by BIM

KEY MESSAGES – WHY ITS IMPORTANT (2)

- Research needs to focus on the development of tools, like IMPACT, that can use this information to enable better choices by designers
- An EPD is not a management system like 14001, contractors asking for an EPD as a tick box exercise are missing the point and such an exercise is largely meaningless
- Links to the Construction Products Regulation – which requires an declaration of environmental performance to follow the European Standard (DOES NOT REQUIRE manufacturers produce an EPD !!)
- Should national governments choose to legislate in the area of sustainability performance they have to use the European Standards

The Guide - FREE

- Describes Life Cycle Assessments
- Describes Environmental Product Declarations
- Signposts where data/information is available
- Discusses how information on products is assessed within building performance
- Discusses in detail the different embodied impacts
- Aim is to improve understanding across the construction industry
- <http://www.constructionproducts.org.uk/sustainability/products/embodied-impacts/>



END GAME:

An EPD is a vehicle to convey data to make choices to deliver a low impact built environment

Thank you

Jane.Thornback@constructionproducts.org.uk

www.constructionproduct.org.uk