

Information paper – 13

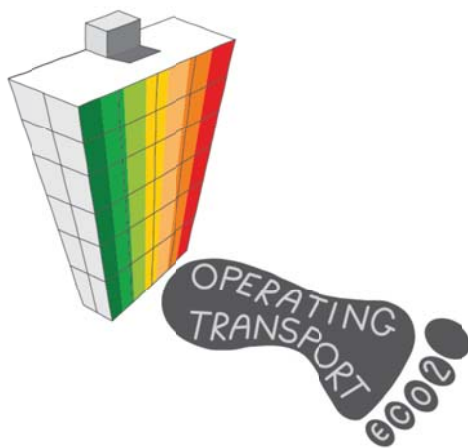
Embodied carbon standards

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WHAT COLOUR is YOUR BUILDING?

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This information paper is one of a series of papers written during the preparation of the book **What Colour is Your Building?** (www.whatcolourisyourbuilding.com). The papers do not form part of the book and have not been peer reviewed. They provide further technical detail, analysis and information to support statements made in the book. All of the papers can be downloaded from www.wholecarbonfootprint.com.

Embodied carbon standards

This information paper provides a list of various standards that can be used for embodied carbon assessments. It is hoped that the standards developed by the CEN/TC 350 committee in Europe will be adopted so as to introduce some consistency and comparability across studies.

1. CEN/TC 350 STANDARDS

CEN/TC 350 is the Sustainability of Construction Works group of the European Committee for Standardisation.¹ It is responsible for developing voluntary standardized methods for the assessment of the sustainability aspects of new and existing construction works, and for the environmental product declaration of construction products.

The standards aim to describe a harmonized methodology to assess the environmental and life cycle cost performance of buildings, as well as quantifiable performance aspects of the health and comfort of buildings.

The suite of standards issued by June 2013 were:

- CEN/TR 15941:2010 Sustainability of construction works - Environmental product declarations - Methodology for selection and use of generic data
- EN 15643-1:2010 Sustainability of construction works - Sustainability assessment of buildings - Part 1: General framework
- EN 15643-2:2011 Sustainability of construction works - Assessment of buildings - Part 2: Framework for the assessment of environmental performance
- EN 15643-3:2012 Sustainability of construction works - Assessment of buildings - Part 3: Framework for the assessment of social performance
- EN 15643-4:2012 Sustainability of construction works - Assessment of buildings - Part 4: Framework for the assessment of economic performance
- EN 15804:2012 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
- EN 15942:2011 Sustainability of construction works - Environmental product declarations - Communication format business-to-business
- EN 15978:2011 Sustainability of construction works - Assessment of environmental performance of buildings - Calculation method

The key standard for calculating embodied carbon in buildings is the last one on the list, EN 15978:2011. The standards developed under this framework do not set the rules for how different assessment methodologies may provide valuation methods, nor do they prescribe levels, classes or benchmarks for measuring performance.

For example, the standards will not describe whether real or modelled energy should be used or where to get the data for the embodied carbon of materials. As described in Chapter 3 of

the book, there can be large differences in embodied carbon assessments depending on the assumptions made.

Further standards are under development including:

- EN 16309 Sustainability of construction works - Assessment of social performance of buildings – Methods
- EN 16627 Sustainability of construction works - Assessment of economic performance of buildings - Calculation method
- EN 15804 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
- EN 16485 Round and sawn timber - Product category rules for wood and wood based products for Environmental Product Declaration

2. OTHER STANDARDS

Other standards that can be used include:

- PAS 2050 – Specification for the assessment of life cycle greenhouse gas emissions of goods and services
- ISO 14020 – Environmental Labels and Declaration
- ISO 14067 – Carbon Footprint of Products - Requirements and guidelines for quantification and communication.

Notes

All websites were accessed on 16 June 2013 unless noted otherwise.

1. www.cen.eu/cen/Sectors/TechnicalCommitteesWorkshops/CENTechnicalCommittees/Pages/Standards.aspx?param=481830&title=Sustainability%20of%20construction%20works

The inevitable legal bit

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