The Institution of Structural Engineers

Informally suggested reading list for continuing professional development on sustainability – reference titles

This list of reference titles has been compiled by the Institution's Sustainable Construction Panel

Carbon: Reducing the footprint of the construction process: July 2010 an action plan to reduce carbon emissions from the Strategic Forum for Construction and the Carbon Trust (freely available at: http://www.strategicforum.org.uk/carbon.shtml)
This gives an overview of the priorities for the industry in the UK as well as key statistics.

Environmental design. 7th edition by CIBSE
Explains the building performance aspects of environmental design.

CIRIA C650 Environmental good practice site guide
For engineers, who want to understand how site activities affect the environment and how to manage them. The book outlines environmental obligations for contract conditions, legislation, management framework and environmental conditions.

Embodied Impacts: A guide to understanding the embodied impacts of construction products by The Construction Products Association (freely available at:
http://www.constructionproducts.org.uk/sustainability/products/embodied-impacts/)
Clear introduction to the concept of embodied impacts; what they are, how they are calculated, life cycle assessment and environmental product declaration schemes in Europe.

Green Building Bible v1 & v2 by the Green Building Press
Information on how to build an environmentally friendly home.

Stern Review by HM Treasury (freely available at:
http://webarchive.nationalarchives.gov.uk/+/http:/www.hm-treasury.gov.uk/sternreview_index.htm)
UK Government commission reporting looking at the economics of climate change. Identified the amount of investment required to abate climate change and the economic consequences of delaying action.

Introduction to architectural science - the basis of sustainable design by Steven V Szokolay
Introduction to engineers who want to know more about how buildings interact in their local environment- it introduces buildings physics, lighting and sound. All these factors support low carbon design for buildings.

London 2012 Learning Legacy reports (freely available at:
http://learninglegacy.independent.gov.uk/themes/sustainability/index.php)
Case studies and practical guidance on the sustainable design and construction of the London 2012 Olympics including low embodied carbon concrete.

Low Carbon Construction Innovation and Growth Team: Final Report Executive Summary
(freely available at: http://www.bis.gov.uk/policies/business-sectors/construction/low-carbon-construction-igt/innovation-and-growth-team)
This gives an overview of the priorities for the industry in the UK as well as key statistics.

Renewable Energy by Godfrey Boyle
This book provides a comprehensive overview of renewable energy sources including: Solar thermal; Photovoltaic; Bio-energy; Hydro; Tidal; Wind; Wave and Geothermal.

The Ecology of Building Materials by Bjørn Berg
This book explores the sustainability of building materials. It includes technical data relating to choosing the most appropriate materials for a project. This includes analysis of materials that are least polluting, most energy efficient, and from sustainable sources. The book also outlines issues of recycling, detailing for increased durability and Life Cycle Analysis.

The Environmental Design Pocketbook by Sofie Pelsmakers (RIBA Publishing)
Guidance on key topics including main facts and figures, checklists and simple tools for architects and engineers designing sustainable houses (and other building types).

The Whole House Book: Ecological Building Design and Materials by Cindy Harris & Pat Borer
This is a green building encyclopaedia. The book combines social, economic and environmental design objectives with an evaluation of buildings' local and global impact. Topics include creating a healthy house with good air quality, designing a home with minimum reliance on fossil fuels and so on.

1987 Brundtland Report (aka 'Our Common Future) by the World Commission on Environment and Development
Most widely quoted definition of sustainability.