Sustainable Building Training Guide

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Principles and Learning Outcomes for Sustainable Building

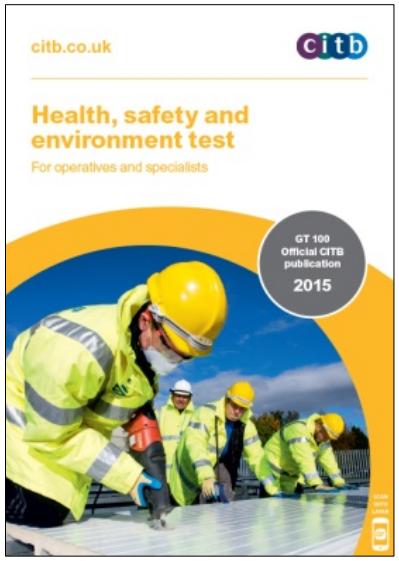
CONSTRUCTION TRADES: Recommended Learning Outcomes for Resource Efficient Buildings	
Theme	**Learning Outcomes for Construction Trades**
Low Energy / Low Carbon Building	Understand the role of [your trade] in achieving the required energy and carbon performance to minimise energy demand and associa building. Understand the principles of airtightness and the requirements for effective installation of the air barrier (sealing at junctions and pene Understand the principles of effective insulation, including: • insulation fitting and placement for different insulation types • thermal bridging and condensation risks • thermal bypassing Understand the impacts of [your trade] on the design and installation of efficient energy and ventilation services Understand the basic principles of air quality and ventilation Understand the main causes of overheating and how to reduce it.
Sustainable Products	Know and identify responsibly sourced products (FSC/PEFC and responsibly sourced materials, i.e. BES6001)
Waste, reuse and recycling	Understand the principles of materials storage, recycling and reuse opportunities - Waste minimisation?
Water	Working knowledge of water efficiency on a construction site
Whole Build Process	Know the sequence of works and the role of dependant trades in build process.

GCB Sustainable Building Guide: DESIGNERS

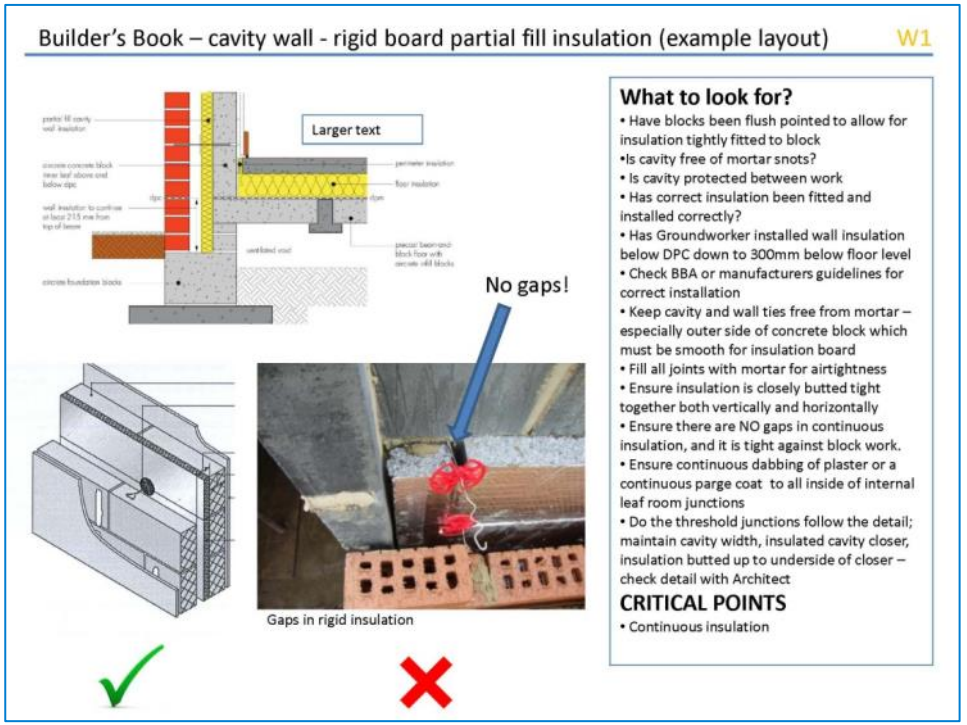
DESIGNERS: Recommended Learning Outcomes for Resource Efficient Buildings	
Theme	**Learning Outcomes for Designers**
Low Energy / Low Carbon Building	Awareness of policies, legislation, and regulation. Understand the key principles of energy performance measurement and have an understanding of measurement protocols, methodologies and tools. Understand the key principles of passive and low energy design Understand the key principles of carbon and energy reduction in buildings and the application of Life Cycle Costing to make better informed design decisions Understand the principles of building physics in relation to energy and carbon performance. Understand the principal requirements of a range of common energy performance standards and a working knowledge of how to achieve them. Understand the principal causes of the performance gap Understand the key elements in the design and construction of an effective thermal fabric, including: • Insulation design and construction • Minimisation of thermal bridging and condensation risks • Minimisation of thermal bypassing • Air permeability and air barrier design and construction. Understand the key principles of the design and construction of efficient energy services, including the impact of the whole system (pipe work, flues and other components) on energy performance. Understand the impact of services commissioning on performance and be able to ensure effective specification of commissioning processes. Understand the key requirements for ventilation Understand the key determinants of overheating and how it can be minimised.
Sustainable Products	Know how to specify responsibly sourced materials (FSC/PEFC and responsibly sourced products i.e. BES6001) and healthy materials i.e. Low VOC products. Understand the principles of embodied carbon and other issues such as resource depletion, reuse and recycling potential waste Understand the principles of the circular economy
Waste, reuse and recycling	Awareness of policies, legislation, and regulation. Understand the principles of good waste management Understand the value of resource efficiency and how to promote it Understand the key principles in designing for waste minimisation, deconstruction and reuse/recycling/circular economy.
Water	Understand best practice in water conservation and planning of water use on site

Embedding Energy Awareness

CITB Health, Safety and Environment Test



1. Why is saving energy important?
2. What can you do to help save energy on site and reduce harmful emissions?
3. What is the difference between an Energy Performance Certificate (EPC) and a Display Energy Certificate (DEC)



Zero Carbon Hub Builder's Book

UK Energy Efficiency Policy

~~Zero Carbon Homes by 2016~~

~~Green Deal~~

~~Energy Company Obligation~~

Bonfield Review?

Thank you

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