

ESD Considerations for Building Design and Construction

Initiative	Status	Details
Part L 2006 Building Regs	Regulatory	Building should comply with and if possible exceed regulatory performance.
EU EPBD	Legislation	Energy labelling of Buildings
Water Act 2003		Sets a duty to encourage water conservation and minimise consumption
BREEAM	Aspirational	Aspiration of 'excellent' or 'very good'
Local Planning Policy 22		Dependant on local planning authority 10% of energy may be required to be provided via renewable energy
Low Carbon Buildings Programme	Possible source of funding	Managed by Energy Savings trust can provide funding of up to 50% for micro generation technologies etc.
Regional Development Agencies (One North East)	Possible source of funding	Can assist in funding for sustainable solutions.
Carbon Trust	Possible source of funding	Possible source of grant funding if true carbon savings are justified.
Energy metering/sub metering	Adopted Standard	Sub metering to CIBSE guide TM39 and Energy Efficiency Best practice Programme GIL65
Grey/ Rain Water Recycling	Aspirational	Subject to Financial viability study look to recover water for toilet flushing etc.
Lighting Control	Regulatory/ Aspirational	Occupancy Controls on all appropriate lighting circuits with daylight linked dimming controls on all spaces within 7m of a window (glazed roof).
Site layout & Orientation	Passive Design feature	Building design and orientation can have a big impact the ability to provide natural ventilation strategies and also by keeping entrances away from prevailing winds, avoing excessive solar gain etc. etc.
External envelope & daylight	Passive Design feature	Building design shoulconsider the impact of thermal performance, air infiltration, solar gain. Use of daylight etc. etc.
Natural ventilation and thermal mass	Passive Design feature	The use of natural ventilation for comfort cooling should be considered above mechanical cooling without providing problems of excess air infiltration when not required. Thermal mass should also be considered for cooling and temperature stabilisation
Green Roof	Passive Design feature	Green roofs can assist with control & stabilisation of internal temperature and also assist with rainwater run off.
CHP/Microgeneration	Best Practice	Consider the use of CHP or micro generation technologies for onsite generation of electricity whilst suing the heat for heating/hot water purposes.

Light Pipes	Best Practice	Consider the use of 'sun pipes' to illuminate areas which otherwise would not benefit by natural daylight.
Light Efficient Luminaires (high light output ratio)	Best Practice	Assessment of the best (most cost effective) type of lighting throughout the building.
Renewable Technologies	Best Practice	Assess the use of Small PV, Solar LTHW, Ground coupled heating and cooling, Bio fuels
Waterless Urinals	Aspirational	Consider use of waterless urinals – even if grey/rainwater harvesting is incorporated.
Percussion taps	University standard	Percussion taps to be used in standard washrooms, assessment to be made on best equipment for disabled facilities and other points of use (catering etc.)
BREEAM LCA Assessment	PC/Web Based Toolkit	Environmental Profiles allow designers to demand reliable and comparable environmental information about competing building materials, and give suppliers the opportunity to present credible environmental information about their products.
BREEAM Envest 2 Assessment	PC/Web Based Toolkit	Software tool that simplifies the otherwise very complex process of designing buildings with low environmental impact and whole life costs.
BRE smartwaste	BRE website	Management toll for reducing waste in the construction sector.
Environmental profiling	BRE guidance	method of measuring the sustainability of all construction products and materials
WRAP Recycled content assessment	PC/Web Based Toolkit	Set targets for amount of recycled material used in construction projects, identifying quick wins and assessment of impact etc.

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