Working towards sustainable construction

BS 8895 Designing for material efficiency in building projects

...making excellence a habit™
The construction sector is the largest contributor of waste by sector in the UK, generating construction, demolition and excavation waste. A more efficient design can help to reduce these waste.

**Why did BSI develop the BS 8895 series?**

We conducted a survey on the need for standards for sustainable construction. The results obtained demonstrated the importance of developing a series of standards in this area.

- 85% said there was a need for standards in Sustainable Construction
- 55% felt that finding the right guidance is difficult
- 100% considered waste reduction to be important
- 75% are already considering waste reduction during the design phase
- 90% believe consideration of waste will increase in the next 5 years
- 70% felt that a single point of reference would be useful

“In 2009 BSI’s ‘Built Environment Design Advisory Committee’ had the foresight to identify design waste in building projects as a potential area for standardization. At this time it was felt that designers would benefit from clear and unified guidance to help them achieve their sustainable construction goals and see those much desired cost savings and reduced environmental impacts.”

Anthony Burd, Head of the Construction Sector at BSI
Material efficiency is a key part to achieve high levels of resource efficiency in a building project. It encompasses the efficient use of materials throughout the lifecycle of a building, waste prevention and reduction, minimizing damage to the environment and minimizing depletion of natural resources.

The customer asks and we deliver: the BS 8895 series

BS 8895 is a suite of codes of practice that address specific and interrelated issues and processes related to material efficiency in building projects. It's in line with the RIBA Plan of Work.

BS 8895 Designing for material efficiency in building projects, will include the following parts:
- Part 1: Code of practice for strategic definition and preparation and brief
- Part 2: Code of practice for concept and developed design
- Part 3: Code of practice for technical design
- Part 4: Code of practice for operation, refurbishment and end of life

BS 8895-1:2013 Designing for material efficiency in building projects. Code of practice for strategic definition and preparation and brief

BS 8895-1 gives recommendations for the process by which design and project teams seek to maximize material efficiency through design. It outlines what material efficiency in design involves and how the process of designing for material efficiency is implemented through the strategic definition and preparation and brief stages of a project.

Opportunities and solutions for material efficiency arise during planning, design, procurement, construction, refurbishment and use, and at end of life. However, the most effective way to implement material efficiency is to comprehensively consider materials and waste during the design and planning stages of a project. This is when maximum impact can be made.

BS 8895-1 is an industry code of practice for designing for material efficiency, giving recommendations for the processes and project responsibilities for designers to incorporate into projects.

BS 8895-2:2015 Designing for material efficiency in building projects. Code of practice for concept and developed design

BS 8895-2 gives recommendations for the processes, information exchanges and responsibilities for design teams to incorporate into projects at the concept design and developed design stages of a building project. This standard aligns with government’s policy to reduce the waste disposal in the construction area.

BS 8895-2 should be used by the design team when preparing concept and developed designs to include proposals for material efficiency.

Some of the key benefits of BS 8895-2 include:
- Helping to achieve higher levels of resource efficiency in a building project
- Taking account of design activities that might occur in either the concept and/or developed design stages, providing a flexible approach in applying material efficiency
- Looking at the efficient use of materials throughout the lifecycle of a building, not just one part of it
- Keeping environmental impacts of the construction process at front of mind fulfilling corporate social responsibility criteria
- Addressing interrelated issues and processes so they can work together to improve material efficiency in building projects

“BS 8895 multi-part standard responds to the recognition of the impact of designing in material efficiency and designing out waste on the overall sustainable performance of buildings. It allows design teams to holistically integrate materials efficiency strategies across a project life cycle stages in a formalised and easily referenced manner.”

Mohamed Osmani, BS 8895 Committee Chairman and Senior Lecturer in Architecture and Sustainable Construction at Loughborough University
Upcoming Parts of BS 8895

BS 8895-3 will build on BS 8895-1:2013 and BS 8895-2:2015. It will set out the process for the integration of designing for material efficiency into Stage 4 of the RIBA Plan of Work (Technical Design). BS 8895-3 will also identify clear performance indicators for material efficiency in Technical Design for architectural design, structural design, monitoring and evaluation and material specification.

BS 8895-4 will support building owners and facility managers to make informed resource efficiency decisions during three building life cycle stages: operation, retrofit and end of life.