



**Constructing Excellence:**  
The SME's quick guide to Sustainability



**CONSTRUCTING  
EXCELLENCE**  
in the built environment

## Why was this guide created?

Sustainability is not just about protecting the environment and improving ones reputation, but is increasingly seen as a way of winning new business, improving efficiency and cutting cost.

This guide seeks to:

- create more *understanding* of the broader ideas of sustainable construction within SMEs
- enable SMEs to *engage* with the sustainability agenda through construction
- identify business benefits and opportunities
- raise *standards* in the construction industry

## Who is it aimed at?

The guide is focused upon small building and construction businesses.

## What does the guide do?

- defines sustainability in the context of construction, and explains how it can help you win more business
- provides you with an overview of best practice and gives guidance on how SMEs can be more sustainable
- offers you a simple framework to build sustainability into your business
- gives useful links to further advice, information and resources

Cover image: [geograph/Euchiasmus  
www.geograph.org.uk/photo/691900](http://www.geograph.org.uk/photo/691900)

## What is sustainability?

The most widely used definition of sustainable development is:

*“development that meets the needs of the present without compromising the ability of future generations to meet their own needs”*

It is important to remember that sustainability covers a lot more than just environmental factors – economic and social aspects are also key parts of sustainability

Media coverage tends to focus on the negative environmental impacts of development, reflecting the rapid progress in scientific research and rising public interest on the subject of climate change.

However, a healthy and stable economy is vital if environmental problems are to be tackled; sustainable options, for example, can offer greater value for money over their lifetime.

Social considerations also have benefits through improved wellbeing, reduced crime and community cohesion. The potential of the built environment to increase the productivity of employees has obvious economic benefits.

Together, these environmental, economic and social considerations are often referred to as ‘the three pillars of sustainability’ or ‘the triple bottom line’. The diagram below shows how they are linked . It demonstrates that development cannot be truly sustainable without consideration of them all.

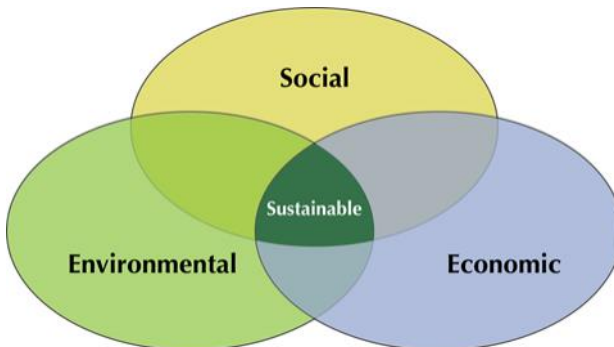


Image: Dréo (2007)

# The business benefits

Sustainable construction enables businesses to benefit in three ways: keeping abreast of legislation, reducing costs and enhancing reputation.

## Legislation

There is legislation specific to sustainable construction that covers issues from environment, health and safety and labour practices. Non-compliance can result in prosecutions and delays to your project.

For more information visit the Environment Agency and Health & Safety Executive websites below.

## Financial

### Reducing costs

Energy prices, material costs and taxes on waste disposal are all rising. Reducing waste, materials and energy consumption, controlling pollution and prevention of incidents can all save you money.

### Winning work

Demonstrating your sustainability credentials can help you win new business, in particular from main contractors, whose procurement requires evidence of sustainability performance, customers who actively seek suppliers in their local area. The Local Government Association can provide information.

### Enhanced reputation

Managing your business impacts on the environment, your workforce and the local community is of interest to your customers, staff and local authorities. Doing well in these areas can benefit your reputation, leading to more business and attracting and keeping talented staff.

Useful links:

[www.environment-agency.gov.uk/business/](http://www.environment-agency.gov.uk/business/)

[www.hse.gov.uk/construction/](http://www.hse.gov.uk/construction/)

[www.gov.uk/browse/business/waste-environment](http://www.gov.uk/browse/business/waste-environment)

<http://pinpoint.ukgbc.org/>

# Waste

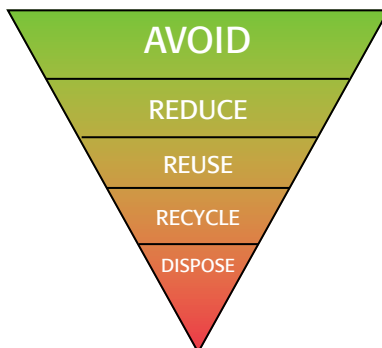
The construction industry produces more than 100 million tonnes of construction waste each year (24% of total waste in the UK), of which up to 13% is materials delivered to site and unused. Although around half of this waste is reused or recycled, the amount that is simply disposed of comes straight off your bottom line.

## Why should this be important to me?

- the cost of managing waste is significant and isn't just the skip hire charge (up to £185 for an 8 yard skip in some areas) – it's also the cost of the materials, transportation, labour and disposal. Better waste management makes you more competitive.
- companies that have considered waste have used this as a springboard to engage their staff to drive efficiency through the business which has given them a competitive advantage in the market.
- more and more clients are considering sustainability performance in their procurement processes. Better waste management will help you win more work.

## What should I do about it?

Firstly, understand the waste you produce and measure it. The next step is to follow the waste hierarchy – it's always better to reduce waste than having to find ways of dealing with it on the construction floor.



## Where can I get help?

- Constructing Excellence KPIs can help you measure how well you are doing.
- the BRE SMARTWaste tool will help companies create Site Waste Management Plans (SWMP)
- WRAP has produced guidance to help companies reduce and better manage waste, including a SMWP 'Lite' template, specifically for lower value construction projects
- The School of Sustainability has been set up by large contractors to help SMEs

There are a number of re-use organisations operating which help re-distribute surplus construction materials for re-use by charities and voluntary organisations such as Recipro (<http://www.recipro-uk.com/>).

## What have others done?

Astins, an SME contractor and Constructing Excellence member, calculated that waste plasterboard accounted for 5% of its turnover. It immediately looked at ways to design out waste and reuse offcuts. Having aligned itself with tier one contractor processes it is now looking at reducing its waste by 20%.

### Useful links:

[www.constructingexcellence.org.uk](http://www.constructingexcellence.org.uk)

[www.bre.co.uk](http://www.bre.co.uk)

[www.wrap.org.uk/construction](http://www.wrap.org.uk/construction)

[www.wrap.org.uk/content/specialist-and-sme-contractors](http://www.wrap.org.uk/content/specialist-and-sme-contractors)

[www.supplychainschool.co.uk](http://www.supplychainschool.co.uk)

<http://greenconstructionboard.org/index.php/resources/top-tips>

# Energy

The construction industry is responsible for the intensive use of energy both directly, in the design, construction and refurbishment of buildings and infrastructure, and indirectly, in their operational phase.

## Site energy

Your company should manage your operations on site in an environmentally conscious way by recording and minimising energy use. This includes monitoring energy use in:

- construction plant and equipment
- site accommodation
- transport to and from site

## Embodied carbon

Energy generated from fossil fuels embodies carbon in the manufacture of construction materials and those with the lowest embodied carbon should be selected. These will often be no more expensive than other construction products.

## Technology

Energy use can be drastically reduced by the use of energy efficient technologies and equipment. To ensure that the full benefits of these technologies are realised it is essential that:

- equipment is specified correctly
- installers have a thorough understanding of the equipment
- thorough commissioning is carried out

## Building energy use

One of the most common reasons for wasted energy in buildings is the inability to cope with large variations in temperature, this is because of badly designed or inadequate building envelopes. This can be reduced by:

- thoughtful planning and design
- high levels of insulation and air tightness
- excellent quality control to deliver designed efficiencies

Designing and constructing buildings which are more energy efficient will appeal to clients as running costs will be lower. Being proactive in delivering this can improve your reputation and help to win work.

- a well-insulated building is key to reducing the demand on heating
- windows should reduce glare and solar gain in the summer but minimise heat loss in the winter
- building services should be energy efficient
- all services need to be well controlled but should also be suitable and readily understood by the occupant or those that manage the building and its operation

With these elements coupled together the chances of a happy occupant are significantly improved. This makes a happy client and an enhanced reputation for your business.

### What have others done?

In assessing the optimum low carbon solution for the refurbishment of a mill in Oxfordshire, Low Carbon Maintenance and Buildings (LCMB) an SME consultancy compared a number of alternative technologies. Delivering a return of between £540 and £800 per annum, a combination of Ground Source Heat Pump with underfloor heating, solar PV, and electric immersion heating for hot water was selected.

Useful links:

[www.bre.co.uk/greenguide](http://www.bre.co.uk/greenguide)

[www.breeam.org](http://www.breeam.org)

[www.energysavingtrust.org.uk](http://www.energysavingtrust.org.uk)

[www.strategicforum.org.uk/Sustain.shtml](http://www.strategicforum.org.uk/Sustain.shtml)

[www.supplychainschool.co.uk](http://www.supplychainschool.co.uk)



# Materials

Responsible sourcing of materials is key to your business as it potentially holds the largest areas of construction cost savings and the maximum value to your client.

This can be achieved by collaborating with architects, main/sub contractors, product manufacturers and suppliers to identify any innovative or value engineered solutions available to best meet the client's requirements (such as water saving devices or pre-cut material lengths)

Tangible benefits can be measured by a visible reduction in material costs as well as a reduction in waste volumes and disposal costs. It would also be worth considering the other factors, such as:

- embodied carbon content
- local sourcing of materials
- minimising hazardous materials
- H&S/manual Handling
- process simplification
- energy and water use
- minimising use of finite materials

It is also important to consider the credentials of your manufacturers and suppliers. There are a number of certification and accreditation schemes for the responsibility sourcing of materials such as for timber the Forestry Stewardship Council.

For further information on how to achieve this speak with your design and product contacts or visit [www.constructingexcellence.org.uk/sustainability](http://www.constructingexcellence.org.uk/sustainability)

# Management of sustainability

Applying a sustainable approach to all your operations means applying sustainable thinking to long-established principles of good management.

For many years, good businesses large or small have followed the process of **Plan–Do–Check–Act**

## Plan

- understand your business activities and assess how these might impact on sustainability
- understand what's important to your customers
- consider opportunities for your business (innovation etc)
- consider applying the principles of an Environmental Management System

## Do

- develop controls that have been agreed in your plan and communicate these to all in your team
- carry out activities in accordance with these controls
- identify sustainability targets relevant to your business - e.g. reducing your waste to landfill

## Check

- use existing business processes to monitor progress against your agreed objectives

## Act

- apply and share lessons learned with all stakeholders, especially customers and staff
- if you need further support or assistance please contact please contact [helpdesk@constructingexcellence.org.uk](mailto:helpdesk@constructingexcellence.org.uk)

Useful links:

[www.gov.uk/browse/business/waste-environment](http://www.gov.uk/browse/business/waste-environment)

[www.supplychainschool.co.uk](http://www.supplychainschool.co.uk)

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