

Guide to sustainable procurement in construction

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Foreword

In the next 40 years, the world's population is likely to double. In theory this is good news for the construction industry because all those extra people will need homes, schools, workplaces and infrastructure. But the world is of finite resources and within 40 years, many of the natural resources that are taken for granted such as oil, water, some base metals and minerals, will be in very short supply. Also, climate change caused by greenhouse gas emissions will fundamentally change the way that people live and do business. The ethics of doing business on a global scale is under increasing scrutiny, particularly the exploitation of workforces. This is not just a developing world issue, a major construction company suffered huge damage to its reputation for using a road surfacing team from Latvia working under forced labour conditions.

The long-term winners will be those who take responsibility for their effects on society and the environment, and address those issues in a positive manner. Both businesses and public bodies need to explore why they want to be sustainable to have an effective strategy. This could be to reduce cost, differentiate their offer to the market, attract better people or better clients, or simply because it is the right thing to do. Every organisation will have their own profile of business reasons to do this and a clear understanding of this is significant when considering sustainability ambitions and risks.

It is important to understand what an organisation wishes to address. This will influence the way relationships with suppliers will change. For example, Marks and Spencer decided to take responsibility for the carbon footprint related to how their customers wash, dry and iron the garments they buy. This led to substantial changes in the products the supply chain were asked to manufacture. In the sportswear industry, Adidas decided to take responsibility for the labour standards in the cotton plantations producing their products, resulting in major changes to the world's cotton industry. In construction, the Olympic Delivery Authority (ODA) decided to take responsibility for the carbon footprint of their concrete supply chain and the health issues relating to PVC. Because of this, the world has new products with lower effects on the environment. Some leading contractors have set ambitious objectives to be zero waste and carbon neutral within two years.

This guide explains how to realise clients' ambitions and mitigate reputation risks through more effective management of the supply chain. It recognises that some key principles apply and that the British Standard for sustainable procurement (BS 8903) can be used as a generic standard. Also, it recognises that the construction industry is unique and that each project is different. There is no "one size fits all" solution and projects need to consider their unique effects on the local environmental, social and economic backdrop. There is a need to consider the geographical location of a project combined with the ambitions of the client along with the policy and reputation of the consultants and contractors within the supply chain of the project.

In this guide the term "buyer" is used to describe any industry professional who plays a vital role in deciding where and with who the money is spent, ie those involved in negotiating and letting contracts. Buying across a construction project is complex and occurs at many different levels including the client, lead contractor, subcontractors, specialist subcontractors and trades. Often it is unclear across the industry what is bought, how it is bought and from who. This has presented a challenge when writing this guide. However the main aim of this guide is to illustrate the breadth of

procurement requirements, and as such we hope this guide will help industry professionals to make their contribution to the sustainability agenda. Finally it is important to recognise that it is not possible for them to do this alone – the principles and practice described in this publication apply equally to numerous professions involved in delivering an effective project.

Shaun McCarthy
Action Sustainability

Guiding principles

Throughout this publication guiding principles have been identified to help you. These summarise the requirements and responsibilities necessary to promote more sustainable procurement outcomes from construction projects:

- ▶ it is the role of the buyer to procure sustainable solutions that offer equal or better value over their life than the traditional alternatives
- ▶ understand what sustainability outcomes are to be achieved and the reasons for doing this. If they are not being done to mitigate a risk, reduce cost or to achieve a client ambition then perhaps reconsider
- ▶ understand the supply chain. Buyers should already know where excessive costs may lie but life cycle costs, excessive risk, sustainability impacts and opportunities must also be considered
- ▶ take ownership of the supply chain and provide guidance regarding sustainability requirements. Work in partnership with suppliers as delegating requirements to tier one suppliers to manage may not be sufficient
- ▶ understand the client's sustainability ambitions and the unique circumstances of the project. Develop meaningful and objective measures to address this
- ▶ do not be tempted to adopt a “one size fits all approach”, each construction project and its associated procurement is unique and will have different drivers and different sustainability risks and opportunities
- ▶ before buying, re-think/challenge the need for the project/product/service. Work with stakeholders and clients to explore if the need can be met without a procurement taking place
- ▶ ensure supply chain are involved as early as possible in the project to ensure expertise is harnessed and whole-life value is secured
- ▶ the process of procurement in construction can range from an in depth market analysis, tender and evaluation process to a simple work instruction to a subcontractor. Irrespective the approach to sustainability requirements should be made clear from the start
- ▶ ensure supply chain sustainability requirements are contractually enforceable wherever possible. In all cases agree objective measures so that non-compliance is highlighted and corrective actions can be quickly identified
- ▶ always take time to review lessons learned, record what works and do it again. Share this knowledge to promote better sustainable procurement practices across the industry.

For the purposes of this guide the term “buyer” is used to describe industry professionals who negotiate and let contracts for materials, works or services within the construction project life cycle. The term supplier is not only used to describe organisations that supply materials, it also refers to organisations that supply resources, works and services such as design, trades, engineering etc. For consistency this guide uses the term sustainable procurement. However it is important to recognise that there are many other terms that are often used that generally have the same meaning these include responsible sourcing, responsible purchasing, sustainable sourcing and green procurement.

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Glossary

Buyer	Any industry professional who plays a key role in deciding where and with whom the money is spent, ie those involved in negotiating and letting contracts.
Client	The natural or legal person for whom a structure is constructed, or alternatively the person or organisation that took the initiative of the construction.
Competitive dialogue	A procedure introduced in the public sector procurement directive (2004/18/EC), which has been adopted in the Public Contracts Regulations (SI 2006/5). It is used in the award of complex contracts, where there is a need for the contracting authorities to discuss all aspects of the proposed contract with candidates.
Flexible Framework	A self assessment mechanism developed by the business led Sustainable Procurement Task Force that allows organisations to measure and monitor their progress on sustainable procurement over time.
Greenhouse gases	Gases such as carbon monoxide and methane that are naturally found in the earth's atmosphere. They trap heat from the sun, which warms the planet.
Green procurement	See <i>Sustainable procurement</i> .
Integrated team	An integrated project team consisting of client, designers, constructors and specialist suppliers, with input from facilities managers/operators that considers the construction process in an integrated way, ie in which design, construction operation and maintenance are considered as a whole.
Life cycle analysis	Any techniques that allows assessment of a given solution, or choice from among alternative solutions, on the basis of all relevant economic consequences over the service life of an asset.
Life cycle costs	The total cost of an asset throughout its life including planning, design, acquisition, operation and maintenance and disposal, less any residual value. See also <i>Whole-life costs</i> .
Performance indicators	A qualitative or quantitative measure of service or activity used to compare actual outcome against a standard or other target. Performance measures commonly relate aspects such as safety responsiveness, cost, comfort, asset performance, reliability, and sustainability.
Procurement	The process of acquiring goods, works and services, covering both acquisition from third parties and from in-house providers. The process spans the whole life cycle from identification of needs, through to the end of a services contract or the end of the useful life of an asset.

Private Finance Initiative	<p>A way of enabling the public sector to contract with the private sector to provide quality services on a long-term basis, typically 25–30 years. This takes advantage of private sector infrastructure delivery and service management skills, with the incentive from having private finance at risk.</p> <p>The private sector takes on the responsibility for providing a public service against an agreed specification of required outputs prepared by the public sector.</p> <p>The private sector carries the responsibility and risks for designing, financing, improving or constructing, maintaining and operating the infrastructure assets to deliver the public service in accordance with the public sector’s output specification.</p>
Project managers	Individuals responsible for the project including leading, managing and co-ordinating the project team on a day to day basis.
Responsible purchasing	See <i>Sustainable procurement</i> .
Responsible sourcing	See <i>Sustainable procurement</i> .
Supply chain	A system that includes suppliers, designers, manufacturers, production facilities, distribution services, commissioning teams, materials and customers, which link together via the upward supply of materials and products and the downward flow of information.
Sustainability	“Meeting the needs of the present without compromising the ability of future generations to meet their own needs” (Bruntland, 1987).
Sustainable procurement	A process whereby organisations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits not only to the organisation, but also to society and the economy, while minimising damage to the environment. Sustainable Procurement Task Force (2006).
Sustainable development	“Development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Bruntland, 1987).
Sustainable sourcing	See <i>Sustainable procurement</i> .
Unique project circumstances	The unique combination of socio-economic, commercial, environmental and political factors that are relevant to a particular project location. These factors will be influenced by proposed end use, length of use, end user and other issues arising from its situation and what is close to the site.
Whole-life cost	The total cost of an asset or its parts throughout its life, including the costs of planning, design, acquisition, operation and maintenance and disposal, less any residual value.

Whole life value

The benefits and costs associated with a built asset over its whole-life taking account of the interests of all stakeholders affected by its construction and existence and its wider economic, social and environmental impact. There will be trade-offs between various short-term project constraints (such as time, costs and quality) and the conflicts in stakeholders' longer-term interests and objectives.

Abbreviations and acronyms

BIS	Department for Business Innovation and Skills
BRE	Building Research Establishment
BREEAM	Building Research Establishment Environmental Assessment Method
BSI	British Standards Institution
CEEQUAL	Civil Engineering Environmental Quality Assessment and Award Scheme
CHAS	Contractors Health and Safety Assessment Scheme
CLG	Communities and Local Government
CLP	Construction logistics plans
DBO	Design, build and operate
Defra	Department for Environment, Food and Rural Affairs
EA	Environment Agency
EIA	Environment impact assessment
EICC	Electronic Industry Citizenship Coalition
ETI	Ethical Trading Initiative
FCP	Forward commitment procurement
FM	Facilities management
FSC	Forest Stewardship Council
GeSI	Global e-Sustainability Initiative
GHG	Greenhouse gases
ICAM	Islington and Camden Borough Councils
IChemE	Institution of Chemical Engineers
ICLEI	International Council for Local Environmental Initiatives
IET	The Institution of Engineering and Technology
ILO	International Labour Organisation
IMechE	Institution of Mechanical Engineers
ISO	International Organization for Standardization
ITPOES	UK Industry Taskforce on Peak Oil and Energy Security
JCT	Joint Contracts Tribunal
KPI	Key Performance Indicators
LOCOG	London Organising Committee of the Olympic and Paralympic Games
NAO	National Audit Office
NEC	New engineering contract

NGO	Non-governmental organisations
ODA	Olympic Delivery Authority
OGC	Office of Government Commerce
OJEC	Official Journal of the European Union
PAS	Publicly Available Specification
PEFC	Programme for the Endorsement of Forest Certification
PFI	Private Finance Initiative
PPP	Public Private Partnership
PQQ	Pre qualification questionnaire
PVC	Polyvinyl chloride
QS	Quantity surveyor
RIBA	Royal Institute of British Architects
RICS	Royal Institution of Chartered Surveyors
SEA	Strategic Environmental Assessment
SMART	Specific, measurable, achievable, realistic and time-based
SME	Small and medium enterprises
SPTF	Sustainable Procurement Task Force
SSSI	Site of Special Scientific Interest
SWMP	Site Waste Management Plan
TFL	Transport for London
UU	United Utilities
WLC	Whole-life cost
WWF	World Wildlife Fund
WRAP	Waste and Resources Action Programme

1

About this guide

This guide aims to show how procurement can help deliver more sustainable outcomes from construction projects. It is divided into three parts:

Part 1 (Chapters 2 to 4): provides some context and background to sustainable procurement in construction. This will be useful to buyers new to the subject and who require some information on what sustainable procurement in construction is, why it is important and what the business drivers are.

Part 2 (Chapters 5 to 6): outlines the thinking behind BS 8903 and describes how this is relevant to construction procurement. Also, it identifies further construction related issues that need to be taken into account to achieve successful sustainable procurement in the construction industry.

Part 3 (Chapters 7 to 8): describes how to put sustainable procurement into practice. It outlines the main sustainability considerations and demonstrates how they can be embedded within the procurement process to ensure that sustainability is considered alongside or within the usual criteria of purchase price, quality and service. This section is about the practical application of sustainability within the process of procurement from initial identification of need through to contract management and then completion.

Annexes: see Section 1.3 for more information.

Figure 1.1 provides a map of this guide to enable you to easily navigate the sections and find the information relevant to your needs.

About this guide

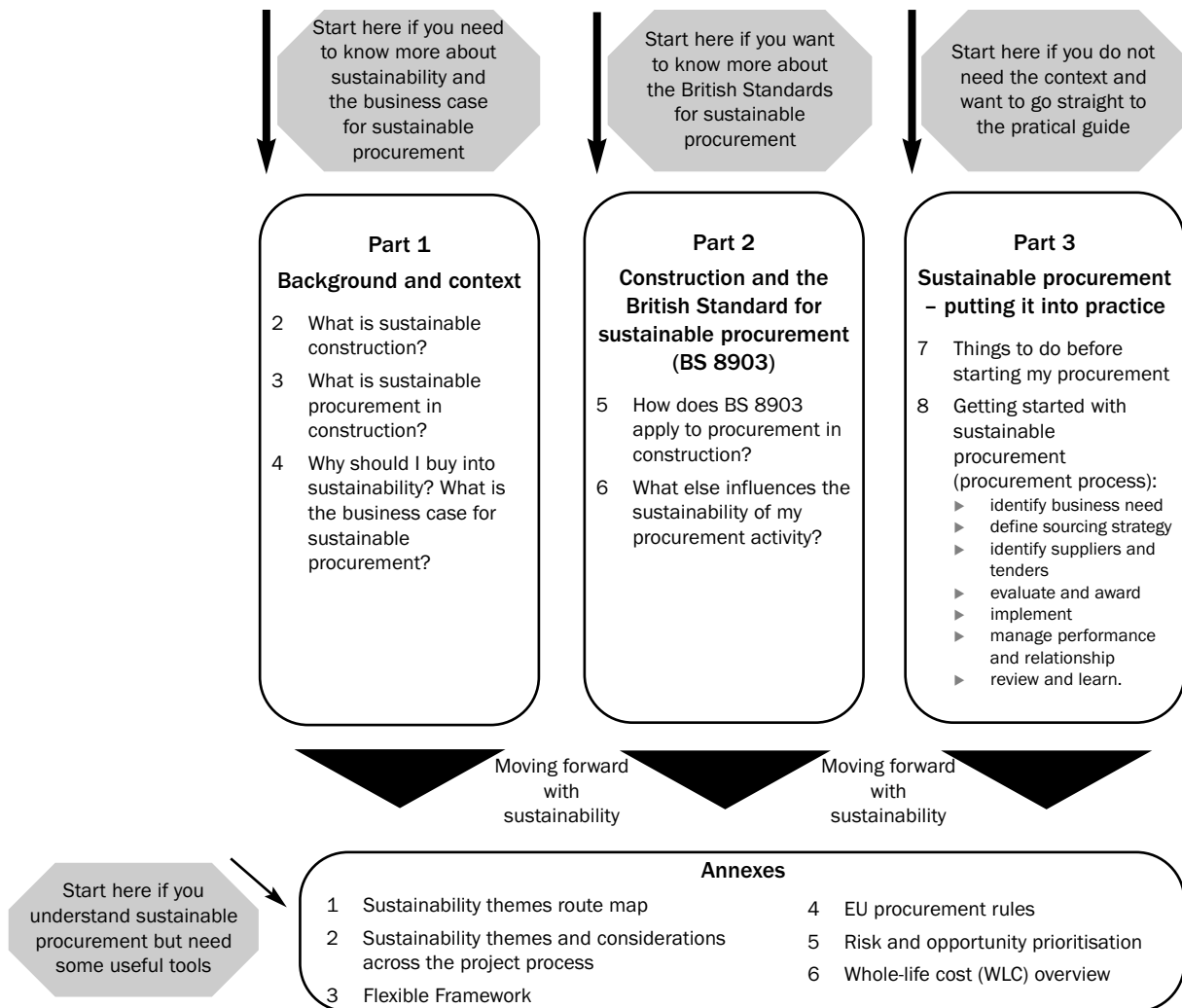


Figure 1.1

How to navigate this guide

Each sub-section provides links to more information sources in the *More help* boxes. Case studies and boxes are included to help show how companies are dealing with sustainability in practice.

1.1

Who should read this guide

This guide is aimed primarily at construction industry professionals responsible for negotiating and letting contracts for materials, works or services on behalf of the client, main contractor or subcontractor across all stages of the construction project. The scale of procurement across a typical project varies markedly, procurement requirements emerge throughout most project stages and are delivered by multiple organisations. This guide should be relevant to any industry professional with procurement needs.

This guide will be useful to:

- ▶ **clients** by helping improve understanding of how the sustainability goals that they set influence sustainability within the supply chain
- ▶ **consultants** (in particular, cost, design, architects and project managers) by helping improve understanding of how decisions taken by consultants can promote or hinder sustainability in procurement and the supply chain. It may also help

consultants provide better advice to clients on how sustainability requirements can be met

- ▶ **suppliers** by building understanding of how a customer's sustainability requirements can be met. It should also help buyers and suppliers find a common approach and common language to sustainable procurement
- ▶ **students** and those seeking to advance their knowledge in the subject area.

1.2 Scope

This guide examines construction and associated procurement in its widest context, meaning it considers the complete project life cycle. This includes construction of buildings, infrastructure, related services, maintenance, refurbishment and disposal.

Figure 1.2 shows the broad spectrum and layers of procurement that occur across a building project from the initial fundamental design concepts to procurement of specific materials, equipment, subcontractors and trades through to operator and facilities management services.

1.3 Annexes

The annexes provide useful information (see Table 1.1).

Table 1.1

Annexes – overview and content

Annex title	Content	Page
1 Sustainability themes route map	Summarises the main sustainability themes, key performance indicators (KPIs), industry targets and best practice, and implications for procurement. This will help buyers ensure that all relevant themes are considered during procurement	89
2 Sustainability themes and considerations across the project process	Summarises what the main sustainability considerations are by theme, across each stage of a generic project process	113
3 Flexible Framework	Tool developed by the Sustainable Procurement Task Force to help organisations assess their progress in sustainable procurement against best practice	122
4 EU procurement rules: supplement to the procurement process for public sector buyers	An overview of the requirements for public procurement within the EU in relation to sustainability and links to further sources of information	124
5 Risk and opportunity prioritisation – a user friendly tool	A tool to help buyers prioritise sustainability risks and opportunities and develop supporting action plans	129
6 Whole-life cost (WLC) overview	An explanation of what WLC is and why it should be used to support procurement decision making. Links are provided to WLC tools and other information sources	133
7 Case studies related to the 12 sustainability themes	Case studies related to the main sustainability themes outlined in Chapter 2 and described in Annexes 1 and 2: <ul style="list-style-type: none"> ▶ Porth relief road project ▶ Breyer Kitchen Recycling Initiative with Egger ▶ Wheal Jane tin mine, Cornwall ▶ Implementing sustainability: building schools for the future, Sheffield ▶ Controlling labour standards: temporary workforce ▶ Environment Agency sustainability score card. 	140

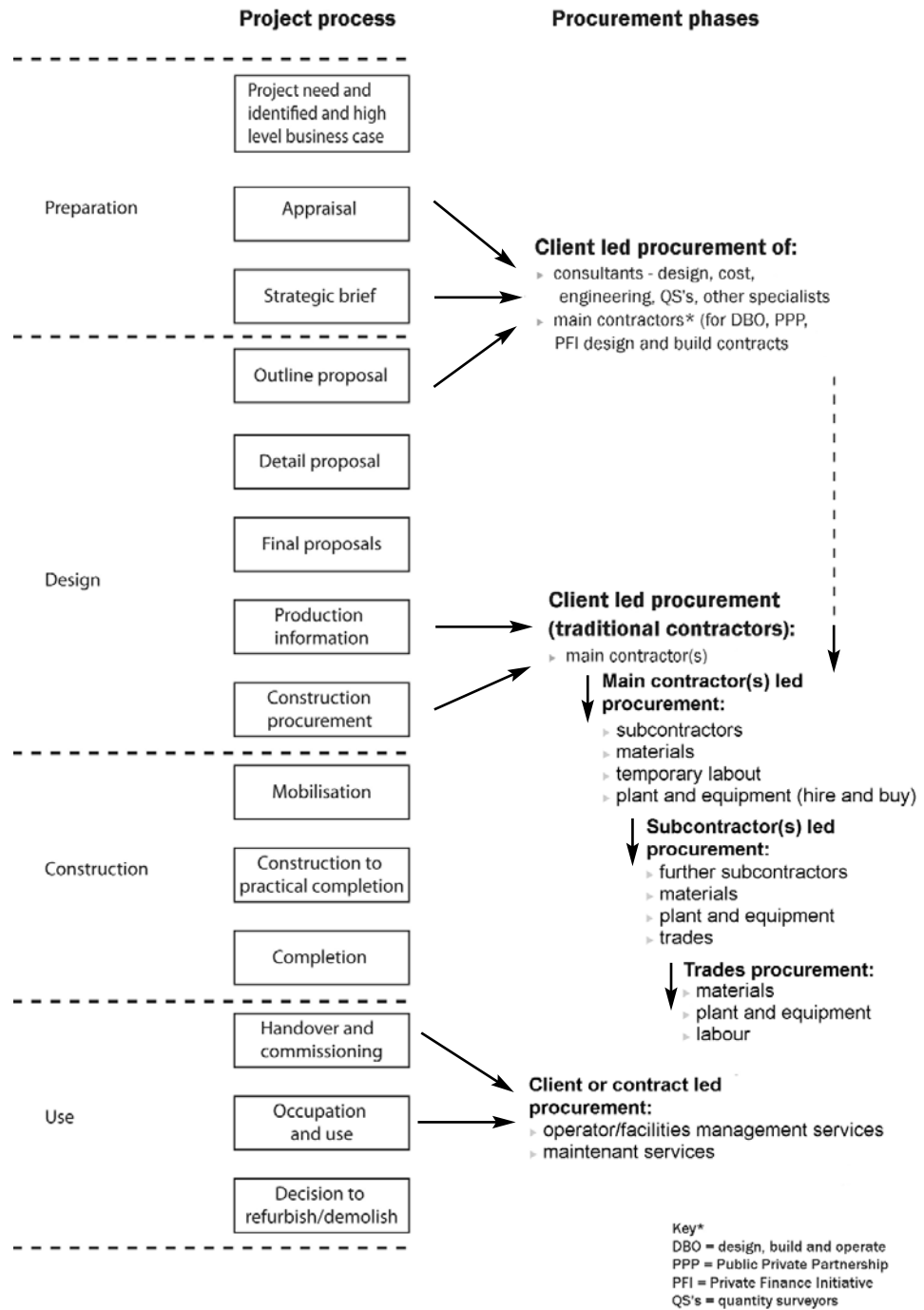


Figure 1.2

Procurement phases across the project process

2

What is sustainable construction?

2.1

What does sustainability actually mean?

Sustainability is about finding a balance between economic, social and environmental needs. It is about taking a long-term view when making decisions to ensure that in meeting our own needs that we are not compromising the needs of others today and in the future. It involves taking responsibility for the local, regional and global effects of our way of life.

Sustainability emerged because we believe our current development model is unsustainable. There are two main issues:

- 1 **Social:** our way of life has led to great social and economic inequality in human health and wealth between and within countries.
- 2 **Environmental:** we are using more resources than the world can support. The main environmental issues can be summarised as:
 - ▷ climate change. Rising global temperatures may result in changing weather patterns, rising sea levels and increasing intensity of extreme weather that will have consequences for all living things
 - ▷ biodiversity loss across ecosystems. Experts estimate our current loss of species to be between 1000 and 10 000 times higher than the natural extinction rate¹
 - ▷ resource depletion and the increasing stress on water, land and air from the way we produce, use and waste resources. For example estimates indicate possibly only 61 years of copper reserves remain². Rising demand for oil continues and it is widely predicted that demand will outstrip supply in the short-term. The second report of the UK Industry Taskforce on Peak Oil and Energy Security (ITPOES) finds that oil shortages, insecurity of supply and price volatility will destabilise economic, political and social activity potentially by 2015 (ITPOES, 2010).

Sustainability is seldom about stopping what we do but about doing it in a way that has minimal effect on the world.

2.2

Sustainable construction

The economic contribution made by the UK construction industry is significant: its output is worth over £100bn a year. It accounts for eight per cent of gross added value and provides employment for over three million workers. Also it has big effects on the environment. For example, buildings are responsible for almost half the country's carbon emissions, half our water consumption, about one third of landfill waste and one quarter of all raw materials used in the economy (HM Government (2008).

Figures from:

1 WWF: <www.panda.org/about_our_earth/biodiversity/biodiversity/>

2 New Scientist: <www.newscientist.com/data/images/archive/2605/26051202.jpg>

The process of construction also alters the natural environment and causes disruption to surrounding neighbours, and the resulting built environment affects the way we live. This includes how people move around, work and play. We need to recognise the significant role that construction plays in creating and shaping sustainable communities and think about:

- ▶ what we construct and how our actions and decisions can encourage owners and end users to lead more sustainable lives
- ▶ how we construct, by making the process of construction more sustainable we can reduce the effect of this activity
- ▶ if we should construct in the first place.

The way we construct, together with the buildings and infrastructure that we create can make a difference. This means building structures that:

- ▶ are sensitive to the natural environment in design and use – minimising damage to the environment
- ▶ are energy and water efficient over life in the built environment and construction process
- ▶ use fewer resources over the life of the finished project
- ▶ use resources from more sustainable sources
- ▶ provide benefits to the surrounding community, for instance through economic activity and involvement
- ▶ are flexible and adaptable – both in use and to external conditions such as climate change
- ▶ provide better outcomes for all involved, developers, designers, the supply chain, operators and end users.

The following table identifies 12 typical sustainability themes that are relevant to construction. These themes have been developed from information provided by HM Government (2008) and the ODA (2007). These are the most common sustainability issues faced by the industry and while not all themes will apply to all projects, they represent the issues that projects and any supporting procurement activity should be attempting to address. Different projects and clients will have different priorities and ambitions so it is important to consider this list (and the definitions of best practice described in Annex 1) as examples rather than a prescriptive list.

Table 2.1

Sustainability themes

Sustainability issues		
1	Climate change mitigation and adaption	To minimise greenhouse gases (ghg's) emitted in the built environment, the construction process and in the manufacture/delivery of associated goods, works, services (embodied carbon) To consider and maintain flexibility in design to cater for climate change adaption
2	Water	To minimise water usage in construction and operational use. Consider embodied water in manufacture of materials, works and services
3	Waste	To minimise waste by reducing, reusing, recycling and recovering in the built environment, throughout the construction phase and across the supply chain
4	Materials	To identify, source and use environmentally and socially responsible materials
5	Biodiversity and ecology	To protect and improve biodiversity and provide ecological benefits through the project life cycle
6	Land, air, water, noise	To maximise positive and minimise negative effects on land, air, water noise, throughout the project
7	Supporting communities	To consider the social, economic and environmental effect of the project on the community, and to get involved with and establish how the project can provide benefits and improve the area
8	Transport and mobility	To consider opportunities for sustainable transport of labour and materials throughout the build phase and to consider opportunities in design to prioritise walking, cycling and public transport in use
9	Access	Use principles of inclusive design ie structures to be inclusive to people of all faiths, accessible to disabled people, and provide specific facilities such as baby changing where needed
10	Equality, diversity, employment and skills	Consider ways construction can create new employment opportunities, build a diverse business base and workforce. Provide training and skills enhancement and stimulate businesses locally, regionally and nationally
11	Health and well-being	Consider the role of design and buildings to promote a healthy environment and lifestyle for users and operators Consider the health and safety requirements of all site workers and other ways to promote healthy lifestyles for construction workers such as eliminating hazardous materials, offering healthy food on site, health checks and education programmes
12	Labour standards	Consider whether clients, contractors and their supply chains are meeting internationally accepted labour standards such as International Labour Organisation (ILO) standards ¹ . This includes taking adequate steps to ensure no exploitation of cheap labour, acceptable working conditions for all and that no illegal labour is used and all relevant employment legislation is complied with

Note:

¹ The International Labour Organisation (ILO) is the tripartite UN agency that brings together governments, employers and workers of its member states in common action to promote decent work throughout the world. It's international labour standards promote opportunities for women and men to obtain decent and productive work, in conditions of freedom, equity, security and dignity.

Part 1
Part 2
Part 3
References
Annexes

Annexes 1 and 2 provide more information about each theme and are important elements of this guide:

Annex 1: summarises each theme including relevant, example key performance indicators (KPIs) and current best practice. It also suggests possible procurement actions that could be taken to help ensure that the relevant themes are considered during procurement.

Annex 2: provides information from a project standpoint. It describes how the themes could be considered at different stages of the project life cycle to promote more sustainable outcomes from construction.

These annexes provide illustrations and prompts of the issues together with references to more information. They can be used together or separately. Just select the themes that are applicable to your project or its related procurement (note this will be influenced by the unique circumstances of the project).

2.3 Opportunities and challenges

In general, however, there are examples of excellent construction practice and the industry has been criticised for its lack of progress in improving quality, efficiency, cost/affordability, integration and delivering sustainable construction. Chapter 4 gives a background summary of the main reports and initiatives shaping sustainability across the industry.

For many years sustainability in construction has been client-led with many contractors taking a relatively passive role and adopting sustainable solutions only if the client asks for them. The industry now needs to make a change and take responsibility for its impacts. Leading organisations are doing this by:

- ▶ starting to set their own standards as part of their value proposition
- ▶ educating and challenging their clients and/or main suppliers to win long-term competitive advantage
- ▶ working closely with their main suppliers to promote sustainability throughout the supply chains and deliver new sustainable solutions
- ▶ trying to provide the widest possible sustainability benefits when undertaking construction projects.

Culture change across the industry is needed, we need to share the same overall sustainability goals and find ways of working that allow the expertise of all those involved to be brought together at a point in the project where a real difference can be made. Changes will be required from all parties including clients, consultants, contractors and their supply chains. Chapter 3 looks at the role of procurement in delivering sustainable construction.

In recent years Willmott Dixon the privately owned construction and property development company has responded to growing concerns about the environmental effects of new buildings by committing itself to using the latest sustainable building methods. Also, it has assembled an in-house team of experts to provide advice to clients on issues relating to sustainability including how to design more environmentally friendly buildings. The team is trained to carry out BREEAM (Building Research Establishment Environmental Assessment Method) assessments and provides advice to clients at the design stage on how their buildings can get BREEAM ratings – increasingly recognised as the industry standard for measuring a building's effect on the environment. This team is able to assess a future building's performance in areas such as carbon dioxide emissions and energy efficiency, land and water use and its effect on the community and users, advising on design changes where necessary.

Lessons learnt

This is a good example of how constructors are now educating clients to be more sustainable. Also, it demonstrates a commitment to resources to support sustainable procurement and embedding sustainability into the business.

Sustainable development – general overviews

WWF: <www.panda.org/about_our_earth/>
For global environmental concerns

HM Government (2005) *Securing the future. The UK Government sustainable development strategy*: <www.defra.gov.uk/sustainable/government/publications/uk-strategy/documents/SecFut_complete.pdf>

London Sustainable Development Commission (2008) *London's quality of life indicators. 2008–2009 report*: <www.londonsdc.org/documents/qol_reports/QoL_indicators.pdf>

Sustainability themes

Strategic Forum For Construction (2008) *Strategy for Sustainable Construction*
A joint industry and government initiative to promote leadership and behavioural change, as well as delivering benefits to the construction industry and wider economy:
<www.bis.gov.uk/files/file46535.pdf>

The Olympic Delivery Agency (2007) *Sustainability Strategy*
Provides an insight and background on the main 2012 sustainability objectives and themes:
<www.london2012.com/documents/oda-publications/oda-sustainable-development-strategy-executive-summary.pdf>

Background to construction industry performance

Construction Task Force (1998) *The Egan Report – rethinking construction*
Influential report identifying opportunities to improve quality and efficiency of UK construction:
<www.constructingexcellence.org.uk/download.jsp?url=/pdf/rethinking_construction/rethinking_construction_report.pdf>

Constructing Excellence (2009) *Never waste a good crisis*
A review of progress since Rethinking construction and thoughts of our future:
<www.constructingexcellence.org.uk/news/article.jsp?id=10886>

Strategic Forum (2005) *The Construction Commitments*
These are six areas vital to delivering construction projects on time, safely and to budget. Several targets have been set: <www.strategicforum.org.uk/cc.shtml>

More help 2