
East of England Sustainable Construction Task Group

Making the construction industry ready for a more sustainable East of England

A primer

June 2006



Foreword

'Sustainability' is one of the buzz-words of the moment, and probably everyone in the construction industry is now aware of the importance of environmental, social and economic issues in a very broad sense. But what does this actually mean for the construction industry?

There is little doubt that the industry must improve its environmental performance: construction in the broad sense (i.e. including clients, planners, designers, contractors and building users, and covering infrastructure as well as buildings) is responsible for 40% of the total world flows of raw materials such as sand, gravel and clay, according to the Sustainable Construction Task Group report, 'Reputation, Risk and Reward' (BRE, 2001). It is responsible for 52% of carbon emissions and 16% of water withdrawals, and produces 17% of all waste generated in this country.

The construction industry also has huge potential to enhance or hinder the economic and social development of our society, not only directly through its own activities and workforce, but indirectly as a result of the impact it has on how and where we all live: our homes and the communities we live in, our work, travel arrangements, recreational activities and the facilities we need such as shops, schools and hospitals.

There are now more and more pressures on the construction sector to deliver a more sustainable built environment, but the industry cannot suddenly change at a moment's notice. We need to understand what the starting-point is, and where we want to get to - and then to establish what support is needed so that people are able to develop their knowledge, understanding and skills to meet these new and increasing demands. This report provides us with exactly that information for the East of England, so that we can all begin to move forward into a more sustainable future.

Ian Coull, Chair, Sustainability
Chief Executive, Slough Estates



Cover photos

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Summary

This report has been prepared by the Sustainable Construction Task Group for the East of England. The report is concerned with how ready the construction industry is to help make the East of England more sustainable. This is important because the industry is one of the principal mechanisms for delivering three of the UK government's policy imperatives:

1. **sustainable construction**
2. **sustainable communities**, and
3. **sustainable urban and rural regeneration**.

Implementing these imperatives will require significant changes in:

- the services that the construction industry offers its clients
- the products it delivers, and
- how these products are used, operated and disposed of.

Many people - amongst its clients, those working in the industry, and those responsible for regulating it - remain either unaware of these changes or are unprepared for dealing with them.

This report has been written in the form of a primer for people who now find they have to grapple with the issues raised by trying to make the built environment in the East of England more sustainable. The report is in three parts.

1. It begins by describing the key players tasked with implementing government policy in the region.
2. This is followed by the results of a survey undertaken to audit how ready the region's construction industry is to tackle what needs to be done.
3. And the report closes with recommendations endorsed by a stakeholders' workshop on the future actions necessary to help the industry progress.

The region has a raft of strategies in place intended to promote sustainability. But, as the survey shows, these have yet to be matched by

This report is the first in a series commissioned by the **Sustainability Forum**. These seek to audit the current awareness and understanding of,

The **Sustainability Forum** is an advisory body made up of representatives from across the UK construction industry. It provides advice to the Department of

"**Sustainable Communities** can only follow the construction of the built environment."

"The region is top heavy with policy but with too little underneath to

an effective response from the construction industry or its clients - from those who will have to make sustainability happen on the ground. Very few organisations responded to the survey. More than three times as many wanted to attend the workshop reporting the survey results. Few appear to want to stand up and be counted on this issue at present. Many more want to know what others are doing and what is now being expected of them.

The survey also identifies that there is a serious lack of regional statistics about the performance of the construction industry that can be used gauge how well it is doing and where it most needs to make improvements. Such statistics will be essential both for monitoring the implementation of regional strategies and for setting realisable targets and milestones against which the industry can measure its own progress.

Three levels of readiness to tackle sustainability can be seen amongst those who responded to the survey or attended the workshop.

1. Unaware
2. Aware but unprepared
3. Prepared.

Those who are already prepared fall into two clusters.

- Large firms (typically developers, housebuilders and contractors) who are adopting a formal, multi-step approach based on management systems.
- Microl to small firms (often, but not exclusively, consultancies) who are employing ad hoc, less systematic approaches.

Interest in, and commitment to, sustainability is revealed as being not just the preserve of large organisations (as some have previously suggested). Both small and large firms are tackling it but with different approaches. Both need to be catered for and supported by future actions to promote sustainability in the region.

As the workshop revealed, stakeholders see sustainability as an (overly) complicated issue. They want:

- it made simpler for them so they can respond effectively
- easy access to a 'one stop shop' providing practical guidance on best practice - possible through a single portal provided by Inspire East.

Those offering services in the construction industry fear sustainability will impose cost penalties on them (without commensurate benefits).

Instead they want it to be a business development opportunity that will

"Government should be leading by example."
Small specialist

"Inspire East/EEDA, with legal responsibility for implementing sustainable development, should be

"The added value that the Sustainable Construction Task Group can play is within the industry. It should work with others where

"Planning and building control are key in making the East of England more sustainable."

"Simplify. This is getting overly complicated. Too much choice/information is

"Sick of 'hot air' discussion about the issues. Want real practical guidance on how to make these

bring them more profitable work. The stakeholders represented at the workshop also want a clear lead from government, operating by example, as the UK's major construction client. And they call for clear guidance on who is responsible for doing what in the delivery of the Sustainable Communities Plan. Taken together their comments reveal a palpable frustration - they want to move on from policy discussions to practical actions but many of them feel unsure how to do so.

Those who completed the survey or attended the workshop agree about what needs to be done next.

They call for action on three fronts.

1. **Education, training and recruitment** for the wide range of stakeholders involved in decision-making about the sustainability of the built environment - from planners through to contractors and beyond to school children (as potential recruits to the industry).
2. **Promotional campaigns** to raise awareness, understanding and commitment both within the construction industry and amongst its regulators, clients, and users.
3. **Advice and guidance**, not just on how to implement sustainability in practice, or about precisely who is responsible for what in delivering sustainable communities, but about how to use these initiatives for business development and to raise the status of construction in the eyes of (regional) government, clients and school leavers.

The East of England Sustainable Construction Task Group is willing to undertake the following actions to help speed progress on making the construction industry ready to deliver a more sustainable region.

1. Draw up a list of all (government-supplied) documents of which construction-related organizations in the region should be aware and identify any short falls.
2. Arrange a round-table discussion with the regional agencies concerned, including those that took part in the workshop

presentations plus CITB-ConstructionSkills, focused on what they are doing to help the construction industry in the region get up to speed. The SCTG will collate these responses and identify any shortfalls between what is proposed and what is wanted.

3. Build effective connections with other relevant agencies to create clear lines of communication on sustainable construction in the region - so that scarce resources are used to maximum benefit and to remove current confusion caused by multiple sources of information.

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Setting the scene

This report begins by introducing a bewildering array of regionally delivered strategies for implementing government policy imperatives on sustainable development. These strategies are currently reshaping the context in which the construction industry is being expected to work in the East of England. They include:

- sustainable construction
- sustainable communities, and
- urban and rural regeneration.

This part of the report also identifies the key players responsible for driving these agendas forward in the region:

- the Regional Assembly
- the Regional Development Agency
- the Government Office for the Eastern Region, and
- Inspire East.

These organisations are signposted at the beginning because the results of the survey reported later indicate that they have yet to rise above the horizon for many working inside the construction industry in the East of England.



The regional delivery of sustainable development

When the Government published its revised strategy for sustainable development in the UK, *Securing the Future: delivering UK sustainable development strategy*, in March 2005¹, it placed emphasis on sustainable development being delivered at the regional level by Government Offices for the Regions, regional assemblies and regional development agencies, through their regional and sub-regional strategies, see Figure 1. All central government departments² and their executive agencies were called upon to review the effectiveness of arrangements being made to deliver sustainable development at the regional level.

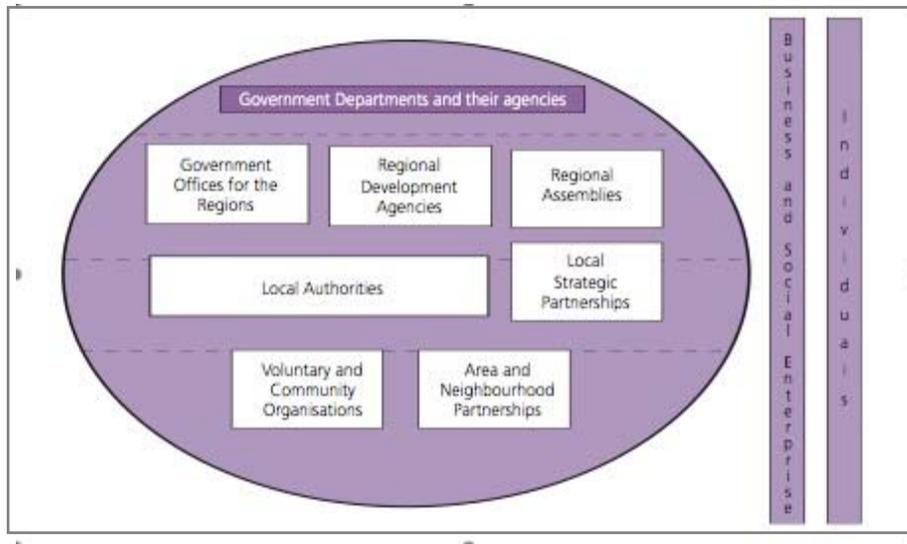
Figure 1: The Government's national delivery system for sustainable development

Government Offices make a vital contribution to the Government's commitment to thriving, vibrant, sustainable communities. The Office of the Deputy Prime Minister's Sustainable Communities Plan will affect every region of England, providing homes for key workers, regenerating towns and cities and providing parks for families and children. Above all, the plan is about helping people

Regional Development Agencies (RDAs) have been set up by Government to transform England's regions through sustainable economic development and to have an influential role in the business community. The RDAs, which have a statutory duty to contribute to sustainable development in the UK, prepare and implement Regional Economic Development Strategies. **Regional Assemblies** scrutinise the work of their RDA and have been appointed as the regional planning body with a duty to prepare the statutory Regional Spatial Strategies (RSS). They also play a leading role in work on integrating regional strategies and drawing up rsdfs with key players and a wide range of regional expert groups and stakeholders. These high level frameworks set out objectives and

¹ Copies of this document can be downloaded from www.sustainable-development.gov.uk/publications/uk-strategy/index.htm.

² Sustainable development is a priority shared by all Government departments, although Defra holds the Public Service Agreement (PSA) target for its delivery (Securing the Future, 2005:154), see www.sustainable-development.gov.uk/publications/pdf/strategy/SecFut_complete.pdf. PSAs set out the key improvements that the public can expect from Government expenditure. They are three year agreements, negotiated between each of the main Departments and HM Treasury during the Spending Review process, www.hm-treasury.gov.uk/documents/public_spending_and_services/publicservice_performance/pss_perf_index.cfm#acronym



The Government's revised strategy also drew attention to importance of planning as a regional mechanism for making this delivery.

Planning – with sustainable development at its heart

The planning system is key to achieving sustainable development. The Government's new planning policy statement 'Delivering Sustainable Development' (PPS 1) sets out our vision for planning in England and the key policies which will underpin it. PPS1 makes clear that sustainable development is at the heart of the planning system. It sets the framework for reflecting the duty in the Planning and Compulsory Purchase Act 2004 for regional and local plans to be prepared with a view to contributing to sustainable development. This is built into every stage of the planning process. Regional plans, called Regional Spatial Strategies (RSS), are drawn up by Regional Assemblies (the regional planning body). The RSS, incorporating a Regional Transport Strategy (RTS), provides a spatial framework to inform the preparation of Local Development Documents (LDDs). These documents form the portfolio which collectively delivers the spatial planning strategy for a local planning authority's area. The RSS also informs the preparation of Local Transport Plans (LTPs), and regional and sub-regional strategies and programmes that have a bearing on the use of land. The RSS should articulate a vision for the region for a 15-20 year period and show how this will contribute to achieving sustainable development objectives. Both RSSs and LDDs should be developed in

The East of England's Regional Spatial Strategy, called the **East of England Plan**, is intended to guide development in the East of England for the next 15 years – housing, economic development, the environment, transport, sport and recreation, waste development, mineral extraction and much more. It provide a framework for local authorities to produce more detailed development plans and local transport plans for their areas, and to provide an overview of many issues that have implications across the region (such as land use and transport infrastructure). It is also needed to inform other strategies and plans that have a bearing on land-use activities, including those for economic development, education, health, rural development, housing and culture.³

The East of England also has a Regional Housing Strategy. This sets out the strategic direction for the delivery of housing in the East of England – helping to meet the challenges of growth and regeneration in the Region, and more specifically to inform the recommendations for public investment in affordable housing. Alongside other key regional strategies that comprise the Integrated

The **Regional Spatial Strategy** sets out a strategy to guide planning and development in the East of England to the year 2021. It covers economic development, housing, the environment, transport, waste management, culture, sport and recreation, mineral extraction and implementation. The RSS has a bearing on almost every aspect of the way we live in the region. It aims to improve the quality of life, and sets

Local Development Frameworks

The Planning and Compulsory Purchase Act 2004 requires that Local Planning Authorities (LPA) prepare a Local Development Framework (LDF). LDFs set out, in the form of a 'portfolio', the local development documents which collectively deliver the spatial planning strategy for the LPA's area.

The LDF will be comprised of:

- Local Development Scheme (LDS)
- Statement of Community Involvement (SCI)
- Local Development Documents (LDD) (including development plan documents (DDP) and

The **Integrated Regional Strategy** is an EERA led strategic initiative, the vision for which is: 'to improve the quality of life for everyone who lives or works in the East of England'. The IRS tackles the critical issues facing the region, for example housing, transport, health, skills and economy. It

³ See www.eera.gov.uk/Documents/About%20EERA/Policy/Planning%20and%20Transport/PlanHome/RPG/RPG1

Regional Strategy (IRS), in particular the the Regional Economic Strategy (RES), it sets an agenda for achieving change and improvement for the quality of life in the Region.⁴

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See [www.eera.gov.uk/Documents/About%20EERA/Policy/Housing/RHS%20Final%20\(for%20website\).pdf](http://www.eera.gov.uk/Documents/About%20EERA/Policy/Housing/RHS%20Final%20(for%20website).pdf)

The latest revision of the East of England's Regional Economic Strategy, **A Shared Vision**, was published by EEDA in November 2004. It sets the long-term vision for the sustainable economic development of the East of England.⁵ The RES provides the framework within which different organizations can work with businesses, communities and individuals to improve the region's economic performance and the quality of life of those who live and work here. It is both strategic and action oriented. Being strategic means making choices about the most important economic development issues facing the region because not everything can be a priority. The synergy between the RES and the RSS is seen as a significant regional milestone that demonstrates the overwhelming alignment of these two strategies. For example, the RSS proposes total growth of 421,500 jobs across the region for the period 2001 to 2021. The spatial distribution of this growth seeks to enable the most prosperous areas to continue to lead the region's economic progress, while promoting a step-change in employment growth, development and diversification in the region's priority regeneration areas. The RES shares that proposition.

A Shared Vision, emphasized the role and importance of constructing a high quality built environment to future of the region. It called upon the construction industry, its clients, and related professional disciplines, to:

- co-ordinate regional programmes to address skills gaps and shortages in the built environment professions, and develop skills to take advantage of the latest sustainable construction techniques
- promote the use of the latest sustainable construction techniques, technologies and materials through regional exemplar projects and by the adoption of housing and building standards by developers and planning bodies
- raise awareness and embed the importance of sustainable development in design and planning
- use the skills of heritage, environment and built environment professionals to promote development which respects and enhances the existing natural, rural or urban environment
- integrate funding streams to improve urban design and architecture using mechanisms such as Architecture Centres

A Shared Vision offers eight goals for regional development

1. a skills base that can support a world-class economy
2. growing competitiveness, productivity and entrepreneurship
3. global leadership in developing and realising innovation in science, technology and research
4. high quality places to live, work and visit
5. social inclusion and broad participation in the regional economy
6. making the most from the development of

Inspire East is a regional body put together to drive up skills and knowledge in the related fields of regeneration and neighbourhood renewal. The services provided are available to a wide range of people from the public and private sectors. Its aims are:

- to promote better community and physical development in regeneration areas and areas of growth to create sustainable communities
- to enhance skills required for sustainable communities by sharing knowledge, information

⁵ A wealth of further socio-economic and environmental information about the region can be found on the East of England Observatory. This is an on line resource to help facilitate the sharing of knowledge about the region. Partners are invited to add their knowledge to this growing pool of information. It is important that we continually update and develop this evidence base www.eastofenglandobservatory.org.uk

These are the regional challenges to which the construction industry in the East of England is now being asked to respond.

The region's growth and regeneration areas

The East of England includes large parts of three of the UK's four growth areas:

- Milton Keynes South Midlands
- Thames Gateway South Essex
- London-Stansted-Cambridge-Peterborough corridor.

It also has older neighbourhoods in urban centres such as:

- Luton
- Peterborough
- Harlow.

that require regeneration while new developments cluster round the edges of these towns. The development agenda here is being driven by the Office of the Deputy Prime Minister's **Sustainable Communities Plan**. This will affect every region of England, providing homes for key workers, regenerating towns and cities and providing parks for families and children. The plan's aim is help people to live where they want to and having pride in their community. It contains an action plan to tackle:

- housing shortages and affordability in the greater south east
- the mismatch between housing supply and economic growth (jobs)
- low demand and abandonment in the Midlands and North
- homelessness
- a history of poorly designed houses and communities
- urban sprawl and environmental degradation
- the need to reform delivery.

GO-East, the Government Office for the East of England, is engaged in a wide range of activities to improve and promote Sustainable Communities in all parts of the region. Its responsibility for the Plan includes cross cutting work with agendas for housing, liveability, rural communities and countryside issues, transport and education. Affordable housing is in short supply in parts of the region, and the number of households is forecast to rise by half a million by 2021. GO-East works closely with Local Authorities to ensure improvement in levels of service and encourage good practice, and through the Regional Housing Forum that represents a wide range of regional stakeholders, it contributes to

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TIFF (Uncompressed) decompressor
are needed to see this picture.

The Sustainable Communities Plan
The ODPM launched its £38 billion Communities Plan in February 2003, setting out the Government's vision for sustainable communities. It has followed this with a plethora of plans, guidance and funding streams to prompt action. For more information, see IDEA's **A beginner's guide to**

The **Regional Housing Forum** have steered the development of the Regional Housing Strategy, with the EERA Housing and Sustainable Communities Panel agreeing and endorsing the final Strategy in May 2005. The Regional Housing Strategy (RHS) is based on a vision of the Region where

the formation of regional and national housing policy.⁶

⁶ GO-East also oversees the delivery of the National Strategy for Neighbourhood Renewal and its programmes, which are: the Neighbourhood Renewal Fund, Neighbourhood Management, New Deal for Communities, Community Participation and Community Empowerment Networks, see www.go-east.gov.uk/goeast/people_and_sustainable_comm/?a=42496

The growth areas

The *Sustainable Communities Plan* identifies specific locations in the region that have been chosen as the focus for employment, housing, and regeneration activity. These growth areas, and the sub-regions within them, are consistent with the sub-regional designations in the Regional Spatial Strategy for the East of England. The towns in these growth areas are seen as facing separate challenges.

The London-Stansted-Cambridge-Peterborough Corridor

Stansted/Harlow: to manage economic and regeneration opportunities of growth and improve the vitality of local economies currently depleted by workforce migration.

Stevenage: to combine regeneration and growth pressures with programmes of remedial action.

Cambridge: to plan for growth in a sustainable fashion, achieving a balance between housing, jobs and transport whilst also encouraging planned growth through the provision of high quality premises and facilities.

Greater Peterborough: to achieve balanced and sustainable growth in the city and its hinterland.

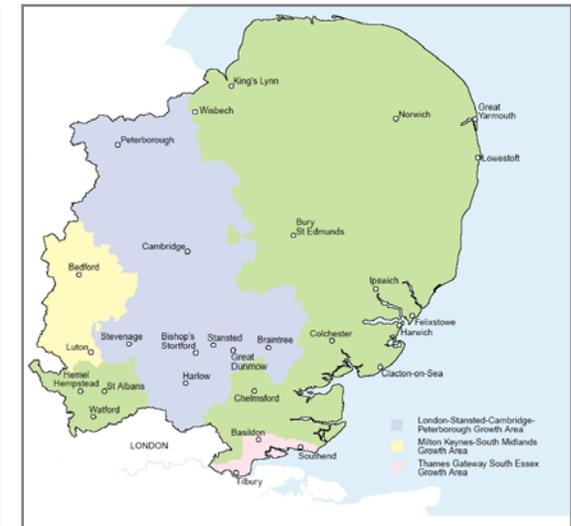
Milton Keynes-South Midlands

Bedford/Kempston: revitalising the centre of Bedford to enable it to function as a sustainable regional centre is regarded as a high priority, with an emphasis on increased housing and mixed use activity.

Luton/Dunstable/Houghton Regis: the emphasis will be on stimulating commercial activity and improving housing, transport, skills, the urban environments and the vitality of town centres.

Thames Gateway South East

The sub-region forms the largest urban area in the East of England. The challenge is to achieve sustainable employment led growth and regeneration since its economy underperforms the rest of the region and exhibits a high rate of business failure and weak skills base exacerbated by inadequate transport infrastructure



In dealing with the growth areas, the Regional Economic Strategy, *A Shared Vision*, focuses principally, though not exclusively, on the economic development

drivers and potential involved in implementing the *Sustainable Communities Plan*.⁷

Sustainable construction and the region

When the East of England Regional Assembly issued *its Sustainable Development Framework for the East of England* in 2001⁸, it called upon sectors of the regional economy to spell out the action they needed to take to help implement it. An East of England Sustainable Construction Task Group was convened to respond to this challenge.⁹ The Task Group developed a Sustainable Construction Strategy for the East of England using industry representatives at a workshop - jointly convened by English Partnerships, Constructing Excellence, GO-East and the Peterborough Environment City Trust - held May 2003. The Strategy was launched in December 2003. Although the Strategy was a response to a 'top-down' challenge from EERA, it was developed 'bottom up' and based on the participation of a wide range of organisations and stakeholder groups on both the demand and supply sides of the construction industry in the region.

The *East of England Sustainable Construction Strategy*¹⁰ began to set out a vision for the sustainable development of the region's built environment and infrastructure. It identified the construction industry's specific contribution to delivering sustainable development at the regional level. It set out high level objectives for sustainable construction in the East of England and an action plan for clients, service providers and regulators to implement them.

East of England Sustainable Construction Strategy: high level objectives

⁷ For further details, see **Focusing on Growth Areas in the East of England** which explains how the Regional Economic Strategy relates to the growth areas and how it will help these areas realise their potential and provide the quality of life that people deserve, www.eeda.org.uk/index.asp?id=1002343

⁸ East of England Regional Assembly, 2001, A Sustainable Development Framework for the East of England, EERA, www.eera.gov.uk/Documents/About%20EERA/Policy/Sustainable%20Development/SDF.pdf

⁹ Initially meeting under the sponsorship of GO-East, the Task Group subsequently operated as a Topic Group of the Sustainable Development Round Table.

¹⁰ The Strategy was adopted by EERA and endorsed by EEDA. It can be downloaded from www.sustainability-east.com/assets/Towards%20Sustainable%20Construction.pdf

The Sustainable Development Round Table for the East of England is a regional partnership which works to promote sustainable development in the region. The SDRT was formed in 1999 as a result of government encouragement, to bring together experts from all

Introduction
This draft Sustainable Construction Strategy for the East of England has been developed by a Task Group of industry representatives from a workshop - jointly convened by English Partnerships, Constructing Excellence, GO-East and the Peterborough Environment City Trust - on 28 May 2003. It is based on the participation of a wide range of organisations and stakeholder groups on both the demand and supply sides of the construction industry.

What is the Sustainable Construction Strategy and what is it for?
The East of England Sustainable Construction Strategy begins to set out a vision for the sustainable development of the region's built environment and infrastructure. It identifies the construction industry's contribution to delivering sustainable development at the regional level. It is offered as a response to the East of England Sustainable Development Framework - a high level initiative intended to inform local and sector-based strategies and action plans, and to the ODPM's strategy for sustainable communities.¹ This draft Strategy responds directly to key challenges stated in these initiatives and begins to spell out the action plans that need to be implemented by construction, its clients and regulators in order to deliver these.

The Importance of Construction to the East England
This should not be underestimated because construction is:
• the third largest employer
• the second largest economic sector by output, and
• the fourth fastest growing sector of the regional economy.
The industry is engaged in a major performance improvement initiative, entitled Constructing Excellence, for seeking:
• deployment of new procurement routes
• staff and labour shortages
• skills shortages
• safety and welfare problems
• a poor public image, and
• a poor understanding of how to implement more sustainable construction.
This Strategy is intended to help the industry, its customers and those who regulate it, to tackle these problems.

What's in it for me?
Adopting sustainable construction can offer your organisation clear strategic and operational benefits.
Quicks Construction's environmentally sustainable housing incorporates environmental good practice and sustainable development objectives. Through its products, the company is seeking to influence the development of sustainable communities by offering residents a better quality of life.
Causton Integrated Services Ltd have won a Workforce Development award 2003/04 for their First Start Programme for Young People between 13 and 19 by offering them opportunities to learn and develop basic skills in construction trades through renovating an empty property.
"Our job is about being part of the community and with the First Start scheme, we've hit on a way to do that."
www.kier.co.uk/Construction/development

Quick wins
The good news is that in the construction industry very little effort is required to gain substantial improvements.
Construction is responsible for 40% of the total works tones of raw materials such as sand, gravel and clay. It takes one quarter of all virgin wood, 20% of energy use, 18% of water withdrawal, and produces 17% of all waste generated. Given these figures, even modest reductions by each firm can begin to add up to worthwhile impacts.
• Reuse existing physical resources on-site to save on import and export costs
• Reduce waste in materials delivered to site (90% is waste attributable to leave on landfill taxes)
• Use local staff and resources to minimise product and sector miles and traffic congestion
• Use sustainable urban drainage systems
• Adopt the Considerate Contractor Scheme
• Plan and construct to protect and enhance site biodiversity

1. East of England Regional Assembly 2001 A Sustainable Development Framework for the East of England (EERA)
2. Office of Deputy Prime Minister 2002 Sustainable Communities in the East of England, ODPM London
3. Constructing Excellence Council, A Constructing Excellence 2002
4. Sustainable Construction Task Group 2001 Regulation, Risk and Reward (RR) - Building Codes
5. Building a better East of England (CCSD) 2001
6. National Green Specification - www.green-spec.org.uk

"As a contractor, developer and service provider, we recognise the need to act in a more sustainable manner - our clients require it, our staff demand it, and we are determined to deliver it."
John Dodds, Chief Executive, Kier Group

A Sustainable Construction Strategy for the East of England

Our aim is to improve the quality of life, environment and infrastructure for all the people of the region. To achieve this aim, our high level objectives are to:

- deliver a high quality built environment
- improve the quality of life
- deliver a high quality infrastructure
- improve the performance of the construction industry
- increase resource efficiency within the built environment.

Each of these objectives needs to be supported by a range of indicators that will be used to set targets and measure progress towards a more sustainable East of England.

Training for sustainable construction

Training in construction skills is an acknowledged priority in the growth areas. So, for example, Cambridgeshire County Council, has established the **SmartLIFE** project with European partners to address this challenge. The opportunities offered by modern methods of construction and their application to housing and other supporting infrastructure - including the schools, hospitals and the other facilities needed as the foundations of major growth - are being investigated and evaluated. Practical solutions, aimed at resolving the obstacles to sustainable growth, are being developed and tested in housing demonstrations. Bodies working together in **SmartLIFE** include central government agencies, local authorities charged with spatial planning, local training providers and private bodies such as developers and building systems suppliers. The fundamental aim of **SmartLIFE** is to facilitate the deliver of sustainable growth. It seeks to address three challenges of housing delivery in growth areas:

- affordability
- sustainability/energy efficiency
- skills/capacity shortages in the construction industry.

Design guidance on sustainable construction

It is becoming increasingly common for Planning Authorities in the region to publish some form of guidance under the headings of sustainable planning, design or construction. This may be issued as Supplementary Planning Guidance (SPG) and so may be used as the basis for decision-making about planning applications. SPGs can take a variety of forms and may include:

- sustainability checklists
- urban design statements
- access statements
- social impact statements
- transport assessments, and
- travel plans for development.

There are very wide differences in the form, contents and coverage of such guidance. This can be seen by comparing two recent local examples:

1. Cambridgeshire Horizons' (2006) **Sustainable construction in Cambridgeshire - a good practice guide**, and

Sustainable Construction in Cambridgeshire is designed to aid all those involved in the planning, design and construction of new developments within Cambridgeshire. It is one of a range of documents providing guidance on different aspects of sustainable development. The purpose of the guide is to illustrate the manner in

The Urban Supplement provides a design framework for the delivery of compact, mixed-use sustainable urban development with an emphasis on design quality. It is envisaged that District Councils, along with Essex County Council

2. Essex County Council's (2005) **Urban Place supplement** to its Essex Design Guide.

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Cambridgeshire Horizons is responsible for driving the delivery of 47,500 new homes and £2.2bn of support infrastructure in the Cambridge Sub-region by 2016. Using the Cambridgeshire Structure Plan as a blueprint for the creation of sustainable communities, it brings together local councils and development agencies to ensure a coherent and comprehensive response to the diverse challenges this presents. One of its objectives is to ensure developments employ high quality sustainable design. Its publication, ***Sustainable construction in Cambridgeshire***, is intended to aid all those involved in the planning, design and construction of new developments in the County. It focuses solely on the environmental aspects of sustainable construction, offering thematic 'design objectives' and 'guidance for developers' on:

- adapting to climate change
- energy
- waste
- water, and
- materials

This strong environmental agenda is also shared by the Three Regions' ***Adapting to climate change: a checklist for development*** (2005). This covers similar issues but structures them around:

- location
- site layout
- buildings
- ventilation and cooling
- other development infrastructure, and
- services

The Urban Place Supplement to the Essex Design guide has a wider focus. As well as dealing with environmental issues, it focuses on 'compact' urban development, 'liveability' and the quality of the public realm. While the Supplement also deals sustainability, this is considered at the urban scale through the influence of spatial issues such as:

Adapting to climate change

provides guidance on designing developments in a changing climate. It was issued by the Three Regions Climate Change Group. This was made up of representatives from the East of England Sustainable Development Round Table, the London and South East Climate Change Partnerships. Its aims are

The Essex Design Guide is aimed at those responsible for designing with the context of market towns and for lower density schemes. It was updated in 2005 to incorporate new road types, biodiversity, and recent planning policy guidance. It is linked to the new

"As society has become less homogenous, communities of place are more likely to include several communities of interest - whether defined by age, sex, race or religion - and be more diverse. The challenge for local government is to make sure that the mechanisms used [to deliver sustainability] are truly representative of the whole community, and not just particular communities of

11 These can be downloaded from www.cambridgeshirehorizons.co.uk/Document_links.asp?sec_id=825 and www.the-edo.co.uk/downloads/ECC_UrbanPlaceSupplement.pdf

-
- urban centres
 - neighbourhoods
 - regeneration areas
 - infills and extensions, and
 - transport corridors.

These three regional design guidelines have wide agendas. But none begins to address how property development and construction can contribute to the wider sustainability issues - such as economic and social development, social inclusion, health and well being - raised by the ***Sustainable Communities Plan***.

The survey

In the Autumn of 2005, the East of England Sustainable Construction Task Group (SCTG) decided to survey the construction industry in the region. The purpose of the survey was gauge how both the demand and supply sides of the industry were responding to the three strategic initiatives on sustainable development being pursued in the region:

- sustainable construction
- sustainable communities, and
- sustainable urban and rural regeneration.

The specific aims of the survey were to provide information to:

- demonstrate the importance of the construction industry to the sustainability of the regional economy and to the region as a whole
- provide an audit of the current state of awareness and understanding of, and action on, sustainability by the construction industry in the region
- identify restraints to construction industry's contribution to sustainability in the region
- address the contribution the construction industry can make to helping to meet the sustainability objectives of the Regional Economic Strategy
- identify future priorities for action by the Constructing Excellence Network for the East and the Sustainable Construction Task Group, working in conjunction with Inspire East and CIC East, and
- assist in the development of partnerships with other organisations in the region to address agreed priorities.

Analysis of this information, including the collected views of stakeholders in industry and beyond, has been used to identify a number of **priorities for future action**. Around these the SCTG is seeking to develop a closer working relationship with EEDA, EERA, GO-East, Inspire East and others to **build a more sustainable East of England**.

The survey was conducted in December 2005 and January 2006.

The target audiences

Three types of organisation were canvassed in the survey.

- supply side organisations providing advice or guidance
- service providers within the construction industry
- demand side organisations procuring, regulating or attempting to influence, services offered by the sector.

The target audiences were canvassed via either electronic newsletters, e-mail based networks, or by individually addressed e-mails. In each case, the survey form was sent as an e-mail attachment. Survey forms were sent out via:

- Constructing Excellence's East of England Newsletter (1500 members canvassed on two separate occasions)
www.constructingexcellence.org.uk/regions/eastengland
- GO-East contact mailing list for sustainable construction events in the region, and
- the Local Sustainability UK network (462 members) run by the Sustainable Development Commission
<http://groups.yahoo.com/group/localsustuk/>

Individually addressed e-mails/survey forms were also sent to the regional chairs of the sixteen full members of Construction Industry Council (East), see box opposite. They were asked to complete the survey on behalf of their organisation and to pass the survey form on for completion by their regional members. The RIBA East, for example, has 1690 members and the ICE East has 3,500 (with e-mail addresses).



Supply side support organisations:

- professional institutions
- trade associations



Service providers in the construction industry:

- contractors
- consultants
- suppliers, and
- product manufacturers



Demand side organisations:

- public sector clients
- private sector clients
- regulators, and
- voluntary organisations

Construction Industry Council East

Full member organisations

Association of Project Management
 Association of Project Safety
 Association of Consultancy and Engineering
 Building Research Establishment
 Chartered Institute of Arbitrators
 Chartered Institute of Architectural Technologists
 Chartered Institute of Building
 Civil Engineering Contractors

The sampling frame

Only 40 organisations returned the survey form. One of these was not filled in. It came from the regional chair of a professional organisation. He returned his form empty because he felt unable to complete it on behalf of his regional group.

Despite his difficulties, the survey form appears to have been easy to complete. Some organisations completed and returned it immediately after it issued by the Constructing Excellence Newsletter. And it was completed and returned not only by large firms (i.e. with more >500 staff) but also by micro ones (i.e. with <10).

Few of the professional organisations and trade associations that are full members of the CIC East returned the survey form. Yet the Royal Institute of Town Planning, which is not, did.

More public sector clients responded to the survey than private sector ones.

The survey forms received from those providing services in the construction industry split into two equally sized clusters containing responses from

1. medium to large developer/house builder/contracting organisations, and
2. small to micro specialist contractors/suppliers/consultants.

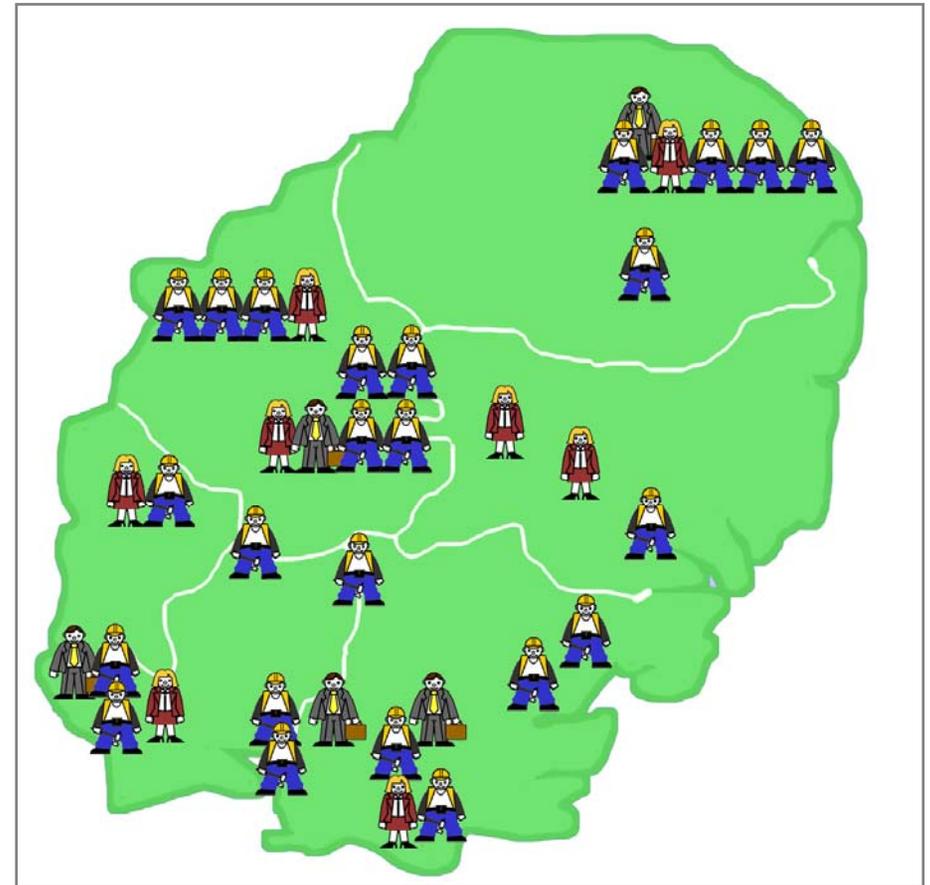
Those in the 'large firm' cluster typically display a more formal, managerial approach to responding to sustainability. Those in the 'small and

	Supply side organisations				Training agency	1
					Professional institution	4
					Trade association	1
					Advice Centre	1
					Subtotal	7
	Service providers in the construction industry					
	Type	Size				Subtotals
		Micro: <10	Small: <250	Medium: <500	Large" >500	
	Developer	-	-	-	1	1
	House builder	-	-	-	2	2
	Contractor	-	-	2	5	7
	Specialist contractor	2	1	-	1	4
	Supplier	2	-	-	-	2
	Consultant	3	3	-	-	6
	Research organisation	-	1	-	1	2
Subtotals	7	5	2	10	24	
	Demand side organisations				Public sector client	4
					Private sector client	1
					Regulatory body	3
					Pressure group	1
					Total	9
TOTALS						40

The respondents

Most of the people who responded to the survey held senior positions in their organisations. A quarter of them were chairmen or MDs.¹² Another third were directors or group or company managers (e.g. of Sustainability or Environment). Another fifth were directors, heads or managers of specific divisions in organisations (such as Business Development, Procurement, Estates, Sustainability and Operations). The remaining fifth held position such as Advisor, Co-ordinator (for Development, Environment or EMS) or Officer (for Safety & Training, Policy, Procurement).

As the map opposite shows, respondents work in organisations right across the region. As might be expected from the spread of population in the East of England, more of them are located in the southern half of the region than in the north. In the latter half, there are two main clusters around Norwich and Peterborough.



¹²

Analyses of the survey returns can be found in **Building a more sustainable East of England: un-interpreted survey results**, see the SCTG website, www.sustainability-east.com (topic groups/construction)



Available statistics on the performance of the construction industry

One of the stated aims of the survey was to demonstrate the importance of the construction industry to the sustainability of the regional economy and to the region as a whole.¹³ So professional institutions and trade associations and demand side respondents – mainly public sector organisations and regulators – were asked whether they compile or hold statistics relevant to the construction industry's performance on sustainability in the East of England.

Such statistics appear to be in short supply. Only two regional organisations reported collecting them: EERA and the regional branch of the CITB-Construction Skills.

EERA gathers construction statistics, restricted to housing, through its Annual Monitoring Report¹⁴. At present, this simply monitors the number of housing units built in the region. However, the Housing Corporation holds statistics on the ratings achieved against **EcoHomes** for the housing that it funds in the region.¹⁵

In 2004 the Regional Housing Forum (now the Regional Housing Delivery Group) was asked by the Regional Housing Board to investigate the likely supply of affordable housing in the East of England. The Pipeline Project Team was formed to conduct this study. Its members came from the Regional Housing Forum plus representatives from GO-East, The Housing Corporation, EEDA, the Countryside Agency, National Housing Federation and Local Government. Funding for the project was provided jointly by the Housing Corporation, GO East and EEDA. As

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

13 Assessment of the construction industry's contribution to sustainable development has already been attempted at the national level in the Pearce Report, (New Construction Research and Innovation Strategy Panel, 2003), **The Social and Economic Value of Construction**. This document started the process of bringing together key facts and data on the industry's contribution to the UK's economic and social welfare, see www.ncrisp.org.uk/Articles/ShowNewsArticle.asp?Src=A0000025.xml.

14 The primary role of the AMR is to monitor policies in the existing Regional Spatial Strategy for the East of England, see www.eera.gov.uk/category.asp?cat=132

15 The Housing Corporation's 2006-08 National Affordable Housing Programme (NAHP) provides new investment to tackle the under-supply of Affordable Housing in England, see www.housingcorp.gov.uk. Since 2003 the Housing Corporation has required the achievement of an **EcoHomes** rating on all its funded developments. This rating has been raised year on year from Pass, to Good, and then from April 2006, to Very Good, see www.housingcorp.gov.uk/server/show/ConWebDoc.7261. The HC anticipates that 97.3% of all new build dwellings delivered under the NAHP will meet its newly upgraded environmental standard of 'very good'.

well as surveying the region as a whole, specific case studies were undertaken of Cambourne and Peterborough.

**The Pipeline Project:
Barriers to the delivery of affordable housing in the East of England**

The Regional Housing Strategy 2003-6 quoted a need for at least 7,000 new affordable homes to be built per year in the region. Annual production up to 2002 was less than half this, about 3,000 per year. Having reviewed the factors affecting housing production in the region, the Pipeline Project Team concluded that:

"The new housing needed for the East of England is not likely to be delivered either in the quantity, or in the timescale required, on the basis of past performance, nor on the basis of the sites and grant money likely to be available."

It also identified two skill shortages that would militate against increasing the rate of production:

1. lack of sufficient construction skills to handle the step change in house building required, and
2. insufficient skills and expertise amongst planning officers dealing with applications, especially at the level of development economics.

It recommended the identification of "regional experts" - or exemplars of best practice - used to provide advice and assistance, brokered by Inspire East.¹⁶

EEDA agrees there is a skills shortage in construction in the East of England. In 2004, its Skills Analysis¹⁷ identified that the region is experiencing an unprecedented period of sustained growth, driven in part by the Sustainable Communities Plan. It diagnosed that significant recruitment activity is required to meet this across most occupations and that the existing provision of trainees does not appear adequate to meet the construction sector's needs over the next five years. More recently, CITB-ConstructionSkills has predicted that growth

¹⁶ Inspire East, the Regional Centre for Excellence for Sustainable Communities in the East of England, is establishing a Design Review and Enabling Service to assist organisations in raising the quality of their projects across all aspects of the sustainable communities agenda, see www.eastspace.net/regeneration/documents/Design_Review_and_Enabling_Panels_Advert.pdf

¹⁷ EEDA, 2004, East of England Skills Analysis: the East of England Construction Labour Market, see <http://www.eastofenglandobservatory.org.uk/viewResource.asp?url=http://eastofenglandobservatory.org.uk/resources/?id=11494>

prospects for the East of England remain high and that total employment in the region's construction industry will increase by 16% between 2006 and 2010.¹⁸

In the UK over half a million additional employees are needed for the construction industry over the next six years. And, in Cambridgeshire, for instance, 22% of the skill shortage vacancies are in construction – this is five times as many as in the next nearest sector, manufacturing.¹⁹

Nationally, the CITB-Construction Skills has reviewed how it might effectively channel its efforts to help the construction industry make its full contribution to sustainable development.²⁰ Confidential work undertaken with managers of large construction companies revealed that less than 20% recognised the environment as part of their responsibility. And less than half of those who did recognised it claimed that they already have the right level of competence for discharging this responsibility.

CITB-ConstructionSkills' review identified that, as both a Sector Skills Council and as an Industry Training Board, it needs to implement actions that will:

1. support the construction industry to build within the legislation that is currently in place to improve sustainability
2. raise awareness and demonstrate the business case for sustainable construction, especially amongst small and laggard large firms, and
3. address skill shortages for sustainable construction across the industry but particularly in large leading companies (who are seen as having the greatest understanding and so the largest current demand).

¹⁸ CITB-ConstructionSkills, 2006, Construction Skills Network: East of England Labour Market Intelligence, see www.constructionskills.net/research/constructionskillsnetwork/

¹⁹ Liz Blackshaw, presentation to the Sustainable Construction Task Group Workshop, 8 May 2006, see the SCTG website, www.sustainability-east.com (topic groups/construction)

²⁰ see CITB-ConstructionSkills, 2005, Build to Last: Reviewing Sustainable Construction, www.constructionskills.net/aboutus/strategicinitiatives/sustainabledevelopment.asp

Organisations contacted for advice about sustainability

Those who responded to the survey were asked which of the key players (see box opposite) responsible for promoting sustainability in the region they had contacted for advice. The organisation most frequently cited as having been contacted about sustainability is Constructing Excellence. Two fifths of respondents say they have contacted it. Nearly two thirds stated that they have sought advice from EEDA, the Regional Development Agency. Two fifths of them have contacted GO-East, the Government Office in the region. In both cases, support organisations and demand side organisations are more likely to have sought advice from these two agencies than are firms providing services in the construction industry. Only about fifth of all the respondents have sought advice from Inspire East or the Sustainable Construction Task Group. Even less have made contact with the Sustainable Development Round Table.

Respondents also report that they have contacted a wide range of other organisations in the region about sustainability. Getting on for half of those cited lie outside the construction industry. The absence of one organisation from the list is surprising. For the BRE's national Centre for Sustainable Construction²¹ is located in the south of the region at Garston near Watford.

Reported priority order of organisations contacted in region

1. Constructing Excellence
2. EEDA
3. GO-East
4. Inspire East
5. Sustainable Construction

Other organizations in region* contacted

BLAE	Environment Agency	RIBA East
BRACE	Envirowise	RICS
Build Norfolk	[EMDA]	RSPB
[CABE]	Essex Business Consortium	Shape
Cambridgeshire Horizons	FoE	STEER
CFCI	Greater Cambridge Partnership	Suffolk Wildlife Trust
[CIRIA]	Housing Associations	SSS
CITB	[Housing Corporation]	TPA
Chamber of Commerce	ICE	UKCEED
East of England Business Group	Local Authorities	Wildlife Trusts
East of England Skills Forum	LSC	
EiP	[National Housing Federation]	
Encluster	Norfolk Big-E	

²¹ The Centre for Sustainable Construction can be contacted at www.bre.co.uk/service.jsp?id=9

English Nature

Regional Housing Delivery Group

* [] = contacted but outside region

Actions taken on sustainability

Construction service providers were asked if they have made a member of staff responsible for:

- sustainable construction
- sustainable communities, or
- sustainable urban regeneration.

Only half have made someone responsible for sustainable construction and the same proportion see themselves as offering this as a service to their clients. Only a quarter have made someone responsible for sustainable communities but a third see themselves as offering services on this front. A quarter have also made someone responsible for sustainable urban regeneration and the same proportion see themselves as offering services related to this area of activity.

Construction service providers were asked if they are undertaking any activities to improve their performance – either in design, on site, or in-house – against a set of sustainable construction issues.²² Half of them report attempting to improve their performance on waste management. Almost half report doing so on energy and Respect for People²³, and over a third on re-use or recycled materials and water. Only a quarter are taking action on ethical trading²⁴ and only a sixth are tackling bio-diversity²⁵.

Only two fifths of service providers report that they are using any indicators to measure or report their performance improvements in these areas.

²² Advice about the use of Key Performance Indicators in construction can be found at www.constructingexcellence.org/productivity/kpizone.jsp

²³ Advice on Respect for People can also be found at www.constructingexcellence.org.uk

²⁴ Ethical trading is one aspect of Corporate Social Responsibility. For further details see CIRIA's ENGAGE web site at www.engageweb.org

²⁵ For a free web download of indicators on biodiversity see www.ciria.org/cgi-bin/sh000001.pl?REFPAGE=http%3a%2f%2fwww%2eciria%2eorg%2euk%2facatalog%2fc627%2ehtml&WD=biodiversity&SHOP=%20&PN=W005%2ehtml%23a526#a526

Priority areas in which construction service providers are seeking to improve their (design/on site/in-house) performance.

1. Waste
2. Energy
3. Respect for People
4. Re-used/recycled materials
5. Water
6. Ethical trading

East of England Sustainable Construction Pledge

Organisations can pledge themselves to sustainable construction at three different levels.

Level 1 My organisation will study the aims and objectives of the East of England Sustainable Construction strategy and take a new look at our activities against them.

Level 2 My organisation endorses the objectives of the Sustainable Construction strategy and will audit our

Only one of the construction service providers reported that they have taken the East of England's Sustainable Construction Pledge²⁶, see box opposite.

²⁶ The Pledge can be found at www.sustainability-east.com/Pages/construction/pledgehome.htm

Respondents offering construction services were asked if they are providing any training on sustainability. Relatively few of them are. A third say they are offering training to their own in-house staff. Only a sixth of them are providing any training to members of their own supply chains. And the same small proportion is offering training on sustainability to other third parties.

All three of types of organisations canvassed in the survey were asked if they had set themselves any specific aims on:

- sustainable construction
- sustainable communities, or
- sustainable urban regeneration.

Nearly two thirds say they have set themselves aims for sustainable construction. However demand-side organisations are more likely to have done this than service providers or their support organisations. More than two fifths of the organisations that responded have set aims for sustainable communities but, again, demand side organisations are much more likely to have done so. And two fifths have set aims for sustainable urban regeneration. But, once again, the lead here is being taken by demand side organisations who report having done so much more frequently.

Identified exemplar projects

All of those who responded to the survey were asked whether their organisation has been working on projects where sustainability has been given a high priority. More than half say they have already been involved with such projects. Again demand side organisations report this more frequently than do construction service providers or the sector's support organisations. Two fifths also say they have been involved in projects where sustainable communities has been prioritised. And nearly the same proportion point to involvement on projects where sustainable urban regeneration has been a high priority.

Just under half of the service providers in the construction sector nominated a project that best exemplifies their organisation's approach to sustainability. They were requested to provide examples inside the region. Only 6 did so. Relatively few of the projects nominated are buildings.

Nominated exemplar projects		
Construction support organisations	Construction service providers	Demand side organisations
ICE's The Case for Resource Management study RIBA Award Winner, The Women's Institute, Girton	"Any one of our contracts for the Environment Agency would do." NU HQ Norwich Woodbridge National Green Specification website Broughton, Atterbury, Milton Keynes Great Notley Garden Village, Braintree, Essex <i>A2 road widening project in N Kent</i> <i>Ecos Centre, Ballymena, Ireland</i> <i>Manchester Civil Justice Centre</i> <i>Sherwood Energy Village</i> <i>Greenwich Millennium Village, London</i> <i>St. Mary's Island, Chatham, Kent</i> <i>Healthy Croydon Resource Centre</i>	Building Magazine's Low Energy Building of the Year 2005 Greengrid.co.uk examples Sustainable development of Ipswich airport Southwold Coastal Scheme River Witham Flood Defences Nora site (CE Demonstration project) Norfolk Schools Energy Club Norfolk CSR Guidance Norfolk County Biodiversity Partnership
Projects shown in <i>italics</i> lie outside the region		

Further information about exemplary projects was collected from participants at the workshop held to report the survey findings. A full list is provided in the Appendix, see page 42.

Levels of readiness for sustainability

From the responses to the survey, it is possible to identify three levels of readiness for sustainability amongst organisations in the region, see box opposite. However Level 3 typically takes different forms in large organisations (>500 staff) compared to small (<250 staff) and micro (<10) ones.

The box below shows how large construction service providers, for instance are getting themselves ready for sustainability.

Levels of readiness for sustainability in the region

Level 1: Unaware

Level 2: Aware but unprepared

Steps taken to get ready for sustainability

- 1 Appoint member(s) of staff responsible for 'sustainable construction' (and possibly 'sustainable communities' and 'sustainable urban regeneration' too)
- 2 Offer 'sustainable' construction (and possibly communities and urban regeneration) as explicit services to clients
- 3 Pursue performance improvements across a range of environmental sustainability issues including waste, energy, materials, water and bio-diversity, and possibly social sustainability issues such as ethical trading and Respect for People, and perhaps beyond
- 4 Employ environmental and social sustainability indicators to measure performance improvements on these issues.
- 5 Use these measurements to set themselves specific targets for improvement against milestones
- 6 Provide in-house training to their own staff on sustainability issues to help them achieve these targets
- 7 Extend training on sustainability issues to members of their own supply chains
- 8 Report performance improvements publicly.

Small and micro firms may be taking some of these actions, especially Steps 1, 2 and 6. They may also be tackling Step 3 in a less systematic way, using bespoke responses. As one design consultancy replied,

"Each project is unique and specific targets are set case by case [and] ... measured through our Best Practice Innovation and Sustainability Checklist."

But it is unlikely that small and micro firms are systematically working through all of the steps. For, in combination, they represent a formalised, management systems, approach to sustainability well understood by the typically larger firms that have already adopted quality or environmental management systems. This difference in approach is supported by additional information collected at the follow-up workshop, see below.

There are also firms in the region that have recognised the arrival of sustainable construction as an issue they need to address but have yet to do so. But there are also firms aware of the issue that have not responded because they don't think it applies to them,

"It's not applicable to contractors."

And there are other firms for whom it has yet to come over the horizon. As one medium-sized building contractor in the south of the region wrote in response to receiving the survey form,

"This is the first time I've heard about this".

Support organisations can also be found at all three levels of readiness. Some are well advanced on sustainability. For instance, the ICE has, for instance, had a Sustainability Charter since June 2003.²⁷ And they may already be strongly engaged with organisations pushing the regional agendas. The ICE, for example, formally responded to the East of England's Regional Spatial Strategy.²⁸ Others have yet to begin to address what sustainability means for their members.²⁹

From the survey, public sector clients in the region appear to be more proactive in dealing with specific aspects of sustainability than private sector ones. For they may already have published:

- environmental policies,
- carbon reduction strategies, or
- regeneration goals

with publicly stated objectives and targets, see for example box opposite.

The Thames Gateway South Essex Partnership

was established in May 2002 to promote the comprehensive regeneration of the region abutting the North bank of the River Thames by:

- improving skills and employment opportunities across a range of economic sectors, and promote a competitive business environment.
- securing leading edge infrastructure, particularly improved and sustainable transport.
- securing investment and site development to promote urban renaissance and provide employment opportunities
- .create a high quality and sustainable urban and

27 See www.ice.org.uk/about_ice/aboutice_sustainability.asp.

28 See www.ice-eastofengland.org.uk/news_events/news_view.asp?newsid=717.

29 See, for an example, page 16.

SWOT analysis of prospects for sustainability in region

Those providing construction services were asked what they see as the industry's main strengths and weaknesses in helping to deliver sustainability in the region. Their responses show a profound lack of agreement about the sector's current position on sustainability.

For instance, some identify the workforce's skills, experience and track record as major strengths. Others identify the growing lack of adequately trained trades people and professionals, and difficulties in recruiting trained youngsters, as major weaknesses. Similarly, some see the economic potential for regional growth and a buoyant market to fund improvements as strengths. Others see under investment and under funding

Major strengths of construction in helping to deliver sustainability in region	Major weaknesses of construction in helping to deliver sustainability in region
Workforce	Economics
Economics	Workforce
Flexibility	Contractual issues
Leadership and commitment	Lack of leadership and commitment
Information	Lack of awareness
Awareness	

Likewise, some point to leadership from strongly committed individuals, including clients, as a major strength. Others point to a lack of leadership and commitment, citing instead inertia in moving away from traditional construction methods, lack of urgency, and reliance on legislation to drive change, as weaknesses. Similarly, some see the construction industry as already aware of:

- the environmental impact of construction activities
- how to achieve sustainable design and practices, and
- how sustainability can increase profitability.

Others portray the sector as not having sufficient awareness of:

- the meaning of sustainable construction
- how to use sustainability principles in construction, and
- how individual businesses can help deliver it.

They suggest that this ignorance is aggravated by a lack of public opportunities for debating what sustainability is and what needs to be done to deliver it in practice.

Those providing construction services were also asked what they see as the main barriers to, and opportunities for, delivering sustainability in the region. Again their responses show a profound lack of agreement on this front too.

For example, some see lack of commitment and support from government as a major barrier. Others see government initiatives on:

- Sustainable Communities
 - the planned growth areas
 - the Olympic Games, and
 - urban regeneration projects
- as opportunities to introduce legislative

Main barriers to delivering sustainability in region	Main opportunities for delivering sustainability in region
Economics	Government action and initiatives
Lack of leadership and commitment	Development opportunities
Lack of awareness	Regional advantages
<i>Don't know</i>	<i>Don't know</i>
Planning	Energy and materials
	Stewardship issues

Some see the economics of construction - where firms often have small (2%) profit margins - as leaving little scope to move beyond providing the cheapest solution, especially where there is no premium for delivering more sustainable options. Others see increased public interest in sustainable communities and housing as resulting in increased demand, especially where this can be take the form of low cost, high quality, high density developments around transport nodes - so minimising the need to use private transport.

Some see the region as having clear advantages:

- its geographical location, including its proximity to London and Europe
- the beauty of its natural environment
- room to expand without significant congestion growth in the local economy, and
- the pool of untrained personnel in the region.

Others counter that there is:

- a lack of willingness on the part of clients to pay and of individuals to change their lifestyles
- a planning system which does not recognise sustainability or penalise poor development
- a lack of training in sustainability at both the design and planning stages of the process, and
- real difficulty in policing sustainability.

Priorities for future action (1)

Despite disagreements about the current potential for sustainability in the East of England, those who responded to the survey are clear about what needs to be done in the region to make improvements. They call for action on three related fronts:

1. education, training and recruitment for the wide range of stakeholders involved in decision-making about the sustainability of the built environment - from planners through to contractors
2. promotional campaigns to raise awareness, understanding and commitment both within the construction industry and beyond, and
3. advice and guidance, not just on how to implement sustainability, or about how to use it for business development, but about precisely who is responsible for what in delivering sustainable communities

Education, training and recruitment
Education of planners, clients, designers and contractors
Teaching on sustainable practices; with clearly signaled learning materials
Training opportunities: at workplace; through subsidized workshops; for qualified workforce
Greater work experience and apprenticeships
Encouragement of recruits at all levels - professions and trades
Promotional campaigns
Defining sustainability, explaining the bigger picture, showing global urgency
Circulating sustainability solutions and informing about benefits
Getting people to understand they can make a difference
Spreading information about current capabilities and accredited bodies
Selling construction and promoting professions e.g. by going into schools
Advice and guidance
Implementing sustainability including best practice exemplars, sources of information, expertise, local materials, support and funding for training
Meeting new Building Regulations and Code for Sustainable Homes
Incorporating sustainability into working practices without incurring cost penalties
Using sustainability to improve business relations and prospects
Selling sustainability to existing clients
Responsibilities (of government, developers, others) for delivering sustainable communities

Macro-planning and strategic decision making for sustainable development

Headline survey findings

- There is a dearth of statistics available in the region about the performance of the construction industry on sustainability. This will hamper monitoring of the achievement of regional strategy objectives and impede the sector's ability to evaluate progress on improving its own regional performance
- The little evidence available (both nationally and regionally) suggests a lack of skills in construction and planning to deliver sustainable construction and sustainable communities
- Few of the 5,000+ individuals canvassed by the survey responded: only 40 organisations replied
- However responses were received from all types of organisations involved in the procurement, construction and regulation of the built environment - from clients and developers, planners and regulators, designers, contractors, suppliers, and from professional institutions, trade associations and other involved stakeholders
- Most responses were received from staff holding senior positions in their organisations - chairmen, MDs, directors, and group or company managers
- Three levels of readiness for sustainability were identified amongst the survey respondents:
 - Level 1: Unaware
 - Level 2: Aware but unprepared
 - Level 3: Prepared
- Responses from those offering services within the construction industry fall into two clusters - medium to large (developer/house builder/contracting) organisations, and small to micro (specialist contractors, suppliers and consultancy) firms
- These two clusters are adopting different approaches to sustainability: large organisations are typically employing a formalised, multi-stepped, 'management system' approach (see box opposite); smaller firms are responding in a more informal, less systematic way

Steps taken to get ready for sustainability

- 1 Appoint member(s) of staff responsible for 'sustainable construction' (and possibly 'sustainable communities' and 'sustainable urban regeneration' too)
- 2 Offer 'sustainable' construction (and possibly communities and urban regeneration) as explicit services to clients
- 3 Pursue performance improvements across a range of environmental sustainability issues including waste, energy, materials, water and bio-diversity, and possibly social sustainability issues such as ethical trading and Respect for People, and perhaps beyond
- 4 Employ environmental and social sustainability indicators to measure

- Constructing Excellence, EEDA and GO-East are the organisations most frequently cited as having been contacted for advice about sustainability: one surprising absence from the list of those contacted is the BRE whose Centre for Sustainable Construction is located in the region
- The priority areas that construction service providers report they are tackling to improve their own performance as shown in the box opposite: less than half are using any indicators to measure or report their performance improvements in these areas
- More than half of the respondents to the survey say they have already worked on projects where sustainability has been given a high priority: clients identified exemplary projects more frequently than those providing services in the construction industry
- SWOT analysis suggests that respondents disagree profoundly about the potential for sustainability in the region
- Precisely what some see as the industry's strengths - its workforce, underlying economics, leadership and commitment, and awareness - others see as weaknesses impeding moves towards sustainability
- Some see the region as having clear advantages - its location, natural environment, and room for growth: others counter that clients and consumers are unwilling to change, that the planning system is unsupportive, that sustainability is un-policed and hampered by a lack of training in both designers and planners
- But respondents are clear about what needs to be done to make improvements: they call for action on three related fronts, see box opposite:
 1. education, training and recruitment
 2. promotional campaigns, and
 3. advice and guidance

Priority areas in which construction service providers are seeking to improve their (design/on site/in-house) performance.

- Waste
- Energy
- Respect for People
- Re-used/recycled materials

Actions requested to improve sustainability in region

1. Education, training and recruitment for the wide range of stakeholders involved in decision-making about the sustainability of the built environment - from planners through to contractors
2. Promotional campaigns to raise awareness, understanding and commitment both within the construction

The Stakeholders' workshop

A free half-day workshop to report the findings of the survey and to collect further information from participants was held at Eastbrook, the offices of GO-East in Cambridge, on 8th May 2006. The meeting was organised by the East of England Sustainable Task Group with assistance from Constructing Excellence and was hosted by GO-East. The workshop was promoted through the Constructing Excellence East Newsletter and by asking each of the full members of the Construction Industry Council East to promote it to their members. This option was taken up by the ICE and by the RIBA. This explains the large disproportionately number of consultants (architects and engineers) who attended workshop, see below.

The workshop had two components.

1. Presentations from:

- Inspire East
- Cambridgeshire County Council's Office of Environment and Community Services
- Constructing Excellence in the East of England, and
- the Environment Agency.

Each described what they are doing to support sustainable construction and sustainable communities in the region. These presentations were accompanied by feedback from the Sustainable Construction Task Group on headline results from the survey.³⁰

2. A series of individual and group exercises seeking information from the participants on what further support and help they see the construction industry as needing to make progress on sustainability in the region. The results of these exercises are reported below.

³⁰

These presentations can be accessed on the Sustainable Construction Task Group's web site,

Steps already taken

The participants in the workshop were asked what steps their organisations have already taken to get ready for delivering sustainability. Their responses are shown opposite, split into the two clusters - micro-small and medium-large.

Medium-large organisations report that, on average, they have taken more of the steps listed than micro-small ones. But the difference here is not large.

Some steps such as 1, 2, 3 and 6 are being taken by both large and small organisations. But small organisations (here predominantly consultancies) are more likely to be offering services that they have labelled as 'sustainable' than are large ones. Conversely, large organisations are more likely to have:

- pursued performance improvements across a range of issues
- employed indicators to measure improvement against them, and
- reported their performance publicly.

They are also more likely to be extending

Steps already taken to get ready for sustainability		
	Micro to small firms n = 28	Medium to large firms n = 25
1 Appointed member(s) of staff responsible for 'sustainable construction' (and possibly 'sustainable communities' and 'sustainable urban regeneration' too)	19	21
2 Offered 'sustainable' construction (and possibly communities and urban regeneration) as explicit services to clients	18	12
3 Pursued performance improvements across a range of environmental sustainability issues including waste, energy, materials, water and bio-diversity, and possibly social sustainability issues such as ethical trading and Respect for People, and perhaps beyond	15	21
4 Employed environmental and social sustainability indicators to measure performance improvements on these issues.	8	14
5 Used these measurements to set themselves specific targets for improvement against milestones	5	9
6 Provided in-house training to their own staff on sustainability issues to help them achieve these targets	10	11
7 Extended training on sustainability issues to members of their own supply chains	4	8
8 Reported performance improvements publicly.	2	9
Total number of steps already taken	81	105
Average number of steps taken per organisation	2.9	4.2

Other steps reported as important

Participants were also asked to identify other important steps they have taken. The sheer diversity of those offered reflects huge differences in the circumstances, priorities, perspectives and pre-occupations of organisations involved in the procurement, design, construction and use of the built environment. These additional steps are listed below by size and type of organisation. Participants' comments are cited opposite.

Larger organisations

- Developed lobby strategy to tighten environmental and sustainability standards (Professional institution)
- Conducted research into sustainability issues and practices (Professional institution)
- Published best practice and business examples (Professional institution)
- Developing an international perspective (Professional institution)
- Introduced new environment/sustainability category on kite mark scheme (Trade association)
- Promoted good practice particularly relating to local communities (Advisory organisation)
- Sought to influence regional strategies (Advisory organisation)
- Engaged contractors, consultants and suppliers to bring products from supply chain for renewable energy (Developer)
- Co-operated with WRAP to write White Paper to identify recyclates in components for construction (Developer)
- Bidding for work based on 'sustainability' in progress (Developer)
- CSCS cards required by all subcontractors on all sites (Developer)
- Chain of Custody (WWF initiative) secured for Group Buying Guide (Developer)
- BRE Ecohomes minimum 'good' rating on all developments (Developer)
- Client education and awareness training (Contractor)
- Instructed clients to seek KPIs on agreed sustainability targets with their suppliers (Contractor)
- Increased local networking (Contractor)

"Talking the talk v. walking the walk with the challenge of opportunity to create 'job' opportunities leading

"We are canvassing local authorities and supermarket chains on our 'hand it back' initiative for

"As a consulting engineering firm, we focus on the technical aspects of projects that can be altered to make them more sustainable. We have a sustainability team which can be a negative thing as

"My school of architecture has a module on environmental design. So the issue of

- Developed links with client partner (Contractor)
- Moved sustainability to the top of the business agenda (Contractor)
- Introduced sustainable/renewable products (Supplier)
- Sought external funding to boost delivery (Local authority)
- Established partnerships to boost delivery in public and private sectors (Local authority)
- Working in partnership with BRE, EEDA and Cambridgeshire on SmartLife project (Housing Association)

Smaller organisations

- Introduced new sustainability award (Professional institution)
- Provided collated learning material free over website (Consultant)
- Organised CPD events on sustainability and green construction (Consultant)
- Raised awareness within construction teams about waste from site (Consultant)
- Documented number of skips/reuse/recycle wherever possible (Consultant)
- Adopted re-use/recycling practices in office including charity donations (Consultant)
- Introduced fair trade purchasing in office (coffee) (Consultant)
- Promoted sustainable options wherever possible and acceptable (Consultant)
- Reduced the use of plastics: stopped using UPVC (Specialist contractor)
- Raised environmental/sustainability issues with client at briefing stage (Consultant)
- Using BRE ENVEST II (Consultant)
- Completed design of new primary school with natural ventilation system (Consultant)
- Incorporating conservatory/buffer zone in handicapped housing scheme to lower heating/cooling demand (Consultant)
- Looking for technology and experts on grey water re-use, solar panels, PVs and possibly wind turbines for domestic use (Consultant)
- Provided feedback on projects (Consultants)

"As a consultant, we try to encourage clients to embrace sustainability as part of the brief. But we can only go so far as they are willing. Most

"Small companies do not have the resources to measure all aspects even though they are

"As a small contractor, we usually have to follow our principles within the constraints of a tender. If there is a Design and Build

-
- Appointed member of staff to research and teach others within company about sustainability (Consultant)
 - Achieved ISO 14001 Environmental Management System (Contractor)
 - Promoted use of totally recyclable materials - a first in our industry (Manufacturer)
 - Developed indicators relevant to sustainable communities (Regional agency)
 - Sustainability improvement targets are a pre-requisite for grants for relevant projects (Regional agency)
 - Endeavoured to encourage the use of the regional Sustainable Development Toolkit (Regional agency)
 - Worked with Cambridgeshire County Council and developers to deliver significant green infrastructure on site (Voluntary group)
 - Taken over management of green infrastructure under Section 106 (Voluntary organisation)

"The intention is there. But monitoring of results is inadequate - although

"Clear environmental sustainability measures taken including Ecohomes Excellent on projects. Community skills projects to raise the

Despite the fundamental differences in the types of steps participants say they have already taken, they call for a single, unifying definition of sustainability within which they can all operate, see next section.

Priorities for future action (2)

At the workshop, participants were asked to respond to the suggestions made by those who answered the survey about what actions are required to help the construction industry to make progress on sustainability in the region.

Working first individually and then in groups, participants were asked to identify what they saw as the three most important actions under each of the headings generated from the survey responses:

- education, training and recruitment
- promotional campaigns, and
- advice and guidance

The table opposite shows the collated responses from the 8 groups at the workshop.

Education, training and recruitment

The participants agreed that a major priority has to be the education of key players in the industry and beyond about sustainability:

- clients, including government as the largest procurer of buildings
- designers and planners, where existing provision was described as inadequate
- contractors, quantity surveyors and cost consultants and more broadly
- members of the general public.

Promotional campaigns

Education, training and recruitment
How to sell sustainability to existing clients
Education of clients (including government)
Sources of information, expertise, materials and local support
Education of designers and planners
Teaching (an agreed programme) on sustainable building practices
Arrears lead from government: a better steer
Training workplace (including mentoring)
Education of contractors
Education of quantity surveyors and cost consultants
Education of general public
Promotional campaigns
Getting people to understand how they can make a difference
Defining sustainability (including explaining the bigger picture)
Informing about the benefits and sources of sustainable building materials
Stop umming and arring: Go Green (mandatory, single high level pass)
Highlighting what will have the most impact short term
Making people aware of living in sustainable communities
Spreading information about current capabilities
Promoting sustainability/sustainable construction in schools (jobs and careers)
Advice and guidance
How to incorporate sustainability without cost penalties
Best practice advice including who's doing well
Practical guidance on how to implement sustainability
Clear guidance on responsibilities for delivering sustainable communities
How to meet Building Regulations and the Code for Sustainable Homes

In line with their calls for a major programme of education, participants give priority to promotional campaigns that will:

- define what sustainability means as well as painting the bigger picture to show the urgency of global imperatives
- help people to understand how they (as individuals) can make a difference (in the face of the enormity of the problems that need to be tackled).

Beyond this, they issued a call to action. One group signalled this by calling for an end to 'Umming and arring'. Instead they wanted sustainability to be mandatory with a single high level threshold set for acceptable performance. To be able to achieve this, participants requested access to information about

- the benefits of sustainability, and
- sources of sustainable building materials.

They want both short-term fixes:

- highlighting what will have the most impact short term, and
- spreading information about current capabilities (within the industry to deliver sustainability)

and longer-term campaigns

- promoting sustainability and sustainable construction in schools (not least as job and career opportunities), and
- raising people's awareness of living in sustainable communities.

Advice and guidance

Above all, participants called for practical guidance on how to implement sustainability without cost penalties. They want to know who amongst their peers is already doing well and they want to know how to sell sustainability to their existing clients. Again they specified immediate and longer-term needs:

- how to meet the new Building Regulations and the recently released Code for Sustainable Homes

as against

- clear guidance on who (government, developers, etc) is responsible for delivering what under the Sustainable Communities Plan.

And they listed both local and national requirements:

- sources of information, expertise, materials and local support

"Contractors will do as paid and instructed. It's clients and consultants who need educating."

"Difficult to prioritise the training options - more skills are needed
- - - "

"The whole supply chain needs the same tools - not just the client wielding a big green

"Users need to be demanding."
Trade association

"Informed clients will drive the market."
Professional institution

"It is important that clients buy into sustainability
.

"The focus on 'green' elements is excessive. Disproportionate lack of emphasis on other aspects

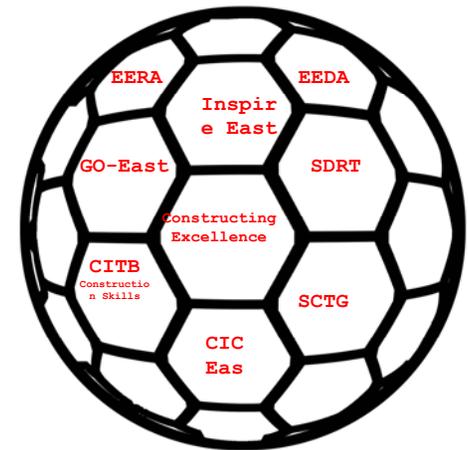
matched by

- a proper lead from government giving a better steer on sustainability.

Next steps for the SCTG

In response to the information gathered from the survey and workshop, the East of England Sustainable Construction Task Group is willing to undertake the following actions to help speed progress on making the construction industry ready to deliver a more sustainable region.

4. Draw up a list of all (government-supplied) documents of which construction-related organizations in the region should be aware and identify any short falls.
5. Arrange a round-table discussion with the regional agencies concerned, including those that took part in the workshop presentations plus CITB-ConstructionSkills, focused on what they are doing to help the construction industry in the region get up to speed. The SCTG will collate these responses and identify any shortfalls between what is proposed and what is wanted.
6. Build effective connections with other relevant agencies to create clear lines of communication on sustainable construction in the region - so that scarce resources are used to maximum benefit and to remove current confusion caused by multiple sources of information.



Appendix: Exemplar projects

The projects, listed below, were cited by participants at the Stakeholders' Workshop as examples where sustainability has been given a high profile. Only two of these were identified by those who responded to the survey, see page 26

Beaumont School, Hadleigh, Suffolk
 Distribution Centre, Adnams Brewery, Southwold, Suffolk
 Eco-tech Centre, Swaffham, Cambridgeshire
 Elmsworth Housing Project, Suffolk
 Faculty of Education, University of Cambridge
 Granta Housing, Cambourne, Cambridgeshire
 Lamb Drove Housing, Cambourne, Cambridgeshire
 Millenium Green Wheel Cycle Network, Peterborough
 Norwich Union Island Site, Norwich, Norfolk
 Plant Growth Facility Centre, Botanic Gardens, University of Cambridge
 Private house renovation, Histon, Cambridgeshire
 Ruecroft Self-build, Harlow, Essex
 School of Medicine, University of East Anglia, Norfolk
 Sheringham Park Visitor Centre,

Future work by the East of England Sustainable Construction Task Group will include compiling a regional directory of exemplar projects, covering:

- project name
- location
- key sustainability features
- contact name
- contact phone number
- contact e-mail address
- other relevant information.

If you are aware of projects that should be included in this



Primrose Field, Swan HA, Harlow: Constructing Excellence



Sheringham, Norfolk
SmartLife, Cambridge Regional College,
Cambridge
Three Score, Norwich, Norfolk
Women's Institute HQ, Girton, Cambridge

directory, please send
details to Ian Cooper
on
icooper@dircon.co.uk

**Accordia, Brooklands Ave, Cambridge:
Countryside Properties**