Are developers and clients in the East Midlands ready for sustainable development of the built environment?

Sherwood Energy Village ©emda 2006. by David Green of Green Imaging Ltd

Final Report: May 2007
prepared for
emda
on behalf of the
Sustainability Forum
by

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Executive Summary

This report documents a survey and workshop undertaken for the East Midlands Development Agency (*emda*):

- to identify whether property developers and large private sector clients in the region say they are ready for sustainable development, and
- to help *emda* to discover what it needs to do next to help the region's construction industry, its clients and developers, improve their performance in relation to sustainable development and climate change.

The survey is the second in a series sponsored by the Sustainability Forum on the readiness of the construction industry in the English regions for sustainable development of the built environment.

50 prominent developers and large private sector clients active in the East Midlands, selected by the members of a Steering Committee convened by *emda*, were canvassed in February 2007. A follow-up stakeholders workshop, largely attended by service providers in the construction industry, was held in April to:

- present the findings of the survey, and
- help *emda* to identify the next steps required to improve performance in its region.

This work is reported against the challenge recently issued by central government to regional agencies, local authorities, and the construction industry to deliver zero carbon new homes by 2016.

Conclusions and recommendations

All of the material reported in this study has been collected and analysed to interrogate a single, overarching question:

Are developers and large clients in the East Midlands ready for the sustainable development of the built environment?

From the responses generated by survey conducted and at the workshops held, it is possible to offer a self-reported answer to this question given by developers and large clients, qualified by supply-side responses collected from service providers within the construction industry.

Survey conclusions

The survey results indicate that the developers and clients canvassed typically present themselves as well prepared for:

- climate change and sustainable construction (which they see predominantly in terms of environmental rather than social or economic issues)

but not for:

- the Sustainable Communities Plan.

Instead they point to problems and failures lying elsewhere, for instance:

- amongst service providers in the construction industry
- in planning authorities, or
- due to costs or lack of market demand

as reasons for lack of progress on sustainable development in the built environment.

For instance, developers and clients typically present themselves as:

- actively trying to anticipate or respond to sustainability issues
- already taking actions to operate more sustainably, and
- seeking to procure sustainable buildings but divided over whether they are willing to pay a higher capital cost to achieve lower running costs.

Typically, they also:

- attach first order importance to environmental sustainability but only second and third order to economic or social sustainability issues, respectively – mirroring the priorities held on the supply side of construction
- see regulators and the demand side (planners, clients, funding organisations and users) has having most influence on whether buildings are more sustainable – only attributing second and third order importance to the supply side (designers and constructors, respectively)
- are convinced of the value of insulation and recycled materials for making buildings more sustainable, but
- are unconvinced about renewables and modern methods of construction, and
- under-estimate the significance of waste management and CHP/district heating.

However, while most portray themselves as actively responding to sustainability, only half of them felt able to offer examples of their own current best practice. This reluctance or inability suggests that both their self-portrayal and their problem diagnosis may be unduly complacent and/or self-protecting.

In addition, the typical portrait offered of (reasonably) prepared developers and clients is only one part of story. While some portray themselves as ready and able, others acknowledge that they are unready and need outside help and expertise. In other words, even among the small number of prominent developers and clients canvassed, the current state of readiness identified in the region is actually very mixed.

Survey recommendations

As a result, *emda* should recognize that there are developers and clients in the region who do require further support and assistance, particularly with:

- meeting the requirements of the Sustainable Communities Plan
- the contribution of specific features - especially CHP and district heating, waste management, modern methods of construction, and renewables – to making buildings more sustainable/adapted to climate change, and
- access to proven exemplars and best practice case studies for sustainable construction, sustainable communities, and climate change.

Some developers and clients will welcome and embrace this assistance. Others will be more difficult to convince of this salience of this information for them, preferring instead to point to deficiencies elsewhere in the procurement process. *emda* needs to tackle these deficiencies as well by offering parallel advice and guidance to other stakeholders - especially to planners and to construction service providers - on how to assist developers and clients better in commissioning and procuring successful sustainable buildings.

Workshop conclusions

The challenge thrown down to the regions in the DCLG's **Green Pack** to deliver zero carbon homes by 2016 – and the embryonic cross-comparison of regional performance on sustainable construction contained in the DTI's **Review** - both

suggest that regional agencies and local authorities need to become much better informed about their performance in these areas.

But the stakeholder workshop indicated that few (even amongst the leading edge or early adopters) in the region are aware of the details behind this challenge. Nor do they own a shared understanding of what is being done in the region to respond to these policy imperatives. While they cited many examples of initiatives and projects in the East Midlands with features they see as responding to these imperatives, awareness of them is in the form of isolated pockets of experience. Individuals know their own local examples, but these are not shared as common knowledge across the region. Only one example cited emerges as both *sufficiently well known* and *sufficiently highly regarded* to be put forward by the participants' choices as being a exemplary project in the region – **Sherwood Energy Village.**

Workshop participants, working in groups, identified a wide rang of barriers they thought would hinder implementing low carbon buildings in the region. But, apart from:

- **costs**, and
- lack of technical **skills** and **capacity**, and
- lack of **information** and **knowledge**

(seen as affecting decision-makers on both the demand and supply sides of the sector), there was not much agreement about which barriers should be tackled as priorities. There was also little agreement about what should be done to overcome the barriers they had identified:

- **education**, **training** and **skills** emerged as shared priorities, and
- half the groups also drew attention to the needs for **strategies** and a **policy delivery framework.**

All of the other actions cited were only referred to by one or two groups.

Participants at the workshop also showed a reluctance to accept the baton being passed by central government to regional agencies, local authorities and the construction sector for implementation. Most of the actions they identified as needed to support the delivery of zero carbon buildings in the region require initiation or direct input from central government. And concern was expressed that, if *emda* were unilaterally to take the lead in implementing this agenda, the region could become unattractive for inward investment by developers.

Workshop recommendations

The workshop participants identified five actions as necessary by *emda* to support the implementation of zero carbon buildings.

1. The formulation of a **policy delivery framework**.
2. **Leadership** of the resultant implementation programme.
3. Provision of a centralized body, perhaps the EMCBE, to act as **a single portal for knowledge transfer.**
4. Action on **skills and training** on both the demand and supply sides of the sector.
5. Support for **cost reduction** (for example, through economies of scale and mass production).

emda also clearly needs to promote knowledge sharing actively across the region about exemplars and best practice case studies, covering the whole range of current government imperatives in the built environment (sustainable construction, sustainable communities, zero carbon, climate change, regeneration, renewables and sustainable procurement). Such sharing could be promoted through production

of a single, consolidated directory or through co-ordinated signposting, by the single knowledge transfer portal requested, to where such information can be found. In either case, provision would have to be made for maintenance and updating of the information on offer.

As a second order issue (in sequence, if not significance), *emda* will then need to give attention to the evidence base for any exemplars and best practice case studies promoted. This, in turn, is likely to require regional agencies, local authorities, and the region's construction sector to:

- establish agreed targets
- monitor and evaluate progress against them
- share lessons learnt, and
- publish the results.

Introduction

This report documents a survey and workshop undertaken for the East Midlands Development Agency (*emda*). The work reported had two objectives:

- to identify whether developers and large private sector clients in the region say they are ready for sustainable construction, and
- to help *emda* to discover what it needs to do next to help the region's construction industry, its clients and developers, improve their performance in relation to sustainable development and climate change.

The **Sustainability Forum** is an advisory body made up of representatives from across the UK construction industry. It provides advice to the DTI, The Strategic Forum and Constructing Excellence on sustainability issues. www.constructingexcellence.org.uk/zones/sustainabilityzone/forum.jsp

The survey is the second in a series sponsored by the Sustainability Forum undertaken in the English regions. The first, **Making the Construction Industry ready for a more sustainable East of England**, was conducted in 2006. The third, **Is the North West ready for sustainable construction?**, was undertaken in parallel with this one.


East of England Sustainable Construction Task Group

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

A primer

June 2006

www.sustainabilityeast.org.uk/pdf/Making%20Construction%20ready.pdf

50 prominent developers and large private sector clients active in the East Midlands were selected by the members of a Steering Committee convened by *emda*. These prominent organisations were canvassed by phone and e-mail in February 2007. A follow-up stakeholders workshop was held in April to:

- present the findings of the survey, and
- help *emda* to identify the next steps required to improve performance in the region.

Is the North West ready for sustainable construction?

A report to the NWDA
April 2007

www.nwda.co.uk

This work is reported against the challenge recently issued by central government to regional agencies, local authorities, and the construction industry to deliver zero carbon new homes by 2016. The report makes specific recommendations about the actions that *emda* needs to take:

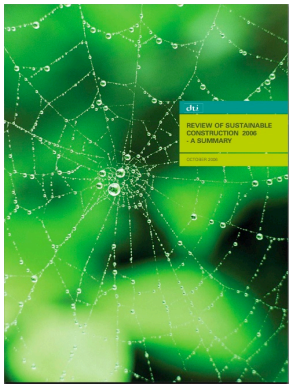
- to respond to this challenge, and
- to provide the support that its constituents on both the demand and supply sides of the construction sector indicate that they require to deliver zero carbon buildings in the region.

The challenge from central government

There can scarcely have been a time, since the physical reconstruction of Britain after the Second World War, when central government has devoted so much attention to the design and building of where and how we live. With the publication of its **Review of Sustainable Construction** and its so-called **Green Pack** at the end of last year, central government has signalled a clear intention to drive the UK construction industry and its clients towards zero carbon buildings over the next decade.

The **Review of Sustainable Construction** was published by the Department of Trade and Industry on the 31st October 2006. In her foreword, Margaret Hodge, Minister of State for Construction, said that the Review had two purposes:

1. to draw together in one source the current main strands of government policy and industry initiatives related to sustainable construction, and
2. to encourage the industry to respond positively and propose its own targets – where industry should go and what industry can do.



http://www.dti.gov.uk/files/file34979.pdf

She presented the Review not as an end product but as:

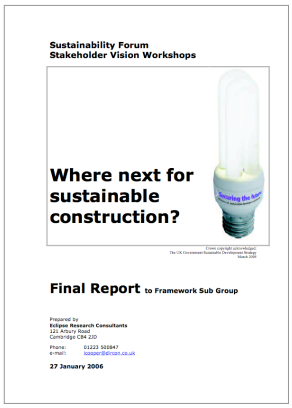
> "… first step in the development of ***industry targets*** for the future which will be carried out with the assistance of the **Sustainability Forum**."

A set of embryonic industry targets were included in the DTI's Review. They were generated by the Sustainability Forum at a series of workshops held with stakeholders from inside the construction industry and documented in **Where next for sustainable construction?**

These highly aspirational targets seek to commit the construction industry to, for instance:

- ☐ zero carbon emissions
- ☐ zero waste
- ☐ zero accidents
- ☐ use of sustainable materials, and
- ☐ whole life costing

by 2015.



www.cief.org.uk/pdf/where_next_construct_Dec05.pdf

A revised version of the **UK Sustainable Construction Strategy** is due later this year, as a cross-departmental publication, jointly from the Department of Trade and Industry, the Department of Communities and Local Government and the Department of Environment, Food and Rural Affairs. In support of this revised strategy, the DTI held a round of consultation workshop on the proposed targets undertaken for it by the Construction Industry Environmental forum in January 2007. These were intended to help refine the targets for inclusion in the forthcoming strategy.

In its final report on these workshops, CIEF concluded that:

> "Overall the industry accepts the need to change to address these sustainability issues. However, it looks to government to take a lead:
>
> - by applying pressure through the supply chain through its procurement of buildings and refurbishment work, requiring those bidding for work to employ leading edge sustainable practices
> - by using fiscal instruments (subsidies as a carrot and tax as a stick) to promote sustainable construction
> - by introducing and enforcing legislation so that there is a level playing field for all construction companies. "

Consultation workshops for DTI/Cross-Governmental Strategy for Sustainable Construction

www.cief.org.uk/dti_reports.htm

This suggests that, while workshop participants accepted the need for industry targets, they want central government to play an active role in the drive towards more sustainable construction.

The publication of the DCLG's so-**called Green Pack** on 13 December 2006, issued as a briefing document to Government Offices for the Regions and others, indicates that this is precisely what central government now intends to do. For the pack lays out a strategy and timetable to make all new homes:

- environmentally friendly, and
- zero carbon

within 10 years, i.e. by 2016.

Shaping a low carbon future - our environmental vision

Speech by Ruth Kelly MP at the 'Towards Zero Carbon Development' event hosted by WWF on 13 December 2006

www.communities.gov.uk/index.asp?id=1505202

The purpose of this strategy, according to Ruth Kelly, Secretary of State for Communities and Local Government, is to stimulate innovation in the construction industry and amongst its clients.

The strategy announced in the **Green Pack** has been made public in three documents.

1. **Planning Policy Statement of Climate Change**
2. **The Code for Sustainable Homes**, and
3. **Building a Greener Future**.

And the pack stressed that the strategy they contain is based on three principles for delivering "better, more sustainable communities":

- the importance of new developments – and new homes – being built to the very highest standards
- the need to step up efforts to make existing homes and buildings more efficient, and
- how crucial it is that central and local government work together to take action on climate change.

As the pack also makes clear, having formulated its objective – zero carbon homes by 2016 - central government clearly expects regional and local government agencies, and the construction sector to pick up this baton and deliver its practical implementation.

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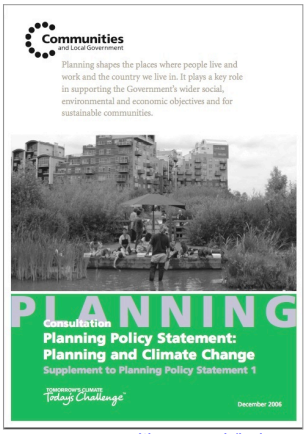
The new **Planning Policy Statement on Climate Change** was issued for consultation in December (which ended early in March). It will be introduced later this year as a supplement to PPS1. The stated purpose of this statement is to put climate change at the heart of the planning system and to ensure that new communities are designed in a way that reduces harmful emissions and makes best use of renewable energy. It contains, for instance, "strong guidance" to Regional and all other planning authorities to prepare and deliver spatial strategies that make a full contribution to delivering the Government's Climate Change Programme and energy policies, and in doing so contribute to global sustainability. A companion guide is being prepared to provide practial guidance and support for the implementation of the policies contained in the PPS.



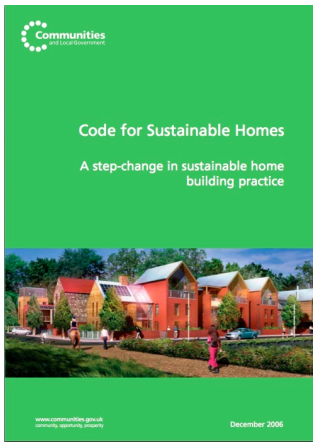
www.communities.gov.uk/index.asp?id=1505140

The **Code for Sustainable Homes** was also published on 13th December. It introduces a star rating system for all new homes. The aim of the Code is to increase the environmental sustainability of homes, and to give homeowners better information about the sustainability of their homes, based on a single national standard. At present, the Code is voluntary, But the DCLG has proposed that, from April 2008, assessment of new homes against the Code will become mandatory.

The Code seeks to measure the sustainability of homes against against nine 'design categories', rating the 'whole home' as a complete package. This is signalled as a clear departure from the current Building Regulations. The design categories included in the Code are:

- ☐ energy/CO2
- ☐ water
- ☐ materials
- ☐ surface water run-off
- ☐ waste
- ☐ pollution
- ☐ health and well being
- ☐ management
- ☐ ecology

Houses are rated against these categories and have to score specific numbers of point to move up through the six levels of performance. To win 1★ rating on energy, for instance, a house has to have a performance 10% better than that required by the 2006 Building Regulations. To gain a 6 ★ rating, a house has to be 'zero carbon'. An explanation of this term is offered by **Building A Greener Future**.



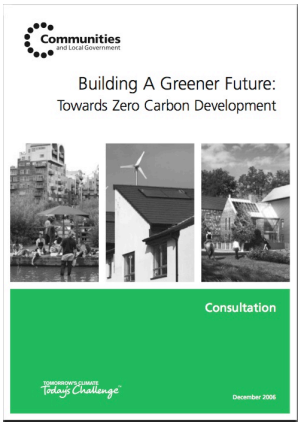
www.communities.gov.uk/index.asp?id=1162094

Building a Green Future, also published on 13th December, proposed a timetable for revising the Building Regulations so as to reach zero carbon development in all new housing in England and Wales. It set a target of moving to zero carbon housing within ten years, with interim steps:

- a 25% improvement in performance by 2010
- a 44% improvement by 2013, and
- zero carbon by 2016.

Here, zero carbon is defined as:

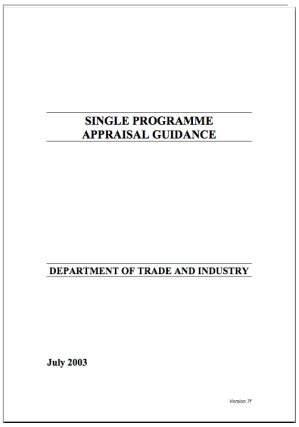
> "No net carbon emissions from all energy use in the home – ensuring homes are self-sufficient by producing enough energy over a year to cover anything they draw from the national grid. For example, this could involve a house being highly efficient through the use of comprehensive insulation and use of devices, such as solar panels, to generate energy."



www.communities.gov.uk/index.asp?id=1505157

The **Green Pack** highlights regional and local government agencies, and the construction industry and its clients, as mechanisms for delivering more sustainable construction, sustainable communities, and zero carbon buildings as a means of combating climate change. A similar spotlight is turn on the regions by the DTI's **Review of Sustainable Construction**. The Review sets up a comparison of sustainable construction within the regions. It suggests that the sustainable construction agenda has been enthusiastically embraced by the English regions and is being vigorously promoted by the Regional Development Agencies. It cites the introduction of the **Single Programme** in 2002, and the guidance developed for that funding stream, as the catalyst for a uniform approach to project appraisal that incorporate an assessment of the impact of physical regeneration:

> "RDAs have refined these assessments and established sustainability policies to help guide funding for physical regeneration to minimise environmental impact. The issue of **Common Minimum Standards** for the procurement of for built environments in the public sector has reinforced the policies already in place in a drive towards achieving excellence in construction."



www.dti.gov.uk/files/file11686.pdf

It is against this background that the DTI published, in its **Review of Sustainable Construction**, a cross-comparison of how each English Region is progressing in its activities on sustainable construction.

www.ogc.gov.uk/construction_procurement_common_minimum_standards_for_the_built_environment.asp

This process was aided by the East Midlands Centre for Constructing Built Environment. In its **Joint Regional Development Agency Response** to the DTI's Draft Sustainable Construction Strategy (March 2006), *emda* offered, as the lead co-ordinating RDA on construction, a cross-comparison of the performance of the regional development agencies on sustainable construction. This listed the main activities in which each RDA was engaged. It should be anticipated that this type of comparison will feature in future central government reviews of progress on this front.


East Midlands Development Agency
East Midlands Centre for constructing the Built Environment

Joint Regional Development Agency Response:

Department of Trade and Industry
Draft Sustainable Construction Strategy

EMDA, Apex Court, Nottingham, March 2006

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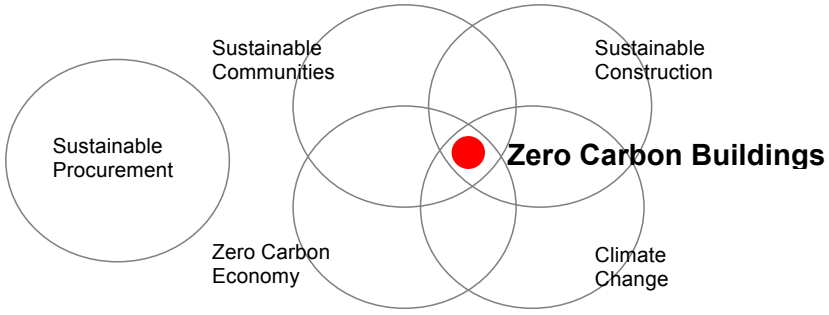
http://www.emda.org.uk/construction/8%20Joint_RDA_response_report%20FINAL.pdf

Through this inter-regional comparison, central government can be seen to be measuring the effect of having passed the baton for a wide range policy imperatives, centred on the built environment, directly to the English regions for implementation, see Figure 1.

Figure 1. Central government policy imperatives for implementation by the English regions



Although not stressed as a delivery vehicle in the **Green Pack**, this baton includes the public sector using its procurement power to drive both the construction industry and the private sector towards sustainable development. As the Sustainable Procurement Task Force made clear in **Procuring the Future** in 2006:

> "With a budget of some £150bn, the public sector can transform markets so that the private sector can join forces in pursuing sustainable purchasing policies."

Implementing these policy imperatives has now been clearly focused by central government's emphasis on the delivery of zero carbon buildings, especially zero carbon homes by 2016.

www.sustainable-development.gov.uk/publications/procurement-action-plan/index.htm

The survey: what do developers and clients say?

Introduction

In the late autumn of 2006, the *emda* was invited by the Sustainability Forum to be the second English region in which the readiness of the construction sector for sustainable development was surveyed. *emda* agreed and convened a committee to steer this survey composed of:

- Blueprint
- Constructing Excellence
- the Construction Industry Council East Midlands
- East Midlands Constructing the Built Environment
- *Emda*
- the Government Office for the East Midlands, and
- Regeneration East Midlands.

The Steering Committee decided on the remit and specification for the survey. It chose to focus on the demand-side of the construction sector – developers, large private sector clients, funders and insurers – since their response to sustainable development was seen as the least well known in the region.

The survey method

The Steering Committee identified 50 demand-side organisations with high profiles that were active in the region. A set of questions for these organisations was compiled from suggestions made by Steering Committee members. These were collated into a short survey form which was not to exceed two sides of A4. It was also deemed important that answering the survey form should not require those attempting to do so to consult information they did not already hold in their heads. This was requested because the Steering Committee wanted the survey to be as simple as possible for demand-side organisations to answer. Bespoke versions of the survey form were developed for each of the constituencies canvassed within a standard format. Appendix 1 shows the version used with developers. Questions were in the form of fixed choices with the option of adding other responses not included. Some included supplementary open-ended prompts.

The members of the Steering Committee identified, where possible, a named contact in each organisation to be canvassed. These were phoned and asked if they were willing to take part in the survey. None refused. Named individuals were asked if they were the best person to answer a survey on sustainable construction - often resulting in pause or brief laugh, followed by the suggestion that they were as well placed as anyone. On occasion, another named individual was volunteered who was then invited to take part. Very occasionally, this search for a individual was protracted with circular nominations, leading back to those previously nominated. Where initially no named contact was available, reception was phoned and asked to identify the individual most likely to be able to complete a survey on sustainable construction. This question frequently resulted in difficulty: reception staff were unable to identify who held this responsibility – even when prompted by supplementary questions asked to help them narrow who might do so. These difficulties suggests ‘sustainable construction’ does not yet appear to be a formally assigned responsibility within many organisations canvassed. Only one returned survey form was received from someone with the word ‘sustainability’ in their job description. Those identified to take part were most typically MDs, company directors or departmental heads.

The response rate

Named individuals were then sent at the beginning of February a short e-mail inviting them to take part in the survey. This was sent on behalf of emda and accompanied by a letter of endorsement from its Executive Director of Regeneration, see Appendix 2. It was accompanied by an attachment containing the survey form, see Appendix 1. The organisations canvassed were offered anonymity but not confidentiality for their responses. The first completed survey form was returned within an hour of being circulated, despite being forwarded by the addressee to someone else to complete. This suggests that the form was not difficult to complete. Two more reminder e-mails were sent at seven day intervals during February to encourage named individuals to respond.

Two of the demand-side organisations approached had ceased trading. Twenty organisations responded to the survey, giving an overall response rate of 42%. One organisation – an insurer recommended by the Steering Committee because of their business in the construction sector – declined to take part because the questions asked were deemed “not relevant”. Nineteen organisations completed and returned the survey form, a response rate of 40%. Completed forms were received from 19 developers, 4 clients and 2 funding/insurance organisations.

The responses to the survey given below should not be read as representative of the demand-side of the construction sector in the East Midlands. The organisations canvassed were typically medium sized to large. In the case of private sector clients, they often represent very large, internationally active organisations who have a presence in the region. In this sense, they are more like a ‘good case’ sample – organisations large and active enough to have encountered the sustainable construction agenda and to have begun to do something in response to it. A very different picture would be likely to emerge if small developers and clients were surveyed, although some small firms are highly innovative in this area as a means of building niche markets for themselves.

What did developers and clients say?

Which of these sustainability issues are the most important in your organisation?

All the demand-side organisations were asked which sustainability issues, identified by Steering Committee members, were most important in their organisations. They were asked to vote for five issues listed, assigning them a score of 1 (most important) to 5. Their responses are shown below. The priority order has been established by multiplying the number who identified an issue with the score they attached to it.

Issue	Rank order	Aspect of sustainability	Importance
Resource efficiency	1	Environmental	First order
Environmental protection	2	Environmental	
Greenhouse gas emissions	3	Environmental	
Enterprise and wealth creation	4	Economic	Second order
Health	5	Social	Third order
Green space	6	Environmental	
Accessibility/social inclusion	7	Social	
Biodiversity	8	Environmental	
Education and training	9	Social	
Human rights	10	Social	Fourth order
Intergenerational equity	11	Social	

Developers, clients, funders and insurers: n =

- By aggregating their replies, a clear pattern emerges.
- Demand-side organisations attach most importance to environmental aspects of sustainability such as resource efficiency, environmental protection and greenhouse gas emissions
- Collectively, they give second order importance to economic sustainability, in the form of enterprise and wealth creation
- Social aspects of sustainability such as health, accessibility and social inclusion, education and training rank lower, while human rights and inter-generational equity ranking lower still
- 'Softer' environmental aspects of sustainability, such as green space and bio-diversity are also only assigned third order importance
- These priorities map directly on to those expressed by those on the supply-side of the construction sector that took part in the Sustainability Forum's stakeholder engagement workshops, see www.cief.org.uk/pdf/where_next_construct_Dec05.pdf
- In this sense, what the supply-side says it wants to offer on sustainability currently maps well on to what the demand-side is says it is looking for.

Which of these parties do you think has the greatest influence on ensuring building projects are more sustainable?

All of the demand-side organisations were asked which types of decision-makers they thought had most influence on ensuring that building projects were more sustainable.

Stakeholder	Rank order	Responsibility
Planners	1	First order responsibility
Clients	2	
Occupiers/users	3	
Funders	4	
Building Control Officers	5	Second order responsibility
Developers	6	
Designers	7	
Shareholders	8	Third order responsibility
Constructors	9	
Insurers	10	
Customers (retail sector)	11	Fourth order responsibility
Public sector landowners	12	

- Again by aggregating their replies, a clear pattern becomes apparent
- Collectively, demand-side organisations do not think that the supply-side has most influence on whether buildings are sustainable or not
- Instead they think that regulators and decision-makers on the demand-side do
- All four of the stakeholders accorded first order responsibility are on the demand side – planners, clients, occupiers and funders
- And the first two accorded second order responsibility are also on the regulator/demand-side – building control officers and developers
- The first supply-side decision-makers, designers are ranked sixth, with constructors ranked ninth, below shareholders and just above insurers
- According to this rank ordering, demand-side organisations think that they are in a much better position, than the supply side, to make buildings more sustainable *if they choose to do so*.

Which of these features do you think makes a building most sustainable?

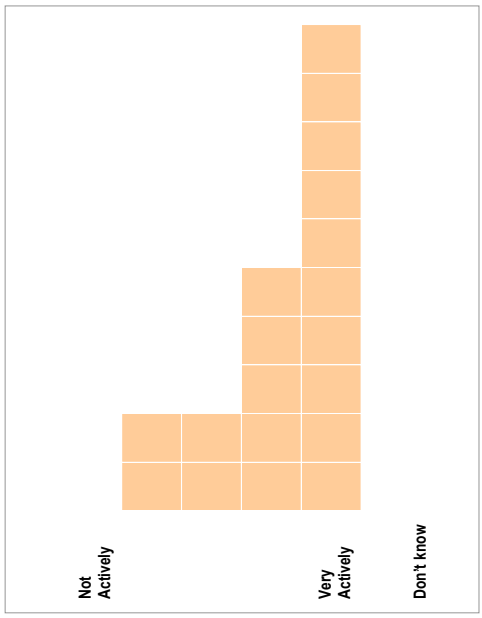
All of the demand-side organisations were asked to indicate which features, suggested by members of the Steering Committee, contribute most to make a building more sustainable.

Feature	Rank order	Contribution
Roof, wall and floor insulation	1	First order contribution
Re-usable/recycled materials	2	Second order contribution
Water management techniques	3	Third order importance
High performance glazing	4	
Natural ventilation	5	
Combined heat & power/district heating	6	Fourth order importance
Waste management techniques	7	
Modern methods of (off-site) construction	8	
Solar heating and/or photo voltaics	9	
Wind energy	10	Fifth order importance

- The thirty-four years since the first so-called energy crises appear to have taught demand-side organisations the value of insulation in building envelopes (but this has taken 'generation' of government and other initiatives to achieve)
- But they still attach less value to high performance glazing (strongly promoted for at least two and half decades) and natural ventilation (re-promoted, having fallen from favour, for two decades)
- They acknowledge the importance of re-usable/recyclable materials and water management
- But they underestimate the contribution of CHP/district heating and waste management: the LSE's study of the Mayor of London's supplementary planning guidance suggests that 90% of the reduction in the ecological footprint of new housing in the capital could come from just these two measures alone, see www.
- And, collectively, these demand-side organisations seem unpersuaded of the value of renewables (solar heating, photo –voltaics or wind energy) or modern methods of construction – both of which are the subject of central government imperatives, initiatives or subsidies.

Is your company actively trying to anticipate/respond to increasing concern about sustainability issues?

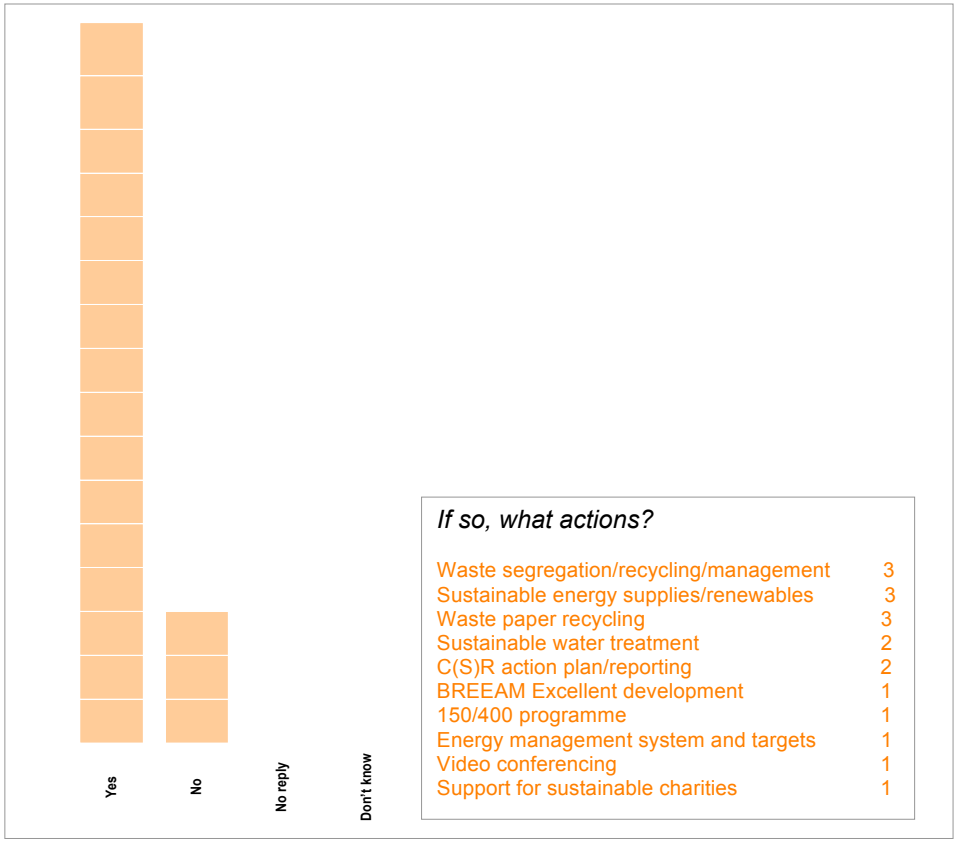
All of the demand-side organisations were asked this question.



- On average, the demand-side organisations canvassed present themselves as 'reasonably' to 'very active' in anticipating or responding to concern about sustainability issues
- Indeed the modal response (the most frequently cited) is 'very actively' anticipating or responding to such concerns
- But the range of response offered by these organisations is also large, stretching from 'not very active' to 'very active'.
- Some of these demand-side organisations clearly see themselves as ready and able to respond to sustainability
- Others, in minority here, do not.

Has your firm taken any actions to operate more sustainably?

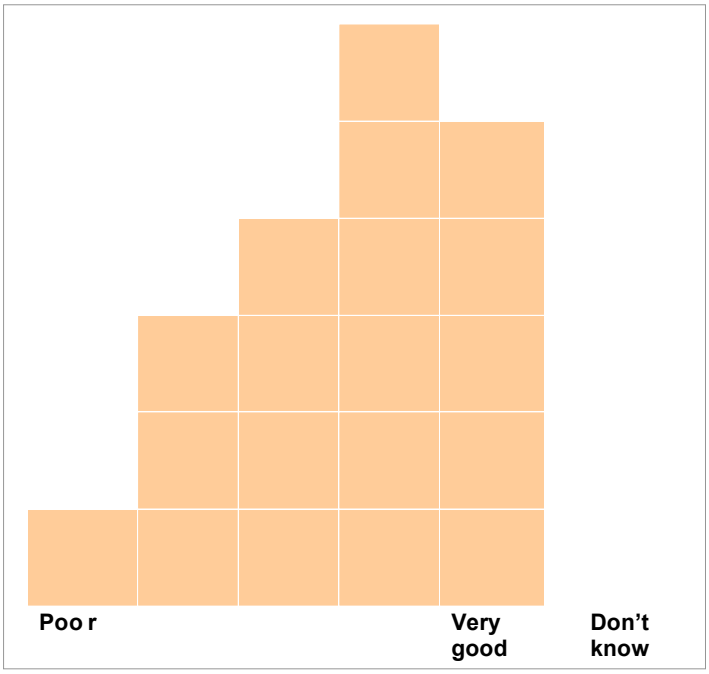
All of the demand-side organisations were asked this question.



- More than 4 out of 5 organisations reported that they have taken actions to operate more sustainably
- The types of actions they have taken vary greatly
- Some have taken in-house actions such as recycling waste paper or using video conferencing
- Others have taken outward-facing actions such supporting charities or CSR reporting
- A few have taken actions directly related to the commissioning, procurement or management of buildings such as achieving a BREEAM excellent rating on development, using sustainable water treatment, or employing energy management system with targets.

How good is awareness and knowledge about sustainable construction in your firm?

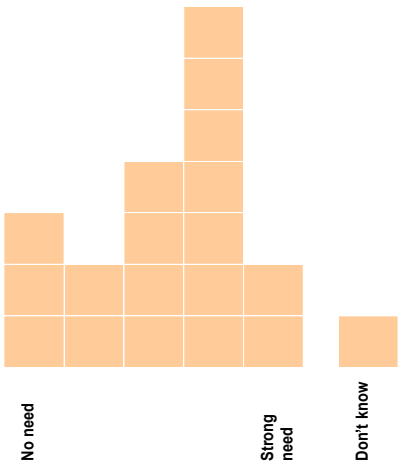
All of the demand-side organisations were asked this question.



- On average, demand-side organisations presented their awareness of, and knowledge about, sustainable construction as 'reasonable' to 'good'
- Their modal response was 'good'
- But the range was very large – from 'poor' to 'very good'
- All forms of readiness for sustainable construction are reported here.
- Some of the demand-side organisations canvassed see themselves as well prepared for sustainable construction
- Some see themselves as reasonably prepared
- Others, once again in a minority, do not.

Do you need more help on sustainable methods to ensure they are used in the design and construction of buildings you develop/procure/fund or insure in the East Midlands?

All of the demand-side organisations were asked this question.



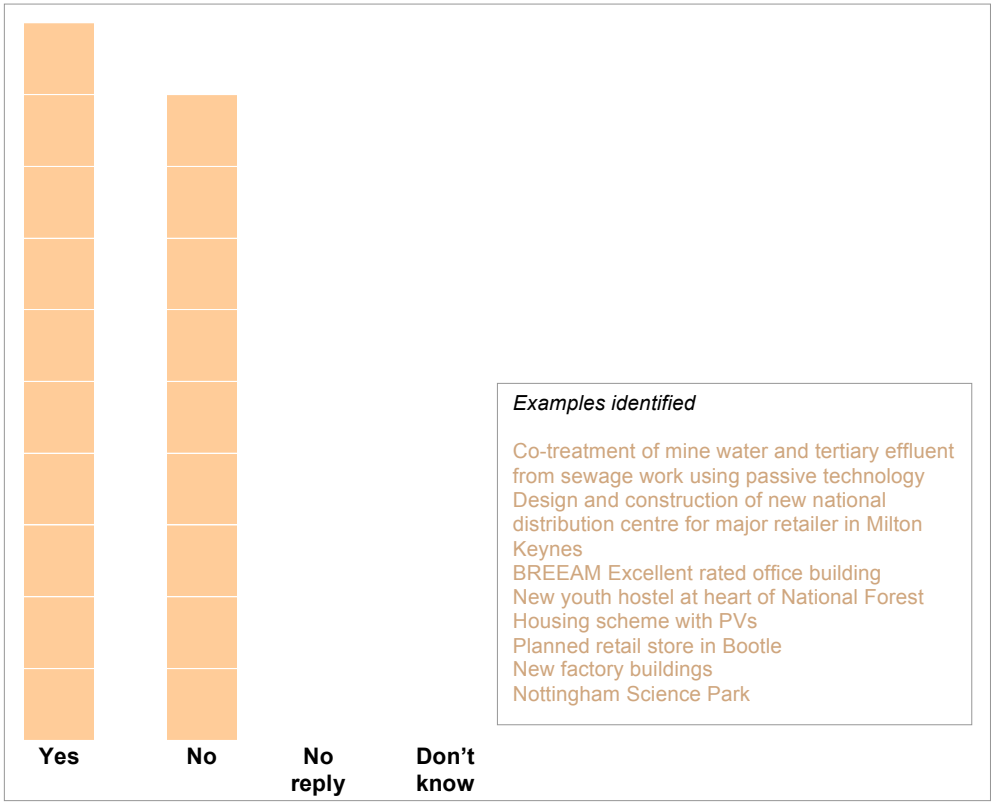
If so, what form should this help take?

List of sustainable suppliers	2
Case studies (to encourage other to adopt sustainable design and construction)	2
Planning checklists	1
Building control guidance	1
Advice on commercial buildings	1
Technical advice on new equipment and materials	1
Recommended options above building regulations	
Training	1
Methods and practices from elsewhere taken on board by public sector	1

- On average, demand-side organisations presented themselves as having a 'reasonable' need for more help on sustainable methods for the design or construction of buildings
- The modal response is 'quite a strong' need
- But the range is large, from 'no need't to a 'strong need'.
- And the responses presented by the organisations canvassed are bi-polar with a small minority expressing little or no need for help against a larger majority that clearly think more help would be useful
- Once again, this suggest that, within the region, there is a wide range of readiness for sustainable design and construction – from ready (with any requirement for further help from outside) to unready (with a strong need for further outside assistance)
- However, even well prepared organisations can see a need for outside intervention to create a 'level playing field':

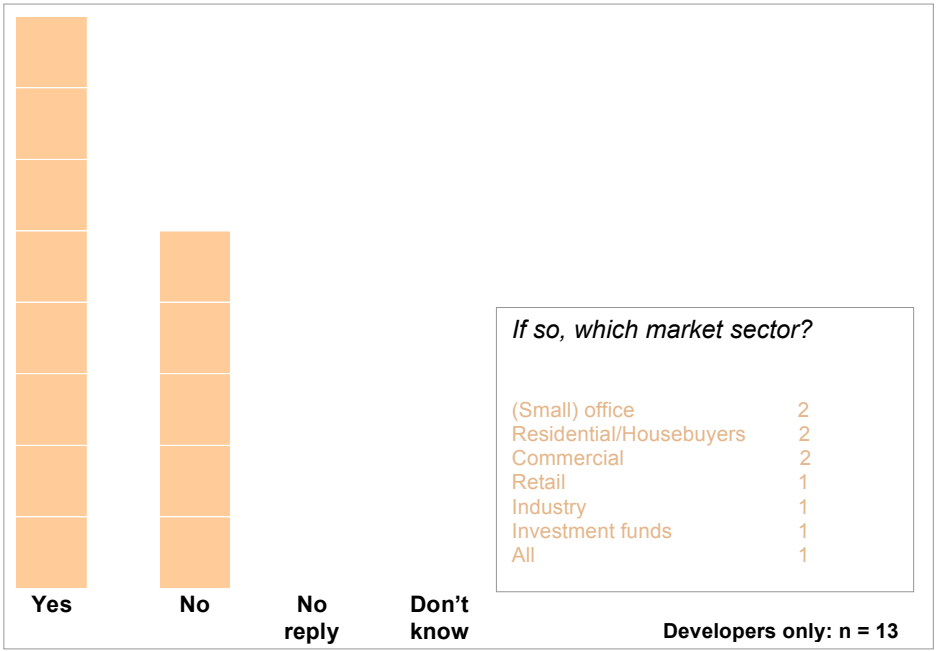
  "Regional government should discourage the less sustainable types of development."

Can you identify a recent development that illustrates your current best practice?
All of the demand-side organisations were asked this question.



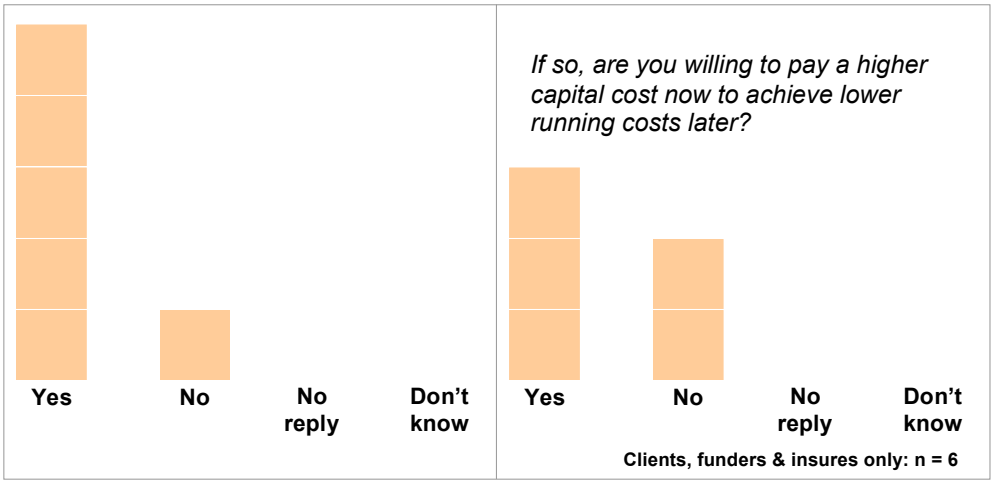
- Just over half of those canvassed were willing and able to provide an example that illustrates their current best practice
- These examples stretch across a wide range of building types and infrasctructure, covering science parks, offices, factories, retail distribution centres, housing, youth hostels and water treatment plants
- Just under half provided no example of their current best practice.

Do you see solid evidence for an occupier market for sustainable buildings?
Only developers were asked this question.



- 3 out of 5 developers canvassed see solid evidence of the emergence of an occupier market for sustainable buildings
- But the examples they offer stretch right across market sectors
- If such a market is emerging, it would seem that it is not developing strongly in any particular sector but rather patchily across the board.

Does your company seek to procure sustainable buildings?
This question was only asked of clients, funding organisations and insurers.



- Almost all of the clients, funding organisations and insurers that responded to the survey said that they do seek to procure sustainable buildings
- However, they are fairly evenly split on whether they are willing to pay a higher capital cost now to achieve a lower running cost later
- One, a major national and international retailer, was not: instead it is following quite a different strategy:

  "We believe that in the short to medium term all our buildings should be delivered to the same cost but in a sustainable manner - using a volume driven approach to offset higher costs."

Which of these barriers is preventing your firm from commissioning/procuring/funding more sustainable buildings at present?

All of the demand-side organisations were asked a variation of this question.

Barriers	Rank order	Importance
Capital cost	1	First order
Market demand	2	Second order
Client vision and leadership	3=	Third order
Regulations	3=	
Access to products and materials	4	
Access to outside expertise	5	Fourth order
In-house knowledge/technical expertise	6	
Access to training	7	Fifth order
Lack of tax breaks on investment	8	

- The most significant barriers cited by the demand-side organisations canvassed are first, capital cost, followed by (lack of) market demand
- All other barriers mentioned were relegated to third order significance, or below, in comparison to these two
- (Lack of) client vision and leadership and regulations are also given strong priority
- But access to outside expertise or (lack of) in-house knowledge or technical expertise are seen as lesser impediments, as is access to training
- The lack of tax breaks on investment is also accorded low priority
- What these demand-side organisations seem to be suggesting is that, if
  - costs could be addressed, and
  - a market emerged, and
  - clients could persuaded to show leadership and vision,

  then they already have the access (to products and material, to outside expertise, and to in-house knowledge and technical expertise) necessary to deliver sustainable construction

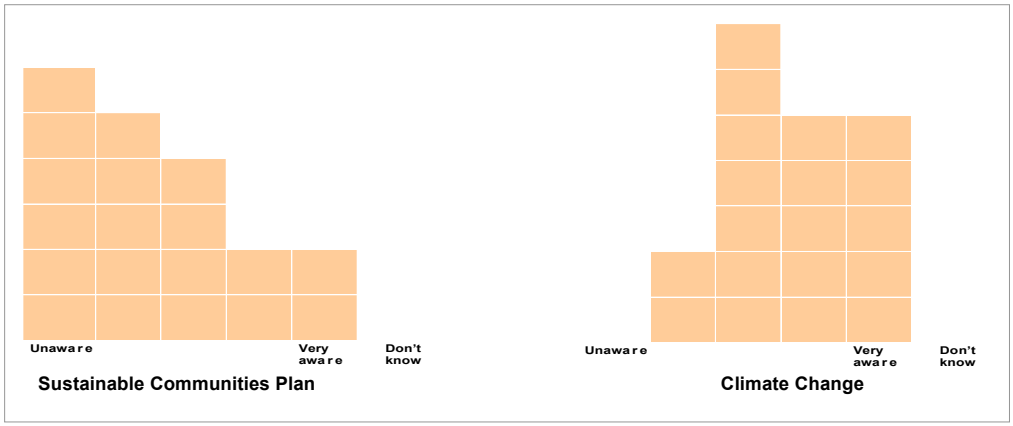
Which of these drivers would encourage your firm to commission/procure more sustainable buildings in the future?

All demand-side organisations were asked this question.

Driver	Rank order	Importance
Carrots (incentives, subsidies, tax breaks)	1	First order
Corporate social responsibility	2	
Company profile and reputation	3	Second order
Client and user demand	4	
Sticks (codes of practice, regulations, legislation	5	
Funders, investors and insurers	6=	Third order
Market advantage/competitive position	6=	
Third party pressure, e.g. RDA, NGOs	7	Fourth order

- Surprisingly, although lack of tax breaks was cited as the least of the barriers (previous page) to commissioning or procuring more sustainable buildings, carrots – in the form of incentives, subsidies and tax breaks – were identified as the strongest drivers for change on this front
- Sticks – codes of practice, regulations and legislation – rank much lower down, just ahead of (pressure from) funders, investors and insurers and market advantage or competitive advantage: this stands in contrast to the supply side of construction who repeatedly asked for legislation and mandatory requirements to create a level playing field at the Sustainability Forum's stakeholder workshops, see www.cief.org.uk/pdf/where_next_construct_Dec05.pdf
- After carrots, CSR, company profile and reputation, and client and user demand are identified as the strongest drivers for change
- Significantly for *emda*, pressure from third party organisations, such as Regional Development Agencies, is seen collectively seen as the weakest driver.

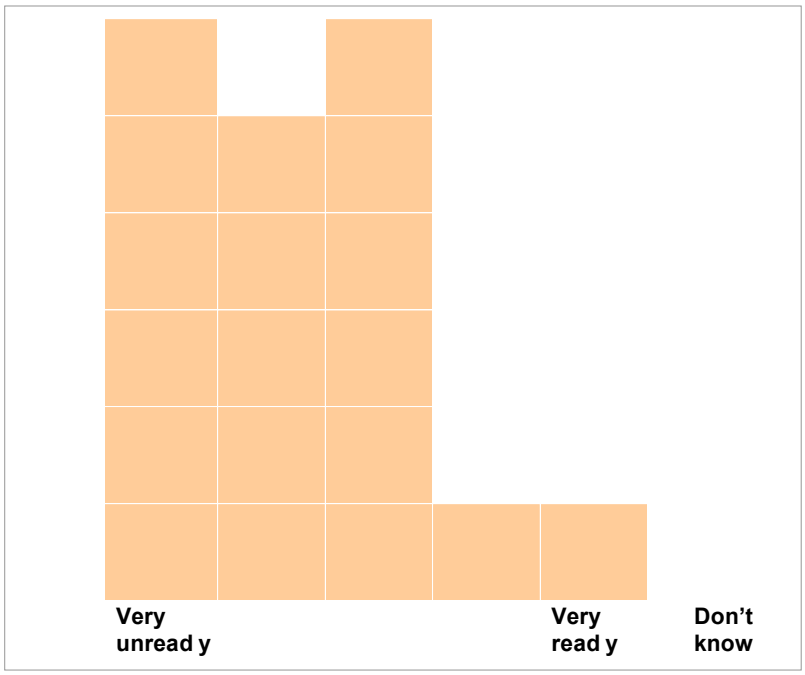
Is your company aware of the requirements of the Sustainable Communities Plan?
Is your company aware of how to deal with Climate Change?
All of the demand-side organisations were asked both of these questions.



- Typically, while most of the demand-side organisations canvassed present themselves as ready to deal with Climate Change, most are unaware of the requirements of the Sustainable Communities Plan
- The contrast in awareness between these two agendas is strikingly marked – they begin to represent mirror images
- 9 out of 10 organisations portray themselves as (at least reasonably) ready to deal with Climate change
- Almost 1 out of 2 present themselves as (at least quite) unaware of the requirements of the Sustainable Communities Plan
- The modal score for Climate Change is reasonably aware
- The modal score for the Sustainable Communities Plan is unaware
- As a consequence, collectively, the developers and large private clients surveyed suggest that they are at present very differently placed to confront and deal with these two agendas.

Is the construction industry ready to help deliver the Sustainable Communities Plan and the Climate Change agendas?

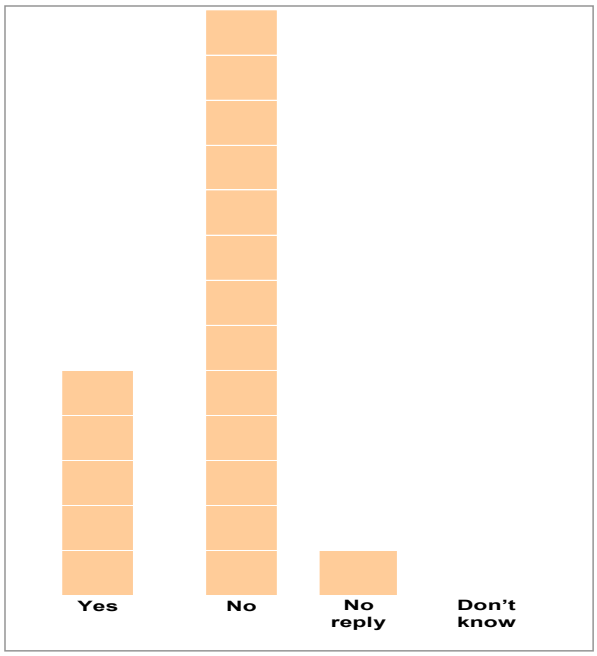
All the demand-side organisations were asked this question.



- Most of the demand-side organisations canvassed think the the supply side of the construction industry is not yet up to speed on Climate Change or the Sustainable Communities Plan
- Almost 3 out of 5 do not see it as ready to help them deliver these two agendas
- Only 1 in 10 sees them as (very) ready to do so
- But the jury is split on this as the bipolar modal scores of reasonable ready and very unready display.

Are Planning Departments doing enough to promote the Sustainable Communities Plan and the Climate Change agendas?

All of the demand-side organisations were asked this question.



- More than two-thirds of the demand-side organisations canvassed think that Planning Authorities are not doing enough to promote Climate Change or the Sustainable Communities Plan
- Only a quarter think that they are
- In the survey form, organisations were occasionally offered opportunities to elaborate on their responses: they seldom took these
- This question was an exception: six of them commented on what they saw as Planning Authorities' under-performance:

  "They need training at both Officer and Member level."

  "[They should] Do more to influence design/building construction. But powers are limited. Central government could provide the 'carrots and sticks' to encourage greater take-up."

  "Awareness is patchy across the country, standards vary tremendously as does the level of priority local authorities attach to the whole issue. There is also confusion about what constitutes best practice with some adhering to BREEM and others dismissing it as not going far enough. Clearer national policy and agreed standards would be tremendously beneficial."

  "[They should] Stipulate a minimum 'sustainable code' star rating required by condition on permission."

  "Numerous of the Planning Depts with whom we work are totally understaffed and struggle to keep up with the basics. Where Planning Depts do demonstrate an appetite for environmental sustainability, the initiatives are often uncoordinated, and do not reflect what can be practically delivered by developers and other stakeholders. The matter of compliance, and how an applicant demonstrates compliance with measurable requirements is clearly key. One only has to look at the shambles surrounding implementation of Building Regulations Part L as evidence of this."

  "They have never mentioned it to me."

Summary of survey findings

So are medium to large developers and large clients in the East Midlands ready for sustainable construction. As they themselves tell the story, typically they are. Typically they present themselves as:

- (reasonably) well informed about and prepared for sustainable construction and climate change, but less well prepared for sustainable communities
- actively trying to anticipate or respond to sustainability issues
- already taking actions to operate more sustainably (but only half offered an example of their own current best practice), and
- seeking to procure sustainable buildings but are divided over whether they are willing to pay a higher capital cost to achieve lower running costs.

Typically, they also:

- attach first order importance to environmental sustainability but only second and third order to economic or social sustainability issues, respectively – mirroring the priorities held on the supply side of construction
- see regulators and the demand side (planners, clients, funding organisations and users) has having most influence on whether buildings are more sustainable – only attributing second and third order importance to the supply side (designers and constructors, respectively)
- are convinced of the value of insulation and recycled materials to sustainable buildings
- are unconvinced about renewables and modern methods of construction, and
- under-estimate the significance of waste management and CHP/district heating.

Again, they typically:

- see solid evidence of an occupier market for sustainable buildings but don't agree about the particular sectors in which this is emerging
- see cost and market demand as the biggest barriers to procuring sustainable buildings at present, and
- identify 'carrots' (incentives, subsidies, and tax breaks) and CSR as the most significant current drivers for change on this front but do not attach as much importance to 'sticks' (codes of practice, regulations and legislation) for creating a level playing field as the supply side of construction does.

And, finally, they typically:

- do not see the construction industry or planners as doing enough to help them deliver the Sustainable Communities or Climate Change agendas, and
- are particularly vocal on the failure of planners on this front.

However, this 'typical' portrait is only one part of the story. Even amongst the small number of medium to large developers and large private sector clients canvassed in the region, not all describe themselves as being similarly placed in relation to sustainable construction. Some portray themselves ready and able to tackle this issue without the need of further injections of outside help and expertise. Others present themselves as unready and in need of extensive external support. The remainder sits between these two extremes. In the East Midlands then, all stages of readiness for sustainable construction can currently be found amongst developers and clients - from champing frustratedly on the bit to not even having entered the race track, let alone reached the starting line.

The workshop: What do other stakeholders say?

Introduction

At the beginning of April 2007, *emda* held a free half-day workshop - in conjunction with the EMCBE, Constructing Excellence, and the Sustainability Forum - for clients, developers and service providers in the construction industry. The purpose of the workshop was to increase awareness in the region about how to implement sustainable construction. It was used to:

- present the findings of the survey, and
- help *emda* to discover what it needs to do next in order to help the region's construction industry, its clients and developers, improve their performance in relation to sustainable development and climate change.

The half-day workshop was aimed at both the demand-side (clients and developers) and the supply-side (designers and contractors) of the construction sector. The workshop was advertised through EMCBE's website and mailing list, with direct invitations issued to those who had been canvassed to take part in the survey. Invitations were also extended internally within *emda* and its Steering Committee for the survey, as well as externally through the Construction Industry Council East Midlands. The fifty places available at the workshop were taken up within days of the workshop being advertised with a waiting list set up as replacements for drop outs.

Workshop attendees	**Size of organisation**				
	Micro 1-10 staff	Small 11-249	Medium 250-499	Large >500	**Totals**
Type of organisation					
Developer	2				**2**
House builder	1				**1**
Contractor		1	1	2	**4**
Specialist contractor		1			**1**
Supplier		1			**1**
Consultant	1	1		2	**4**
Research organisation					**-**
Training agency		1			**1**
Professional institution	1				
Trade association					**-**
Advisory organisation	1				**1**
Government department			1		**1**
Regional development agency		2	2		**4**
Local authority	1			1	**2**
Public sector client					**-**
Private sector client					**-**
Regulatory body					**-**
NGO/voluntary body	1				**1**
Higher education					**-**
Further education					**-**
Financial organisation		1			**1**
Solicitor		1			**1**
Totals	**8**	**9**	**4**	**5**	**26**

On the day of the workshop there was a large 'no show'. Only 28 of those who had booked to attend did so with 2 further apologies for absence received – an overall response rate of only 55%. And, despite being advertised to both the demand and

supply sides, those who attended came overwhelming from service providers within (or to) the supply-side of the construction industry, see table above.

26 of the 28 workshop participants provided information about the size and type of organisation they came from. Only 4 came from the demand-side: 2 developers, 1 housebuilder, and 1 funding organization: each of these described themselves as micro or small. The three constituencies with most participants present were contractors, consultants and staff from the regional development agency: even here there were only 4 attendees apiece. Outside of this, the workshop attracted a wide range of other types of stakeholders within and around the construction sector, each represented typically by only one attendee. Nobody was present from the sector's regional research or teaching base (research organizations, higher and further education). Nor did any of the participants identify themselves as being public or private sector clients. Given the invitation extended to the CIC East Midland, professional institutions and trade associations were under-represented.

Just under two-thirds of the participants described themselves as coming from micro to small organization – a lower proportion than the 99% of firms in construction industry nationally that belong in these categories. Overall, the delegates represented a wide range of stakeholders in the construction sector, with over-representation of medium to large organizations (because of the presence of regional and local government) and under-representation of professional and advisory organizations.

The workshop structure

At the workshop, participants were given presentations covering the first two parts of this report:

- the challenge from central government launched by the **Green Pack**, and
- the survey results: **What developers and clients in the region say**,

which can be accessed from www.emcbe.com.

They were also invited to take part in a series of individual and group exercises covering:

- their awareness of examples of regional and local initiatives, activities and projects featuring:
  - sustainable construction
  - sustainable communities
  - zero carbon economy
  - climate change
  - urban regeneration
  - renewables, and
  - sustainable procurement
- what they saw as the barriers preventing compliance with, or implementation of, low carbon buildings in their own organisations, and
- the most important actions, on either the demand- or supply-sides, they thought should be taken in the region to tackle these.

Awareness of the challenge from central government

At the workshop, participants were asked if they had seen

- **the Planning Policy Statement on Climate Change**
- **the Code for Sustainable Homes**
- **Building a Greener Future**, or
- **The Review of the Sustainable Construction Strategy**.

These documents had launched a major policy imperative of central government. And they set out the targets by which the performance of the construction industry will be measured against progress on sustainable construction. They had been published four or five months by the time of the workshop. However, none had been seen by more than a small minority of those who attended the workshop, even though these participants represent either leading edge practitioners - or, at the very least, potential early adopters - of sustainable construction. In no case had more than more than a fifth of the participants seen any of the publications. And only two said that they had taken part in the consultation processes surrounding by them. Given this lack of awareness amongst even those that self-selected to attend an event on sustainable construction, first hand or detailed understanding of the challenge imposed on the regions, local government and the construction sector by the **Green Pack** – to deliver zero carbon new homes by 2016 - is likely to be low in the East Midlands.

Awareness of examples of regional and local initiatives, activities and projects

Prior to the workshop, members of the *emda* Steering Committee had been asked to identify examples of relevant initiatives, activities and projects of which they were aware in the East Midlands: their responses are recorded in Appendix 3. At the workshop, participants were asked to provide examples with features that illustrated:

- sustainable construction
- sustainable communities
- zero carbon economy
- climate change
- urban regeneration
- renewables, and/or
- sustainable procurement.

Where an example had features that could be classified under more than one of these headings, participants were asked to repeat it against each relevant category. A full list of the examples they offered is given in Appendix 4.

Example offered	Number offered
sustainable construction	36
sustainable communities	19
zero carbon economy	16
climate change	10
urban regeneration	9
renewables, and	10
sustainable procurement	6
Total number offered	**96**

- As the table above shows, participants offered a total of 96 examples against these seven category headings:
  - nearly two-fifths of the examples were offered as displaying sustainable construction features
  - one-fifth as sustainable communities
  - one-sixth as zero carbon, and
  - about 1 in 10 as climate change, urban regeneration or renewables
  - sustainable procurement elicited only six examples
- Relative few examples, a dozen only, were listed under more than one category heading - sometimes by the same participant, sometimes different ones
- Even after removing duplicates, 84 seemingly discrete examples remain
- Hence across the region, there are a large number of initiatives, activities and projects seen as addressing one or more aspects of policy imperatives defined by central government.
- Very few of these, only 14, were identified by more than one participant.
- At the grass roots level, awareness of what is being done takes the form of isolated pockets of local experience.

- Service providers in the construction sector know their own (local) examples but, with a few exceptions, what they know is not shared by others in the region: just seven examples were identified by three or more participants:
  - the Inland Revenue Building, Nottingham
  - Nottingham University's eco-homes
  - The Nottingham Climate Change Declaration
  - River Crescent, Nottingham riverside regeneration
  - Sherwood Energy Village
  - Shirebrook Business Park
  - Upton Village Development, Northampton
- None of these seven was identified by more than four participants
- Few examples offered appear to have achieved a profile high enough to become common knowledge as exemplars across the region.

Examples selected as worth visiting

At the workshop, participants were ask to select one of the examples they had identified as worthy of being visited by a government minister to showcase what is being done in the East Midlands.

Examples selected for visits	
	Number of workshop participants selecting example
Arkwright Meadows Community Gardens	1
The Avenue Project, near Chesterfield	3
Eliot Durham School	1
Gateford Prinary School	1
Markham "Core Works" regeneration project	1
Moor Green Ind plc	1
Nottingham District Waste Incineration heating scheme (Eastcraft)	1
Nottingham Science Park extension	2
Renewal Trust – Hungermill Allotments	1
Riverside Crescent, Nottingham riverside regeneration	1
Sherwood Energy Village	3
Upton Village Development	1
Total number of examples selected for visits	**12**

- As the table above shows, the 28 participants between them only identified 13 examples in the region that they thought worthy of this attention. Surprisingly (and confusingly), only three of these:
  - River Crescent
  - Sherwood Energy Village, and
  - Upton Village Development –

  also feature in the previous list of regional high profile exemplars.
- And only three of the 13 were selected by more than one participant:
  - The Avenue Project, near Chesterfield
  - Nottingham Science Park extension, and
  - Sherwood Energy Village

  (The criteria participants used to make these selections are recorded in Appendix 5.)
- Just one example survives the sorting and filtering processes described above to emerge as both sufficiently well known and sufficiently highly regarded to be in each of the short lists generated by the workshop participants' choices.
- This is **Sherwood Energy Village**.
- By these criteria, it could currently be described as sole candidate put forward at the workshop for being both a high profile and exemplary project in the region.

Barriers to zero carbon buildings

Workshop participants were individually asked to identify barriers that could prevent them complying with, or implementing, the low or zero carbon buildings in their organizations. Then, working together in six mixed discussion groups, they were asked to agree what they jointly saw as:

- the five most important barriers they had identified, and
- who was most affected by them.

Rank order	Important barriers	Those most affected
1=	(Capital) cost	Clients, developers, end users
1=	(Lack of technical) skills/capacity	Clients, project team, contractor, supply chain, construction sector, education sector
3	Lack of information//knowledge	Developers, clients, supply chain, all
4	Regulations/legislative framework	Policy-makers, developers, architects, construction sector
5=	Procurement rules	Contractor, supply chain
5=	Culture (change)	Supply chain, consumer
5=	Focus of attention: new build, not existing	Policy-makers
8=	Lack of demand	End users
8=	Lack of standards	1st tier supply chain
8=	Lack of enforcement	End user, public
8=	Variety of targets	Client, supply chain
8=	Definition of risk	Variety of decision-makers at different stages
8=	Lack of leadership: who will go first	Funders, developers
8=	Innovation	Supply chain

- Capital cost (as opposed to whole life cost) was identified as a barrier by five of the six discussion groups and chosen by four of them as the most important barrier currently preventing implementation of low carbon buildings
- This barrier was seen as affecting both those at the front end of the procurement process (clients and developers) and those on the receiving end of it (end users)
- Lack of technical skills and capacity was also identified by five of the groups but was only selected by one as the most important barrier
- This barrier was seen as affecting every set of decision-makers - on both the demand and supply sides, including those in the education sector
- Lack of information or knowledge was highlighted by four of the groups: this was seen as affecting the front end of the procurement process
- A long list of other barriers were also identified by only one or two groups
- These typically focused on the lack of some essential factor seen as necessary for the implementation of low carbon building:
  - demand
  - leadership
  - culture change
  - procurement rules
  - standards
  - enforcement
  - unified targets
  - innovation
  - agreed definition of risk, and
  - sufficient attention to existing as well as new build

Actions required to overcome barriers

At the workshop, participants, working together in groups, were asked to agree what they saw as:

- the most important actions that the demand and supply sides of construction industry could take to overcome the barriers they had listed, and
- who they saw as primarily responsible for taking these actions

In addition, specifically at the request of the *emda* Steering Committee, in answering these questions they were asked to consider:

- Who in the region needs to show leadership?
- What are the supply chain development issues?
- What support is required from regional agencies?

Rank order	Actions required	Those responsible
1	Skills, training, education	Central government, Sector Skills Councils, professional bodies (national), Constructing Excellence, RDA, local authorities, schools & FE & HE (regional and local)
2=	Strategies and policy delivery framework,	Central government policy-makers, *emda*, supply chain leaders
2=	Mandatory standards, legislation	Central government (level playing field)
4=	Tax system, incentives	Central government – Treasury, DCLG, Defra, WRAP
4=	Cost reduction	RDA (whole life value), industry, consumers
4=	Leadership: be brave	*emda*, organisations like Blueprint
4=	Market shaping	Sector Skills Council, education providers
4=	Culture/attitude change	Media, schools, time (drip, drip)
9=	Centralised body (EMCBE?)	*emda*
9=	Definition of benchmarks	Central government, Planning Authorities
9=	Provision of more planners	Central government, education sector
9=	Common client standards (public and private)	Central government lead (mandatory codes and standards), investors (CSR), and insurers
9=	Enforcement of standards	Central government – DCLG, Defra, CABE, Housing Corporation, local authorities (league tables)

- There was less agreement across the groups about what should be done to overcome the barriers identified as preventing implementation of low carbon buildings in the region
- Four of the six groups saw education, training and skills as priority
- Three of the groups drew attention to the need for strategies and a policy delivery framework
- All of the other actions were only referred to by one or two groups
- However, there was a high level of agreement across the groups about where much of the responsibility for action lies
- Central government was identified as responsible for taking 8 out of the 13 actions identified
- As one group recorded, as a result of the discussion in the plenary session: "Send some of this problem back to the government rather than the industry automatically accepting it."

- Indeed three fifths of the actions requested would have to be initiated at, or have a strong input from, a national level:
  - tax system
  - policy delivery framework
  - mandatory standards
  - common client standards
  - benchmarks
  - enforcement
  - skills and training, and
  - provision of more planners

  although most of these would also require a regional or local input as well
- Just five of the actions were explicitly identified by the workshop participants as requiring a specific input at the regional level by *emda*:
  - policy delivery framework
  - leadership
  - centralized body (for knowledge transfer)
  - skills and training, and
  - cost reduction.
- Plenary discussion revealed that participants were concerned that, if *emda* were unilaterally to take the lead on implementing this agenda, it would make that region unattractive for inward investment by developers.

Individual participants' comments

During the workshop exercises, participants were given the opportunity to record their individual comments about what they were being asked to do.

Type of organisation	Individual comment
Why sustainability isn't happening	
Small developer	More education is required. The public are confused about the actual cause of climate change, i.e. man or nature. Therefore the majority lacks the appetite to invest. There must be a central government incentive otherwise the local regions who embrace renewable energy may suppress inward investment. There has to be a level playing field nationally.
Micro housebulider	If market demand were more prominent, sustainable construction by developers would be more advanced, regardless of cost.
Landscape architect	Attending numerous seminars, I am aware that costs of materials are high and therefore out of reach of many people. At present [some] materials are only available from Germany.
Small specialist contractor	There appears to be a circle here with clients saying "We'll let affordable sustainable buildings"; developers saying "Demand's not there, wont pay the rent"; and contractors saying "Developers won't pay", etc, etc.
What needs to change for sustainability to happen	
Small voluntary body	All the networks in the East Midlands are doing lots of good work. We just don't know it. There is no central observatory. There is no central place to voice concerns. A forum is required to facilitate these activities. There is no way of collecting all the good practice that is happening in the region. We need a demonstration programme.
Small consultant	The success of the implementation will depend upon the demand in the market and on incentives/drivers – financial incentives and regulatory drivers.
Contractor	Get everybody up to speed.
Why workshop topic isn't relevant	
Small demolition contractor	Much of this is not necessarily relevant due to the area [I'm] coming from
Solicitor	Our organization probably doesn't consider that its efforts (should it choose to) would play much of a part in the sustainability agenda.

- Only a third of the delegates chose to make individual comments, though those made did from a wide range of the types of organizations present.
- There is little that unites these comments.
- They fall into three types: comments about:
  - why sustainability is not happening
  - what has to change for sustainability to happen, and
  - why the workshop topic is not relevant for the participant's own organization.
- Most of them echo the group discussions already reported
- However one suggests additional actions for *emda,* providing*:*
  - providing a central observatory
  - discussion forum, and
  - demonstration programme

Summary of workshop findings

The workshop was intended to help *emda* discover that it needs to do next to help the region's construction industry, its clients and developers, improve their performance in relation to sustainable development and climate change.

- Despite the workshop being promoted to both the demand and supply sides of the sector, those who attended were mainly service providers in construction industry
  - They came a very wide range of stakeholders in and around the sector, with contractors, consultants and the Regional Development Agency itself most strongly represented
  - Other stakeholders such as public and private clients, professional organizations and the region's research and teaching base were under- or un-represented
  - Most participants came from micro or small organizations
- Only a small minority of those present had seen the publications which central government used to launch its policy imperative on zero carbon homes or the sustainability targets for the construction industry
  - Hence detailed awareness of the challenge imposed on the regions, local government and the construction sector by central government is likely to be low in the East Midlands
- Participants were able to identify a large number (96) of examples of initiatives, activities and projects in the region with features seen as addressing one or more aspects of the policy imperatives defined by central government
  - Only 14 of these were duplicates, leaving 84 seemingly discrete examples showcasing what is being done in the East Midlands
  - However awareness of these at grass roots level takes the form of isolated pockets of experience: service providers know their own (local) examples but this is not shared with others in the region
  - Most examples were identified by just one participant: only seven examples were identified by three or more, none by more than four
  - Hence few examples appear to have achieved a profile high enough to become common knowledge as exemplars across the region
- Participants were asked to select one example as a showcase for the region, worthy of being visited by a government minister: 13 examples were offered
  - Only one of these emerges as both sufficiently well known and sufficiently highly regarded to be put forward by the participants' choices as being a high profile and exemplary project in the region – **Sherwood Energy Village**
- Participants, working in discussion groups, were asked what barriers they thought would hinder implementing low carbon buildings in the region
  - Capital cost was identified as the most important barrier, mainly affecting those at the front end of the procurement process (clients and developers) and those on the receiving end of it (end users)
  - This was closely followed by lack of technical skills and capacity, and then lack of information and knowledge – both seen as affecting every set of decision-makers on both the demand and supply sides
  - A long list of other barriers was identified by only one or two groups – demand, leadership, culture change, procurement rules, standards, enforcement, unified targets, innovation, an agreed definition of risk and sufficient attention to existing buildings as well as new build
- Groups were asked to agree what actions they thought necessary to overcome these barriers and who was responsible for taking them. In addition, they were asked
  - who in the region needs to show leaders?
  - what are the supply chain development issues?
  - what support is required from regional agencies?

- There was little agreement amongst the groups about what should be done to overcome the barriers they had identified
  - Education, training and skills emerged as shared priority
  - Half the groups also drew attention to the needs for strategies and a policy delivery framework
  - All of the other actions were only referred to by one two groups
- There was a high level of agreement about where much of the responsibility for action lies – central government
- Indeed three fifths of the actions requested would have to be initiated at, or have a strong input from, the national level:
  - an incentivised tax system
  - a policy delivery framework
  - mandatory standards
  - common client standards
  - benchmarks
  - enforcement
  - skills and training, and
  - provision of more planners

  although most of these would also require a regional or local input as well
- Just five of the actions were explicitly identified by the workshop participants as requiring a specific input at the regional level by *emda*:
  - policy delivery framework
  - leadership
  - centralized body (for knowledge transfer)
  - skills and training, and
  - cost reduction
- One group signaled that the baton for implementing policy imperatives should be handed back to central government rather than automatically accepted by the construction industry
- And plenary discussion revealed participants' concern that, if *emda* were unilaterally to take the lead in implementing these imperatives, the region could become unattractive for inward investment by developers.

Conclusions and recommendations

The work conducted in the East Midland for *emda* had two objectives:

- to identify whether developers and large private sector clients in the region say they are ready for sustainable construction, and
- to help emda to discover what it needs to do next to help the region's construction industry, its clients and developers, improve their performance in relation to sustainable development of the built environment.

These objectives were pursued through the survey of prominent developers and clients and the stakeholders' workshop.

Survey conclusions

The survey results indicate that the (mainly) medium to large sized developers and clients canvassed typically present themselves as well prepared for climate change and sustainable construction (which they see predominantly in terms of environmental rather than social or economic issues), but not for the Sustainable Communities Plan. Instead they point to problems and failures lying elsewhere, for instance:

- amongst service providers in the construction industry
- in planning authorities, or
- due to costs or lack of market demand

as reasons for lack of progress on sustainable development in the built environment. However, while they typically portray themselves as actively responding to sustainability, only half of them felt able to offer examples of their own current best practice. This reluctance or inability suggests that their self-portrayal and problem diagnosis may be unduly complacent or self-protecting.

In addition, the typical portrait offered of (reasonably) prepared developers and clients is only one part of story. While some portray themselves as ready and able, others acknowledge that they are unready and need outside help and expertise. In other words, even among the small number of prominent developers and clients canvassed, their current state of readiness in the region is actually very mixed.

Survey recommendations

As a result, *emda* should recognize that there are developers and clients in the region who do require further support and assistance with:

- meeting the requirements of the Sustainable Communities Plan
- the contribution of specific features - especially CHP and district heating, waste management, modern methods of construction, and renewables – to making buildings more sustainable/adapted to climate change, and
- access to proven exemplars and best practice case studies for sustainable construction, sustainable communities, and climate change.

Some developers and clients will welcome and embrace this. Others will be more difficult to convince of this salience of this information for them, preferring instead to point to deficiencies elsewhere in the procurement process. *emda* needs to tackle these deficiencies as well by offering parallel advice and guidance to other stakeholders - especially to planners and to construction service providers - on how to assist developers and clients better in commissioning and procuring successful sustainable buildings.

Workshop conclusions

The challenge thrown down to the regions in the DCLG's **Green Pack** to deliver zero carbon homes by 2016 – and the embryonic cross-comparison of regional performance on sustainable construction contained in the DTI's **Review** - both suggest that regional agencies and local authorities need to become much better informed about their performance in these areas.

But the stakeholder workshop indicated that few (even amongst the leading edge or early adopters) in the region are aware of the details behind this challenge. Nor do they own a shared understanding of what is being done in the region to respond to these policy imperatives. While there are many examples of initiatives and projects in the East Midlands with features that do respond to these imperatives, awareness of them is in the form of isolated pockets of experience. Individuals know their own local examples, but these are not shared as common knowledge across the region.

Participants at the workshop also showed a reluctance to accept the baton being passed by central government to regional agencies, local authorities and the construction sector for implementation. Most of the actions they identified as needed to support the delivery of zero carbon buildings in the region require initiation or direct input from central government. And concern was expressed that, if *emda* were unilaterally to take the lead in implementing this agenda, the region could become unattractive for inward investment by developers.

Workshop recommendations

The workshop participants identified five actions as necessary by *emda* to support the implementation of zero carbon buildings.

1. The formulation of a policy delivery framework.
2. Leadership of the resultant implementation programme.
3. Provision of a centralized body, perhaps the EMCBE, to act as a single portal for knowledge transfer.
4. Action on skills and training on both the demand and supply sides of the sector.
5. Support for cost reduction (for example, through economies of scale and mass production).

emda also clearly needs to promote knowledge sharing actively across the region about exemplars and best practice case studies, covering the whole range of current government imperatives in the built environment – sustainable construction, sustainable communities, zero carbon, climate change, regeneration, renewables and sustainable procurement. Such sharing could be promoted through production of a single, consolidated directory or through co-ordinated signposting, by the single knowledge transfer portal requested, to where such information can be found. In either case, provision would have to be made for maintenance and updating of the information on offer.

As a second order issue (in sequence, if not significance), *emda* will then need to give attention to the evidence base for any exemplars and best practice case studies promoted. This, in turn, is likely to require regional agencies, local authorities, and the region's construction sector to:

- ☐ establish agreed targets
- ☐ monitor and evaluate progress against them
- ☐ share lessons learnt, and
- ☐ publish the results.

Appendix 1

Questionnaire for developers active in the East Midlands

Which of these aspects of sustainability is most important to your company?

Please rank your top 5 where 1 = most important

biodiversity	☐	education and training	☐
green space	☐	accessibility/social inclusion	☐
environmental protection	☐	enterprise and wealth creation	☐
resource efficiency	☐	human rights	☐
greenhouse gas emissions	☐	don't know	☐
health	☐	other (please specify)	☐

Which of these parties do you think has the greatest influence on ensuring building projects are more sustainable?

Please rank your top 5 where 1 = most important

funders	☐	constructors	☐
insurers	☐	planners	☐
shareholders	☐	building control officers	☐
developers	☐	occupiers/end users	☐
clients	☐	don't know	☐
designers	☐	other (please specify)	☐

Which of these features do you think makes a building most sustainable?

Please rank your top 5 where 1 = most important

solar heating and/or photo-voltaics	☐	wind energy	☐
combined heat and power/district heating	☐	re-usable/recycled materials	☐
high performance (e.g. triple) glazing	☐	natural ventilation	☐
roof, wall and floor insulation	☐	waste management techniques	☐
water management techniques	☐	don't know	☐
modern methods of (off-site) construction	☐	other (please specify)	☐

Do you have good access to examples of best practice for sustainable construction?

Tick appropriate box

1	2	3	4	5	
☐	☐	☐	☐	☐	☐
Poor access				Very good access	Don't know

Is your company actively trying to anticipate/respond to increasing concern about sustainability issues?

☐	☐	☐	☐	☐	☐
Not actively				Very actively	Don't know

Do you need more help on sustainable methods to ensure they are used in the design and construction of buildings you develop in the East Midlands region?

☐	☐	☐	☐	☐	☐
No need				Strong needy	Don't know

If so, what form do you think this help should take? ***(please specify)***

How good is awareness and knowledge about sustainable construction in your firm?

☐	☐	☐	☐	☐	☐
Poor				Very good	Don't know

Do you see solid evidence for an occupier market for sustainable buildings?

Yes	☐		No	☐

If so, is this demand coming from any particular market sector? ***(please specify)***

Which of these drivers would encourage your firm to develop more sustainable buildings in the future?

Please rank your top 5 where 1 = most important

company profile and reputation	☐	carrots (incentives, subsidies, tax breaks)	☐
corporate social responsibility	☐	sticks (codes of practice, regulations, legisation)	☐
funders, investors and insurers	☐	third party pressure, e.g. RDA, NGOs	☐
market advantage/competitive position	☐	don't know	☐
client and user demand	☐	other (please specify)	☐

Which of these barriers is preventing your firm from making new developments more sustainable at present?

Please rank your top 5 where 1 = most important

client vision and leadership	☐	access to products and materials	☐
capital cost	☐	access to outside expertise	☐
market demand	☐	access to training	☐
regulations	☐	don't know	☐
in-house knowledge/technical expertise	☐	other (please specify)	☐

Has your firm currently taken any actions to operate more sustainably?

No	☐		Yes	☐	***please specify***

Can you identify a recent development that illustrates your current best practice?

No	☐		Yes	☐	***please specify***

Is your company aware of the requirements of the Sustainable Communities Plan (SCP)?

☐	☐	☐	☐	☐	☐
Unaware				Very aware	Don't know

Is your company aware of how to deal with climate change (CC)?

☐	☐	☐	☐	☐	☐
Unaware				Very aware	Don't know

Is the construction industry ready to help deliver against the SCP and CC agendas?

☐	☐	☐	☐	☐	☐
Unready				Very ready	Don't know

Are planning departments doing enough to promote them?

Yes ☐ No ☐ **If not, what else could they do?** ***please specify***

Thank you for completing this questionnaire on behalf of the East Midlands Regional Development Agency

All information supplied will be treated anonymously

Please return the questionnaire

by email to: icooper@dircon.co.uk

by post to: **Eclipse Research Consultants**
121 Arbury Road
Cambridge CB4 2JD

If you have any queries about this questionnaire, please phone Ian Cooper on 01223 500847

Appendix 2

***emda* letter of endorsement accompanying survey form**

2 February 2007

State of Readiness Survey for Sustainable Construction

East Midlands Development Agency (*emda*) is currently undertaking a survey of the region's readiness to deliver more sustainable construction. We are asking property developers, large private sector clients, and their funders and insurers, how prepared they believe they are for sustainable construction and whether they think the construction sector in the region is up to speed on this issue.

The survey is being undertaken for us by Eclipse Research Consultants. It is being steered by a committee with representatives from *emda*, the Government Office for the East Midlands, Regeneration East Midlands, the East Midlands Centre of Excellence, the East Midlands Centre for Constructing the Built Environment, the Construction Industry Council and Constructing Excellence

This survey is one of three being undertaken in the English regions. The others are in the East of England and the North West. They are being funded by the Sustainability Forum, the construction industry body responsible for promoting sustainable development in the sector.

This is not a general, open survey. It is only being sent to targeted organisations and individuals specifically selected by the Steering Committee for the survey.

So we are very keen to hear your views. If you are not the most appropriate person in your organisation to answer the survey, please could you immediately pass it on to the best person.

The survey form is very short. You should not need to refer to any files to complete it. And it should only take 10 minutes to do so. Any information you supply will be treated anonymously.

Please fill in the form and return by e-mail or post by Monday 19th February – following the instructions on page 3 of the attached form.

Please can I encourage you to ensure that the survey form is completed and returned on behalf of your organisations as soon as possible? The results of the survey will be circulated to all those who take part and will be presented at a workshop to be held in early March.

If you have any queries please contact Ian Cooper at Eclipse or my colleague, Chris Ward-Brown on 01159 888373.

Yours sincerely

Diana Gilhespy
Executive Director of Regeneration
East Midlands Development Agency

Appendix 3

Examples nominated by *emda* Steering Committee members of relevant regional and local initiatives, activities and projects in the East Midlands

Sustainable construction	
	Nominated by
BREW project EM PIRE 2 – SCOPE 8 Energy Efficiency Awareness and Training EM PIRE 1 - Cutting out waste in construction EM PIRE 2 – SCOPE 7 Sustainable Property Development	EMCBE
Core regional CPD programme for BE professionals	RIBA
Energy Efficiency Training & Awareness - Design4Life is a support programme that aims to fill the knowledge gaps which hamper the delivery of cost-effective, high quality low-carbon buildings.	CE
EMCBE *Constructive*' newsletter circulation (nearly 14,000 recipients): 5 monthly editions of the Sustainability 'Speak' or 'Greenwash' or 'Sustainability for Dummies' section of the newsletter.	EMCBE
Environmental and ISO 14001 Workforce Awareness - This short course is provided in-house for a maximum of 16 delegates as half-day or full-day options. Training supports staff and operational managers in construction companies seriously committed to managing their business's environmental risks.	CE
Environmental Management Systems (EMS) Auditing - one-day course trains team of in-house auditors to help maintain an Environmental Management System (EMS) that is essential for ISO 14001 auditing requirements.	CE
Gateford Primary School, Retford. Recycled materials and use of rainwater collection system.	LGTF
Hockerton Housing Project, near Southwell, Nottinghamshire. UK's first earth sheltered, self-sufficient ecological housing development.	GOEM
Identifying and acknowledging exemplars in sustainable design and construction through the regional RIBA EM Awards for architecture programme	RIBA
IEMA Foundation Certificate in Environmental Management for the Construction Industry - four-day modular course is offered in-house for between 8 and 16 delegates and provides a recognised professional qualification in Environmental Management. It also forms the basis to apply for IEMA Affiliate Membership.	CE
Inland Revenue Building, Nottingham. 66% reduction in electricity usage through design of windows and natural light.	LGTF
Knowledge Transfer Collaboration. EMCBE is working with a Local Authority construction procurement organisation looking at the benefits of off-site manufacture. Part of the activity considers the benefit of sustainability during the construction decision process.	CE
Nottingham Science Park extension. Blueprint development, urban drainage system, recycled construction materials, biomass heating system, new wildlife habitat, brown roof, low energy usage.	BP
RCE has a major Sustainability project under way with a primary focus on Sustainable construction, which will provide guidance to local authority designers and commissioners of construction projects ie property and highways.This work is due to publish its work in July of 2007.	EMCoE
Resource Efficiency Club for Construction sponsored by Envirowise. Helping regional contractors become more resource efficient and providing them with a community to support the exchange of best practice and learning. If all potential savings are implemented the total savings could amount to £2.3M	CE
Scoping study to research model(s) for assessing environmental efficiency of new, refurbished, renovated buildings to feed into enhanced low carbon awards scheme, demonstration projects, best practice etc.	RIBA

SME Environmental Road show on Environmental Legislation and practical tips to address the environmental challenge for small business.	CE
Sustainability Exhibition – Each year in collaboration with other government departments and agencies we collaborate to deliver a sustainable event to the construction industry with other which pulls resource from National, Regional and local programmes. Last year the event attracted over 500 delegates and was held in Derby. This year the event will take place in October in Northamptonshire on low carbon solutions.	CE
Sustainable Property - This project seeks to assess the commercial impact of energy ratings on the East Midlands commercial property sector and the associated implications for growth & economic development.	CE
Waste Management - Cutting out waste in construction. This project seeks to provide significant reductions in SME (small medium sized enterprises) energy costs, CO2 emissions and commercial and industrial waste to landfill.	CE
Sustainable Communities	
CIC Employers Panel – is supported by EMCBE to bring together professional employers in the region to address the sustainability of the construction work force.	EMCBE
Construction Communities – EMCBE have established with key stakeholders a public sector construction community that will over the next 5 years procure £1b from the construction industry to deliver improvements into the built environment across the region. Procurement and efficiency has driven the formation of the community but it plans to look and address many key government strategies and policy during its life.	EMCBE
Core regional CPD programme for BE professionals	RIBA
Education activities with schools, awareness of design, awareness of built environment.	RIBA
Local authorities have obligations to promote sustainable communities and the RCE`s are assisting with its national procurement programme on commodities, goods and services, whilst balancing the need to encourage and sustain SME engagement . In the EM local authority business placed with SMEs accounts for 60% of the total spend of £3bn. Construction is the single highest external spend of local authorities at £800m per annum.	EMCoE
Regional Training Model – EMCBE are working across the region to understand the industry requirements for training provision. A report of the findings will be available at the end of April 2007.	EMCBE
Zero/low carbon	
All local authorities have targets for reducing C02 emissions from its property. More needs to be done and this is tied up in investments in better fuel efficiency programmes and renewable energy sources.	EMCoE
Design4Life – Low Carbon Design CPD: series of CPD days running throughout 2007	EMCBE
1 Nottingham Science Park. Biomass heating system. Blueprint development, practical completion due Spring 2008.	BP
Southreef development, Canal Street, Nottingham, incorporating district heating	CIC EM
Climate change	
The larger local authorities have been making provisions for climate friendly services i.e. cycle path networks, hybrid fuel powered fleets of vehicles, re-washable nappies scheme. Recycling household waste (now up top 30% across the five counties of the EM).	EMCoE

Appendix 4

Examples nominated by workshop participants of relevant regional and local initiatives, activities and projects in the East Midlands

Sustainable construction	
	Number of nominations
Arkwright Meadows Community Gardens – eco-building	1
Attenborough Centre: EMAS accreditation, sustainability indicators for whole project life, innovative remediation techniques	2
Baggaley Construction working with EMCBE resource efficiency clubs to reduce materials going to landfill	1
Barnboro links, M1 junction 30	1
BREW Project	1
Central England Procurement Partnership, see Constructing Excellence	1
Design for Life	1
Eastside Development – re-use of development land/brownfield, recycled materials, zero waste	2
EMCBE supports the 2012 commitments	1
Emmanuel School, Wilford, Gresham Park Development	1
EMS auditing (waste)	1
Energy Efficiency Training Awareness	1
Envirowise Site-based Waste Management Plan workshop	1
Gateford Primary School	1
Herbert Strutt Primary School, Derbyshire	1
ICE East Midland Merit Awards/Innovation Awards winner: The Avenue Remediation Project	1
Inland Revenue building, Nottingham	4
KTC – EMCBE working	1
Leicester City Upperton Viaduct regeneration project	1
Lindum Group – target of zero waste to landfill, owns own landfill site, takes other contractors' waste	1
Markham Environmental Centre	1
Marriott's Construction and NM Construction – both identifying considerable saving s on exemplar projects.	1
Module introduction to Loughborough University undergraduates, aimed to cover all aspects of sustainability at the planning stage	1
National Centre for School Leadership – Nottingham: low carbon blueprint	1
Nazareth House – kept Bishops House, little waste	1
Nottingham Science Park extension (RIBA award)	2
Nottingham University Campus - present and future developments	2
Penny Poyzer Eco-home, West Bridgeford	1
Plane Building, Moor Green	1
Redlands Primary School, Nottinghamshire County Council – a Constructing Excellence demonstration project using sustainability products (wood boilers/grey water recycling on the school)	1
REM/OPUN Design Review Panel	1
Resource Efficiency Club	1
River Crescent, Phase 1, Nottingham Riverside regeneration, incorporating wind turbines, solar energy, ground source heat pumps, etc	1
Salcey Forest, Northamptonshire – aerial walk-way, use of trees to provide a visitor attraction. British Construction Industry Local Authority Award Winner	1

Sherwood Energy Village – Sustainable Construction Centre Competition	2
Upton Village Development, Northampton	2
Total number of examples offered	**36**

Sustainable Communities	
	Number of nominations
Avenue Learning Centre, community engagement	1
BSF and Schools Programme – OPUN/REM	1
Construction Communities	1
Cindermill Business Park, old coal mine	1
Core regional programme for BE professionals	1
Educational activities with schools	1
Hockerton Housing Project	1
Hockerton Meadow Proposal Development: zero carbon	1
NET TRAM	1
Nottingham and Leicester City Councils' Procurement Initiative	1
Leicester City Council Building Monitoring Project	1
Leicester Science Park, development of and surrounding regeneration	1
Regeneration East Midlands – training programme, joint CPD	1
River Crescent, Nottingham Riverside regeneration, Phases 1 and 2	1
Regional Training Model	1
Shirebrook Business Park, sustainable development strategy and community engagement	3
Sherwood Energy Village/Eco-homes community development	4
Sustainable Property, Constructing Excellence	1
Upton Village Development, Northampton	2
Total number of examples offered	**19**

Zero/low carbon	
	Number of nominations
Attenborough Nature Reserve	1
Design for Life workshops	2
Energy Cove @ Empower	1
Herbert Strutt Primary School, Derbyshire	1
Hockerton Meadow Proposal Development: zero carbon	1
1. Nottingham Science Park, biomass	2
Nottingham University zero carbon eco-house	4
Nottingham University 'carbon sinking' at Sutton Bonnington	1
Pleasley Eco-village: 24 units aimed to achieve 6 stars in Code for Sustainable Homes	1
Renewable Energy Growers Ltd	1
Rural Energy Leicestershire	1
River Crescent, Nottingham Riverside regeneration has ordered seven cars from France which run on compressed air using electricity from renewable source, increased insulation, south orientation, solar reflective glazing	1
Sherwood Energy Village	1
NET TRAM	1
Upton Village Development, Northampton	1
Total number of examples offered	**16**

Climate change	
	Number of nominations
Climate Friends, Local authority policies	1
College of School Leadership, Triumph Road, Nottingham	1
East Midlands cycle path, through brownfield reclamation, identified in the Brownfield Land Action Plan	1
East Nottingham windmill	1
National Forest	1
Nottingham Climate Change Declaration: all East Midlands councils signed up	4
Off-shore wind farm, Lincs	1
RSPB survey: clean coal technology for new power stations	1
St Benedict's School, Derby: all-weather floodlit pitch and changing rooms, with all power to be generated from windmill	1
Wind farm, Lincoln	1
Total number of examples offered	**10**

Urban Regeneration	
	Number of nominations
Blueprint	1
Cindermill Business Park	1
Meden Vale	1
RIBA Awards	1
Nottingham Eastside redevelopment	1
Nottingham's emerging Riverside regeneration	1
Nottingham Ozone Proposal	1
Shirebrook Colliery	1
Welbeck Site – old colliery now arts centre	1
Total number of examples offered	**9**

Renewables	
	Number of nominations
Eclectic Energy	1
Mansfield Hospital wind turbine	1
Markham "Core Works" regeneration – central energy plant using 'willow' fuel	1
Off-shore wind farms, Lincs	1
Pleasley Eco-village: combination of renewable energy resources to achieve zero carbon homes	1
River Crescent, Nottingham Riverside regeneration – wind turbines, heat pumps, solar energy	1
Rural Energy Growers	1
Sherwood Energy Village	1
St Annes Allotments – land/training programmes/sustainable technologies	1
Worksop wind turbine	1
Total number of examples offered	**10**

Sustainable Procurement	
	Number of nominations
BSF Programmes – Design Quality Indicators for schools	1
Blueprint concept for developing public sector initiatives	1
Collaborative working initiatives for local authorities	1
Construction Communities – EMCBE	1
EMCBE is reviewing with stakeholders the possibility of establishing a Sustainability Forum to co-ordinate all the activity in the area of sustainability	1
Mondoe Supply Curtains	1
Total number of examples offered	**6**

Appendix 5

Examples nominated by workshop participants for visits by government minister, showing selection criteria employed

Arkwright Meadows Community Gardens
☐ Local community involvement project
☐ Innovative
☐ Practical
☐ Visible

The Avenue Project, near Chesterfield [3]
☐ Regeneration
☐ Innovative techniques and remediation design
☐ Scale of project
☐ Sustainable development: environmental, economic and social
☐ Avenue Learning Centre exhibition
☐ Rail sidings area – example of how brownfield site can be successfully transformed into an excellent wetlands and ecologically important site
☐ Community satisfaction

Eliot Durham School
☐ Catch kids early, infants 5-8 years old
☐ Promote understanding
☐ Kids tell parents

Gateford Primary School
☐ Will impress importance of activity through future generation – this is a long term strategy
☐ Good photo opportunity
☐ Schools are easy to identify with

Markham “Core Works” regeneration project
☐ Complete clean-up and transformation
☐ New life to a deprived area
☐ New focus for existing communities

Moor Green Ind plc
☐ Regeneration of ex-coal mine
☐ Economic rebuilding of community
☐ Public/private partnership: gap funded with GOEM help
☐ Already done/tangible

Nottingham District Waste Incineration heating scheme (Eastcraft)
☐ Innovative
☐ Addresses waste recycling, power generation
☐ Old technology (1960s build) but relevant to today’s agenda – which works
☐ Public/private partnership

Nottingham Science Park extension [2]
☐ Sustainable construction
☐ Renewable energy
☐ Innovative public realm
☐ Environmental performance
☐ Investment in Sustainable Knowledge Economy
☐ Visible – publicity purposes
☐ Practical/replicable

Renewal Trust – Hungermill Allotments
☐ Unique partnership/opportunities
☐ Fantastic asset
☐ Being produced with all aspects of sustainability agenda

Riverside Crescent, Nottingham Riverside regeneration
☐ Pioneering example of renewable energy in private residential development
☐ Outstanding design
☐ Zero emission transport initiatives

Sherwood Energy Village [3]
☐ Examples of best practice
☐ Combination of sustainable construction, renewables etc
☐ Covers all sustainability criteria
☐ No waste
☐ Self-supporting/job creation

Upton Village Development
☐ Best practice in terms of sustainable communities and low carbon
☐ Response to MKSM Growth Agenda
☐ Partnership approach