



LOW CARBON COMMUNITIES:

Position paper - Vision, scenarios & delivery

This position paper was prepared by the SD Foundation and its Associates:

- Jon Bootland – Director, SD Foundation
- Helen Heathfield – Associate, SD Foundation & Director, Happy Heat and Power
- Laura Morgan – Project Co-ordinator, SD Foundation

Additional advice and assistance was provided by an advisory group comprising:

- Ian Cooper – Eclipse Research Consulting and Associate Director, SD Foundation
- David Roberts – Igloo Regeneration and Associate Director SD Foundation
- Stephen Hill - CO2 FuturePlanners

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Context

Global scientific consensus identifies that we need to make an 80% reduction in annual CO₂ emissions in order to stall climate change at a level within which human life can continue to thrive, which they set as a 2°C rise in temperature¹; in the UK, we have set in law that this reduction should be reached by 2050². Furthermore, even achieving these targets means that there will still be a significant change in the climatic conditions in the UK, and a corresponding impact on the natural and built environments, to which we will have to adapt³.

In order to respond to these joint challenges of climate change mitigation (CO₂ emissions reduction) and adaptation will require a radical transformation of both our built environment and people's behaviour. In particular, this will require a significant shift in the shape and use of our neighbourhoods and communities, as this is the scale at which most of our regular patterns of behaviour are set.

The problem

In order to transform our existing, or build new, neighbourhoods and communities into sustainable, low carbon places, we need visions of what might be possible, examples of what has (or hasn't) worked in the past, and guidelines or frameworks as processes for how we might get to the holy grail of a sustainable future.

There are a few examples of sustainable low carbon communities/ neighbourhoods that have been built and more work is currently underway to plan the transformation of a number of existing places, particularly through the Transition Towns Network⁴. However, there is not yet widespread application of the changes required.

There are probably many reasons why uptake is not currently widespread, including:

1. There is not widespread recognition of the mitigation and adaptation challenge we face
2. There is not enough robust/reliable information about what works and what doesn't as an adaptation/ mitigation response
3. There is not enough information about what to do practically in terms of transforming the built environment in either new or existing places
4. There are numerous barriers to implementation, including lack of skills, means of funding and existing sector-based regulations and protocols

This position paper sets out our plans for helping to address these problems, with the aim of accelerating the speed of uptake for sustainable low carbon communities.

¹ IPCC's 4th Assessment Report, Climate Change 2007: Impacts, Adaptation and Vulnerability – www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg2_report_impacts_adaptation_and_vulnerability.htm

² Climate Change Act 2008 – www.opsi.gov.uk/acts/acts2008/pdf/ukpga_20080027_en.pdf

³ UK Climate Impacts Programme report, the UK Climate Projections 2009 – www.ukcip.org.uk

⁴ www.transitiontowns.org

Changes required

To make low carbon communities mainstream, we believe that various activities are needed:

1. Campaigns and visions of possible futures

- a. Campaigns to highlight the range of scenarios covering possible future mitigation and adaptation requirements. We believe that it will be important to highlight the problem, in order to create a sense of urgency and determination to tackle the challenges of reducing carbon dependency.
- b. Visions describing how our future places might look in response to these twin challenges. There needs to be an appreciation of the scale of changes in lifestyle required, including more sustainable forms of transport and travel patterns.

The scenarios and visions must include both new and existing communities

2. Information & Guidance

- a. Well-founded, believable, evidence base about the performance of existing communities, both new and long-standing, in terms of CO₂ emissions from energy use, transport and other aspects of lifestyle
- b. Practical, how-to guides for how we might get from the existing situation through to the proposed visions/solutions

3. Implementation support

- a. Peer groups to spread design advice, information and evidence through networks of practitioners.
- b. Mentoring and ongoing support
- c. Lobbying to remove persistent barriers

Current activities – summary and gap analysis

We have completed a mapping exercise to identify the activities currently underway to develop low carbon communities. These are categorised as “Campaigns and visions” or “Information/Guidance and Support”, as summarised in Appendix 1. A full copy of the report of this mapping exercise is available on our website www.sdfoundation.org.uk.

We have further examined the activities underway, particularly in terms of the audience that is targeted, and have then completed a gap analysis to identify particular gaps or difficulties that are not currently being adequately addressed.

Our analysis suggests that there is a paucity of visioning to demonstrate how our future neighbourhoods and communities might look and function, whether new build or transformations of existing places.

We found a number of case studies, but a lack of robust evidence about their actual real-life performance (as opposed to design aspiration) performance

And finally, there appears to be limited guidance around routes to achievement, especially aimed at development /regeneration companies and agencies.

Recommendations

We have identified two programme areas that are required, one to tackle new build and another for existing communities.

New communities

There should be a meta-analysis of recently completed places worldwide (e.g. Hammarby in Sweden, Frieberg in Germany), plus evidence-gathering about their actual performance in real-life (in terms of actual carbon emission reductions achieved).

This analysis should then be used to set visions about what is possible and to produce guidance about what is proven to be successful and how to achieve it. This should be particularly targeted at development companies/ agencies and their professional advisors, and should be supported by a communications campaign or learning network to highlight the need for an urgent change in approach and to help support changes in implementation.

Potential partners for this work might include: CABE, TCPA, RTPI, BURA, the Local Government Association, and leading academics. Key target audiences include leading developers such as Igloo, Argent, Bioregional Quintain and First Base, as well as development and housing agencies such as the Thames Gateway Development Group, Places for People and others, and community development groups.

Existing communities

There are several leading-edge examples, particularly as a bottom-up approach through the Transition Towns Network, and as a top-down approach through Carbon Trust's low carbon cities group. However these are not sufficiently advanced to provide evidence of benefits, nor to generate good practice guidance. A learning network for developers, community development groups/ agencies, local authorities and others could enable sharing of emerging good practice.

Potential partners for this work might include: DECC, DCLG, the Carbon Trust, the Local Government Association, the Development Trusts Association, Friends of the Earth and the Transition Towns Network. This could utilise the current activities of

- The London climate change action plan
- Forum for the Future's Bristol sustainability programme
- Carbon Trust's low carbon cities group (Bristol, Manchester, Leeds etc)
- The Transition Towns Network

Project development

These projects probably need to be organised as a co-ordinated programme containing a number of smaller projects. This might include development of a number of visions, with the route maps and potential application to be tested later. The programme might also be undertaken by the SD Foundation and partners directly, or might be overseen by the SD Foundation and partners, say working with the Joseph Rowntree Foundation, with the work undertaken by a number of bidding academics or research consultancies:

1. Meta-analysis of international projects, including evidence of actual CO₂ emission reductions.
2. Visions about what is possible and guidance about how to achieve these.
3. Communication campaigns to highlight the need for urgent change.
4. Learning networks to share emerging good practice.

Appendix 1 – Current activities

Campaigns/Visions

<i>Programme</i>	<i>Audience</i>
Transition Towns	Local communities – residents & business, neighbourhoods
Forum for the Future futures programme	Thinkers & policy-makers
Bioregional One Planet Living	Exemplar developers, local authorities, supply chain (B&Q), general public
PPS1	Planners, councillors
Transition Pathways (EPSRC-funded, universities project)	Policy-makers, academia
DCLG Eco towns	Developers, landowners and local agencies
Homes & Communities Agency Carbon Challenge projects & Millennium Communities	Developers & local authorities

Info/Guidance & Support

<i>Programme</i>	<i>Audience</i>
BRE/ASC	Planners, councillors
CABE/TCPA low carbon design guide	Building designers, includes community energy solutions
Carbon Trust Low Carbon Cities Programme	Local authorities, existing places
London Climate Change Action Plan + mayor's energy strategy	London councils, business, energy companies
Ecotowns	Councils, developers, landowners
CLOVIS	† councils and developers, including housing associations
CABE Sustainable Cities	Local authorities
BRE Sustainability Checklist	Planners, developers
SUSTAIN & Thames Gateway Sustainability Institute	†

† we need more information about these programmes.