



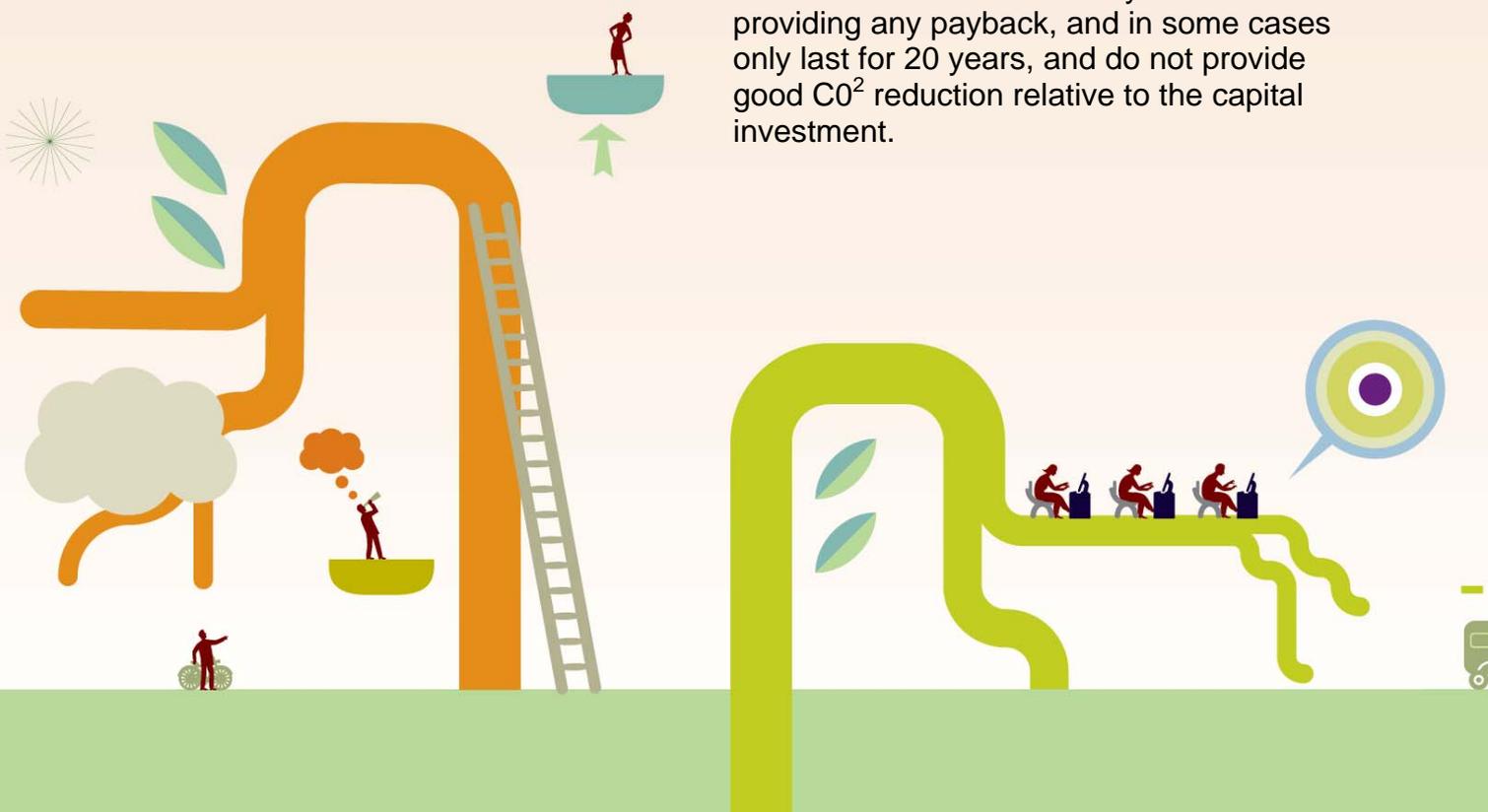
In designing individual buildings, eco-minimalism means properly considering issues such as –

- Orientation – maximising solar gain (and providing for solar shading if necessary).
- Choice of materials– the use of hygroscopic materials, for example, can remove the need for mechanical ventilation; massive timber components can constitute a substantial 'carbon sink' as well as providing a healthier internal environment, as well as the potential additional benefits of being locally sourced.
- Super insulation – to avoid heat loss.
- Airtightness –to cut our draughts; coupled with natural ventilation an airtight building should not need the use of energy-consuming fans (specified even under the Passivhaus standard).
- Low energy demand – by designing appliances that use minimum energy and do not incorporate energy-consuming standby modes.

In urban design the eco-minimalist approach involves getting the following aspects right –

- The orientation of the buildings to maximise the use of energy available from the sun.
- Placement – for instance maximising the use of available building area to be able to build low rise, integrate green space, but keep high density).
- Mixed use – places that combine work-spaces, living spaces, retailing and other uses to create a place that has many reasons to be in and which provide for more than one individual need.
- Good use of planting (for instance to provide solar shading as well as biodiversity and green space and water - including the beneficial effects of Sustainable Urban Drainage Systems (SUDS) which combine drainage requirements with garden needs.

The earliest green buildings in the UK are now over 30 years old and there is substantial evidence that 'eco-bling' features like domestic wind-turbines, PV cells, solar thermal panels and heat pumps need to be installed for 100 years before providing any payback, and in some cases only last for 20 years, and do not provide good CO<sup>2</sup> reduction relative to the capital investment.



## Context: what's already happening in Scotland?

Scotland's [2009 Climate Change Act](#) has set targets of 42% reduction in greenhouse gas reduction by 2020, and 80% by 2050. The [2010 Low-Carbon Strategy](#) has the target of providing 80% of electricity and 11% of heat production from renewable sources by 2020, and a 12% reduction in Scotland's final energy use by 2020. Howard Liddell is sceptical of our ability to reach these targets, and believes that the culture of target-setting distracts attention from the simple actions that can and should be taken to lower demand for energy. He believes we should focus investment in eco-minimalism rather than eco-bling.

Scotland's [2009 Climate Change Delivery Plan](#) contains specific measures to help address climate change that can be addressed by the planning system such as decentralised energy production. Spatial strategies are the primary tool that can be deployed to affect the two elements of new development impacting Greenhouse Gas emissions (GHG): *location* and *form*.<sup>1</sup>

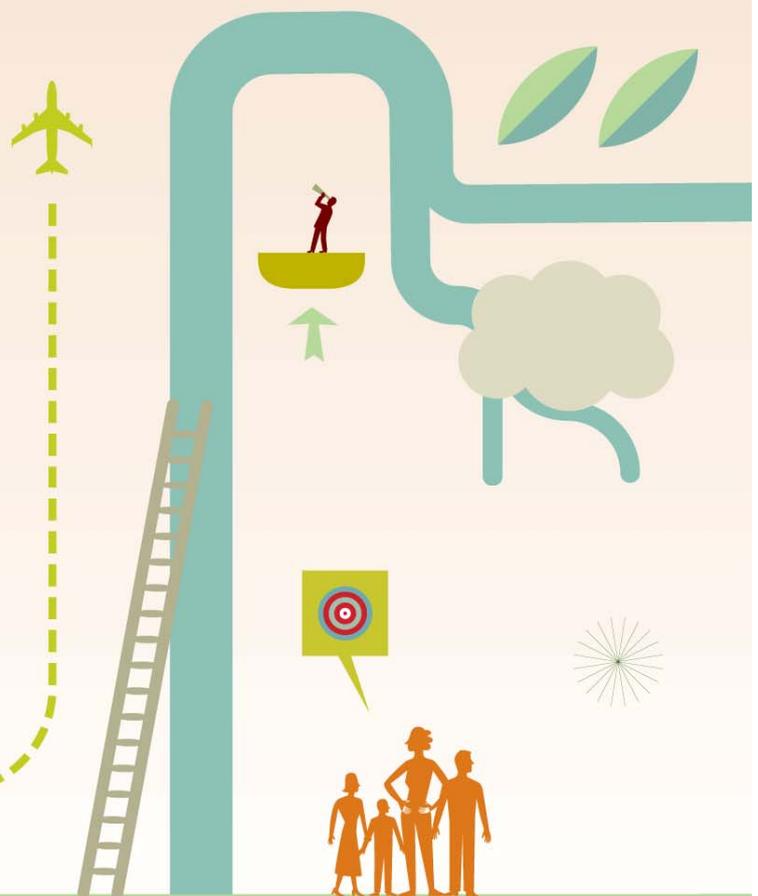
The aim of the recent [SSCI Charrette Series](#) was to enable a new level of public engagement in the sustainable planning process, linking *people* to *location* and *form*.

Nevertheless there is a growing body of practice in Scotland from which to learn, much of which is promoted and captured by organisations such as the Scottish Ecological Design Association (SEDA) and Sust. (now part of A+DS). Gaia itself has nearly 30 years experience of environmentally conscious architecture and urban design. [Scotland's Housing Expo in 2010](#) actively promoted low-carbon building processes and

technologies, and an evaluation of this has [just been published](#).

All of these different strands share the common theme of the importance of 'planning for care' or stewardship, which says that getting the simple things right (i.e. airtightness, insulation, location, orientation, form) and focusing on how a place will be cared for and maintained over time, make a more important contribution to creating more sustainable places than applying short-term technological fixes. This approach of joined-up delivery thinking and long-term stewardship is one of the key messages of [Delivering Better Places in Scotland](#), the guide published by the Scottish Government in 2010 based on a study of successful regeneration in 8 cities in the UK and Europe.

<sup>1</sup> Quantitative Greenhouse Gas Impact Assessment: A Tool for Spatial Planning Policy Development Phase 1 Feasibility Report (Scottish Government, 2010)



## How can we build upon good practice in Scotland and learn lessons from elsewhere?

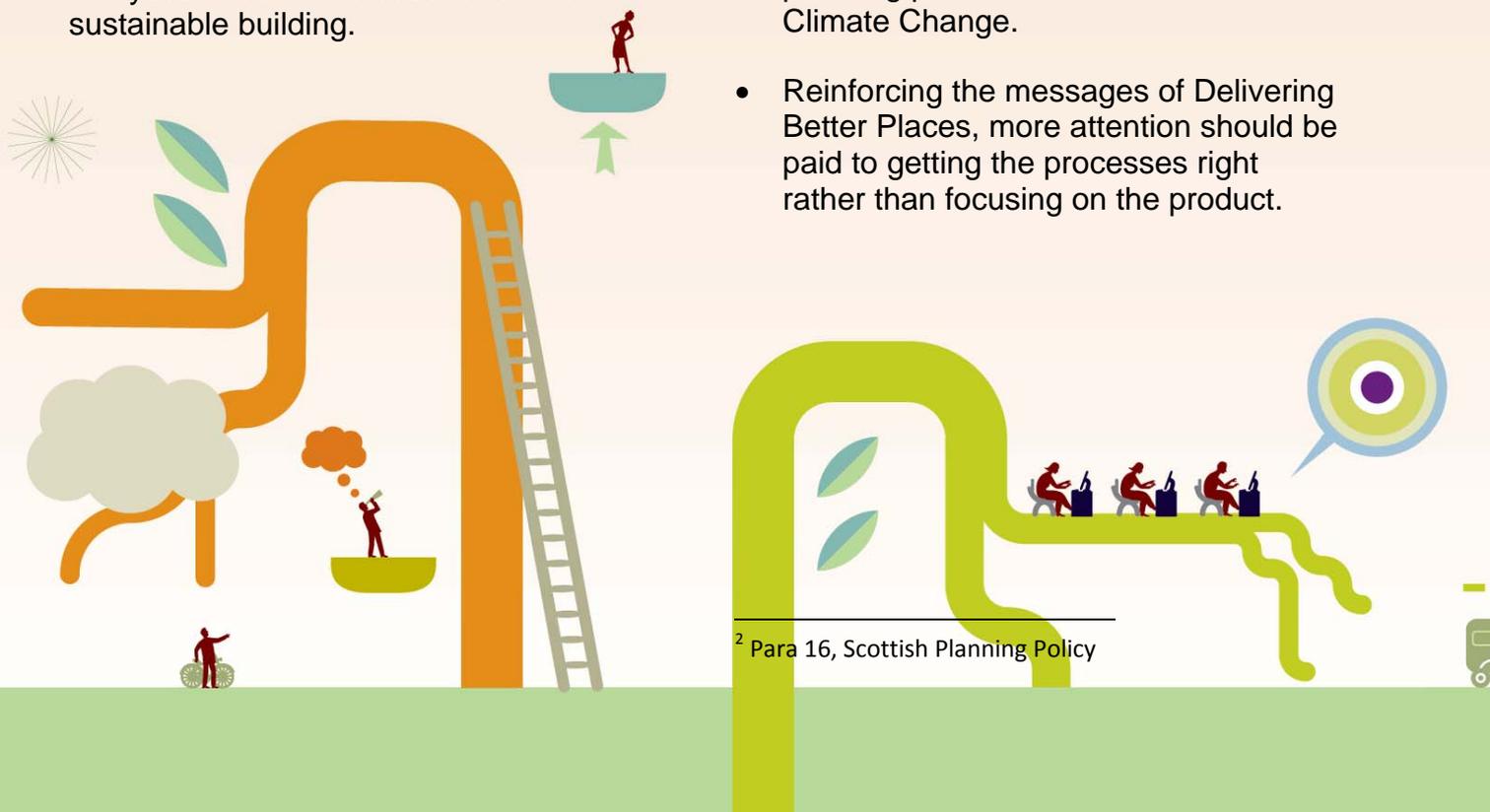
Our approach to sustainable design must be holistic, where we take a cyclical rather than a linear analysis of the resources and materials that we are using to create or inhabit our environment – one that considers where these come from, how we use them and then where they go after we use them. Examples of this were quoted in the presentation from Scharfbruhl, Tübingen, Emscher Park and Perth (Scotland).

Rather than being blinded by ‘techno-fixes’, we have to analyse the costs and benefits of various measures dispassionately, and the tools and knowledge now exist to do this. There is plenty evidence that achieving sustainable buildings need not cost more, and that any additional costs (which may be in the order of 5-10%) produce additional benefits, e.g. health of occupants or re-usability of materials. If the process of achieving sustainability (whether in building design or urban design) is seen not as an add-on but as an integrated issue, the chances of it being successful and effective are immeasurably greater. The final chapter of Howard Liddell’s book ‘Eco-minimalism’ analyses in detail the cost/benefits of sustainable building.

## Key conclusions

- A focus on the principles of building and urban design – including materials, aspect, insulation, air-tightness and maintenance – will achieve greater results in creating more sustainable buildings and places than adding new technology.
- On-site renewables are generally an inefficient use of capital investment. It would be better to buy into the renewable tariff of centrally generated electricity.
- Development Plans are required to identify new development’s supporting infrastructure<sup>2</sup> (including energy and heat) which is unlikely to be properly addressed without establishing development *form*. National, Strategic and Local planning principally focus on the *location* of development. Supplementary Planning Guidance (SPG) is the appropriate planning scale at which to identify *form* and to engage *people*. The amount of GHG emissions can vary depending on a development’s design approach therefore SPG is a key stage in the planning process at which to address Climate Change.
- Reinforcing the messages of Delivering Better Places, more attention should be paid to getting the processes right rather than focusing on the product.

<sup>2</sup> Para 16, Scottish Planning Policy



## What next?

'Delivering Better Places' identifies five key stages of placemaking: anticipation [visioning], initiation [getting the right team], engagements, land and finance in place, frameworks [the matrix for pulling everything together], implementation and stewardship [maintenance and management].

More informed thinking about the principles of sustainability at each stage will ensure better place outcomes. On this basis, A+DS propose the following actions:

### *Capacity Building*

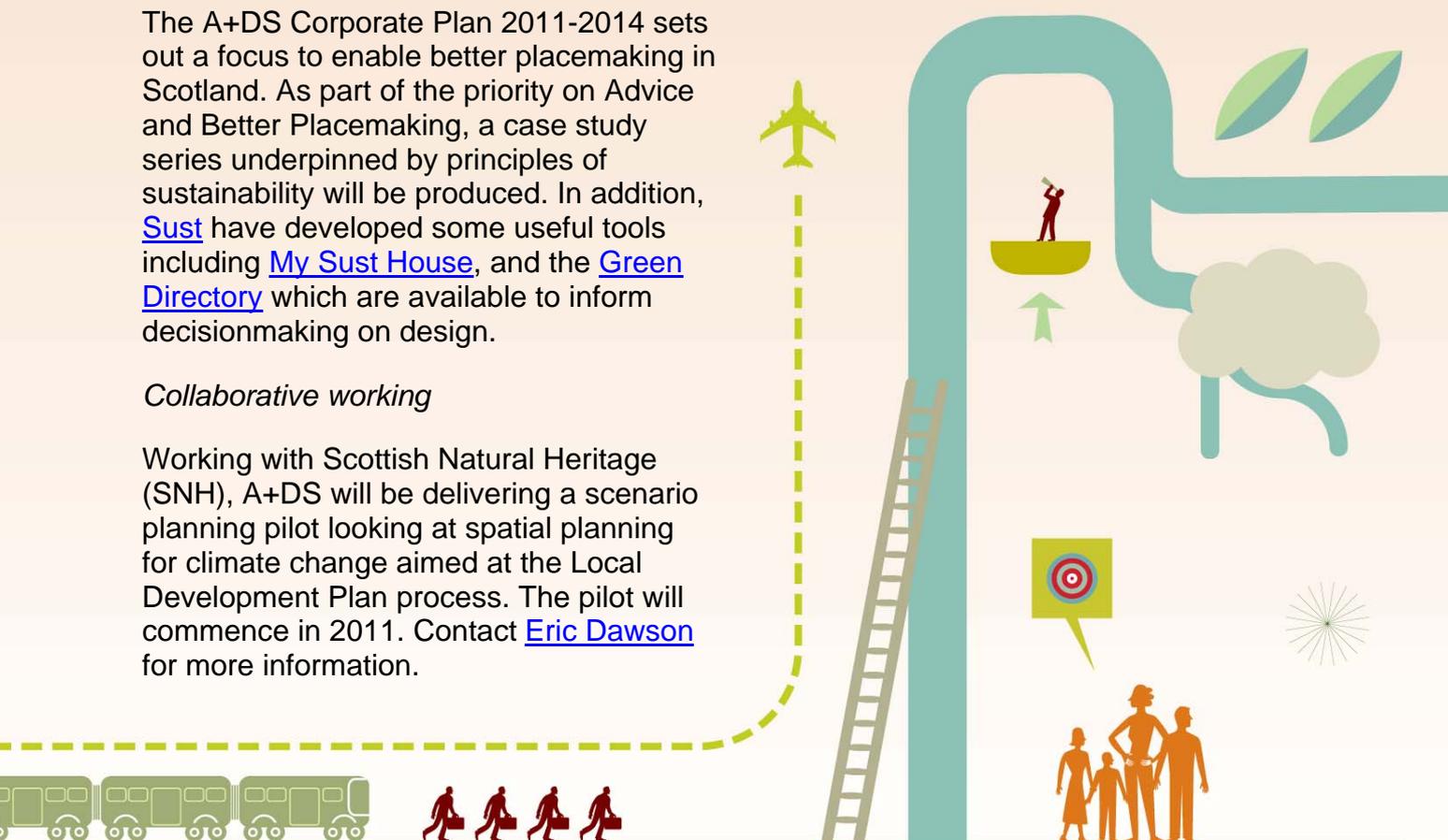
The [Design Skills Symposium](#) is a useful platform to bring professionals from a variety of backgrounds together to learn by working together on design projects. It is our ambition to run this as an annual event, and for the key principles of sustainable placemaking to underpin this event.

### *Knowledge exchange*

The A+DS Corporate Plan 2011-2014 sets out a focus to enable better placemaking in Scotland. As part of the priority on Advice and Better Placemaking, a case study series underpinned by principles of sustainability will be produced. In addition, [Sust](#) have developed some useful tools including [My Sust House](#), and the [Green Directory](#) which are available to inform decisionmaking on design.

### *Collaborative working*

Working with Scottish Natural Heritage (SNH), A+DS will be delivering a scenario planning pilot looking at spatial planning for climate change aimed at the Local Development Plan process. The pilot will commence in 2011. Contact [Eric Dawson](#) for more information.



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### **Scottish Centre for Regeneration**

This document is published by the Scottish Centre for Regeneration, which is part of the Scottish Government. We support our public, private and voluntary sector delivery partners to become more effective at:

- regenerating communities and tackling poverty
- developing more successful town centres and local high streets
- creating and managing mixed and sustainable communities
- making housing more energy efficient
- managing housing more efficiently and effectively

We do this through:

- coordinating learning networks which bring people together to identify the challenges they face and to support them to tackle these through events, networking and capacity building programmes
- identifying and sharing innovation and practice through publishing documents detailing examples
- of projects and programmes and highlighting lessons learned
- developing partnerships with key players in the housing and regeneration sector to ensure that our activities meet their needs and support their work

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