

*“By leaves we live. Some people have strange ideas that they live by money... we live not by the jingling of our coins, but by the fullness of our harvests.” Patrick Geddes (1888)*



**RTPI Sir Patrick Geddes Commemorative Lecture 2010:  
‘Sustainable Economic Development: towards the emerging Ecological Age’**

Wednesday 21 April 2010, The National Galleries of Scotland, Edinburgh



The 2010 RTPI Sir Patrick Geddes Commemorative Lecture, entitled ‘Sustainable Economic Development: towards the emerging Ecological Age’, was delivered by Peter Head OBE, Arup Director in charge of the first eco-city at Dongtan near Shanghai. The event was introduced by Stewart Stevenson MSP, Minister for Transport, Infrastructure and Climate Change, and was sponsored by the Scottish Government, Scottish Water, SEPA and Architecture + Design Scotland.

The lecture topic links with the Scottish government’s central purpose of creating a more successful country through increasing sustainable economic growth. A major conclusion is that Scotland is well placed to capitalise on an emergent ‘Ecological Age’ (see box below).

**Scotland 2050: Implications of an ‘Ecological Age’**

A renewables programme can develop based on a variety of sources. The economy is stimulated and grows post recession, with implications for existing and new places. Successful places generate wider social benefit and enhance opportunities for human development in urban and rural locations. There are implications at macro and micro scales, with possibilities for incremental change that don’t require massive investment.

**International / national** – Scotland an exporter of energy through linking to supra power grid; better international connections through high speed rail passenger network (see China box)

**Regional / city** – integrated regional eco-systems trade power and food; retrofitting of existing places reduces energy consumption and improves quality of life

**Neighbourhood / community** – local initiatives such as power generation and food production stimulate local economy, with profits recycled back into the community

**China** is investing 7% of one year’s GDP on high speed rail investment; by comparison, Scotland and England’s equivalent combined investment represents 0.2% of one year’s GDP.

Global research and practice were used to demonstrate how public and private investment in the built environment can be more effective when adopting sustainable development principles. The broad ranging talk considered demographic and resource pressures, and identified the importance of living in harmony with the environment. An important ‘Geddesian’ dimension to the talk was of supportive eco-systems and how sustainable economic development is interdependent across space (urban/rural) and across scales (national / regional / local).

The lecture provides a timely complement to the Scottish Sustainable Communities Initiative (SSCI). Sustainable settlements being planned in China and India are informed by a national strategy to challenge unsustainable living patterns, which similarly influences the retrofitting of existing places. In his introduction the Minister highlighted Scotland’s ambitions for sustainable placemaking, and referred to consolidated planning policy and the Climate Change (Scotland) Act 2009.

Evidence shows that pursuing an economic growth model, with success measured in terms of GDP, has not been successful. The planet’s supportive eco-system is being polluted and damaged, and there is an inefficient use of finite natural resources. Urban expansion does not account for

**USA** urban dwellers, on average, consume about 24 times more energy annually in private transport than a Chinese urban resident

transport energy use (see USA box). Consumer society has not improved quality of life; social inequality has widened, and material accumulation has not resulted in greater happiness.

A vision for an 'Ecological Age' was presented, that is capable of being delivered by 2050, based on:

- CO2 Emissions Reduction
- reduced ecological footprint
- increased human development index that releases human potential and raises overall wellbeing

Achieving these objectives requires a much more efficient use of land; good planning and urban design is key to a successful future. A framework, based on 10 biomimicry principles that work with nature, was proposed to guide future change (see box). Reference was also made to the importance of drawing on cultural roots to initiate and inform thinking.

- Use waste as a resource
- Diversify and cooperate
- Gather and use energy efficiently
- Optimise not maximise
- Use materials sparingly
- Clean up not pollute
- Do not draw down resources
- Remain in balance with the biosphere
- Run on information
- Use local resources

In **Seoul** a major highway has been removed and replaced with the Cheonggyecheon river for economic planning reasons that also provided wider health and quality of life benefits.

Looking ahead, the way urban areas are laid out needs to be re-evaluated. This will have a considerable impact on the spatial, and non-spatial, aspects of making places. "... the way forward is one of smart responsive simplicity rather than rigid complexity. For example, in a new compact mixed use development, people can easily go to work, school, shops and leisure facilities by walking, cycling or by public transport; the residents save money and travel creates less pollution from car exhausts. This leads to better health, lower social care costs and creates a more desirable place to live in and a higher return for the developer."

[http://www.arup.com/Publications/Entering\\_the\\_Ecological\\_Age.aspx](http://www.arup.com/Publications/Entering_the_Ecological_Age.aspx)

A vision of the future nature of urban places is likely to include the following:

- Compact, high density development around public transport nodes (see Hong Kong box)
- Public transport investment, aided by increases in urban density, in rail, metro, bus and tram and better information systems enable more journeys to be taken by efficient public transport
- Reduced car movement, with more car clubs; electric vehicles + charging stations (with potential for community benefit); improved air quality through reduced petrol and diesel consumption
- Consolidation delivery centres located around urban perimeters; distribution through a fleet of zero emissions vehicles, organised to minimise travel distance and congestion
- Selected road closures free up valuable development land, remove huge maintenance cost burden, provide walking and cycling routes and other health benefits (see Seoul box)
- Local food production, distribution and consumption, aided by improved water capture and grey water management in urban areas
- Intensive urban food production utilising vacant space, roof tops, hydroponics, new LED lighting technologies and plant science
- Locally sourced building materials
- Combined heat and power schemes, and local heat and power grids

**Hong Kong** provides an example of compact form, high density, low car ownership and high public transport usage ... density of 75 persons/ ha ensures economic provision of public transport with room for parks and gardens.

The lecture was enthusiastically received and appeared to offer a modern interpretation of Geddes' beliefs and approach. The content covered both place and cultural planning. It also understood eco-systems; scenario testing and modelling; greater use of technology; strong use of graphic techniques; mapping qualitative data; vision and ambition, coupled with local leadership and action.

The event recognised that "a city is more than a place in space it is a drama in time" (Geddes).