

2.4 Sustainability Principles

2.4.1 Sustainability Defined

Sustainability is a complex approach to decision making and problem solving which balances social/cultural, economic/financial and environmental/physical aspects for consideration. In this sense and within the context of addressing our existing built heritage we would adopt:

“A continuing process of mediation among social, economic and environmental needs which result in positive socio-economic change that does not undermine the ecological and social systems upon which communities and societies are dependent.”

(Christie and Carley)

amended slightly to emphasise a desire to positively restore and improve ecological and social systems wherever possible.

2.4.2 Sustainable Development and the Built Environment

The built environment is a key sector in addressing issues of sustainability. In the UK alone, the construction industry annually:

- Converts 6000 hectares of land
- Extracts 260 million tonnes of minerals
- Produces 40% of the SO_x and NO_x
- Generates 70 million tonnes of waste
- Uses 50% of all energy generated

The actions of the construction industry are of particular concern because they are largely irreversible within normal planning time-scales.

That said, sustainable building is about much more than energy efficiency, waste minimisation and reduced toxicity of materials. Other key issues include:

- Social inclusion, cultural history and sense of place, community involvement, quality of life and public amenity
- Economic factors such as commercial viability, productivity, employment, risk, ethical and equity issues
- Resource management of land, materials, existing buildings, water, bio-diversity and human resources.

2.4.3 Guidance and Policy to Date

Since the Earth Summit in Rio de Janeiro in 1992, Government guidance and policy in applying sustainability has become more visible. In the UK this has become more substantial since the 1997 General

Elections, and the combination of policies, indicators and targets across professional sectors and government departments has become more extensive.

Widespread consultation led to the UK-wide guidance for construction “Building a Better Quality of Life” (1). Therein, are set out a number of key themes under which to explore and group more sustainable standards. These have been endorsed by the Government Construction Client Panel in their “Achieving Excellence” (2) document. They are:

- Think About Re-using Buildings and Land
- Design for Minimum Waste
- Aim for Lean Construction
- Minimise Energy in Construction and Use
- Do Not Pollute
- Conserve and Enhance Bio-diversity
- Conserve Water Resource
- Respect People and Their Local Environment
- Think About the Whole Place
- Set Targets

In support of the recommended standards and targets under these themes, the UK Government has set its own timetable for adopting them for all Government department procurement of construction (44% of the UK market on an annual basis). This deadline was reached in April 2002.

2.4.4 Sustainability and Architectural Conservation

The conservation of existing buildings, and the manner in which conservation as a discipline uses materials and evolves its methodologies are at the heart of the argument for sustainable development. Likewise, applying sustainable design decisions sensitively to conservation, adaptation and renewal can bring substantial benefit in reducing the environmental impact of buildings, developing new products and markets, improving our quality of life and health and increasing the asset value of existing buildings, listed or otherwise. In determining the appropriate balance it is important to assess:

- The sustainability potential of each building
- How sustainability may have been undermined or increased by interventions subsequent to the original design
- The benefits of restoring original systems and fabric
- The environmental, social and economic implications when specifying ‘matching’ materials

- How design decisions can retain as much existing fabric as possible while reducing waste
- How its essence can best respond to or reflect our current understanding of sustainable intervention
- The reversibility of proposed actions
- The suitability of modern sustainable materials, technologies and systems to the existing building fabric and chemistry
- Whether changes will secure the building's long-term future in an acceptable form
- Acceptability of interventions to Historic Scotland, local authority conservation officers and heritage funding bodies and trusts

Neither conservation nor sustainability can be viewed as formulaic approaches to the built environment. Each requires care and attention to a range of specifics, the building's essence, its sense of place, the values it embodies and its contribution to the community. The combination, and ultimately the balance, between these approaches has the potential to produce inspirational results.

2.4.5 Historic Scotland Policy

In May 2002, Historic Scotland published its sustainable development policy, "Passed to the Future" (3). This new policy document recognises the benefits of the built heritage in social, cultural and economic, as well as environmental terms. It highlights Historic Scotland's contribution to economic regeneration, tourism and employment, education, recreation and vibrant city centres. But it also emphasises the need to assess and manage any potential impacts on the historic environment through a variety of uses.

As part of their development of new thinking, Historic Scotland has outlined the need to work in partnership with others, setting key areas that include:

- Encouraging the sharing of expertise, experience and resources, to find solutions to common problems;
- Providing the guidance needed to implement the key principles outlined in this statement and to establish standards for good practice, including:
 - Identifying key historic characteristics;
 - Clarifying capacity for change and developing a framework for decision making;
 - Balancing local, national and international values.

We particularly recognise the need to develop new models for addressing Scotland's historic built assets in a changing world and hope that this study will help to advance that thinking.