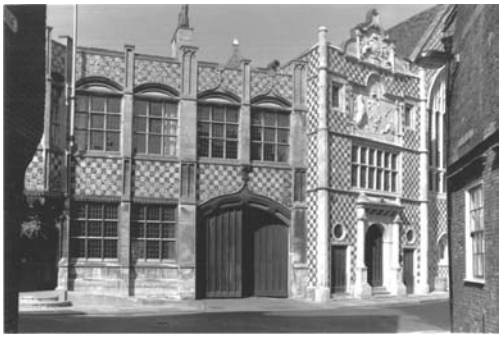
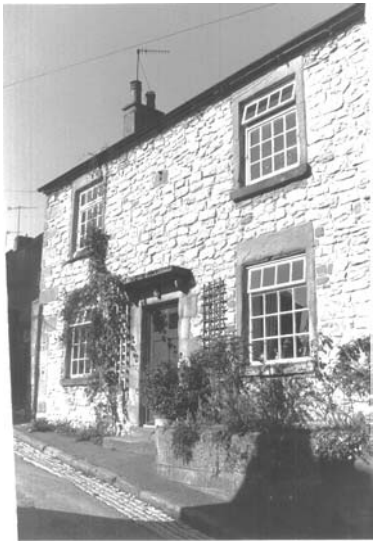


2.3a

2.3b

Figure 2.3 (a) The Guildhall of the Holy Trinity, King's Lynn; (b) Steep Hill, Lincoln

a development not undertaken lightly. This is still the case in the vast squatter cities of the Developing World. This seems to contrast markedly with conditions prevailing today, or in the recent past in countries of the West such as Britain. Built-in obsolescence appears to be a feature of the current ethos of a society, which changes some of its buildings and their styles with as much ease as it changes its clothes to suit the latest fashion. Clearly, construction work still requires a perceived need and an economic justification before it is undertaken. Nevertheless, in our consumer society the growth in the economy is, to some extent, driven by the individual's desire and ability to acquire the latest model in cars or higher space standards and equipment in the home. 'Keeping up with the Joneses' ensures the rapid replacement of comparatively new equipment, last year's model being consigned to the dustbin, often when it still has many years of useful life. This attitude permeates the construction and development industry where buildings are designed to meet immediate business requirements and are located on the most convenient site with easy access for the motor car. One of the reasons given for changing the current planning system is to help business to achieve its potential. 'There will be a fundamental change in planning so



2.4a

2.4b

Figure 2.4 (a) Derbyshire; (b) Kettlewell, Yorkshire

2.5a

2.5b

Figure 2.5 (a) Hawkshead, Cumbria; (b) Speke Hall, Liverpool

that it works much better for business' (DTLR, 2002). Little seems to have been learned from the Canary Wharf experience, where similar planning arrangements were made. The use of environmental assessment limits possible damage inflicted on the environment from any proposed developments: however, it still remains to be seen how successful this technique will be in a business-friendly environment. Some of the headings shown in Figure 1.5, 'The checklist for assessing impacts on urban developments', act as surrogates for the energy inputs into the project. Nevertheless, a knowledge of the effects on the environment would be greatly enhanced by a full evaluation of a project's energy needs over its lifetime.

One principle of Green Development is: not to build unless it is absolutely necessary, as other ways of meeting the need should be examined, in the first instance. The onus for proving the desirability of new development in a sustainable city would be on the developer. Conservation in these circumstances would be the natural outcome of a development philosophy that has sustainability as its primary goal. Conservation includes extending, adapting and finding new uses for existing buildings wherever feasible: demolition would occur only after a detailed environmental and energy appraisal (Figures 2.6 and 2.7). The reason for giving priority to conservation as opposed to demolition and replacement is the pursuit of policies for the efficient and frugal use of resources, particularly energy from non-renewable resources.

The answers to the questions: 'to build or not to build?' and 'to conserve, or demolish and reconstruct?' are not as straightforward as they would appear from the last paragraph. Existing structures embody quantities of energy capital: their demolition usually means the loss of that capital, unless some of the material can be re-used, usually in a low-grade capacity as hardcore or land-fill. An existing building, however, may require energy capital inputs in terms of maintenance, new equipment and insulation, or it may consume costly energy revenue to keep a worn-out structure operating. A new structure replacing an old building disposes of energy capital on demolition and uses energy capital for the replacement building. If the new structure is super-insulated and is served by passive or solar heating, it will use little or no energy revenue from non-renewable sources. The analysis of an energy audit covering the lifespan of the

Figure 2.6 The Lace Hall, Church conversion, Nottingham