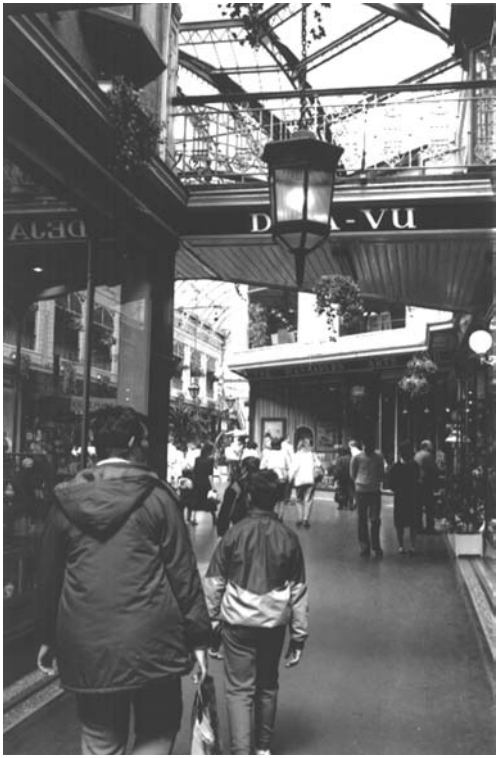

Figure 2.27 Shopping Arcade, Southport
Figure 2.28 Atrium, London wall

landscape features and local architectural form: these factors are the stimulus for the development of culturally acceptable solutions whereby the general principles of sustainable development can be applied for a site-specific purpose.

CONCLUSION

Traditions of vernacular architecture have many lessons for those seeking sustainable forms. There is much to commend the common-sense approach to energy conservation and environmental protection practised, however unknowingly, by many builders in the past. The first principle gleaned from a study of past practice is the priority given to the conservation and re-use of buildings, infrastructure and materials. The second principle is the use of local regional building materials for construction work: where possible, it is preferable to use materials requiring low inputs of non-renewable energy in fabrication, transportation to the site and in the construction process itself. Preference should be given to those materials obtained from a source, which is managed in a sustainable way – that is, where the traditional ethic of good husbandry and stewardship governs attitudes to their farming or extraction. Those materials, which are labour-intensive rather than energy-intensive in their extraction, dressing and

erection being more environmentally friendly and equitable in terms of the distribution of resources, are more acceptable for purposes of sustainability. Where possible, materials which cause environmental damage such as unsightly spoil heaps, massive quarries or denuded rain forests should be avoided. The third principle is to mitigate the effects of any environmental damage. All new buildings cause environmental damage, no matter how carefully they are designed. New developments should, therefore, be linked with tree-planting schemes in an effort to offset some of the effects of pollution caused by the manufacture of the building materials. The fourth principle is to relate the development to the local environmental context. In cold European climates – and there is some reason to believe that the climate in this country may become colder as the greenhouse effect gains strength – it is important to insulate buildings to the highest standards; to reduce the amount of external wall surface; to orientate the building towards the sun; to organize the interior of the building so that a buffer of storage rooms and similar accommodation faces north; and to arrange for conservatories and sun spaces or solar catchments to be sited on the south, east and west facades. Buildings set into the hillside with some accommodation below ground and with the roof covered by earth and vegetation fit unobtrusively into the landscape: they also make great use of the insulating properties of the earth itself. There are a growing number of projects of this type: the Visitor centre at Navan Fort, the ancient seat of the Ulster Kings in Armagh are of particular interest in the context of sustainable development. The Visitor centre fits snugly into the landscape, leaving the great earth mounds of the ancient fort to dominate the scene (Figures 2.29–2.31).

Figure 2.29 Navan Fort, Armagh. Ancient capital of Ulster

Figure 2.30 The Navan Visitor Centre: the building is buried within a grass-covered mound and is centrally lit with clerestory lighting

Figure 2.31 The Navan Visitor Centre

The fifth principle is to design buildings for flexibility so that a mix of uses can be accommodated under the same roof and so that floor plans are 'robust', in the sense that they can be adapted for different uses during the lifetime of the building. Finally, buildings should be located on public transport routes and with close connections to other parts of the urban structure, which is a major theme of the next chapter.