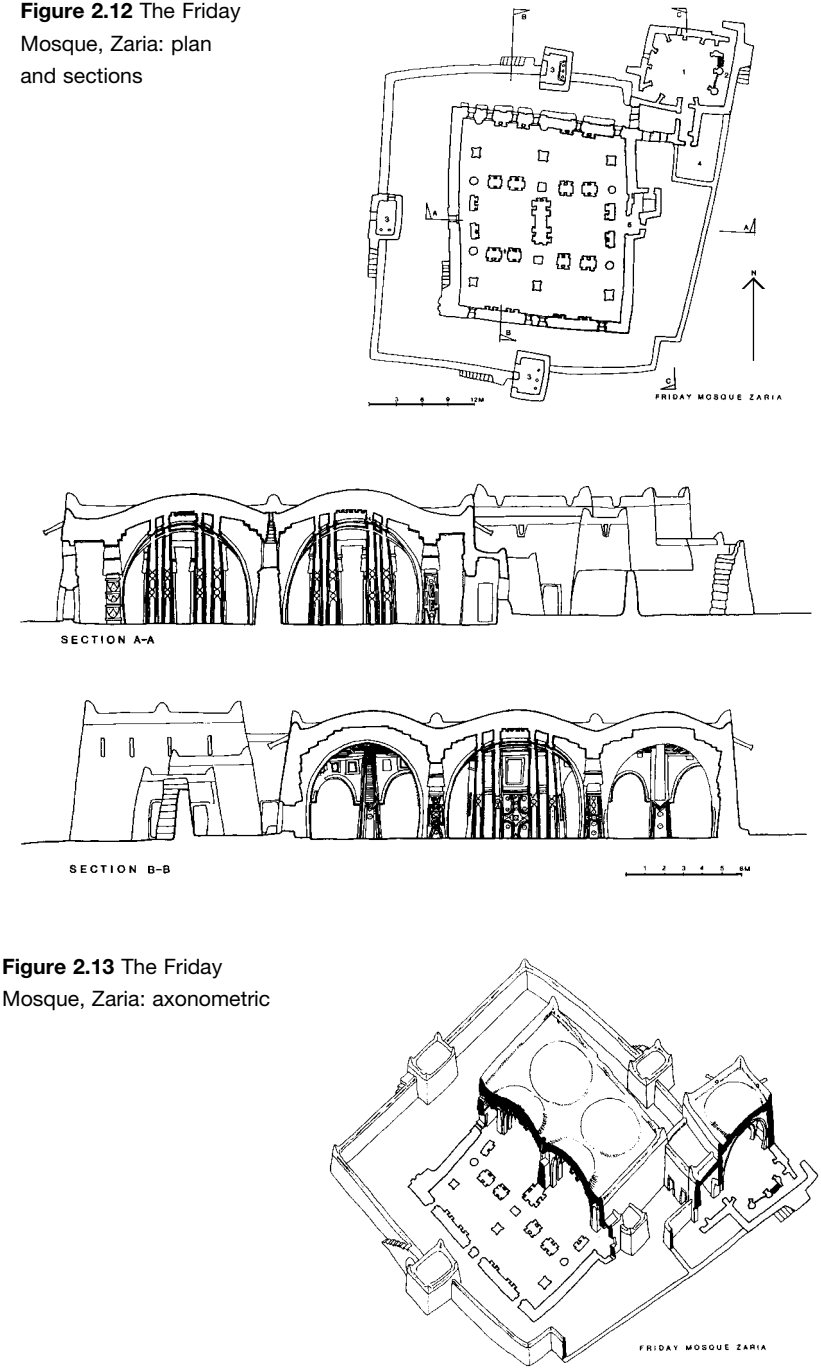


**Figure 2.12** The Friday Mosque, Zaria: plan and sections




**Figure 2.13** The Friday Mosque, Zaria: axonometric

there is little confidence in the ability of modern urban design to achieve solutions to equal those of city builders in the past. Where can we find a better model for conservation than Stamford, where whole frontages were remodelled in the eighteenth century to make the buildings more modern but also more fireproof – an important consideration after the destruction to timber-framed buildings caused by the Great Fire of London in the previous century.

## BUILDING MATERIALS

All building materials originate in the earth. Some materials such as clay and mud require only man's efforts to make a structure from them. Most people on this planet live in buildings made from earth (Moughtin, 1985). Earth building can achieve great heights of structural and aesthetic achievement, such as the engineering feats of the Hausa people of Nigeria (Figures 2.12–2.14). Earth can be used in a variety of ways which encompasses a wide range of architectural styles and aesthetic appeal (Williams-Ellis *et al*., 1947; Guidoni, 1975; Dethier, 1981). Earth has also been used as a building material to house the poor in the slums of the burgeoning cities of the developing world. Building from earth does least damage to the environment: it is close to the building site and so does not involve transport energy costs. Moreover, when no longer required, the building decomposes naturally and without pollution, returning to the earth from whence it came. Amongst the Hausa people it is customary for the occupier of a hut to be buried beneath it when he or she dies. The hut eventually collapses, forming the burial mound. This is possibly

**Figure 2.14** The Friday Mosque, Zaria: interior

the ultimate form of sustainable building, although it is not presented as the model for life and death in central London. Nevertheless, it can stimulate the imagination as an analogy for sustainable development. The sod or earth roof has a long history reflecting the value of soil and turf as shelter from heat, cold and rain. The earth roof still has great potential in future urban centres of the developed world where it forms valuable open space in dense developments; it can improve air quality, modify microclimate, retain rainwater and provide the base for urban agriculture (Osmond, in Birkeland, 2002).

Timber is another building material that has served man well in the past and has been associated with great architecture and wonderful decorative

**Figure 2.15** Kristiansand, Norway: timber building

effects (Figures 2.15 and 2.16). It is also a material eminently suited to recycling when the building, of which it forms a part, is defunct. Timber can be 'farmed' – that is, it can be planted, grown, harvested and


**Figure 2.16** Kristiansand, Norway: timber building