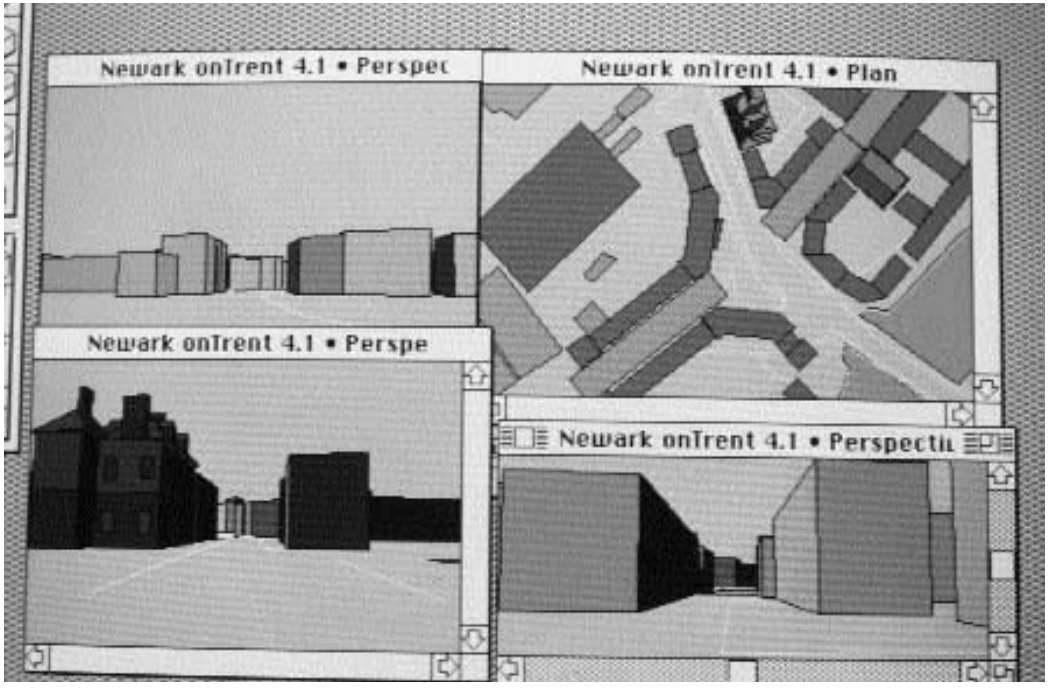

Figure 7.17 Computer model of Newark, Nottinghamshire: student project, The Institute of Planning Studies, The University of Nottingham, by Peter Whitehouse.

Such computer simulations of the city will soon be as important to urban design as computer-simulated flight to the pilot. A three-dimensional computer model of Bath includes the whole of the Georgian city, the commercial and business centres, a large part of the residential area and a three-dimensional terrain model of the surrounding countryside. The model is made up of 150 sub-models, each of which is about the size of a city block. An important use of the model is in development control where the effect of any proposed development can be examined to determine how it affects neighbouring buildings, public space or the rural skyline, which is so important in Bath's setting (Figure 7.18).

The urban computer model presents a way of analysing the present form of development, the impacts of proposed developments and assessing future possibilities. It is also potentially a technique whereby the whole community can 'focus and articulate its thoughts on how urban growth and change can be accommodated'.[13]

The preparation of drawings, reports and models is the responsibility of professional architects, planners and urban designers. At this stage in the design process, the role of members of the public is to receive information, to hear the evidence, to understand the main arguments for the proposal and to see the implications of the proposed development. This understanding may be impaired for those with defective vision. An estimated 250 000 people in Britain have a partial, but nonetheless disabling, loss of vision which cannot be corrected by ordinary spectacles. This may even include senior decision makers whose vision is failing through age. For this section of the community the task of reading documents and visual displays can

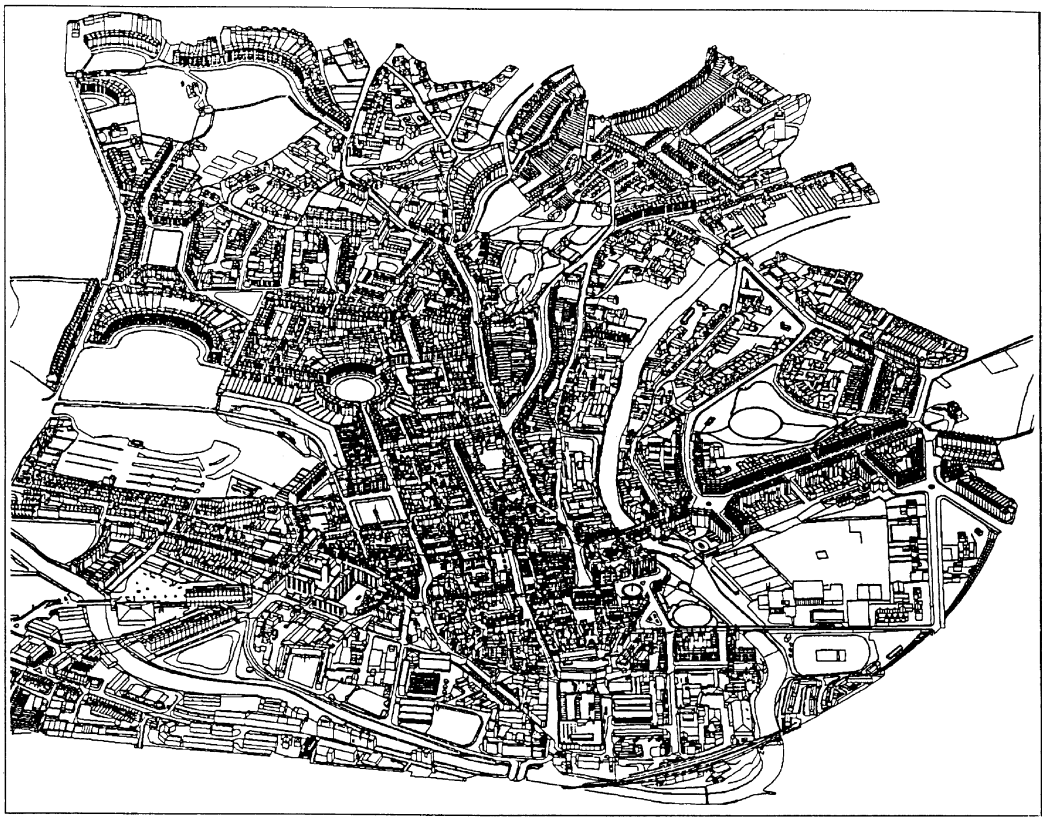

Figure 7.18 Bath computer model.

become difficult and confusing if the information presented is unclear and lacks consistency.

The minimum size of lettering that is required for displays varies according to distance. Research has established that the relationship between letter height and viewing distance is linear. As a general rule, letters and numbers should be at least 10 mm high for every metre of viewing distance. No lettering should be less than 22 mm in height while texts used in overhead projector slides should not be smaller than 18 point. Considerable research into legibility has led to the design of typefaces suitable for presentations. It was found that a mixture of upper and lower case letters can be read more easily and recognized more quickly than words consisting entirely of capital letters. People usually recognize words by their shape, so for example Nottingham can be recognised more easily than NOTTINGHAM. Typefaces such as Helvetica, Arial, Universe and Times are usually considered to be easy to read rather than over-stylized designs. Legibility depends upon text spacing and, where possible, splitting the text around illustrations should be avoided.

Because an estimated 9.3 per cent of the population is colour blind (leading to a particular confusion between red and green), and 8 per cent significantly affected by colour confusion, contrast is more important than colour for achieving legibility.