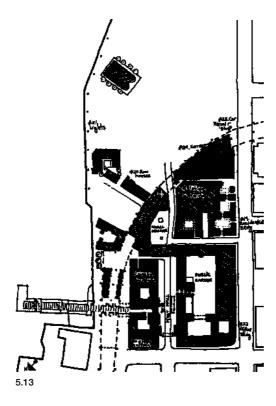
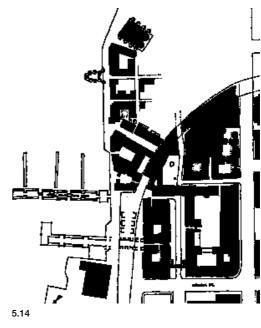
**Figure 5.13** Alexander: organic design process, midway through the process.

**Figure 5.14** Alexander: organic design process, towards the end of the process.



'There are equal numbers of large, medium and small projects'. <sup>20</sup> There is an argument in favour of reducing Alexander's figure of 100 000 for the largest single city development so that even the largest developments would be in keeping with the small scale of sustainable settlements. <sup>21</sup> The idea of developing the city as a series of incremental experimental steps without the guide of a comprehensive blueprint which defines in detail the form of the end product does seem to fit closely with the principles of permaculture.

Alexander's second rule for the organic urban design process is 'The Growth of Larger Wholes'. For the purpose of this particular rule every increment to the city should help to form one larger whole in the fabric of the settlement: 'In the

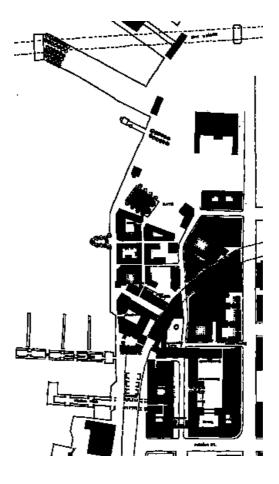


process of growth, certain larger structures, or centres, emerge. These larger centres are distinct and recognizable entities, larger than any individual building'. These centres are normally public spaces, the creation of which is detailed in Alexander's Rule 4 'Every building should create coherent and wellshaped public space next to it'. The essence of Alexander's theory is the aim to heal the city or to make it whole by the creation of a field of overlapping centres or wholes. Rules 5 and 6 deal with the detailed design of buildings and structures, which is not the main concern of this particular book. However, it is interesting to note that even in the case of building structure Alexander is still analysing the elements, such as windows, floors or columns in terms of the creation of centres and wholes. This is how Alexander defines the centre: 'A centre is not merely, as the word suggests, a point that happens to be a centre of some larger field. A centre is an entity; if you like, a 'thing.' It may be a

building, an outdoor space, a garden, a wall, a road, a window, a complex of several of these at the same time ... In general, a centre has some kind of elementary symmetry, especially bilateral symmetry ... This does not mean that all centres are perfectly symmetrical. But when an asymmetrical situation occurs, the centring process will generally try to construct the asymmetrical thing, or centre, as a product of simpler centres which are themselves locally symmetrical. It does not permit random asymmetrical arrangements'. 22 Figures 5.11 to 5.15 illustrate the result of Alexander's organic urban design process. For this experiment he used groups of students to design an incremental series of individual projects. Without a master plan and armed only with the principles for the healing or centring process, the design groups prepared ground plans for a new city district which would exhibit some of the qualities associated with a Medieval town in Europe and therefore would fulfil the aim of the process.

## **CASE STUDIES**

This section of the chapter illustrates, with case studies, the use of analogy in the generation of ideas for urban design in the pursuit of sustainable development. The first case study is from Surrey. It explores the theme of permaculture. It is a project which develops from ecological analogy. The second case study is from Derby and outlines the rehabilitation of railway cottages, developing the idea of the urban village. The third case study takes further this idea of the small urban community and shows how such a community can become involved in design. In the process of generating ideas about design, a group of strangers came together to form friendships and a support group, the bedrock of community. The resulting physical structure exhibited the organic qualities associated with the unplanned settlement.



**Figure 5.15** Alexander: organic design process, final stage of the process.

The fourth case study is the Norwegian Ecological City. The ideas taken from nature have been developed in Norway and applied to the city as a whole. A number of features of the Ecological City are examined using 'Gamle Oslo' and Bergen as the main examples.

DESIGN FOR ECOLOGICAL SUSTAINABILITY ON AN EIGHT-ACRE SITE IN SURREY, UK This private residence which is linked to Construction Resources, Ecological Building Centre,