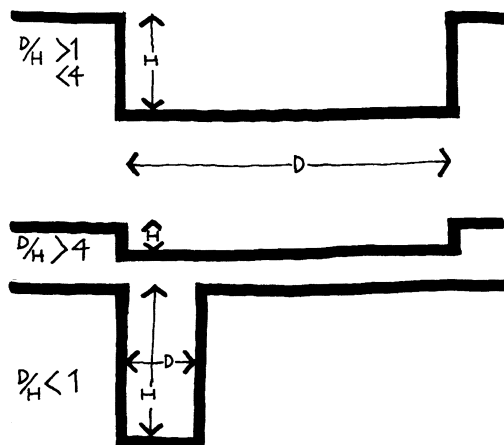ground urban architecture and how the pattern of the horizontal surface should reflect the scale of the space itself. But they also indicate that the sense of enclosure within such urban spaces is governed by the relationship between the height (H) of the buildings which define the space and the distance (D) between them. If the ratio D/H is between (1) and (4), then a satisfactory sense of enclosure will ensue; if D/H exceeds (4), then there will be insufficient interaction between the wall determinants of the space and the sense of enclosure will be lost; but should D/H be less than (1), then interaction is too great and the 'balance' of enclosure is lost (**Figure 6.13**).

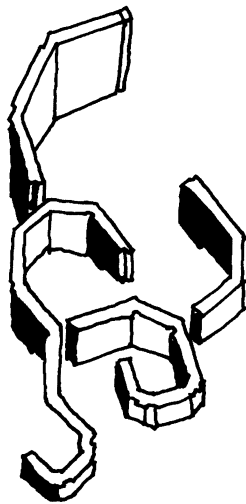This crude rule-of-thumb may be applied to significant twentieth-century developments which have hinted at new urban forms by the manipulation of centripetal space. The high-density housing development at Park Hill, Sheffield, designed by city architect, Lewis Womersley in 1960 encapsulated most of the ideas on social housing which had been formulated during the previous decade; that it is beneficial to the life of a city and to its community if a substantial provision of mixed high-density public housing is located adjacent to the city centre. This was achieved at Sheffield by manipulating a multi-storey serpentine form on a steeply-sloping site to enclose a series of public open spaces associated with the housing blocks and their high-level deck-access routes (**Figure 6.14**). But as the roof level for the entire complex remained constant, build-
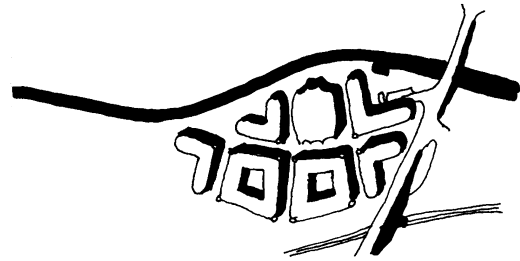
Figure 6.13 *Centripetal space enclosure, D/H ratio.*
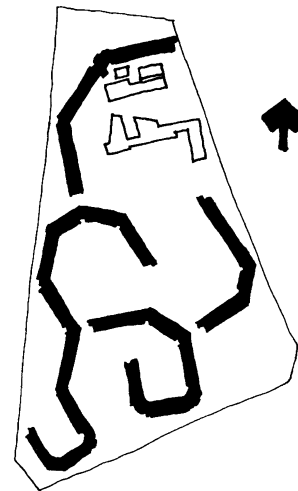
Figure 6.14 *Lewis Womersley, Park Hill Housing, Sheffield, 1961.*

ing heights decreased as the serpentine form reached the highest points of the site (**Figure 6.15**). This is reflected in the diminishing size of open spaces as the site levels rise; the smaller areas on plan respond exactly to the diminishing height of the enclosing building form, so that satisfactory D/H ratios are maintained throughout the scheme.

In 1995 Michael Hopkins used established 'centripetal' techniques to order the Inland Revenue offices in Nottingham. Here, the square and the boulevard are reinterpreted to provide public tree-lined linear spaces and enclosed private courtyards all achieved by simple attenuated building forms (**Figure 6.16**) which establish a satisfactory D/H ratio

Figure 6.16 *Michael Hopkins and Partners, Inland Revenue Offices, Nottingham, 1995. From* Architectural Review *5/95.*

and suggest a model for extending the city. The heart of the complex is an open public square with a jewel-like community building placed within it.

In his 1945 plan for Saint Dié, in eastern France, Le Corbusier produced a prototype for city centre development which was to be reiterated throughout war-torn Europe.

Firmly within the centrifugal category, a series of self-conscious civic buildings form a carefully placed assembly on the backdrop of an open piazza. An administrative tower block forms the visual focus and defines an open space around it.

Smaller civic buildings such as a museum and public assembly hall, interact with each other to determine the nature of the massive open public space. But essentially, the architectural devices used to achieve such open spaces are the inverse of those used in pursuit of centripetal space; now, by way of contrast,

Figure 6.15 *Lewis Womersley, Park Hill Housing, Sheffield, 1961.*