development changed significantly. Prior to the nineteenth century, a building had been able to stand out or gain status simply by virtue of its relative scale and location. However, there was a growth and multiplication in the number of institutions competing for recognition and identity within the city. This competition was facilitated by developments in the building industry which increased the availability of imposing structures for those wishing to erect them. Towards the end of the nineteenth century and for all of this century the magnitude of urban development increased in both scale and presence. The consequent destruction of the spatial order in most traditional European cities is evident to even the most casual observer. Kostof (1991) sums up this development cogently: 'When the towered railway terminal and its hotel lifts up its silhouette in emulation of the cathedral, we know that the old values are reduced or overtopped. When the city centre ends up as an aggregate of tall buildings, we recognise that the city image has succumbed to the advertising urges of private enterprise.'

The most dramatic change came with the advent of the skyscraper. The technological inventions and innovations which permitted the development of such buildings were the safety elevator, invented in 1854 by Elisha Graves Otis, and in 1884 a method of steel-frame construction, worked out by the Chicago architect, William Le Baron Jenney, making very high buildings structurally possible and high buildings of all kinds much cheaper. The problem with high construction in brick or stone was that beyond a few storeys, loadbearing walls must be so thick at the base in order to carry their own weight and resist bending and overturning movements within the structure, as to make the extra floors so gained uneconomic. The advance of the steel frame was that it dispensed with this enormous mass of masonry construction.

The building of skyscrapers in the USA was an initiative confined largely to the private sector. Before the skyscraper boom, high buildings had been the privilege of the church or state, being confined to religious buildings and the palaces of those in power or holding public office. Over the last 150 years, height had become privatized and the property of those who could afford it. The users of the buildings extended to many in the community; people now lived and worked in skyscrapers and other tall buildings. The skyline, once the direct manifestation of religious or political power, now became the product of naked financial power – 'The skyscraper was a monument to the growing prominence of the modern American corporation. The corporate tower became the universal symbol of the city, and desirable for itself as proof of civic pride and prosperity' (Kostof, 1991). This translated into a civic desire to decorate the city with skyscrapers. While Henry James, returning to New York in 1904, lamented the overshadowing by office towers of Trinity Church – the tallest tower in the city until 1875 – the popularity of these buildings as civic decorations of a modern age was enjoyed by the city's population: as Kostof notes: 'In New York, people took the Staten Island Ferry to George Washington Bridge to see the city as the photographers saw it. Identifying the tall buildings became part of this ritual. Identifying the domes of Baroque Rome had been a tourist's ritual in an earlier era, and it was memorialized in the captioned Baedeker fold-out of the city's skyline as seen from S. Pietro in Montorio on the Janiculum, with St. Peter's at one end of the panorama and S. Paolo fuori le Mura at the other.' Despite the apparent glamour of the skyscraper and its appeal to architects, there was a resistance to building them in the older established cities of Europe. The resistance to the skyscraper is nowhere more in evidence than in the controversy surrounding the proposals for rebuilding the area around St Paul's in London.

CHANGING CITY SKYLINE: THE CASE OF LONDON

Changing patterns of influence and their impact upon the skyline as a decorative element of the city

is clearly illustrated by the City of London. Until, perhaps, as late as the mid-nineteenth century, the skyline of the City of London was simple and dramatic: 'It was "cathedral on a hill", St Paul's Cathedral presiding over the town around it' (Attoe, 1981). The Cathedral, both in its original Gothic form, and later as the great Baroque masterpiece of Sir Christopher Wren, by sheer scale was able to dominate the merchants' premises and dwellings of the City of London. The later skyline was a combination of the juxtaposition of the rounded mass of the dome of St Paul's and the many delicate church steeples rising above the sea of tiled roofs and newly-fashionable chimney pots. As Attoe (1981) notes: 'Like cathedral cities elsewhere in Britain and Europe, the visual image of the City of London was that of a church-dominated community.'

This visual image of the City of London and its skyline remained intact for centuries, largely due to the limitations of available building materials and techniques, and by fire-conscious building regulations which restricted building heights. Post-Great Fire of London houses were generally of red brick and of a modest height of about three or four storeys. By the 1860s height limits had been raised in the City, and many of Wren's steeples began to be obscured by incremental development of office blocks. 'At the time of the London Building Act of 1888, building height was limited either to 80 feet or to the width of the street on which a building stood. The only exceptions to these regulations were church steeples and similar attachments. Even when new technologies – the steel structural frames, lifts (elevators) and fire-fighting methods – made highrise construction possible, height limitations were retained' (Attoe, 1981). The new urban scale was not universally welcomed. As Kostof (1991) notes, to make a point about the erosion of traditional values in the modern world, Pugin juxtaposed 'the new skyline of the industrial city, in England, a grim, stark silhouette of factories and tenements and warehouses, with the spire-pricked piety of the medieval cityscape'.

Figure 4.11 Office development, City of London

It was after the First World War, that the skyline of the City of London began to alter significantly due to the changing nature of business life in the city. An even more dramatic change occurred at the end of the Second World War. The intensive bombing of London had destroyed 27 million square feet of building, almost a third of the city's total floorspace. This wartime bombing was also responsible for eliminating some of the filigree of church steeples which, through contrast, emphasized the massive roundness of St Paul's dome (Attoe, 1981). Public sector comprehensive high-rise development, such as the Barbican, London Wall and Paternoster Square, was followed by a golden age for private developers as height restrictions were relaxed in the 1950s (Figure 4.11). More recently under the