The locational setting of an urban place refers to three aspects of position: location (6), situation (7), and site (8). These parameters are distinguished logically and empirically from each other. Of the three, site has special significance. It is the conditions of site which have special importance in localising the original function at a particular spot, fixing there the nucleus (9). In the later stages the urban place grows mainly under the influence of its situation, the region surrounding it. Thus, while location and situation express a horizontal relationship, site is essentially a manifestation of vertical relationship linked with history. It exerts permissive as well as restrictive influences on the evolution of urban form.

SOURCES OF DATA

The discussion is based on the following sources:

1. Survey of India topographical sheets (scale one inch to one mile) were used for discovering the locational characteristics. The advantages of location enjoyed by the city during different periods of history have been interpreted from published historical works, references to which have been made at the appropriate places.

2. The District Gazetteers published in 1883-84 and 1910 were used for the identification of the characteristics of the situation of the city.
3. The City Municipal Office and the Department of Town and Country Planning, Rohtak supplied the maps (10) and other information from which the attributes of the site were derived.

METHODOLOGY

The present chapter purports to examine the location, situation, and site of the city. The locational factors which have helped in the emergence of the settlement nucleus of Rohtak, and the advantages available to the site during the historical periods have been interpreted from a map. The map was prepared with the data available in the historical works. A contour map of the site of the city has been prepared by interpolating spot heights of different points in the city. The attributes of the site have been identified on this map. The influence of the site on land values, morphology, and landuse has also been discussed.

LOCATION

Rohtak is located between 28° 54’ North latitude and 76° 35’ East longitude, 44 miles to the northwest of Delhi, the capital of India, and 163 miles from Chandigarh, the common capital of the states of Haryana and Punjab and the Union Territory of Chandigarh (Fig.1). Rohtak is the larger of the only two cities of Haryana, and the administrative headquarters of a district and tahsil of the same name.

The city is connected by a broad guage railway line
The Locational Setting

ROHTAK

Chandigarh

Fig. 1

RIVER
CANAL
ROAD
RAILWAY
NATIONAL CAPITAL
STATE CAPITAL
DISTRICT H.Q.
TOWN
(5 feet 6 inches) with Delhi and Jind (33 miles) to its northwest, and Gohana (20 miles) to its north (Fig.1). By road it is connected with these three places, and with Sonipat (32 miles), Bahadurgarh (24 miles), Jhajjar (20 miles), Dadri (30 miles), Bhiwani (26 miles), and Hansi (40 miles). These places are located to the northeast, southeast, south, southwest, west, and northwest of the city respectively (Fig.1). The city is connected with its surroundings by many roads and a few railway lines. It has considerable interaction with smaller urban places. Its greatest functional interaction is, however, with Delhi.

Locational Advantages

The city enjoyed the following locational advantages during various periods of its history:

1. During the Pre-Buddhist and Buddhist Periods (300 B.C. to 646 A.D.) (11) the city was located at the edge of Kuru jangâla (12) (Fig.2), a densely forested area, and functioned as a political and strategic frontier post (13). In the Gupta Period (327 to 82 B.C.) (14) it was the capital of the Yaudheyava territory (15).

2. During the reign of the Yaudheyava Kings (circa 2nd century B.C. to 2nd century A.D.) (16) the city was the administrative and economic capital of the Bahudhanyaka (17) region.

3. During the early Ancient Period the city was located...
on the important trade route, Uttarapatha (18), and also on the southern edge of Kuru Janakala (Fig.2). It was a halting place and a trading centre.

4. There is no material available to study the locational advantages of the site from the end of the Buddhist Period till the beginning of the Medieval Period (13th to 18th century A.D.). During the Medieval Period the Delhi-Multan Road (Fig.2) passed through the city (19) which flourished as a trade centre and a strategic place. Its strategic significance was derived from its location on the road that functioned as a channel of continuous political interaction (20) between Delhi, the coveted seat of power, and Multan, the base for all the campaigns and intrigues for laying the foundations of a Muslim Empire in India. The landscape expression of the function of this road passing through the city is reflected in a sarai (inn) and a mosque in the southern part of the city. The inn and the mosque were essentially meant for the travellers. Today, the mosque is in a fair degree of preservation but the inn has been destroyed. However, a mohalla named sarai mohalla exists at its approximate and meaningful location.

5. The advantage of location on an important road was available to the site during the British and Post-British Periods also. The Delhi-Multan Road continued to function in the British Period. Presently, a part of it forming the Delhi-Hissar Road (National Highway No.10) passes through the
city. This road has helped the city in maintaining its regional contacts and has considerably influenced its morphological growth in the Post-British Period.

SITUATION

The city is situated on the flattish alluvial plain of Ghaggar-Yamuna Divide which is a part of the larger plain extending between the Satlej and Yamuna. The western and southern parts of the Divide contain sand hillocks (Fig.3). The eastern margin is demarcated by the Yamuna and its flood-plains (Khadar) (Fig.3). The situation does not reveal any striking topographical feature.

The Divide is intersected by north-south extending sand-hills, about 750 feet high, and punctuated at places by the Aravalli outcrops (Fig.3). The easternmost range is located about 35 miles southeast of the city, extending into the Union Territory of Delhi. About 25 miles west of the city are found many detached hills, rising to more than 900 feet, and fringing the border of Rohtak and Hissar districts. The hillocks located to the north and south of the city (Fig.4) represent the central range. The initial site of the city spreads on one of these hillocks.

The Ghaggar-Yamuna Divide experiences the Cwg (Koppen) type of climate. The daily mean maximum temperature at the peak of the summer season in May and June is 116.5°F (47°C) and 69.8°F (21°C) during January, the coldest month. The city
has an average annual rainfall of 18.3 inches (45.7 cms.) almost 75 per cent of which is received in the monsoonal months of July and August. The rainfall during winter is insignificant. On an average, the city experiences 29 rainy days.

Centuries of clearing of the Kura woodlands have left a scanty cover of natural vegetation around Rohtak. The most common species is farash (Tamarix orientalis). It is used as fuel wood in the city and also in the neighbouring villages. The sand-hills in the southern part of the region are covered with sar (Sachcharum munja) of which the whole leaves are used for making ropes.

Typical of other towns in the Divide, there is a general lack of major natural lines of drainage around Rohtak. The Rohtak Canal and Drain No.8 which pass in the vicinity of the city are man-made.

Physiographically a large part of the Divide is comprised of the Pleistocene old alluvium upland called hangar. Its low-lying counterpart is the Recent alluvial flood-plain called khadar. The khadar stretches between the Yamuna in the east and the Grand Trunk Road in the west (Fig.3). The situation of the city in the hangar upland having uniformity of relief and the lack of major physiographic barriers, aided by the compactness of the sub-soil and freedom from annual flooding, has helped in the establishment of a multi-directional
transport network around the city.

SITE

Rohtak, a typical Indian district headquarters city, is comprised of two parts, old and new, differentiated on the basis of urban characteristics. The oldest part of the city coextensively spreads over the mound, the initial site of occupancy. In the subsequent periods the city expanded in different directions and extents on the area adjacent to the mound. The new parts are located in this area. Presently, the city covers an area of six square miles.

In the absence of striking physiographic boundaries the present site of the city is better defined in terms of man-made features. The municipal limits of the city run along roads and railway line and cut through the agricultural lands of the adjoining villages.

The mound, by providing defence, encouraged continuous agglomeration on the initial site. The height of the mound increased due to the additions of debris of the material used by different cultural groups that occupied it during historical periods. It was only when the civil conditions in the surrounding region became peaceful, and the pressure of population reached saturation levels that the residents were prompted to move down from the mound and settle in the extra-mural belt resulting in an expansion of the original site.

The largest expansion of the site occurred during the
British and Post-Independence Periods. During the former, the Civil Lines and the administrative offices coupled with the construction of roads and railway line helped in the expansion of the site to the south and east of the mound. This type of expansion during the British Period repeats itself without exception in all the district towns and, therefore, may be considered a model of urban places in India.

In the Post-Independence Period there was further expansion beyond the Civil Lines. The expansion is typical of the urban places of the states of Punjab and Haryana which experienced the influx of displaced persons originating in West Pakistan after the Partition of the country in 1947.

Today the site of the city is comprised of a mound over which spreads the old part of the city; a crescent of low lying areas located to the east, south, and west of the mound (Fig.4); and a flattish gently sloping plain beyond the crescent of low lying areas (Fig.4).

The mound stands about 30 feet high from its southern base along the Delhi-Hissar Road (Fig.4). The mound to the north, and the Rohtak-Gohana and Rohtak-Delhi Railway-lines to its east and south respectively, act as barriers to the surface flow of water (Fig.5), and promote its accumulation in the low lying areas flooding the city during periods of excessive rainfall (21).
Rohtak
Natural Drainage of the Site

----- RAILWAY
---- AREA LIKELY TO BE FLOODED
---- TRENDS OF NATURAL DRAINAGE
S DEPRESSION AREA

BASED ON FIELD OBSERVATION AND CONTOUR MAP
The floods, aggravated by the simple relief of the site, have affected the morphology and function of the city during several periods of city's history. Two floods, in 1933 and 1960 in particular, considerably affected the physical expansion of the city (22).

Impact on Morphology

The two major depressions located south and southeast of the mound have resulted in a sudden break and a detouring in the layout of the built-up area. Consequently, these are not well connected with their surroundings. Also, the lack of environmental sanitation induces the people to shun these areas, resulting in a lack of permanent structures.

Impact on Landuse

The flood-affected areas lack buildings involving large capital investment by individuals. The area adjacent to the southern depression, which generally remains filled with water, is used for rearing cattle while around the other depression in the ecologically low-quality area has developed a colony of labourers. The structures here are temporary dwellings generally lacking in immovable property.

Impact on Land Values

The price of land and buildings is lower in the flood-affected but at places densely populated areas than in the flood-free higher sites. In the former the value of one square
yard of land is less than 10 to 20 rupees. This is lower than the value of 50 to 85 rupees per square yard of land in the flood-free areas.

SUMMARY

The initial site of the city was a mound. The reasons for the emergence of the settlement nucleus were, (i) its location on the southern edge of the Kuru jangala, a thickly forested area; (ii) location on an important trade route called Uttarapatha; and (iii) its vicinity to Hastinapur, the capital of the Kuru mahajanapada in the Ancient Period. In the Medieval Period the vicinity of the city to Delhi and its location on the politically and strategically important Delhi-Multan Road helped in the continued occupation of the mound site.

During the British Period the site of the city expanded like that of any other British district headquarters town. The trends of expansion set by the British were followed in the Post-Independence Period also.

Presently the site of Rohtak is comprised of, (i) a mound which contains the old parts of the city; (ii) a gently sloping flattish plain to the east of the mound containing the Civil Lines and many of the newly developed Post-Independence expansion areas; and (iii) a crescent of lowlying areas to the east, south, and west of the mound.

The human interference with the natural lines of drainage of the site, especially the construction of the
Gohana and Delhi railway lines, has resulted in the flooding of the city during periods of heavy rainfall. Extensive flooding of the city occurred in 1933 and again in 1960. The second flooding has influenced the morphology, land values, and the landuse in the city considerably.