Defence as a function is as old as the earliest settlements. In India, settlements such as the fortress towns, citadels, pur, durg, kot, killa, parav, chowki etc. were established for defence specific function. Their built up form strongly reflected the military function and set them apart from other urban settlements. The Rig Veda mentions defensive strongholds as pur and durg (meaning rampart, fort or stronghold) 1. The ancient Indian treatise on town planning, the Vastu Shastra, identified several settlements which performed military function, viz. the durg (fortified towns), shivir (encampment for army on the march), senamukha (suburban military base), shaniya (temporary local fortified town which was a seat of the king with garrison and police) and skandhavara (a protected military encampment inhabited by common people along with soldiers) 2. Similarly, the ancient Indian treatise on statecraft, the Arthashastra, recorded the presence of military stations known as vyuha and defensive fortifications such as the audaka, parvata, dhanvana and vanadurga which connote water, mountainous, desert and forest fortifications respectively 3.

The practice of having standing armies, which needed to be quartered, either separately or among the townsmen started around the sixth century B.C. 4. Building of forts and arsenals were defensive measures for the entire settlement and not specifically to quarter army separately 5 since forts ‘provided secure bases in a hostile environment and as local depots for warlike stores for the use of the army and provincial administrations’ 6. During Akbar’s reign the term chhavany connoted a military base, a term which continues to be the Hindi nomenclature for a cantonment in India.

With the advancement of technology and methods of warfare the role of forts as a measure of defence got relegated, however, not before the British fortified their factories during the seventeenth century in India. The forts as ‘one of the trading factories of the English East India Company’ became nucleus of colonial city development, particularly in port cities like Madras, Bombay and Calcutta, which were the ‘entrepôts for European trade with Asia, later became bases for the spread of European political and military control over the entire country’ 7. Expansion of trading interests and administrative frontiers necessitated standing armies in a state of military
location of some phenomenon, e.g. suitability of a site for defence purposes and its strategic importance gave them the status of special function towns. As per the statutory definition contained in the Cantonments Act of 2006, any place including the boundaries and area in its vicinity in which any part of the forces are quartered or are required for the service of the forces, may be declared a cantonment through an Official Gazette notification by the Central Government, and be under the purview of the Cantonments Act. By a similar notification, the Central Government may define the limits of a cantonment and constitute a Board for its efficient administration. In addition, the Central Government in consultation with the State Government and the concerned Cantonment Board can extend or decrease the limits of the cantonment by an Official Gazette notification for inclusion within the cantonment of any local adjoining area or exclude from the cantonment any local area. Such changes in jurisdiction are usually related to matters of sanitation and general administration by which areas either come to be governed by the Cantonments Act or cease to be under the Act and consequently become part of the adjoining municipal administration. Similarly, an area largely inhabited by the civil population may be notified as the Civil Area of that cantonment under sub-section (1) of Section 46 of Cantonments Act of 2006 through an Official Gazette notification by the Central Government.

**Spatial organization of cantonment towns**

The term cantonment is derived from the French word ‘canton’, which means ‘to divide, to separate, to allot quarters to troops, or to quarter soldiers’. From its etymology the term indicates a principle of separation which is an inherent feature of all cantonments. This principle was spatially operationalized at two scales: (i) cantonments established as distinct spatial units located at a distance from the indigenous city, and (ii) sub-division of this spatial unit into the military and the civil area. The location of two disparate sections of population, viz. military and civil in spatially separate parts within the cantonment town is associated with distinct functions of defence, and residential and commercial respectively. Thus, two distinct types of morphological-functional sub-areas characterise the internal spatio-functional organization of cantonment towns:

1. **Military area:** This comprises the military segment of cantonment towns by which they have come to acquire a distinct functional status. Some of the specific functional structures in it include barracks, bungalows, arsenals, rifle ranges, parade
control by the British authority was achieved through institutional mechanisms which set the colonial powers apart from the colonised. The establishment of cantonment towns was one such means to maintain colonial authority by incorporating a policy of segregation based on racial and social hierarchies with spatial inclusion but social exclusion of the indigenous population.

The establishment of cantonment towns followed territorial expansion but their location at a distance from the native town was guided by complex linkages between climate, health, environment and culture. The British troops belonged to geographically varied regions from that of the tropical climate of India and had to acclimatise to heat, moisture and sun of the tropics - elements which were perceived to negatively influence the sanitary conditions of the native habitations. In fact, ethno-medical explanations, also called ‘miasmic theory’ prevailing during the nineteenth century linked the diseases in tropics such as fever, cholera, dysentery to polluted air which emanated from human effluence, swamps, decaying vegetable and animal matter found in the native town. The native town was also perceived to be prejudicial to the moral well being of troops given the unrestricted availability of spirituous liquor and women. Further, the fear of native troops being influenced by the patriotic sentiments of the local populace and therefore, rise in arms against the military or civilian authority was of paramount concern. Such notions guided the government policy on physically distancing troops from the native population by locating cantonment town at a distance from native town; separation of British and native troops within cantonment, and separation of military and civil population in cantonment. As a form of colonial urban development, cantonment towns, therefore, represented ‘the first stage in the physical separation of the rulers and the ruled which characterized the Raj’.

Institutionalization of the concept of cantonment towns

Since the earliest times defence establishments such as camps, strongholds, forts etc. functioned on an ad hoc basis depending upon the movement of troops. However, cantonment towns established by the British stand apart as they were provided an institutional framework for their establishment, demarcation, functioning and general administration. This institutional framework developed over a period of time, initially separately for the three Presidencies in the form of General Orders of the Commander-in-Chief and later under a comprehensive set of regulations for all the cantonment towns. The first such order dated 13th April 1806 pertained to occupation of land,
Magistrate was made in-charge of the cantonment. By Act III of 1880 the cantonment administration moved towards a system of taxation for bringing them in line with the municipal administration of towns. Subsequent Acts focussed on particular aspects of cantonment administration, viz. Cantonments Act XIII of 1889 particularly emphasized policing and conservancy; Cantonments Act II of 1902 (House Accommodation Act) underlined priority of housing to military officers; the Cantonments Act XV of 1910 focussed only on taxation and cantonment fund, and the Cantonment Code of 1912 contained provisions of administration which were not included in the previous Act of 1910. It also dealt with the grant of vacant sites on lease terms, a policy which was adopted in the Cantonment Code of 1899.

The Cantonments Act of 1924 helped in securing a more progressive and representative form of governance for cantonment towns, particularly for the administration of their civil areas through the setting up of Cantonment Boards. In addition to maintaining sanitary environment within cantonment towns, these Boards performed such obligatory functions of municipal administration as street lighting and watering, cleaning of drains, registration of births and deaths, establishment of schools, removal of dangerous and congested buildings etc.

In recent years, the institutional framework within which cantonment towns have been governed shifted from military-centric to people-centric on account of a very high growth of their civil area population. Their aspirations of being treated at par with the military population and provision of better civic infrastructure resulted in the new Cantonments Act of 2006. This Act in addition to existing sections of the 1924 Act, incorporated several sections pertaining to contemporary development administration of urban areas including collection of rubbish and solid waste management, controlling air pollution, better water supply, special provisions for drainage and sewage, norms of town planning and control over buildings (stopping of construction work, sealing of unauthorised construction, undertaking group housing schemes).

A fairly long and continuous history of governance of cantonment towns under separate set of regulations has given them a distinct place among urban settlements within India. The continuation of cantonment towns as military enclaves without significant dilution of their original function is also an outcome of their distinct administrative set up.
A. Studies on Individual Towns

Town studies have formed an important segment of research in urban geography. In India, one of the early works titled ‘Town Study’ by Ahmad suggested a general framework for the study of towns. It was Singh’s study of Banaras which proved seminal and set the trend for single town studies in India including those on Bangalore, Hyderabad-Secunderabad, Rohtak and Pune. All these studies followed a composite framework. Studies in urban geography in India covered diverse aspects of urban settlements, but the main emphasis has been on the setting, historical growth, morphology, functions and delimitation of umland of individual towns.

The studies on origin and evolution of individual towns have been conducted in a historico-geographical framework for identification of growth phases in individual towns. These studies highlighted the role of physical, cultural and historical factors in shaping urban centres. As corollary to the studies on evolution of individual towns, geographers have also examined the morphological attributes of their layout, buildings and functions. By addressing the larger question of interplay between form and function, such case studies brought to fore generalisations for Indian cities.

Further, intra-urban patterns of spatial distribution of urban population, and its socio-economic attributes such as growth, density, sex ratio, literacy, workforce, occupational structure, Scheduled Castes and Scheduled Tribes formed the focus of case studies on several cities. Besides analysing the areal variations among population attributes, several studies conducted in an ecological framework brought out the relationship between the socio-economic characteristics of population and the residential patterning of cities. A number of studies also employed the methodologies of Social Area Analysis and Factorial Ecology for defining the sub-areas within the cities.

Urban studies have also dealt in detail the characteristics of intra-urban functional zonation of land uses which is reflective of the basic functions a city performs. The socio-economic dynamics of spatial growth of cities resulted in unique urban-rural interface, with studies concerning them mainly related to two aspects, viz. (i) the umland of cities including city-hinterland relationship, and (ii) the rural-urban fringe. The latter aspect has been studied more extensively in the last two decades in terms of general characteristics, attributes of population and changes in land use in rural-urban fringe zones of individual cities. A few studies on this theme also highlighted the problems of rural-urban fringe and issues related to their planning and management.
2. Hill stations: Among the specific town types that developed as a result of colonial policies, hill stations either as individual or group of hill stations have attracted greater academic attention. Hill stations gained popularity on account of the belief that Europeans were ‘incapable of becoming fully acclimatised’ to the tropical climate of Indian subcontinent. Medical studies indicated the potential benefits of the salubrious environment of hills which was similar to the temperate environment of Britain. The Royal Commission on the Sanitary State of the Army in India in 1863 strongly suggested the provision of hill stations so that a third of the force could be located in them on a rotational basis. The efficacy of stationing of troops in the hills, better housing and diet was subsequently noted in the improvement in their invaliding. The establishment of hill stations was also an attempt to replicate the temperate environs of ‘home’ i.e. Britain and carve out a separate socio-cultural niche for the Europeans stationed in India. For the British in general and their ladies in particular, the annual summer retreat to the hill stations meant a ‘whirl of entertainment, interspersed with some quite gorgeous ceremonial and pomp...dancing, official dinners...’

3. Demographic and economic attributes: Characteristics of colonial urbanization as reflected in the demographic and economic attributes of cities have been of interest in several studies. A common observation arising out of these studies is that colonial cities were parasitic rather than generative of economic development, which flourished at the cost of the indigenous rural sector and led to economic atrophy in their hinterlands. This led to primacy of a few settlements in the overall urban settlement system.

4. Morphology: The theme of colonial impact on morphology of Indian cities has been a subject of wide academic interest across several disciplines. The dual structure of Indian cities arising out of the contact between two culture groups and comprising the native city and the British accretions underlined the difference between the colonial power and the colonised, ‘physically juxtaposed but architecturally and socially distinct’. The spatial configuration of the city was a segmented urban form comprising the ‘white’ and ‘black’ towns and the development of administrative and service sectors of the economy. Planned and spacious layouts (specially the grid iron pattern), low population densities in areas of colonial elite, residential segregation by race, spatial differentiation of landuses, institutional structures that lent distinction to the life style were the distinguishing attributes of the British developed settlements.
C. Studies on Cantonment Towns

Cantonment towns have formed an area of intensive scholarly discourse only occasionally. References to cantonment towns have occurred in the context of theoretical literature on the morphology of colonial cities, social life and behaviour characterising the British. Only a few studies have dealt either with individual cantonments per se or with some of their individual aspects. Further, most of these studies have been conducted on hill station cantonments. Some of these studies are reviewed below:

1. General attributes: A macro level study dealing with the pattern of location and distribution of cantonment towns in India and their population attributes was undertaken by Dhami 75. A similar macro level analysis by Sharma pertaining to the distribution, layout and demographic profile of cantonment towns revealed a marked distinction in the population attributes of cantonment towns such as growth of population, literacy rates and sex ratio as compared to urban population. The study concluded the emergence of cantonment towns as ‘islands in the urbanization stream’ 76.

2. Socio-economic characteristics: A study on declining towns in India brought to light a decline in the population of cantonment towns located in Himachal Pradesh and Uttar Pradesh 77. The decline in population, particularly in hill station cantonments was attributed to their restricted economic base. However, a contrasting view in a study on Secunderabad Cantonment revealed the functional transformation within the cantonment, from a predominantly administrative and residential land use to concentration of commercial activities in its three market areas. According to this study, the quiet and clean cantonment landscape got transformed into an area of crowding and increased building densities 78.

3. Morphological features: Individual as well as group of hill station cantonment towns particularly Kasauli, Dagshai and Sabathu formed the study area for a number of studies which focussed on their location, morphology, functional characteristics, commodity and social structure in the civil section 79. The process of cultural landscape transference has been analysed through a study of bungalow names in hill station cantonments located in Himachal Pradesh and Uttaranchal 80.

4. Social morphology: Case studies on Kasauli, Sabathu and Pune cantonments brought to fore the social morphology of the bazaar section 81. These studies concluded that the
segregation of troops from the natives. Thus, a practice of issue of beer and rum to soldiers who had to endure ‘the absence of home pleasures, the non-existence of family cares, to divert with their sweet anxieties the routine of everyday life, the absence of all visible result from weary hours of monotonous parades and days of manoeuvring, and the extraordinary sameness of barrack life...’ was a method of keeping soldiers away from country liquor and the native town. Similarly, the establishment of ‘lal bazaars’ or the red light area or brothels in regimental bazaars within cantonments, in which only registered prostitutes were allowed to carry on their trade and the establishment of Lock Hospitals for mandatory examination, detention and treatment of diseased prostitutes in order to protect soldiers from contracting venereal diseases were means by which the State regulated prostitution. Morality legislations and sanitary reforms emerged as necessary interventions, particularly in dealing with venereal diseases among the British soldiers. Environmental sanitation in the form of better water supply, drainage and conservancy along with improved nutrition and housing positively affected the health of the British soldiers. Despite attempts to physically segregate the natives from the Europeans within cantonments through legal guidelines restricting contact with camp followers such as prostitutes and liquor vendors, however, the lines of division were mostly blurred.

The above review of studies on individual towns in India in general and on cantonment towns in particular suggests the following:

1. Although there are a number of studies pertaining to individual towns also having cantonments located in their vicinity, specific references to cantonment towns are brief and cantonments have been treated as mere appendages to the indigenous city and not studied as a distinct urban spatial unit.

2. Only a few studies have dealt with cantonment towns as a functional group or as a phenomenon discretely distributed in space. Such studies have described the attributes of their location, layout and demographic characteristics. In fact, there is a general lack of studies on individual cantonment towns as a functional-morphological entity.

3. Cantonment towns have been widely mentioned in literature pertaining to health issues concerning the soldiers; however, there is a dearth of studies on the civil area population either on the same or other themes.
morphology such as landuse and built form in response to the administrative regulations governing cantonment towns and socio-economic changes over time; (d) the type of socio-spatial structure in the civil area and its change over time.

The present study pertains to these aspects of the civil area of cantonment towns, with Jalandhar Cantonment as a case study. Its location in Punjab which has been historically strategic area in the northwest was an important factor in its selection as a study town for this work. In addition, the other two cantonment towns in Punjab, viz. Firozpur (the oldest cantonment in Punjab) and Amritsar are forward location cantonments and therefore, access to data pertaining to them is restricted.

Study Town

This study is based on Jalandhar Cantonment and its Civil Area. The Cantonment adjoins the city of the same name and is located in Jalandhar District of Punjab. An overview of the study area within its regional framework is presented below.

A. Locational setting

The Region: The district of Jalandhar occupies the apex of the Bist Jalandhar Doab in the State of Punjab. The Doab also known as the Saharwal Doab is an inter-fluvial territory lying between the rivers Beas and Sutlej and is marked by the Katardar range of Shiwalik hills in its eastern part. It is one the three physical-cultural regions of Punjab, the other two being Majha and Malwa. The Doaba region comprising the districts of Jalandhar, Hoshiarpur, Nawanshahar and Kapurthala is spread over an area of 8863 square kilometres and forms 17.6 per cent of the total area of the State. Jalandhar district located between 30°97’05” and 31°32’00” North latitude and 75°04’10” and 76°15’50” East longitudes covers an area of 3401 square kilometres. It shares its borders with the districts of Kapurthala to its west and northwest, Hoshiarpur to its north and northeast, Nawanshahar to its southeast, Ludhiana to its south and Moga and Firozpur to its southwest (Map 1.1). Administratively the district is divided into 5 tehsils, viz. Jalandhar I, Jalandhar II, Phillaur, Nakodar and Shahkot.

Cantonment: Jalandhar Cantonment located between 31°19’36” North latitude and 75°36’46” East longitude in Jalandhar I tehsil of the district occupies a near central position in the fertile Bist Jalandhar Doab of Punjab (Map 1.1). It lies 147 kilometres northwest of the State capital Chandigarh, with which it is connected by National Highway Number 21. The Cantonment is located to the southeast of Jalandhar City
Jalandhar Cantonment: Locational Setting

PUNJAB

K - Part of Kapurthala

To Amritsar

To Tanda

Pakistan

Jammu & Kashmir

Himachal Pradesh

Jalandhar

Jalandhar District

Ludhiana

Chd

Map 1.1

Source: Punjab Administrative Atlas, 2001
the Dha or Dhaia or Bangar. On this basis, three natural divisions can be identified in the district:

(a) The Sutlej lowlands comprising the Bet area of Nakodar and Phillaur tehsils.
(b) The uplands east of the Bein stream.
(c) The uplands west of the Bein stream.

The Bet tract lies below the well defined bank of the Sutlej and is on an average 25 feet below the level of the district. At several places the Bet is characterized by swamps and marshes formed in the ravines cut by small torrents draining into it. The soil of the Bet is thin alluvial deposit overlying sand, which is extremely fertile being constantly re-laid by the river. The uplands form an unbroken plain in the east of Bein and with low sand ridges occurring in the region west of Bein. The soil varies from clay and loam in the east of Bein to sand in the west of Bein. The uplands west of Bein consist of two tracts popularly known as Dona and Sirwal. The Dona tract with soils formed by two constituents-clay and sand lies in Nakodar and western parts of Jalandhar tehsils. A major part of Jalandhar tehsil including Jalandhar Cantonment is under the Sirwal tract.

C. Climate

The climate of the district is continental monsoon type, with hot summers and sufficiently cold winters and is similar to that of Punjab. The average temperature ranges between 40° C to 44° C during summer, with peak temperatures being recorded in the middle of June. During winters the temperature plummets to sub-freezing levels. Light frost occurs between mid-December and end January. The average annual rainfall is 776.6 millimetres, most of which is concentrated during the months of July to September. Light rainfall also occurs during winters, in the months of December and January.

D. Flora and Fauna

Due to extensive cultivation in the district there is little natural flora, except in the form of small grooves of Kikar (Acacia arabica), Shisham (Dalbergia sissoo), Ber (Ficus indica), Sarkanda (Erianthus munja) and Kahi (Holarrhena antidysenterica) which are useful reeds found in the riverine tract. Common shrubs found are Karil (Capparis decidua), Jhar-Beri (Zizyphus nummularia), Aak (Calotropis gigantean), Harmal (Peganum harmala) and Jhau (Tamarix dioica)101. Fauna is almost non-existent in the district, except such types of snakes as the Goh, Karait and a variety of Cobras. Wild
and the functioning of Jalandhar City as an important regional administrative headquarters since early times. The Jalandhar Doab was famous for sugar manufacturing and various kinds of cloth (chandeli cloth of Nakodar, coarse cloth of Phagwara, chintzes of Sultanpur), while Jalandhar City was known for bows and arrows, silver ware and laces. These products were traded to cities like Multan, Peshawar and Kabul.

**Medieval period:** Before the advent of the Sikh rule in the medieval period, Jalandhar Doab was ruled by the Rajputs, the Muslims including the Mughals and Afghans. Its physical extent during the Rajput rule under Raja Utito and Raja Susarma Chandra extended between the rivers Beas and Sutlej and the hill territories lying between river Ravi including the princely states of Chamba, Mandi and Suket, and Satadru or Sirhind in the plains. The plain portion of the region passed into the hands of Muslim ruler Ibrahim Shah of Ghor in 1179-1180 A.D., whereas its hill territories known as Kangra continued to be ruled by the Rajput rajas. Jalandhar Doab formed a part of the Mughal Empire till the middle of the eighteenth century. The region rose to prominence during the reign of Mughal emperor Akbar who named it as the Doab-i-Bist Jalandhar, i.e. the land between the Sutlej and Beas and placed under the Suba of Lahore. Jalandhar City formed the provincial headquarters of the Sarkar of Jalandhar. The Dastur circle of Jalandhar was the fifth largest in terms of areal extent and generated the third highest revenue in the Suba of Lahore. The location of a copper mint site in the City not only reflected its commercial importance as a revenue generator but also attests to its political stability. Despite Jalandhar’s relative antiquity, it does not find a specific mention in the pan regional network of routes whether ancient or medieval. The insularity of the region away from invasion routes led to the permanence of settlements, and contributed towards large population base, flourishing agriculture and economic prosperity. This testifies to its comparatively low significance in military perspective, thereby, contributing to its relative stability.

**Sikh rule:** After two decades (between 1747 and 1763) of being a stronghold of the Afghan invader Ahmad Shah Abdali, in 1766 the city of Jalandhar fell into the hands of the Sikh misl (confederacy) of Faizullapuria then headed by Khushal Singh. In 1811 Jalandhar Doab was annexed to the kingdom of Maharaja Ranjit Singh who gradually turned the politically fragmented Punjab into one powerful state with the Sikh kingdom extending between river Sutlej and north of river Indus (Map 1.2a). Jalandhar City was
The annexation of Punjab after the Second Anglo-Sikh War (1848-49) led to the setting up of an efficient network of road and electric telegraph to connect all the major military stations in northern India with those in northwest, to facilitate quick movement of men and material, and swift transmission of information. The realigned Grand Trunk Road connected Jalandhar Cantonment and the City to other major towns primarily for commercial purposes. It functioned as an important transit line during the Mutiny of 1857 when Trans-Sutlej Division 'formed the medium through which the supplies and troops from the whole of Punjab proper had to pass in order to reach Delhi. This division was also the supply depot of a large portion of the carriage used in the transport of the troops and stores to Delhi...' Further, the extension of railway line in 1869-70 connected the cantonments in Punjab, viz. Amritsar, Jalandhar and Ambala to that of Meerut in the United Provinces. Jalandhar Cantonment emerged as a second line cantonment which reflected in its relative importance vis-à-vis the native city. Cities like Jalandhar, Delhi and Sialkot were 'affected by cantonments' containing at least 5000 persons, unlike Rawalpindi, Ambala and Firozpur who were 'dominated by cantonments' which contained more than half the population and were located along the military route.

E.2 Establishment and Growth of Jalandhar Cantonment

Immediately after the annexation of Jalandhar Doab by the British, a special committee constituted by Brigadier Wheeler, the Commander of the Loodianah (modern Ludhiana) Field Force conducted a survey in February 1846 to examine the suitability and advantage of three places, viz. Sultanpur, Kapurthala and Jalandhar as military positions for permanent stationing of troops. The points of consideration included the strength of each place; facilities for building, for procuring forage and supplies; consideration of water, soil and climate, and facilities for constructing a barrack for a European Regiment and three troops or companies of European Artillery. In its report submitted in March 1846, the committee found the sites at Sultanpur and Kapurthala utterly unfit for a cantonment.

In Jalandhar, the tract elevated above the inundation of the river Bein was found to be well adapted for cantoning troops. The site most favourable and chosen was located 4 miles from the town of Jalandhar on the right of the high road leading to Phillaur and extended 3 miles in a westerly direction at a distance of 2 miles from the river Bein, embracing the villages of Kote, Mumgrool, Sofipind, Sisarpur and Morawali (Map 1.3).
Site Map for Cantonment at Jhalundur

Note: Spellings as per the source
1 Koss is nearly 1.25 mile

Source: Foreign Department; Secret Proceedings 1846: 26 December (No. 384-729) 1846, No 606, pp. 3637-3640, Map No. 3640; NAI

Map 1.3
Table 1.2

Acquisitions in Abadi Area of Villages Included in Jalandhar Cantonment (1847-1849)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of Village</th>
<th>No. of Houses Acquired</th>
<th>Religious Structures</th>
<th>No. of Wells</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Morawali</td>
<td>956</td>
<td>1 Thakoordwara</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Dakoha</td>
<td>922</td>
<td>-</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>Zadirabad</td>
<td>222</td>
<td>1 Masjid</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Boorhahwal</td>
<td>103</td>
<td>1 Masjid</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Khusropur</td>
<td>43</td>
<td>1 Masjid</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Todarpur</td>
<td>31</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Allahdinpur</td>
<td>19</td>
<td>1 Masjid</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>2296</td>
<td></td>
<td>5</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Foreign Department: Political Proceedings, 31 December 1847, No. 2342-43; Foreign Consultation, 12 May 1849, No. 185, NAI, New Delhi

Note: Spelling of the villages is as per the source.

Out of the seven, in four villages viz., Morawali, Boorhahwal, Khusropur and Allahdinpur the abadi area comprising a total of 1121 mud houses were pulled down to build new lines for European troops. A compensation of rupees 12617 was paid to the residents of these four villages, whereas rupees 9795 was paid to the inhabitants of the remaining three villages, Dakoha, Zadirabad and Todarpur who vacated their houses in October 1848.

Like all other cantonment towns established by the British, Jalandhar Cantonment as well as its Civil Area was planned and laid on a clearly defined geometric, grid-iron pattern (Map 1.4). Since the site on which the Cantonment was established is remarkably plain with little variation from north to south, the arrangement and growth of planned elements of its sub-areas, viz. military and civil were influenced by proximal location to the Grand Trunk Road and Phagwara Road respectively. The former provided direct access to civil administration in the Civil Lines, whereas the latter helped maintain links with adjoining settlements for smooth flow of commodities for local utilisation and trade carried out from the Civil Area. Both these sub-areas, i.e. the military area and the civil area were planned and planted almost simultaneously with the establishment of Jalandhar Cantonment in 1846, as a thana for abkaree in the kotwali in Sadar Bazaar was built in the same year.

The Military Area: Although Jalandhar Cantonment officially came into being on 1 May 1849 as a royal artillery station, however, the construction work of barracks for the soldiers began soon after the Cantonment was laid in 1846. The earliest were the Foot Artillery Barracks built in 1847 in the Royal Artillery (RA) Lines located in the northwest of the Cantonment. These were followed by the construction a European Hospital around 1847-48, European (British) Infantry Barracks in 1848 in the
for aviation ground was also earmarked for any operational requirements. Similar expansion of its functional establishments occurred during the Second World War (1939-1945) with the addition of a transit camp, one civilian internment camp, a veterinary hospital, mule training regiment and animal transport driver training regiment. Other developments in the military area in early decades also included establishment of Jalandhar Club (1909), Cantonment General Hospital (1923-25), a Soldier’s Home, Chamier Hotel (1928), a tennis court for British Other Ranks (1929) and Jubilee Hotel (1935). The gaining of Independence by India and the subsequent Partition of the country in 1947 brought about a reconstitution in the strategic importance of regions and the cantonments located within them. Jalandhar Cantonment acquired an important strategic position in Punjab due to its proximity to the international border with Pakistan. It grew in administrative hierarchy to a Sub-Area Headquarters in 1949 and a Corps Headquarters in 1951. The 11 Corps also known as Vajra Corps is amongst the highest operational formations of the army in the northwest region. It occupies the erstwhile buildings of KGRIM School which was shifted to Chail in 1947.

Although the developments in Jalandhar Cantonment in decades after Partition were military centric, however, measures for making it an important family station in the region were also put in place. Significant strides were made in the direction of provision of education facilities with opening of several schools in the military area particularly for children of the military personnel, viz. four Kendriya Vidyalaya, one Army Public School, besides privately owned schools like D.R. Jain National School, Montgomery Guru Nanak Khalsa Senior Secondary School and S.D. Model School for Boys and Girls. Facilities for sports, games and recreation in the Cantonment were enhanced over the decades, viz. Vajra Golf Course, an Olympic size swimming pool, Vajra Vatika, Vajra Sainik Institute for the soldiers, Vajra Officers Institute and Vajra Central Hall. In recent years, large scale building activity for accommodation facilities for families of officers and soldiers stationed in the Cantonment have been undertaken under the Married Accommodation Project (MAP) which was initiated across cantonment towns, military and air force stations in India from 2002 onwards. As many as 3540 residential units were constructed during the first and second phase in Jalandhar Cantonment.
locational association with a physically inferior site is also reflective of the low social status of its residents, majority of who belong to the low caste groups. RA Bazaar is located in the northwest of Sadar Bazaar on the road leading to Jalandhar City known as Bhagat Road. To its south, RA Bazaar is bound by Azad Road.

The fourth pocket of the Civil Area, i.e. Kumhar Mandi, meaning a potters’ settlement, is located in the south-eastern part of the Cantonment, in the proximity of two villages- Sofipind and Allahdinpur. It is the exclusive enclave of Kumhar families, who initially resided in Sofipind during the construction of barracks for the army in 1846-47, but were permanently settled within the limits of the Cantonment in 1870s.

From the historical perspective as described above, it emerges that the location of Jalandhar Cantonment in a relatively stable and economically prosperous region, and on the commercial segment of the realigned Grand Trunk Road led to its functioning as a second line or backup cantonment. Its locational advantage of a relatively insular character helped it to develop as an important staging-cum-transit military depot during the British period and as a Corps Headquarters in a holding or defensive operational role in the post-Independence period. This also attests to its emergence as an important cantonment town in the northwest region.

F. Population Characteristics

Jalandhar Cantonment adjoins Jalandhar City which is the third largest urban centre in Punjab after Ludhiana and Amritsar, and the largest in the district with 706043 persons residing within the jurisdiction of its Municipal Corporation as per 2001 Census. Jalandhar Cantonment has been an important urban centre in the district being next only to Jalandhar City in terms of population with 40531 persons in the same Census year. The special functional status of Jalandhar Cantonment as a military enclave characterised by movement of military population has led to fluctuating trends in its growth of population. By the same rationale, other socio-economic attributes of its population such as sex ratio, proportion of literates, workers and Scheduled Castes have been quite distinct. A detailed account of each of these population attributes for Jalandhar Cantonment has been presented in a chapter in the thesis.

Research Objectives

As a systematic geographical enquiry on cantonment towns, this study seeks to understand their characteristics as a distinct urban settlement type in India. With
Scale of study

This study has been conducted at two scales. The first is at the national level involving cantonment towns. Only those urban settlements which have been accorded a municipal status by virtue of being administered by a Cantonment Board and recognized as Cantonment by the Census of India, 2001 were considered as Cantonment Towns for the present study. There are a total of 59 cantonments located in nineteen states across the country according to the Census of India, 2001. The Census of 1961 was chosen as the earliest Census year for analysis pertaining to population attributes due to availability of comparable data vis-à-vis Census of 2001.

The second scale of this study pertains to Jalandhar Cantonment as a case study, which has been examined at two levels: (i) the entire Cantonment as a settlement unit in terms of its population profile; and (ii) the Civil Area in terms of its growth, attributes of its existing morphology and social patterning. The unit of analysis for the Civil Area is mohalla, since it forms the basic morphological-functional unit within a city in India as well as in the Civil Area of Jalandhar Cantonment, and is sufficiently small to reveal details and not too large to obliterate differences.

Data processing and representation

Data obtained from various sources were converted into ratios and percentages for most of the attributes studied. Suitable tables and graphs have been incorporated to give snapshot view of these data. The base maps pertaining to location of individual cantonment towns were prepared using the administrative map of India as given by the Census of India, 2001. The base maps of four pockets of the Civil Area were prepared from the General Land Register Plan of 1939. For the purpose of mapping, processed data were categorized by either using quartile values and therefore, four categories were arrived at, viz. very high, high, low and very low; or wherever possible natural breaks in data were employed for identifying three categories, viz. high, medium and low. The data have been represented cartographically in the form of choropleth maps to show the distribution of various attributes. These maps were generated through computer aided cartographic techniques involving digitising and layout of maps using Arc GIS 9.3 software. The discussion is based on the tables, diagrams and maps.

Since most chapters have their unique set of data requirements and methodological framework, a detailed account of these has been given in individual chapters.
5. Changes in Socio-Spatial Structure: It describes the patterns of areal distribution of religious groups within the Civil Area of Jalandhar Cantonment in 1939 and examines the changes that have occurred after Independence in the context of spatial patterns of caste groups in 2008.

6. Summary and Conclusions: The final chapter of the thesis presents a summary of the findings of this study and the conclusions drawn from it.

An additional select bibliography at the end of the thesis has also been given which includes published work related to the broad themes covered in this study.

References and Notes


5. Examples of such fortifications can be seen at Kausambi, Ahichchhatra, Rajgriha, Shishupalgarh, Jaduguda; Gingee, Dindigul; Ahmadnagar, Nagpur, Delhi, Agra, Ajmer etc. Malhotra, Brig. V.P. (2006), ibid., Vol. 1, pp. 27-28 and 73 and Vol. 2, p. 95.


officer to the other upon the officer being posted out of the station. On similar conditions, civilians were later allowed to construct bungalows. Mittal, J.P. (1998), Vol. I, op. cit., p. 4.


35. Beawar or Naya Shahar in Rajasthan is a case in point in which a cantonment was established around 1825. For the support of the army, a bazaar was developed in 1836 which formed the core of Naya Shahar. Despite the withdrawal of the army few decades later, the town continued to grow due to its commercial centrality and is today an important industrial town. Heitzman, J. (2008): “Middle Towns to Middle Cities in South Asia, 1800-2007”, Journal of Urban History, Vol. 35 (1), pp. 15-38.


50. A second model known as the *Bazaar* Based city model suggested by Dutt envisaged the growth of the city around an economic, administrative, transport or religious node located within the *bazaar*. This city centre is an amalgam of landuses with high intensity commercial and residential landuses being the most dominant and core dominated by the wealthier sections


65. Interestingly, Breese pointed out to cantonments as ‘the single most voracious land eaters in Indian urban areas...the layout is quite formalised and geometric, with a small market area...and developed as a self-contained unit with outside contact mostly unnecessary’. For generalizations on the morphology of Indian cities, see Brush, J.E. (1962): “The Morphology of Indian Cities”, in R. Turner Ed. India’s Urban Future, Oxford University Press, Bombay, pp. 57-70; Breese, G. (1966): Urbanization in Newly Developing Countries, Prentice Hall Inc., Englewood Cliffs, p. 66.

66. Another perspective on colonial architecture has been investigated through the transformation in domestic architecture of old Delhi from the traditional haveli to the colonial


88. The summary of Report of the Commission on the Sanitary State of the Army in India submitted in 1863 stated that the mortality among Company’s European troops was 69 per 1000 per annum and 8.4 per cent of men were constantly sick. Within the next half a decade the mortality had come down to 29 per 1000. See “The Mortality in Our Indian Army”, The British Medical Journal, (August 1, 1863), Vol. 2 (135), pp. 117-119. Firth, Colonel R.H. (1913): “Fifty Years Sanitary Effort in the Army of India”, Journal of the United Institution of India, Vol. XLIII (194), p. 40.

89. Between 1815 and 1855, nearly 1 lakh British-born soldiers died in India, costing the government an estimated loss of 10 million Pounds. See Arnold, D. (1993): Colonizing the


99. Some examples of the twin town urban form are Ambala City-Ambala Cantonment, Lucknow City-Lucknow Cantonment, Meerut City-Meerut Cantonment, Pune City-Pune Cantonment etc.


101. The botanical names of the trees and shrubs have been noted from http://www.medicinalplant.in/index.


103. The culmination of the process of colonization of the North Indian Plains was the rise of states or republics known as mahajanpadas. The first Buddhist text – Angutra Nikaya mentions sixteen mahajanpadas, viz. Kamboja, Gandhara, Kuru, Panchala, Kosala, Malla, Vajji, Kasi, Magadha, Anga, Vatsa, Chedi, Matsya, Surasena, Avanti and Asmaka. Their continuity as important political entities is discernible even in the medieval period when the Mughal Empire under Akbar was divided into twelve subah or provinces, which overlap these mahajanpadas. The twelve subahs are Kabul, Lahore, Dehli, Agrah, Awadh, Illahabad, Behar, Bengalah, Ajmere, Malwah and Ahmadabad. The later additions include Berar, Khandesh, Ahmadnagar and Multan. See Ahmad, A. (1999): Social Geography, Rawat Publications, Jaipur, pp. 96-101.


105. Historically, the entry point into the region constituting the undivided Punjab was through the Khyber Pass located in the northwest frontier province in Pakistan. This mountain pass as an integral part of the ancient silk route has perennially afforded trade and strategic link between Central Asia and South Asia, by virtue of which two settlements, viz. Taxila and Attock acquired nodal character forming points of Indian and foreign commerce as well as passage into the subcontinent and consequently linked the region to the Gangetic plains as far as Kasi and Mithila in the east. In addition, the Khyber Pass marked the entry point for the invasion of the Greeks, Kushanas, Afghans and the Mughal. See Chandra, M. (1977): Trade and Trade Routes in Ancient India, Abhinav Publications, New Delhi, p. 12; Ahmad, A. (1999), op. cit., p. 76.

106. The Grand Trunk Road which connected the Ganges-Yamuna river system through the Punjab to Central and Western Asia is coterminous with the Uttarapatha mentioned in ancient Indian texts. It is believed to have come into existence when wheeled traffic developed. It was the Royal Road of the Mauryans around 3rd century BC which connected Pushkalavati near Purushupura (Peshawar) in the northwest to the Mauryan capital at Patliputra in the east. Its alignment was completed by Sher Shah Suri between 1540 and 1545, but was realigned by the British after the annexation of Punjab in 1849. See Abdul, R. (1997): Historic Towns of Punjab: Ancient and Medieval Period, Ferozsons Pvt. Ltd., Rawalpindi, p. 154. Gommans, J. (2002):
121. A telegraph line was laid along the Grand Trunk Road in 1855 between Karnal and Peshawar with telegraph offices established en route at ‘the five most important places in a Civil, Military and Political point of view’ - at Ambala, Jalandhar, Lahore, Rawalpindi and Peshawar as stated by Mazumder, R.K. (2003), op. cit., pp. 59-60. See Abdul, R. (1997), op. cit., pp. 154-156.


124. Foreign Department: Secret Committee, 26 December 1846, No. 595, National Archives of India, New Delhi.

125. Foreign Department: Secret Committee, 26 December 1846, No. 606, National Archives of India, New Delhi.

126. The present residents of Kumhar Mandi belonging to the Kumhar caste trace their lineage to their ancestor by the name of Santokhi, who was a native of a village in Faizabad district in Uttar Pradesh and came to Jalandhar Cantonment in 1846-47. His son Beli Ram and grandson Ram Dayal find a mention in the General Land Register (GLR) of Kumhar Mandi. Field work, 2008.

127. The word abkaree is of Persian origin meaning ‘the business of distilling or selling strong waters, and hence elliptically the excise upon such business’. The abkaree is a tax on the manufacture and sale of spirituous liquor. Yule, H. and A.C. Burnell (1886): Hobson-Jobson: A Glossary of Colloquial Anglo-Indian Words and Phrases, and of Kindred Terms, Etymological, Historical, Geographical and Discursive, John Murray, London, p. 752.

128. A shop for the sale of liquor to the soldiers and camp followers was found operational on the outskirts of Jalandhar Cantonment as early as April 1846. The abkaree establishment was sanctioned under the supervision of Sub-Assistant Commissariat General of Jalandhar Cantonment with the abkaree darogha placed under the kotwal of Sadar Bazaar ‘as a measure of licensing...for prohibiting excess, and for preventing the European soldiers from easily obtaining spirituous liquor’. The references to the kotwali suggest it to be the police station in Mohalla 19 of Sadar Bazaar, which was amongst the first buildings to be erected in the Civil Area in early 1846. Its relatively central location is expected to have provided a heightened sense of and easy access to security in the then sparsely inhabited Civil Area, thereby helping the commercial segment to develop in its vicinity, particularly along the Phagwara Road. For abkaree establishment, see Foreign Department: Political, 26 December 1846, No. 1039 and No. 1044; Foreign Political Department: ‘C’ Consultation, 31 December 1847, No. 1996 and No. 2428-29, National Archives of India, New Delhi.

129. An unpublished write-up on the history of Jalandhar Cantonment written by Lt. Col. A.D.J. Speedie is placed at the Headquarters 91 Sub-Area, Jalandhar Cantonment.

130. Foreign Political Department: ‘C’ Consultation, 31 December 1847, No. 2017, National Archives of India, New Delhi.

131. Foreign Political Department: 22 April 1848, No. 9192, National Archives of India, New Delhi.

132. Interestingly, there is no church within the Civil Area and the only church, i.e. The Church of North India (CNI) was established in 1936 near BI Bazaar. The ownership records also showed an insignificant proportion of Christian residents in the Civil Area, a trend which

143. The Chamier Hotel was closed down in 1945 and converted into Alfa Officers Mess. Jubilee Hotel opened by Mohd. Ali Bax was closed down in 1963 and lay in ruins until its resumption by the military authorities. A family accommodation for military personnel was constructed over the site a decade ago. *Proceedings of the Cantonment Committee, 21 April 1922, 10 July 1923, 23 November 1926 and 28 September 1928, Jalandhar Cantonment Board and Field Work, 2008.*

144. Interview conducted with army officers in 2007 revealed that 11 Corps was raised at Ambala Cantonment in 1950 under Lieutenant General Kulwant Singh and was shifted to Jalandhar Cantonment in 1951. The 11 Corps is a holding formation with a vast operational area under it.


147. For details on the Married Accommodation Project see [http://dgmap.nic.in](http://dgmap.nic.in)

148. *Sudder* is from Arabic word *sadr*, is an adjective but used literally to mean chief. The use of the word was almost confined to the Bengal Presidency in the context of a board, court, ameen and station. See Yule, H. and A.C. Burnell (1886), *op. cit.*, p. 653.

149. BI Bazaar is colloquially known as *Lal Kurti Bazaar* in reference to the red coats of the British soldiers, whereas the RA Bazaar’s alternative name as *Topekhana*, from its association with artillery regiment, means the area for keeping guns or tope. Regimental bazaars are a common feature of cantonment towns and derive their names from their associated regiments. For example, Ambala Cantonment has British Cavalry Bazaar, Native Cavalry Bazaar. *Field Work, 2008.*


152. The Directorate General Defence Estates recognize an additional three urban units, namely Ajmer, Jalapahar and Lebong as cantonments. According to the Census of India, these were merged with their respective municipal towns for purposes of municipal administration in 1961, with the former in Ajmer town in Rajasthan and the latter two in Darjeeling town in West Bengal.

153. During the pre-Independence period, there were several cantonments located across the country, which owing to the gradual erosion of their strategic location and function as well as that of their adjoining towns were abandoned and merged within the municipal towns. Some of the examples include Lashkar and Neemuch in Madhya Pradesh, Kartarpur, Phillaur and Nakodar in Punjab. By and large the number of cantonment towns has remained constant in the post-Independence period, with the exception of a few cantonments such as Bakloh, Dalhousie, Morar and Dehu Road which were not enumerated as separate urban units in various Censuses during 1951 to 1971. The number of cantonment towns got stabilized to fifty nine in 1981.