Chapter III
PRESENT SCENARIO OF THE CITY

3.0. INTRODUCTION

Urban land use broadly refers to, how a particular piece of land is put to various use by man, in order to accommodate different activities, in an urban area. As a consequence of a large number of people in an urban area, each human activity requires a specific land use. Ranchi City has emerged from a tribal village and with the process of urbanisation; the land use has been altered in accordance to the urban activities. It exhibits a typical kind of land use pattern, mixed structures of urban and rural nature.

3.1. GENERAL LAND USE

Alike any other urban area Ranchi City comprises of the Central Business District (CBD) located at the centre and the urban area seem to have expanded in a linear pattern along the main corridors in all directions. The CBD area or the commercial core of the City is dominant mainly of wholesale activities. Retail activities have developed place along the major corridors of the City i.e. along main road, Circular road, Kanke Road and Patratu road. Apart from the Commercial Core, the other nuclei that have emerged in the City are the Doranda, Hatia and Ranchi railway stations and the industrial areas at Tupudana and Tatisilwai. The Residential Areas have developed around the Commercial Core of the City. It lacks a hierarchical form of urban development, primarily because of its evolution from a tribal village to an administrative town and thereafter from an industrial town to the State Capital.
On the basis of the dominant land use in the wards, a III tier classification may be applied for the City. The City has been divided into 5 Urban Units, at level I (Figure 3.1). These have been further classified 11 Urban Units at level II (Figure 3.2) and 17 Urban Units at level III (Figure 3.3). The general land use, in these urban units has been discussed below:

### 3.1.1. Old Residential Areas

These areas mainly comprise of the initial settlements. These are basically owned by the tribal communities. These areas have been settled in clusters and are locally known as *tolies*, like NayaToli, Pathalkudwa, SiromToli, BasarToli, GunguToli, Tang TangToli, ChunwaToli, DhumsaToli, MakchundToli, Samlong, Chutia, Tiril, GarhaToli, KhorhaToli, BarhiToli. Such Old Residential Areas mainly stretch over Ward numbers 11, 12, 13, 14, 15, 16, 17, 18 and 19.

Being the initial settlements, these localities exhibit traditional set up mixed with modern architecture. Recently the initial architecture comprising of semi pucca houses have been demolished and buildings have been erected. Of late the single storey buildings have been supplemented by additional floors, which are primarily being used for rent purposes.

#### 3.1.1.1. Community Based Old Residential Areas

It has been observed that the old residential areas were primarily community based settlements and people of the same community clustered together in one area. A clear segregation may be seen between the areas dominated by a particular community. Later these areas began to be settled by mixed community. On the basis of community these areas may be further classified into the following areas:
3.1.1.1. a. Areas Dominated by Christian Community

Ward numbers 15 and 18, mainly comprising of clusters like, NayaToli, Pathalkudwa, Tang TangToli, ChunwaToli, GunguToli, BarhiToli, GarhaToli, KhorhaToli and Peace Road have been dominated by tribal Christian community. The secondary roads connecting these areas are quite broad and these areas are semi-compact in nature with sufficient spaces between residences.

3.1.1.1. b. Areas Dominated by Muslim Community

Muslims in Ranchi initially settled in Ward number 11, mainly comprising of KantaToli area. This area is a highly compact area in terms of residences and development of roads and sanitation facilities is quite under developed in such areas.

3.1.1.1. c. Areas Dominated by Hindu Community

Ward numbers 12, 13 and 14 comprising of parts of Chutia, Samlong, MakchundToli, DhumsaToli were initially under the Zamindars engaged in vegetable cultivation and mango orchards. The lands in these areas have been purchased basically by the immigrants from rural parts of Bihar, who had migrated to Ranchi for cultivation. These migrants primarily belong to the Hindu Community.

Being located near to the major educational institutions, lodges for students have cropped up in place of these areas. With the increasing rate of the influx of students from rural and neighbouring areas and the attractive profit from lodges, floors were added to the existing houses and vegetable fields were converted to residential units. The people engaged in cultivation have switched over to commercial activities like grocery shops and other activities serving the student population like internet cafe, restaurants, stationary etc.
The establishment of Oxford Public School in MakchundToli has been to quite an extent responsible for the springing up of establishments for the student community. Due to increasing building activities shops supplying building materials and furnishings, wooden works, fabrication etc. have come up. Having emerged as a major residential area, facilities like that of medical and others catering to the daily essential needs of the residents have come up. Such areas lack proper sanitation and drainage facilities. Also the streets need to be developed.

3.1.1. d. Areas Dominated by Mixed Community

The initial developments which are relatively newer in terms of settlement comprise of mixed communities. These include the residences different communities, including the Christians, Hindus, Muslims and the Sarnas (the animists). However same communities are found more or less settled together. Such areas mainly include Ward number 19, which was later dominated by the Bengalis and few South Indians, who migrated to the City with urbanisation and educational development of the City, as skilled servicemen.

A major portion of the Muslim population is also found in Ward numbers 16 and 17, especially in NayaToli and Pathalkudwa. These are basically the transitional area between the areas dominated solely by Muslims and Christians. However a clear segregation between the residences of the two communities is apparent.

3.1.2. Up Market Areas

These are the areas inhabited primarily by the high income groups. The land value and the rent are exorbitantly high in these areas, owing to the on road location. With the increase in income and better standards of living, new Up Market Areas
have also come up in the City. These areas are rich in civic amenities. These are also planned in nature. These mainly comprise of High Rise buildings. These areas exhibit a mixed type of socio-economic characteristics. Such areas may be divided into the following two types:

3.1.2.1. Old Up-Market Areas

These areas include those areas which have developed even before the formation of the Capital, with urbanization of the City. These include Ward numbers 8, 20, 21 and 29, which includes area areas like Lalpur, Bariatu, Morabadi Ashok Nagar, Kadru, Doranda and Harmu. The population includes primarily the state and central government employees and business personnel. The Bariatu area is mainly dominated by the doctors due to its affinity to Rajendra Institute of Medical Science. Areas like Ashok Nagar, Kadru, Doranda and Harmu are dominated by government servants. These still continue to be Up Market Areas with further developments in public utilities.

Areas like Anantpur and Nivaranpur, have developed below the over-bridge, are areas inhabited by the people, who have migrated to the City primarily for the purpose of employment.

3.1.2.2. New Up-Market Areas

These include areas in Ward numbers 1, 45 and 52, which have been inhabited by high income groups after the formation of the State. Areas along the Kanke road, Bhitta and Lake Avenue, in Ward number 1 are newly developed areas, resided by the high income groups. These areas mainly include City’s biggest apartments. Vertical development of residential units is apparent in these areas. The apartments along the
roads are primarily residential cum commercial units. The lower floors are devoted to commercial activities and upper ones for the purpose of residing. The commercial activities have developed quite rapidly along the roads, catering to the daily needs of the population and other basic requirements. After the formation of the state the roads in these areas have been broadened, consuming most of the land under the tree plantations and parts encroaching he broadened roads.

3.1.3. Commercial Areas

The main commercial area of the City, alike other urban areas are located in the core of the City as the Central Business District. It includes the Upper bazaar and the Lower Bazaar area.

3.1.3.1. Upper Bazaar

Upper Bazaar is dominated by wholesale commercial activities. This area is occupied by the business communities from Rajasthan and Gujrat, who had migrated to the City in its initial stages of urbanisation. They are basically engaged in garment, cloth and jewellers business. A Street popularly known as Sonar Patti is a famous street in the area devoted to the sale of jewellary items. This consists of the oldest jewellers of the City. Another street, RangrezGali is one of the busiest streets of the market, engaged in retail activities. The area basically comprises of commercial-cum residential set up, with lower floors engaged for commerce and rest for residence, especially in case of old establishments.

The commercial activities have developed in this area in a very haphazard manner, served by narrow roads, with frequent incidences of traffic jam. The residences in this area lack the basic facilities like courtyard, parking and water
harvest structures. The area lacks public transport facilities as the area is quite congested. Medical facilities are also more than 5 kilometers. SevaSadan, a hospital donated by a Marwari businessman serves the area but the quality of treatment for major ailments is not preferred by the residents of the area. Institutions like Marwari College, Marwari School and Balkishna School have also been the contribution of the businessmen in this area. However the residents do not prefer going to these institutions.

As far as the changes are concerned the area has experienced rapid development of commercial activities without any considerable development in the infrastructure. The commercial activities in the area have also been diversified, which was initially confined to clothes and garments. Initially the area was purely engaged in wholesale activities but of late retail has also developed in the area. Few malls can also be spotted. Most of the residents have moved to lesser congested areas in the City. Banks, trade union offices and alike have emerged to assist the commercial activities in the area. The businessmen of this area have also extended their business in other parts of the state and the country.

3.1.3.2. Lower Bazaar

The Lower Bazaar area includes areas of Hindpiri. This area is primarily dominated by the Muslim community, with relative lower level of education and income. The area is engaged in relatively small wholesale and retail activities like furnishings, spare parts, paints, glassworks etc. This area is again congested with haphazard constructions and difficult mobility. Medical facilities include dispensaries and pharmacies which effectively serve this area. The condition of sanitation in the area is quite poor. The area lacks well connected drains and soak-pits and it often
faces the problem of water logging in the rainy season. The maintenance of most of the lanes of this area is a contribution of the MLAs and MPs. Few drains have also been maintained by them. This area has experienced relatively less development than the Upper Bazaar.

### 3.1.4. Newly Developed Downtown Areas

These areas are the ones that were initially in the form of Down Town Areas, dominated by relatively low income groups, mainly belonging to labour class or people engaged in small agricultural activities especially in the form of vegetable farming. These consist of small residential units, mostly kuccha and semi pucca. The area was initially under cultivation and orchards with open spaces.

After the formation of the Jharkhand state and Ranchi getting the status of the capital these areas have been developed into residential areas with multi-storied structures. These include areas like Jayprakash Nagar, ShashiVihar, Garhi, in Ward number 6, Hehal, Pundag, Hesag. The land values of these areas were initially relatively less, therefore individual residential units, mainly duplexes have developed. Rest of the area has been developed into apartments rapidly and has huge demand basically because of its location away from the congestion of the City and relative lower land value.

These areas are served with broad connecting lanes connected to the main roads with good sanitation facilities. The individual dwelling units in the area are mostly spread in a wide area with proper flower gardens, courtyard and parking space. Being newer establishments as per the new building norms these areas have water harvesting structures and limited tree plantations. The houses having outhouses have either converted them to garages or given them on rent to the students or the daily
wage labourers. The recent constructions instead of having separate garages for their vehicles have porticos for parking. Also as per the norms the main buildings are 10 feet away from the boundary of the premises. The workplaces and institutions of most of the residents are 5 to 10 kilometers away from their residences. However these areas have a good connectivity of autos and buses.

Areas like Harmu, Pundag, Hehal, Pandara, in ward numbers 34, 35 and 36 were mainly open spaces and under agriculture towards the outskirts of the City but recently these areas have been a hub of multi-storied buildings. Most of the huge government establishments and institutions are in these areas. Pandara has been a major area for vehicle showrooms and service centres. This area is also an important area for vegetable wholesale market.

Hotwar, in ward number 7 has been developed as the KhelGaon for the National games in 2011. A major change in this area has been the construction of the flyover connecting it to the Namkum section of Ring Road.

3.1.5. Residential Quarters

These include the quarters provided by the institutions, like H.E.C, Shyamli Colony, AG colony, Railway Colony, Jawahar Nagar and Housing Colonies provided by the Housing Board, in Bariatu and Harmu.

H.E.C colony has been the oldest residential quarters. The industry had to undergo losses so it sold most of the quarters to its employees, which are either being used for rent purposes or have been sold to third parties. Few are being used by the original employees of H.E.C. this area also has been take by the government to build its offices and buildings like VidhanSabha, Project Building, Ministry of Human
Resource Development, Space Application Centre, Social and Women Welfare. Few areas have also been taken by the CRPF and CISF establishments. This area is served by a good number of schools and colleges and other institutions within its premises.

Shyamli colony is provided by MECON, with essential facilities. Similarly AG Colony, Railway Colony and Jawahar Nagar are the residential quarters provided by Attorney General, S.E Railways and Coal India respectively.

The Housing colonies provided by the housing board lack considerably maintenance and regular supply of water. Of late there has not been much change in the physical structure of the area except for market facilities and other basic amenities. These areas are well connected with public transport.

These colonies have been set up in a well planned manner with ample spacing between the units. These are the areas with almost every required facility like vegetable market, shops, community halls, stadiums, open grounds and recreation centers. These colonies have different categories of residential units ranging from single storied units to multi storied buildings. These have proper courtyards, and separate parking spaces. Being quite old establishments the latest requirement of water harvesting is absent in these areas. These areas have essential facilities like that of banks, ATMs, fuel stations and each colony has a school managed either by the respective institution or there is one in its vicinity. Moreover each colony has a hospital or a health center of its own.
3.1.6. Transformed Arable Land and Open Spaces

These areas lie towards the outskirts of Ranchi like BadaGhaghra, ChotaGhaaghra and Tupudana. BadaGhaghra and ChotaGhaaghra have been one of the most productive areas of the region along the banks of river Ghaghra. The Ring road has been developed along these areas after the state formation after which these areas have been developed for residential purposes and commercial activities have been emerging. Quite a considerable portion of the cultivated had been consumed in the construction of the ring road, for which monetary compensation has been provided to the owners. These pieces of land are primarily tribal. However, small tracts of land are still being cultivated for growing paddy, wheat and vegetables for self consumption. Self constructed residences have also sprung up along with apartments, especially by the residents of the City who want to move out of the City congestion. Also the land values of these areas had been quite low. Huge institutions have been established in this area. Though the daily needs are fulfilled in this area but for major requirements people have to move towards the core of the City. Income level of the residents is not very high in this area. The level of education is relatively low compared to the core of the City. The residents mostly are tribal the land being tribal and according to the Chotanagpur Tenancy Act a tribal land can be sold only to a tribal.

Tupudana initially was an industrial area with cultivated lands and open spaces, which has been converted to new residential areas with ample civic amenities.
like banks, markets catering to essential domestic needs and other public services. New institutions have come up to serve the developing residential areas.

3.1.7. **Industrial Land Use**

Ranchi comprises of three main industrial areas, namely, H.E.C, Kokar and Tupudana Industrial areas. H. E.C is the only heavy industry and oldest among the three and has been responsible for the urbanization of the City. These have been the growth centres and have been responsible for the overall development of the adjoining areas. With the establishment of these industries the infrastructure has been strengthened and has given aid to the development of other activities especially commercial activities During the 2\(^{nd}\) FYP in the year 1958 HEC was established in the Hatia region, covering an area of 1300 square kilometres, in collaboration with the Czechoslovakia and Russia. The production began in 1963. It has 3 producing units

- Heavy Machine Building Plant (HMBP)
- Heavy Machine Tools Plant (HMTP)
- Foundry Forge Plant (FFP)

These engineering units led to the development of other engineering units like Shree Ram Ball Bearing (Ratu), Black Wire Rope Factory (Tatisilwai), Bharat Westfalia Limited (Namkum), Garden Reach Ship Builders (Dhuwa) etc. However these are undergoing losses.

Later the Kokar and the Tupudana areas came into being. Kokar has emerged as a densely populated area and has become highly commercialised. Tupudana is yet in a developing stage.
3.1.8. Administrative Land Use

Ranchi has had administrative significance ever since its inception as a town, with most of the headquarters during the Bihar regime. New Administrative Areas have emerged with the increased administrative significance of the City as a Capital. These areas may be divided into two:

3.1.8.1. Old Administrative Area

The old administrative area lies in ward number 22, along with the State Administrative Building, Commissioner’s Office, Ranchi Regional Development Authority, Ranchi Municipal Corporation Office, Department of Water and Sanitation, District Transport Office, Kutchery and other offices. This is also linked to the Governor’s House, Judicial Academy, Administrative Training Institute, SoochnaBhawan, Anti-Corruption Department, the Speaker’s residence, Judges’ residences and the Chief Ministers residence. Most of these set ups have been existing even before the formation of the separate state. This administrative area is situated adjacent to the commercial core of the City.

3.1.8.2. New Administrative Area

These include the administrative areas that have developed after the formation of the Capital. These area planned areas with well developed infrastructure and public facilities and are mostly cannot be converted to any other land use.

This includes the administrative area, with most of the recent administrative developments like the State Secretariat, High Court, Attorney General Office, Van Bhawan, Survey of India located in the Doranda region.
Adjacent to it lies the most recent administrative area that is the H.E.C Industrial-cum-Administrative area with the Legislative Assembly, Fisheries department, Project Building, with different regional administrative departments, Ministry of Human Resource Development, Jharkhand Space Application Centre, Social and Women Welfare and other State offices.

3.1.9. Land under Defence

The main defence area of the City lies towards the eastern boundary, near the Namkum Region. The area being a defence area is planned in nature and prevents encroachment of other land uses in this area. Besides training areas, offices and army residences, the area is well equipped with small shopping areas for daily needs, schools, health centers and other minor public facilities. Other important Cantonments however with smaller expanse lie in the Bariatu and Dipatoli region, which lie between the mixed land uses.

3.2. Urban Infrastructure

Urban infrastructure plays an important role in the development of an area, resulting in a change in land use. It assigns importance to a particular piece of land and determines its use. The infrastructure of Ranchi has been strengthened as the City has developed.
3.2.1. Transportation

Ranchi is well connected to other parts of the state and India, by roadways, railways and airways. This good connectivity of transport network is the result of industrialisation in Ranchi and neighbouring areas.

3.2.1.1. Roads

Most of the urban development in Ranchi has taken place along the major roads and regional linkages radially in the past. The commercial activities primarily have developed along the Main Road beginning at the Upper Bazaar at north-west, Administrative Offices at north, Commercial Centers along the central spine, Administrative office at the south and south-east, culminating to self sufficient Industrial Area (HEC, HSL) at the south-west end (Master Plan of Ranchi -1983, RRDA).

The City has three National Highways, connecting it to other parts of the country. NH-33 passes through the City, connecting in north to Hazaribagh, Dhanbad and further to Uttar Pradesh and Delhi, in south-east to Jamshedpur, Orissa and Kolkata. NH-75 connects the City in west to the western part of the state and further to Bombay. NH-23 connects the City in south-western direction to Chattisgarh. (Figure3.4)

The total length of the roads at present is 942.94 kilometres, comprising of 309.27 kilometres of major roads and 633.66 kilometres of secondary roads. The average width of the secondary roads in the city is 10 to 25 meters and that of other major roads is 5 to 10 meters. About 470 kilometres roads comprise of the sub-arterial and colony roads, which are build and maintained by Ranchi Municipal Corporation.
The total 470 kilometres roads maintained by RMC constitute of 346 kilometres of pucca roads, out of which 32 kilometres are WBM (Water Bound Macadane: refers to the cemented connecting secondary roads), 62 kilometres are bituminous and 252 kilometres are concrete. On the other hand 124 kilometres roads are kuccha out of which only 29 kilometres are motorable and 90 kilometres are non-motorable (Figure 3.5).

There are 21 major road corridors that are most frequented by the commuters, especially for education and work. These have a total length of 78.9 kilometres and are built and maintained by Public Welfare Department (PWD) (Figure3.6).
Table 3.2: MAJOR CORRIDORS OF THE CITY

<table>
<thead>
<tr>
<th>CORRIDORS</th>
<th>LENGTH (kilometres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FirayalalChowk to ShaheedChowk</td>
<td>0.3</td>
</tr>
<tr>
<td>FirayalalChowk to KantatoliChowk</td>
<td>3</td>
</tr>
<tr>
<td>FirayalalChowk to RajendraChowk</td>
<td>4.2</td>
</tr>
<tr>
<td>Railway Station to KantatoliChowk</td>
<td>2.7</td>
</tr>
<tr>
<td>Railway Station to ArgoraChowk</td>
<td>3.6</td>
</tr>
<tr>
<td>RajendraChowk to NamkumChowk</td>
<td>5.6</td>
</tr>
<tr>
<td>RajendraChowk to BirsaChowk</td>
<td>3.2</td>
</tr>
<tr>
<td>BirsaChowk to Hatia</td>
<td>5.7</td>
</tr>
<tr>
<td>BirsaChowk to Tupudana</td>
<td>7.4</td>
</tr>
<tr>
<td>BirsaChowk to ArgoraChowk</td>
<td>3.4</td>
</tr>
<tr>
<td>ArgoraChowk to Ratu Road</td>
<td>4.5</td>
</tr>
<tr>
<td>Piska More to Lalgutua</td>
<td>5</td>
</tr>
<tr>
<td>Piska More to Lohardaga Road</td>
<td>6</td>
</tr>
<tr>
<td>Piska More to Ratu Road</td>
<td>2</td>
</tr>
<tr>
<td>ShaheedChowk to Kachahri</td>
<td>1.2</td>
</tr>
<tr>
<td>ShaheedChowk to Ratu Road</td>
<td>1.4</td>
</tr>
<tr>
<td>Kutchery to KaramToli</td>
<td>1.2</td>
</tr>
<tr>
<td>Kutchery to Ratu Road</td>
<td>1</td>
</tr>
<tr>
<td>KaramToli to Booty More</td>
<td>6.3</td>
</tr>
<tr>
<td>Booty More to KantatoliChowk</td>
<td>5.4</td>
</tr>
<tr>
<td>KantatoliChowk to NamkumChowk</td>
<td>5.8</td>
</tr>
<tr>
<td><strong>Total Length</strong></td>
<td><strong>78.9</strong></td>
</tr>
</tbody>
</table>

*Source: District Transport Office, Ranchi*

Though the main streets of the City have widened and strengthened after the formation of the Capital. The other infrastructure like footpaths are absent in these roads. Only 50 percent of major roads have drainage built along the sides. Most of these secondary roads have potholes without a proper drainage system along the sides. The kuccha roads on the fringes are in a very bad state.

3.2.1.1. Traffic Attraction Zones

The major traffic attraction zones include major commercial areas, educational institutions, medical facilities, and government offices (Figure No3.7). Most of the traffic attraction points in the City are located along the Main Road from Upper
Bazaar to RajendraChowk, the traffic to other attraction points tends to cross the whole City, as thoroughfare traffic. The built-up areas are in close proximity to these zones, along the roads.

**3.2.1.1.2. Public Transport**

Main modes of public transport within the City are cycle-rickshaws, e-rickshaws and auto-rickshaws. Autos act as the para transit contributing to nearly 12 percent of the transport demand. Some Bus services provided under the JNURM operate in selected routes of the City and are mainly availed by the college going students. Few passengers use the inter-city bus services for travelling between the city bus stand and the peripheral areas within the City. Besides these private taxi services like OLA and JAT have been operating within the City.

**3.2.1.1.3. Private Transport**

There has been a significant increase in the private transport, specifically in terms of two-wheelers. Private vehicles, comprising of two and four wheelers, comprise of about 85 percent of the total vehicular traffic. There has been a remarkable increase in the number of two-wheelers among the teenagers. The uncertainty in the public transport system has led to an increase in private transport.

**3.2.1.1.4. Bus Terminal**

The Birsamunda Bus Stand have been strategically placed on the Station Road, which serves the maximum of inter-state bus services, connecting Ranchi with Hazaribagh, Jamshedpur, Dhanbad and Patna. The other bus stand proposed and under operation at the Ratu Road, is not being thoroughly being used to its capacity, instead the earlier bus stand at the heart of the City is still in use. The bus
stand at Ratu Road in the City presently serves the Minibuses, Trackers and City public transport autos.

3.2.1.1.5. Recent Developments in Road Transport

3.2.1.1.5.1. Newly Constructed Ranchi Ring Road

The first 6 lane Ring Road was inaugurated in 2014. This project was completed in 4 phases. Phases I and II of the Ring Road is a green-field thoroughfare, which is a part of NH-33 between Ranchi and Jamshedpur that has been widened to four lanes by the National Highways Authority of India (NHAI)

Phase III starts from near Rampur along NH-33 (Ranchi-Jamshedpur road) till Tupudana (Ranchi-Khunti state highway) and Phase IV from Tupudana to NH-23 (Ranchi-Gumla road). Phases V and VI connect NH-23 with NH-75 (Ranchi-Daltonganj road).

Sections III, IV, V and VI of Ranchi Ring Road constructed under the Jharkhand Accelerated Road Development Corporation was inaugurated at Palandu, about 15 kilometres from the State capital. The 36.192 kilometres Ring Road is among the first being executed under Public-Private Partnership (PPP) in Jharkhand. It is also among the first as far as execution under BOT (built, own and transfer) model is concerned. Infrastructure Leasing & Financial Services Limited (IL&FS) has executed the project on behalf of JARDCL, a joint venture of the State Road Construction Department and IL&FS.

The four sections will reduce heavy vehicular traffic that currently passes through main City areas. Now, vehicles coming from Jamshedpur will take a detour near Rampur to go towards Khunti, Gumla, Lohardaga and other districts.
The final Phase VII — connecting NH-75 (Ranchi-Daltonganj road) with NH-33 (Ranchi-Hazaribagh road) — is being constructed.

3.2.1.5.2. Newly Constructed Hazaribagh-Ranchi Expressway

This project includes the development of four lanes with an aggregate length of approximately 319 kilometres connecting Hazaribagh to Ranchi. This project is a partnership between NHAI and ITNL, on a BOT (Build-Operate-Transfer) basis for a period of 18 years including an initial construction period of two and a half years. State Highways Authority of Jharkhand (SHAJ) has been implementing the project on build-finance-operation-transfer (BFOT) basis.

3.2.1.6. Vehicular Growth

There has been a substantial increase in the number of vehicles in the City. There has been a continuous increase in the sale of vehicles ever since the formation of the Capital (Figure 3.9). In a period of 15 years (2001-2015) the sale has increased by 359 percent. The increase of females in the workforce participation also has necessitated at least 2 vehicles in a household.

There has been an increasing rage of two-wheelers among the college going teenagers, including the female students (Figure 3.11). The number of four-wheelers has also substantially increased. And a remarkable 38 percent of the households have two four-wheelers, one compact or hatchback and another luxury car. There has been an increase in the sale of Sedans and SUVs. But the compact cars are more preferred due to congestion in the City.

With the increase in commercial activities there has been an increase in the number of goods carriers. There was an increase in the number of mini buses in the
year 2012-2013 (Figure 3.12). This was due to the increase in the city bus services in
the City, under JNNURM. The increase in the number of vehicles may be attributed to
the increase in per capita income, increase in the flow of credit in the market, with
attractive company offers. Two-wheelers and compact cars are being preferred due to
traffic congestion

Despite the increase in the number of registered vehicles in the City there has
not been a proportionate improvement, leading to the problem of traffic congestion,
jams and vehicular pollution. One of the major problems faced by the City is that of
parking. Prior to the creation of the new capital, there were only six parking places in
the City, which has been the same till date. The City lacks an efficient traffic
management. The density of roads is still low. The wards have a high density of roads
in the commercial core of the City. The developing areas are still to develop road
infrastructure.

3.2.1.2. Railways

A well developed railway network connects Ranchi City to the major cities of
India. Initially the railways were majorly developed for transportation of raw
materials and finished products to and from the industries. It comes within the South-
Eastern Railway Zone, and is the headquarter of the Ranchi division of this zone of
Indian Railway. The Ranchi division was formed out of the Adra Railway Division of
South-Eastern Railway, in the year 2003. The City, apart from Ranchi station, is
served by 3 more stations namely, Hatia Station, Tatisilwai Station and Namkum
Station. There are 16 trains that originate from, 16 end at and 20 trains pass through
the Ranchi Railway station. The City has frequent trains for Delhi, Kolkata, Chennai,
Mumbai, Bangalore and other parts of India.
Besides these, it also has frequent electrified local passenger trains for adjoining destinations. The station was renovated in the year 2012, with modern facilities. It has altogether 6 platforms, interconnected with 2 foot over-bridges. It has been proposed to set up an escalator to interconnect the platforms. It has separate platforms for local trains, to avoid congestion. It is connected to the state bus terminus in its vicinity and the airport, within a distance less than 5 kilometers. The railway yard is located in Hatia.

The nearest airports from the railway station are BirsaMunda International Airport (5 kilometers), Gaya Airport (179 kilometers), LokNayakJayprakash Airport, Patna (280 kilometers) and NetajiSubhash Chandra Bose Airport, Kolkata (365 kilometers).

Because of its connectivity to the neighbouring areas hundreds of students and workers commute daily to and from the City. The frequency of parcels especially the commercial goods has increased over time.

3.2.1.3. Airways

The BirsaMunda International Airport is located about 7 kilometers away from the core of the City, in Hinoo. Earlier it was a small domestic airport, but after the formation of the Capital City, the importance of the airport increased. Along with the administrative importance, the National Games and the Indian Premier League and One-Day-International matches necessitated the construction of a bigger international terminus, covering an area of about 0.02 square kilometres.

The Runway extends up to a length of 2712.72 metres. It has a capacity of 500 domestic and 200 international passengers at a time. In order to attract more airlines
to the City the Aerodrome Traffic Frequency tax was reduced from 20 percent to 4 percent. Besides this, night landing has been made free, in order to facilitate more flights to the metro cities in the morning. It has 5 parking bays and 3 more would be added very soon. This would make it the first Tier-II airport in India, with 8 planned parking bays.

It has direct flights for Patna, Delhi, Mumbai, Goa and Kolkata. It is served by major airlines like Air India, Go-Air, Indigo, Jet Konnect and Jet Airways. Recently, flights for Haj pilgrimage to Saudi Arabia have started, with a prime purpose of reducing the pressure on the Kolkata airport, for the pilgrims from Eastern India.

3.3. Urban Facilities

With the growth of the city there has been an increase in the responsibility of the Urban Local Bodies to provide the City with facilities at the household upto the City level, which have been responsible for further growth of the City.

3.3.1. Water Supply

In Ranchi City the responsibility of planning, designing and construction of water supply lies with The Department of Water Supply and Sewerage Development (DWS and SD). It receives funds from the Urban Development and Housing Department, through the RMC, for the capital goods and for operation and management, for the distribution of water. The RMC provides pipeline connections to the households and is responsible for the collection of water tax, which is a part of the holding tax.
The water supply system in the City is primarily governed by:

- **Public Health and Engineering Department (PHED)**
  
  It is basically looks after the construction and maintenance of pumping and water treatment plants and transmission and distribution of water.

- **Ranchi Municipal Corporation (RMC)**
  
  The RMC along with the Water Board looks after the provision of water connections to the households and other establishments like, institutions, government organizations, commercial centers, public facilities and alike.

  It is also responsible for the collection of revenue.

### 3.3.1.1. Water Supply Zones

PHED has divided the RMC area into eleven Water Zones, for the distribution of water (Figure. These exclude the HEC and the Cantonment area that cover 20 percent of the total municipal area. The eleven zones along with the constituting population are as shown in the following table:

**Table 3.3 Water Supply Zones in Ranchi City**

<table>
<thead>
<tr>
<th>WATER ZONES</th>
<th>POPULATION</th>
<th>PERCENT OF TOTAL POPULATION OF THE WATER ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>I: Hindpiri Zone</td>
<td>18500</td>
<td>4.093</td>
</tr>
<tr>
<td>II: Church Road Zone</td>
<td>77000</td>
<td>17.035</td>
</tr>
<tr>
<td>III: Piska More Zone</td>
<td>57500</td>
<td>12.721</td>
</tr>
<tr>
<td>VI: SiromToli Zone</td>
<td>32500</td>
<td>7.190</td>
</tr>
<tr>
<td>V: KantaToli Zone</td>
<td>70000</td>
<td>15.487</td>
</tr>
<tr>
<td>VI: Lalpur Zone</td>
<td>48500</td>
<td>10.730</td>
</tr>
<tr>
<td>VII: Morabadi Zone</td>
<td>38500</td>
<td>8.518</td>
</tr>
<tr>
<td>VIII: Ratu Road and Harmu Road</td>
<td>18000</td>
<td>3.982</td>
</tr>
<tr>
<td>IX: South Office Para and North Office Para Zone</td>
<td>22500</td>
<td>4.978</td>
</tr>
<tr>
<td>X: Hinoo and adjoining areas</td>
<td>35500</td>
<td>7.854</td>
</tr>
<tr>
<td>XI: Kanke Zone</td>
<td>33500</td>
<td>7.412</td>
</tr>
<tr>
<td>TOTAL</td>
<td>452000</td>
<td>100</td>
</tr>
</tbody>
</table>

*Source: Public Health and Engineering Department, Ranchi*
The HEC area is composed of a total population of 75000, while the cantonment area comprises of 21000 population. The above eleven zones, cover 50 percent of the total municipal area. Each Zone has its own overhead Water Tank (Figure No), However Ranchi Institute of Medical Sciences (RIMS) and Upper Bazar have direct pumping facilities. Presently the City is served by three surface water sources, as shown in the table below:

**Table 3.4: Surface Water Sources Serving Ranchi City**

<table>
<thead>
<tr>
<th>DAM</th>
<th>NO. OF ZONES SERVED</th>
<th>WATER WORKS</th>
<th>SOURCE</th>
<th>TREATMENT CAPACITY (MLD)</th>
<th>STORAGE CAPACITY (ML)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kanke Dam</td>
<td>1</td>
<td>Kanke Water Works</td>
<td>KaramNallah</td>
<td>19.50</td>
<td>7.72</td>
</tr>
<tr>
<td>Hatia Dam</td>
<td>2</td>
<td>Hatia Water Works</td>
<td>Subarnarekha River</td>
<td>56.83</td>
<td>28.18</td>
</tr>
<tr>
<td>Rukka Dam</td>
<td>8</td>
<td>Getalsud Reservoir or Subarnarekha Water Works</td>
<td>Subarnarekha River</td>
<td>170.48</td>
<td>NOT AVAILABLE</td>
</tr>
</tbody>
</table>

*Source: PHED*

Eight zones and the cantonment area are served by Rukka Reservoir, one zone by Gonda reservoir, through pipeline and two zones and the HEC area by the Hatia reservoir. Only 65 percent of the total population is served by the water supply network. The expansion, replacement and laying down of new pipelines have been also undertaken by PHED.

Presently only 7.8 percent (13710) of the total households (174750) have water connections. Besides the piped water supply the City receives water from the sources shown in Figure.
30 percent of the total inhabited areas still do not have access to safe and regular supply of water. Only 48 percent of the total households are served with piped water supply. The remaining households have to depend on wells, hand-pumps provided by RMC, tube-wells, tanks, ponds, rivers and other sources like bottled water, tanker supply and neighbourhood sources.

Source: PHED

Figure 3.15: Distribution of Households by Sources of Drinking Water

Source: Census of India, 2011

Figure 3.16: Availability of Drinking Water in the Households
3.3.2. Banking Facilities

Flow of credit plays a major role in the development of an area. At present there are more than 62 branches of different the 19 nationalized and private banks operating in the City, along with their respective ATMs. State Bank of India and Bank of India are the leading banks in the City. The other banks include, Indian Overseas Bank, Central Bank of India, Canara Bank, Allahabad Bank, Oriental Bank of Commerce, Punjab National Banks, Federal bank, Corporation Bank, Bank of Maharashtra, Andhra Bank, Karnataka Bank, NABARD, UCO Bank, Union Bank of India, United Bank of India, Vijaya Bank and other associate banks along with private banks like HDFC, ICICI, IDBI, Axis, ING Vysya Bank, Syndicate Bank, Yes Bank etc.

On an average nearly 80 percent of the households have access to banking facilities. Most of the banks are available within a distance of 5 kilometres (Figure 3.17 and 3.18) The main branches of the banks are located along the major road corridors especially near the commercial core of the City. The sub-branches are located scattered near other shopping areas and within the campuses of the institutions and offices. Moreover nearly every ward has at least one ATM. There has been an increase in the flow of credit in the market which has given incentives for taking up of new ventures that have broad about structural changes in the City.

3.3.3. Health Facilities

Rajendra Institute of Medical Sciences is the main government hospital of the City. The Central Institute of Psychiatry (CIP) and the Ranchi Institute of Neuro-Psychiatry and Allied Sciences (RINPAS) are the 2 government Psychiatry Hospitals. There are 22 health centres and 3 blood banks run by the government. Besides these
there are 30 private hospitals and 28 nursing homes are found in different parts of the City to cater the health needs of the inhabitants of the City. There are about 13 hospital-cum-research centers engaged in medical services and research. At present multi-specialty hospitals are functioning in the City namely Orchid, Apollo, Sante-Vita, Medica, Medanta, SirdiSai etc. Recently, Jharkhand State Cancer Research Hospital has been established in the City. Nursing homes and clinics are found almost in all the wards within a vicinity of less than 5 kilometers. Health facilities in the City have been discussed in more detail in the following chapters.

3.3.4. Educational Facilities

As per 2011 Census, the literacy rate has increased to 88.49 percent in Ranchi City. In the City, there are altogether 619 number of schools. Out of which 450 numbers are primary and upper primary with Secondary and Higher secondary schools, 119 numbers are secondary with High-secondary and 50 are Higher secondary schools.

There has been a continuous increase in the number of schools with the development of the City, along with the Government’s compulsory education programmes and infrastructure development as per the Nagar Palika Act.

The Ranchi City has 21 General colleges located at different parts of the region. Out of total, the Ranchi urban area has 10-colleges i.e. Doranda College, Doranda; Gossner College, J. N. College, Dhurwa; Marwari College separate for boys and girls, Nirmala College, Doranda; Ranchi College, S. S. Memorial College, St. Paul College, St. Xavier College, Ranchi Women's College. There are 14 professional and other technical institutions in the City. Out of total, out of which 10 are located in Ranchi urban areas along with 2 Industrial Training
Institutes located at Itki road and Kokar and 4 technical institutes present in rural areas within the Ranchi planning area boundary. In addition, the State Government has its own institution for training their personnel and orientation courses. These are tribal orientation and study centre and extension training centre at Hehal and the Administrative Training Institute at Ranchi. There is another institution namely the Tribal Research Institute in Morabadi under the State Welfare Department. Educational facilities in the City have been discussed in detail in the following chapters.

3.4. Sewerage and Sanitation

Sanitation is an index of socio-cultural development of an area. Better sanitation facilities ensure improved environment and health conditions, complimenting the economic development of the area. On the other hand continued increase in urban population along with the increase in the population of urban poor without proper sewage and sanitation facilities, coupled with constriction of resources, has led to rapid deterioration of the environment and community health.

3.4.1. Sewerage Conditions and Latrine Facilities

The City lacks a centralized sewerage network. There was no Sewage Treatment Plant treatment (STP) plant for the entire City, however to avoid contamination and pollution of the Kanke Dam a STP is built serving about 50,000 population was built. Planned areas like HEC and MECON have their own STP and sewerage system. However HEC sewerage system is very old and the STP is in a dying stage. The STP serves a total population of 59,000, as compared to the total population of 10.06 Lac at present. The sewerage facilities are accessible only to 5.8 percent of the total population. The remaining population relies on septic tanks, soak
pits and open defecation. At present, the larger part of sewage remains untreated due to absence of any treatment plant and sewerage system in the City, the rest of the sewage is disposed of through the septic tanks and soak pits.

The City lacks also a centralized sewerage system. However MECON has its own sewerage system. The residential and commercial buildings and educational institutions mostly have septic tanks and soak pits. The slum areas within the RMC boundary are not served by any sanitary services at all, and the practice of open defecation, discharge of sewage in the adjacent drains is very common. Due to the continuous discharge of wastewater into water bodies, the water quality has been continuously deteriorating.

The other prevalent method in the City is septic tanks with and without soak pits. Generally the newly developed areas have septic tanks but without soak-pits. Hence the treated waste wastewater from these septic tanks is directly discharged to open drains passing through the streets which ultimately find its way into water bodies through open drains. The deterioration of water quality is a serious problem for the City.

In Ranchi City, 34 percent of population resides in slums without having any individual toilet facility. Public toilets have been provided in some of the slum area. Only 11 percent of slum population has access to the public toilets. SulabhShaochalaya International is responsible for operation and maintenance of public toilets and sanitation system. Only 33.3 percent of the total households have access to latrines.
Figure 3.21.: Access to Latrine Facilities in the Households, 2011

Source: Census of India, 2011
3.4.2. Waste Water Drainage

The City has a very poor drainage system in the households, which often causes problems of water-logging and poor conditions during the rainy season. In the City only 23.8 percent of the households are served by closed drains and 27.6 percent by open ones. The remaining 48 percent of the households have no drains. That is only 52 percent of the households have drainage facilities and a major portion of the households are devoid of such facilities. It has a total length of 950.95 kilometres of drains, of which 98.12 percent (933.1 kilometres) are masonry drains, 1.46 percent (13.93 kilometres) are culverts and 0.41 percent (3.92 kilometres) are pipe drains (Census, 2011).

The drains have been developed along the roads. The length of drains along these roads is 441.04 kilometres, of which 41.43 percent (182.72 kilometres) of the total length is kuccha and rest 58.57 percent (258.32 kilometres) are pucca.

The wards have an average length of 14.23 kilometres of drains. Maximum length of drains are found in ward no. 9, with maximum length of both pucca (41 kilometres) and kuccha (24 kilometres) drains. The drainage coverage is also relatively higher in ward nos. 8, 7 and 10, with total drains of 54.50, 38.60 and 37 kilometres length, respectively. Ward no. 6 has the minimum length (3.25 kilometres) of drains. Ward numbers 1, 2, 3, 4 and 31 have total length of drains less than 5 kilometres long.

3.4.3. Solid Waste Management

The responsibility of collection, transportation and disposal of solid waste lies with the Ranchi Municipal Corporation. The solid waste management system in the
City is not well organized. Merely 27000 (18.75 percent) households are being served under this system, as against 1,44,000 total households, covering only 10 wards mainly, 2, 5, 6, 8, 11, 12, 13, 24, 25 & 28. The City lacks a proper sanitary landfill site. All the collected wastes are disposed 18 kilometers away from the City in a landfill site at Jhiribasti, where no practice like compaction and topping up of the waste with a layer of soil exists. Poor management of wastes has led to poor sanitary conditions and health hazards.

At present the City produces around 255 tons of domestic solid waste per day, comprising of domestic wastes, bio-medical wastes, industrial wastes, wastes from the vegetable and fruit market, commercial areas, hotels and restaurants and from the drains in the form of wet silt. The total amount of waste generated by the region is about 360 tonnes/day, comprising of around 70 percent of Biodegradable Wastes 15 percent of Recyclable Wastes and others (Building Materials, Drain Silt) 15 percent (Ranchi municipal corporation).

Physical and chemical characteristics of solid waste vary depending on population size and geographical location though composition of urban waste is changing with increasing use of packaging material and plastics.

Ward number 14, 15 and 16 produce maximum amount of wastes. These three wards together produce about 100 tons of wastes daily, i.e. about 27.78 percent of the total wastes produced in the entire City. These wards include muhallaslike Karbala tank road, Azad Basti, Dom Toli, Nazir Ali Lane, Hindpiri, Khetmuhalla, Lake Road,Gudri, Kasai muhalla, Islamnagar, Pathalkudwa etc. These areas are very congested with very narrow lanes which make collection of wastes very difficult and thus these areas are often left unattended.
After the formation of the capital city the Nagar Palika Act became more effective, this strengthened the city’s infrastructure. The sanitation and cleanliness of the city was emphasized. With this the management of wastes was given to a private company named A-Z, by the Ranchi Municipal Corporation. It is supposed to provide community bins for waste disposal at frequent interval of distance.

![Figure 3.22: Availability of Community Bins in the Sample](image)

**Figure 3.22: Availability of Community Bins in the Sample**

**Source:** Field Survey

Quite a satisfactory 85.4 percent of the households have such a facility, within a distance of 200 meters. The sample even reports 10.6 percent such households who have community bins within 100 meters. Remaining households have bins within a distance of 500 meters. However most of the households opt for door to door collection of wastes. Though the bins have been provided by the municipal corporation, the cleaning of these bins is very irregular. As a result of which it attracts scavengers and gives a bad odour, inviting diseases.
The Ranchi Municipal Corporation facilitates door to door collection of wastes by the *safaitiras*, for which the households have to pay a monthly amount of Rs. 40. They have distributed separate dust bins for bio-degradable and non-biodegradable wastes, for waste collection but 94 percent of the households does not practice waste segregation. 98.57 percent of the sampled households is covered by door-to-door collection of wastes, while the rest practice burning of wastes for disposal. However the door-to-door collection of wastes is very irregular and irregularity has been reported by all the surveyed households. The *safaitiras* are also responsible for cleaning the drains of the city. Beside the municipal also provides sweepers for cleaning the roads. However none of such services are regular.
3.5. SUMMARY AND CONCLUSION

The Ranchi City is dominated by mixed structures of urban and rural nature. Alike any other urban area Ranchi City comprises of the Central Business District (CBD) located at the centre and the urban area seem to have expanded in a linear pattern along the main corridors in all directions. The Residential Areas have developed around the Commercial Core of the City. However, an absence hierarchical form of urban development has been observed primarily because of its evolution from a tribal village to an administrative town and thereafter from an industrial town to the State Capital.

The City initially had community based settlements. As the City developed mixed community settlements gradually emerged. The present land use is mainly dominated by new residential developments that have taken place with the increase in the population of the City. These developments have mainly taken place on the agricultural land and open spaces. The down-town areas have developed into new residential areas. The increase in the administrative importance of the City has resulted in the emergence of new administrative areas. However these lie scattered in the City. As the City has developed, there has been an increase high class society, mainly comprising of businessmen and administrative servants new up market areas have emerged. In terms of commercial activities, there has been emergence of new specialized wholesale areas and retail activities and the retail activities have developed throughout the City.

Though there has been an increase in the urban facilities, but an irregularity has been observed in their distribution. These are concentrated in few relatively developed pockets. Similarly infrastructure development has also been confined to
few areas. In this way the available facilities and the infrastructure is not sufficient in relation to the demand of the City. With the increase in the urbanization and resultant increase in the population there has been an increase in the sewage load and solid waste generation. Water demand has also increased simultaneously. But public facilities have not increased accordingly. The sanitation facilities have also not been able to match with the demand of the City.