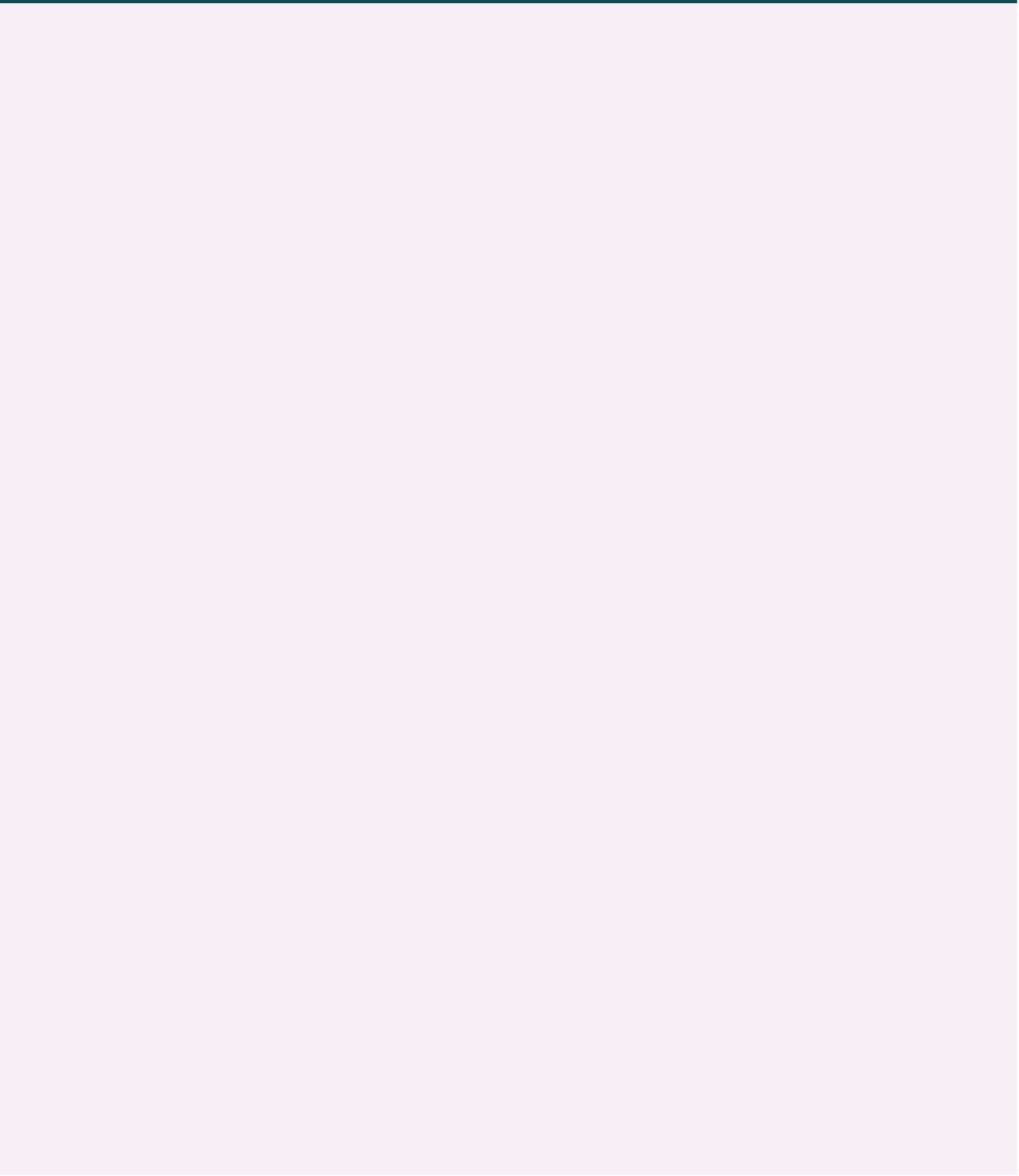
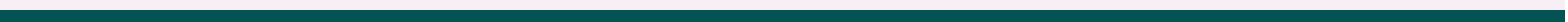
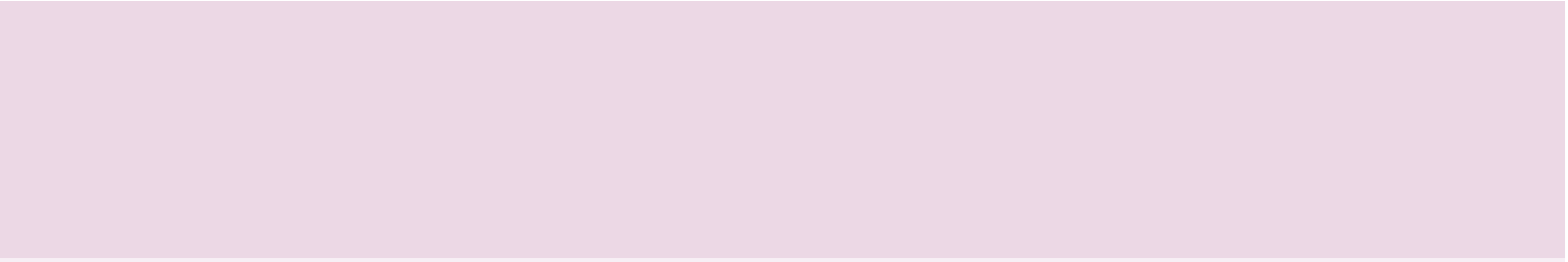


# DPZ *05*

**LALKHAN BAZAAR - PAHARTALI**



## 4.5 DPZ-05: LALKHAN BAZAAR-PAHARTALI

### 4.5.1 EXISTING SITUATION

**a) Location and Administrative Boundary:** This Zone is on the north of the city and is largely hilly in character. The Foy's Lake, one of the most important landmarks of Chittagong is located here. There are large railway holdings within picturesque rolling landscape. Unfortunately there has been massive destruction to the hills for creation of housing sites by private housing societies and individuals. The Zone has an area of 5914 acres (Land use survey, 2006-07). Planned intervention in a comprehensive manner can turn this area into a unique development and conservation site. The Zone consists of the following six wards: part of ward 2, ward 7, 8, 9, 13 and 14.



*Fig. 4-35 Natural beauty of Foy's lake and its adjacent hilly areas.*

**b) Population:** The population of the Area was 468625 in 2001 (BBS). Through planned intervention the population may grow to 8, 08,340 in 2015 and the population density may be 112 per acre in 2015.

**c) Land Ownership:** Government is a major landowner. This may be classified into four groups such as i) Bangladesh Railway - the major landowner, Forest Department, NHA, PWD, ii) Government developed industrial estates, iii) Government land leased to the private sector for real estate. iv) Government Khash land.

Non-operational railway land has been leased to educational, community organizations (USTC, Imperial Hospital), and socio economic societies

(Diabetic society, Kidney Foundation etc), and for tourism and commerce (Foy's Lake).

**d) Socio Economic Condition:** From socio economic survey, it is found that HH size varies from 1 to 12. Common size is 4-6 persons per HH. The average literacy rate is 89%. In order to have better job or business, around 92% of the migrated people have moved from their native place to this zone (survey report-II, 2007).

Piped water supply exists in 20% HH, (tube wells 77%) electricity connection in 91% and sanitary toilet facilities in 86% HH (BBS, 2001). An average 45% of the households depend on trade and commerce for their livelihood

### 4.5.2 EXISTING LAND USE AND DEVELOPMENT STATUS

**a) Residential:** Residential areas consist of the railway estates, government developments, formal and informal private housing estates and scattered private development.

**i) Railway Housing:** Large railway estate under housing and associated use consists of hill top bungalows, single storied detached and semi detached houses and three to four storied flats. The first two categories have been built more than half a century ago and except those of the top management, are in a state of neglect and disrepair. Housing areas are well served by schools, play grounds and community halls. Mosques, youth and labor clubs have been constructed haphazardly. A number of housing sites and areas along roads and rail tracks have been illegally encroached with shops, bazaars and houses. Large areas of undulating picturesque land offers ample scope for urban development to cater to the wider needs of the city.

**ii) Government Development:** The Sugandha R/A is a HI and MI area. It has now become a concrete slum, with no community open space and buildings touching each other, ignoring legal set back regulations. Two low income projects have

**Table 4.5: Existing land use features of DPZ-05**

Sl No.	Type of use	Area (in acre)	Percentage
1	Agriculture	11	0.19%
2	Commercial	141	2.38%
3	Education & Research	48	0.81%
4	Manufacturing & Processing	344	5.82%
5	Mixed Use	80	1.35%
6	Office Use	17	0.29%
7	Open/Community Space	48	0.81%
8	Residential	1635	27.65%
9	Service Facilities	50	0.85%
10	Transportation	405	6.85%
11	Vacant Land	393	6.64%
12	Water Body	255	4.31%
13	Miscellaneous	49	0.83%
14	Restricted area	142	2.40%
15	Hill	2296	38.82%
<b>Total</b>		<b>5914</b>	<b>100%</b>

*Source: Land use survey, 2006-2007*

been developed by NHA. These are: the Sher Shah Colony, which is in a poor environmental state. The second is the Kaiballaydham Low income housing project popularly known as the 'Bishya Bank colony', 41.30 acres has been developed. This includes urban facilities and places for employment. Designated open spaces have been allocated to plots. Some 38% housing plots are currently occupied. There is a large demand for industrial workers housing, which has been inadequately addressed.

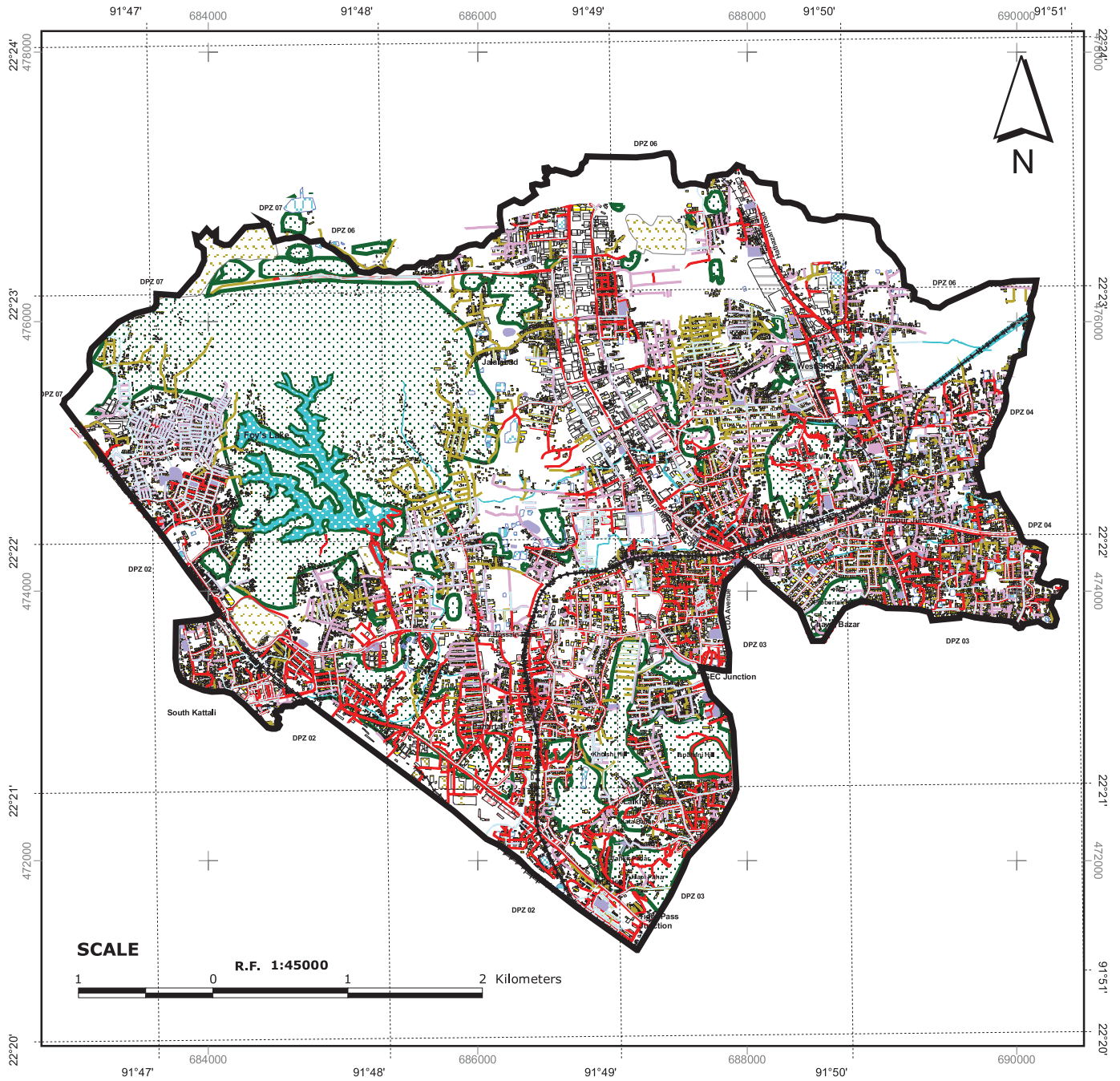
**iii) Private Societies/ Private:** Important established HI cooperative societies are the Nasirabad Housing Society (HS) and Khulshi HS. Both sites are on land leased by the government. Major transformation to high-rise high-density development without any addition to open space or urban amenities is occurring in both sites, with buildings occupying more than 70% site area. The single small open space is grossly inadequate to serve the community and retains environmental sustainability.

Important private developments are the South

Khulshi Housing and the Nasirabad Properties. Multi storied apartments have largely been constructed in the former. There is inadequate access, drainage and open spaces provision. The Authority must ensure reservations of open space, play ground, as per this plan and the Government rules 2004. and pedestrian access provisions.

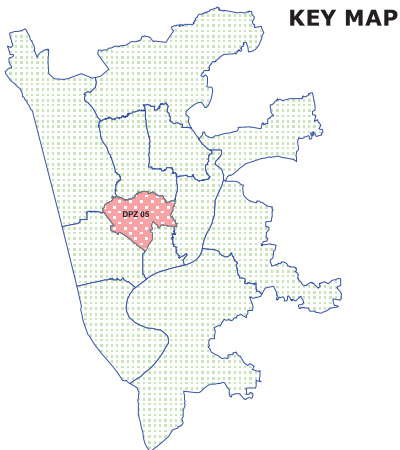
Concentration of scattered schemes, by real estate developers is in three major locations. These are: i) between Foy's lake and the Baizid Bostami road ii) between Baizid Bostami road and Hathazari road and iii) south of Zakir Hossain road. All three areas are hilly in character and efforts to develop them have resulted in large scale deterioration of the environment but very little housing units have been constructed due to lack of roads, utilities and amenities. The area i) is largely vacant, though these have been sold as medium and small sized plots. Area (ii) is in a more advanced state of development with some access roads and houses. Two major housing sites are the Cosmopolitan and the Hill View Housing Society. (Draft Detailed Plan CMMP: Foy's Lake to Hathazari Road)

**FIGURE 4.9: EXISTING LAND USE MAP OF DPZ- 05 (Lalkhan Bazaar-Pahartali)**



**SCALE**

R.F. 1:45000  
1 0 1 2 Kilometers



**LEGEND**

**Existing Structure**

- Residential
- Commercial Activity
- Community Service
- Education & Research
- Governmental Services
- Manufacturing and Processing Activity
- Miscellaneous
- Mixed Use
- Non Government Services
- Service Activity
- Transport & Communication
- Agriculture

**Existing Road**

- Pucca Road
- Semi-pucca Road
- Katcha Road
- Railway Line

**Existing Waterbodies**

- Marshland
- Ditch
- Pond
- Khal
- Drain

**Other Use**

- Restricted
- Hilly Area
- Other Use

**b) Industrial:** Some 460 industries are located in the Nasirabad- Sholashahar Light Industrial Estate and its surroundings. The formal I/A has been developed by PWD (approx 100 ha/240 acres). CDA and BSCIC added further plots. Significant industries are the steel re-rolling mills; paint, jute products, garments and accessories, edible oil, foam, food products, chemical, textiles etc. There are also a number of vehicle repair workshops, offices and shops.

Within the industrial area, a number of plots are either vacant or underutilized. Some industries are in an abandoned state. At least one has been changed to educational use (school).

There is no treatment facility in this industrial area. Pollution of the surrounding areas is a health and environmental hazard. Flash flooding and water logging is a major problem. Water surging from the hills routinely inundates the Baizid road.

The Amin Jute mills hold properties, which have been encroached or used in a haphazard and inefficient manner. The mill itself is in a state of dereliction. The Ispahani Marshal is in this zone. Also present are a number of garments and other factories in the Hathazari road and the CDA Avenue.

**c) Commercial:** A formal commercial area (Office) is on the CDA Avenue at Sholashahar. Concentrations on shop houses are along all major roads. Concentration of shopping malls, hotels and restaurants are in the GEC junction. Many are in an advanced state of construction. These buildings have not maintained adequate offsets at the ground level for the volume of pedestrian and motorized traffic, which is being (or will be) generated by the buildings. Legal site offset and adequate parking provision has not been maintained. Cars are parked at the road edge of this single most important spinal city road and junction. This is a major source of traffic congestion and this situation will deteriorate immensely. Shopping development directly from Zakir Hossain (which is a major intercity connection) is also a threat to the urban environment and for the operations of public bus services.

**d) Topography and Drainage:** The topography of this planning zone is unique in character. Except a few portion to the east of the Hathazari road, the entire area has the hilly undulating landscape. Based on topography the area can be divided into at least four morphological units, which are hills, valleys, piedmont and low lying plain lands. Hills occupy the major part of this area. The Dhaka-Chittagong rail tracts in the south and west; Tiger Pass-CDA Avenue in the south; OR Nizam road in the south and Hathazari road in the east bound the hill area. Hills of this area are about 100 ft height, which gradually increases up to 200 ft in the north. Some well-known hills are Batali hill, Prabartak hill, FRI hill, and Ispahani hill. There are valley areas within these hills, some of which are wide, extended and nearly plain. Bordering the hill areas, both on the west and eastern edges, a narrow strip of piedmont land areas has been developed. A small portion in the southeast part is the low-lying land. The hill topography plays a vital role in the radial dispersal of gullies and streams from hill slopes to the plains. Some major streams originating from the hill ranges and flow outward are Shital Jharna khal, Baman Shahi khal, Khandakia khal, Akuti Jharna canal, Ruby gate khal, Gainachara khal and Kattoli khal.

**e) Transport:** Major roads are the Tiger Pass, CDA Avenue, OR Nizam road, DT road, Ambagan road and Baizid Bostami road. A new road is under construction (by CDA) near the northern boundary, which cuts through virgin hills and undisturbed valleys. There is a network of internal access roads within the railway estate, government and formal private housing and industrial estates.



**Pic. 4-36** Scenic view of undulating hilly landscape from Tiger Pass to CDA Avenue

**f) Restricted Area:** The large grounds and facilities of the Metropolitan police and a part of the Chittagong Cantonment are in this zone. Some of the structures of the Police are of historical significance.

**g) Community Facilities:** A number of educational and health facilities have emerged and are ongoing along the Zakir Hossain road on land leased from the railway and on private land. Significant ones are listed below.

**i) Health:** Significant facilities are: the Holy Crescent Hospital, Bangabandhu Medical College and Hospital, and Eye Infirmary. Limited services by voluntary societies such as; the Lions eye hospital, Diabetic, Kidney and Deaf & Dumb Clinic exist. Lack of operational funds limit their services and physical development program.

**ii) Education:** Significant government facilities are the Veterinary University, Technical Training Institute, Women's technical college, Nasirabad Govt. women's' college, Nasirabad Govt. girls school, and Nasirabad boys high school.

Important private facilities are the University of Science and Technology Chittagong, MES College, Ispahani Public School and college.

Buildings for a private university (southern university) have been constructed. Very recently (2006) government has given 104 acres of land immediate north of Foy's Lake) to the Asian University for Women for setting up an international university.

**h) Utility Services:**

**i) Water supply:** Chittagong WASA is responsible authority to supply pipeline water in DPZ 05. Trunk mains remain along the major roads such as CDA Avenue (36"), Zakir Hossain road (24"), Baizid Bostami road (12"), Hathazari (12") and some other parts of the area. Besides, a network of smaller mains also lies in different parts of this zone.

**ii) Electricity:** Electricity supply authority provides electricity through a network of transmission line in this zone. Generally 11 kv and 6 kv lines are used to supply electricity in industrial and residential areas respectively. In accordance with

the demand, capacity of transmission lines varies in different parts of DPZ-05.

**iii) Gas:** Bakhrabad Gas System Ltd. is responsible authority for supplying gas in this zone. Main distribution lines lie along CDA Avenue, Baizid Bostami road and Hathazari road. Besides, a network of smaller mains also serves the study area.

**iv) Sewerage system:** Like other parts of Chittagong city no sewerage system exists in this zone. Sewage is discharged by septic tanks, drains, and directly to the ground.

**v) Telecommunication:** T&T is responsible authority to provide telecommunication line in Detailed Planning Zone 05.

**vi) Solid waste collection and disposal:** The Conservancy Department of Chittagong City Corporation (CCC) is responsible to collect waste from dustbin and transport them to the final disposal sites. Under this study it is found that waste management system of CCC does not achieve acceptable level.

**i) Leisure, Recreation, Parks and Open Spaces:** The Foy's lake and its surrounding hilly area is of outstanding natural beauty. The lake had been recognized as a part of Regional Park in the 1961 Master Plan and a botanical and zoological Garden. Only a small zoological garden has been established. Others remain unfulfilled.

A total of 469 acres of Railway land consisting of the Foy's Lake and adjacent areas has been leased to the private company - Concord



**Fig. 4-37** Foy's lake amusement park.

International for development into a tourist attraction. It has been commissioned in 2004. Phase 1 development work is complete (amusements park south of the dam). Phase 2 (Water Park, motel and Resort) is in progress and



*Pic. 4-38 Foy's lake water park.*

is partly complete. These two phases comprise of 120 acres. Phase 3 proposals are for a cable car and a five star hotel. (Refer section on environment)

- j) Culture and Heritage:** Important heritage site is the Baizid Bostami Mosque site with tank filled with over 100 year old turtles. Others are the Nandir Hat temple and residence, Kaiballaydham Temple and Prabartak Sangha.
- k) Agriculture:** Some 10.731 acres land is under agricultural use. These consist of paddy fields, poultry and fish and diary farm

#### 4.5.3 EXISTING ENVIRONMENTAL ISSUES

The generalized land use pattern of the area is the narrow industrial belt along both sides of Baizid Bostami road; planned residential area at Khulshi, Kaiballaydham, Nasirabad and west of FRI; unplanned residential areas at Lalkhan bazaar, Kusumbagh, Alfalah Gali and Muradpur, forest coverage in the hills; brick fields in the east of Foy's lake hill ranges and the Foy's lake area. Environmental issues in this planning zone are:

**i) Hill cutting:** The extent of hill cutting is so destructive that is a major environmental concern

for the City. Evidence of merciless and uncontrolled hill cutting for brickfields and for housing plots is widespread. Depletion of the forest ecology is the result of hill cutting. Hill cutting within the Foy's Lake area in the name of tourism development is alarming. Based on the scale of hill cutting, the hills in this Zone has been classified as type; H0, H1 and H2 sites.

**Type - H0** site is the environmentally sensitive Foy's lake area. The Lake is not only a unique landscape of natural attraction, but is a cultural and historical heritage of the City. The Lake and hills need full protection.

**Type - H1** sites are those hills, which have not been noticeably altered, and needs to be conserved as hill vegetation areas.

**Type -H2** sites are hills that have been significantly altered. Controlled low-density housing and institutional development may be permitted. Development rights will vary according to site and type of use.

**ii) Hill Erosion and Landslide:** Massive hillside erosion after a torrential rainfall has even lead to loss of live and property. Land slides at Kusumbagh and Mati Jharna area on 6 June 2007 and the death tolls reflect the fragile hill environment of the area. Some vulnerable sites for future landslides are Mati Jharna area, Musa colony, Sholashahar rail station, and narrow valleys of Foy's lake area.

**iii) Brickfield and Air Pollution:** Brick making operation is a major cause of environmental degradation. Brickfields are owned by private groups (Abul Khaiyer, TK and Yeakub). The area was originally hilly in character, but has now been totally altered into ditches, rugged plains and eroding slopes. Brick making operations pollute the atmosphere.

**iv) Water logging:** Water logging is a serious environmental problem here. The worst affected areas are Gate No. 2, CDA Avenue opposite Chittagong shopping centre, GEC junction, Prabartak, Muradpur and Mirzar pool. The main causes are siltation due to massive hill cutting and hill erosion in the uplands, encroachment of khals, depressed marshy lands in the east and artificial



obstacles in the drainage system.

**v) Ponds and Water bodies:** Except the flood plains in the south-east, there is limited number of water bodies and ponds. The only remarkable water body is the Foy's lake, which is the only source of potable water for some 50,000 families of the BR. The 'closed eco system' of this confined lake water is now under pollution threat due to massive development and human interference, in the name of amusement tourism.

**vi) Industrial Pollution:** A narrow strip of industrial belt along both sides of the Baizid Bostami road and also partly along west side of Hathazari road includes medium to large-scale industrial unit. The effluents from some industries find their ways into the khals and finally into the Karnaphuli river.

#### 4.5.4 HIGHER LEVEL PLANNING

**a) Structure Plan - CMMP 1995:** Three important strategic proposals have been made for this zone:

- Large part of the Zone has been considered as one of the three peripheral expansion areas and phased programme for development between Hathazari roads to west of Foy's lake had been proposed following certain procedures and standards.
- The Foy's Lake and the hilly area to its north has been recommended as strategic open spaces under the Special Control Zone, demanding special protection. The former is under S01 and the latter S02 of the Special Control Zone.
- Parts of the Battali Hills and the Adjacent Hills marked as S 03 as Strategic open space also falls under this zone.

**b) Urban Development Plan CMMP 1995:** In line with the Structure Plan policies the major actions recommended are as follows:

- Establishment of a mechanism to enable for timely development of the Area.
- Implementation of the transportation and drainage proposals of the Plan.

- Encouraging the full development of the Nasirabad /Sholashahar industrial area. Making better use of underutilized areas within government industrial enterprises.
- Emission control of pollutants and provision of effective solid and liquid effluent disposal for industries in the Nasirabad Industrial Area.

Actions already taken by CDA:

- Construction of the East west road through the hills north of the Foy's Lake (ongoing). The manner in which the alignment has been determined and the engineering work implemented is unsustainable and has damaged the environment and effected the overall drainage

**c) Storm Water and Drainage Master Plan CMMP 1995:** The DPZ 05 covers part of Drainage Area No. 4a, Drainage Area No. 4b, Drainage Area No. 5b and Drainage Area No. 7 of the Drainage Master Plan. Major proposals given for this zone are khal rehabilitation, new primary khal, and new secondary khal and silt trap.

**d) Long Term Strategy for Traffic and Transportation Master Plan CMMP 1995:** Major proposal of this Master plan is east west and north-south connection roads.

#### 4.5.5 DETAILED AREA DEVELOPMENT PROPOSALS

The following development proposals have been shown in *Figure no 4.10*

This Zone comprises of the last stretch of hills entering the city from the north, Foy's lake and the surrounding hills, residential, service, and urban amenities, and tourism potential exists which could be citywide and regional significance. Environmental conservation will be a major determinant.

Major development proposals will be:

- Conservation of the hilly areas and its environmental protection and enhancement.
- Regeneration of the industrial estate and its environmental improvement.

- Regeneration and improvement of haphazardly growing and environmentally degraded residential areas through formation of organizations and application of land management techniques
- Meeting housing and community needs of the population.
- Promotion of recreational, leisure and open space facilities

Sector wise proposals are as follows:

#### a) Residential (Housing)

Implementing agency will be CDA/ CCC/ PWD / other government / housing societies/ subsidiary development companies (proposed) / private sector / private landowners. / NGO's/ CBO's, as the case may be.

Policies in chapter 2 and Guidance Notes in Annex 2 will be applicable as is relevant.

**R-05-01:** The large area east of Foy's Lake abused by brick making operations and indiscriminate hill cutting should be turned into a low-density township. The following proposals are made:

- Housing all income groups with LI development restricted to the edge of the industrial area.
- In areas largely flattened, the layout will include lakes and urban open spaces, leisure centres, limited shopping centres and office buildings, educational facilities, Eidgah, and wooded and landscaped areas.
- The existing hills will be conserved and protected.

A mechanism must be established such that the Authority can work in association with private companies to ensure planned development of the area in phases. No individual action will be entertained. However, rights of existing landowners will be considered. Instead of plot allocation only, the aim should be to deliver complete buildings and plots. The whole development process must be accountable and transparent and subject to professional and public opinion and debate. Approval from the Nagor Unnayan Committee will be mandatory. (Refer chap 5)

*Implementing Agency: BR / CDA / CCC/ with private sector / private landowners.*

**R- 05 -02/ R- 05-03:** A number of squatters on the foothills are at risk because of hill erosion. A phased programme for identifying and upgrading these sites should be a routine function. A start may be made with slums at Moti Jharna, Sholashahar railway station.

*Implementing Agency: BR / CDA / CCC/ CBOs / NGOs are with the private sector/private landowners.*



*Pic. 4-39 Moti jharna area.*

**R-05-04/ R-05-05:** The planned areas of Nasirabad, Sugondha Society and Khulshi Housing Society are undergoing changes from low rise low density to high rise high density. In consultation with the relevant societies the Authority must ensure that open spaces (parks and play grounds), urban amenities (education and primary health facilities, grocery and kitchen markets) are provided in designated locations. The community has to make reservations for such purposes as per minimum standard set by the government.

*Implementing Agency: CDA / CCC/ Housing societies /Private sector*

**R-05-06:** Guidance should be provided to the three sites - Cosmopolitan and Hill view and others located between Baizid and Hathazari road. Planned housing will be permitted for HI and MI group. Plot coverage and building height will be followed as per Building Construction Rules. Neighborhood open space, playground and urban amenities should be ensured as per government rules 2004, through motivation and readjustment.

**R-05-07:** The area between the Baizid and the Amin jute mills should be encouraged to develop for all income groups but reserving the lower plains for LI industrial workers housing.

**R-05-08:** A large site has been leveled and is currently vacant with poor access and environmental condition. Mixed Low-density housing for all income groups (south of industrial area at Baizid Bostami road) will be permitted. Plot coverage and building height will be allowed as per Building Construction Rules.

**R-05-09:** Improvement to the sites (south of industrial plots)- Ensure Low rise and Low density housing for HI and MI - Plot coverage and building height will be followed as per Building Construction Rules.

**R-05-10:** The Authority will ensure environmental protection and planned expansion and provision of urban amenities of the South Khulshi residential site. Building height and plot coverage is recommended as per Building Construction Rules.

**R-05-11:** This site is recommended for residential use. Planned Housing will be permitted as per Building Construction Rules.

**R-05-12:** A number of hilly sites have residential development. The environmental conditions are fragile and the edges are being continually cut. The Authority should impose strict control on hill cutting and high-rise high-density development. Single and dual family residences may be permitted. Plot coverage and building height on the hilly areas will be permitted as per Building Construction Rules and decision of Nagor Unnayan Committee. Adequate plantation coverage and provision of site drainage should be ensured. The surroundings should be protected from high-rise development.

**R-05-13:** The Authority will ensure protection and stabilization of the remaining hills on both sides of the Foy's lake approach road. Housing for all income groups may be permitted. Building height and plot coverage have to be determined as per Building Construction Rules. Institutions and urban facilities may be permitted along the road with adequate local vehicular and pedestrian access after making reservations for expansion of the

existing road. No shopping mall development will be permitted on the road front

**R-05-14:** The Authority will liaison with NHA and other relevant authorities to improve the low income housing sites at Kaiballaydham and ensure its full utilization for the target group. Environmental improvements and adequate access and urban facilities will be ensured to this area and an area to the north. Parking provision may be relaxed as per decision of the Authority for single and double storied residential buildings for the LI group. Other provision will be as per Building Construction Rules.

**R-05-15:** This site was hilly area. A significant portion of the hill has been leveled through hill cutting. Still hill remains at this site. The leveled portion of the site is suggested for residential use and remaining will be protected. Plot coverage and building height will be considered as per Building Construction Rules as well as the decision of Nagor Unnayan Committee.

**R-05-16/ R-05-17:** The Authority will start a phased programme of improving the existing residential areas within the urban areas. These suffer from poor access; poor environmental condition, and served by inadequate urban amenities. Land readjustment and guided land development techniques shall be used to improve conditions. A start may be made with three areas. These are a) the Lalkhan bazaar area (west of Ispahani junction) b) an area south of the CDA avenue at Sholashahar and c) the area east of the Nasirabad women's college at Nasirabad. Efforts must be made to secure open spaces, footpath and road reserves. The encroached drainage channels must be restored and protected. RI 05 -18 is transforming to commercial use. This will be permitted with protecting privacy of residential development and ensuring adequate access and parking and movement functions.

**R-05-18:** The site on the north of rail line is almost vacant land. Planned housing will be permitted with required community facilities and urban amenities. The authority can take initiative to motivate land owners for planned neighborhood by participatory approach.

**R-05-19 / R-05-20:** The Authority will start a phased programme of improving the existing semi urban areas in the more peripheral areas. Problems and development techniques suggested above may be applied. Two such areas are a) between the CDA Avenue and the Dohazari railway track b) south of the CDA Avenue. The areas have a large number of ponds. The Authority should ensure that individual and other land subdivision and development projects occur under an overall drainage and road (vehicular, including cycle and pedestrian) network plan with adequate reserves for the same. Adequate reserves for public open spaces and urban facilities must be ensured. Roadside commercial development may be permitted with adequate offset for local traffic and footpaths.

A Number of sites within the hills are in different stages of development of residential areas. Some have been leveled and awaiting large-scale construction. The Authority will ensure that each site stabilizes the hill edges such that eroding edges are not exposed to the weather. Most importantly it must ensure that the water discharged from its site is managed in a sustainable manner and does not cause flash flooding on its foothill.

**R-05-21:** The Nasirabad Properties: The site may be classified as a low-density area. Building height will be determined by FAR and road width, which will not be contradictory with low-density housing.

**R-05-22:** Considering that the lake city project by the CCC is already underway a HI low-density development may be permitted as per Building construction Rule and decision of Nagor unnayan Committee. Full environmental protection must be guaranteed.

**R-05-23:** A special hill top site at the junction of Zakir Hossain road and Goribullah shah road may be permitted as a single family HI residence. The hills and slopes will be protected. The foothills will be conserved as an urban open space. Maximum height of building and plot coverage will get approval according to Building Construction Rules. The Authority will secure public foot walks of at least 10' all along the outer boundary and a space for public transport stoppage at a suitable

location. The boundary wall may be such as to create visual connectivity. The hill slopes will be protected and water management ensured.

**R-05-24:** The government quarters presently in dilapidated conditions should be revitalization. In this zone a start may be made with the site west of CDA Avenue.

Policies H4, H4.1, H4.2, H4.3, H4.4 (Chapter-4) and Guidance Notes 04 (all section) (Annex-2) will apply.

*Implementing Agency: CDA/PWD / with or without the private sector*

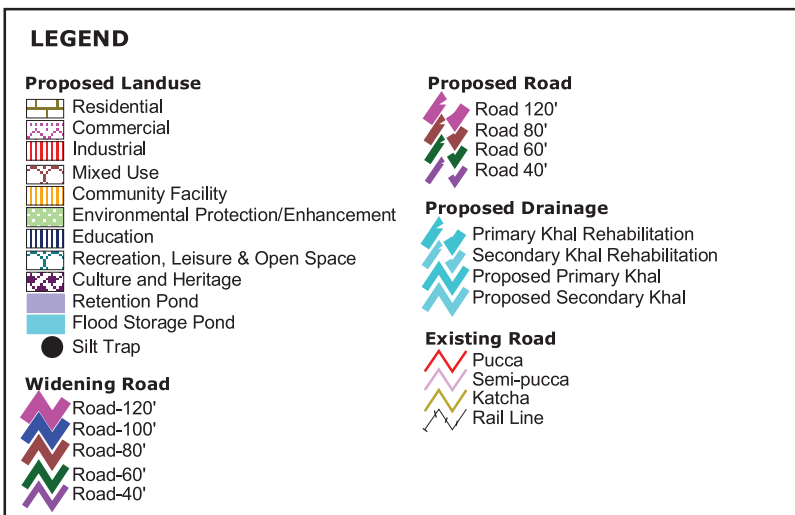
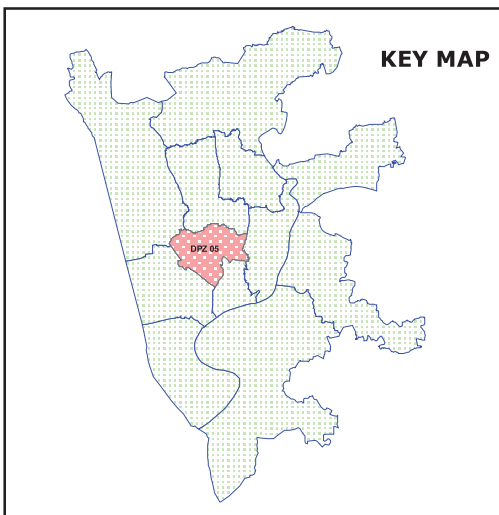
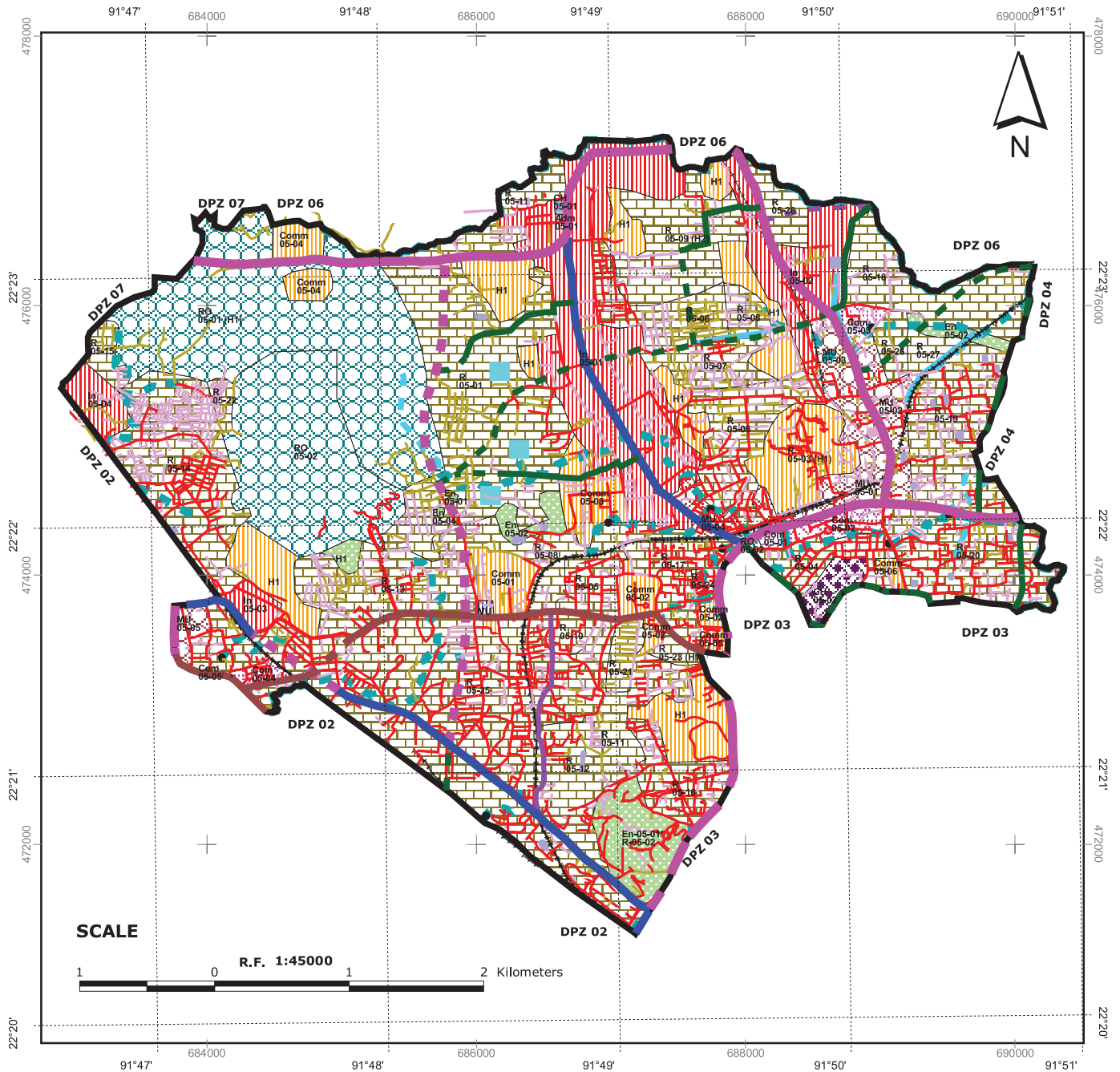
**R-05-25:** There are large land holdings of the Railway in this Zone. It is understood that a major planning project for the use of all Railway land is underway. However, this Plan would like to state that the rolling topography of the railway lands in Zone 3, and the large triangular area in this Zone is a rare and unique feature of Chittagong and therefore holds vast potentials to uphold the



**Pic. 4-40** Railway museum needs to upgrade with facilities.

image of the City. The hilly and undulating character must be retained and enhanced. The low-density hill top bungalows may be converted to uses of public interests. One has been converted to a railway museum. The area should be upgraded and additional facilities developed to create visitor interest. The housing areas must be revitalized with actions to limit the growth of slums and squatters. Instead of piecemeal lease of land the area could be redeveloped into a township with residential facilities for a range of income groups, institutions, commercial development, parks and

**FIGURE 4.10: PROPOSED LAND USE PLAN OF DPZ- 05 (Lalkhan Bazaar-Pahartali)**



open spaces, transport facilities and places for leisure and recreation. The railway and planning authority may coordinate with each other for a comprehensive development of the area. The development plans must be subject to professional and public opinion and debate and approval from the proposed Nagor Unnayan Committee.

**R-05-26:** The area is recommended for planned housing. Land development techniques may be applied in the area for planned development.

**R-05-27 / R-05-28:** The Authority will liaison with CCC / NHA / government / Community / NGOs to improve and extend the spontaneous traditional rural and semi-rural settlements, through land readjustment and Guided Land Development Techniques. Water retention areas will be established. Existing landowners will have option to join the development effort and /or be rehabilitated within the area.

R 05-26 will be for the HI and R-05-27 for the MI and LI group.

#### **b) Industrial:**

**In-05-01:** The Authority will pursue the relevant government organization to see that the underutilized plots within the Industrial area are fully and efficiently utilized for non-hazardous light industrial uses. It will ensure that its own plots are fully used. No further industrial expansion should be made in either east or west of the Baizid road. The Authority will demarcate the western edge of the industrial area by a tree buffer.

**In-05-02:** There are some industries located at Raufabad, near to oxygen moore and along the Hathazari road. Besides industrial use, some residential structures have been developed in this area. Considering existing use, this site is recommended for industrial & residential use.

Policies ECN 11.5, ECN 4.4, ECN 11 (all sections) (Chapter 2), Guidance Notes all sections of 7 and 8 (Annex-2) will apply.

*Implementing Agency: CDA /CCC / BSCIC/ Private sector companies / landowners / local representatives*

**In-05-03:** At present the site remains as industrial

use that will also be retained for industrial or manufacturing use in future.

**In-05-04:** The DT road is lined with industries. The western limit should be strictly controlled to stop any incursion of industries into the hills. A 100 m tree buffer must be ensured. Access to the individual factories should be by means of local roads the frequency of which is specified in the section on roads.

**c) Commercial:** The following recommendations are made for commercial uses. Relevant policies in Chapter 2 and Guidance in Annex 2 will apply.

**Com-05-01/ Com-05-02:** The aesthetic quality of the existing planned commercial area may be enhanced. Immediate attention must be given to resolve the flash flooding problems at the shopping arcade. The residential area south of the shopping complex is transforming into commercial and shopping use. This should be permitted after ensuring privacy and convenience of residential users and ensuring adequate parking and circulation of vehicular and pedestrian movement.

*Implementing Agency: CDA / CCC / Private sector*

**Com-05-03:** The triangular site located to the east side of hathazari road is recommended for planned commercial use. Open spaces including existing water bodies as well as proper parking facilities are to be designed for creating sound environment and good circulation.

**Com-05-04:** Pahartoli CDA market is situated at this site which will be retained as commercial use.

**Com-05-05:** Taking into account the surrounding land uses, this strip of land located to the east of DT road is proposed for commercial use.

**Com-05-06:** Narrow strips of land along the CDA Avenue have commercial and shopping use. The Authority should ensure that a minimum of 12' wide footpath is provided on both sides of the road from WASA junction to Sholashahar Gate No 2. All developments must have the requisite parking space and dropping and pick up space within its own plot area. Where it does not exist, the Authority should find innovative ways for its provision.

**d) Mixed Use**

**MU-05-01:** Roadside commercial and industrial development has occurred in the north of CDA Avenue. The Authority should ensure sufficient offset from the road. All proposals south of the BFRI hills must have a minimum gap of 20' between two buildings for visual connection of the hills. The Authority must ensure footpath, access and parking reservations.

**MU-05-02:** The area between the Hathazari road and rail track is designated for mixed use. Sufficient off street parking, public transport stoppages, and footpaths has to be ensured by the Authority. A major drain is planned along the CDA Avenue, the sides of which should be protected with vegetation, pavements and landscape features. Public plazas and such public open spaces must be ensured to encourage limited provisions for hawkers. The ward Office will be upgraded to its status as a public office serving the community. (COM 01, Chapter-2 and Guidance Note, Annex-2)

**MU-05-03/MU-05-04/MU-05-05:** There are three sites located on the west of Hathazari road, north of CDA Avenue and east of DT road. These sites are designated for mixed use. The shopping areas in and around at the sites may be further developed with adequate drop off zone and parking. A wide pedestrian path of at least 10' must be secured in front of the buildings in access of the dropping and parking zones.

**e) Drainage:** Following Storm Water Drainage and Flood Control Master plan, 1995, it is evident that Detailed Planning Zone -05 (DPZ-05) covers part of Drainage Area No. 4a, Drainage Area No. 4b, Drainage Area No. 5b and Drainage Area No. 7. Whole area of DPZ 05 is covered by Drainage Master Plan Proposals. DAP study has also identified some additional drainage works to be done for DPZ 05.

**Drainage Master Plan Proposals for the area include:**

1. Rehabilitation of Tripura Chara khal, Kalir Chara khal, Kattali khal, Gaina Chara khal and Rampur khal.
2. One new primary khal joining with Bahadderhat

junction.

3. Two new secondary khals joining with Tripura Chara khal and one new secondary khal near to Sulak Bahar road and another one is along the railway line.
- 4.9 silt traps in appropriate locations along different khals.

All the above proposals are identified in the land use plan, Figure 4.10.

**DAP Proposals:**

1. Rehabilitation of Mirza khal and its surrounding khals with a total length of about 9 km.
2. Retaining and preservation of 38 ponds of 0.5 acres and above. The accumulated size of these existing ponds proposed to be preserved equal to approximately 36 acres. These ponds are identified in figure 4.10.
3. A total of 4 flood storage ponds with an accumulated size of 45 acres and are identified in figure 4.10.
4. One silt trap along the upstream end of Mirza khal is proposed. The location is identified in figure 4.10.
5. Following drainage-guiding principles/guidelines C at page from 3-3 to 3-4 remaining drainage network is proposed and identified in the proposed land use plan of Figure 4.10.
6. Where not shown specifically in the Land use plan of Figure 4.10 Drainage Guiding Principles / Guidelines will apply.

**f) Transportation**

**Road Network:** There are some planned and unplanned residential areas in this zone. In addition, a significant number of institutions have developed in this area. All these have made the area as a busy part of the city where large volumes of traffic are generated everyday. Existing roads are not wide enough for efficient traffic movement. Consequently, traffic jam is common phenomena in most of the intersections. This DAP had, therefore, proposed widening of some existing roads in order to make a road network for efficient vehicular traffic movement. The road from tiger pass moor to Muktijoddha Shafiuddin

road and railway school road is proposed to be widened to 100 ft ROW. Another road named 'Ambagan Flora Pass road' has to be widened 40 feet from Ambagan to Zakir Hossain road. Under DAP; it is proposed to build another road of 60 ft ROW from the road in Ambagan to DT road. A 120 ft ROW road is proposed from road in Ambagan to Baizid and Fouzderhat connection road (under construction), which is also the Outer By-pass road. Some east west link roads between Baizid and Hathazari road have been suggested to open up the surrounding areas. This study also recommends to wide the two major roads named Baizid Bostami road to 100 ft ROW and Hathazari road to 120 ft ROW. For further details, please see Figure 4.10

### g) Community Facilities

Relevant policies in Chapter 2 and Guidance Note in Annex 2 will apply.

**Comm-05-01:** The Veterinary University, Agricultural Centre, various buildings of the USTC is on the edge of a major road (Zakir Hossain). The Authority should liaison with the relevant institutions to ensure wide footpaths along the entire road and to make sufficient offsets from the road at entrance locations. Boundary protection should retain visual connectivity. The proposed north south road may be permitted through this area with adequate protection and safety considerations.



*Pic. 4-41 Chittagong Veterinary and Animal Science University.*

**Comm-05-02:** A number of large education sites are located along CDA Avenue and Zakir Hossain Road, as for example Nasirabad Women College &

School, MES College, Ispahani School & college and Nasirabad Boys School. The Authority must liaison with the relevant organization to secure wide footpaths. Spaces should be created for dropping and pick up areas of each institution.

**Comm-05-03:** The Technical Institute (TI) and other educational institutes occupy large areas west of the industrial estate. The overall environment is poor, the buildings of the TI are extremely poor and they are in under utilized. The Authority may liaison with the relevant government department to upgrade and revitalize the area.

**Comm-05-04:** The proposed international residential campus of the Asian University for Women (AUW) has been permitted on the north and east of the Foy's Lake. This will be allowed to grow expand on conditions of ensuring a sustainable building practice and environment.

**Comm-05-05:** The National Housing Authority has a large site, which can be used for more effectively. The existing pond will be retained. The Authority will liaison with the government to secure land for widening the footpaths all along the southern boundary and in the junction.

**Comm-05-06:** The Two, hill top community centers are widely used. Adequate open space and parking facilities must be retained. No hill cutting should be permitted. Landscaping and trees cover should be increased.

**Comm-05-07:** Three significant religious facilities exist. These are discussed under culture and heritage conservation.

### h) Administration (Adm-05-01):

Tea Board Office is situated at this site. The present administrative use of this site will be retained.

### i) Leisure, Recreation, Parks and Open Spaces:

Relevant policies in Chapter 2 and Guidance in Annex 2 will apply.

**RO-05-01:** The southern part of the proposed Regional Park falls in this special Hill Zone. The hills, natural depressions and water bodies need protection. The Authority must pursue the development of a regional park as a top priority.



All residential area or individual residential permits must be stopped. They may be compensated or relocated in the large developable area on the east (R-05-01). The AUW campus will be permitted on consideration of sustainable environmental planning (Comm-05-04). Surrounding hills of AUW may be permitted for educational related use. Chawkreshu Housing of Bangladesh Bank approved by CDA will also be permitted. Vegetation and tree cover will be made mandatory (See environmental section).

*Implementing Agency: CDA / other government agencies*

**RO-05-02:** The Foy's Lake will be declared as a "Special Ecological Zone". The forests and lake zone must be protected. Amusement park shall be permitted south of the dam. Considering the noise generation of the park, the adjacent zoological park may be relocated in Zone 7. (See environmental section)

Parts of the Batali Hills and the Adjacent Hills marked as S-03 as Strategic open space (Figure 9.1, Urban Development Plan) also falls under this zone.

*Implementing Agency: BR / CDA / other government agencies*

#### **j) Utility Services**

**Ut-05-01:** The present DAP study recommends that the responsible agencies for the provision of utility services, will prepare their own detailed plan in respective fields.

#### **k) Culture and Heritage**

The Authority shall assist in identifying heritage sites. The following have been identified for conservation, enhancement and protection to enable these to be attractive and sites of interest for visitors. Relevant policies in Chapter 2 and Guidance in Annex 2 will apply. The Planning Authority will liaison with other relevant organizations both public and private to implement these recommendations.

**CH-05-01:** The Authority will ensure conservation of the Baizid Bostami Shrine site and make the area aesthetically appealing to visitors. Low-rise shops of appropriate design to match the

surroundings should replace the roadside shacks. Other urban design features and visitor facilities will be incorporated. The Authority in liaison with the mosque committee may initiate an urban design scheme.



*Pic. 4-42 Baizid Bostami Shrine.*

**CH-05-02:** The hilly property of the Prabartak Sangha has a cultural past. Government will ensure protection of the hill from encroachments and illegal occupation. The Authority will assist to protect, conserve and enhance the hills along with the temple, educational campus and open space and its natural setting. The workshops will be relocated in other appropriate locations. Efforts will be made to secure footpath reserves, which should follow the contour. No shopping or commercial development use should be permitted. To transform it into a place of visitor and tourist interest, appropriate development may be permitted in harmony with the site. The Shanga shall be permitted to add supporting facilities to the existing orphanage and school, subject to environmental and conservation considerations.

**CH-05-03:** The Jalalabad Pahar relating to the Chittagong Uprising (1931 -34) should be given the status of a heritage site. The Authority will identify the area and liaison with the government, for its listing, development and use as a place of visitor interest. (This will also fall in Zone 6).

**CH-05-04:** The hill top temple at Kaiballydham should be protected from visual obstruction and encroachment. The surrounding environment should be enhanced. The Authority may liaison

with the CCC and the community to enhance the site as a place of visitor interest.

**CH-05-05 / CH-05-06:** The Armory at Police lines and the European Club. (Quit India Movement) should be listed as heritage structures and appropriate renovation and enhancement undertaken to create places of visitor interest.

**CH-05-07:** The Authority will ensure the creation of large fields for kite flying and other such festivals in suitable locations in the new township area (R-05-01 and in the railway redevelopment area.

#### 4.5.6 ENVIRONMENTAL PROTECTION AND ENHANCEMENT

Massive hill cutting, land slides, brick field operation, industrial pollution, water logging, lake water pollution, scarcity of ponds/water bodies and preservation of Foy's lake and forest coverage area are the major considerations in the future development activities of this planning zone.

Any project in the hilly topography particularly major road projects must be subject to Environmental Impact Assessment (EIA) and reviewed by the proposed Nagor Unnayan Committee prior to project approval and implementation. Alignments can only be confirmed after such evaluation. Thus all major road projects in particularly in this Zone will be indicative of a need for connection. The current projects should be reviewed to take environmental considerations in mind and to control damage and to ensure water management.

*Implementing Agency: The Planning Authority/ CDA will coordinate with other relevant public and private organizations and individuals to achieve environmental protection and enhancement and some of the guiding principles for this planning zone are as follows:*

**En-05-01:** The aesthetic environment of Moti Jharna hill should be enhanced with tress plants and vegetation cover. The Jilapi Pahar is an ecological and environmental resource of the city and a place of visitor interest. Visitor facilities

should be enhanced and enlarged. The Authority may liaison with the relevant department for effecting adequate landscape and urban design of the site and surroundings. The open area at the foothills of the site with PWD quarters should be formerly developed as a play ground for all. Other public facilities such as public toilets may be incorporated at suitable location. The CNG stations at the foothills should be relocated to other suitable sites. The historic structure of the mazar shall be conserved and the surrounding structures will be formally approved to meet a high degree of aesthetic standard. The unauthorized structures will be removed. The existing sand trade in the lane should be controlled and relocated to suitable site away from the city centre.



**Pic. 4-43** Jilapi pahar.

**En-05-02:** The area development plan on the east side of the Foy's lake area, will take environmental considerations in mind. A crescent shaped lake is proposed to be readjusted on final layout. Another lake has also been proposed on the northern end of Panchlaish ward. This lake would be expansion and widening of the Uttara khal. Both the proposed lakes would be developed as sites of attraction for leisure and tourism.

**En-05-03:** No hill cutting and no forest clearing should be allowed in the existing hilly areas. All brickfields should be removed form this area and relocated outside the city. The Foy's Lake area has been identified as **Type-H0**, which needs to be full conservation. Construction and development activities related to entertainment tourism cannot be allowed in this area. The present agreement

with Concords needs to be revised and all current development activities scrutinised, controlled and unsustainable development cancelled. Development may be retained only in the lower part of the cross-dam.

All **Type-H1** hilly lands have to be retained and further hill cutting strictly controlled. Such hills are mostly located north of the Foy's lake area, railway land at Pahartali, Battali hill, Prabartak hill, FRI hill, and Ispahani hill. However, amongst permitted projects, (such as AUW) building coverage should be limited to 10% of site area, subject to environmental protection and sustainable hill slope development. Low density (up to 3 stories) residential and institutional and community use may be permitted occupying 10% ground area and taking full account of water management and slope protection.

EIA and presentation to the proposed Nagor Unnayan Committee is mandatory.

**Type-H2** hill areas have significantly been altered and flattened. Comprehensive area development and restoration of forest cover in such areas is recommended. Considering the economic cost of the area only low rise, low density institutional and residential with ancillary facilities may be permitted as per Building Construction Rules and based on the decision of Nagor Unnayan committee.

**En-05-04:** The Authority will guide the environmental areas of privately developed housing areas in undulating land and those affected by sporadic hill cutting. Efforts will be made to repair the eroding hills and stabilize the edges, so as to stop all further damage. Through dialogue with housing societies, developers and land owners, the Authority will ensure minimum provision of open spaces, play grounds, and other community facilities. The Authority may impose further conditions as is relevant.

**En-05-05:** All major khals, such as Shital Jharna khal, Robi gate, Chashma hill khal should be rehabilitated, backlines marked and fixed by vegetation coverage. Along the backline there should be a buffer zone of green belt, up to 50 ft wide on both sides. The existing slum along the

Tulatuli bustee along khal should be relocated and the area developed as a green reserve for reducing the effects of flash flooding in the overall area.

**En-05-06:** To delineate the boundary between the hills and dissected plains and also between dissected plains and Nasirabad industrial zone, two 100m wide forest buffer zones is recommended. Such zone will limit the expansion and encroachment of each Land use type and enhance the physical environmental quality of the area.

**En-05-07:** The flood plains of the Halda in the east about 90 ponds of various sizes, many of which are large. Ponds of 0.5 acre and above must be preserved under the guidelines of water body preservation. The environments of some of the water bodies are fragile and need to be improved. When comprehensive area plans are made the water surface areas may be adjusted to layouts. Special attention must be taken to protect the water quality of the Foy's lake. Currently due to accelerated human movement and boat plying in the lake the quality of the lake water is under threat. Dumping of solid waste, such as drinks can, polythene wrappers etc. are directly thrown into the lake water by visitors. To protect the water quality it is recommended to limit the use of the water covered area.

**En-05-08:** All brickfields operating on the eastern dissected part of the Foy's lake area needs to be relocated. Considering the needs for brick supply in the city, these may be relocated in suitable sites outside the city area. However, all these relocated brickfields must be built following the existing brickfield and environmental rules and should be at least 500m far from the foothill.

**En-05-09:** Current scale of industrial pollution at this planning zone is not very alarming. But the physical environmental setting within each industrial unit needs to be made sustainable and eco-friendly. It is recommended to enhance more green coverage throughout the entire industrial belt. Moreover, measure should be taken by each industrial unit to reduce their pollution level and discharge effluences only after proper treatment.

**En-05-10:** The government and private landowners own five hilly sites of various sizes

under various uses. The existing hilly character should be protected and very low density residential and urban amenity development will be permitted. Expansion of industries will not be permitted. The Authority should ensure enhancement of the natural hilly environment.