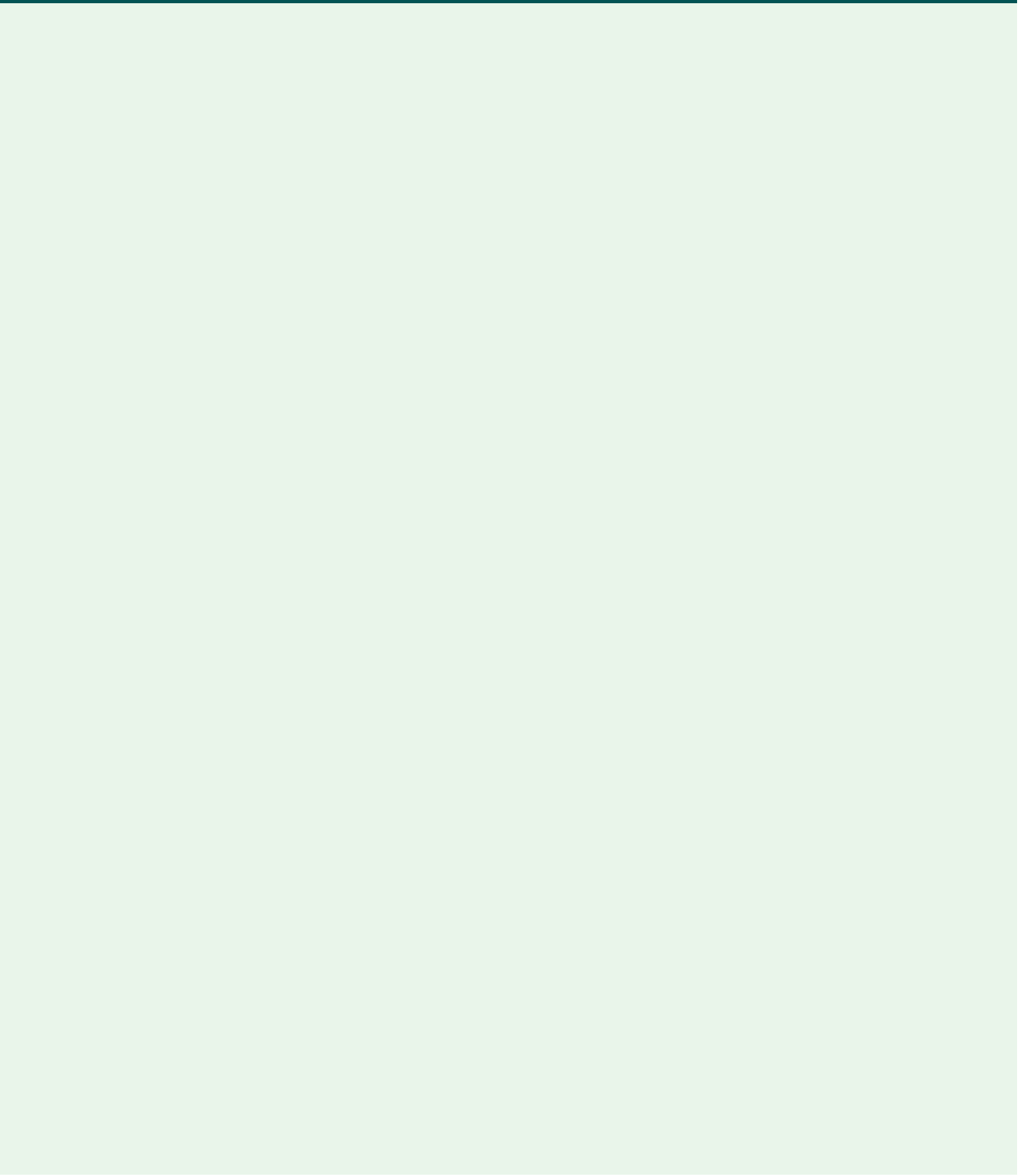


DPZ  
*02*

**AGRABAD-KATTALI**



## 4.2 DPZ-02: AGRABAD-KATTALI

### 4.2.1 EXISTING SITUATION

**a) Location and Administrative Boundary:** The Zone is flat and is bounded by the coast on the west and the Sk. Mujib road on the east. On the north is the Dhaka-Chittagong railway track. Beyond this boundary the land rises to form the hilly areas of Pahartali and Batali hills. The City limit is on the North West. The Area has large areas of formally developed residential, commercial and industrial areas, port and railway and military areas. It is under two Thanas: Double Mooring and Pahartali. The nine wards are: Ward 10, Ward 11, Ward 12, Ward 24, Ward 25, Ward 26, Ward 27, ward 36 and Ward 37.

**b) Population:** The population of the Area was 282,697 in 2001 (BBS). According to trend population (CMMP), this is estimated to grow to 367,000 in 2011 recording a rise of 84,303 persons over a 10-year period. This Plan estimates the population to rise to 429,690 in 2015. The population density of DPZ 02 is 5615 P/sq km or 20-p/ acre in 2015.

**c) Land Ownership:** Major land owners in this Area are, Bangladesh Railway, CPA Military, National Housing authority (Halisahar R/A), CDA (Agrabad R/A, Sagarika I/A), PWD (Govt. flats, offices, other community facilities)

**d) Socio Economic Condition:** In the census of 2001, of 79455 HH some 48% are pucca and 22% are katcha & Jhupri. Piped water supply exists in 20% HH. 77% use tube wells as source of drinking water. 37.7% HH. Electricity connection exists in 91.5% HH. Sanitary toilet facilities exist in 79.6 % HH (BBS 2001).

### 4.2.2 EXISTING LAND USE AND DEVELOPMENT STATUS

Besides the government developed planned areas, other areas grew sporadically, without any guidance, resulting in poor environmental conditions and inadequate urban amenities and facilities.

**a) Residential:** There are major government staff quarters at Agrabad, Mansurabad and Halishahar and housing colonies of CPA and BR. Planned residential areas have been developed by CDA (Agrabad R/A) and by NHA (Halisahar H/S). Agrabad RA area is not connected to public transport network. The Agrabad and Halishahar R/A's are routinely flooded during June – September by rains and high tides. The frequency and flooding level has increased significantly.

Private Neighborhoods (NH) North Agrabad, such as Rangipara, Anandapara, Mistripara, Ashkarabad, suffer from, water logging, poor access and lack of urban amenities. The Agrabad Access road had opened up opportunities but due to lack of a planning mechanism unplanned development continues.

**b) Industrial:** The Sagarika Industrial Estate has developed by BSCIC/CDA and CCC. Major industries are fish processing, garments, chemicals, pharmaceuticals etc. There are no treatment facilities. Garments factories occupy a number of commercial buildings in the Agrabad and Halishahar C/A and near Dewanhat and Mansurabad.

**c) Commercial:** Major government offices, banks and private business offices are located along the Sk. Mujib road. Commercial use occupies the Sadarghat road and DT roads. Government (CSD) warehouses are located in Halishahar. Government establishments (R& H, Food dept.) are located south of the rail track). Other commercial activities consist of shops and small business houses along all roads. These generally create obstruction to pedestrian and vehicular movement. Many have encroached on road and drain reservations and have insufficient parking and dropping arrangements.

**d) Topography and Drainage:** Topographically the area is almost flat with a gentle westward slope. The area can be divided into at least four morphological units. A narrow stripe of piedmont land along the western edge of the hill range is relatively the higher ground and is well drained.

The central and northern parts are predominantly the alluvial plain. The area between Agrabad access Road and DT road is the swampy depressed land, with very poor drainage condition and creates severe water logging even after a short torrential rainfall. The area west of Maheshkhal is the tidal plain, which has been protected from daily tidal inundation by a coastal embankment. Outside the embankment there is a strip of about 0.5 km wide muddy beach, mostly accreted from the sea. The zone is drained by a number of khals, mostly originating from the hilly areas. The khals, which discharge into the Bay of Bengal, are Kattali khal and Rampur khal. Other khals, such as Gainna Chara khal and Nasir khal, originating from the north finally join with the Maheshkhal in the south. The Maheshkhal discharges into the Karnaphuli River in the east and is also connected to the sea in the west. This khal is the main drainage artery in this zone.

**e) Transport:** The primary north-south roads, which serve this zone, are the SK. Mujib Road (100



**Pic. 4.8** Port Access Road keeps an important role to transport goods rapidly from port to other areas of the country.

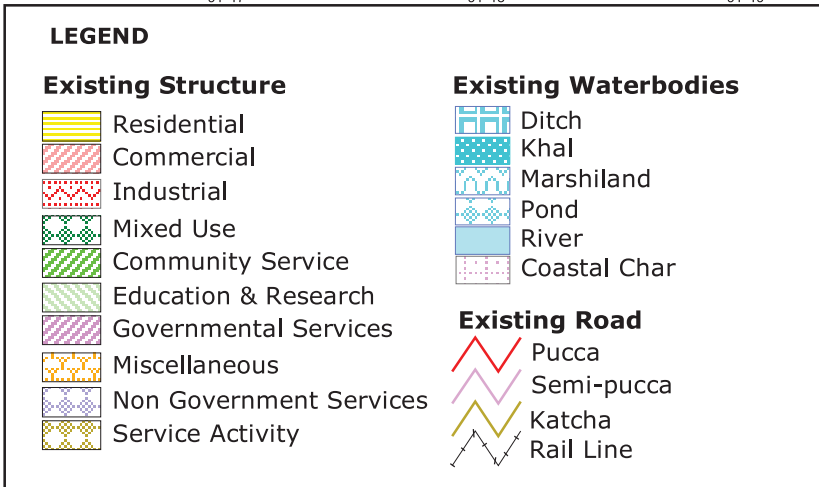
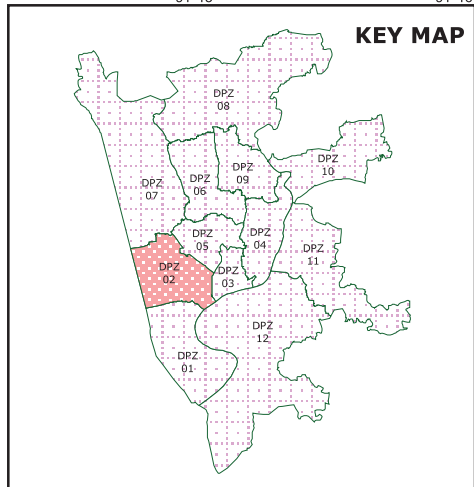
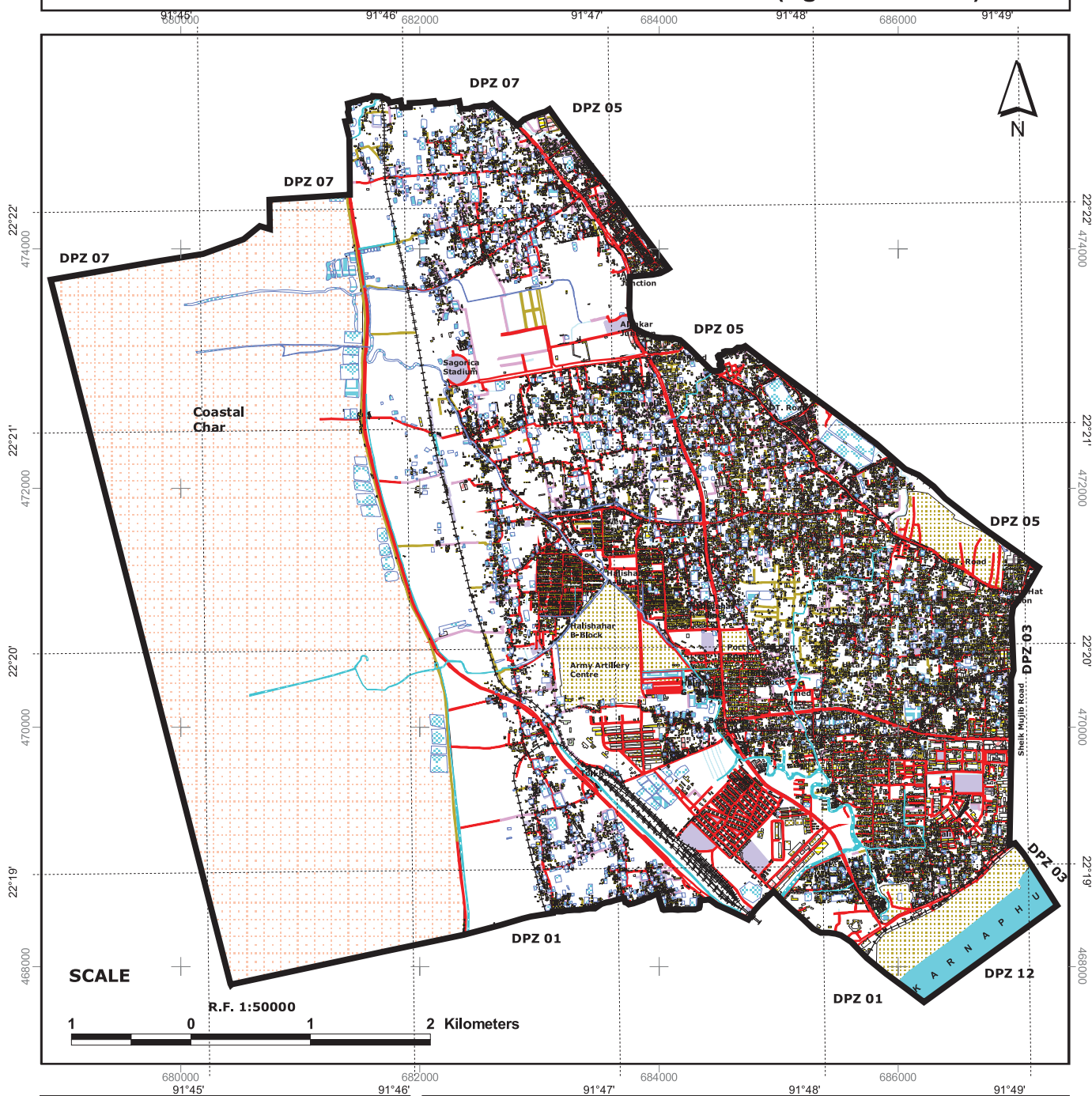
ft ROW), the Port Connecting Road (100 ft ROW), and the newly constructed Chittagong Port Access Toll Road (100 ft ROW), the Dhaka Trunk Road, which meets the Sk Mujib Road at Dewanhat Bridge. The major east-west roads are Agrabad Access Road (100 ft ROW), the Uttar Haliashahar Road, the Madhya Haliashahar Road and Sagarika Road. The east-west roads could be treated as

**Table 4.2:** Existing land use features of DPZ-02

Sl No	Type of use	Area (in acre)	Percentage
1.	Agriculture and Fisheries	725	7.19%
2.	Commercial Activity	52	0.52%
3.	Education and Research	55	0.55 %
4.	Hilly land	---	---
5.	Manufacturing & Processing	1825	18.09 %
6.	Miscellaneous	43	0.42 %
7.	Mixed Use	4	0.03 %
9.	Open/Community Space	33	0.32 %
10	Residential	3326	32.97 %
.11.	Restricted	773	7.66 %
12.	Service Facilities	14	0.13 %
13.	Transport & Community	725	7.18 %
14.	Vacant Land	945	9.37 %
15.	Water Body (ponds, khals)	809	8.02 %
16.	Coastal Character	756	7.55 %
<b>Total</b>		<b>10,085</b>	<b>100 %</b>

**Source:** Land use survey, 2006-2007

**FIGURE 4.3: EXISTING LAND USE MAP OF DPZ- 02 (Agrabad-Kattali)**





secondary roads.

**f) Institutional:** The Police Academy is the major institutional use in the area.

**g) Restricted Area:** Chittagong Port (CPA): Part of port lands and functions are in this Zone (main office, storage sheds, staff quarters and community facilities), The BR land (marshalling yard and the Training Academy), Military areas (Artillery centre, the BDR camp, Army installation) are in this area. The Port is undergoing major improvements to its physical facilities, to expand its backward facilities. Principal activities include the following:

Constructing a new port service road paralleling the railroad yards on the east site to the X-Y, Shed area and large railroad parcels adjacent to the Port Colony;

Developing the Port Park as a FCL stripping compound and building a truck parking area on railroad land across the new port services road (ongoing)

Developing the X Shed and associated yard as a

CFS operation (ongoing)

Developing an inter-modal yard directly connected with the Chittagong Port Access Road (CPAR) in the main railroad-switching yard

Developing warehouse and distribution center, which would include a Customs General Order Warehouse on the railroad site next to the Port Colony;

Constructing connecting roads, flyovers, bridges, security fencing, and control gates, which are needed to service the off-dock containerized cargo facilities;

Developing a connecting road from the CPAR to the New Mooring Container Terminal (NMCT) and CCT and constructing two tow-stage gate complexes for directly servicing the container terminals;

Adding a second bridge across the Maheshkhal

Developing a waste reception and treatment facility as per international regulations.



*Pic. 4.9 The country's largest sea port located in this zone plays a key role in the national economy.*

**h) Community Facilities:** The government staff housing areas is well served by boys and girls schools. Building conditions are generally poor. The Home Economics College, women's polytechnic, sports training centre at Haliashahar are notable institutions. Private health facilities are emerging along the Access road. The port hospital, government Skin disease hospital and private Maa o Shishu hospital serve limited needs. The Sagarika stadium is a major sport facility in need of upgrading. The Jumboree Field has been converted into the Karnaphuli Amusement park resulting in loss of public open space and flood retention function. .

**i) Culture and Heritage:** There are number of large ponds of cultural significance. Unfortunately the Padma Pukur and the William Jones Pukur have been recently filled. William Jones road, Bazaar and charitable clinic exist in changed settings.

**j) Agriculture:** Agriculture use (paddy) is present all along the coast. Extensive fish farming exists west of the embankment on land leased from the Water Development Board.

### 4.2.3 EXISTING ENVIRONMENTAL ISSUES

**a) Land use Pattern:** The existing environmental profile of this zone is linked to its physical landscape, drainage network, and land use characteristics. The generalized land use pattern consists of the port and port uses in the south, planned commercial and residential areas at Agrabad and Haliashahar, and spontaneous unplanned residential areas with other mixed uses in north Agrabad, Rampur, Saraipara and Kattali, BSCIC I/A at Kattali, defense establishment at Haliashahar and large vacant lands along the coast and sea front mangrove belt.

**b) Water logging:** Severe water logging is the major environmental concern in this zone, which is very serious at Haliashahar and north and some areas in south Agrabad. This is due to poor drainage condition, resulting from unplanned urban growth and failure of the Maheshkhal system to discharge into the Karnaphuli.

Encroachment and siltation of the Maheshkhal is primarily responsible for severe water logging in this area. The situation becomes serious if heavy rainfall coincides with the spring tide.

**c) Industrial Pollution:** Industrial effluences from BSCIC industrial zone at Kattali are a serious environmental concern. Besides, bad odor is a major source of marine pollution. The discharge of toxic effluences from such industries is a threat to aquatic life and to the neighborhoods.

**d) Marine pollution:** Due to port operations, there is always the risk of pollution of the Karnaphuli River, particularly oil spill from vessels and tankers. More potential threat is the accidental oil spill from oil tankers.

**e) Coastal Protection:** Along the west coast new lands are being accreted due to heavy siltation. Part of this accreted land is covered by planted mangrove species, but vast areas are still vacant. Mangrove belt acts as a defense to cyclonic storm surges. Although this planning zone is sparsely developed (horizontally and vertically), it shows scarcity of vegetation growth and green cover.



**Pic. 4.10** Extension of Planted mangrove species to the vacant areas will act as defense to cyclonic surges.

**f) Water Bodies:** The area is very rich in water bodies and ponds, many of which are historically important. Some of these dighis are quite big, and are the source of surface water, bathing facility and fish cultivation for the local people.

#### 4.2.4 HIGHER LEVEL PLANNING

**a) Structure Plan – CMMP 1995:** Part of the area (west of Sk. Mujib rd) has been identified as a Special Commercial Area. (The eastern part is located in Zone 3). This is to be developed at high standards to attract business houses to locate here and turn it into a prestige commercial area. Along the coast major urban use has been discouraged as noted in DPZ 01.

The Structure Plan policies are similar to that of DPZ-01.

**b) Urban Development Plan CMMP 1995:** In line with the Structure Plan policies the major actions are similar to Area One with haphazardly fringe areas. Distinguishable new feature is:

- Identifying a mechanism for ensuring the development of Agrabad Commercial Area as a special commercial area.

The other important action is:

- Identification of areas of urban open space that require protection and enhancement.

#### 4.2.5 DETAILED AREA DEVELOPMENT PROPOSALS

Improving the water logging and drainage, revitalizing the formal areas, improving the environment and the haphazardly developed fringe areas will be a major challenge for the Area. Provision of community amenities and creation of economic areas will be a major aim.

The following development proposals have been shown in *Figure no 4.4*

**a) Residential (Housing):** Improvement of haphazardly developed housing areas will be a major aim. Improvements to government housing areas and guiding the redevelopment of planned areas are significant. Land readjustment and guided land development schemes may be made mandatory. The Authority will liaison with CCC / NHA / government / Community / NGO's to improve these two type of settlements.

For traditionally grown areas the following policies will apply for all improvement areas.

**Policies in Chapter 2:** H1.1, H1.2, H1.3, H1.4, H3, H3.1, H5, ECN 11.1, ECN 11.2, ECN 13.1, COM1.2, COM 1.3, RO 2, RO 3, RO 3.1, RO 3.2, RO 3.4, RO 3.5, and RO 3.8 will apply. In Annex 2: Guidance Notes 2 (with all its subsections) is mandatory. Guidance 5, 6a, 10, 11 and 12 will be considered.

*Implementing Agency: CDA / CCC / NHA / Private sector / NGOs/ Local residents / local representatives*

**R-02-01/ R-02-02 / R-02-03/ R-02-04:** Four sub areas are developing in a disorderly way. Opportunities exist to guide development of these areas and improve the urban environment. The aim would be to provide urban amenities, and make provision for local employment. The Authority will coordinate with relevant bodies and local representatives to overcome water logging and lack of access. .

**R-02-05:** CGS colony, Bank colony and Sadaron Bima colony are situated in this area. Community facilities need to be developed in this area by community peoples' participation.

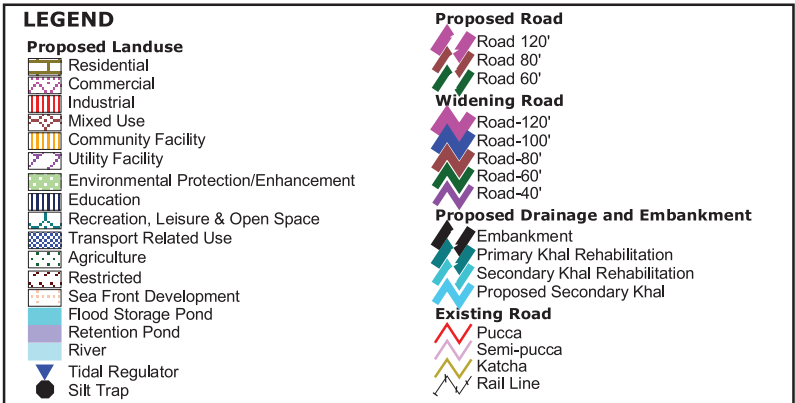
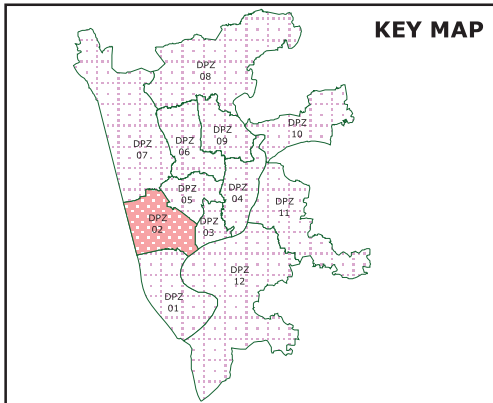
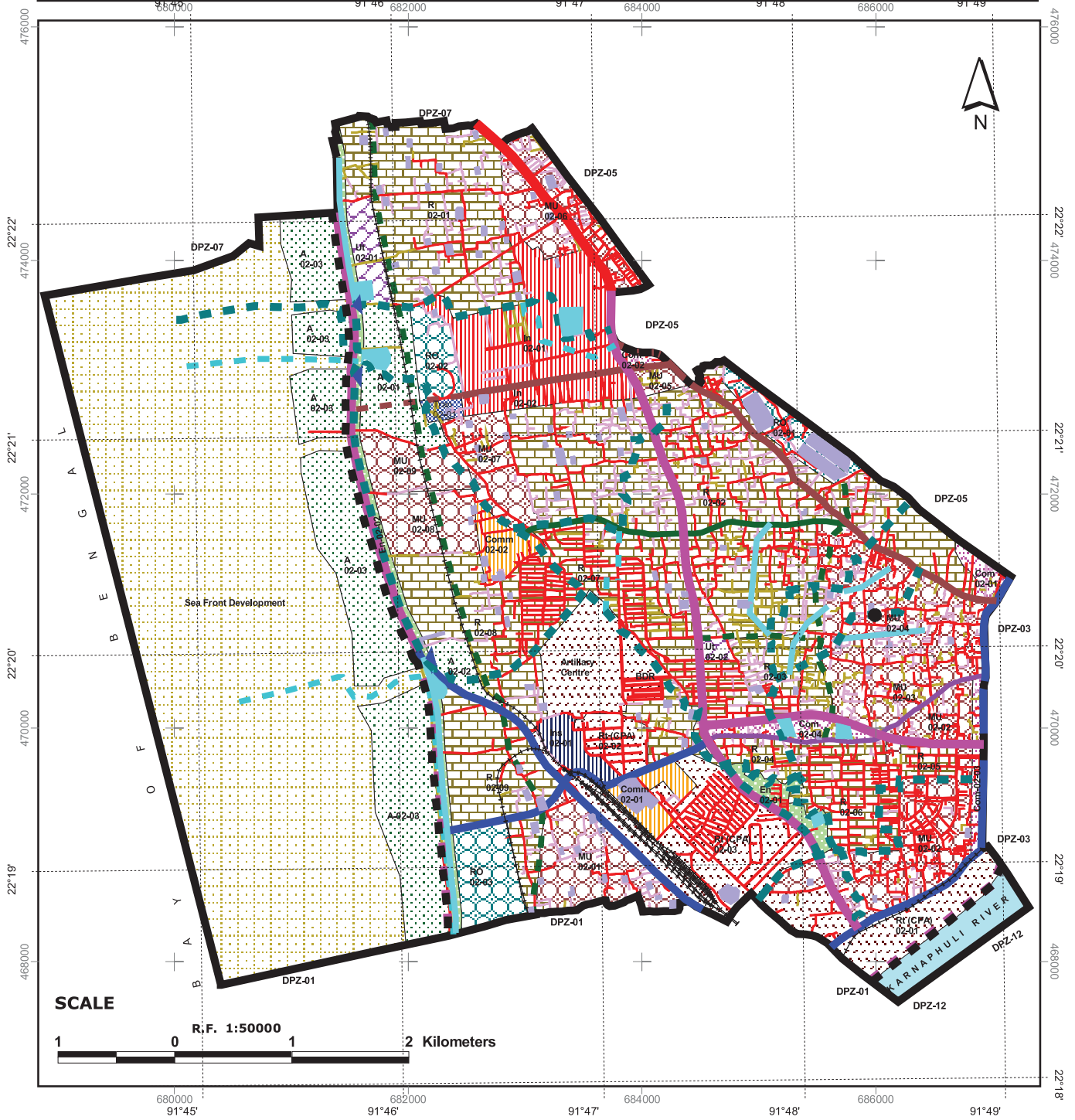
**R-02-06/R-02-07:** The two large planned residential areas (Agrabad and Hali Shahar) are undergoing transformation. Community facilities have to be expanded. Plot owners may contribute towards availability of such facilities. Other fiscal measures may be incorporated to pay a percentage of the cost of provision by making reservations of existing vacant sites. Encroachment along the Mahesh Khal has to be removed and a green belt established. To ensure sunlight, air into buildings maximum plot coverage and building height should be permitted as per Building Construction Rules.

**R-02-08:** West of the CPAR an area may be reserved for new residential area with emphasis to the LI and MI group. The Authority will decide the number of units. The distribution will be LI 50%, MI 40% and HI 10%. The technique of land readjustment will be used to create flood retention ponds (5 - 7%) parks and open spaces and commercial sites to recoup costs. Planned provisions will be made to accommodate existing settlements within the scheme.

Policies H3, H3.1, H3.2, H4.2, H4.4 will apply and



**FIGURE 4.4: PROPOSED LAND USE PLAN OF DPZ- 02 (Agrabad-Kattali)**



Guidance notes 1 (as applicable), 05, 6, 10, 12 will apply.

*Implementing Agency: CDA / CCC / NHA / Private sector companies / NGO's/ Local residents / local representatives*

**R-02-09:** Along the coast an area may develop for a new residential area for the High-income group. The Authority will decide the number of units. There will be a range of unit sizes.

Policies H 3, H3.1, H 4.2, H 6B will apply. Notes Guidance Notes 2.3, 2.3, 3.2, 5, 6a, 10 and 12 will apply as relevant.

*Implementing Agency: CDA / Private sector companies / NGO's/ Local residents / local representatives*

**R-02-10:** There are government staff quarters particularly in Agrabad (PWD, T& T, Forest etc) and Mansurabad (PDB, etc), which are in dilapidated conditions. These need revitalization. This applies to CPA and BR housing also.

## **b) Industrial**

**In-02-01:** The Sagarika I/A and its immediate northeastern part is a major industrial area. This needs utilization to full capacity, major environmental protection from pollutants and parking facilities. A construction yard may be permitted. A min. of 50' tree buffer will be planted to protect neighboring settlements from noise and sound pollution.

*Implementing agency: CDA/Private sector developers/ landowners*

**In-02-02:** The narrow strip on the north of PC road and on the south of Sagarika I/A is recommended for small manufacturing industries and commercial use. The area needs road and drainage improvement and introduction of footpaths.

Policies ECN 04, ECN 04.1, ECN 04.3, ECN 04.4, ECN 11, ECN 11.1, ECN 11.2, ECN 11.3, ECN 11.4, ECN 13, ECN 13.1 will apply.

*Implementing Agency: CDA / CCC / Relevant Industry owner /Private sector*

## **c) Commercial**

**Com-02-01:** An area north of DT road is

recommended for commerce and small enterprises. Existing population will be resettled through land development techniques within the area.

Policies ECN 11, ECN 11.1- 5, H3.1, H3.2, ENV will apply.

*Implementing Agency: Govt./PWD/Forest dept.*

**Com-02-02:** This site is located to the south of DT road that is known as Alongkar moore. There is a market in this site. Considering commercial importance, this area needs to be developed as commercial use.

**Com-02-03:** The area west of the Sk. Mujib Road is designated as, "Special Commercial Area", in the CMMP. As a special commercial area all developments will be of high aesthetic quality. Permitted uses will consist of offices, shops, government buildings, parks, civic buildings and squares, restaurants, specialized markets, schools, religious buildings, off street parking. Residential uses will be permitted in the upper floors (above 6 floors).

**Com-02-04:** A liner strip between the Agrabad Access Road and the Halishahar Road may be considered as an predominant area for small scale enterprise such as furniture making, recycling facilities, small workshops, construction yards etc. in a planned organized manner. Existing large water bodies will be retained and used for reservoirs and urban public spaces. Besides, planned housing may be permitted through land readjustment technique.

*Implementing Agency: CDA/ CCC / private sector companies / private land owners*

## **d) Mixed Use:**

**MU-02-01/ MU-02-02/ MU-02-03:** Three areas a north of the Strand road at Gosaildanga is recommended for area upgrading through guided land management technique. Environmental and access conditions will be improved and open spaces created. This area will be mixed in character with emphasis to housing for middle and low-income housing and commercial and small enterprises. The Open space will be retained as a formal playground with seats and tree lined landscaped areas. Privately held areas have to be developed in

a comprehensive manner. A set of gridiron roads will have to be developed to open up the area for appropriate development. All further subdivision and isolated building construction should be brought under a comprehensive layout with interconnected road network. A pedestrian and NMT and cycle lane (12' to 15') should be developed west of the Sk. Mujib road with short connections to the Sk. Mujib road. The road west of the Jamboree field needs to be connected to the Agrabad access road along the Nasir khal and to the Sadarghat Road. Illegal encroachments from the Khal should be removed.

Policies H4, H4.1, H4.2, H4.3, H4.4, H3, H3.1, H3.2, COM 1.3, RO 1, RO 3.1, RO 3.5, RO 3.8, ECN 11, ECN 11.1, ECN 11.2, ECN 9.1, ECN 9.2, ECN H 2.3, will apply and Guidance Notes all sections of 02, 03, 04, 6, 11 will apply.

*Implementing Agency: CDA/ CCC / private sector companies / private landowners*

**MU-02-04:** This area is bounded by DT road on the north and proposed Agrabad north-south road on the west. In addition to residential use a small scale commercial activities will be permitted following good accessibility and as per Building Construction Rules.

**MU-02-05:** Taking into consideration commercial use on the north as well as industrial use on the west, this site is recommended as mixed use.

**MU-02-06:** This area is situated on the both sides of DT road that is suggested for residential and commercial use.

**MU-02-07:** This site is recommended for mixed use. Besides residential use, specialized commercial activities will be permitted here.

**MU-02-08:** An area along the coast may be used for fish related economic activity. This will include fishermen's housing, fish trade and auction centre. Facilities will be incorporated to allow tourist facilities. Original owners will be rehabilitated within the scheme. The authority can motivate local people to develop planned housing through their united participation. Specialized commercial activities and light industries may be permitted through proper evaluation of Planning

Committee.

*Implementing Agency: Govt. / CCC / Private sector companies / private land owner*



**Pic. 4.11** Livelihoods of fishermen depend on fishing along the coastal area.

**MU-02-09:** An area along the coast may be designated for a craftsmen's village - 'Bay Crafts Village'. This will include housing for artisans and craftsmen, manufacturing areas, and marketing facilities. Facilities will be incorporated to allow tourist visits. Original owners will be rehabilitated within the scheme. Planned housing by community involvement will be highly appreciated. In addition to that specialized commercial activities and light industries may be allowed as per need through proper assessment of Planning Committee.

Policies ECN 11.3, ECN 12, H 3.1, H3.2, RO3.4, will apply 02-1 and 0-2.

*Implementing Agency: Govt./ BCSIC / CDA/ CCC / private sector companies / private land owners*

#### **e) Drainage:**

In accordance with the 'Storm Water Drainage and Flood Control Master Plan – 1995', DPZ-02 falls partly in the Drainage Area No. 4a (Agrabad Residential Area) and Area No. 4b (Western coastal plain) of the Drainage Master Plan. Whole area of DPZ-02 is covered by Drainage Master Plan proposals. In addition, DAP study has identified the drainage works to be done for DPZ-02.

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

1. Rehabilitation of Nasir khal, Pakiza Khal,

- Rampur Khal, Maheshkhal, Gaina Chara Khal and Kattali Khal are proposed
2. Four secondary new khal is proposed
  3. 1 silt traps along the Pakiza khal is proposed and its location is identified in the proposed land use plan of Figure 4.4
  4. 3 regulators on khals flowing into the Bay of Bengal and one regulator in the mouth of Sheikh Mujib Road box culvert is proposed and their locations are identified in the proposed land use plan of Figure 4.4
  5. One flood storage pond along Maheshkhal is proposed
  6. Flood defense is proposed on the right bank of the River Karnaphuli and along the Bay of Bengal Coast.

**DAP Proposals:**

1. Retaining and preservation of 187 ponds of 0.5 acres and above is proposed. The accumulated size of these existing ponds proposed to be preserved equal approximately 253.4 acres. These ponds are identified in Figure 4.4.
2. Two secondary new khals near the embankment of the Bay of Bengal with a total length of about 3.9km are proposed and their locations are identified in the proposed land use plan of Figure 4.4. Additionally, drains/khals are proposed on both the sides of the new roads.
3. Following drainage guiding principles/guidelines C at page 3-3 remaining drainage network is proposed and identified in the proposed land use plan of Figure 4.4
4. Location of a site for a sewerage treatment plant is identified near the embankment by the side of a branch khal linking Maheshkhal. The location is identified in the proposed land use plan of Figure 4.4
5. Where not shown specifically in the proposed land use plan of Figure 4.4 drainage guiding principles/ guidelines will apply.

**f) Transportation:**

Although this zone is well served by major

network of roads, some of the secondary east-west links are narrow; as a result the traffic circulation is not efficient. Again none of the east-west links provide any exit to the west, where a major embankment-cum road is proposed along the coast. Since the Port Access Toll Road runs parallel to the Embankment-cum Road, all east-west connections shall have to be at grade. In order to improve traffic circulation, the following major roads are proposed

**1.0 Major Road Proposals**

1.1 Extension of Madhya Haliashahar Road to the west up to the Embankment-cum-Road, with a ROW of 60 ft. This road would also provide a link to the Haliashahar Road running between Madhya Haliashahar and Dakhshin Haliashahar. This will also provide an alternative road between the city and the airport.

1.2 Extension of Uttar Haliashahar Road to the west up to Embankment-Cum Road, with a ROW of 60 ft.

1.3 Extension of Sagarika Road to the west up to Embankment-cum-Road, with a ROW of 60 ft.

**2.0 Road Intersections:** There are two major intersections, which are critical and need to be properly designed to enhance traffic safety. Both are near Alangkar Moore. These are

2.1 Intersection between Dhaka Trunk Road and Port Connecting Road

2.2 Intersection between Sagarika Road and Port Connecting Road, particularly in view of the city bus terminal proposed on Sagarika Road

**3.0 Foot over bridges:** To enhance traffic safety, pedestrian over bridges are proposed at the following locations:

- i) Port access road ii) Agrabad Access Road, iii) Uttar Kattali (Near Cornelhat bazaar, iv) Alangkar more v) Sk. Mujib Road (at least 2)

**4.0 City Bus Terminal (Tran-02-01):** A city bus terminal may be developed to the south of sports stadium at Sagarika. This place will contain different facilities for other modes of transport such as taxi service and offices of car rentals. Besides, other supporting facilities are to



be provided in this place such as restaurants, shops, offices of tourist companies and so on.

## g) Restricted Areas (Port)

**Rt (CPA)-02-01/(CPA)-02-02/(CPA)-02-03:** The CPA is undergoing major upgrading of its underused and derelict storage and housing areas more efficiently. This Plan supports this move. To reduce noise and contain air borne pollution massive tree plantation buffer must be created. The large water bodies must be retained and more created for flood retention surface water use. Existing settlements may be resettled with work areas within the site through land sharing. Other restricted areas will have their own programme.

## h) Community Facilities

**Comm-02-01:** This site is suggested for development of mosque, eidgha and graveyard. At the project level particular places for these uses will be determined through detail study.

*Implementing Agency: Govt. / CCC / CDA/ private sector*

**Comm-02-02:** A site north west of the Hali Shahar R/A may be considered as an educational zone. A residential high school, university, Home Economics College, sports training facility exists. The khal going through the site will be conserved as a green pathway. 50% of the site should be kept open and green. Existing settlements will be resettled within the zone. Efforts have to be taken for planned development through community participation.

**Comm-02-03 / Comm-02-04:** Two areas at important junctions (Agrabad and Alangkar) are recommended to act as the community and local administration and community centre.

Policies COM 1, COM 1.1 will apply

*Implementing Agency: CCC / CDA/ private sector companies /private landowners*

**Comm-02-05:** Reservations may be made for a health facility north of Hali Shahar R/A. Existing landowners will be accommodated in a planned manner and some land released through compulsory acquisition and land sharing

techniques.

*Implementing Agency: CCC / CDA/ private sector companies /private landowners*

## i) Institution

**Ins-02-01:** Mohila Polytechnique and Physical College can make combined an institutional block in this site.



**Fig. 4.12** Mohila Polytechnique plays vital role to promote women education.

## j) Leisure, Recreation, Parks and Open Spaces

**RO-02-01:** To promote tourism, the Behular Dighi (11.04 acres) and Joor Dighi (22.496 acres) area may be developed into a recreational park named "The Railway Taranga". Illegal encroachments should be removed. A high-class commercial building may be constructed (5% area) to provide visitor facilities (toilets, restaurants, souvenir shops, etc.), and community halls, to recoup cost of



**Fig. 4.13** Joor Dighi needs to be developed as recreational park with different facilities.



development. The full urban and economic potentials of these magnificent large water bodies must be utilized..

*Implementing Agency: CDA/Railway/ Parjatan / Private sector companies*

**RO-02-02:** The sports stadium at Sagarika may be upgraded and further facilities added to make it a venue of regional and international sports events. Other facilities will consist of adequate parking facilities, public transport dropping facilities, limited commercial/community facilities (within



**Fig. 4.14** Stadium at Sagarika is an international sports venue.

5% of area) and dorms, institutional housing for players, sports administrators. Original landowners will be rehabilitated within the zone.

*Implementing Agency: CDA /CCC/ Other Government agencies*

**RO 02-03** An area along the coast is suited for a picnic spot. This is easily connected to the bay and can be developed to attract visitors. Structures can occupy 10% of area. Other facilities include seats, pavilions, toilets, restrooms and limited number of shops. This may be named, "Oboshor".

*Implementing Agency: CDA/CCC/ Parjatan/Private sector companies/Private land owners*

**RO-02-04:** The 1 acre vacant plot south of Rd 01 at Agrabad R/A shall be reserved as a play ground for the NH schools and the NH children. Public toilets and some sitting arrangement shall be provided. Vendors will be given specified locations to sell food items in mobile carts at designated time. It can also serve as a kitchen market (only in mobile carts) for limited hours. (The community

shall pay rent for use of the facility.) After school hours it should be treated as a public open space for children of the area.

*Implementing Agency: CDA /CCC/Community Organization (ARASCA)*

**RO-02-05:** The Karnaphuli Amusement Park needs improvement of its entrance area and parking facilities have to be introduced. The following actions are recommended: removal / demolition of rows of shops on the north of the field, creation of a tree plantation and pedestrian walkway and hawkers' site (non polluting items only), visual connection of the park from the road and public areas. The vacant north western portion may be released for a children's park open to all. New additions to the park will be discouraged and its open areas retained.

*Implementing Agency: CDA/CCC/PWD / Private sector*

**RO-02-06:** The 10 acre field owned by PWD (East of Jamboree field) has to be retained as a formal playfield to serve the whole Zone. The following recommendations are made; provision for public toilets, maintenance and security rooms, seats, no solid boundary wall, and adequate parking arrangements. The field should be landscaped and built to a high design standard.

*Implementing Agency: CDA/PWD/CCC/Forest department /other government/Private sector*

### **k) Utility Services**

**Ut-02-01:** An area along the coast on the northern edge may be considered as the city garbage dump and recycling facilities. As the prevailing wind is from the southwest the existing CCC dump yard at Ward 39 is inappropriately located. Tree plantation and such protection needed to protect surrounding areas from overspill of garbage and bad odor must be made.

*Implementing Agency: CDA/Govt. / CCC / private sector companies /NGO's/CBOs*

**Ut-02-02:** The present DAP study recommends that the responsible agencies for the provision of utility services, will prepare their own detailed plan in respective fields.

### I) Culture and Heritage

**CH-02-01 / CH-02-02:** Two sites may be protected from demolition and disfigurement. i) The Mandir west of Sk Mujib road, ii) the petrol pump adjacent to Barik Building junction.

*Implementing Agency: CDA /CCC / Landowners*

### m) Agriculture

**A-02-01:** The government agricultural extension centre is very rich in agriculture production. This should be retained and developed as Khamar Bari - a model village centre. Besides high quality seed production, other innovative uses (snake farm), may be incorporated to attract visitors. Visitor facilities may be added. Semi urban housing built to serve the centre covering a maximum 10% area. Original landowners shall be rehabilitated within the zone. The 'Khamar Bari', will make positive improvement to the environment.

*Implementing Agency: CCC/ CDA/ Other Government Agencies/Land owners*

**A-02-02:** An area west of the Artillery centre shall be retained as an agricultural zone for security related reasons. Existing settlements will be retained in its semi urban state and building heights restricted to a maximum of three stories.

*Implementing Agency: CDA/Other Government Agencies/ Landowners*

**A-02-03:** The current use of lands west of the embankment may be continued as fish culture ponds. This activity may be extended. However, the environmental and visual quality has to be enhanced to attract tourism. Limited facilities to attract tourism should be developed.

*Implementing Agency: BWDB/ CDA/Other Government Agencies*

### 4.2.6 ENVIRONMENTAL PROTECTION AND ENHANCEMENT

For the future development activities of this planning zone the principal aim is to; reduce water logging, stop industrial pollution (water), creating green belts and open spaces and stop loss of water ponds/dighis. It is necessary to develop the area in

an environment friendly manner. Some guiding principles are:

**a) Controlling Unplanned Urban Growth Trends And Encroachment:** Unplanned urbanization and encroachment of Nasir, Rampur and Gainna Chara khal, siltation of the outlets, construction of inadequate box culvert and sluice gate of the Kattali khal to the Bay, and more importantly the encroachment and siltation of the Maheshkhal are the major causes. Immediate improvement of these khals, removal of all legal/illegal obstacles, re-excavation, and fixation of the bank-lines by walkway is required. Maheshkhal is the main drainage artery in this zone, and this needs special planning attention.

**b) Reducing Pollution:** To reduce the current trends of water pollution by industrial effluents from the BSCIC I/A at Kattali, Industrial Waste Treatment Plant, (individually or by group of units) must be installed immediately. No industry would be allowed to discharge their effluences without treatment.

**c) Protecting Water Bodies:** This planning zone, particularly wards 10, 11 and 12 are rich in ponds and dighis. The community is using water of many of these dighis. Such dighis, under any form of ownership, should not be allowed to be filled up. These are marked in the Figure 4.4

**d) Implementing Projects:** A green belt can be generated on both sides of the toll road (CPAR), DT road, banks of major khals and Sagarika Stadium compound. Other proposals are:

**EN-02-01:** To reduce flash flooding, the port land bounded by the Maheshkhal on the east and the PC road on the west must be conserved as an open space to accommodate the overspill of floodwaters of the natural khal system. Originally this land acted as a retention area during high tides and rainfall. It is recommended that this area to be retained as a green park named, " Port Ananda". The existing school, staff quarters and grave will remain and will be aesthetically enhanced. The edges of the khal will be developed into a green pathway. All leases to shops should be cancelled and a defined plantations scheme prepared. This should include large open landscaped areas with

seats, sports facilities (court games, swimming facilities, tracks and fields, football and cricket), public toilets, a kitchen market with appropriate buffer to separate play areas, a shopping mall, adequate parking for all types of vehicles, bus stoppage / bus bay and adequate provision for public transport dropping and stalling. The setting has to be of high architectural design standard. A minimum of three pedestrian crossings from the east and north (Agrabad R/A rd 17, rd 4 and Boropool area) is recommended. The spectacular meandering views of the Maheshkhal from the proposed foot bridges could be a great attraction for visitors.

*Implementing Agency: CPA /CDA/ Forest Department / private sector.*

**EN-02-02:** To reduce further vulnerability due to surges, development of a green corridor along the landward side of the coastal embankment by non-mangrove native species is recommended. A tree plantation zone of varying width is recommended on the landward side of the coastal embankment. This plantation zone will be maximum 300 meters as well as may be reduced based on existing obstacles.

*Implementing Agency: CDA/BWD /CCC/ Forest Department / CBOs/ NGOs*



**Fig. 4.15** Intensification of existing tree plantation on the landward side of the coastal embankment will decrease vulnerability due to storm surges.

**EN-02-03:** In the North Agrabad area, a 10 acres site is recommended for creating an urban forest called, "Chaya Bithi". Water bodies may be created

in some 20-25% of the site to relieve water logging and create leisure spaces.

*Implementing Agency: CCC/ CDA/ Forest Department/ CBOs/ NGOs/ Private landowners*

**EN-02-04** A number of ponds are recommended to retain in the above area. These can be developed as public urban spaces and used as recreational facility to generate income.

*Implementing Agency: CCC/ CDA/ CBOs/ NGOs/ Private landowners*

**En-02-05:** To reduce the deadly effect of cyclone and storm surges and act as a shield a seaside mangrove green belt, extending from the embankment to low tide limit is recommended. There will be gaps (100m on both sides) of the natural khals and natural creeks. Measures should be taken to facilitate visitors (elevated walkways, boat berthing decks etc)

*Implementing Agency: CDA/BWD / Forest Department / CBOs/ NGOs*

**En-02-06:** All along the natural khals and creeks, a 20' width of land will be kept free from all development and turned into a green walkway. Guidance Note 12.

*Implementing Agency: CDA/BWD /CCC/ Forest Department / CBOs/ NGOs*