

DPZ
07

SILIMPUR-KUMIRA



4.7 DPZ-07: SILIMPUR-KUMIRA

4.7.1 EXISTING SITUATION

a) Location and Administrative Boundary:

DPZ-07 is on the northwestern edge of the planning area. DPZ-07 consists of flat plains meeting the Bay of Bengal on the west and the hilly region on the east. To the west side, its boundary is the Bay of Bengal and to the east side, its boundary is the Hathazari hilly region and Bayzid Bostami area and to the south side, its boundary is the Pahartali Thana. The whole of the area covered by this DPZ lies within Sitakunda and Hathazari Thana and comprises 6 Unions and Kumira growth centre.

b) Population: As per the BBS census 2001, the population of this zone was 156920. According to the trend of the population projection the total population is estimated to be 206752 in 2015. Density of the DPZ-07 will rise from 8 persons/acre in 2001 to 11 person/acre in 2015.

c) Land Ownership: Most of the land within the area is under private ownership. A significant size of land is under public control as for examples educational institutions. Most of the dwellers have their own private land and they live in their private houses.

d) Socio-Economic Condition: The DPZ-07 is situated outside of the Chittagong City Corporation Area which is vastly rural in character. The DPZ 07 area comprises one growth centres (Kumira) and a number of Unions.

It is found that approximately 28.34% of the residents have completed the primary education level and 25.50% have completed the secondary level education. (Source: Socio-economic Survey Report of DAP project in March 2007)

There are five types of structures in the DPZ-07 area such as pucca, semi-pucca, Katcha, Tinshed and Jhupri. Most part of DPZ-07 is rural in character where Katcha, and Tinshed structures are dominating feature. (Source: Socio-economic Survey Report of DAP project in March 2007)

In order to understand the pattern of household employment and investment activities as well as

sectoral contribution to the economy of DPZ 07, it needs to present an overall profile of economic activities mainly in the industrial sector and agricultural sector. Agriculture as a whole including crops, livestock and poultry and fish cultivation, accounts for around 12.44%; there are about 12.67% day labour and around 8.69% are employed in informal activities (Source: Socio-economic Survey Report of DAP project in March, 2007)

According to the Socio-economic survey report of the DAP project 2007, business, trade and agricultural goods are the dominant sources of household monthly income accounting for around 46.91% of the total household monthly income. Income from wages and salaried job accounts for around 27.32%, cottage industry and professional services accounts for around 0.65%, agriculture as a whole, including crops, livestock and poultry and fish cultivation, accounts for around only 12.45%.

4.7.2 EXISTING LAND USE AND DEVELOPMENT STATUS:

In accordance with field survey 2005-2006, the study area seems an admixture of a variety of land uses of rural character. Broadly, the areas, served by good road facilities have experienced spatial growth of rural character comprising housing, commerce, industries, institutions, and services. The inaccessible remote areas away from major roads have remained with their original rural character comprising homestead, farmland, fellow land and areas of water bodies. The existing land use features of the DPZ-07 are shown in the following table.

From the land use survey it is observed that the present dominant land uses of the study area are hilly area, vacant land and sea beach. Other dominant lands are water body, agriculture and fisheries and industrial. The total area of the land uses is 25,546 acres. Hilly land covers 38.74% while 15.46% land is vacant and 19.4% land is sea beach area and 12.43% water bodies (Rivers, Khals and Ponds). Figure 4.13 shows the existing land use of DPZ-07.

Table 4.7: Existing land use features of DPZ-07

Sl. No	Type of use	Area (in acre)	Percentage
1.	Agriculture and Fisheries	1056	4.13%
2.	Commercial Activity	52	0.2%
3.	Education and Research	7	0.03%
4.	Hilly land	9896	38.74%
5.	Manufacturing & Processing	716	2.8%
6.	Miscellaneous	31	0.12%
7.	Mixed Use	5	0.06%
8.	Office Use	1	0.01%
9.	Open/Community Space	88	0.34%
10.	Residential	416	1.63%
11.	Restricted	843	3.29%
12.	Service Facilities	4	0.01%
13.	Transport & Community	345	1.35%
14.	Vacant Land	3951	15.46%
15.	Sea Beach	4958	19.4%
16.	Water Body	3177	12.43%
TOTAL		25,546	100

Source: Land use survey, 2006-2007

a) Residential: Residential land covers an area of 416 acres (1.63%) of DPZ 07. The survey results indicate that residential category is not the major dominated land use in the DPZ-07 area. There are 25854 dwellings in this area, of which 11.00% pucca, 19.94% semi pucca, 65.65% tinshed and 17.39% katcha.

b) Industrial: The area covered by the DPZ-07, a significant number of industries have been developed between the rail line and Dhaka Trunk Road, as for example General Manufacturing Plant, metal industry, textile and garments, different types of factory, food silos, jute mill, and soap industries. There are also 137 poultry farm found in the DPZ-07. A large amount of land, 716 acres (2.8%) of DPZ 07 is covered by this category.

c) Commercial: There are a large number of retail shops, bazaars and wholesale shops as well as ribbon commercial developments along the major road in this area. This zone is famous for ship breaking material shops. Some portion of land, 52 acres (0.2%) of DPZ 07 is covered by this category.

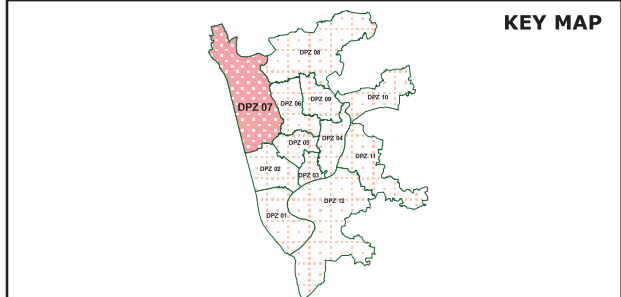
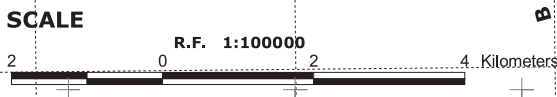
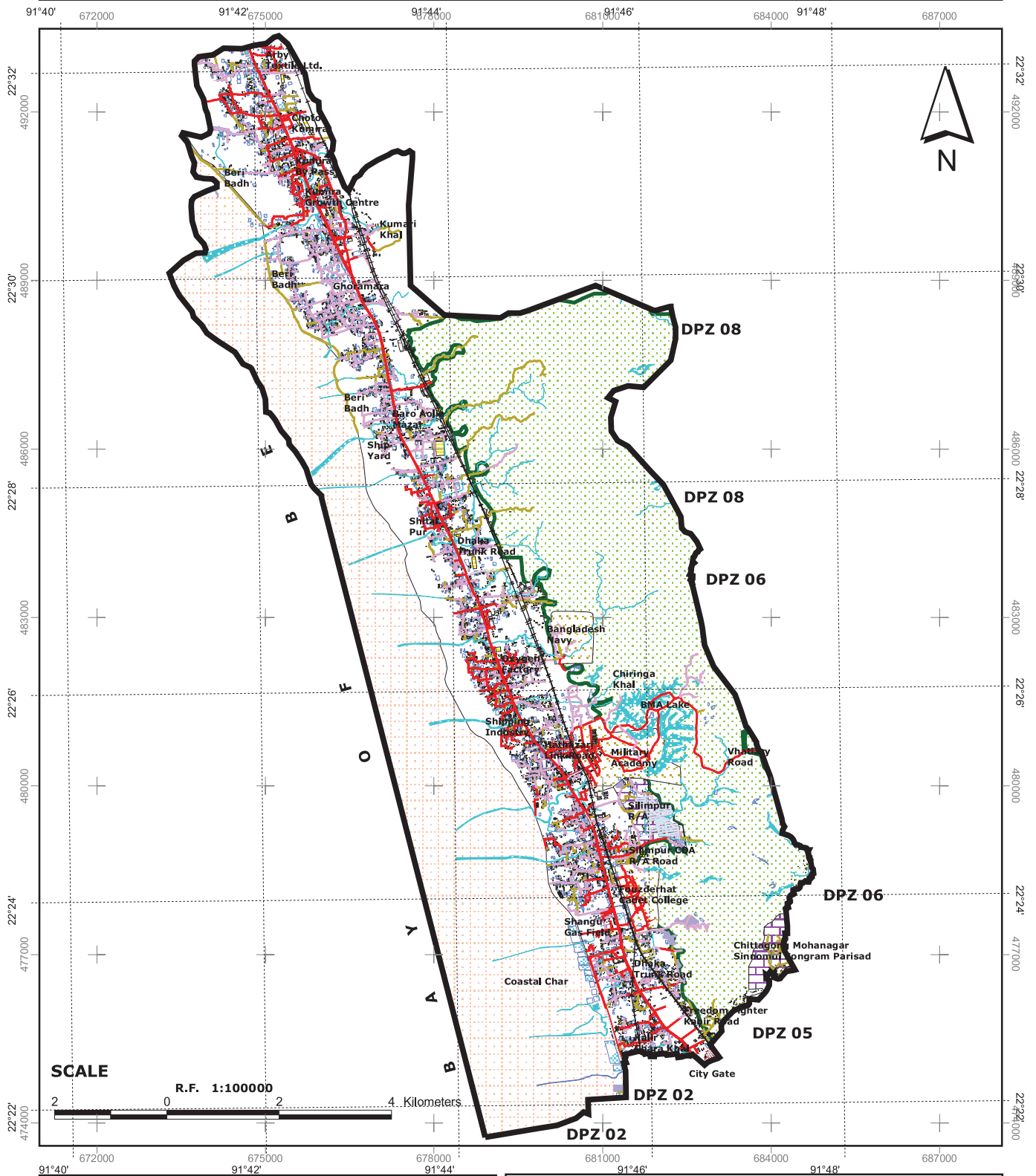
d) Mixed use: Mixed land use area may consist of residential with commercial or commercial with

residential use. However, other admixture of diverse land uses is also found. Around 5 acres (0.06%) of DPZ-07 is covered by this category.

e) Topography and Drainage: In DPZ-07, some areas are geologically flat and a large portion is hilly area. West side of the area covers flood plain land along the Bay of Bengal. Consequently, this portion of the study area is flood prone and water remains for a few weeks during the rainy season. East side of the area covers the hilly region and the area has a risk of landslides. Some khals and branches, which cross the area, are important natural drainage courses. Finally all the khals fall into the Bay of Bengal. In addition to the khal a significant number of ponds work as storm water reservoir during the monsoon period. The western area is susceptible to cyclonic surges therefore largely unsuitable for general urban use.

f) Transport: There are various types of roads with different widths in this area. The present study finds a total of 345 acres (1.35% of total area) for road use. An analysis of the circulation pattern shows that there is only one primary road named Dhaka Trunk Road in this planning zone. No

FIGURE 4.13: EXISTING LAND USE MAP OF DPZ- 07 (Silimpur-Kumira)



LEGEND

Existing Structure		Existing Road	
	Residential		Pucca Road
	Commercial Activity		Semi-pucca Road
	Community Service		Katcha Road
	Education & Research		Railway Line
	Governmental Services		Marshland
	Manufacturing and Processing Activity		Ditch
	Miscellaneous		Pond
	Mixed Use		Khal
	Non Government Services		Drain
	Service Activity		Residential
	Transport & Communication		Restricted
	Agriculture		Hilly Area
			Coastal Char
			Other Use

prominent secondary or tertiary roads are available here. There are some access roads, which are connected to Dhaka Trunk Road only. The existing roads do not form any network for efficient circulation within the zone.

g) Restricted Area: This category consists of different restricted areas under the defense service installations such as Bangladesh Military Academy including their residential area, Naval Base and headquarters including their residential areas and BDR camp as well as Fauzdarhat Cadet College. It also includes the Chittagong Port Installations. A total of about 843 acres of land are in restricted area. Out of that, 390.076 acres land are restricted by Bangladesh Military Academy, 165.282 acres by Naval Base and 287.642 acres by Fauzdarhat Cadet College.

h) Community facilities: Most of community facilities are concentrated where many people live and gather. This land use includes educational

institutions, hospital/ clinic/dispensary, park & playground, post office, police station, fire station, town hall, all kinds of assembly hall, prayer halls including mosque, temple, church, pagoda, community centre, mazar, graveyards, cemetery, religious sites etc. It accounts for approximately 88 acres (0.34%) within the DPZ-07.

i) Utility services: The supply network in the served area is not comprehensive. There are various sources of water supply in DPZ-07. And household owned tube well is predominant. A considerable number of households depend on community tube well for safe drinking water. Slum areas generally have little or no piped water supply. The major sources of water supply come from shallow tube wells or open ponds. These supplies are often polluted and unclean.

There is no piped sewerage system in Chittagong. Some buildings have septic tanks but the majority of sewage is flushed directly to khals or deposited

Table 4.8: Existing community facilities of DPZ-07

Community Facilities	Existing Features (Unit/No)	Area (in acre)
Police Box	1	0.051
Post office	1	0.035
Hospital	2	0.525
Clinic	15	1.255
Market	22	4.235
Bank	7	0.525
Community Centre/Club house	12	3.499
Graveyard	107	16.525
Mosque	174	19.252
Temple	56	4.625
Mazar/Dargah	12	0.525
Primary school	74	9.1828
Secondary school	22	5.254
College	3	1.262
NGO school	8	0.0262
Madrassa	19	1.169
Park	---	---
Playground	6	4.231
Corner shop	826	14.319
Water pump house/Water reservoir	13	0.241
Signal house/Cyclone centre	2	0.322
Petrol pump	3	0.52
Total	1385	87.579

Source: Land use survey, 2006-2007

in open latrines.

There is no proper solid waste management system in this area. People dump waste indiscriminately along the roadside; drain, pond and canal that pollute water body. Such unsanitary condition may lead widespread pollution, which causes health hazard.

Supplies of gas and electricity are available to all developed parts of the area, particularly in the industrial areas. Some poor households cannot bring gas line due to financial inability rather they cook food in traditional mud made oven.

j) Agriculture: This category includes all types of agricultural uses like paddy field, cropland, grazing land, orchard, horticulture, fisheries, nursery, farm land, poultry, cattle farm etc. It comprises about 1056 acres (4.13%) land of DPZ 07. Irrigation water is comprehensively utilized for cultivation. Approximately 137 poultry farms and a certain number of fisheries play a pivotal role in local economy of the DPZ-07.

k) Vacant land & Char land: Unused or vacant land is an important feature of the planning area. This category includes land with no apparent use or unused land, low-lying areas, char land including the sea beach land etc. This area has a land (vacant & sea beach/char) of about 8909 acres (approximately 35% of the DPZ-07); of which a little portion agricultural land has transformed into non-agricultural land through selling from farmers to non-farmers.

4.7.3 EXISTING ENVIRONMENTAL ISSUES:

Water body is the major environmental issues in the DPZ-07 area. The water bodies are spread all over the DPZ-07. Water bodies like pond, khal, ditch etc. encompass almost 3177 acres (12.43%) of DPZ-07 area as shown in the Table 4.7. A lot of small hilly regions are present in DPZ-07 and covers 9896 acres (38.74%) of DPZ-07.

4.7.4 HIGHER LEVEL PLANNING:

a) Structure plan 1995: Structure plan has identified Sitakunda Thana as one of the future industrial expansion areas taking into account various policies on population, economy, spatial development opportunity, community facilities, transportation, infrastructure services, flood and

drainage, urban land development, environment and prestige projects

b) Urban Development Plan 1995: The following issues, problems, opportunities and required actions have been recognized at zone 07 areas, which are clarified through observation.

Major issues and problems

- Susceptibility to cyclonic surges near the coast.
- Susceptibility to seasonal flooding from the Bay of Bengal.
- Haphazard development of urban fringe areas.
- Presence of slum and squatter areas.
- Presence of vacant or underutilized industrial sites.
- Ribbon development along the Dhaka Trunk Road.

Opportunities

- Availability of gently sloping, easily serviced land adjacent to the coast.
- Accessibility to good highway communications with the rest of the country.
- Protection from cyclonic surges to be provided by construction of new coastal embankment in part of area to replace that damaged in the 1991 cyclone.
- Lightly developed or underdeveloped hills in the area.

Actions Required

- Reduce the number of accesses onto Dhaka Trunk Road.
- Stop new urban development west of Dhaka Trunk Road in the area not protected by the new coastal embankment.
- Provide service roads to serve areas of development to the east of the Dhaka Trunk Road.
- Encourage the full development of the Fouzderhat Industrial Area.
- Limit new development west of railway line but protected by the new coastal embankment to non-urban uses.
- Identify and address environmental problems

caused by ship-breaking operations.

- Redefine the western boundary of the proposed regional park and maintain this as the eastern boundary of development in the area.
- Encourage the organized development of the areas protected by the embankment which lie to the east of railway, by meeting their priority needs in association with the local community.
- Implement coastal afforestation schemes in association with the new coastal embankment.

Priority Actions Required by Area

- Stop unplanned ribbon development along the Dhaka Trunk Road particularly in the areas subject to cyclonic surges (i.e. west of the Dhaka Trunk Road and the coastal railway line).
- Identify alignments of service roads to serve areas of development to the east of the Dhaka Trunk Road and make provision for their implementation.
- Identify an alignment for the proposed east-west line and adopt a reservation for it
- Encourage the full development of the Fouzderhat Industrial Area.
- Implement coastal afforestation schemes in association with the new coastal embankment.

c) Storm Water and Drainage Master Plan CMMP, 1995

The DPZ-07 encompasses part of drainage area no. 4b as well as drainage no. 10 of the drainage master plan 1995. Major proposals of drainage master plan for this zone are khal rehabilitation, tidal regulator and flood defense.

d) Long Tern Strategy for Traffic and Transportation Master Plan, 1995

The prime proposal of this Master Pan for DPZ-07 is north-south connection road.

4.7.5 DETAILED AREA DEVELOPMENT PROPOSALS:

The following development proposals have been shown in *Figure no 4.14*.

As a large-scale peripheral expansion of the area, we recommend that the area covered by the

Detailed Plan should contain a wide use of industrial and agriculture and fisheries related use. Taking into consider all the demand for different activity, the present study of DAP recommends some proposals on around 25546 acres land in the DAP-07. These are shown at Table 4.09 and discussed in turn below:

a) Residential (Housing) & Ancillary: Due to the land scarcity, Chittagong city is now extending to its urban fringe areas and Sitakunda Thana is the urban fringe area. Day by day industries are being developed here and for this reason people are coming to live in this area. Consequently, haphazard growths of residential areas have been developed here. Under the present study of Detailed Area Plan for zone 07, an attempt is taken to identify the proper location of future housing development with some guidelines. Here it is mentionable that almost land of these areas are flat, so before taking any housing project land development is necessary as it demands in different parts of the study area.

The private sectors are welcome to make the low-cost housing schemes for the industrial worker. No development will be allowed within 100 yards from the foothills.

R-07-01/R-07-02: There is unplanned growth at the sites. Through land readjustment technique and community participation this spontaneous growth can be brought in orderly development. Planned housing will be permitted in the vacant lands. In this case, united participation of the community people will be highly appreciated. Measures have to be taken to create more small size plots for low and middle income people. As this DPZ is industrial dominating, so attempt needs to set up low cost housing block for industrial workers. Environmental condition has to be improved and good access road is to be made in this site.

R-07-03: Planned housing will be permitted at this site as per Building Construction Rules.

R-07-04: Silimpur R/A developed by CDA is situated at this site. Plots of this residential area remain underutilized. Step has to be taken to use the vacant plots.

R-07-05: These two sites are rural and semi urban characteristics where existing land use is residential dominating. Large development will not be permitted till embankment is made. Residential and industrial supporting use will be allowed at this site. Building approval will be subject to keeping ground floor empty and upper storied to be used.

R-07-06: This site is semi urban characteristics. In order to planned development, this area is recommended to be upgraded as residential use by land development techniques with proper urban amenities and community facilities

b) Industrial

In-07-01: It is observed that many industrial activities are already exists to the west side of the hilly area and this area is suitable for industrial development and finally, this area is recommended as industrial or industry related use but it will not be close to the hill. No such activities will be approved within the 100 yards from the foothills. For environmental enhancement, a green buffer must be designed at the edge of industrial sites as well as waste water treatment plant has to be established individually or jointly or centrally. The concerned authority will ensure that industrial plots to be fully utilized.

In-07-02: This site is recommended for ship yard where ship breaking and ship making activities will be carried out in planned manner.



Pic. 4-45 Ship breaking industry.

c) Commercial: As future industrialization will take place in zone 07 areas, lots of commercial activities will be needed to support this area. Considering this demand some right places will have been recognized for commercial and mixed uses in various parts of DPZ-07 through proper evaluation of CDA's Planning Committee.

d) Mixed use: This site is located to the east side of Dhaka-Chittagong Highway to be suggested for planned mixed use.

e) Drainage: In accordance with the 'Storm Water Drainage and Flood Control Master Plan – 1995', DPZ-07 falls partly in the Drainage Area No. 4b (Western coastal plain) and the Area No. 10 (Along the Dhaka Trunk Road & the rail line) of the Drainage Master Plan. About 1/3rd area of DPZ-07 is covered by Drainage Master Plan proposals. For

Table 4.9: Proposed land use features of DAP-07

Sl. No.	Type of use	Area (in acre)	Percentage
1	Residential	3806.177	15%
2	Industrial	3261.622	12.76%
3	Mixed Use	2248.341	8.80%
4	Recreation, Leisure & Open Space	529.415	2%
5	Sea Front Development	6518.815	25.51%
6	Transport Related Use (Bus, Truck & Container Terminal)	602.799	2.35%
7	Reserved Hill	7809.521	30.56%
8	Restricted	764.177	3%
9	Green Buffer	5.133	0.02%
Total		25,546	100%

Source: Land use survey, 2006-2007

the rest of the area, DAP study has identified the drainage works to be done.

Drainage Master Plan Proposals for the area include:

1. Rehabilitation of Kalichara Khal is proposed. The location is identified in the proposed land use plan of Figure-4.14.
2. 4 regulators on khals flowing into the Bay of Bengal are proposed and the locations are identified in the proposed land use plan of Figure-4.14.
3. Flood defense is proposed along the Bay of Bengal Coast.

DAP proposals:

1. Rehabilitation of Akuti Jharna, Balu Chhara, Kumari Khal, Chiringa Khal, Kalirsora Khal, Lasni Khal, Kajari Choura Khal and Mitha Khal, having a total length of about 48.1 km. are proposed. The locations are identified in the proposed land use plan of Figure-4.14.
2. Retaining and preservation of 286 ponds of 0.5 acres and above are proposed. The accumulated size of these existing ponds proposed to be preserved equal approximately 302 acres. The locations are identified in the proposed land use plan of Figure-4.14.
3. 5 new regulators are proposed on khals flowing into the Bay of Bengal. The locations are identified in the proposed land use plan of Figure-4.14.
4. 28 new flood storage ponds measuring about 417 acres are proposed. The locations are identified in the proposed land use plan of Figure-4.14.
5. Following drainage-guiding principles/guidelines C at page 3-3 remaining drainage networks is proposed and identified in the proposed land use plan of Figure 4.14.
6. Where not shown specifically in the land use map, drainage guiding principles/ guidelines will apply.

f) Transportation: The long-term development strategy for traffic and transportation contains one major road proposal, which will improve the

accessibility and encourage the development of the zone. In addition, a number of major road links are proposed to open up the area for development. Figure 4.14 illustrates the proposed road network for the zone-07. The details are indicated below:

Primary Roads (District Distributor Roads): A major north-south primary road is proposed alongside the embankment on the coast of Bay of Bengal in line with JBIC recommendation. This would be a road having 120 ft ROW on an embankment ramp ROW of 200 ft. The alignment of this road will follow the track immediately behind the flood defenses and control of the storm water drainage indicated in the Flood Control Master Plan. A service lane has also been proposed along side this primary road, on the eastern side.

Secondary Roads (Other Distributor Roads): Most of the access roads in this zone are in poor shape. In order to provide accessibility, a number of roads have been proposed between Dhaka-Chittagong Trunk Road and the service lane alongside the new primary road-cum-embankment mentioned above. These link roads will have 40 ft ROW and will serve as secondary roads. On the south side of Sitakunda Thana, a local distributor road is proposed to be widened.

Terminal:

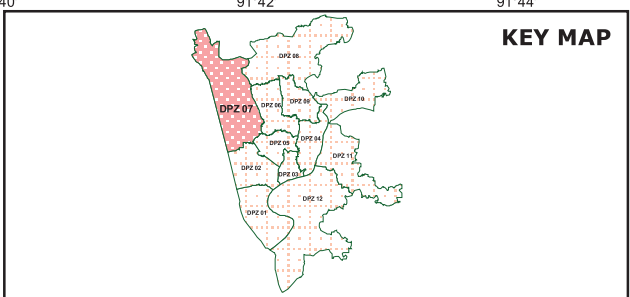
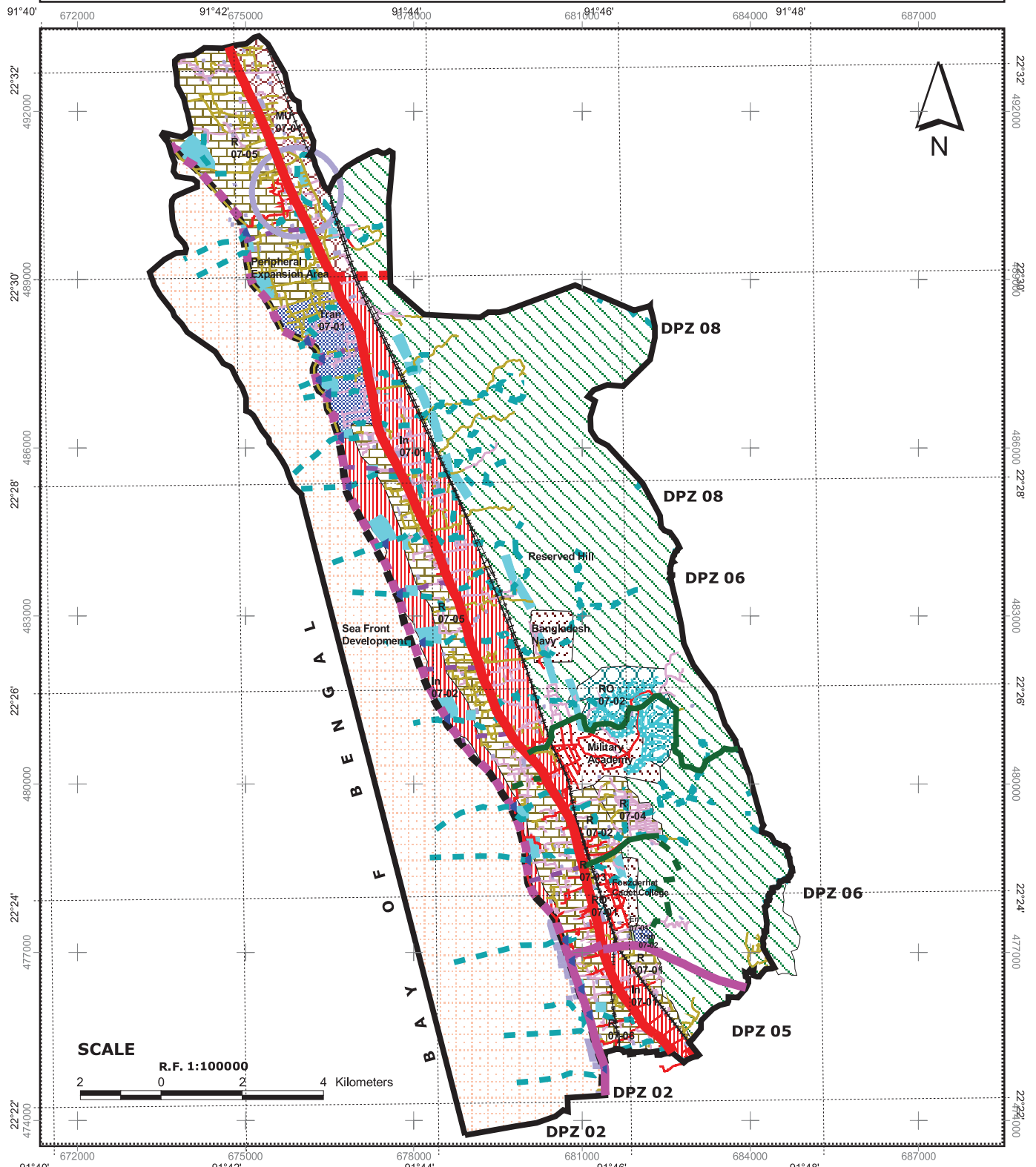
Tran-07-01: This site is designated for truck and container terminal. At the project level, detail design will be prepared with considering environment enhancement. A green buffer has to be designed surrounding the terminals.

Tran-07-02: This site is recommended for city and inter district bus terminal considering smooth circulation and environmental improvement.

g) Leisure, Recreational, Parks and Open Spaces: About 40% of the areas are hilly and there are many khals around the hilly area but there is no sufficient facility for recreation activities in this area. For better mental and health improvement of the local people it is mandatory to provide land for different types of recreation activities like parks, boating, fishing etc.

RO-07-01: This site west of Fouzderhat Cadet

FIGURE 4.14: PROPOSED LAND USE PLAN OF DPZ- 07 (Silimpur-Kumira)



LEGEND	
Proposed Landuse	
[Pattern]	Residential
[Pattern]	Industrial
[Pattern]	Recreation, Leisure & Open Space
[Pattern]	Transport Related Use
[Pattern]	Reserved Hill
[Pattern]	Restricted
[Pattern]	Peridheral Expansion Area
[Pattern]	Retention Pond
[Pattern]	Flood Storage Pond
[Pattern]	Mixed Use
[Pattern]	Green Buffer
[Symbol]	Tidal Regulator
[Symbol]	1st priority Growth Centre
Proposed Road	
[Symbol]	P-120'
[Symbol]	P-60'
[Symbol]	P-40'
Widening Road and Drainage	
[Symbol]	W-160'
[Symbol]	W-120'
[Symbol]	W-60'
[Symbol]	Khal Rehabilitation
Existing Road	
[Symbol]	Pucca
[Symbol]	Semi-pucca
[Symbol]	Katcha
[Symbol]	Railway Line

College remains vacant that can be developed as linear landscape park including existing water body.

RO-07-02: BMA lake is recommended for recreational use. Taking into account the combination of water body, hilly areas and a green natural park can be landscaped in this site with some sitting arrangements, walking way, boating and other facilities that will not degrade environment.

h) Utility Services:

Ut-07-01: The present DAP study recommends that the responsible agencies for the provision of utility services, will prepare their own detailed plan in respective fields.

i) Seafront Development: West side of this zone along the bay has been identified for seafront development through detail study.

j) Reserved Hill: Taking into account the environmental importance of hilly areas, this study recommends to preserve existing hill as well as its edge. Development control and promotion will be carried out as per guiding principles and policy of hilly areas through proper evaluation of Nagor Unnayan Committee.

k) Development of existing unplanned area: This area covers existing unplanned residential areas, industrial areas and commercial areas. These areas can be redeveloped with different planning techniques like Land Readjustment, and Site and Services Scheme. All the unplanned commercial and residential areas can be redeveloped in future for healthy neighborhood environment

k) Afforestation: A linear coastal afforestation programme has been proposed. This afforestation programme may also incorporate other trees and bamboo for systemic felling for building purposes

4.7.6 ENVIRONMENTAL PROTECTION AND ENHANCEMENT:

Massive water logging, industrial pollution (water), lack of green belt, loss of water bodies such as ponds, khals and open spaces are the major considerations in the future development activities of this zone. Some of the guiding principles are as

follows:

1. Green buffer (En-07-01): To design green buffer surrounding the bus terminal (tran-07-02) is mandatory in order to protect residential use and educational institution.

2. Protection of existing hilly areas: No hill cutting and forest clearing would be allowed in the existing hilly areas. Such hill landscape should be preserved under the guideline of strategic open space area.

3. Green belt along khals: All major khals should be rehabilitated, and bank lines marked and fixed. Along the bank line there should be a buffer zone of green belt as per guideline in Chapter-03.

4. Protection of water bodies: All the water bodies and pond must be preserved under the guidelines of water body preservation (Chapter-03).

5. Coastal Mangrove Forests: 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.

Implementing Agency: CDA/BWD / Forest Dept / CBOs/ NGOs

6. Green pathways: All along the natural khals and creeks, a width of 100 ft. land will be kept free from all development and turned into a green walkway.

Implementing Agency: CDA/BWD /CCC/ Forest Dept / CBOs/ NGOs

7. Green Coastal Zones: 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.

Implementing Agency: CDA/BWD /CCC/ Forest Dept / CBOs/ NGOs