

# Chapter- 3

## DEVELOPMENT PLAN PROPOSAL

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### 3.1 Relevant Policy Frameworks of Higher Level Plans

The DMDP 1995 address the planning issues at three geographical levels- sub-regional, urban and local. The plan comprises of three components; structure Plan, Urban Area Plan and Detailed Area Plan.

#### Structure Plan Policies

The Structure Plan covers the period from 1995 to 2015 and lays down long term strategy for there 20 years for the Metro Dhaka Sub-region (590 square miter of area administered by RAJUK). The plan identifies the order of magnitude and direction of anticipated urban growth and defines a broad set of policies considered necessary to achieve the overall plan objectives. Eight long-term strategic options were considered by the Structure Plan. The preferred strategy recommended in the Structure Plan incorporates elements from three of these options (Map 3.1). The preferred strategies are:

#### Consolidation in existing urban area

The objective here is to concentrate on upgrading the services in line with the densification in the existing urban areas. The strategy calls for the consolidation of the established urban area in the short to medium term to optimize existing land resources, with priority accorded to planned and serviced low-density districts and those with reserves of vacant and under-utilized land.

#### Acceleration in existing urban fringe

Under this strategy targeted areas would be the existing urban fringe that is areas mainly at the periphery of the more established urbanized area, where conversion from rural land occurred during the 1980's. This strategy involves adoption of policies which aim at accelerating the provision of services in these areas and making the development process in these areas more cost-effective.

#### Promotion in new urban land in outlying areas

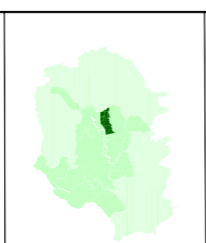
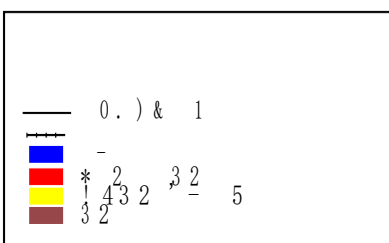
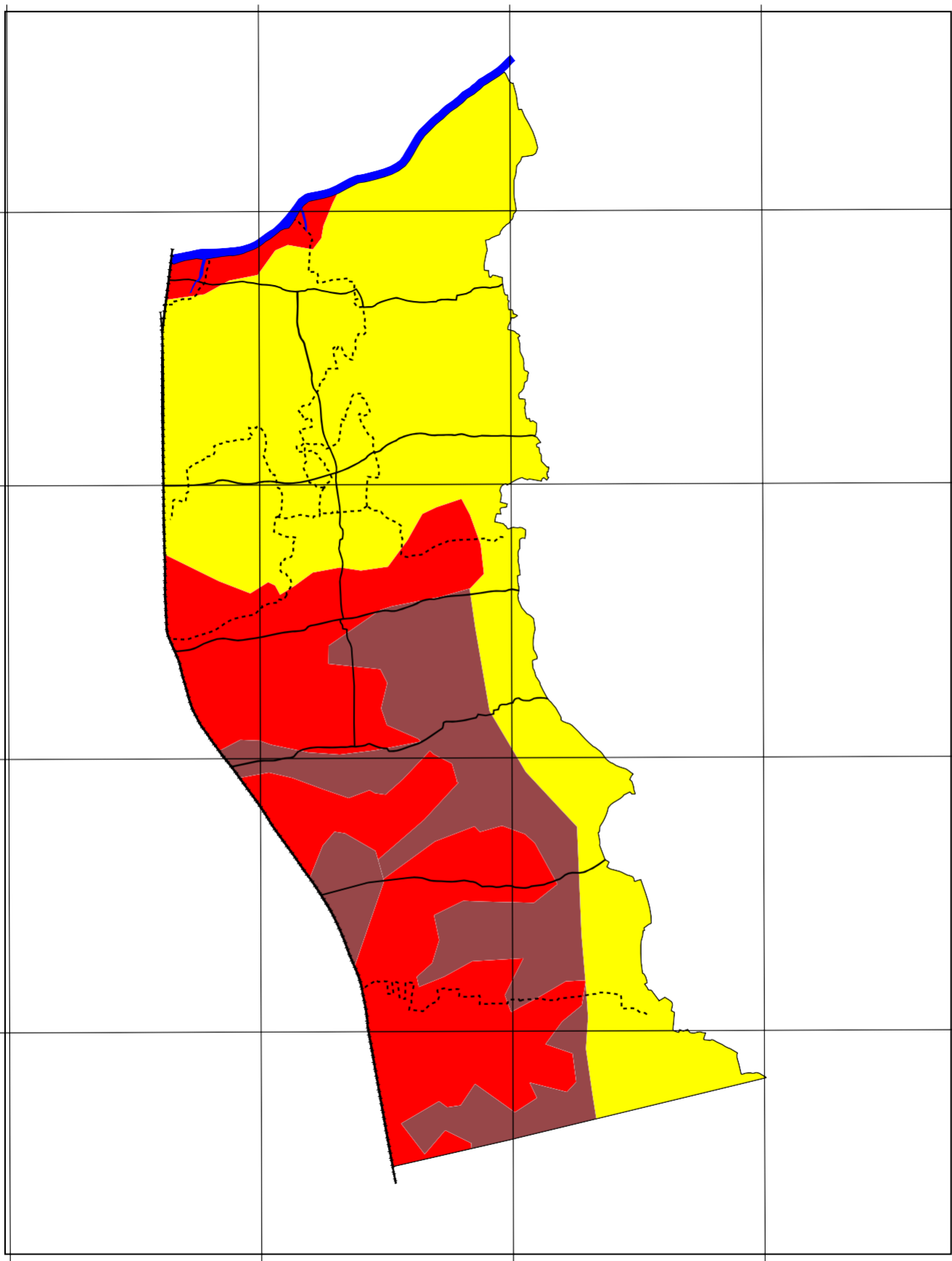
Under this strategy targeted areas would be the more outlying areas that are going to be urbanized spontaneously or in a planned way. These areas tend to grow very slow thus making the provision of infrastructure facilities and services very costly. The promoting development strategy for this urban sub-area is to adopt policies which will accelerate development at specific locations. The purpose of these policies is to optimize the utilization of these extensive but scattered and under-utilized lands, at the same time promoting further outward, planned urban growth.

#### Development of Primary Roads

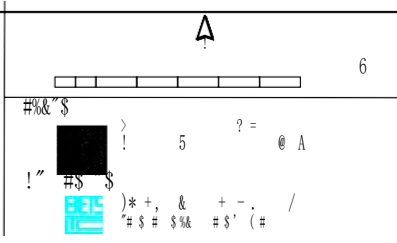
Under the DMDP Structure Plans long-term road development strategy parts of one important primary road pass through the present study area. The Primary Road (MII) from western embankment near Ashulia to eastern by-pass near Noykhol via Abdullahpur and Mainnar Tek.

#### Urban area plan policies

The Structure Plan recommends a number of policies and strategies to guide the development in the preferred direction. Its functions, therefore, does not include development management. This function in the interim period has been given to the Urban Area Plan (UAP), until it is superseded by the Detailed Area Plan (DAP). The Interim Development Management Report of the Urban Area Plan describes the development management tools of the plan in relation to planning control functions of the Detailed Area Plan, the building code and fire prevention regulations. The urban area map of the plan visualizes the urban area plan and delineates existing and proposed land uses.



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As per provision of the Urban Area Plan most of the area of location-6 can be categorized into Mixed Use Planned Zone and Mixed Use Spontaneous Zone as shown in **Map 3.2**.

### 3.2 Planning Principles and Standards

#### 3.2.1 Guiding Principles

Proposed land uses for the project area has been prepared on the basis of following principles:

- Environment friendly sustainable development of the area.
- City function to develop as per major land use zones.
- Effective drainage through minimum hindrance to Flood Flow and Sub-Flood Flow zones.
- Safe residential areas at proximity to place of work or major communication routes.
- Smooth and effective functioning of industries, specially export oriented industries.
- Safe yet faster connectivity.
- Develop to serve the surrounding hinterlands.

#### 3.2.2 Planning Standards

Many standards and codes for guiding and controlling development are found in Bangladesh National Building Code [BNBC], Building Construction Rules and Environmental Act. For ascertaining minimum space requirement for different physical features and functions Private Housing Land Development Rules, 2004 and for density control of an area Floor Area Ratio [FAR] are the two very important legal instruments.

DMDP Structure Plan and Urban Area Plan too have fixed certain minimum standards for certain facilities. In today's reality of congested unhygienic laissez-faire construction race where planning is a far cry, land is obviously the most scarce and hence most valuable asset.

#### Facility Standard

DAP Consultants are convinced that planned development ensuring community's active participation is the key to successful transformation of today's Dhaka into tomorrow's adorned green Dhaka. Keeping this vision in mind, they developed an optimum standard for the amenities and community facilities that the city dwellers deserve. Table No. 3.1 shows standard population served with corresponding area requirement for educational institutions as these data is frequently needed for physical planning decisions. Double shift for Primary School is also discouraged due to odd timing hampering healthy grooming of the children. However, school of performing or fine art for the children to complement the learning process is recommended in the school premise in the second half. Double shift for Colleges having Honours and Master's Program is also discouraged for making way to carryout library work, sessionals / practicals and other extracurricular activities by the students. Data of university has not been included in this time saver chart as the catchment area of university extends far beyond the region it belongs.

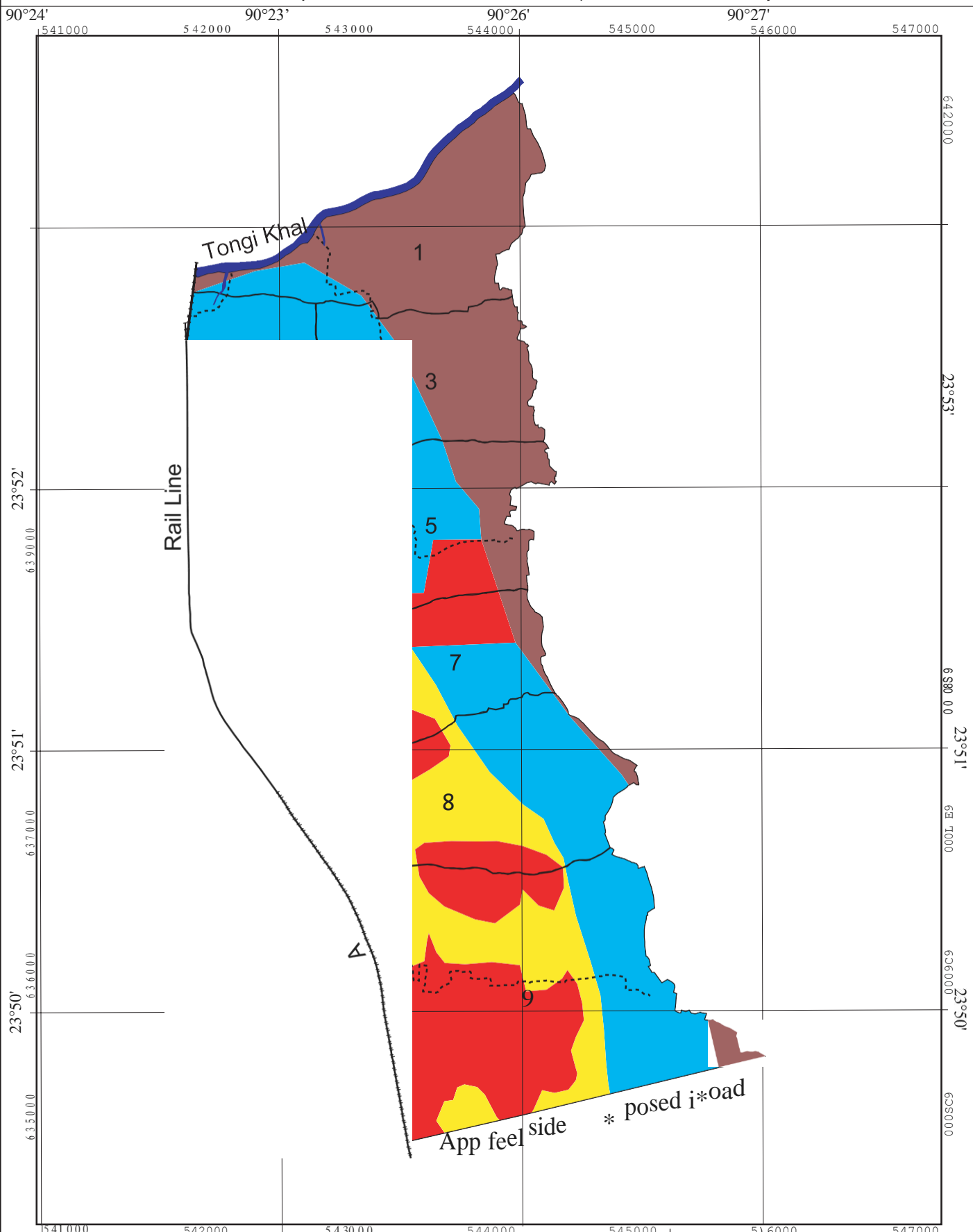
**Table - 3.1: Standard Population Served and Area Required per Educational Institute**

| Facility       |                            | Population/Facility |              | Area (Acre) |         |
|----------------|----------------------------|---------------------|--------------|-------------|---------|
|                |                            | Single Shift        | Double Shift | Minimum     | Optimum |
| Primary School |                            | 5000                | 10000        | 1           | 1.5     |
| High School    | Std.VI- Std. X             | 12000               | 24000        | 1.5         | 2       |
|                | Std.VI- Std. XII           | 16000               | 32000        | 3           | 4       |
| College        | Std.XI- Std. XII           | 12500               | 25000        | 3           | 5       |
|                | Std.XI- Upto Hons./Masters | 22000               | 44000        | 4           | 6       |

[Note: Double shift for Primary School and college with Hons./Masters is discouraged.]

Neighbourhood concept of residential development is recommended in the DAP as strategy. So, the facilities required for a neighbourhood development deserves special mention (Table No. 3.2).

Map 3.2 Urban Area Plan Policies (1995-2015 of DMDP)



**Legend:**

- Project Boundary
- Rail Line
- River/River
- Existing Mixed-use Spontaneous Zone
- Proposed Mixed-use Planned Zone
- Proposed Mixed-use Spontaneous Zone
- Undefined Zone

**Index Map**

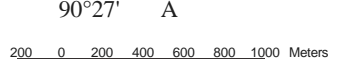


**Data Source**  
 Topographic, physical feature and land use survey conducted by BETS Consulting Services Ltd.

**Reference Bench Mark (BM)**  
 Horizontal: SCB (ICA)-303, SCB (ICA)-3407 and SCB (ICA)-3469 for Latitude/Northing & Longitude/Easting Vertical: SCB-542 and SCB-6039 for Reduce Level (RL) adjustment

**Projection Parameters**

|  |   |
|--|---|
| Projection System                      | : Bangladesh Transverse Mercator (BTM)          |
| Spheroid                               | : Everest 1830                                  |
| Scale Factor                           | : 0.9996  |
| Central Meridian                       | : 90 degree East                                |
| False Easting                          | : 500,000 Meter                                 |
| Central Northing                       | : -2000,000 Meter                               |
| Latitude of Origin                     | : 0 degree (Equator)                            |
| Seven-parameter for User Defined Datum | : 283.729, 735.942, 268.143, 0.0, 0.0, 0.0, 1.0 |



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**CONSULTAV**  
 BETS Consulting Services Ltd.  
 H-10, R-135, Gulshan-1, Dhaka-1212

Table - 3.2: Facility Standard at Neighbourhood Level or for 12500 People

| Sl. No.  | Name of the Facility   | Quantity       |       | Area                        |                 |                    |
|--|--|----------------|-------|-----------------------------|-----------------|--------------------|
|  |  | Min.           | Max.  | Minimum for Unit Facility   | Sub-Class Total | Class Total (Acre) |
|  |  | (No.)          | (No.) |                             |                 |                    |
| 1  | Primary School (Public or Private)                             | 2              | 3     | 1 Acre                      |                 | 3                  |
| 2  | High School (Public or private)                                | 1              | 2     | 1.5 Acre                    |                 | 3                  |
| 3  | Open space   |                |       | 10 Acre                     |                 | 12                 |
|  | i) Park/children's park  | 1              | 2     | 0.3 Acre                    | 1 Acre          |                    |
|  | ii) Water body/Canal/Pond                                      | As per Planner |       | 1.5 Acre                    | 6 Acre          |                    |
|  | iii) Play field  | 2              | 3     | 1 Acre                      | 3 Acre          |                    |
|  | iv) Green/Vegetation/Water Front                               | As per Planner |       | 0.5 Acre                    | 2 Acre          |                    |
| 4  | Mosque and Maktab/Worship Places                               | 2              | 3     | 0.2 Acre                    |                 | 0.6                |
| 5  | Library (central)  | 1              | 1     | 0.1 Acre                    |                 | 0.2                |
| 6  | Services   |                |       | 0.3 Acre                    |                 | 0.5                |
|  | i) Dentist/Doctor's Chamber                                    | 2              | 3     | 40 sq.m                     | 120 sq.m        |                    |
|  | ii) Beauty Parlour   | 1              | 2     | 50 sq.m                     | 100 sq.m        |                    |
|  | iii) Laundry   | 2              | 3     | 16 sq.m                     | 50 sq.m         |                    |
|  | iv) Hair Dresser   | 2              | 3     | 12 sq.m                     | 40 sq.m         |                    |
|  | v) Cyber Café/Internet service provider                        | 1              | 2     | 50 sq.m                     | 100 sq.m        |                    |
|  | vi) Photocopy/mobile/land phone/fax                            | 2              | 2     | 12 sq.m                     | 40 sq.m         |                    |
|  | vii) Computer based (word processing, printing etc) Services   | 1              | 1     | 30 sq.m                     | 30 sq.m         |                    |
|  | viii) Motor bike Repair, vulcanizing etc.(optional)            | 1              | 1     | 50 sq.m                     | 50 sq.m         |                    |
|  | ix) NMT repair service (Rickshaw, bicycle etc)                 | 1              | 2     | 30 sq.m                     | 60 sq.m         |                    |
|  | x) Post Office/Courier Services                                | 1              | 2     | 20 sq.m                     | 40 sq.m         |                    |
|  | xi) Sports/Recreational facilities (games, indoor games etc)   | 1              | 2     | 50 sq.m                     | 100 sq.m        |                    |
|  | xii) Rickshaw/Auto stand (General)                             | 2              | 4     | 100 sq.m                    | 400 sq.m        |                    |
|  | xiii) Restaurant, Tea bar, Fast food                           | 2              | 4     | 10 sq.m                     | 100 sq.m        |                    |
|  | xiv) Tailoring   | 1              | 2     | 20 sq.m                     | 40 sq.m         |                    |
| 7  | Solid waste transfer station(may also small scale processing)  | 1              | 1     | 0.5 Acre                    |                 | 1                  |
| 8  | Utility Facilities   |                |       |                             |                 | 1*                 |
| 9  | Neighborhood Co-operative Office Complex                       |                |       | 0.33 Acre                   |                 | 0.5                |
|  | i) Offices   | 2              | 4     | 15 sq.m                     | 60 sq.m         |                    |
|  | ii) Committee rooms  | 2              | 3     | 40 sq.m                     | 120 sq.m        |                    |
|  | iv) Community Club including indoor games (male and female)    | 2              | 2     | 200 sq.m                    | 400 sq.m        |                    |
|  | v) Cultural Facilities (Rehearsal, Music room etc)             | 1              | 2     | 30 sq.m                     | 60 sq.m         |                    |
|  | vi) Community Police Barrack                                   | 1              | 1     | 40 sq.m                     | 50 sq.m         |                    |
|  | vii) Technician Service (Electrical, Plumber, AC, Freeze etc.) | 2              | 4     | 25 sq.m                     | 100 sq.m        |                    |
| 10   | Community Hall   | 1              | 2     | 0.33 Acre                   |                 | 0.5                |
| 11   | Shops  |                |       | 0.33 Acre                   |                 | 0.5                |
|  | i) General store   | 3              | 4     | 25 sq.m                     | 100 sq.m        |                    |
|  | ii) Grocery  | 4              | 6     | 25 sq.m                     | 150 sq.m        |                    |
|  | iii) Stationery  | 2              | 3     | 25 sq.m                     | 150 sq.m        |                    |
|  | iv) Confectionary/Bakery                                       | 2              | 3     | 25 sq.m                     | 80 sq.m         |                    |
|  | v) Departmental Store**  | 1              | 2     | 100 sq.m                    | 200 sq.m        |                    |
|  | vi) Medicine Shop  | 2              | 3     | 25 sq.m                     | 80 sq.m         |                    |
|  | vii) Sweet Meat Shop   | 2              | 3     | 25 sq.m                     | 80 sq.m         |                    |
|  | viii) Book/Newspaper Stall                                     | 2              | 3     | 10 sq.m                     | 30 sq.m         |                    |
|  | ix) Fresh Corner (Vegetable, fish, meat, egg, chicken etc.)    | 2              | 3     | 12 sq.m                     | 40 sq.m         |                    |
|  | x) Fruit Shop  | 2              | 3     | 10 sq.m                     | 30 sq.m         |                    |
|  | xi) Flower Stall   | 2              | 2     | 10 sq.m                     | 30 sq.m         |                    |
|  | xii) Gift shop   | 1              | 2     | 10 sq.m                     | 30 sq.m         |                    |
| <b>Total Area for the Neighbourhood Facilities</b> |  |                |       | <b>22.8 Acres (approx.)</b> |                 |                    |

\* May be added as per decision of the Nagar Unnayan Committee under New use category

\*\*Area under Departmental Store shall be calculated on the basis of the spaces allocated against one of the

corresponding services in this table (cumulative area)

Gross area of neighbourhood : 50 acres [approx.]  
Gross density : 225 to 250 persons per acre.

### Road Standard

Roads are categorised on the basis of both function and hierarchy which is presented in Table 3.3 showing their corresponding standard widths. Same road has more than one width to make way for laying them as per availability of land.

While the Structure Plan recommended two categories of primary roads-main road and arterial road. Consultant proposes the three categories of roads. The new road type will facilitate providing different categories of roads based on local requirement.

The following principles are proposed for development of road network in the planning area:

1. Footpath, meaning exclusive pedestrian movement paths, may be avoided because of enforcement problem.
2. A grid pattern road network with an average 1200 m distance between major roads is recommended.
3. A distance of 1500 m or 2000 m for north-south road and 2000 m or 3000 m for east-west roads is to be maintained.
4. Structure Plan reservation of land for bus road and light train tracks will be maintained. However, the new roads have been proposed based on certain criteria. The arterial roads are aimed to create new options to link Dhaka as well as providing access to inaccessible areas outside the city. The collector roads would open up areas not having accessibility. The access roads would be created to link mainly the housing areas with the collector roads. This part of the project report, however, deals only with first two categories of roads (Table-3.3).

**Table - 3.3: Proposed Road Standard for DAP Area**

| SL No. | Road Category  | Type   | Built-up Area | Less Built-up Area |
|--------|----------------|--------|---------------|--------------------|
|        |                |        | ROW (Ft)/M    | ROW (Ft)/M         |
| 1      | Primary Road   | Type-1 | 80(24.39)     | 170 (51.83)        |
| 2      | Primary Road   | Type-2 | 80 (24.39)    | 130 (39.63)        |
| 3      | Primary Road   | Type-3 | 80 (24.39)    | 100 (30.49)        |
| 4      | Secondary Road | Type-1 | 60 (18.29)    | 80 (24.39)         |
| 5      | Secondary Road | Type-2 | 40 (12.0)     | 60 (18.29)         |
| 6      | Tertiary Road  | Type-1 | 40 (12.0)     | 40 (12.0)          |
| 7      | Tertiary Road  | Type-2 | 30(9.19)      | 40(12.0)           |
| 8      | Access Road    | Type-1 | 24 (7.32)     | 30 (9.19)          |
| 9      | Access Road    | Type-2 | 20 (6.10)     | 24 (7.32)          |

*Source: Proposed by Consultants*

### 3.3 Preferred Development Strategies

The major portion of Project Area (Airport-Demra by pass area) is built up urban area which developed without any planning manner in the last decades. Here the shortage of infrastructures, utilities, urban amenities and facilities are well marked. Development strategies of project area are as follows under some basic heads:

#### 3.3.1 Drainage

- Minimize obstruction of flood water as is practicable.
- Appropriate connectivity by roads having sufficient openings to ensure needful flow of water across them and as well as uninterrupted traditional water based connectivity. This would help maintain the biodiversity of the area and contribute to sustainable environment in turn.

#### 3.3.2 Residential Development

- Subdivide Residential Landuse Zone based on the potentiality, trend and opportunity.
- Minimize through traffic and heavy vehicles within the neighbourhoods.

- Ensure community facilities and services of appropriate scale at neighbourhood level.
- Adapt neighbourhood concept for new residential developments and for need assessment of community facilities
- Ensure within neighbourhood availability of day to day commodities and facilities.

### 3.3.3 Industrial Development

- Ensure own treatment plant in case of individual facilities.
- Prohibit high hazard industries within the area.
- Provide essential support facilities for effective functioning of the industries.

### 3.3.4 Mixed Use Development

- Ensure adequate safety and security of the people especially of the families residing in such mixed zones.
- Provide sufficient quantity of wide, easy to use and safe footpaths.
- Provide zebra crossing at road crossings instead of foot over path to ease the lives of major portion of low income people.

### 3.3.5 Transport and Connectivity

- Provide safe, adequate and comfortable pedestrian paths.
- Provide appropriate and effective public transport routes with sufficient number of quality public transport to carry passenger.
- Grade separation of National and Regional Highways from the local main roads, the later being at grade and other
- Through traffic and heavy vehicles within the neighbourhoods is generally prohibited. However Fire brigade and ambulance will remain out of such rules.
- Sufficient and easy to move footpaths to be provided.
- Provide safe, adequate and comfortable pedestrian paths.

### 3.3.6 Non-Urban Areas

- The existing character of this area should not be hampered.
- Urban sprawl should be controlled over here.

### 3.3.7 Water Body and Open Spaces

- Strictly protect canal networks as per the DAP.
- Make Provision for open spaces and water body at the neighbourhood level.
- Make city scale open space with easy accessibility especially for people of densely populated areas with meager sc

### 3.3.8 Amenities and Community Facilities

- Urban amenities and community facilities to be create considering the number of population in acceptable stan
- Amenities and facilities should be provided Neighbourhood wise.

### 3.3.9 Solid waste management

- To be collect regularly from every neighbourhoods.
- Finally it should be disposed far away from the urban area.

### 3.3.10 Water Supply

- Water to be supplied considering the consumption per capita per day basis in domestic and other uses.

### 3.3.11 Electricity

- Electric connections to be provided to all urban dwellings, business and industrial establishments.
- To be minimized the existing load shedding and power interruption.

### 3.3.12 Gas Supply

- To be provided all over the urban areas.

### 3.3.13 Environmental Management

- Solid waste to be collect properly in a regular basis.
- Adequate utilities to be provided
- Adoption of Neighbourhood Concepts for New Residential Development

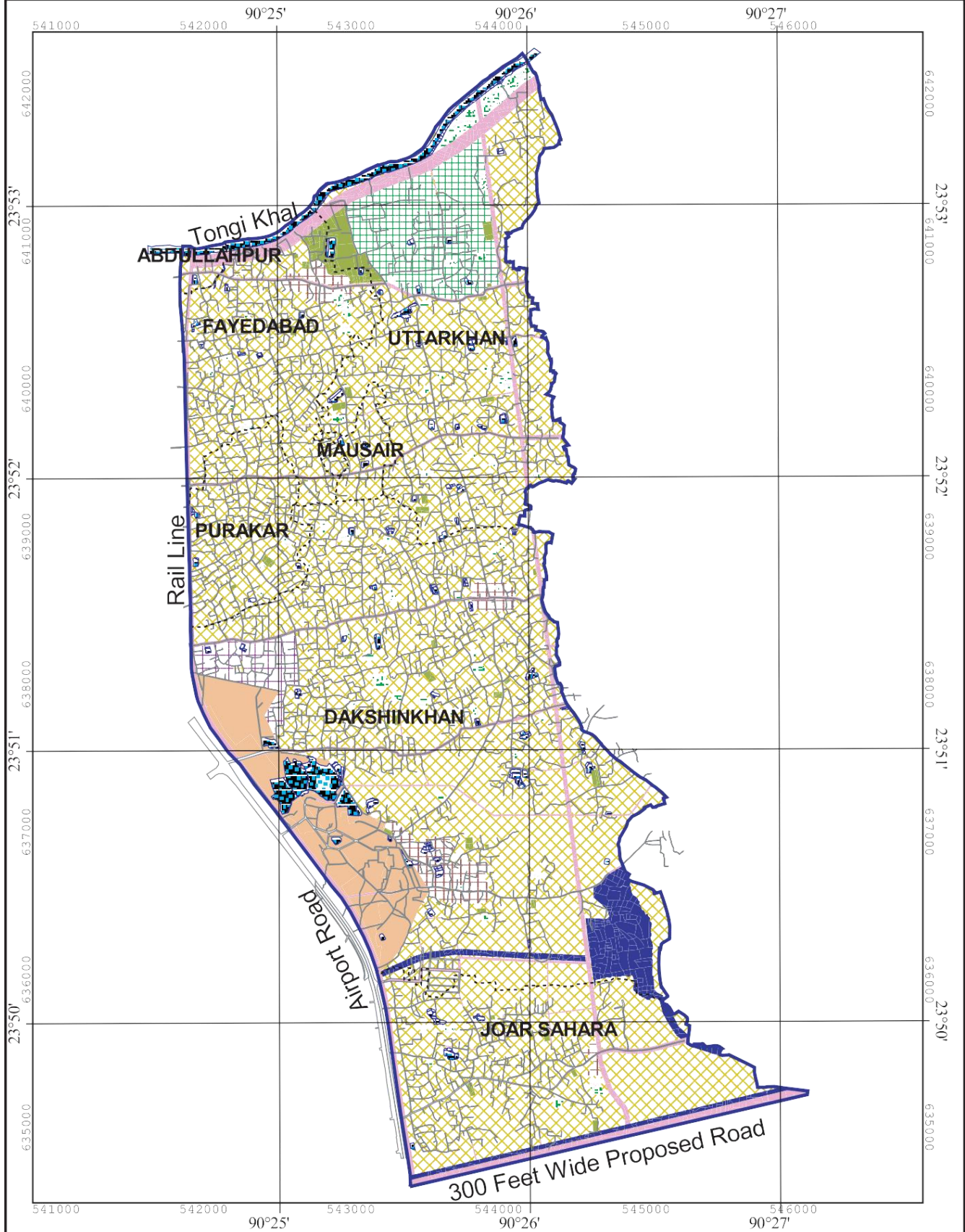
### 3.4 Proposed Land use Classification

According to the nature and character the project area have been classified in to 8 types of uses (**Table-3.4 & Map: 3.3**) as follows:

**Table 3.4: Distribution of Proposed Land Use In Location 6**

| <b>Proposed Land Use</b>                  | <b>Area in Hectares</b> | <b>Area in Acres</b> | <b>%</b>      |
|---|-------------------------|----------------------|---------------|
| Proposed Road Network                     | 128.93                  | 318.60               | 8.23          |
| Open Space                                | 16.38                   | 40.48                | 1.05          |
| Commercial Zone (Business)                | 31.88                   | 78.78                | 2.04          |
| General Industrial Zone                   | 73.05                   | 180.51               | 4.66          |
| Institutional Zone                        | 12.38                   | 30.59                | 0.79          |
| Mixed Use Zone (Residential & Commercial) | 40.57                   | 100.25               | 2.59          |
| Urban Residential Zone                    | 1203.76                 | 2973.46              | 76.84         |
| Water body                                | 59.59                   | 147.25               | 3.80          |
| <b>Total</b>                              | <b>1566.55</b>          | <b>3869.93</b>       | <b>100.00</b> |

Map 3.3: Proposed landuse map of the project area

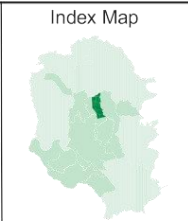


**Legend:**

- Project Boundary
- Mauza
- Road Network
- Railway

**Proposed Landuse**

- Commercial Zone (Business)
- General Industrial Zone
- Institutional Zone
- Mixed Use (Residential/Commercial)
- Open Space
- Proposed Road Network
- Urban Residential Zone
- Waterbody



**Data Source**  
Topographic, physical feature and landuse survey conducted by BETS Consulting Services Ltd.

**Reference Bench Mark (RM)**  
Horizontal: SCB/IC As/3/ SCB (ICAJ-340) and SCB/IC As/340 for Latitude/Northing & Longitude/Easting/Vertical: SCB-52 and SCB-609 for Reduce Level (RL) adjustment

**Projection Parameters**

|  |  |
|--|--|
| Projection System                      | Bangladesh Transverse Mercator (BTM)     |
| Spheroid                               | Everest 1830                             |
| Scale Factor                           | 0.9996                                   |
| Central Meridian                       | 90 degree East                           |
| False Easting                          | 500000 Meter                             |
| False Northing                         | 2000000 Meter                            |
| Latitude of Origin                     | 0 degree Equator                         |
| Seven-parameter for User Defined Datum | 283.724, 735.942, 261.143, 0.0, 0.0, 1.0 |

N

200 0 200 400 600 800 1000 Meters

**CLIENT**

Government of the People's Republic of Bangladesh  
Ministry of Housing and Public Works  
**Rajdhani Unnayan Karttripakkha (RAJUK)**

**CONSULTANT**

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H-10, R-135, Gulshan-1, Dhaka-1212