

c. Climate

Temperature

The climate of Dhaka is fairly equable, the maximum temperature recorded in Dhaka is 42.22°C, the minimum 5° C and the average temperature is 25.66°C. Good weather begins in November and for four months the climate remains fairly pleasant. In March, however, the days grow hot. May to June is hotter. January is the coldest month.

Rainfall

The Maximum rainfall recorded in Dhaka is 2633 mm, the minimum is 1197 mm. and the normal is 1863 annually. During the dry season (from November to March), the total rainfall is 133 mm.

Prevailing Winds

From November to March, the prevailing winds are often from the north and north-west. In March, sudden storms from the north-west are by no means un-common, and are a source of considerable danger to the light crafts cruising in the rivers. From April to October the wind is generally from the east and southeast. It is heavily laden with moisture, but it does much to mitigate the rigor of the climate.

d. Geological Fault

Geographically Bangladesh finds itself in one of the most earthquake prone areas of the world. The Structure Plan identified three fault lines.

Baunia Fault is a small feature in the Baunia depression, west of Shahjalal International Airport; this lineament is characterized by sigmoidal fractures.

Bansi Fault is one of the major structural features in the area. It has developed in the western part of the Madhupur Tract, along which zone the Bansi River flows. The fault is approximately 70 miles long. The western block is the down thrown block and the eastern block is the up thrown block. The Bansi Fault is also characterized by sharp fault scarps, hanging valleys, abnormal ground level and springs.

Turag Fault is approximately 10 miles long. The feature is characterized by abnormal ground level. The northern block of the Turag Lineament moved west and the southern block east. On the other hand, Buriganga fault is situated towards south-west direction. Group- D area is located near the Buriganga fault line (**Map 1-4**).

During field investigations, a sharp litho logical change observed in Dhaka City and its surroundings. There are many evidences of down-thrown blocks of the fault. Except for rapid subsidence, there is also evidence that there is a sharp lateral contract between layers. Considering various facts, it may be inferred that there is a displacement due to faulting. The north-south trend is considered to be the probable alignment of this fault.

However, the project area falls in the earthquake Zone-2 of the seismic map of Bangladesh Besides main sediments of the many parts of the project area are poorly compacted, highly plastic, collapsible thick peat and organic clay layers. With the presence of organic layers and sediments with low compaction, the area is considered to be a weaker foundation layer.

1.1 Review of Previous Plan and Proposals

The statements and recommendations of previous higher-level plans relevant to the current plan and their success and failures have been considered. These plans include Master Plan for Dacca, 1959, Dhaka Metropolitan Integrated Urban Development Plan, 1981, Report of the Task Force on Bangladesh-Development Strategies for the 1990's, Greater Dhaka Metropolitan Area Integrated Transport Study, Dhaka Metropolitan Development Plan, 1995-2015 and Strategic Transport Plan of 2006. However, the project area (Group-D) was outside the planning area of 1959 Master Plan but some directions have been given as adjacent area of Dhaka.

1.1.1 Master Plan for Dhaka, 1959

The portion of Jinjira in Keraniganj thana be connected with the Old Dhaka and future settlement be planned for this to settle extra population that will emerge in coming decades.

1.1.2 Dhaka Metropolitan Area Integrated Urban Development Project (DMAIUDP)

a. Relevant Recommendations

It proposed to ensure the existence of Khals with further expansion as these are low-lying and better as drainage channels. It has been also proposed to follow FAP in maintaining Drainage channels of the project area. The project area falls under the FAP-8A area. The Greater Dhaka Protection Project (FAP-8A), funded by JICA, formulated a framework for comprehensive flood control and storm water drainage in the Dhaka Metropolitan Area, covering an area of 850 sq. km. It is proposed that an area of 453 sq. km would be protected, drainage improvements are proposed within the area and non-structural measures are proposed outside.

b. Application of DMAIUDP

Most of the components are under implementation, especially development in the Eastern Fringe, schemes involving retention pond in the Eastern Part of Dhaka. Under this plan, greater Dhaka Protection Project (FAP-8A) will facilitate eastern bypass, which will protect the eastern side of greater Dhaka and will supply flood free land area. In addition, there will be faster southeast development by optimizing exiting and potential new land development areas; and natural drainage system and khal will be protected.

1.1.3 DMDP Structure Plan and Urban Area Plan

a. Relevant Recommendations

The Dhaka Metropolitan Development Plan (1995-2015) project was a three-tier Plan Package, viz. the Structure Plan (SP), the Urban Area Plan (UAP) and the Detailed Area Plan (DAP). The first two tiers are completed and published in two volumes under the DMDP.

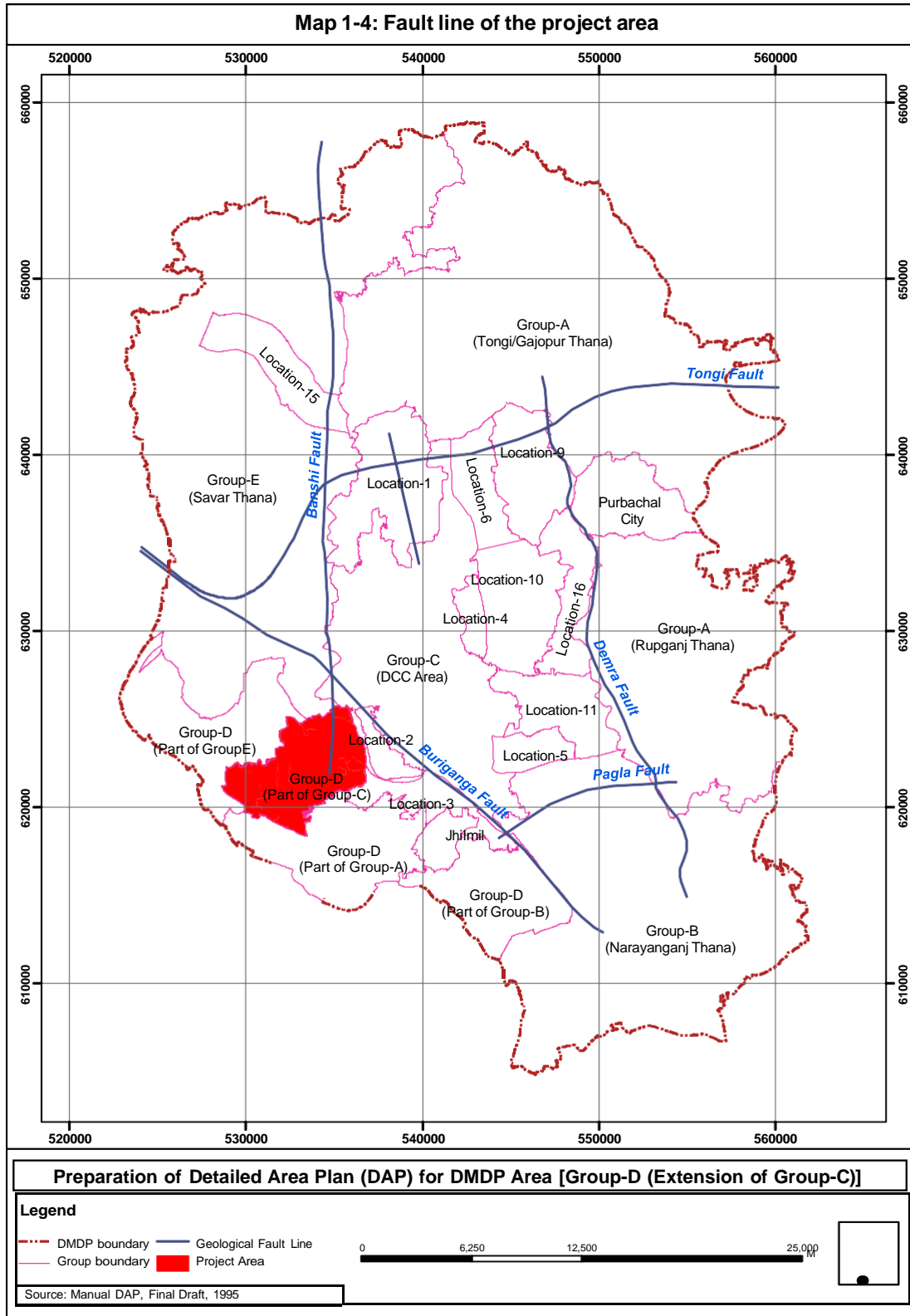
The DMDP Structure Plan provides a long-term strategy for the 20 years for the development of the greater Dhaka sub-region covering 590 sq. miles. It consists of a written report and policy document with various support maps. The report identifies the order of magnitude and direction of anticipated urban growth and defines a broad set of policies considered necessary to achieve the overall plan objectives. The future development proposals were marked in maps in an indicative manner. The Structure Plan recommended strategies for planned new area development, special area development, infrastructure development etc. through community participation. The plan also suggested long-term planned new area development through flood protection and conventional development in dispersed flood free areas. The plan prepared sectoral plans, policies and proposals under the broad headings of socio-economic sectors and infrastructure sectors.

The DMDP Urban Area Plan (UAP) provides an interim mid-term strategy for 10 years up to 2005 for the development of existing urban area within the RAJUK administrative boundary including 26 SPZ (Special Planning Zone). The validity of UAP, though expired in 2005, has been extended up to 2009 through a gazette notification. The following sections make a review of the UAP proposals made for the project area.

b. Application of the Structure Plan and the Urban Area Plan

Under SP, the policies are given considering the characteristics of a land area. Some policies that are suitable considering the context of Location-9 are mentioned here. Flood flow areas of the project area will not be developed except some uses such as agriculture, dry season recreational facilities and the retention ponds must be preserved with the permitted use such as fish cultivation, recreation. In infrastructure development sector of Group-D, Kholamura to Ati Bhawal Road (36.59 m), Balsata Ati to Taranagar Road (36.59 m) are proposed.

Under UAP, Location 9 has been demarcated as SPZ 18 where major issues/ problems, opportunities and relevant Actions have been proposed. The project area is subject of annual flooding by Dhaleshwari River and has been



designated as Flood Flow South. The zone is rural in character and the low lying lands are the interference of development. If development is considered in this zone then large investment is required for landfill and development. But, Private developers are not taking into account the requirements. In order to realize UAP proposals, areas are proposed as flood flow zone to avoid the negative effects of flood flow water.

1.2 Public Consultation

1.2.1 Consultation with Local Government Authorities

Inventory of existing plans by public agencies, ongoing or scheduled implementation projects, inventory of public sector objectives and wishes, and of spatial problems affect these objectives, and wishes. The inventory has to start with desk research, followed by additional consultations.

1.2.2 Consultation with Different Communities

For consultation (also in later stages), it is advisable to draw up a separate Communication Plan and reserve sufficient budget for the implementation of this plan. In the Communication Plan an inventory has to be made of interested parties, according to the following categories:

- Public agencies (concern ministries, semi-government, utility agencies and companies, local government, etc.)
- Local communities (e.g. elected representatives, community leaders, local CBO's)
- Private developers
- Relevant NGO's
- Professional and business groups

Prior to start of the consultation, a plan was drawn up to carry on the consultation in an organized manner. The plan contains the categories of stakeholders to be consulted, issues to be discussed and the application of the findings of consultations as shown in theTable 1-2.

Table 1-2: Communication Plan

Category	Stakeholders	Issues Discussed	Application of Findings
Public Agencies	<ul style="list-style-type: none"> • Service providing authorities • Public companies, Local government 	<ul style="list-style-type: none"> • Possible location of infrastructure & service expansion, • Problems of infrastructure development, • Future urbanization & spatial expansion 	<ul style="list-style-type: none"> • Designing of infrastructure & services, • Developing policy proposals for future development
Local Communities	Public representatives, Teachers, General Public	<ul style="list-style-type: none"> • Local problems, • Aspirations of different groups about future development • Potentialities & opportunities 	Inclusion of people's aspirations in designing service facilities & in formulation of future development policies
Private Developers	Real estate companies & housing cooperatives	<ul style="list-style-type: none"> • Problems of real estate development • Filling of flood flow areas, • Planning criteria & standards 	<ul style="list-style-type: none"> • Integration of housing estates in DAP • Formulation of planning standards
NGOs	Representatives of major national & local NGOs	<ul style="list-style-type: none"> • NGO programs & activities in the project area, 	Integration of NGO activities in the DAP

Category	Stakeholders	Issues Discussed	Application of Findings
		<ul style="list-style-type: none"> • Social problems & the role of NGOs 	
Professionals, Business Group	Engineers, Doctors, Lawyers, Journalists etc	<ul style="list-style-type: none"> • Problems of environment, open space, encroachment etc • Problems relating industrialization 	Preparation of environment friendly DAPs for the area

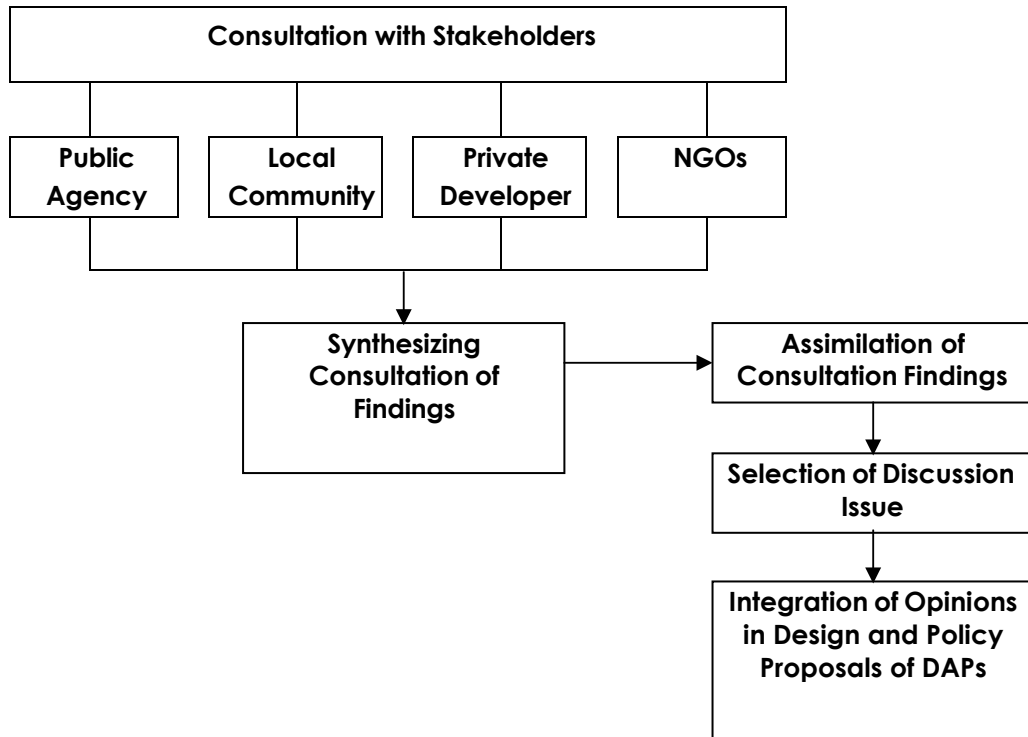


Figure 1-1: Integration Process of Consultation Findings

Processing and Integration of Consultation Findings

After review and consultation with stakeholders at the field level, the information has processed through systematization and assimilation and later integrated with detailed area plans. The interview records were brought from the field in text form in notebooks. The text records have edited, revised, synthesized and assimilated. Photographs taken during interview have processed for inclusion in the text as evidence. From synthesized text, key points has identified and separated for inclusion in the DAPs. The proposals were set in the form of recommendations. Integration of findings was carried out through design of plan components and policy proposals.

1.2.3 Public Hearing

As per section 74 of Town Improvement (TI) Act 1953, RAJUK carried out a two month long Public Hearing on the Detailed Area Plan from October 3, 2008 to December 4, 2008. The Public Hearing was carried out through:

- Media Coverage
 - Print
 - Electronic

- Press Conference
- Web based Publication
- Display of Maps (Hard Copy) at various locations
 - RAJUK Auditorium
 - DAP, PD Office
 - RAJUK Zonal Office at Dhanmandi
 - RAJUK Zonal Office at Mohakhali
 - RAJUK Zonal Office at Uttara
- Explain different aspects of the Plan to the stakeholders by experts
- Mauza Plot level digital display in GIS Platform
- Collection of Complaints in prescribed format and preparation of checklist
- Collection of Complaints in the form of letter to Chairman/P.D.

Numbers of complaints/comments were made on the plans by the stakeholders of Location-11 Area. Complaints were received from individuals, groups, institutions/organizations, local co-operatives and Private Developers. Most of the complaints were related to proposed road network. For fear of eviction, the landowners of the plots over which new roads have been proposed have made complaints in a very large number. However, quite a good number of people also appreciated the plan and wanted its early implementation.

1.2.4 Consultation with Public Representatives

As not much information is readily available, emphasis has been on direct consultation, with careful introduction of the background, the status and the purpose of the project to avoid conflicts and make meetings fruitful.

Communities and their leaders were the focal persons to participate in planning and implementation of different development programs and spatial planning. They have been asked regarding their problems they face and which they are able to solve by themselves and for which they need government support.

Key issues discussed

The teachers and other people of the union councils have mentioned that only a few planning agencies come or consult with the local people regarding the problems and development of the area. The project area is outside the DCC jurisdiction so there is no gas supply and sewerage coverage. The project area has no recreational facilities like parks or playground. People dispose their household and other wastes in open ground. Drinking water supply is also absent in the area. The existing Khals and other low lands are almost occupied by some influential people and constructed illegal structures, which causes flood and water logging in the adjacent areas. There are private developers occupying low and agricultural lands.

Findings of discussion

- The utility services like gas, drinking water and waste disposal system should be provided as early as possible.
- There is lack of medical facilities in project area so more hospital facilities should be provided.
- The illegal structures inside the Khal should be evicted. It is also important to keep the canal navigable.
- The activities of the private developers should be monitored closely so that their development activity could not deteriorate the flood situation of the area.

1.3 Draft DAP Review by Review Committee

After finalization of the Draft Plan and public hearing the out of DAP was placed before review committee composed of eminent academics, experienced town planners and representatives from concerned interests groups. The purpose of this review was to find out how far accurate and pragmatic the proposals were. The review committee raised certain issue related to future population growth, appropriateness in changing the flood flow zone, retention pond area, etc. This was reviewed and new recommendations from review committee was made and incorporated in the plan.

1.4 Draft DAP Review by DAP Porjalochana Committee

Ministry of Housing and Public Works vide a notice no. Gri o pu ma/Pari-3/1(5)/2001(Part-3)43 dated 7-3-2010 constituted a DAP Porjalochana Committee with the following members to verify the compliance status of the recommendations made by the previous Review Committee according to a ToR.

- | | | |
|----|---|--------------------|
| a. | Prof. Dr. Jamilur Reza Chowdhury
Former VC, BRAC University | : Convener |
| b. | Prof. Nazrul Islam, Chairman
University Grants Commission | : Member |
| c. | Prof. Dr. Sarwar Jahan, President
Bangladesh Institute of Planners | : Member |
| d. | Ms. Rezwana Hasan
Chief Executive Director, BELA | : Member |
| e. | Architect Iqbal Habib
Jt. Secretary, BAPA | : Member |
| f. | Project Director, Detailed Area Plan
RAJUK, Dhaka. | : Member Secretary |

The committee reviewed the status of the Draft DAP in view of the recommendations of the previous Review Committee in four separate meetings held on 16-03-2010, 25-03-2010, 01-04-2010 and 11-04-2010 in the RAJUK Board Room. The committee ultimately made 36 point recommendations to be followed by the consultants. The committee also recommended that on compliance of these recommendations made by the porjalochana Committee, the Draft DAP may be accepted by the ministry.

Chapter- 2

CRITICAL PLANNING ISSUES

2.1 Existing Development Pattern

2.1.1 General

Within a timeframe of two decades, the Dhaka spanned both north, east and west ward triggering urban development both haphazard and few planned by Government. The progress of urban development has occurred with unrivaled speed and dimension. The development trend has propelled the city's growth into the future with amazing velocity; an entirely new urban reality excellerated the current development trends within the city which became characterized by a steady population growth and density, an on going haphazard urbanization with moderate economic growth and a rapid motorization.

In Group-D, most of the areas are not developed. The share of agricultural land is very high. Major portion of the lands are non-urbanized with scattered rural settlements. Several numbers of different types of industries like heavy industry, medium industry and light industry etc. exist in this area. A part of this location is full of water bodies and wet lands. Recently private housing developer's initiative in some areas are fetching towards an urbanized area.

2.1.2 Residential Structures

Near about 95% of the total buildings in project area are used for purely residential purpose, 5% used for commercial and the rest are used for industrial purpose. There are a total number of 22123 residential buildings within the project area, which is composed of pucca: 8%, semi pucca: 13% and katcha structures are 79%. The project area is a rural area that is why most of the buildings are katcha and one-storied buildings. The number of residential buildings is shown in Table 2-1. The locations of residential buildings are shown in **Map-2-1**.

Table 2-1: Structure Types of the Residential Buildings

Union	Building for Residential Use			
	Pucca	Semi-pucca	Katcha	Total
Kalatia (Partial)	287	371	4404	5062
Ruhitpur (Partial)	137	163	2185	2485
Sakta	1084	1583	8069	10736
Taranagar (Partial)	339	781	2720	3840
Total	1847	2898	17378	22123

Source: Physical Features survey 2005-2006

The Semi pucca residential buildings are second highest in number of the project area. Out of 2898 semi-pucca buildings Sakta Union, Ruhitpur Union, Taranagar Union and Kalatia Union has occupied 54%, 6%, 27% and 13% respectively.

About 17378 katcha residential buildings are available in the project area. Among them, Sakta Union has occupied the highest in number (46%). At the same time, Kalatia Union has 25% katcha residential buildings out of total katcha residential buildings. Rest of the buildings is situated in other unions.

Most of the structures are katcha and one storied in all the unions. About 87% are katcha one storied building exists in Kalatia union. In the case of pucca residential building, most of them are one and two storied (Table 2-2).

Table 2-2: Height Distribution of Residential Pucca Buildings

Union	Building Height (Story) for Residential Use								Total
	Pucca					Semi-pucca		Katcha	
	1	2	3	4	4+	1	1+	1	
Kalatia (Partial)	265	20	2	0	0	371	0	4404	5062
Ruhitpur (Partial)	115	17	4	1	0	163	0	2185	2485
Sakta	900	161	21	0	2	1581	2	8069	10736
Taranagar (Partial)	285	49	5	0	0	781	0	2720	3840
Total	1565	247	32	1	2	2896	2	17378	22123

Source: Physical Features survey 2005-2006

2.1.3 Industrial and Commercial Landuse

Out of 1087 commercial buildings in the project area, pucca, semi pucca and katcha commercial structures are 8%, 36% (387) and 56% (614) respectively. A little number of pucca commercial structures (86) are found in the project area. Ruhitpur union and Sakta union dominate 41% and 34% commercial pucca structures respectively. A very small number of pucca commercial structures are also found in a scattered manner in Kalatia Union (22%). The highest concentration of semi-pucca buildings are in Sakta union about 45% which is followed by about 27% buildings are in Ruhitpur union. Among the four unions, 38% commercial structures are observed in Sakta union and 31% in Ruhitpur union.

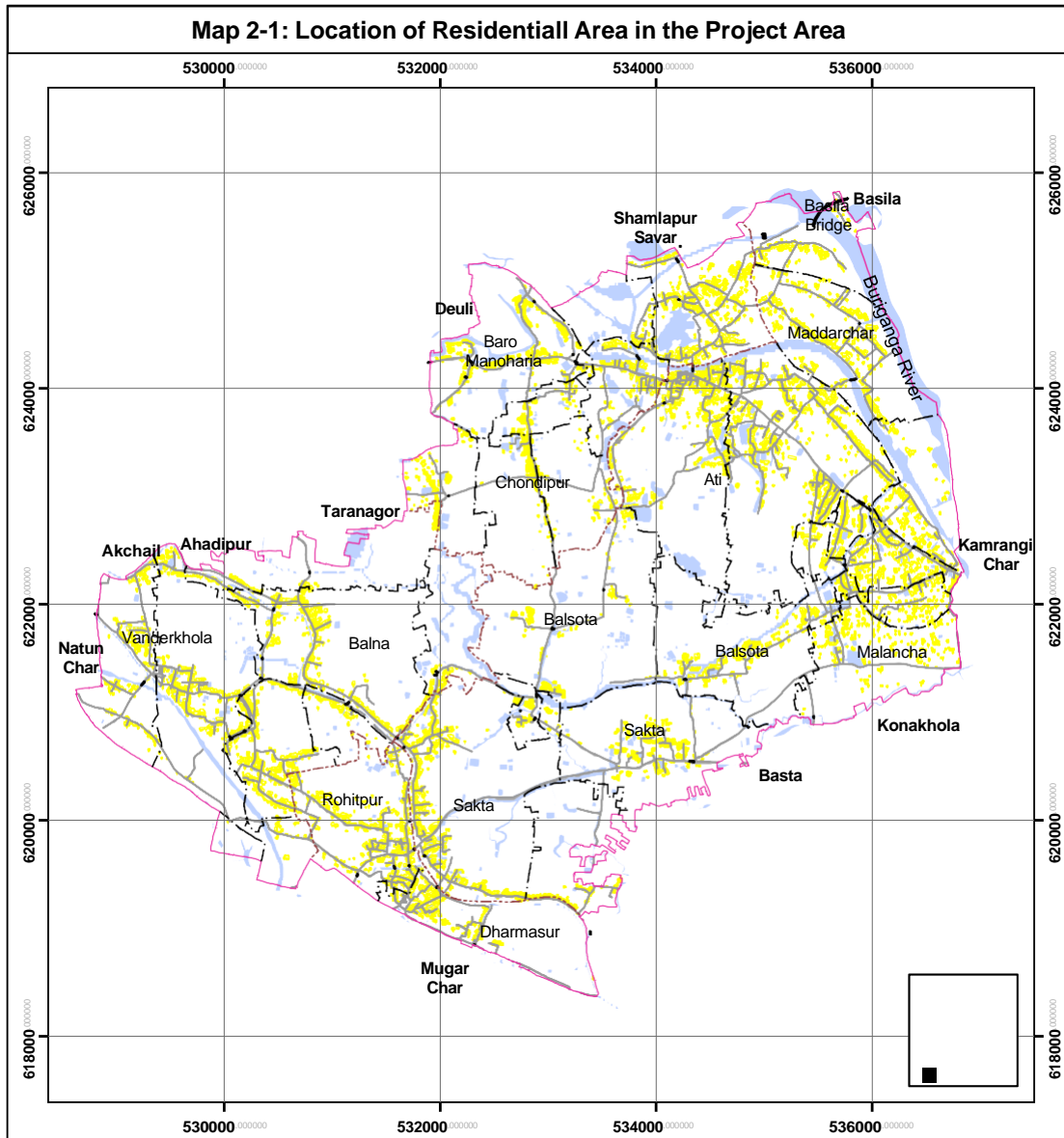
Table 2-3: Structure Type of Commercial Buildings

Union	Building Height (Story) for Commercial Use								Total
	Pucca					Semi-pucca		Katcha	
	1	2	3	4	4+	1	1+	1	
Kalatia (Partial)	17	2	0	0	0	51	0	201	271
Ruhitpur (Partial)	26	9	0	0	0	104	0	196	335
Sakta	24	4	1	0	0	176	0	214	419
Taranagar (Partial)	3	0	0	0	0	56	0	3	62
Total	70	15	1	0	0	387	0	614	1087

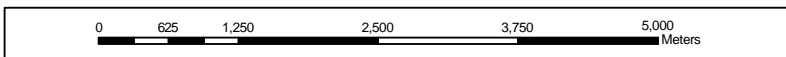
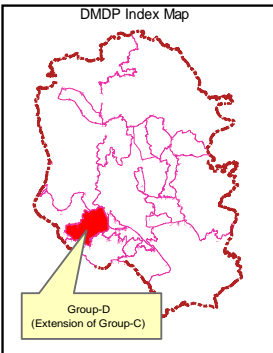
Source: Physical Features survey 2005-2006

Most of the pucca commercial buildings of the project area are one storied. Beside these, there is several numbers of two storied buildings. All the semi-pucca and katcha commercial buildings are one storied building in the project area. The locations of commercial buildings are shown in **Map-2-2**.

There are several numbers of industrial agglomerations in the project area. Industries are located in different places in the project area and those are of different types like heavy industry, medium industry and light industry etc. From the physical feature survey it is revealed that the total number of buildings for industrial use is 72. Out of these, most of the buildings (63) are light industry and rests of them are medium industry. The location of industrial building is shown in **Map-2-3**. However, the heavy industry is not apparent in this area. Medium industry includes the different types of factory such as food industry. There are only 9 medium category industries in the project area and most of them are located in Sakta union. Poultry farm, Cottage industry and rice mill etc. are main light industry. There are 63 light industries, which are sequentially distributed in different unions in project area. Sakta union has maximum light industries (36). Rest of the light industries is available in other unions, which are shown in Table 2-4.



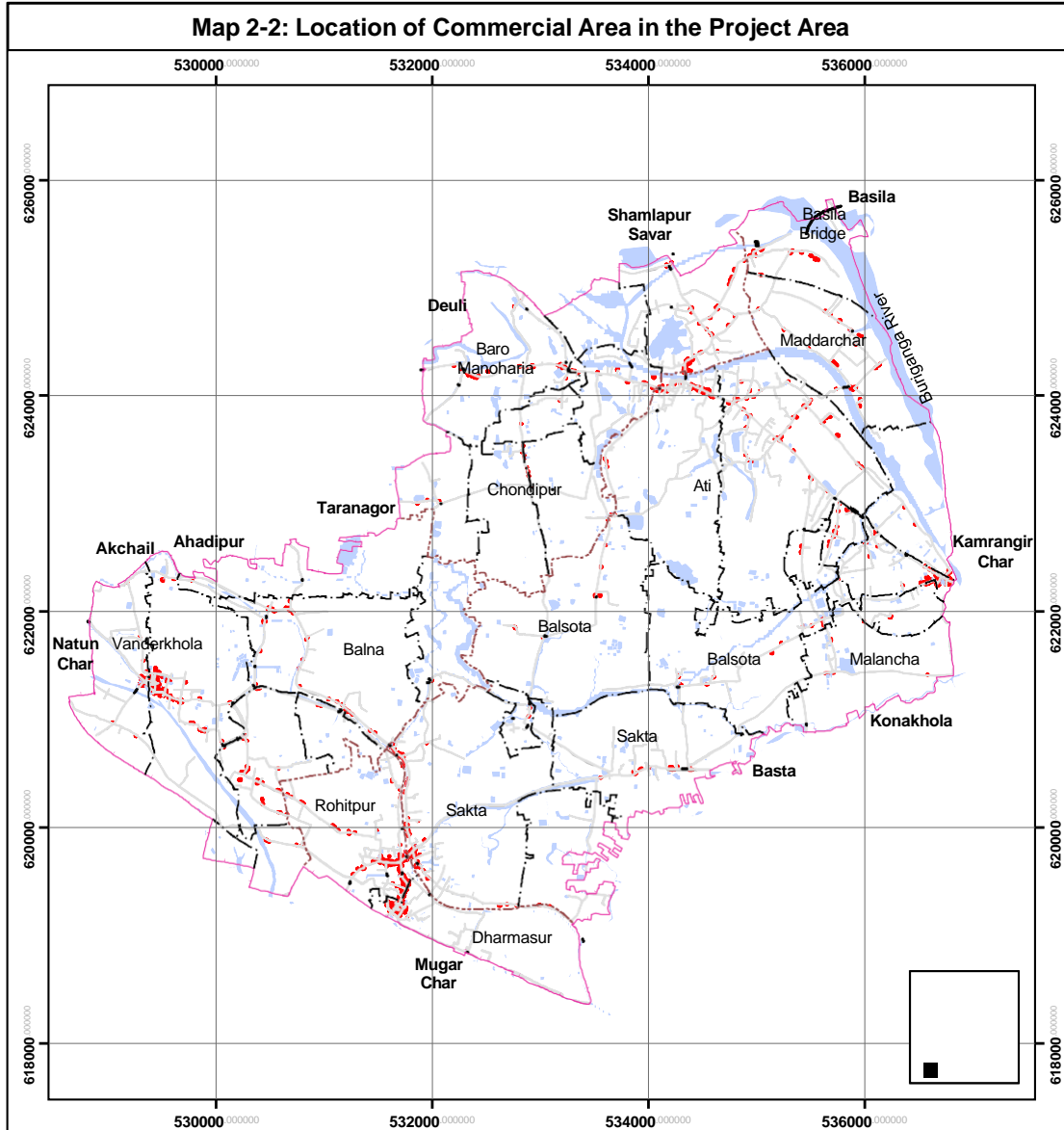
Preparation of Detailed Area Plan (DAP) for DMDP Area [Group-D (Extension of Group-C)]



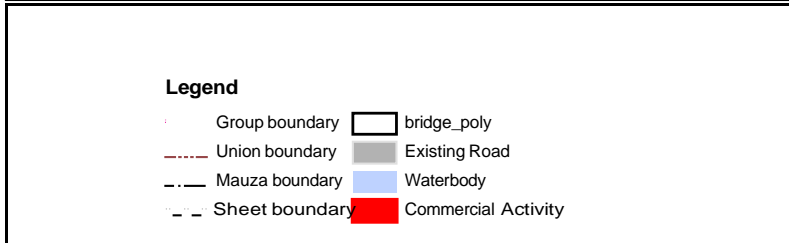
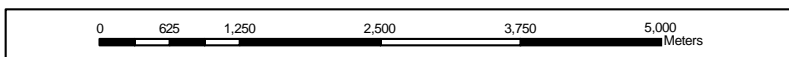
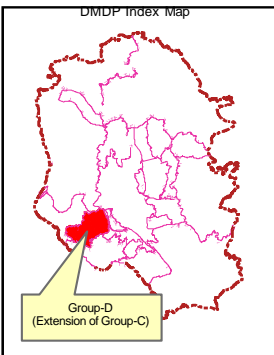
Legend

- Group boundary
- - - Union boundary
- - - Mauza boundary
- - - Sheet boundary
- bridge_poly
- Existing Road
- Waterbody
- Residential

Source: Landuse Survey, 2005-06



Preparation of Detailed Area Plan (DAP) for DMDP Area [Group-D (Extension of Group-C)]



Source: Landuse Survey, 2005-06

