

DHAKA METROPOLITAN
DEVELOPMENT PLAN (DMDP)
1995-2015

DETAILED AREA PLAN (DAP)

PART- IV

JUNE 2010



RAJDHANI UNNAYAN KARTRIPAKKHA (RAJUK}
DHAKA

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Dhaka Metropolitan Development Plan (DMDP) 1995-2015: Detailed Area Plan (DAP)

Index

Related Areas

- Part-I (Group – A)** : Tongi, Gazipur, Kaliganj Paurashava and surrounding rural settlement and flood plain areas of Balu, Sitalakkha and Brahmaputra river
- Part-II (Group – B)** : Narayanganj, Kadamrasul Paurashava and its surrounding areas including Dhaka-Narayanganj-Demra (DND) flood protected areas
- Part-III (Group – C)** : Areas under Dhaka City Corporation (DCC) jurisdiction and surrounded by the river Buriganga, Sitalakkhya, Balu, Turag and Tongi Khal
- Part-IV (Group – E)** : Entire Savar Paurashava and Part of Gazipur
- Part-V (Group-A Extension : Part-D)** : Keraniganj (Part)
- Part-VI (Group-B Extension : Part-D)** : Keraniganj (Part)
- Part-VII (Group-C Extension : Part-D)** : Keraniganj (Part)
- Part-VIII (Group-E Extension : Part-D)** : Keraniganj (Part)
- Part-IX (Location-1)** : Mirpur North to Uttara
- Part-X (Location-2)** : Kamrangir Char Area
- Part-XI (Location-3)** : Keraniganj (Part)
- Part-XII (Location-4)** : Begunbari Khal and its influenced area
- Part-XIII (Location-5)** : DND North
- Part-XIV (Location-6)** : Airport-Demra bypass adjacent area
- Part-XV : (Location-9)** : Eastern Fringe (Part)
- Part-XVI (Location-10)** : Purbachal connecting road to Begunbari Khal
- Part-XVII (Location-11)** : Eastern Fringe (Part)
- Part-XVIII (Location-15)** : Savar EPZ, Byrail, Ashulia
- Part-XIX (Location-16)** : Eastern Fringe (Part)

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
BUET	Bangladesh University of Engineering and Technology
BIP	Bangladesh Institute of Planner
BIWTA	Bangladesh Inland Water Transport Authority
BSCIC	Bangladesh Small & Cottage Industries Corporation
BNBC	Bangladesh National Building Code
BBS	Bangladesh Bureau of Statistics
CTP	Chief Town Planner
CNG	Compressed Natural Gas
CETP	Common Effluent Treatment Plant
CBO	Community Based Organization
DMDP	Dhaka Metropolitan Development Plan
DMAIUDP	Dhaka Metropolitan Area Integrated Urban Development Project
DND	Dhaka Narayanganj Demra
DEPZ	Dhaka Export Processing Zone
DCC	Dhaka City Corporation
DPHE	Department of Public Health and Engineering
DPZ	Detailed Planning Zone
DoE	Department of Environment
DAP	Detailed Area Plan
DITS	Dhaka Integrated Transport Study
EPZ	Export Processing Zone
ERI	Earthquake Risk Index
FAR	Floor Area Ratio
FAP	Flood Action Plan
GLD	Guided Land Development
GOB	Government of Bangladesh
IAB	Institute of Architect Bangladesh
ILDI	Infrastructure Led Development Initiatives
LPP	Landuse Permit Planner
LPC	Landuse Permit Committee
LGED	Local Government and Engineering Department
MISP	Multi Sectoral Investment Plan
NUC	Nagar Unnayan Committee
NGO	Non Government Organization
PDB	Power Development Board
PPA	Population Per Acre
RC	Review Committee
RS	Revised Survey
PWD	Public Works Department
RAJUK	Rajdhani Unnayan Kartripakkha
RHD	Roads and Highway Department
REB	Rural Electrification Board
RMG	Readymade Garments
SPZ	Spatial Planning Zone
STP	Strategic Transport Plan
TLCC	Town level Coordination Committee
TIA	Town Improvement Act
TWG	Technical Working Group
UAP	Urban Area Plan
UNDP	United Nations Development Program
URP	Urban and Regional Planning
UGIIP	Urban Governance and Infrastructure Improvement Project

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Preface

Detailed Area Plan (DAP) is the third and final tier of DMDP (Dhaka Metropolitan Development Plan) 1995-2015. DMDP is a three tier plan package, viz. the Structure Plan, the Urban Area Plan and the Detailed Area Plan. The first two tiers of DMDP i.e. the Structure Plan (1995-2015) and the Urban Area Plan (1995-2009) were prepared in 1995 under the Project 'Preparation of Structure Plan (SP), Master Plan and Detailed Area Plan (DAP) - Metropolitan Development Plan Preparation and Management in Dhaka' under UNDP project No. BGD/88/052 and TAPP No. TA/BGD/ 88 /052 with the technical assistance of UNCHS. The third tier of DMDP i.e. the Detailed Area Plan was prepared by RAJUK under a separate project named "Preparation of Detailed Area Plan (DAP) for Dhaka Metropolitan Development Plan" following the strategies and guidelines mentioned in the Structure Plan and the Urban Area Plan. This is almost a six and a half year project launched in August, 2004 and completed in December, 2010. The total project cost is BDT 2494.66 lac. The project was financed by RAJUK's own source.

The project was managed by a Inter-Ministerial Steering committee, a Technical Management Committee and a Technical Management Sub-Committee. One project director, four project managers, five assistant town planners, one GIS expert, one survey expert and other supporting staffs were the project personnel.

The DAP is prepared for RAJUK jurisdiction or DMDP area of 590 sq.mile (1528 sq. km.). In order to complete the task efficiently, RAJUK divided its control area into five groups and eleven locations and awarded five local consulting firms with the work. The contract was awarded to DDC Ltd. for Group A, Group A Ext. (Part D), Location 3,4 and 15; EPC Ltd. for Group B and Group B Ext. (Part-D); Gani Bangla Ltd. for Group C, Group C Ext. (Part-D), Location 9,11,16; Sheltech (Pvt.) Ltd. for Group E, Group E Ext. (Part-D), Location 1,2,10; BETS Ltd. for Location 5,6. For ease of work, the task of Group D was awarded to DDC Ltd., EPC Ltd., Gani Bangla Ltd. and Sheltech (Pvt.) Ltd.

Group A (North-East Part) covers three paurashavas including Tongi, Gazipur and Kaliganj together with surrounding rural settlement and flood Plain areas of Balu, Sitalakkhya and Brahmaputra river. Group B (South-East Part) covers Narayanganj, Kadam Rasul Paurashava and its surrounding areas including Dhaka- Narayanganj- Demra (DND) flood protected areas. Group C (Central Part) is surrounded by the river Buriganga, Sitalakkhya, Balu, Turag and Tongi Khal. Dhaka City Corporation (DCC) jurisdiction area is within Group C. Group C covers important establishments of capital Dhaka like Bangladesh Secretariat, Motijheel, Kawran Bazar commercial areas, International Airport, Old Dhaka etc. Group D (South-West Part) covers Keraniganj and Zinjira. Rest of the area of this Group is mainly Dhaleshwari flood plain. Group E (North-West Part) covers Savar Paurashava, Export Processing Zone (EPZ), Turag flood plain. Location 9, 110, 16 covers the eastern fringe areas of Dhaka. Other locations are in the different parts of Dhaka.

DAP projects population for the year 2015 as 18.43 Million on the basis of data generated from the population census 2001, which was 10.24 Million. The overall Annual Growth Rate is considered as 4.29%. The stages of DAP preparation included geo-referencing of mauza maps, different types of surveys, consultation with stakeholders, draft plan preparation, public hearing and final plan preparation. Socio-economic survey, physical feature survey, topographic survey and land use survey were done during the period of 2005-2006. The high tech digital GIS (Geographic Information System) data base was prepared for the very first time for Dhaka under the project. Quality checking of survey activities was done by Survey of Bangladesh (SOB). A series of consultation meeting was held with local government authorities (Wards & Paurashavas), Honorable Members of the Parliament of the RAJUK jurisdiction, concerned development agencies (RHD, LGED, WASA, WDB etc.), academics, professionals, socially concerned groups, study groups, business groups, etc.

Following this, draft final plan was prepared. As per section 74 of Town Improvement (TI) Act 1953, RAJUK carried out a two month long Public Hearing on the draft plan from October 3, 2008 to December 4, 2008. The Public Hearing was carried out through media coverage, press conference, web based publication and displaying of maps in RAJUK auditorium, PD (DAP) office and three other zonal offices of RAJUK. The comments given by general people and different organizations were documented in the prescribed format and these were addressed. A national seminar was held with academics, different professionals, BAPA, BELA and REHAB. Round Table Conferences were held in three daily newspaper offices.

A Review Committee to review the Draft Final Plan submitted by the Consultants was formed by the Ministry of Housing & Public Works (MoHPW) with Prof. Dr. Jamilur Reza Chowdhury, Vice Chancellor and BRAC University as convener. In order to assist the Review Committee in the task, a 16 member Technical Working Group (TWG) was formed with members from Urban and Regional Planning Department of BUET, Urban and Regional Planning Department of JU, Bangladesh Institute of Planners (BIP), Institute of Architects, Bangladesh (IAB), Urban Study Group and RAJUK.

A series of consultation meetings was held with the Honorable Members of the Parliament of RAJUK jurisdiction area to apprise them of the draft final DAP and obtain their valuable suggestions and recommendations. Almost whole of August and half of September, 2009 were spent on this consultation.

Ministry of Housing and Public Works constituted a DAP Review Committee with Prof. Dr. Jamilur Reza Chowdhury, former Vice Chancellor, BRAC University as convener to verify the compliance status of the recommendations made by the previous Review Committee. 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 RAJUK Board Room. The committee ultimately made 36 point recommendations to be followed by the consultants. Following the recommendations, consultants prepared final plans (maps and reports) and submitted to RAJUK. After approval in the Technical Management Sub-Committee, Technical Management Committee, Steering Committee of DAP and RAJUK'S board, the final plan was submitted to Ministry of Housing and Public Works for final approval. Ministry of Housing and Public Works sent the final plan to Ministry of Law for vetting and placed it in the Cabinet. The cabinet approved final DAP. Finally, Ministry of Housing and Public Works notified gazette of DAP under the SRO No. 232-law/2010 on 22 June 2010. The Reports and the Maps of DAP has been published on the website of RAJUK (www.rajukdhaka.gov.bd).

Eng. Md. Nurul Huda
Chairman, RAJUK.

Executive Summary

Detailed Area Plan (DAP) is the third of the three tiers DMDP Package. The first two tier—Structure Plan and Urban Area Plan were prepared back in 1995. It was decided to prepare DAP subsequently and the initiative was taken in 2004.

The current Planning area of Group—E encompasses 10 unions of Savar Upazila in full and one in part, Savar Cantonment Union, Savar Paurashava and other Urban Areas declared by BBS 2001. The planning area also includes three unions of Gazipur Sadar Upazila. According to BBS 2001 the total planning area comes to 87,654 acres or 35487.45 ha (according to Structure Plan the area is 72,237 acres, while according to consultant's GIS estimation the area is 75,114.53 acres).

In 1991 the total population of the planning area was about 4,16,682 that rose to about 6,42,320 in 2001, with an increase of about 54.15%. Projection for the year 2010 shows population as 948208, about 47.62% increase from 2001. The projection shows 11, 77,272 populations in the year 2015 that will be almost 24% increase over 2010. The planning area is inhabited by a cross section of income earners like, service holder, businessman, working class and farmer.

Existing spatial development of planning is characterized by established built up areas and dispersed new developments mostly on flood free lands. Pockets of industrial agglomerations are observed in northern and south-western areas, while dispersed industries are found almost everywhere. Main industrial agglomerations are at Hemayetpur, Karnapara, Baipail, Dhamsona, along Baipail—Tongi Raod and areas around Dhaka EPZ. Retail Commercial developments are observed on major roads, like, Nabinagar- Chandra Road and Baipail - Tongi Road and Savar. A large area is comprised of agricultural and rural homestead. Except eastern periphery, almost entire planning area is characterized by high, undulated land surface with red soil, crisscrossed by flood plains and khals.

Group-E Planning area is covered by four spatial planning zones of Structure Plan, namely, SPZ 16: Northern Fringe, SPZ 17(1): Savar, SPZ 1(2): Dhamsona (part) and SPZ 17(3): Flood Zone West (part). For SPZ 16 the Structure Plan Policy recommended to discourage urbanization. The plan asked to integrate the RAJUK plan in the area with new DAP; for SPZ- 17(1) it recommended to steer development in the established urban area instead of new areas; discouraged linear development; suggested realization of cost of infrastructure development from private developers of housing estates. As suggested for SPZ 17(2), DAP should guide development in the area in a planned way; fund should be made available to develop infrastructure to enable urbanization; a separate municipality is recommended to provide infrastructure facilities in planning area. In SPZ 17(3) Structure Plan proposes the entire zone as flood flow area where only agriculture is permitted.

The summary of proposed land allocation depicts that agriculture is the dominant land uses with an area of 20852.81 acres of land which is 27.76% of the total planning area, followed by flood flow zone (24.04%), while about 9.35% of the planning area has been proposed for residential development. Besides, there is about 17.59% rural settlement zone while about 5.43% of lands have been earmarked for road network developments. Apart from Structure Plan delineated flood flow zones major water bodies in the area including natural channels have been proposed to conserve. Conservation of old heritage has also been proposed.

Structure Plan suggested developing urban centres and sub-centres, in line with Structure Plan, DAP proposes to develop major civic centre to promote urbanization. Major civic centre with space for such facilities as, park and playground, health facilities, education, public administration, shopping, mosque and eidgah, fire station and police out post, kitchen market, graveyard and space for miscellaneous uses have been suggested with an area of 27.49 acres of land. The total open space (including the civic centre) stands at 205.37 acres that gives 4.29 acres per 25000 populations in the year 2015.

The DAP for Group—E area proposes 537.73 km of road network comprising secondary and tertiary roads that includes STP proposed roads as well. Proposals have also been made for widening of number of narrow roads and establish missing links. Service roads have been proposed on major thoroughfares for local traffic movement and to keep the highway traffic free. DAP also supported the proposed circular waterway around Dhaka, a part of which passes by the eastern periphery of Group—E area.

Chapter-1

Background

1.1 Introduction

This Final Plan Report is the 6th of the series of the reports submitted under the tasks of DAP assigned to Group-E area. The first report of the project was the Inception Report that primarily dealt with the approach and methodology of the work highlighting the present scenario of the study area. The second report was study area report (called Report-1) which was about the collection and authentication of Mauza maps, fixation of study area boundary and geo-referencing of maps. The next report was survey report (Report-2) that contained the survey findings and the base maps prepared on the basis of physical survey and also the findings of sample household survey of the study area. Interim Report (Report-3) was the third report that contained description about previous higher level plans, stakeholder consultations, the broad land use plan and policies and the integrated plan. The Draft Plan Report (Report-4) contained the draft plan proposals. The current report is the Final Plan Report that illustrates the detailed area plan proposals, the projects prepared based on the plan, priority and phasing of project implementation and other details of institutional issues. The final report has been prepared incorporating the acceptable amendments received during public consultations.

1.2 Background

RAJUK initiated the Dhaka Metropolitan Development Plan (DMDP) project in early '90s. The project was originally designed to prepare a set of three hierarchical plans- Structure Plan, Urban Area Plan and Detailed Area Plan. Due to technical reasons the project had to be closed down in 1995 without preparing the Detailed Area Plan component.

The DMDP Structure Plan sets a 20 year (1995-2015) long term development strategy for metro-Dhaka sub-region of 1528 sq. km. of RAJUK area. The DMDP Structure Plan report identifies the order of magnitude and the direction of anticipated urban growth and sets forth a series of policy guidelines for achieving the overall plan objectives.

The DMDP Urban Area Plan (UAP) provides an interim mid-term strategy for 10 years (1995-2005) for the development of urban area within the RAJUK administrative boundary. Detailed Area Plan (DAP), the lowest tier in the three level planning exercises, is basically a local level plan which provides the proposed land use zoning, infrastructure and utility services.

Detailed Area Plan is a vital part of the DMDP as far as spatial development and development control are concerned. Absence of Detailed Area Plans not only hampered undertaking development projects by RAJUK but also led to uncontrolled and unwanted spatial development in the private sector. Absence of land use zoning provisions also posed another problem that restricted approval of building plans, particularly in the newly urbanizing areas of RAJUK. With a view to ameliorate all the above problems, RAJUK decided to complete the Detailed Area Plan component of the DMDP package and undertook the present project. On approval of the project by GOB, RAJUK invited proposals from competent consulting firms. Firms submitted proposals for assignments were divided into five groups (Group A, B, C, D and E). The proposals were studied and analysed and works were awarded to five successful applicants. Sheltech (Pvt.) Ltd. in association with Data Experts (Pvt.) Lt. was awarded Group-E area covering almost entire Savar Thana and a small part of Gazipur Sadar Upazila falling within the RAJUK jurisdiction.

1.3 Purpose of the Detailed Area Plan (DAP)

The provision of DAP is inherent in the Structure Plan with some specific purposes. These are:

- a. Provide basic infrastructure and services in the study area through systematic planning
- b. Create congenial environment to promote economic activities
- c. Improve drainage system and protect flood flow zones from encroachment
- d. Create service centres to enable urban growth
- e. Serve as a reference document for land clearance and building permission
- f. Provide guidelines for public and private investment priorities
- g. Provide relevant planning polices for sustainable development

- h. Serve as a document for land use and development control

1.4 Objective of the Project

The main objectives of the Detailed Area Plan (DAP) are as follows:

- a. To provide a quality urban design having aesthetic, functional and flexibility characteristics
- b. To develop a programme for public sector action aiming at the implementation of the plan
- c. To prepare database and disseminate it in professional manner
- d. To provide and guide private sector development
- e. To provide clarity and security to future inhabitants and investors
- f. To prepare guidelines for future infrastructure development

1.4.1 General Objectives

The general objectives of Detailed Area Plan envisage:

- To Implement Structure Plan and Urban Area Plan policies
- To Guide and control urban development in an orderly manner in preferred areas of urban expansion
- To create an urban environment enabling citizens to enjoy the services that suit urban living

1.4.2 Specific Project Objectives

- Implementation of Dhaka Metropolitan Development Plan 1995-2015
- Data Management and Dissemination
- Preparation of Multi-sector Investment Plan
- Ensuring Clarity and Security of Investment
- Providing Guideline for Development
- Ensuring Sustainable Environment

1.5 Custodian of the Detailed Area Plan

The present detailed area plan is a part of the DMDP plan package prepared under the banner 'Master Plan' as envisaged in Section 73(1) of the Town Improvement Act 1953. Rajdhani Unnayan Kartripakkha (RAJUK) is the custodian of the 'Master Plan' and as such it will be the custodian of the detailed area plan as well and responsible for execution of the development control and development proposals prepared under the plan. The development proposals can be implemented either by RAJUK itself or through any other development agency, public or private. Execution of many of the development proposals will rest on other public development agencies, but it will be the responsibility of RAJUK to take initiatives to get the work done by those agencies through the Ministry of Housing and Public Works. RAJUK will take action against whoever violates the provisions of the approved DAP proposals and development control provisions.

1.6 Duration of Detailed Area Plan (DAP) and Amendment

The current Detailed Area Plan (DAP) shall remain valid till the validity of the Structure Plan that is 2015. DAP proposals, including land use zoning made in this report, should be periodically reviewed to fit the plan with the need of the time. The purpose of the review will be to take an overview of the level of implementation of the DAP, review changing physical growth pattern, development of infrastructure, trend of public and private sector developments. Necessary changes should be made in DAP proposals in the light of the findings of the review.

As a part of the master plan, amendment of the detailed area plan will be done under the legal provision of Section 74(2) of the Town Improvement Act 1953. All the amendments shall have to be notified in the Official Gazette for public information. As the relevant provision of the act says, "(2) The [Kartripakkha] may, from time to time, with the approval of the [Government] and the [Government] may at any time, amend or alter any specific provision of the Master Plan. Any such amendment or alteration shall be published in the Official Gazette." So RAJUK can carry out amendment of the DAP any time with the approval of its Board and the Ministry and publish the same in the Official Gazette. But the best way will be to carry out the amendments at regular interval instead of time to time peace meal amendments.

1.7 Format of Detailed Area Plan

The format of Detailed Area Plan consists of:

- a) Explanatory Report
- b) Integrated Planning Map

a) Explanatory Report

The current explanatory report of the plan describes the plan proposals and other necessary information to explain the plan. The report is divided into six chapters. Chapter one contains background elements that includes, among other things, project background, project objectives, planning area, plan duration and review of previous plans. Chapter two highlights the critical planning issues and problems prevailing in the planning area, the planning area profile and the future population. In Chapter three the development plan proposals have been placed in details including the integrated planning map. The development proposals include, infrastructure and services, public sector land development in new housing areas, ecological conservation, conservation of monuments and heritage and flood protection and drainage development. Chapter four describes the procedures and measures needed for plan implementation, comprising such issues as, fixation of priorities, public sector action program, and development control. Chapter five gives idea about the selected projects that would be implemented on priority basis. Chapter six is about follow up actions to be taken including necessary legal and procedural measures to execute the plan and development control.

b) Integrated Planning Map

The Integrated Planning Map shows different layers of map information like, the cadastral base, administrative boundaries, geo-physical features (contour line, water bodies), infrastructure and proposed land use.

Following are the various components of Maps with different prescribed scale as per ToR have been submitted at the final stage for the Detailed Area Plan (**Table-1.1**).

Table- 1.1: Required Maps with Corresponding Scale

SI No	Description	Scale
1	Base Map	1:1980
2	Physical Feature Survey Map (Road+ Structure Floor)	1:1980
3	Physical Feature Survey Map (Road+ Structure Type)	1:1980
4	Physical Feature Survey Map (Road+ Structure Use)	1:1980
5	Land Use Survey Map	1:1980
6	Topographic Survey Map	1:1980
7	Utility Services Map	
	a. River/ Khal/Drainage	1:1980
	b. Gas/Electricity/ Water Supply	1:1980
8	Comprehensive Detailed Area Plan	1:3960
9	Comprehensive Detailed Area Plan	1:1980
10	Identified Projects in separate layers	1:1000

Source: Terms of Reference (ToR) of DAP

1.8 Description of the Planning Area

The Detailed Area Plan (DAP) project area of Group-E is located in the north-western part of DMDP area (RAJUK area) (**Map- 1.1**), comprising almost entire Savar Upazila of Dhaka Zila, and a small part of north- west Gazipur Sadar Upazila of Gazipur Zila including a part of Gazipur Pourashava. The total area of the project stands at 29,233.59 ha or 72,237 acres. **Table-1.2** shows the details of the study area with respect to SPZ. Variations have been found in the planning area of Group-E. According to Structure Plan combining all the three SPZs under Group-E the total area comes to 72,237.00 acres, while adding up all the unions under the above SPZs gives an area of 87,654 acres. Again, GIS estimation by consultants gives 75,114.53 acres.

Table-1.2: SPZ wise Number of Mauza, Area, Population and Households of the Project Area

SPZ	No. of Mauza	Area in Ha (Acre)	Population (1991)	Household (1991)
1. SPZ-16: Northern Fringe	41	7836.01 (19363)	79825	15438
2. SPZ-17(1): Savar	51	2489.65 (6152)	76675	15062
3. SPZ-1(2): Dhamsona (part)	42	482795 (11930)	69966	12125
4. SPZ-17(3): Flood Zone West (part)	150	13934.29 (34432)	174844	29617
Total:	284*	29233.59 (72237) 29.23 Sq.km.	401310	72242

Source : DMDP Structure Plan,

Note: *Cadastral Survey (CS) Mauza

1.8.1 Administrative and Cadastral Boundaries

The project area of Group-E consists of entire Savar upazila of Dhaka district and partial of Gazipur district. There is one municipal authority in the project area namely Savar Paurashava. The study area accommodates 14 unions. Table-1.3 shows the administrative units of the group-E area. Cadastral base of the project area are C.S and R.S mauzas. The study area is divided into 252 CS mauzas and 223 RS mauzas. There are in total 385 C.S and 324 R.S sheets of the project area Mauzas.

Table- 1.3: Administrative Units of Group-E

Name	Description
District	Dhaka, Gazipur (partially)
Thana / Upazila	Savar and Gazipur (part)
Paurashava	Savar
Union	Simulia (Part), Tetuljhora, Yearpur, Pathalia, Kaundia, Dhamsona, Bhakurta, Banagram, Ashulia, Biralia, Savar Cantonment, Basan (Part), Kayaltia (Part), and Kasimpur (Part)
Police Station	Savar

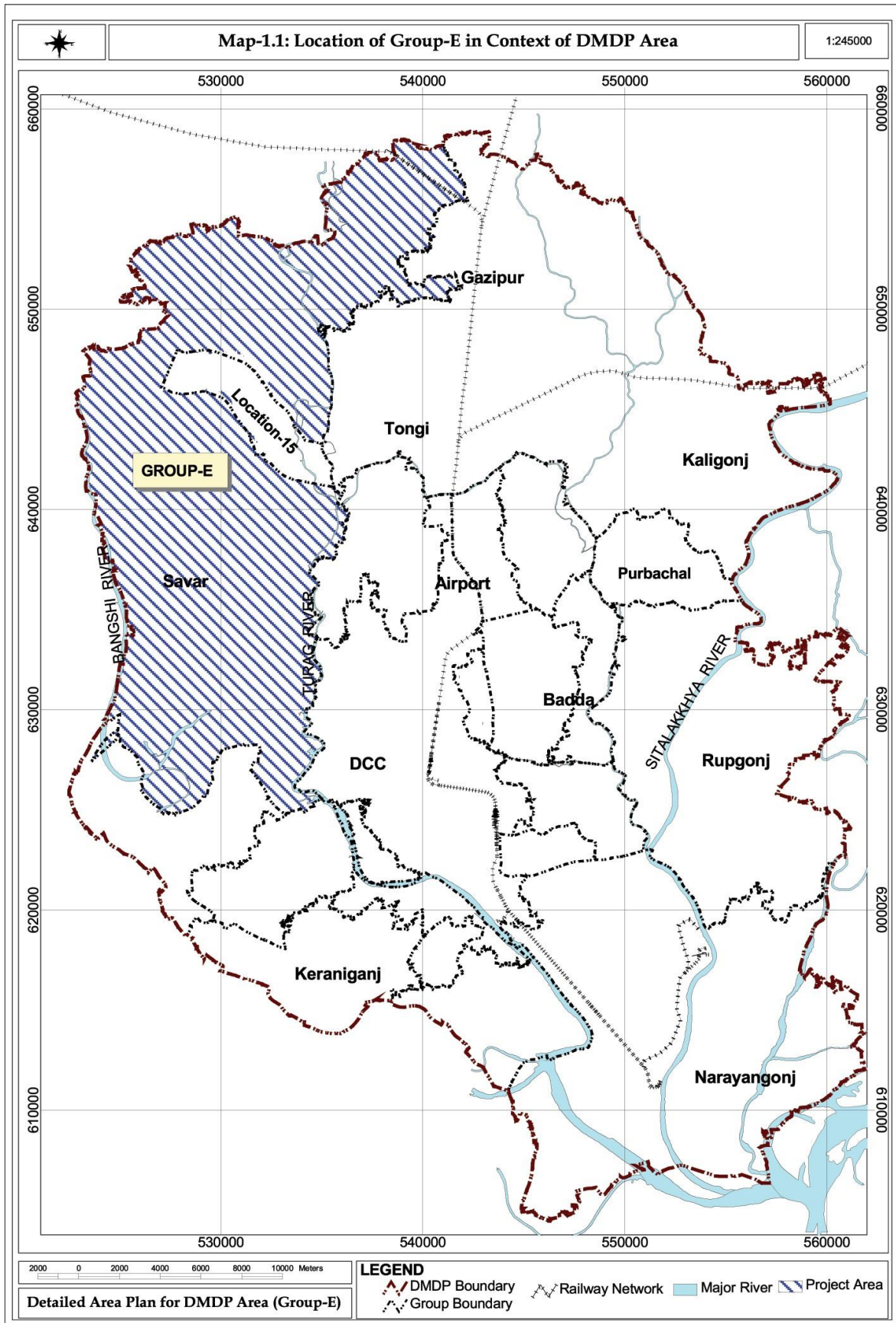
Source: Compiled from BBS Publications, 2001

1.8.2 Geo-Physical Profile

The following geographic profile of the study area has been ascertained through physical survey and other secondary sources.

a. Geology and Soil

The land of the planning area is composed of alluvial soil of the pleistocene period. The height of the land gradually increases from the east to the west. The southern part is composed of alluvial soil of the Bangshi and Dhalashwari rivers. Main rivers in the area are Bangshi, Turag, Buriganga and Karnatali.



b. Topography

The substantial part of the study area is geographically a part of the Pleistocene Terrace, popularly known as Madhupur Tract. Such lands are characterized by high, undulated land surface with red soil, criss crossed by flood plains and streams. Except the southern part, almost entire planning area land falls in this category. The level of land surface exhibits greater than gentle slope ranging between –2 m to +15 m with respect to m PWD. The highest level of lands in the area exists in patches and not in continuous form. A realm of lower level plains are found along the flood plains on the eastern periphery, moving from north to south, ranging from –2 m to +6 m. The levees of the flood plains are usually of higher elevation ranging up to 12 m PWD. Areas like Birlia, Savar Cantonment, Ashulia, part of Pathalia, part of Basan, Rajashan, Jahangirnagr University stand comparatively at a higher elevation, ranging between 10 m to 15 m to PWD. These areas are free from normal floods and used for settlement development, while the areas of lower elevation are used for cultivation of crops.

c. Geological Faults

Geographically, Bangladesh finds itself in one of the most earthquake prone areas of the world. The northern part of mega Dhaka that is almost the entire Group-E area falls in the most severe earthquake zone of the country. As per Earthquake Risk Index (ERI), Dhaka is one of the riskiest cities in the world, “although geologically Dhaka is in the second earthquake prone zone. Its vulnerability is due to its non-engineered structures,” said experts (Daily Star, August 25, 2006). From the study of “Dhaka City and Earthquake”, it has been observed that (Daily Star, August 25, 2006) two fault lines pass through the Group-E area creating two areas which are most vulnerable and moderately vulnerable. One line has passed through Bangshi-Dhaleswari River and the other through the Turag River. The Structure Plan identified three fault lines. One fault, called Bansi Fault passes through the Turag, the Dhamrail fault runs through the Karnapara River and the fault, originating from Karnapara River in the west runs north-east, crosses Bansi fault and joins Tongi fault. Development control should be exercised in these areas through Building Construction Rules 2008 and Bangladesh National Building Code (BNBC) 2006 to avoid any possible disaster. Please see **Map-1.2**.

1.9 Review of Previous Plans and Proposals

The following section presents a review of the previous plans undertaken in the planning area.

1.9.1 Master Plan for Dhaka, 1959

a. Relevant Recommendations

The Dacca Master Plan 1959, prepared in 1959 and approved in 1960, covered an area of about 829 sq. km (320 sq. m.) encompassing the Dhaka Municipality, Tongi Municipality and Narayanganj Municipality. The present study area of Group-E that is Savar Thana and part of Gazipur Sadar Thana, was totally outside the jurisdiction of the 1959 Master Plan area. So for logical reasons review of 1959 Master Plan is omitted here.

1.9.2 Dhaka Metropolitan Area Integrated Urban Development Project (DMAIUDP), 1981

a. Relevant Recommendations

DMAIUDP was undertaken in 1980-81 with a view to prepare a long term strategy for the future development of Dhaka City. The project proposed some alternative growth strategies for future Dhaka, evaluated them and finally selected the most suitable strategies for future development of Dhaka.

Preparation and Selection of Strategic Options by DMAIUDP

Dacca Metropolitan Integrated Urban Development Project (DMAIUDP) 1981 was undertaken to work out the future mode and pattern of Dhaka city development in consideration of the physical and social constraints and opportunities existing within and possible areas of future expansion. It was the first ever attempt to prepare a strategic plan in Bangladesh. The project was jointly funded by the Government of Bangladesh (GOB), the Asian Development Bank (ADB), and the United Nations Development Programme (UNDP). The Planning Commission of GOB was entrusted with the responsibility to implementing the project with Asian Development Bank as the executing agency.

A British consulting firm in association with a number of local firms initiated the project in 1980 and completed in 1981. The experts drew up nine strategic options for future development of Dhaka city. They reviewed the options for selection of the most suitable one. The options were,

Option-1: continuation of the current trend –sustained peripheral growth of the city with limited northward

- expansion.
- Option-2: peri-urban development – low density resettlement with intensive agricultural production, over an extensive area surrounding the city.
- Option-3: comprehensive flood control-flood protection of the existing city and the northern, eastern and western development areas by enclosing embankment.
- Option-4: comprehensive flood control around the south and south eastern periphery of greater Dhaka.
- Option-5: northern expansion- development by concentration of employment, infrastructure and services.
- Option-6: northern expansion- as for 5 with addition of an improved transportation facility linking urban centers in the north up to that in the south-east.
- Option-7: development of new satellite city – concentration of new development at one new location in the city region away from the existing city.
- Option-8: sub-regional dispersal –decentralization of urbanization and urban development in the existing urban centers of the city region.
- Option-9: minimization of urban growth-limitation of urban population growth by reducing the level of investment in the city in favour of rural development.

A two stage evaluation of the option was carried out. But the consultants finally found none of the options satisfactory. In the first stage the experts rearranged the options into following three strategies.

- a. Extensive development of land immediately adjoining the city by comprehensive flood protection.
- b. Continuing peripheral expansion of the city without flood protection.
- c. Expansion of the city to the north and west which does not require comprehensive flood protection.

A second stage evaluation of the three alternatives was carried out based on the criteria of,

- cost
- benefit
- Implementation possibilities and
- flexibility.

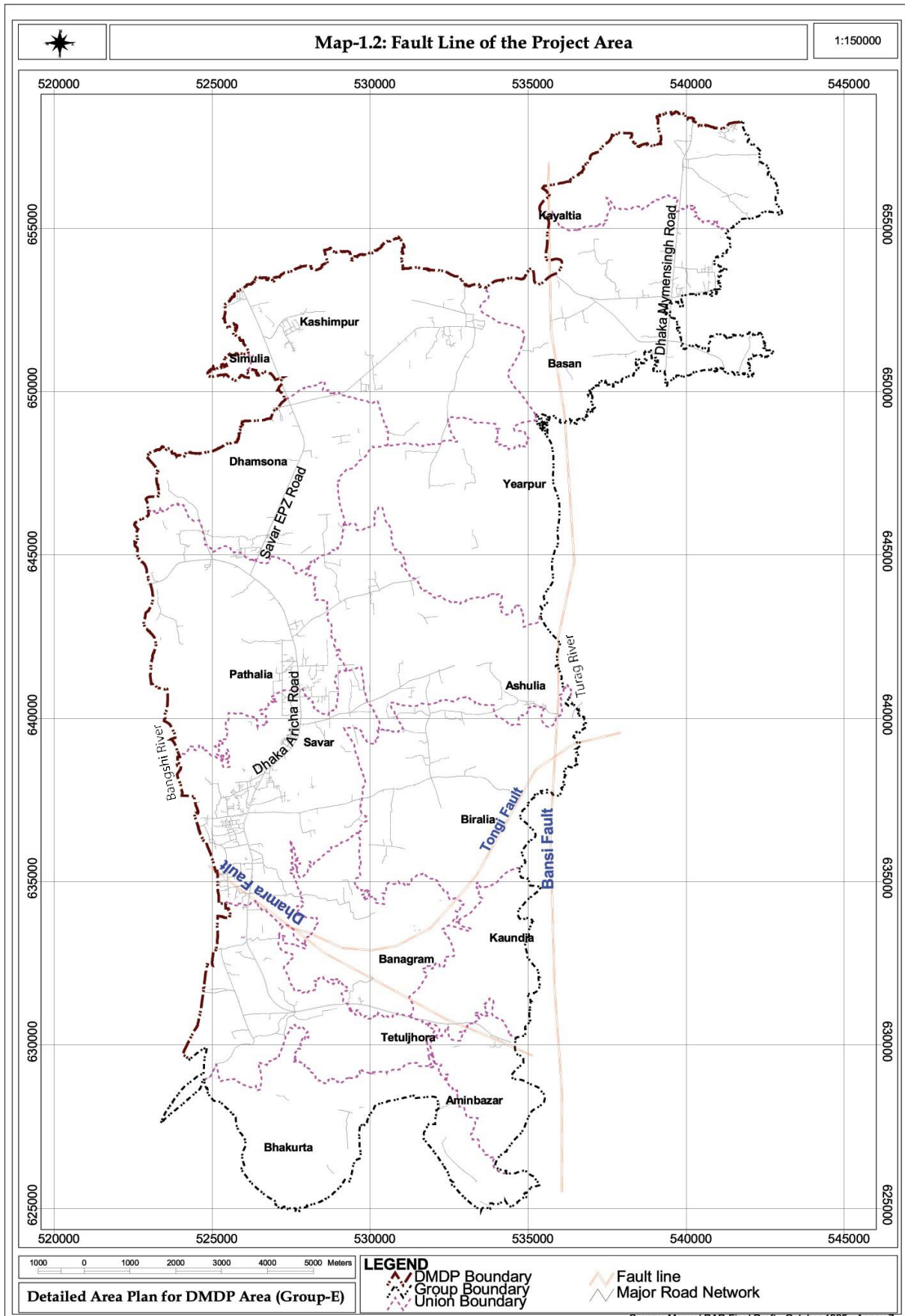
After evaluating the three alternatives the experts came to the conclusion that alternative B and C were the best choices as they have “*the balance of advantages*”. And these advantages “*could be achieved at a lower level of urban development expenditure, with fewer implementation problems, and at lower risk than in the flood protection strategy.*” Therefore, the combined peripheral growth /northern expansion strategy was adopted as the recommended urban development strategy for development of future Dhaka.

Review and Analysis of DMAIUDP Options in the Context of the Study Area

Though the strategy was never officially adopted but the spontaneous trend of development was towards the same direction as anticipated by the DMAIUDP consultants. The northern and central part of Savar and the areas around Joydebpur Chowrasta are nothing but the part of Option C that is northern expansion in flood free zone. In Alternative A: Comprehensive Flood Protection Strategy the Savar and Gazipur Sadar Thanas, termed as ‘less intensive peripheral growth area’, were not included within the comprehensive flood protection strategy.

In **Alternative B: Peripheral Growth**, areas adjacent to the exiting built up parts of Group-E area were included as possible future peripheral growth locations. These areas are located in Savar and on the both sides of Dhaka-Aricha Highway and areas around Joydebpur Chowrasta.

In **Alternative C: Northern Expansion**, the entire Group-E area was included as future expansion areas except the central flood flow zone. The Gazipur part falling within the study area was considered as 1st expansion area in the C alternative. In Savar, the northern part was taken as 4th phase development area. The central eastern part of the Group-E area was considered as 3rd phase and the central part Government Dairy and Livestock Farm and other public establishments and privately planned housing areas were marked as ‘development areas already planned.’ The central western part on the west of Dhaka-Aricha Highway was considered as the 1st phase development area.



Latest physical survey by the consultant reveals unprecedented spatial growth in the study area beyond comprehension of the experts of DMAIUDP. Peripheral growth has surpassed the prediction in the eastern and northern part of the city, however within predicted limit in Savar and Gazipur. Alternative B did not predict any growth along Nabinagar-Chandra Road, but this is one of the fastest expansion areas of mega Dhaka, mainly induced by the development of two EPZs in the area. A new Abdullapur-Baipal Road was built during late eighties that also boosted industrial and commercial developments along the road. Large scale increase in the global export of RMG and knitwear by Bangladesh are the main reasons for boosting manufacturing establishments in the area. Flood free cheap lands with good communication with Dhaka City are the major pull factors that led to the large scale growth of industries in the northern periphery. However, it is true that the than experts did not foresee such economic boost in the country back in early 1980s. Similar spatial growth is also observed along the Tongi-Gazipur Road. New investments in the manufacturing in these areas have resulted in large scale population growth in the vicinity leading to growth of other supporting activities. The Alternative C predicted much wider spatial growth on the flood free northern periphery. It predicted development in four phases. But the developments have been not that momentum to cover all the four phased areas. Rather the 1st phase locations are yet to become saturated. DMAIUDP report was never officially accepted as strategy for urban development by the government and no urban development agency ever showed any response to the recommendations of the report. In fact the report was virtually ignored. However, the private land development that took place after preparation of the report was mainly along the flood free land and the expansion was northward. Some flood control structures built during the great floods in 1988 encouraged developments in the low lands within the embankment area in the western city fringe.

1.9.3 DMDP Structure Plan and Urban Area Plan (1995-2015)

The Dhaka Metropolitan Development Plan in the form of Structure Plan and Urban Area Plan was prepared during the period 1992-1995 to provide policy guidelines for the development of Metro Dhaka for 1995-2015 period. The policies and strategies adopted in the plan was to provide a rough development control guidelines for the Metro Dhaka until the preparation of Detailed Area Plan, the third of the three tier new urban development plan document. Structure Plan and Urban Area Plan framework relevant to Group-E area is presented below.

a. Relevant Recommendations

Structure Plan Land Use Development and Control Policies divide the Group-E area into following Land Use zones (Map-1.3).

- Established Urban Area up to 1989 (Consolidation)
- Peripheral Urban Development (Enablement)
- Agriculture Area
- Main Flood Flow Zone
- Sub-flood Flow Zone
- High Value Agricultural Land
- Special Area
- Flood Retention Pond (Indicative)

Major Roads/Public Transportation Network

The DMDP Structure Plan policies relating to transport sector derived largely from the Greater Dhaka Metropolitan Area Integrated Transport Study (DITS). The main objective of the study was to establish a long term primary road network for the metropolitan area, to serve the needs of the growing urban concentrations by providing improved access to the main urban area itself and linkage to areas with potential for growth. These roads would differ from the remaining network in that its main purpose would be to provide a national link rather than to provide for urban travel. The DMDP Structure Plan proposed different road transport infrastructures like, road development, public transport, sub-way development etc. **Table-1.4** shows the proposed sequence of road development covered in Group-E area.

Road Development

As policies oblige, oblique the DMDP offered high priority to the development of “limited access Eastern By-pass to become a key link in the emerging national network of arterial roads and relief the existing urban network”. However the Eastern By-pass lies outside the study area of Group-E. The DMDP also recommended a policy of “incremental road development”, as a long term road development approach. Under this approach Right of Way will be reserved in advance of future development where need arises. The roads will be developed in phases.