

**APPROVAL OF THE DEVELOPMENT PLAN FOR
PANADURA URBAN COUNCIL AREA**

I, Patali Champika Ranawaka, Minister of Megapolis and Western Development do hereby approve the Development Plan for the Urban Development Area of Panadura constituted of the Urban Council Area of Panadura, having considered the recommendation made by the Board of Management of the Urban Development Authority on 13th November 2008 by virtue of the powers vested in me under Section 8 F of the Urban Development Authority (Amendment) Act No. 4 of 1982.



.....
Patali Champika Ranawaka
Minister of Megapolis and Western Development

Ministry of Megapolis and Western Development,
17th and 18th Floors,
"Suhurupaya",
Battaramulla.

27-10-2016.

Content

	Page No.
Chapter One	01
1.0 Introduction	01
1.1 Impotency	01
1.2 History	01
Chapter Two	06
2.0 National and Regional Linkages	06
2.1 National Linkages	06
2.2 Regional Setting	06
Chapter Three	08
3.0 Population	08
3.1 Total Population of the Urban Areas in Kalutara District	08
3.2 Population Composition by Gender	09
3.3 Population Density	09
3.4 Daily Commuter Population	12
3.5 Population in Age Group Wise	12
3.6 Population on Educational Level	13
3.7 Population Composition by religion	13
3.8 Population Composition by Ethnicity	14
3.9 Population Forecast	15
3.10 Identified Problems and Potentials of the Population	15
3.10.1 Problems	15
3.10.2 Potentials	15
Chapter Four	16
4.0 Land Use Pattern	16
4.1 Existing Land Use Pattern	16
4.1.1 Residential Use	19
4.1.2 Commercial Use	19
4.1.3 Industrial Use	19
4.1.4 Government and Semi Government Use	19
4.1.5 Religious Use	19
4.1.6 Undevelopable Lands	20
4.2 Land Values	20
4.3 Identified Problems and Potentials of the Land Use	22
4.3.1 Problems	22
4.3.2 Potentials	22
Chapter Five	24
5.0 Economic Background / Urban Economy	24
5.1 Analysis of Income & Expenditure of the Urban Council	24
5.2 Employment of the Panadura Urban Council Area	25
5.2.1 Employment by Sector	25

	Page No.
5.3 Contribution of the Various Sectors in Urban Economy (Economic Activities)	26
5.3.1 Industrial Sector	26
5.3.2 Fishery Industry	26
5.3.3 Banks	26
5.3.4 Tourism Activities	27
5.4 Identified Problems and Potential of the Urban Economy	27
5.4.1 Problems	27
5.4.2 Potentials	28
Chapter Six	29
6.0 Housing	29
6.1 Housing Composition	29
6.2 Housing Need	29
6.3 Housing Density	30
6.4 Identified Problems and Potential of the Housing	31
6.4.1 Problems	31
6.4.2 Potentials	31
Chapter Seven	33
7.0 Physical Infrastructure Facilities	33
7.1 Road and Transportation	33
7.1.1 Road Network	33
7.1.2 Transport Facilities	33
7.1.3 Vehicle Movement within the Panadura Urban Area	35
7.1.4 Identified Problems and Potentials of Roads & Transportation	35
7.1.4.1 Problems	35
7.1.4.2 Potentials	35
7.2 Electricity Supply	37
7.2.1 Identified Problems and Potentials of Electricity Supply	37
7.2.1.1 Problems	37
7.2.1.2 Potentials	37
7.3 Water Supply	39
7.3.1 Identified Problems and potential of Water Supply	39
7.3.1.1 Problems	39
7.3.1.2 Potentials	39
7.4 Drainage System	39
7.4.1 Identified Problems and Potentials of Drainage System	42
7.4.1.1 Problems	42
7.4.1.2 Potentials	42
7.5 Solid Waste	42
7.5.1 Identified Problems and potentials of Solid Waste	43
7.5.1.1 Problems	43
7.5.1.2 Potentials	43
7.6 Sewerage Facilities	43
7.6.1 Identified Problems and Potentials of Sewerage Facilities	43

Chapter Eight	44
8.0 Social Infrastructure Facilities	44
8.1 Health Facilities	44
8.1.1 Identified Problems and Potentials of Health Facilities	46
8.2 Educational Facilities	46
8.2.1 Composition of the Existing Schools of Panadura UC Area	46
8.2.2 Identified Problems and Potentials of Educational Facilities	47
8.3 Leisure and Recreational Facilities	47
8.3.1 Identified Problems and potentials of Leisure and Recreational Facilities	47
Chaper Nine	48
9.0 Environment	48
9.1 Sensitive Zones	48
9.1.1 Cultural and Historical (Archeological) Valuable Places and Buildings	48
9.1.2 Environmental Sensitive Zones	48
9.2 Environmental Hazards	49
9.3 Identified Problems and Potentials of Environment	49
Chapter Ten	53
10.0 SWOT Analysis	53
10.1 Recommendation by analyzing of Strengths, Weaknesses, Opportunities and Threats	58

List of Maps

	Page No.
Map No. 1 - Location of Panadura Urban Council Area	03
Map No. 2 - National Physical Plan - 2030	04
Map No. 3 - Western Province Structure Plan	05
Map No. 4 - Regional Linkages	07
Map No. 5 - Population Density - Panadura Urban Council Area - 2012	11
Map No. 6 - Land Use Pattern - Panadura Urban Council Area - 2012	17
Map No. 7 - Catchment Area of the Panadura Town	18
Map No. 8 - Existing Land Values Panadura Urban Council Area -2012	23
Map No. 9 - Housing Density - Panadura Urban Council Area - 2012	32
Map No.10 - Existing Road Network - Panadura Urban Council Area - 2013	34
Map No. 11 - Traffic Congestion of the main Roads - Panadura Urban Council - 2007	36
Map No. 12 - Electricity Supply Network - Panadura Urban Council Area - 2012	38
Map No. 13 - Water Supply Network - Panadura Urban Council Area - 2012	41
Map No. 14 - Existing Social Infrastructure Facilities - 2012	45
Map No. 15 - Historical and Cultural Valuable Places & Buildings Panadura Urban Council Area	50
Map No. 16 - Environment Sensitive Areas - Panadura Urban Council Area	51
Map No. 17 - Environmental Hazards - Panadura Urban Area	52

List of Tables

	Page No.
Table No. 3.1 - Population Growth and Total Population of Urban areas in Kalutara District (1981-2011)	08
Table No. 3.2 - Population Composition by Gender 2012	09
Table No. 3.3 - Population Density of Urban Areas in Kalutara District - 2012	10
Table No. 3.3(1) - Population Density of Municipal Council Areas in Colombo District and Panadura Urban Council Area – 2012	10
Table No. 3.5 - Population Composition of Age Group wise – 2012	12
Table No. 3.6 - Population Composition by Educational Level in Gama Niladhari Division Wise – 2012	13
Table No. 3.7 - Population Composition by Religion – 2012	14
Table No. 3.8 - Population Composition by Ethnicity – 2012	14
Table No. 3.9 - Population Forecast - 2025	15
Table No. 4.1 - Existing Land Use Pattern- 2012	16
Table No. 4.2 - Land Value – 2012	21
Table No. 5.1 - Income Expenditure Summary 2012	24
Table No. 5.2 - Labour Force – 2012	25
Table No. 5.2.1 - Employment in Sector - 2012	25
Table No. 5.3.3 - Details of the Commercial Services and Banks – 2012	27
Table No. 6.1 - Housing Composition – 2012	29
Table No. 6.2 - Housing Need – 2012 – 2025	29
Table No. 6.3 - Housing Density – 2012	30
Table No. 7.1.3 - Daily Vehicle Movement Panadura Urban Council Area – 2007	35
Table No. 7.2 - Electricity Connections – 2010	37
Table No. 7.2 (1) - Electricity Facilities – 2012	37
Table No. 7.3 - Water Sources – 2012	39
Table No. 7.5 - Composition of Solid Waste -2012	42
Table No. 7.6 - Sewerage Facilities – 2012	43
Table No. 8.1 - Health Facilities – 2010	44
Table No. 8.2.1 - Existing Schools and Facilities – 2012	46

Chapter One

1.0 Introduction

1.1 Importancy

The Panadura town is a coastal city located 25km.away towards south from Colombo. Being situated along Galle Road consisting with the lands 6.1 Sq.km. in extent this city has bounded by Moratuwa Municipal Council to the North, Panadura Pradeshiya Sabha to the East and the South. The annual average rainfall is 2500 to 4000mm and average temperature is 27 C^o (Map No. 1).

Panadura Urban Council has been established in 1st of January in 1923. Panadura Urban Council area has been declared as an Urban Development Area under the special gazzete notification No. 100/4 dated 4th Agust 1980.

According to the National Physical Planning Policy prepared by the National Physical Planning Department, Panadura Urban Council area is belongs to the Metro Region of that (Map No. 2). Also, according to the Western Region Structure Plan, Panadura has been proposed to develop as an Urban Center (Map No. 3).

1.2 History

Panadura has a history dating back to the Portuguese, Dutch and British pre-colonial era and during this period Panadura is a small junction. The historic debate 'Panadura Vadaya' was held in 19th century this place which is a milestone in the history of Buddhism in Sri Lanka.

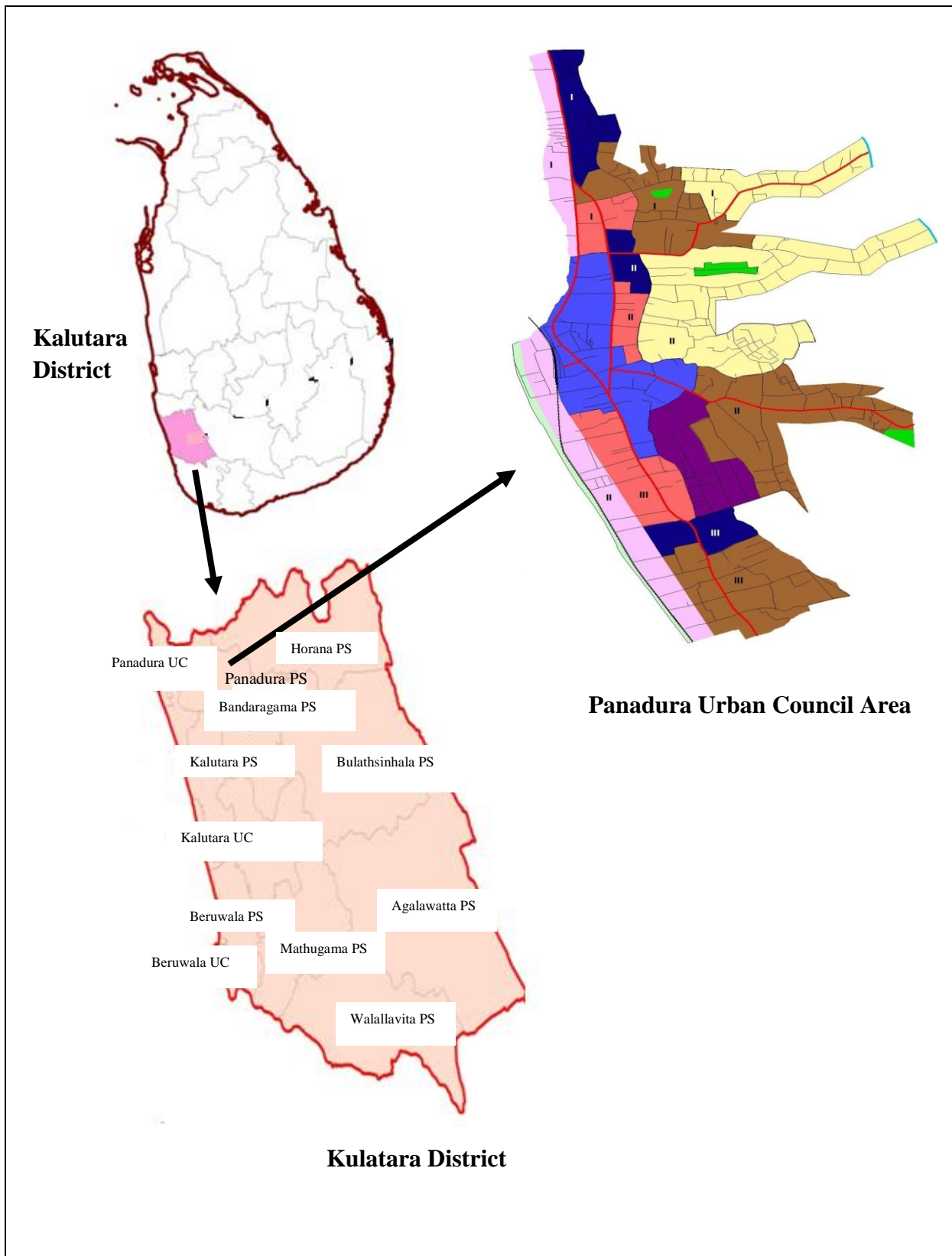
The Panadura Debete site is located close to Panadura town and Rankoth Viharaya is an example for the 'Pandora Vadaya' held on August 26 and 28 in 1873 A.D. The two key persons in the Panadura Debate were Migettuwatte Gunananda Thera and Father David de Silva. Gunananda Thera was acclaimed as a debater of a very high order after this debate and his personality deeply affected the resurgence of Buddhism which was to follow.

Salagama caste was the first inhabitants of the ancient Panadura and they were occupied with several business activities and production of toddy. Due to the British governance's rules they automatically converted to estate sector economic activities. According to the archeological evidence and ancient building it can be seen the ancient inhabitants had a good social life.

As a result of the social implification, the Buddhism in Sri Lanka saw a revival and was achieved the best religious development of the nation. In that period most of the people were engaged with construction of Buddhist Temples, Schools, and mostly engaged with the Social Service Activities. Sri Rankoth Viharaya, Wellampitiya Temple, Sri Sumangalla Girls and Boys School, Kethumathi Hospital and Leeds International School Buildings are the best examples for that.

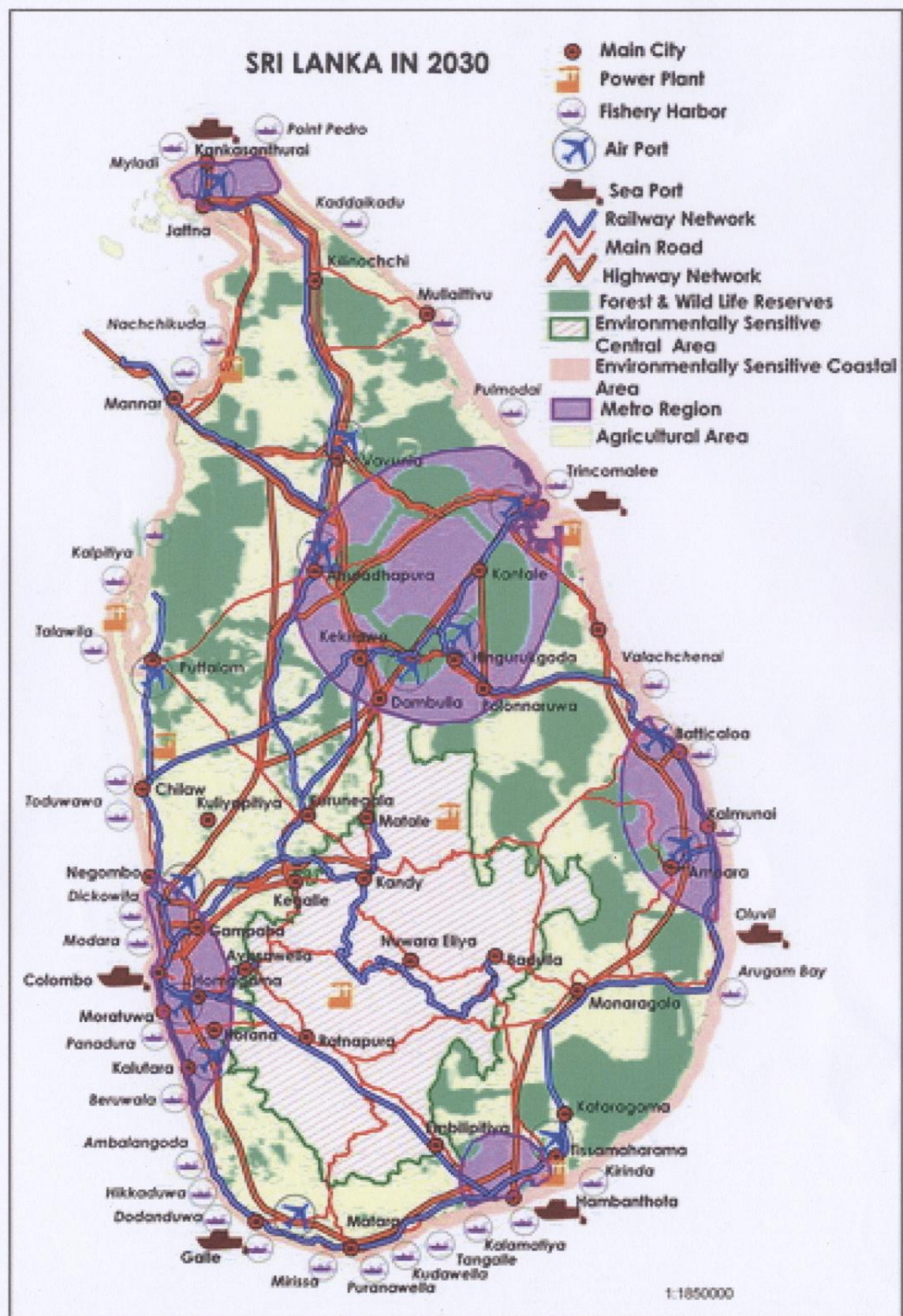
Map No. 1

Location of Panadura Urban Area



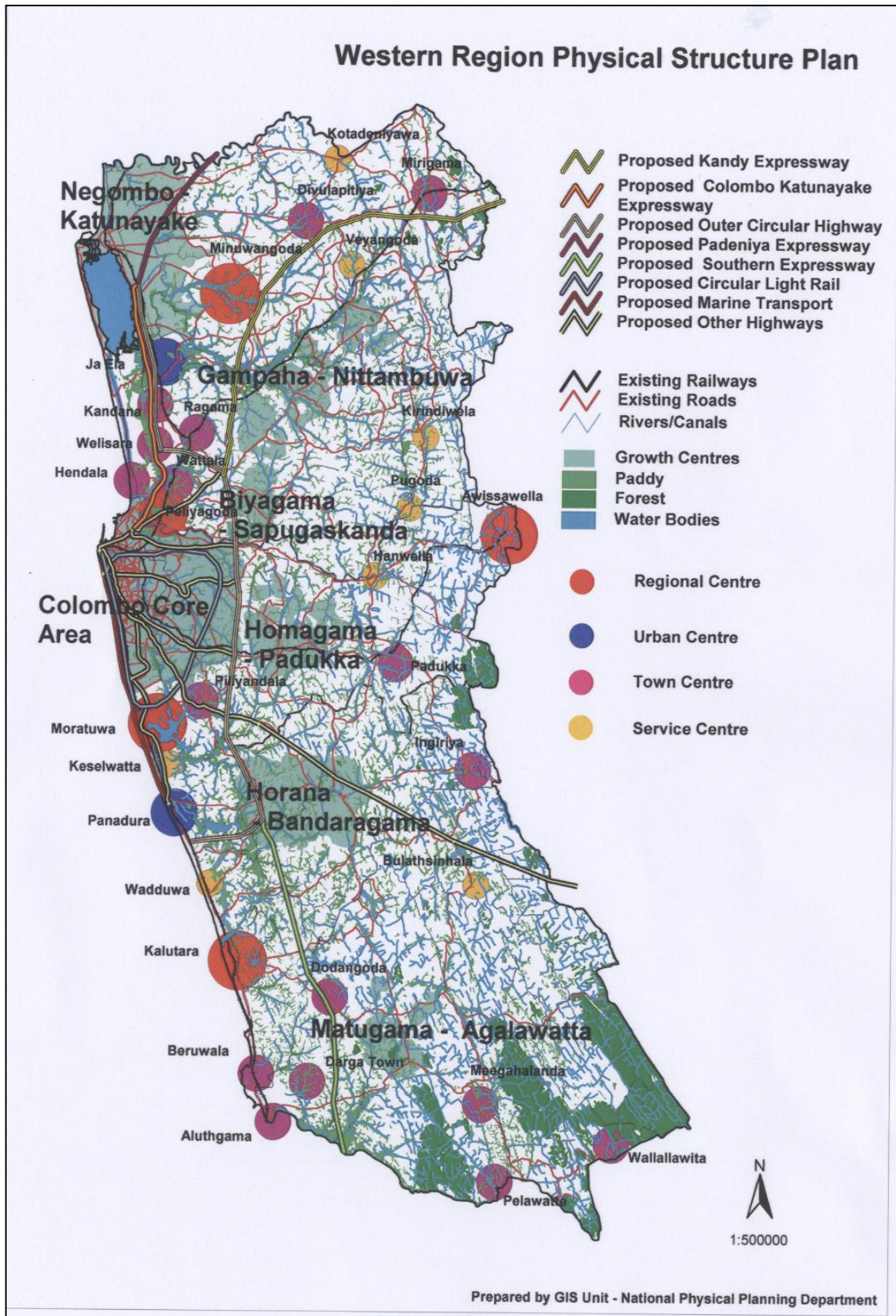
Map No. 2

National Physical Plan – 2030



Map No. 3

Western Region Physical Structure Plan



Chapter Two

2.0 National & Regional Linkages

2.1 National Linkages

Being situated along Colombo - Galle Road endowed with regular road network which provides accessibility to the North, Colombo the main commercial city of Sri Lanka the main capital city of Sri Jayawardenapura Kotte and other areas and to the South Galle, Matara, Hambantota, Kataragama and up to Rathnapura, through Colombo – Horana Road. Also it is help to improve the existing connection with other regions due to the Southern Express way located closer proximity to the Panadura area to the 12 km in distance to the west.

2.2 Regional Setting

Panadura Town is located centering the Colombo – Galle Road and giving direct access to the Moratuwa Town to the North, Kalutara Town to the South, Horana Town to the East (Map No. 4). Accordingly, to the urban hierarchy of the Kalutara District Panadura Town has been identified as a second order town centre. (as a regional level) The reason for the migration of the people to the Panadura town is the Modarawila Industrial Estate. More than 6000 job opportunities were born from this industrial estate whereby the job opportunities have been born for the people of the other areas of the Kalutara District.

Further, there was a possibility to attract the students to the Panadura Town from the Moratuwa area as the same in Kalutara District due to the location of famous school such as Sri Sumangala Girls & Boys Schools, Panadura Balika, Panadura Royal within the area. Being junction accessed by Railway & Bus Transport it is convenience to access within the city and the other region. However, according to the location of the city it has a threat for flash flooding due to the low elevation of the town in relation to the mean sea level.

Map No. 4

Regional Linkages



Source: Urban Development Authority, Department of Survey

Chapter Three

3.0 Population

According to the Census reports done by the census and Statistic Department in 2001, the total population of the Kalutara District for the same year is 1,060,800 and the Census reports in 2012 the total population of the Kalutara District up to 1,217,374 and the population of the Panadura Urban Council area up to 45,136 have been increased the population of the Panadura Urban Council area is 3.7% of the total population of the Kalutara district.

3.1 Total Population of the Urban Areas in Kalutara District

The total population of the Panadura, Kalutara, Horana, and Beruwala urban council areas belong to Kalutara District are as in Table No. 3.1.

Table No. 3.1

Total Population and the Population Growth Rate of the Urban Areas in Kalutara District (1981-2012)

Urban Council Area	1981	2001	2012	Percentage (%)	
				1981 – 2001	2001 -- 2012
Panadura	31,090	33,432	45,136	0.70	2.41
Kalutara	31,503	37,081	32,273	1.5	-1.35
Beruwala	26,320	33,053	37,772	2.03	1.13
Horana	8,812	9,127	9,637	0.35	0.48

*Source: Census and Statistic Department, Urban Development Authority
Pananura Divisional Secretariat*

31,090 of existed population of the Panadura urban area in 1981 up to 33,432 has been increased in 2001, existed population of 31,503 in 1981 of the Kalutara urban area up to 32,273 has been increased in 2012.

In 1981 – 2001 Panadura Urban Council area population growth rate was 0.70% & it has been increased up to 2.41% in 2012. The reasons for this are the direct access to the Colombo, the possible road and transport network for ease approach to other cities, development of other infrastructure facilities, establishment of famous schools with facilities and establishment of the Modarawila Industrial Estate.

3.2 The Gender Composition of the Population

The Table No. 3.2 has been shown the male and female population of the Panadura Urban Council area.

Table No. 3.2

The Gender Composition of the Population - 2012

Gama Niladhari Division	Male	Female	Total
Walana	1,661	1,836	3,497
Thanthirimulla	787	798	1,585
Udahamulla	807	911	1,718
Kuruppumulla	998	942	1,940
Atambagoda	1,524	1,581	3,105
Walawila Pattiya	1,033	1,131	2,164
Pattiya North	610	641	1,251
Kadaweediya North	1,308	1,263	2,571
Kadaweediya	684	737	1,421
Kadaweediya West	494	493	987
Sagara Place	345	340	685
Pattiya South	1,043	1,115	2,158
Uyankele	1,016	1,211	2,227
Pattiya	1,042	1,103	2,145
Wakada West	1,010	1,280	2,290
Wakada North	1,985	2,460	4,445
Morawinna	1,905	1,969	3,874
Nalluruwa	1,593	1,935	3,528
Nalluruwa North	1,282	2,460	3,545
Total	21,127	24,009	45,136

Source: Panadura Divisional Secretariat Office

According to the gender population of the area it was recorded that the percentage of the female population was 53%. As an amount it is 24,009. Male population was 21,127 and it was the 47% of the total population.

3.3 Population Density

Population densities of the Urban Councils of the Kalutara District including Panadura UC area are as per the Table No. 3.3. (Map No. 5)

Table No. 3.3**Population Density of the Urban Councils of the Kalutara District-2012**

Urban Area	Population	Area (Sq.km.)	Density (Per sq.km.)
Panadura	45,136	6.1	7,339
Kalutara	32,273	7.64.	4,224
Beruwala	37,772	5.18	7,291
Horana	9,637	4.53	2,127

Source: Census and Statistic Department 2012, Panadura Divisional Secretariat Office, Urban Development Authority

When looking at the population density of the urban areas within the Kaluthara District, Panadura Urban Council area was recorded 7, 339 Persons per sq. km. It was the highest density and the second was Beruwala Urban council area. It was recorded 7,291 Persons per Sq.km. The reasons for the increasing the population density of the Panadura Urban Area is the trend of moving of the People to the Panadura town for residential activities due to close proximity to Colombo.

Table No. 3.3 (1)**Population Density of Municipal Councils in Colombo District and the Panadura Urban Council - 2012**

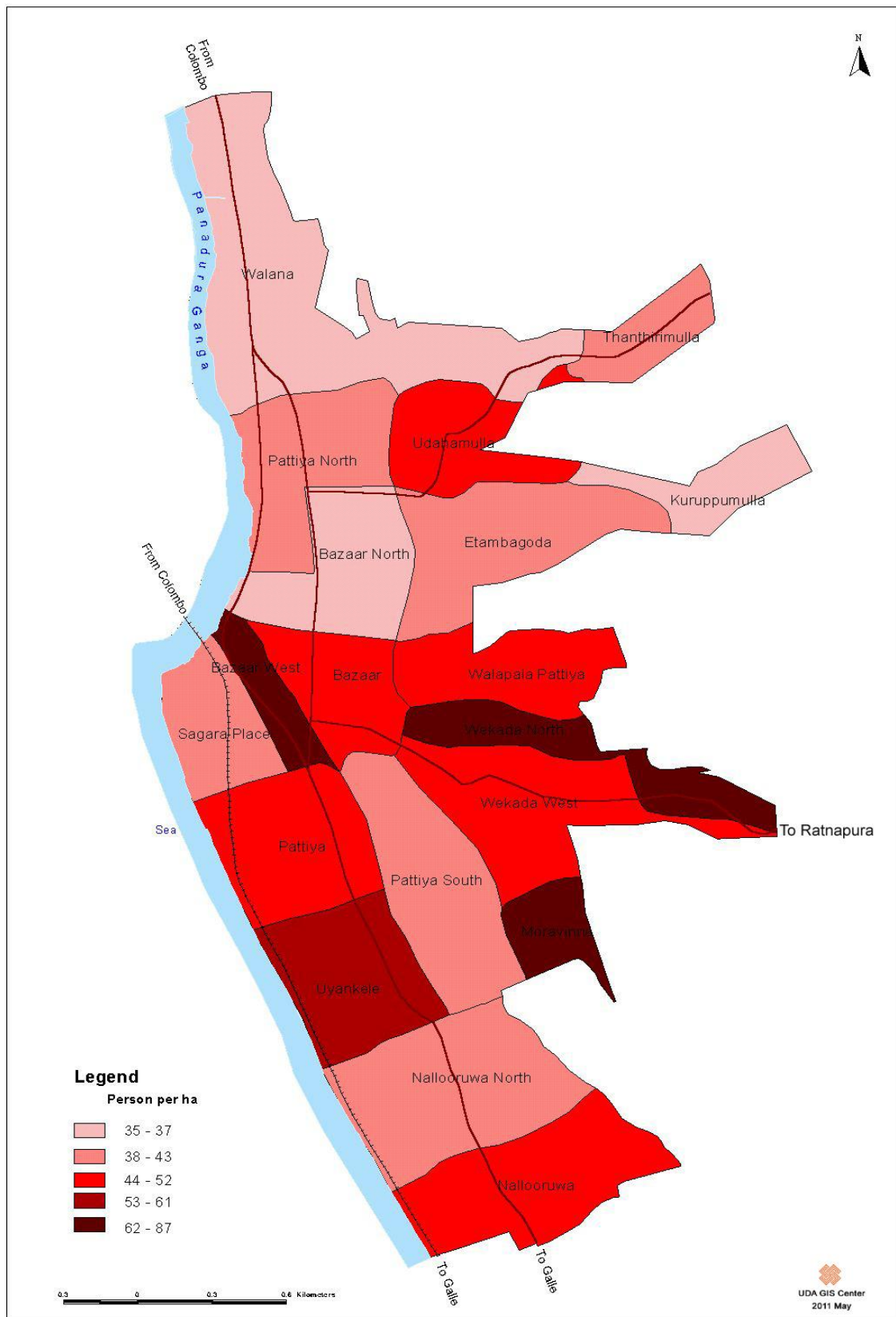
Area	Density (Per sq.km.)
Colombo Municipal Council	7,911
Dehiwala - Mount Lavinia Municipal Council	4,170
Moratuwa Municipal Council	7,161
Sri jayawardenapura Kotte Municipal Council	6,309
Panadura Urban Council	7,339

Source: Census and Statistic Department/ Resorce Profile 2012 Divisional Secretary

The area of the Panadura Urban Council is 6.1sq.km. where as the total land area of the Moratuwa, Dehiwala - Mount Lavinia, Sri Jayawardenapura Kotte, Colombo areas are more than 20 Sq.km. Accordingly, it can be seen with the Table No. 3.3 (1) a high population density has occupied within the small area as Panadura. A main reason for that is the most facilities were located within the city for the occupants of the area and the transport.

Map No. 5

Population Density - Panadura Urban Council Area (2012)



3.4 Daily Commuter Population

According to the survey reports, the daily commuters which are coming to the city to fulfill their needs is about 85,000 - 100,000. People are moving to the city to fulfill their service needs such as market and commercial activities and scattered within the city as schools, health facilities and railway facilities. Saturday and Sunday the commuter population is more than 100,000 and they visit the city for pola and other commercial activities. Further, the amount of the commuter population will be high due to the industrial estate of the city and the Panadura town become town junction.

3.5 Age Group wise Population

According to the resource profile of Panadura Divisional Secretariat e in 2012 total population of the age more than 18 years was 29,646 and the total population of the age less than 18 years was 15,560.

Table No. 3.5

Age Group Wise Population - 2012

	Gama Niladhari Division	Less than 5	6 – 18	19 - 60	More than 60
1.	Walana	361	397	2,122	617
2.	Thanthirimulla	380	409	690	106
3.	Udahamulla	170	205	930	413
4.	Kuruppumulla	375	411	642	512
5.	Atambagoda	345	596	1,475	689
6.	Walawila Pattiya	220	211	941	792
7.	Pattiya North	211	198	662	180
8.	Kadaweediya North	652	1,028	727	164
9.	Kadaweediya	302	402	597	120
10.	Kadaweediya West	92	104	689	102
11.	Sagara Place	99	159	370	57
12.	Pattiya South	432	403	1,231	92
13.	Uyankele	221	372	1,115	519
14.	Pattiya	425	481	992	247
15.	Wakada West	328	463	1,300	199
16.	Wakada North	883	1,466	1,274	822
17.	Morawinna	265	398	2,564	647
18.	Nalluruwa	221	314	2,403	590
19.	Nalluruwa North	621	840	1,661	423
	Total	6,703	8,857	22,385	7,261

Source: Divisional Secretariat office Panadura

3.6 Population on Education Level

Table No. 3.6

Population on Education Centres in each Grama Niladhari Divisions - 2012

Grama Niladhari Division	Grade 1 – 5	Grade 6 - 10	Grade O/L	Grade A/L	Degree	Not Attend
Walana	394	793	1041	746	483	40
Thanthirimulla	380	782	222	111	80	10
Udahamulla	120	661	512	218	172	35
Kuruppumulla	420	735	332	142	311	-
Atambagoda	210	817	980	685	403	10
Walawila Pattiya	81	855	726	332	157	13
Pattiya North	139	141	254	481	232	4
Kadaweediya North	-	1549	707	242	73	-
Kadaweediya	570	272	187	207	123	62
Kadaweediya West	167	248	222	167	167	16
Sagara Place	33	274	241	121	4	12
Pattiya South	207	636	564	426	93	232
Uyankele	697	275	321	306	42	586
Pattiya	183	843	894	154	68	3
Wakada West	158	521	747	618	246	-
Wakada North	285	1878	995	815	457	15
Morawinna	311	820	989	692	870	192
Nalluruwa	472	235	1366	867	505	83
Nalluruwa North	206	1569	1083	466	171	50
Total	5,033	13,904	12,383	7,796	4,657	1,363

Source: Urban Development Authority, Grama Niladhari Report - 2012

According to the Table No. 3.6 the percentage of the persons which got the education upto grade 6-10 and upto G.C.E.(O/L) are in orderly 30% and 27% from the total population of the Panadura Urban Council area and as an amount 13,904 and the 12,383 in orderly. Further, persons who are educated upto G.C.E. (A/L) is about 7,796. The persons who got the higher educations is about 4,657. As a percentage it was 10%. As the same the percentage of the persons not attending the school is 3% from the total population of the area and as an amount it was 1363.

3.7 Population Composition by Religion

The Table No. 3.7 is shown the religion population of the Panadura Urban Council area.

Table No. 3.7**Population Composition by Religion - 2012**

Religion	Population	Percentage (%)
Budhist	42,555	94.28%
Hindu	360	0.8%
Islam	402	0.89%
Roman Catholic	1,425	3.15%
Cristian	364	0.81%
Other	30	0.07%

Source: Divisional Secretariat office, Resource Profile, Urban Development Authority

According to the data issued by the Resource Profile of Panadura Divisional Secretariat office, the percentage of the Buddhist population is 94% and as an amount it is 42,555. In addition to that, Roman Catholic & Christians are 3% and it is recovered less percentage of Islam and Hindu Population in this area.

3.8 Population Composition by Ethnicity

The Table No. 3.8 is shown the population by the ethnicity of the Panadura Urban Council area.

Table No. 3.8**Population by Ethnicity - 2012**

Race	Population	Percentage (%)
Sinhala	44,245	98.0 %
Sri Lanka Tamil	328	0.7.%
Indian Tamil	91	0.2%
Sri Lanka moor	272	0.6%
Bugar	87	0.2%
Malay	93	0.2%
Other	20	0.1%

Source: Panadura Divisional Secretariat office/ Urban Development Authority

According to the data shown in Table No. 3.8 it is clear that the Sinhala population is 98% from the total population of the area. In addition to the sinhalese the remaining percentage of 2% is included the minority groups such as Sri Lanka Tamil, Indian Tamil, Sri Lanka moor, and Malay.

3.9 Population Projections

According to the Table No. 3.9 the population growth of the Panadura Urban Council area is occurring at a gradually increasing rate. Example, from 1981 upto 2001 growth rate was 0.70% and from 2001 upto 2012 it was 2.41%. However, considering the impacts of the National development projects and potentials of the city and the impact of the proposals of the development plan the population forecast has been done assuming the growth rate as 0.5%.

Table No. 3.9

Population Projections - 2025

Year	Population
2012	45,136
2017	47384
2022	48568
2025	49296

Source: Urban Development Authority - 2015

Accordingly, 45,136 in 2012 the existed population of the Urban Council area is expected to increase up to 47,384 in 2017, 49,296 in 2025. There is a tendency to attract population be drawn to the city due to the high quality of infrastructure facilities including roads & transport towards the Pradeshiya Sabha area due to scarcity of lands.

Since the Pandura Urban Council area is developed in considerable level the increasing population is pulled by the Pradeshiya Sbha area. In its train, it can be seen the population are increasing rapidly of those areas. Considering all these factors the population of the Pandura Urban Council area has been forecasted and indicated in Table No. 3.9. Population has been forecasted assuming the growth rate was 0.5% for the population projections.

3.10 Identified Problem & Potentials of the Population

3.10.1 Problems

- It was recorded the high commuter population when compare to the other cities of the Kalutara District.
- 87% of the city pupolation are belongs to the working population.
- 78% of the city pupolation are educated.
- Approximatly more than 62% are educated in G.C.E. (O/L) or more than that.

3.10.2 Potentials

- Panadura town is consisting with potentials to attract the people.
- Relatively high population density of the city.

Chapter Four

4.0 Land Use Pattern

4.1 Existing Land Use Pattern

The land use pattern of the Panadura urban area consisting with 6.1 sq.km. as illustrated in Table No. 4.1 In its train, 95% of the total land area was developed and developable vacant land is only 0.25%. The uses that have the ability to coacervate the population in locally and regionally were located within the developed lands (Map No. 6). Especially the existing land use pattern should be arranged by in systematically to expanding the facilities for the commuter population and the expected population of the city, while considering the future developments of the area.

Further, there is a high demand for the lands due to the Southern Expressway running 12 km. away from the city and there is a high tendency for the commercial and the industrial activities. Due to the resources like Bolgoda Lake and the sea beach, there is a tendency to spreadout tourism & fishery industry within the area. (Map No. 7)

Table No. 4.1

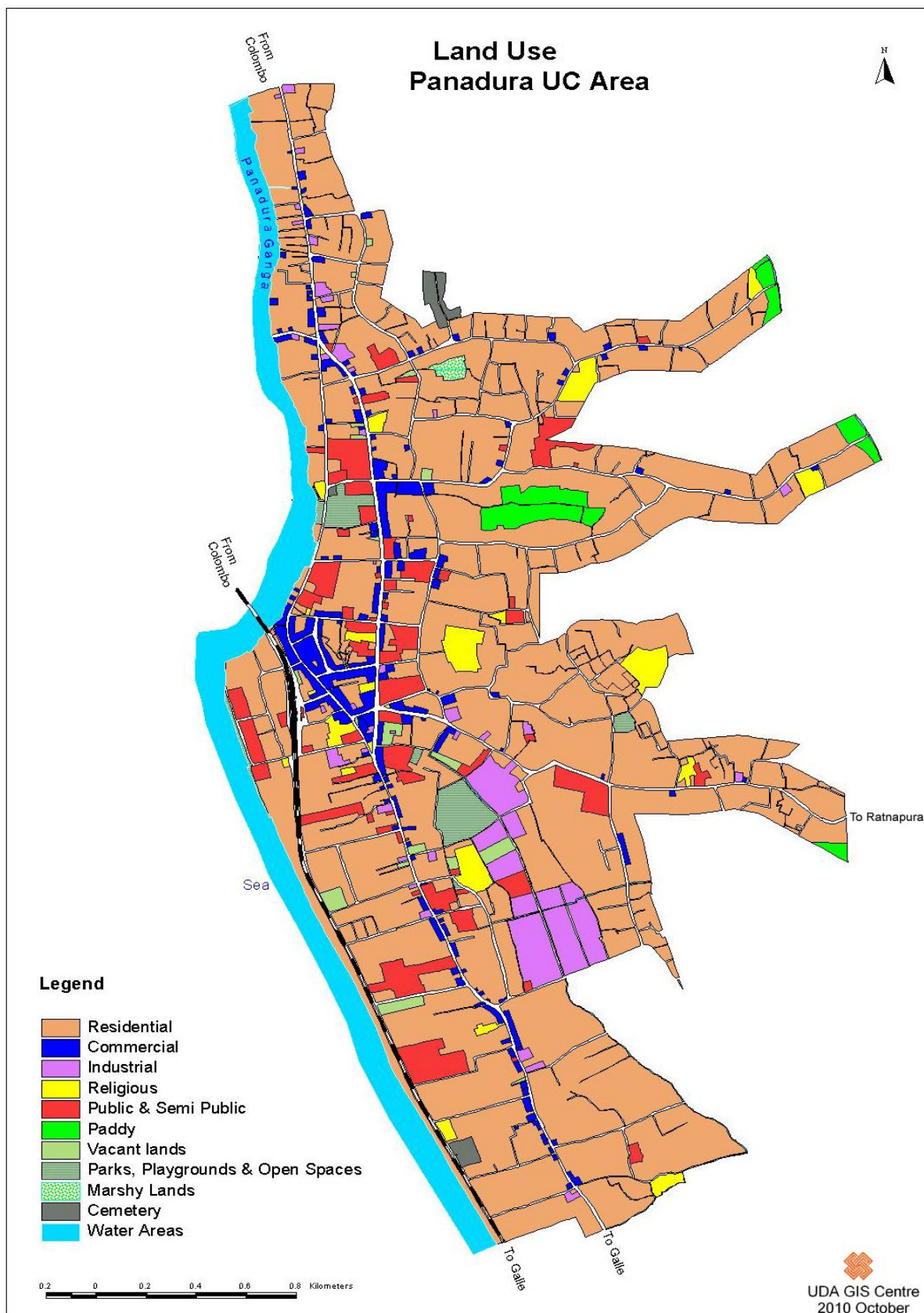
Existing Land Use Pattern - 2012

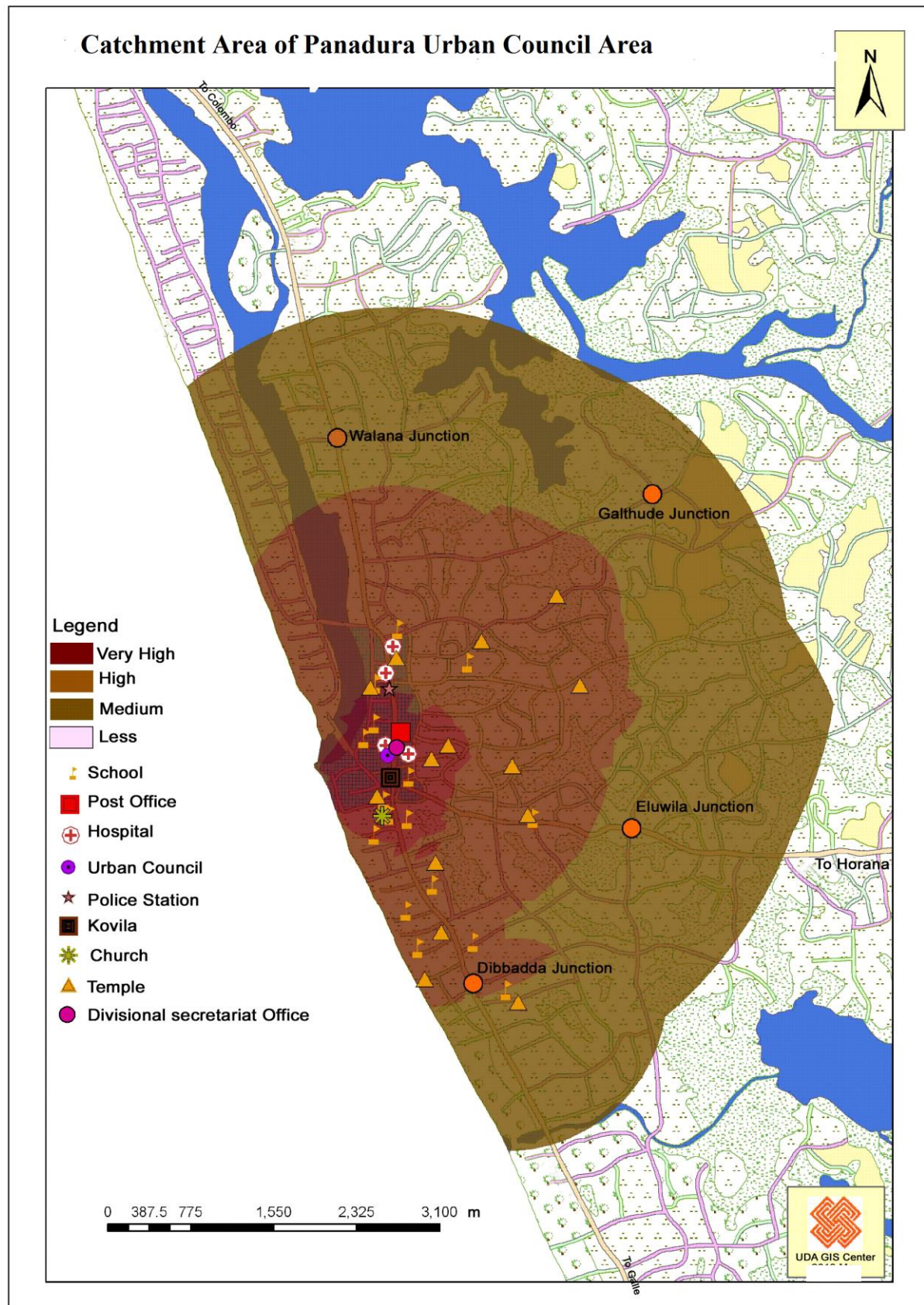
Use	Extent (Ha.)	From Total Land (%)
1.0 Developable lands		
1.1 Developed lands	583.2	95.45
1.1.1 Residential	407.5	66.70
1.1.2 Commercial	24.6	4.02
1.1.3 Government and Semi Government	39.7	6.51
1.1.4 Industrial	24.5	4.00
1.1.5 Religious	15.0	2.50
1.1.6 Parks & Play Grounds	8.8	1.41
1.1.7 Cemeteries	2.9	0.48
1.1.8 Agriculture /Paddy	8.8	1.45
1.1.9 Roads & Transport	51.9	8.30
1.2 Undevelopable land		
1.2.1 Vacant land	0.9	0.42
2.0 Land cannot be developed		
2.1.1 Mashy lands	0.9	0.14
2.1.2 Water bodies	24.4	3.99
Total	611.0	100.00

Source: Urban Development Authority

Map No. 6

Land Use Pattern – Panadura Urban Council Area (2012)





4.1.1 Residential Use

407.2 Ha, which contribute 67% from the total land area of the city are utilized for residential use. The main reason for the expansion of the residential activities within this city is the direct access to the Colombo and the area is the pre-existence residential city.

4.1.2 Commercial Use

The commercial activities are scattered within the 24.6ha. land in extent and it was 4% of the total land area. Mostly those uses are spreaded out as the linear pattern to the blocks face to the Colombo - Galle road, Ather V. dies Mawatha and Janapriya Mawatha. In pursue of the commercial buildings constructed in the city, the land uses have not been met the optimum level. The reason is that there are buildings which only occupied ground floors within high value lands located at the city center.

4.1.3 Industrial Use

2% of the total land use. (24.5ha.) is utilize for the industries. From that the Modarawila Industrial Estate gets a significant place in idustrial activities of the area. About 6000 direct job opportunities have been borned from this industrial estate. The Modarawila industrial estate has been constructed on the filled paddy land and according to the field survey it could be seen the existing drainage system has not been maintained well. Presenly a block of land has been allocated for the housing for the Tsunami affected families and 288 housing units have been constructed.

4.1.4 Public and Semi Public Use

39.7ha, which contribute 6% of the total land area are utilized for the Public and Semi Public purpose. The main goverment institutions of the area are the Police Commissioner Office, Regional Education Office, Panadura Base Hospital, Panadura Urban Council, Court Complex, Divisional Secretariat Office, Goverment Schools, Land Registry, Electricity Board, National Water Supply and Drainage Board, Telecom and they have been scattered within the city.

4.1.5 Religious Use

1% of the total land has been utilized for the religious activities and it was 15ha. in extent. It is very significant character that settlements have been set in focusing the religious places.

4.1.6 Undevelopable Lands

The extent of the undevelopable lands is 27.8 Ha. of the Panadura urban area. It is included vacant lands, marshy lands, and water bodies. The available lands for development accounts for 1.28% of the total land area. It is 2.5 Ha. in extent. Most of these vacant lands were located on either side of the Galle Road, Horana Road and Station road. Therefore there is a high demand for the lands at either side of the Galle, and Horana road.

While the extent of the marshy lands is 0.9 Ha. as a percentage it accounts 0.14%. Since the marshy lands of the Panadura Urban Area is insignificant and it is very useful to smooth water flow on rainy season. These marshy lands are subscribed to protect the environment balance of the area and it cannot be used for another development activities.

24.4 Ha. were utilized for the rivers, canals & other small water bodies. It constitutes 3 % including Panadura Ganga, Karapan Ela and Moda Ela & other small water ways. According to the geographical location of the city these water ways are needed to flow the excess water in heavy rainy season. But these water ways are not maintained regularly.

4.2 Land Value

The high land value of the area is recorded on either side of the Colombo - Galle road and the surrounding area which were concentrated the commercial activities. Thereafter land value is high for the lands along the Horana road. The land value of the town center and the Colombo - Galle road is Rs. 1,000,000 - 1,500,000, On either sides of Horana road is Rs. 900,000, - 750,000. Kuruppumulla road and surrounding the land value is Rs. 850,000 - Rs. 500,000. When comparing the land value and the land use, the lands of these areas are not utilized in optimum way. (Map No. 8 and Table No. 4.2)

The land value is decreased the area away from these main roads. The main reason for that is insufficient accessibility for the area. The land value of the coastal area has been decreased due to the Tsunami in 2004 and it decreased up to Rs. 50,000 in 2005. Further the land value is high in the areas like, Pattiya North, Bazar South, Bazar town, Pattiya, Uyankela Grama Niladhari Divisions due to the existence of the commercial buildings and the Galle road.

Table No. 4.2**Land Value - 2012**

Area	Land Value (Rs.)
Either side of the Galle road, Uyankele, Pattiya South, Sagara pedesa, Bazar, Bazar North, Pattiya South Grama Niladhari Divisions.	1,000,000 - 1,500,000
Either side of the Horana road, Old Galle road, Sri Rahula Mawatha, Sri Wijaya Mawatha, Mahanama Road, Siril Jans Mawatha, De Silva Mawatha, Gunasekara Mawatha Modarawila road, Jayanthi Mawatha, Birty Silva Mawatha, Circular road, Podu seva road, Jaya Mawatha, Walana road.	900,000 - 750,000
Seelananda road, Kuda pokuna Mawatha, Udumulla Road, Swarana Jothi Mawatha, Ashoka Mawatha, Ananda Mawatha, Pasal Mawatha, Walpola Mawatha, Manel Mawatha, Sriya Mawatha to Dibbedda Mawatha, Sri Seevali Mawatha, either side of the Bodhirukkarama road, and coastal Sagara pedesa, Pattiya Uyankele, Nalluruwa North, and Nalluruwa Grama Niladhari Divisions.	850,000 - 500,000

Source: Urban Council – Panadura, Urban Developemnt Authority

4.3 Identified Problems and Potentials of the Existing Land Use Pattern

4.3.1 Problems

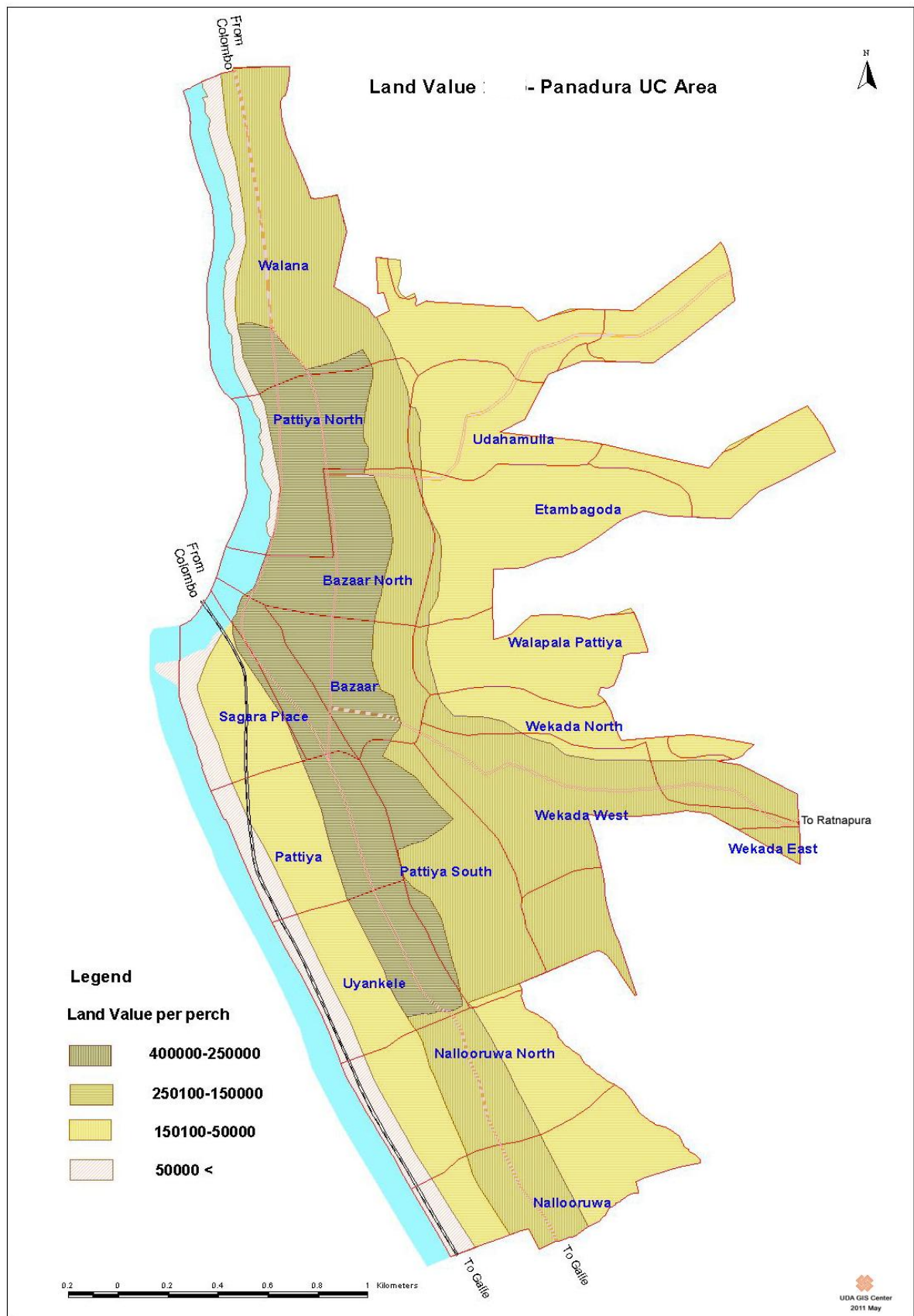
- Commercial uses of the city being mainly limited to the first land blocks along the main roads as a linear development.
- Underutilization of the lands in city center.
- Prevailing activities of the Public and Semi public in unplanned way within the city.
- Pervade of the subdivision land blocks in nonsystematic and unplanned way.

4.3.2 Potentials

- 0.42 % (2.5.Ha.) of vacant land is available for the development from the developable lands.

Map No. 8

Land Value - Panadura Urban Council Area (2012)



Chapter Five

5.0 Economic Background / Urban Economy

Economic activities of the city can be presented on the basis of followings,

- Analysis of Income & Expenditure of the Panadura Urban Council
- Employment pattern of the Panadura urban area
- Contribution of the various sectors to the urban economy (Economic activities)

5.1 Income & Expenditure analysis of the Panadura Urban Council

Income & Expenditure Analysis of the Panadura Urban Council is indicated in Table No. 5.1. Accordingly, investment for the physical infrastructure facilities was 9%. Which amount is Rs.13, 100,000/-.

Table No. 5.1

**Summary of the Income & Expenditure
Pananura Urban Council – 2012**

Programme	Income (Rs.)			Expenditure (Rs.)		
	Recurrent	Capital	Total	Recurrent	Capital	Total
General Administration	105,104,800	-	105,104,800	23,650,500	2,500,000	26,150,500
Health Services	2,113,000	7,000,000	9,113,000	38,665,000	8,100,000	46,150,500
Physical Planning Roads, Lands and Buildings	4,025,500	10,010,000	14,035,500	26,424,000	13,100,000	39,524,000
Other Public Utility Services	2,740,000	1,000	2,741,000	6,020,000	1,100,000	7,120,000
Welfare Services and Facilities	1,512,000	1,000	1,513,000	10,397,000	2,500,000	12,897,000
Total	115,495,300	17,012,00	132,507,300	105,156,500	27,300,000	132,456,300

Source: Urban Council Panadura

5.2 Employment of the Panadura Urban Council Area

The indexes of the labour force, employment and unemployment of the Panadura Urban Council area have been shown in the Table No. 5.2. Accordingly, 63% are employed and unemployment is about 37%. About 6000 job opportunities have been borned from the Industrial Estate located at Modarawila and it was buttress to reduce the unemployment of the area.

Table No. 5.2

Labour Force - 2012

Index	Quantity	Percentage
Employment	15,093	63%
Unemployment	8,787	37%
Labour Force	23,880	100%

Source: Divisional Secretariate Division, Panadura

5.2.1 Sector Composition of Employment

The employment of Panadura Urban Council area is indicated in Table No. 5.2.1. Accordingly, most of the persons are employed in private sector. As a percentage, it was 49%. It can be considered as an index for the economic strength of the city. In addition 25% are engaged in the Government sector. The least labour contribution was for the agicultural sector. Labour involvement for the fishery activites is about 0.5% and carpentry works is about 2.5%.

Table No. 5.2.1

Sector Composition of Employment

Indusrial sector	Employment	Percentage (%)
Agricultural	28	0.2%
Government Sector	3,840	25%
Private Sector	7,367	49%
Animal Husbandry	36	0.2%
Fishery Industry	75	0.5%
Carpentry	375	2.5%
Mason	530	3.6%
Self employment	1,670	11%
Business	1,172	8%
Total	15,093	100.00%

Source: Divisional Secretariat office, Panadura

5.3 Contribution of Various Sectors for the Urban Economy (Economic Activities)

5.3.1 Industrial Sector

Most of the industries were located within the Modarawila Industrial zone and it was recovered about 6000 of direct job opportunities and about 10,000 indirect job opportunities have been provided by these industries. It was 4% from the land use pattern of the area.

In addition to the Modarawila Industrial Estate small scale industries such as garments, welding workshops, Bathik, cement block work shops, saw mills, Tyre tube are processing.

5.3.2 Fishery Industry

While there is an important place for the fishery industry in economic sector of the Panadura Urban Council area two ferries are processing within the coastal area. Two trolars and two 28ft. length trolars, three 18ft length trolars, are the resources owned by the fishermen of the area. There are 200 fishery families and most of them are living in the Uyankelwatta Grama Seva Niladhari Division. Modara fishery harbor which is located at the boundary of the area is insufficient for their activities, therefore it is a barrier to develop their industry. According to the National Physical planning policy the Modara fishery harbour has been proposed to improve and expand.

5.3.3 Banks

Several public and private banks have been located within the town center to foster the economic activities of the industrial sector and the other service sectors. The existing Banks of the area are mentioned in Table No. 5.3.3.

Further, these banks have offered to finance for the industrial activities. It will contribute to increase the investment of the area.

Table No. 5.3.3**Details of the Commercial Services and Banks - 2012**

Commercial Institutions		Services		Banks	
Sathosa	2	Saloon	8	Peoples Bank	2
Retail Shops	1206	Laundry	3	Bank of Ceylon	2
Resturant	22	Studio	5	National Saving Bank	1
Shoes and Cloths	8	Garage	7	Sampath Bank	2
Meat, Fish, Vegetables	95	Parlours	2	Seylan Bank	1
Pharmacy	6	Catering Services	4	Hatton National bank	1
Furniture	2	Cement Block Work Shop	1	Commercial Bank	2
Domestic Equipment	3	Beauty Centers	15	DFCC Bank	1
Shops	8	Service Station	2	Samurdhi Bank	2
Building Materials	18	Record Bar	12	Nation Trust Bank	1
Wine Stores	1	Filling Station	4	Sanasa Bank	1
Juwellery	16	Communication Centers	21	Insurance	4
				Regional Development Bank	1
Book Shop	5	Tyre, Tube Wolkandise	1		
Vehicle Parts	6	Bycycle Repairs	3		
Agro-Chemical	2	Electrical Equipment Repairs	6		
Gas Sales	3	Pharmacies (Ayurvedic)	8		
		Watch Repairs	8		

Source: Grama Niladhari Reports - 2012

5.3.4 Tourism Activities

A Few tourist hotels have been located within coastal area and pervaded the tourist activities surrounding the Bolgoda lake. When considering the other beaches within the Kalutara District, the Panadura beach is not prominent for tourist activities.

5.4 Identified Problems and Potentials of the Urban Economy**5.4.1 Problems**

- Exiguous allocation for investment in income & expenditure analysis of Urban Council.
- Underutilization of conventional resouces at the city.

5.4.2 Potential

- 63% from the labour force are employed.
- Location of the Modarawila Industrial Estate providing 6000 direct job opportunities and the 10000 indirect job opportunities.
- Location of the fishery harbour 1km. away from the city and the rehabilitation programme for the development of the harbour has been proposed by the national physical planning policy.
- Location of banks and the financial institutions to support for the industrial investments.
- Availability of Beach Strip and Bolgoda Lake to expand the tourist activities.

Chapter Six

6.0 Housing

The 33,432 population of 2001 have been increased up to 45,136 in 2012. The house hold size of the area is 4. Based on this house hold size the families of the area were 11,284.

6.1 Housing Composition

Table No. 6.1

Housing Composition – 2012

Grama Niladhari Division	Permanent Houses	Temporary Houses	Total
Toal	8,992	66	9,058
Percentage	99%	1%	100%

Source: Panadura Divisional Secretariat Office / Urban Development Authority

After the Tsunami calamity, the enumeration of the housings done by the Panadura secretariat office in 2012 the total housing stock is 9,058 and from that 66 housing were temporary.

The low income housings were located in Grama Niladhari divisions adjacent to the beach due to the scarecity of the lands and the high land value of the area and those housings have been destroyed by the Tsunami. The new housings have been constructed within the city and the near by area on behalf of those housings. However, in planning point of view the locations of those housings are not acceptable for housing. They considered in this time only state vacant lands.

6.2 Housing Need

Table No. 6.2

Housing Need 2012 - 2025

Year	Population	Housing Needs	Housing Deficit
2012	45,136	11,284	2,226
2017	47,384	11,846	2,788
2022	48,568	12,142	3,084
2025	49296	12,324	3,266

Source: Panadura Divisional Secretariat Office, Urban Development Authority

11,284 Housing Units are need to the Population of 45,136 in the Year 2012. But existing Housing Units were 9058. Accordingly, gross housding deficit is about 2,226. Housing deficit will be 3,266 in 2025.

6.3 Housing Density

Table No. 6.3

Housing Density – 2012

	Grama Niladhari Division	Total Land Extent (Hectares)	No. of Housing Units	Housing Units per Hectares
1.	Walana	25	849	34
2.	Thanthirimulla	30	312	10
3.	Udahamulla	29	415	14
4.	Kuruppumulla	21	431	20
5.	Atambagoda	29	415	14
6.	Walawila Pattiya	33	410	12
7.	Pattiya North	32	226	07
8.	Kadaweediya North	13	320	25
9.	Kadaweediya	22	250	11
10.	Kadaweediya West	12	308	26
11.	Sagara Place	28	143	05
12.	Pattiya South	32	382	12
13.	Uyankele	34	436	13
14.	Pattiya	37	431	12
15.	Wakada West	43	481	11
16.	Wakada North	39	765	20
17.	Morawinna	18	1,060	59
18.	Nalluruwa	66	715	11
19.	Nalluruwa North	53	725	14
		611	9,058	15

Source: Panadura Divisional Secretariat Office / Urban Development Authority

A highest housing density was recoded from the Bazzar Grama Niladhari Division. Next was recorded in Sagara Place, Wekada North and Walapala Pattiya Grama Niladhari Divions. The low housing density was reported in Pattiya South, Walana, Pattiya and Wekada West Grama Niladhari Divisions. (Map No. 9)

6.4 Identified Problems and Potentials of the Housing

6.4.1 Problems

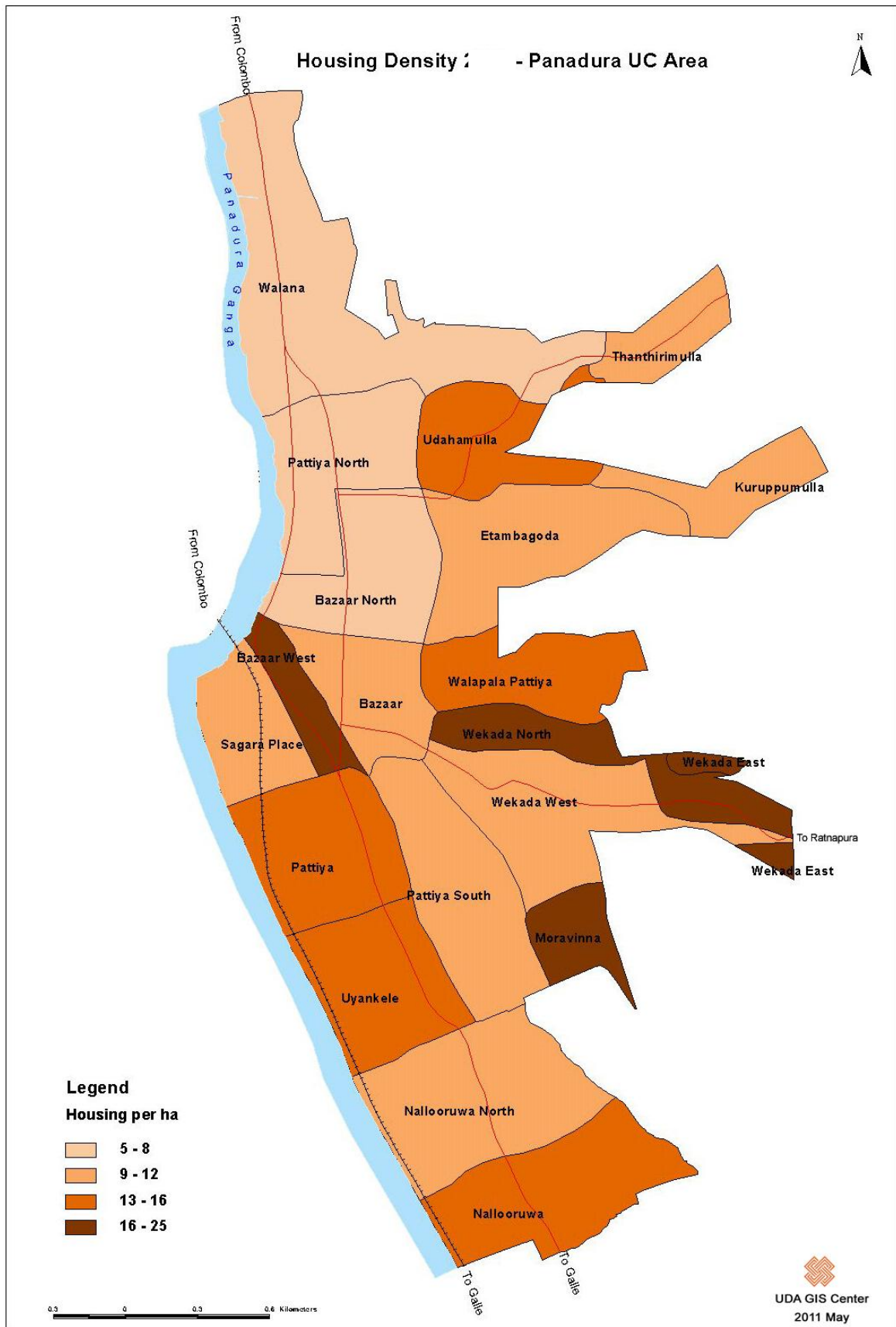
- ❖ Create an unplanned land use pattern within the town center due to the new housing constructions.
- ❖ According to the existing land use pattern of the city the developable land is only 0.4% of the total land of the city.

6.4.2 Potantials

- ❖ Possibility to increse the housing density of the area using the lands that are not utilized in optimumly.

Map No. 9

Housing Density - Panadura Urban Area (2012)



Chapter Seven

7.0 Physical Infrastructure Facilities

7.1 Roads and Transportation

7.1.1 Road Network

Panadura town is a main place which is located at the Colombo - Galle Road. The Colombo - Galle Road and Panadura - Rathnapura Road are the main accessibility to the city. Addition to the above two roads Ather V. Dies Mawatha is administered by the Road Development Authority. The total length of the Road Development Authority's roads is 21.62km. Total length of the Provincial Road Development Authority's road is 9.5 km. those roads are Walana road, Thanthirimulla road, Kuruppumulla road, Sri Maha Vihara Road, Morawinna Road, Dibbedda Road and Station Road. Except Road Development Authority roads and the Provincial Road Development Authority roads, Urban Council roads are very significant in considering the accessibility of the city. However, the width of most of these roads are not adequate. Although Panadura town is consist with proper road network and it is not well maintained and the unauthorised constructions have been occurred either side of the roads and it will cause to obstruct the smooth vehicle movement of the city. (Map No. 10)

7.1.2 Transport Facilities

While the Panadura town is consist with the proper transport network connecting the towns in close proximity, the all buses of the Colombo - Galle road are running via the Panadura town. Panadura town has a strong connectivity with the towns in Kalutara District such as Horana, Kalutara, Beruwala as well as the town such as Rathnapura, Badulla, Kandy due to the better transport facilities starting from the city. Addition to the daily buses coming from the other region to the city, there are 112 buses administered by the Central Transport Board and more than 400 buses administered by the Road Passenger Transport Authority starting from the city.

The railway transport service get a significant place within the passenger transport service. 13 trains towards Colombo are running via the Panadura railway station and 14 trains are starting from the Paadura station and end also from here.

There are two bus stands located within the town center for the Central Transport Board and the Road Passenger Transport Authority for convenience of the passengers. But there is no adequate facilities for bus parking and it will be a case to increase the traffic congestion of the city. To avoid this problem a new bus stand is in progress with the basic facilities as same as to fulfil the commercial needs within the Private Bus stand site.

There is no proper connectivity in between bus stand and the railway station and the people are embarrassed who are using the mean of bus and railway transport.

Road Network - Panadura Urban Area - 2013



7.1.3 Vehicle Movement within the Panadura Urban Area

High vehicle movement is recorded on the Galle road which are frequently using the main road within the town center. It was reported more than 29000 vehicles are moving on the Galle road within the 6.00 a.m to 6.00 p.m.

The vehicle movement of the Horana - Panadura road which is connecting the Panadura town with the other town is more than 10000. In addition to this, there is heavy traffic congestion on the Ather V. Dies Mawatha and the Siril Jans Mawatha within the school hours. The results of the survey conducted on 12th October 2012 is indicated in Table No. 7.1.3 (Map No. 11). Due to the unavailability of parking space for the buildings constructed along the roads such as Colombo - Galle road, Ather V. Dies Mawatha, Janapriya Mawatha, it can be seen the parking of vehicles on either side of the roads in the day time. The other reason for this traffic congestion is the construction of some buildings within the building line and the unauthorised commercial activities along the pavements.

Table No. 7.1.3

Daily Vehicular Movement - 2012

Road	Daily vehicular movement
Galle road	29,083
New Galle road	21,166
Old Galle road	14,112
Horana road	10,136
Siril Janz Mawatha	8,640
Ather V. Dies Mawatha	7,440
Morawinna Road	6,782

Source: Urban Development Authority

7.1.4 Identified Problems and Potentials of the Road Network

7.1.4.1 Problems

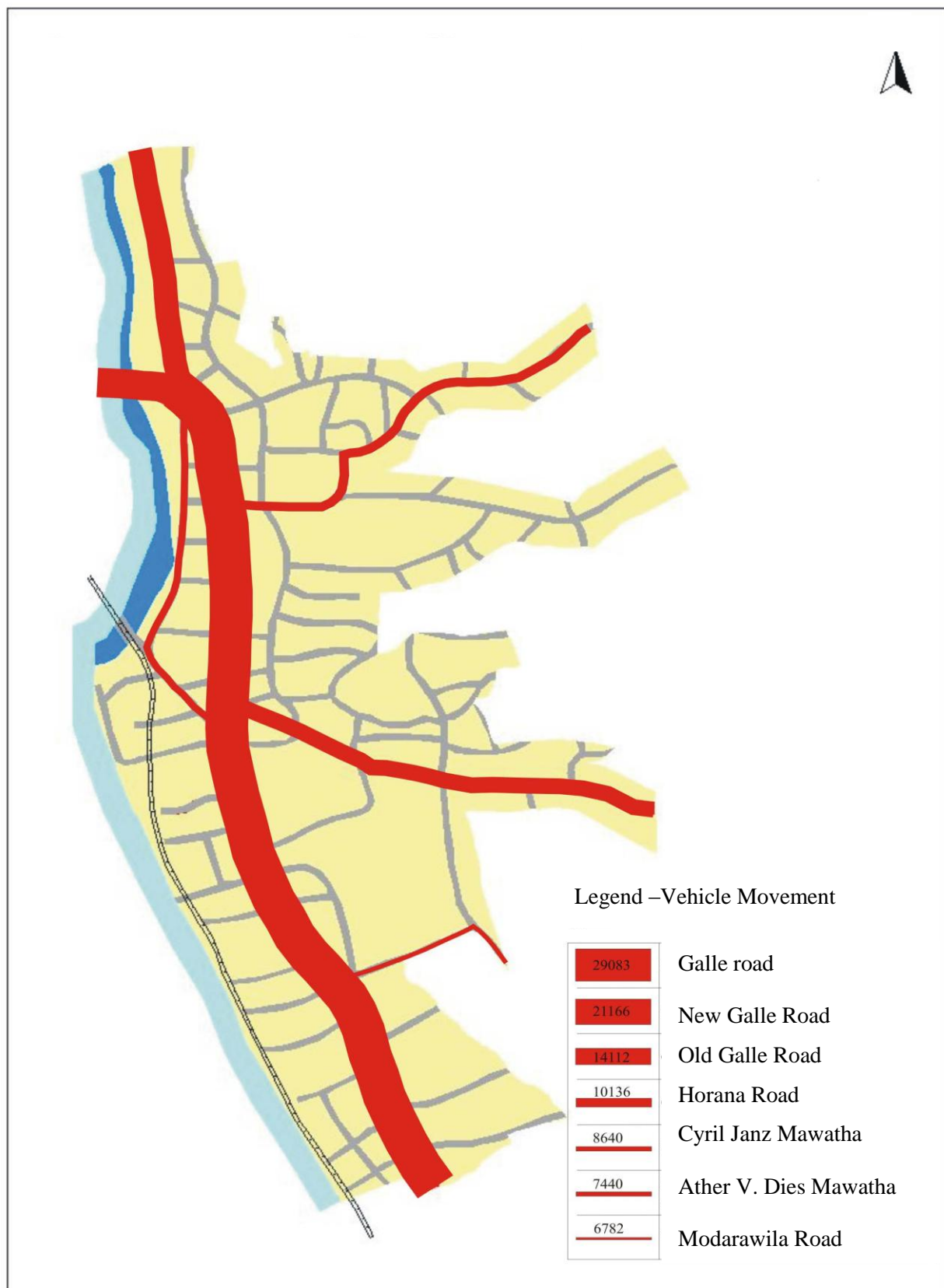
- ❖ Although there are proper road network some roads are not maintained properly.
- ❖ Unable to use the alternative roads during the heavy traffic congestion occurred within the city.
- ❖ No interconnections between bus stand and the railway station.
- ❖ Inadequate facilities for the vehicular parking.
- ❖ Traffic congestion due to the street vendors and building line has not been maintained properly.

7.1.4.2 Potentials

- ❖ Existence of proper road network
- ❖ Existence of better transportation with other surrounding towns located in Kalutara District.

Map No. 11

Traffic Congestion of the Main Roads - 2012
(Panadura Urban Area)



7.2 Electricity Supply

Lanka Electricity Board and Lanka Electricity Company (Pvt) Ltd. are engaging in the electricity distribution activities of the Panadura urban area. The area 1km. from sea beach to the land side is administered by the Lanka Electricity Company (pvt) Ltd. and the other area of the city is administered by the Sri Lanka Electricity Board. The details about connections given by Lanka Electricity Company (Pvt.) Ltd. are indicated in Table No.7.2 (Map No. 12) to the Year 2012.

Table No. 7.2

Electricity Connections - 2012
(Lanka Electricity Company (Pvt.) Ltd., Panadura Urban Area)

Sector	Consumers (Units)	Percentage (%)
Domestics	8990	82
Religious	70	0.6
Commercial	1709	15.6
Industries	145	1.4
Temporary	45	0.4
Total	10,959	100.00

Source: Lanka Electricity Company (Pvt.) Ltd

Table No. 7.2 (1)

Electricity Facilities - 2012

Category	Units	Percentage -%
Housings with Electricity	8,990	99%
Housings without Electricity	68	1%
Total	9258	100%

Source: Panadura Divisional Secretariat Office, Urban Development Authority

Total housing units of the Panadura urban area is 9,058. From that electricity facility is not available for the 68 housing units. As a percentage it is accounted 1%.

7.2.1 Problems and Potentials of the Electricity Supply

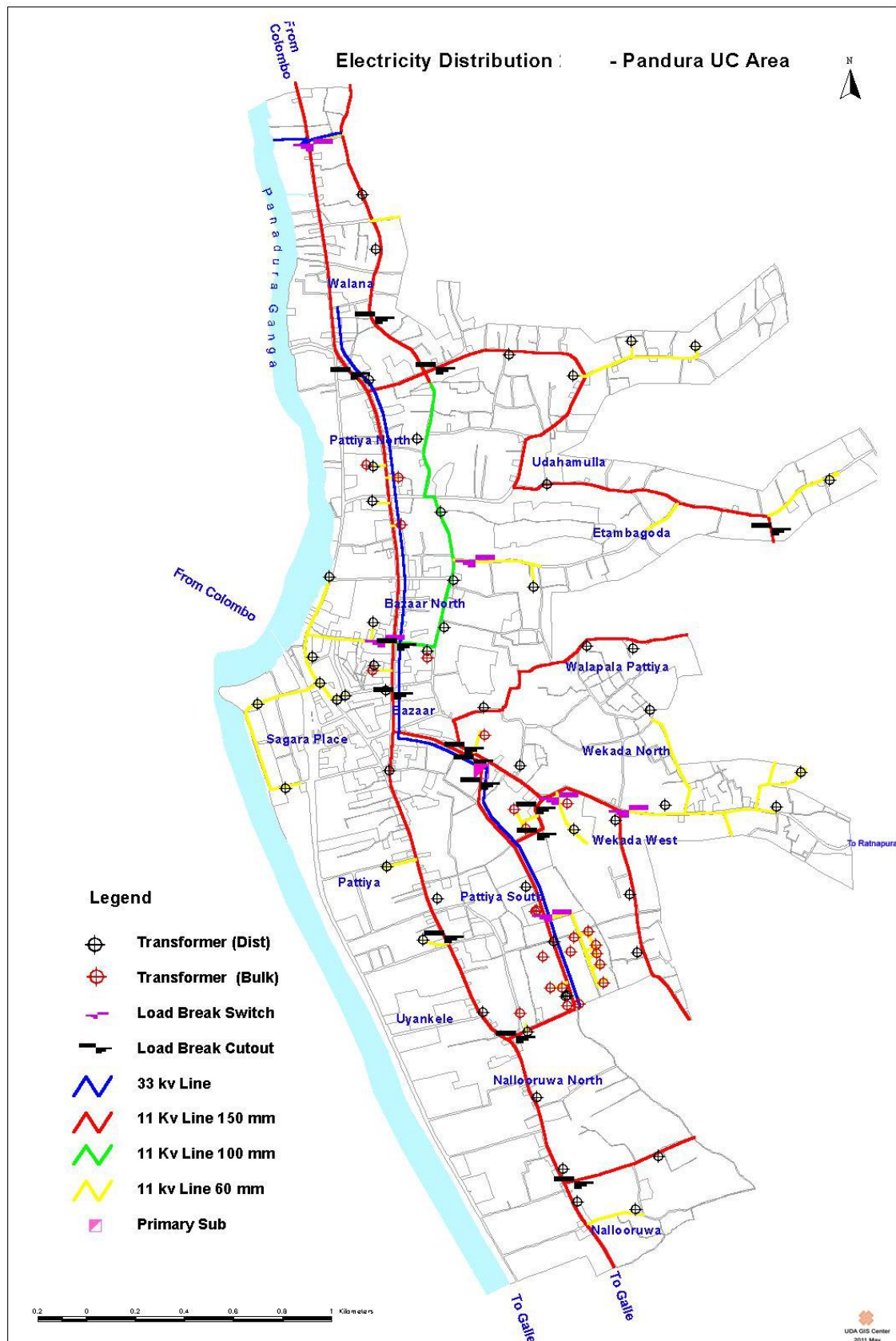
7.2.1.1 Problems

- The electricity supply is not available to the 1% housing units and those are low income housing.

7.2.1.2 Potentials

- The electricity supply is available to the 99% of housing units.

Distribution of Electricity Supply - GN Division (Panadura Urban Area -2012)



7.3 Water Supply

Water Supply in the Urban Council Area is under the responsibility of the National Water Supply and Drainage Board by obtaining the water from the Kalu Ganga water supply project and the Water Supply are processing within the whole 24 hours within the area. (Table 7.3 and Map No. 13)

Table No. 7.3

Water Sources - 2012

Water resource	Pipe born water	Protected wells	Unprotected wells	Tube wells	Common wells	Canals
Housing Units	6829	2572	22	334	36	0
Percentage (%)	70%	26%	0.3%	3.0%	0.7%	0

Source: Panadura Divisional Secretariat Office / Urban Development Authority

70% of housing units are using the pipe born water and its account is 6,829. Addition to this, 2,572 units are fulfil their needs by the protected well and 22 units by the unprotected well.

7.3.1 Identified Problems & Potentials of the Water Supply

7.3.1.1 Problems

- ❖ 70% of Housing Units use pipeborn water.

7.3.1.2 Potentials

- ❖ Ability to take excess water from the Kalu Ganga project which is the main water source located in Kalutara District.

7.4 Drainage System

Though the side drains of the main roads maintained by the Road Development Authority and Provincial Road Development Authority have been constructed well, the side drains of the Urban Council roads have not been constructed properly. Then those drains should be constructed and maintain well.

The area is facing a threat of not flowing rain water of the area due to unauthorised commercial activities either side of the roads specially town center which disturb to the existing drainage system. This threat will be increased due to the unauthorised filling of the low lands constructions.

Further, the hospital is facing a threat of flooding due to the the waste water drain running through the hospital site. Also, the area is flooding due to disturbance to the drainage by disposing solid waste to the canals which connect to the Thalpititiya canal via Modarawila. The reason to over come this problem is a non maintainace of the canals in properly. How ever this maintainace has to be done regularly and the relevant authorities should do this engaged.

Water Supply Network - Panadura Urban Area (2012)



7.4.1 Identified Problems & Potentials of the Drainage System

7.4.1.1 Problems

- Obstruct the existing drainage system due to the unauthorised construction and no maintainance.
- Flooding the Panadura city due to silting the Panadura Ganga by obstructing the natural water flow of the area.
- Unavailability of programmes for smooth flow of rain water without obstructions.
- The unauthorized construction of either side of roads obstructing the existing drainage system of the city.
- A new draiange system is not constructed (to water flow of the Galle road).

7.4.1.2 Potentials

- Availability of canal system to flow the excess water.
- Processing the reservations for the drains.

7.5 Waste Disposal

There are 9,058 housing units, 03 medical centers, 02 hotels, 1206 retail shops, 12 butcher shops, 09 guest houses, 08 super markets, within the Pandura city and about 40 tones of waste gets collected per day. Addition to these, the waste generated from 20 industries in the Modarawila industrial zone is disposed with other waste collection of the city. The composition of the waste is as per the Table No. 7.5.

Table No. 7.5

Composition of the Solid Waste - 2012

Quantity of the Waste per day	Cabonic	Paper	Glass	Iron	Polythen & Other
40 Tones	74%	5%	4%	4%	13%

Source: Panadura Urban Council

Presently, Panadura urban council is conducting the solid waste management programme and it is included.

1. Collect solid waste
2. Final disposal

The solid waste generat within the city and the both side of the Galle Road is collected daily and the waste generat in other areas collect once a week. These collected waste is disposed to the UC land located near to the railway station.

7.5.1 Identified Problems & Potentials of the Solid Waste Disposal

7.5.1.1 Problems

- ❖ Although it is essential to take participation from the people who are living in the area for the successful solid waste management system but the community were not being aware. Accordingly, it can be seen the garbage disposal on open places within the city and either side of the by roads.
- ❖ Lack of Supervision & monitoring system for the existing solid waste management project and no quality improvement of the project.
- ❖ No private sector participation (for various projects and to locate the temporary retention centers)

7.5.1.2 Potentials

- ❖ Possibility to make compost by using about 74% of carbonic things from the collected waste of the area.
- ❖ Aware the people to make compost in their home using own carbonic wastes.

7.6 Sewerage Facilities

While a sewerage network has not been implementing within the city, the sewerage system has been constructed within the main hospitals, police station and Modarawila industrial estate, specially the main problem of the industrial estate and surrounding is the discharge the waste of the industries without any treatment.

Table No. 7.6

Sewerage Facilities - 2012

Category	Water sealed	Bench hole	Without Toilet
Housing units	8,885	103	70
Percentage (%)	98.09%	1.14%	0.77%

Source: Divisional Secretariat, Panadura / Urban Development Authority

According to the Table No. 7.6 housing units with toilet facilities is about 8,988. Addition to that it is recovered 70 housing units have not toilet facilities. However, it is needed to implement a common sewerage system to the Panadura urban area considering the impacts to the environment through 99% of existing toilets of the area and location of closer to the sea level and considering the increasing population in future.

7.6.1 Identified Problems & Potentials of the Sewerage Facilities

- No proper sewerage system to the area and some places are closer to the sea level.
- The final disposal of the existing sewerage plants implemented at special places is not occurring in standard way.

Chapter Eight

8.0 Social Infrastructure Facilities

8.1 Health Facilities

The base hospital located within the city center is the main institution which provides the health facilities for the inhabitant of the area. Panadura hospital is consist with two story building and it has the possibility to expand the facilities with vertical development.

It was recorded that about 20,000 patients from Bandaragama, keselwatta, Wadduwa, Moratuwa, were getting health services from the external treatment section per month from this base hospital. Although increasing the quantity of people who get the services from the hospital, inadequate space and facilities of the operation theatre has been got into a problem. Also, the drainage system of the hospital site is not properly maintain and rain water is running via the operational theater.

In addition to the government base hospital there is a hospital for peggant mothers, a Ayuvedic hospital and private medical centers located within the city. Addition to this, health facilities including the child clinic, vaccination clinic are carried out by the medical of health office. The facilities of the main two hospitals are mentioned in Table No. 8.1 (Map No. 14).

Table No. 8.1

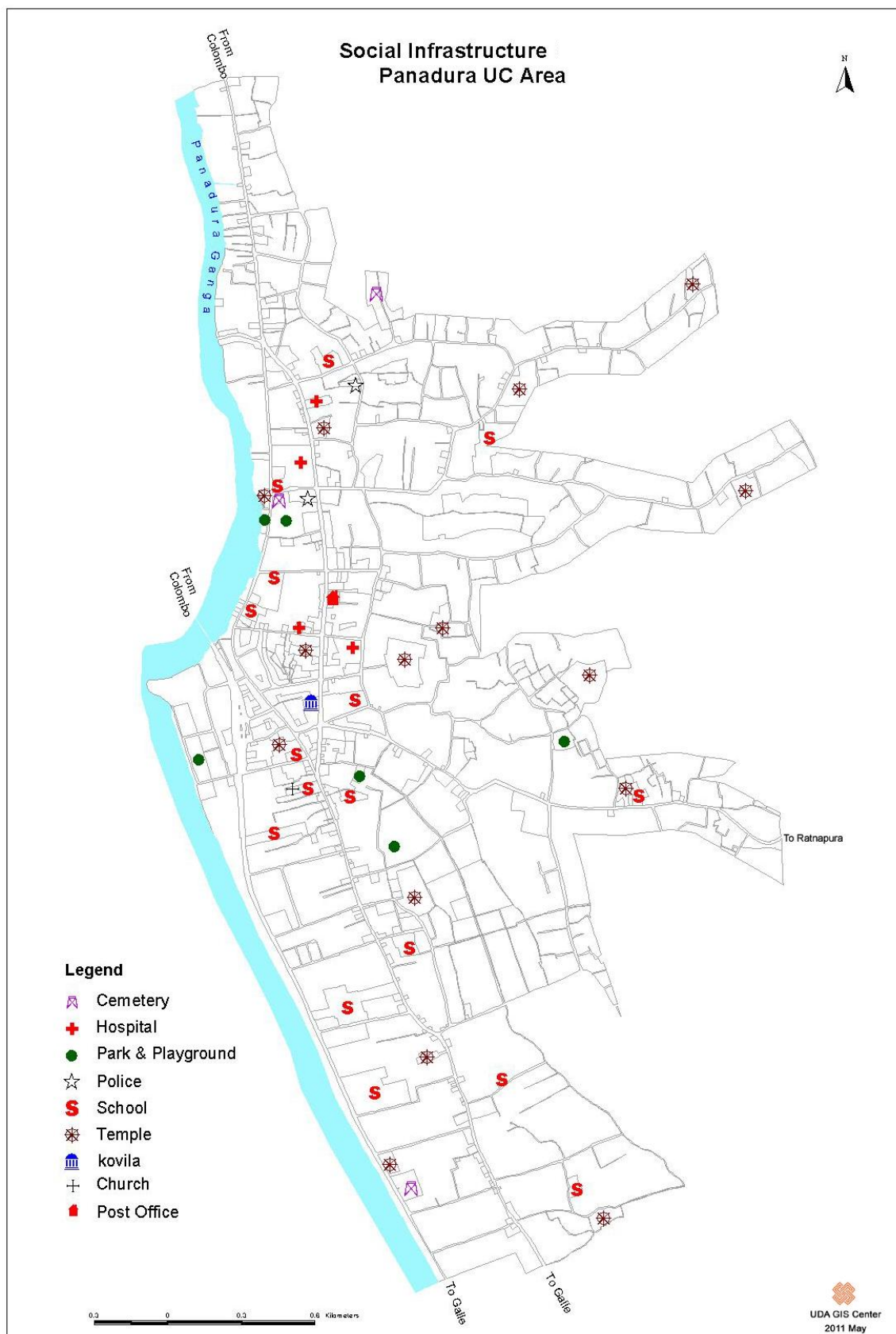
Health Facilities 2012

Name of the Hospital	Government / Private	No. of Beds	No. of Ambulance	No. of Generators	No. of Water Tanks	Laboratory Facilities	Labour Room Facilities	Motury Facilities	Hostal Facilities for the Doctors	Operation Theater Facilities	Clinic Facilities
Base Hospital	Government	280	2	1	1	Yes	Yes	Yes	Yes	Yes	Yes
Kethumathi Hospital	Government	110	2	1	1	Yes	Yes	Yes	Yes	Yes	Yes

Source: Base Hospital, Panadura

Map No. 14

Social Infrastructure Facilities – Panadura Uran Area -2012



8.1.1 Identified Problems & Potentials of the Health Facilities

- Insufficient space and the facilities of the main hospital
- Possibility to develop vertically due to its location

8.2 Educational Facilities

The educational facilities in the Panadura urban area is in advanced while there are 15 national schools, 01 international schools, 03 private schools, 06 private schools are scattered within the city. St.Jons Maha Vidyalaya, Sri Sumangala Balika Maha Vidyalaya, Sri Sumangala Boys school are the National schools. Sri Chandrasekara deaf school, St. Johns Balika Vidayala, Good Shepered Convent, Leeds International School and Licyam International School are the schools conducting by the private sector (Map No. 14).

8.2.1 Circumstances of the Schools in Urban Area

The circumstances of the government schools are mentioned in Table No 8.2.1.

Table No. 8.2.1

Existing Schools and Facilities - 2012

No.	Name of the School	School Category	Class Range	No. of Students	Facilities		
					Water	Electricity	Library
01	Panadura Balika Maha Vidyalaya	1AB	6-13	1,638	√	√	√
02	St. Johns Maha Vidyalaya	1AB	1-13	2,154	√	√	√
03	Sri Sumangala Balika Maha Vidyalaya	1AB	1-13	3,291	√	√	√
04	Sri Sumanagala Maha Vidyalaya	1AB	1-13	3,507	√	√	√
05	Nalluruwa Siri Seewali Maha Vidyalaya	2	1-11	650	√	√	√
06	Walana Mahanama Maha Vidyalaya.	1AB	1-13	2,062	√	√	√
07	Mahamathya Vidyalaya	3	1-13	600	√	√	√
08	St. Anthony Boys Maha Vidyalaya	1C	1-13	584	√	√	√
09	St. Anthony Balika Maha Vidyalaya	1C	6-13	1,299	√	√	√
10	Wekada baudhdhaloka Maha Vidyalaya	1C	1-13	1,377	√	√	√
11	Jeramiyan Dias Primary Vidyalaya	2	1-11	161	√	√	√
12	Upadya Maha Vidyalaya	2	1-11	698	√	√	√
13	Panadura Royal Maha Vidyalaya	1AB	1-13	3,572	√	√	√
14	Methodis Balika Primary Vidyalaya	3	1-5	658	√	√	√
15	Prime Minister Balika Maha Vidyalaya	1AB	1-13	1,917	√	√	√

Source: Panadura Divisional Secretariat office 2012

The teacher student ratio of the schools in the Panadura Urban Council area is in high rate and more than 22,000 students are studying only the schools which are located within Panadura U.C. area. There is a tendency to attract students from the outer areas like, Aluthgama, Bandaragama, Moratuwa, Matugama to the schools of city.

8.2.2 Identified Problems & Potentials of the Educational Facilities

- ❖ Adverse impact to the city efficiency from the traffic congestion creating with the schools located in informal way facing to the main roads within the city center.

8.3 Leisure and Recreational Facilities

The leisure and recreational activities of the area are

Playgrounds	-	03
Cinema Hall	-	02
Parks	-	01
Sport Clubs	-	06

Including the children's play grounds, Panadura Urban Council playground and Modarawila play ground are dominant in the area. The UC play ground is consist with Cricket and indoor stadium facilities and the Modarawila play ground is use for the ceremonial activities of the area. (Map No.14)

The land in extent of 4.9 Ha. is allocated for the common open spaces and the playgrounds within the Panadura U.C. area. The category of the open spaces and the extent of those can be mentioned as follows,

Mini play ground	-	1.40Ha.
Central play ground	-	<u>3.50Ha.</u>
Total	-	<u>4.90Ha.</u>

8.3.1 Identified Problems & Potentials of the Leisure and Recreational Activities.

- ❖ Insufficient of the existing playgrounds for the existing demand

Chapter Nine

9.0 Environment

The Pandura river, the marshy lands and the paddy fields of the area are support to keep the environmental balance and the natural beauty of the area. Also, the coastal belt being boundary to the area is a valuable venue in considering the environmental characteristics of the area. But the construction occurred day by day will cause to collapse the environmental balance and the natural beauty and created the problems such as environmental pollution and the flooding of the area.

9.1 Sensetive Zone

9.1.1 Cultural and Historical (Archeological) Valuble Places and the Buildings

Few cultural and archeological places and buildings were located within the Panadura urban area. The place of Panadura debate and the Rankoth Viharaya could be identified as cultural valuable place and there are few archeological valuable buildings (Map No. 15).

- Kethumathi Hospital building
- Leeds International School building
- Railway station
- Old houses of the area
- Rankoth Viharaya
- Sri Sumangala Girl's School buildings
- Galgoda Viharaya
- Welipitiya Mudalindaramaya

The image house belongs to an important Viharaya of Rankoth Viharaya located at Pattiya South Grama Niladhari Division of the area has been published by the gazette notification including the National Security Statue Register. This should be conserved because of these are very important historically. It will support to protect the identification of the city.

9.1.2 Environmental Sensetive Zone

Two kind of natural wetlands can be identified as an environmental sensitive zone of the area. (Map No.16)

1. Marshy lands
2. Paddy lands

These marshy lands and the paddy lands are useful to protect the environmental balance of the area to minimise the flooding of the area.

9.2 Environmental Hazards

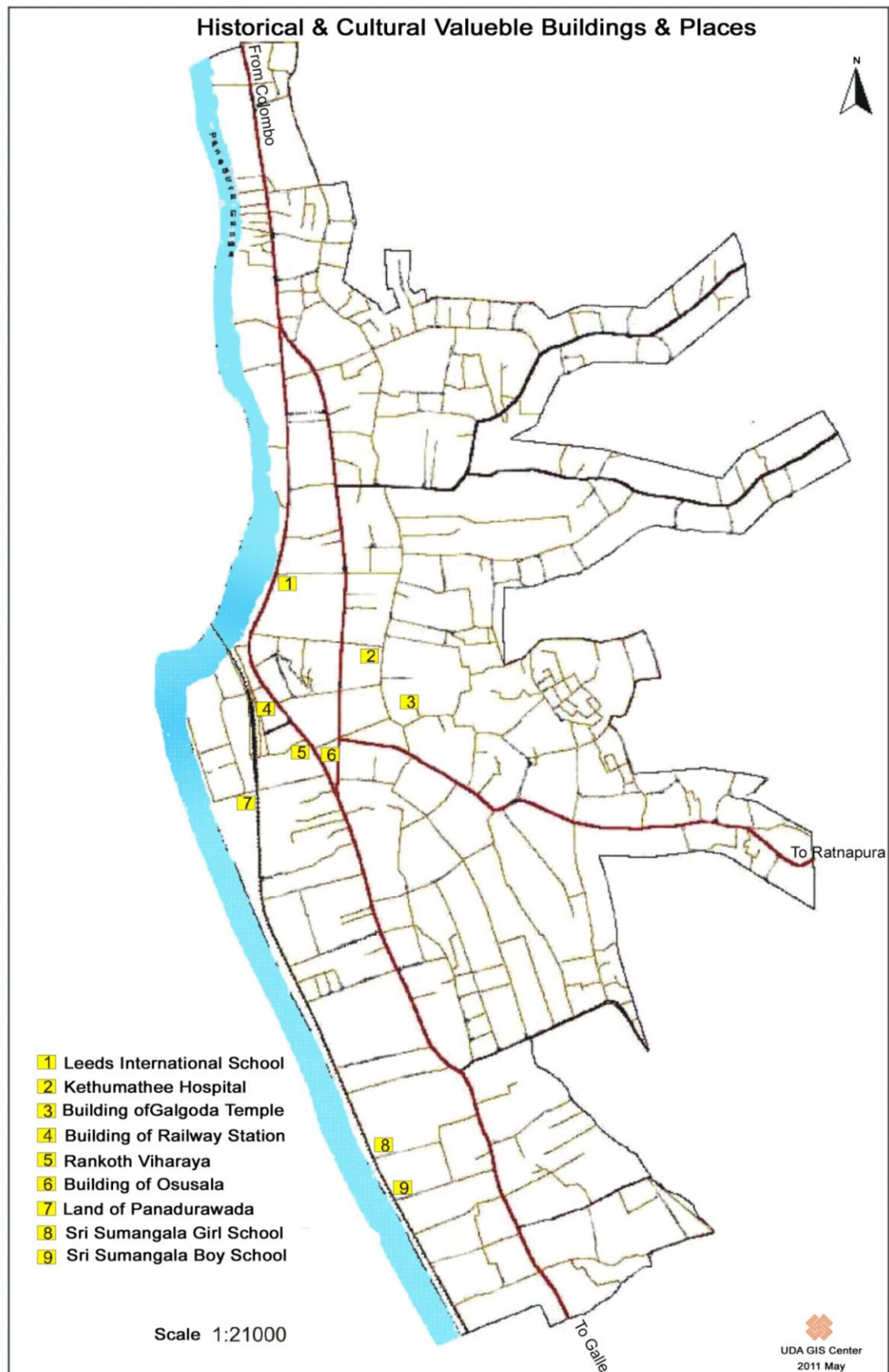
Tsunami & flash floods are the main environmental hazards occur in the Panadura urban council area. Seven (07) GN divisions affected to the Tsunami in 2004 & it has been recovered now. Annually Panadura town has threaten to occur flash floods due to the low elevation of the town in relation to the mean sea level & an improper drainage system & it has affected to the transportation & the commercial activities of the area. Map no. 17 shows the places where floods have occur, especially Modharavila industrial zone.

9.3 Issues & potentials related to the Environment

- Presence of valuable environmental resources like, Beach, Bolgoda River, Cultural & historical places.
- Absence of action programs to conserve environmental resources at the area.
- Increase environmental hazards due to informal human activities.
- Potential to create the water retention areas using the abandoned paddy lands

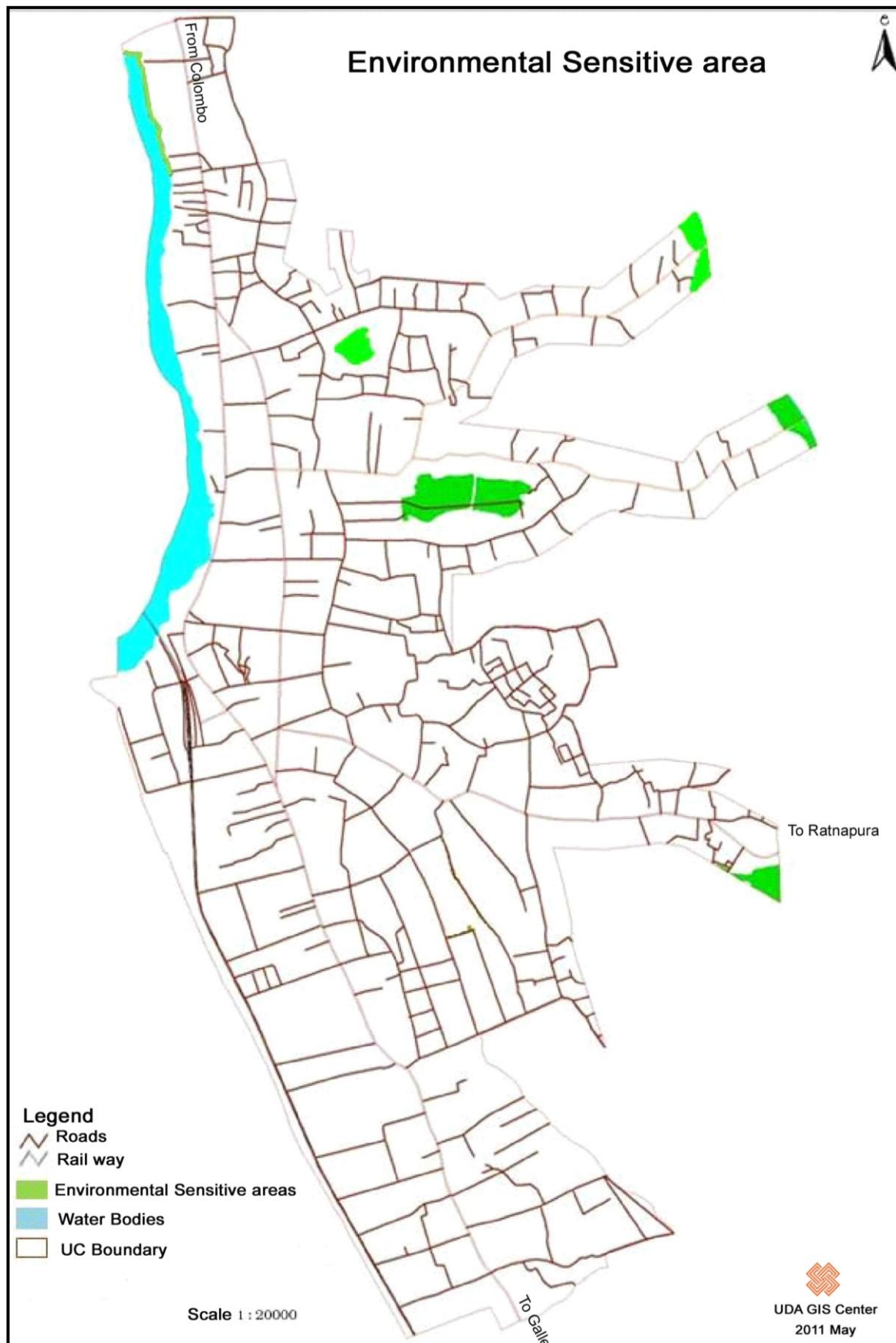
Map No. 15

Historical and Cultural Valuable Buildings & Places
Panadura Urban Area

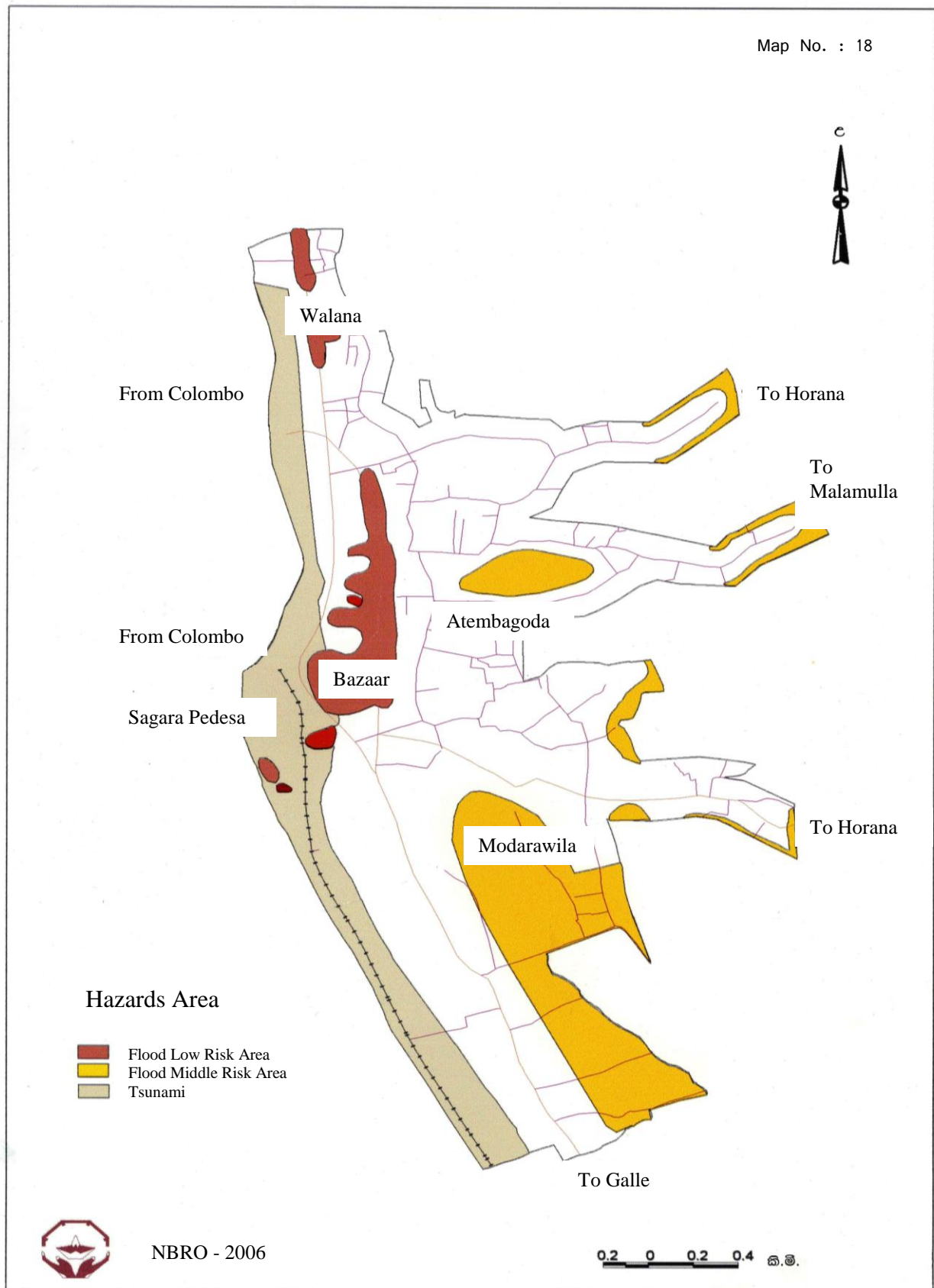


Map No. 16

Environmental Sensetive Zone - Panadura Urban Area



Environmental Hazards - Panadura Urban Area



Chapter Ten

10.0 SWOT Analysis

Factor	Strengths	Weaknesses	Opportunities	Threats
Location	<ul style="list-style-type: none"> * Main trade & commerce city in Kalutara District * Close proximity to the Colombo city 	<ul style="list-style-type: none"> * Location of the some places of the city center in below sea level. * Ribbon development 	<ul style="list-style-type: none"> * Investment opportunities for future development due to the town is falling within the Metro Region under the National Physical Planning Policy 	<ul style="list-style-type: none"> * Effect of the Natural Disaster (flood, Tsunami) to the city.
Population	<ul style="list-style-type: none"> * 56% of the total population being the educated more than G.C.E. (O/L). 		<ul style="list-style-type: none"> * Possibility to expand the service & industry sectors using the labour force of the city.. 	<ul style="list-style-type: none"> Trend of the labours going out of the city.
Transport & Vehicle Movement	<ul style="list-style-type: none"> * Accessibility from bus & railway transport to the city. * Connection with other region through the "A" grade roads and the coastal cities through the railway line. 	<ul style="list-style-type: none"> * No proper connectivity between the bus station and the railway station. * The width of the grade A, C, D roads are not adequate * No proper management system for the passenger transport. * The parking facilities are not adequate. * High traffic congestion in peak hours 	<ul style="list-style-type: none"> * Location of the interchange of the Southern Express way close to the Panadura town (12km. away) 	<ul style="list-style-type: none"> * Dimidiate the transport activities within the city center due to the flood by over flowing the drainage of the city.

Factor	Strengths	Weaknesses	Opportunities	Threats
Land Use	* Except the 0.4%, the total land within the city were developed.	* Economical disadvantages due to the ribbon development along the main roads with commercial and service activities. * Traffic congestion and flooding within the city due to the unauthorized constructions along the roads & the reservations of the water bodies.	* Possibility to plan the land use pattern through the zoning * The high demand for the commercial & residential activities. * Possibility to develop the lands in vertically.	* Increase the demand for the lands towards to the Bandaragama area due to location of the interchange of the Southern Express Way.
Industrial	* Endowed with industrial zone providing 6000 direct job opportunities.	* No proper maintain of the sewer treatment plant of the industrial zone.	* Ability to locate the non polluted industries.	* Pervasion of the residential activities within the industrial zone. * Ability to rush the industries towards the towns closer to the souther Express Way.
Tourism	* Consisting with potential for the tourism activities of coastal area and surrounding Bolgoda lake.	* The resources of the area are not utilized in maximum way.	* Possibility to expand the tourist activities with the assistance of the private sector.	* Threat for pollution of the Bolgoda Lake due to the establishment of low income housing and informal human activities.

Factor	Strengths	Weaknesses	Opportunities	Threats
Commercial & Market Activities	* Establishment of the various commercial and market activities at the city center and the either side of the roads.	* The location of various market activities of the city center & the cause either side of the roads are to create traffic congestion.	* High demand for the commercial & market activities as the region.	
Services	* Establishment of banks and financial institutions within the Panadura town secondary to the district capital.	* Economic disadvantages due to the scattered establishment of the each service institutions.	* Possibility to develop the service sector relatively within the Panadura which had been built as the residential city.	
Fishry Activities	* Establishment and possibility to expand the brine fishry industry & fresh water fishery industry due to the location close to the coastal & outfall. * Location of fishery harbor 1 km away from the city	* Unsufficient of the existing fishery harbor for the same activities.	* Benifits to the fishermen that can gain through the development of the Modara harbour under the proposal of the National Physical Planning Policy.	* Tendency of the development of fishery activities towards to the Moratuwa due to the location of developed fishing harbour.
Health Facilities	* Existence of a base hospital within the city is the only hospital that consisting specialist medical facilities along the Galle - Colombo road from Colombo to Galle. * Existence of hospital for pregnant mothers including the government base hospital.	* Flooding the operational theater of the hospital in rainy season. * Insufficient of the residential facilities for the medical specialist	* Ability to minimise the people going out of the city by improving the facilities of the hospital.	

Factor	Strengths	Weaknesses	Opportunities	Threats
Housing	* 99% from the total housing are permanent housing.	* Out of the existing houses 1% being low income houses	* Possibility to improve the low income housing with the assistance of the non government organizations.	* Scarcity of lands for
Education	* Existence of 14 schools including the famous schools within the city. * Serve as a famous educational centre	* Insufficient of the Playground facilities for the schools.	* Possibility to expand the secondary education facilities with the assistance of the private sector.	* Gravitates the student to the Colombo famous school.
Leisure and Recreational Activities	* Existence of existing parking and playgrounds within the various places of the city with good accessibility.	* Not adequate play grounds and parks in pursue of the population of the area.	* Ability to use the coastal and the Bolgoda lake area for recreational activities.	* Play ground in the city cannot be used regularly as they are used for water retention area in rainy season.
Administrative Activities	* Existence of service institutions within the city to supplying the services to beyond Urban Council area. Eg.Regional Education Office	* Administrative activities located in the city are scattered in various places.		* Tendency for administrative activities towards Kalutara Town
Cultural and Historical Valuable Places	* Existence of the national historical valuable places. Eg. the place of Panadura debate, Rankoth Viharaya * Panadura town is consist with an identical cultural value of the area.	* Historical places are not conserved properly.’	* Ability to conserve those places through the government rules and regulation.(Archelological act.)	

Factor	Strengths	Weaknesses	Opportunities	Threats
Waste Disposal	* 78% from the waste generate of the city is degredable waste.	* Inadequacy of making people aware about benefits to people from the Waste Management Programme	* To arrange the suitable land and introduce that Waste management progrmme interfearing the Central Environmental Authority	
Drainage system	* Existence of well constructed drains on either side of the main road.	* Unavailability of drains on either side of the UC roads and not maintain the drains on either side of main roads properly.	* Ability to connect the side drains & drains for overflowwater to the water bodies close to the city.	

10.1 Recommendation by analyzing of Strength, Weakness, Opportunities and Threats

Factor	Recommendation
Location	It is show the path by the Policy of National Physical Planning, Panadura developed as main commercial centre in the Kalutara District
Population	<p>Create job opportunities for 6% of illiteracy population and they mainstream to the production economy</p> <p>It is need to expansion of service and production sector from the 50% people those who obtained the high education</p>
Road and Transportation	Construct and maintained the existing road network to developed Panadura Town as a famous city
Land Use	Minimizing of leaner development and utilized land use. Allocation of suitable land for development of residential town
Industries	Industrial development within the town
Commercial, trade activity and service sector	Establishment of strong and complete commercial zone within the town to mitigate the service obtain from for the other cities
Tourism	Development of tourist industry through the natural resource and improvement of economic sector in the town
Fishery	Expansion of fishery industry by using coastal belt and Modara Port close proximity to the town
Health	Upgrading and expansion of basic hospital facilities
Education	To provide necessary space in the schools to mitigate the demand for the other area