

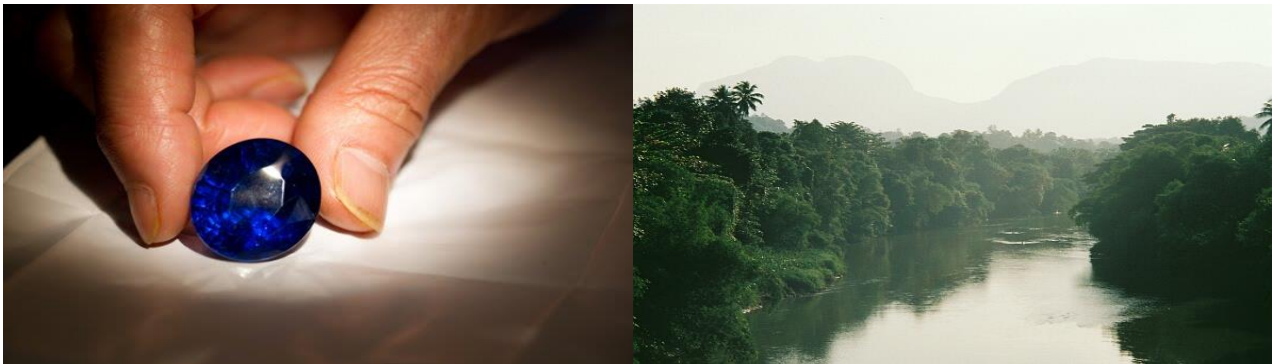


Urban Development Plan (2018 – 2030)

Urban Development Authority
Sabaragamuwa Province



Volume 01



RATNAPURA DEVELOPMENT PLAN

VOLUME I



Urban Development Authority

“Sethsiripaya”

Battaramulla

2018 - 2030

RATNAPURA DEVELOPMENT PLAN

VOLUME I



Urban Development Authority

2018 - 2030

Minister's Foreword

Local Authority Chairman's Forward

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Preface

This development plan has been prepared for the implementation of the development of Ratnapura Municipal Council area within next two decades. Ratnapura town is the capital of the Ratnapura District. The Ratnapura town has a population of approximately 49,083 and act as a regional center servicing the surrounding hinterland area and providing major services including administration, education and health.

The aim of this plan is to make Ratnapura, envisioned that new industries and livelihood will be sourced from the development of the Gem Industry and Tourism Industry. It will be benefitted by the proposed Ruwanpura expressway from Colombo to Pelmadulla. This development plan essentially including a vision, goals, objectives and strategies. It aims to guide the major change to land use and give effect to the development of Ratnapura.

Acknowledgement

It is our proud privilege to express the feeling of our gratitude to our resource person who helped directly and indirectly to prepare the Ratnapura Development Plan 2030.

First and foremost, we would like to thank the commissioner of Ratnapura Municipal Council Ms. Kottewatta And her staff and Mayor of Ratnapura Municipal Council Mr. Tiron Attanayake for extending their fullest support to successfully complete the Ratnapura Development Plan 2030.

We also express our heartfelt and deep sense of gratitude to the Chairman, Director General, Deputy Director (Planning), Development Planning Division, and Research and Development Unit of the Urban Development Authority for the encouragement and support given to prepare and finalized Ratnapura Development Plan.

Finally, we thank all the people for their help directly and indirectly to complete the Ratnapura Development Plan 2030.

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VI. Abbreviations

UDA	Urban Development Authority
RMC	Ratnapura Municipal Council
GN	Grama Niladhari

Volume I
Part I

CHAPTER 01

INTRODUCTION

1.1 Background of the Development Plan

Preparation of a development plan for the future of a city starts at the basis of the trends of the social, economic, political and environmental forces. Because the shape of the development of a city is driven by more or less strength and weakness of the above forces and invert and invers mutuality nature of the forces.

Urban development authority is the regulatory body of the urban development of Sri Lanka. Thus, it has been empowered to function as the key urban planning implementing agency in the country by Urban Development authority act no 41 of 1978. Development plan preparation for the declared area of UDA is vital aspect under the legal background of the authority. Considering these scenarios development plans are prepared for the wellbeing of the city with a futuristic vision and to take advantage of the city's new development opportunities and to provide development benefits to the inhabitanancies of the development area.

Ratnapura Town based Local Board was established in 1887 for the town's administration and maintenance and brought under a Local Government General Council established in terms of the Local Government Council Act of 1922. Ratnapura town achieved a development as above was upgraded to a position of Municipal Council in 1968 and Ratnapura Municipal Council area was declared as urban development area on 1st June 1979 under the Urban Development Authority Act No: 41 of 1978.

As a result of declaration of Ratnapura area as an urban development area, urban development authority identified the need of a New Town and acquired lands for it under an extraordinary gazette notification No. 172/8 of 23rd December, 1981.

The preparation of Ratnapura Development Plan initiated in early 2006 based on this dual city concept and it has been gazette under the extraordinary gazette notification of No. 1483/8 – 07th February, 2007. The updating process of the development plan was initiated in 2013 and this

particular plan has contributed to upgrade the disaster management aspects of the city. It has been gazette under the extraordinary gazette notification of No. 1884/25 – 14th October, 2014.

The preparation of the latest Ratnapura Development Plan was started in early 2017 and it is considering the emerging urban scenarios of the city. The Revised Development Plan is targeting for 12 years to enhance the physical, environmental, economic and social wellbeing and comfort of the city and has also introduced developmental strategies and guidelines for the next 10 years to achieve it. The working process of the particular plan commenced on 15th March, 2017.

1.2 Planning Team

The Planning Process of the Development Plan involves with the consultation of stakeholders as it is a major step in the planning process. The following key stakeholders of the diverse streams are consulted in the initial stage of the development plan.

1.2.1 Key Stakeholder

- Ratnapura Municipal Council

1.2.2 Administration Related Consultancy Agencies

- Sabaragamuwa Provincial Council
- District Secretariat Office
- Garama Niladhari Officers of Ratnapura Divisional Secretariat area

1.2.3 Economy Related Consultancy Agencies

- National Gem & Jewellery Authority
- Department of Agrarian Development
- Department of Provincial Agriculture
- Department of Export Agriculture
- Ministry of Plantation Industries
- Traders Association
- Gem Traders Association
- Sri Lanka Tourism Development Authority
- Provincial Tourism Ministry
- Archeological Department

1.2.4 Environment Related Consultancy Agencies

- Geological Survey and Mines Bureau
- Irrigation Department
- Department of Survey
- Department of Meteorology
- Forest Department
- Central Environment Authority
- National Building Research Organization

- Disaster Management Center
- Provincial Land Commissioner Office
- Land Reform Commission

1.2.5 Infrastructure Related Consultancy Agencies

- Road Development Authority
- Provincial Road Development Authority
- Ratnapura Highway Development Project
- Ratnapura Depot
- Road Passenger Transport Authority
- National Water Supply and Drainage Board
- Community Water Supply Project
- Ceylon Electricity Board
- Sri Lanka Telecom
- National Housing Development Authority
- Health Services Department
- Provincial Education Office
- Sri Lanka Police

1.2.6 Social Related Stakeholders

- Religious leaders of the area
- Community based organizations
- Social Media Community (Face book)
- General Public (Randomly and purposely picked)

1.2.7 Planning Team

- Mr. Sisira M. Dissanayaka, Director, Sabaragamuwa Province, UDA
- Ms. D. A. D. Athukorala, Dy. Director (Planning), Ratnapura District, UDA
- Ms. A. W. H. N. Artigala, Strategic Planner, Ratnapura Cluster, UDA
- Ms. K.A.S.Gunasekara, Enforcement Officer, Ratnapura Cluster, UDA
- Ms. H.K.D.M.K.Pathirana, Enforcement Officer, Ratnapura Cluster, UDA
- Ms. H.M.P.H.Menike, Enforcement Officer, Ratnapura Cluster, UDA
- Ms. W.M.W.Menike, Draughtsman, Ratnapura Cluster, UDA

1.2.8 Supporting Divisions

- Research & Development Division
- Development Planning Division
- Planning Support Division

1.2.9 Supporting Studies

- 2006/2010 Batch - Department of Town & Country Planning, University of Moratuwa
- Studio 5 (2017/18) - City School of Architecture, Colombo

1.3 Scope of the Work

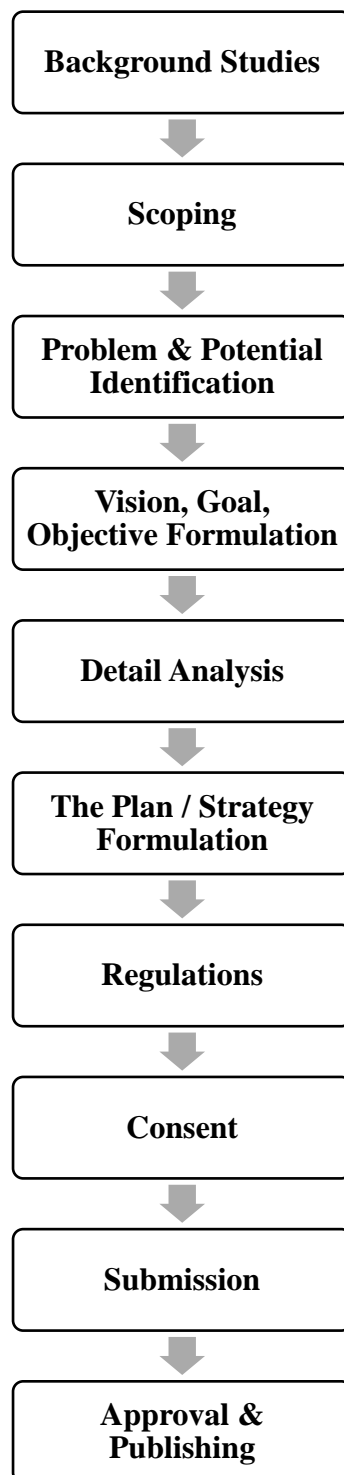
Ratnapura Development Plan is both a perspective and a vision for the future development of the city. It presents the current stage of the Ratnapura city's development – where are we now? It sets out the directions of change – where do we want to go? It identifies the thrust areas — what do we need to address on a priority basis. It also suggests alternative routes, strategies, and interventions for bringing about the change – what interventions do we make in order to attain the vision? Ratnapura Development Plan is anchored with a focus on creating economically productive, efficient equitable and responsive City by 2030.

This plan is formulated for the entire Municipal Council area of Ratnapura and the particular 18 GND s consists with 49,083 populations in 22.2 Km² area.

Ratnapura Development Plan is focusing on boosting the local economy by gaining the economic value of the historical identity of being a national center gem trading since king's era. At the same time, diversifying the economic opportunities through the existing environmental and cultural sensitivity while preserving its value is another concern of this development plan. Ultimately, Ratnapura Development Plan has been formulated for creating a livable city for the local community with strong concern of Economic, Environmental and Cultural perspectives.

1.4. The Planning Process

Figure No.1.1 Planning Process



Source: Urban Development Authority

Ratnapura Development Plan has followed the planning process which contains the 12 major steps that can be identified as Background Studies, Scoping, Problems and Potential Definition, Public/ Stakeholder consultation, Vision and Goal Formulation, Detail Analysis, Objective Formulation, Strategy Formulation, Identification, Establishment, Evaluation and Testing, Documentation/ Tabulation/ Diagrams & presentation & Formalizing, Public/ Stakeholder/ Consultations & Local Authority Consent and Amendments & Publishing.

The first step of background studies involves with the establishment of Geo Database, exploring the base data, identification of data gaps, updating the base data by field survey or other data capturing method, collecting other necessary data required for analysis and storing prepared data in the Geo Database under feature classes. This was carried out from March 2017 to August 2017.

The second step of Scoping contains the identification of the present order of the urban area in relation to its context, Reviewing the National level policies and regulations related to development trends of the area, Conducting Surveys regarding to vehicular and pedestrian traffic, land values, reviewing the ongoing and proposed projects and their impacts. This was carried out from September 2017 to October 2017.

The Third step of Problems and Potential Definition contains the identification of the main issues in the area in the order of priority and the development potentials in the area. The fourth step of Public/ Stakeholder consultation provides the basis to open the Development Plan for the public's and stakeholders' comments and their opinions. The fifth, sixth and eight steps of Vision, Goal, objectives and strategy Formulation open the futuristic image and spatial form, physical, environment, economic and social aspects of the city and its role. The seven step of detailed analysis has covered the Sensitivity Analysis, Development Pressure Analysis, Connectivity Analysis and multi criteria suitability analysis. This was carried out from November 2017 to April 2018.

The ninth step of Identification, Establishment, Evaluation and Testing influences to identify and Prioritize the Projects with Analysis of Physical, Social, Economic and Environmental Impacts, Urban Design Schemes with Form Based Analysis, Simulations, Building and Planning Regulations and Guidelines with Legal Implications and Social/Political Sensitivities. The other tenth, eleventh and twelfth steps of Documentation/ Tabulation/ Diagrams & presentation & Formalizing, Public/ Stakeholder/ Consultations & Local Authority Consent and Amendments & Publishing involves with the formalizing works such as coordination work with stakeholders and Rathnapura Urban Development Area (2018-2030) Sabaragamuwa Province – Urban Development Authority

Planning committee and internal reviews, getting the Ministerial approvals and working with Gazette Notification. This was carried out from May 2018 to December 2018.

CHAPTER 02

PRELIMINARY SURVEY

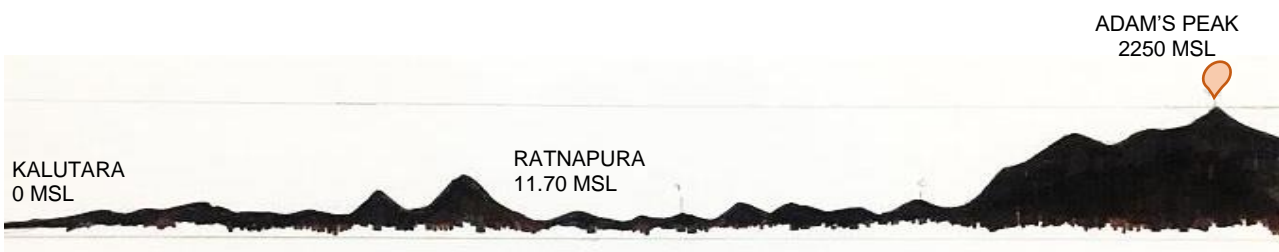
2.1 The Study Area

The City of Ratnapura is located 100 km away from Southeast of Colombo and it is the Capital of Sabaragamuwa Province. Ratnapura urban development area includes the administrative boundaries of Ratnapura Municipal Council Area. Ratnapura has been protected as a worthy land since king's era due to the economic and environmental importance. At colonial period Ratnapura fort build by the Dutch and other two nations (Portuguese and British) also had shown their interest to Ratnapura.

Location of Ratnapura town in a trough between South West mountain slopes in the central uplands has become as a special factor for its ecological conditions. Due to its strategic location, sensitivity and identity, Ratnapura has the potential to provide strong economic and environment base to the Sri Lanka in a long run.

Ratnapura town is situated above 18 meters from the Mean Sea Level between Latitude $60^{\circ}-41'$ and $60^{\circ}-42'$ from North and Longitude $80^{\circ}-23'$ – $80^{\circ}-24'$ from East. According to physical features, Ratnapura town consists with mountain areas with steep slopes, river valleys, low lands and plains and the said features existing within a range of 18-305 meters from the Mean Sea Level. Besides, Kalu Ganga is one of the main four rivers in Sri Lanka and Ratnapura town is located in its valley. The Way Ganga joins to it within town is an important physical feature in Urban Development.

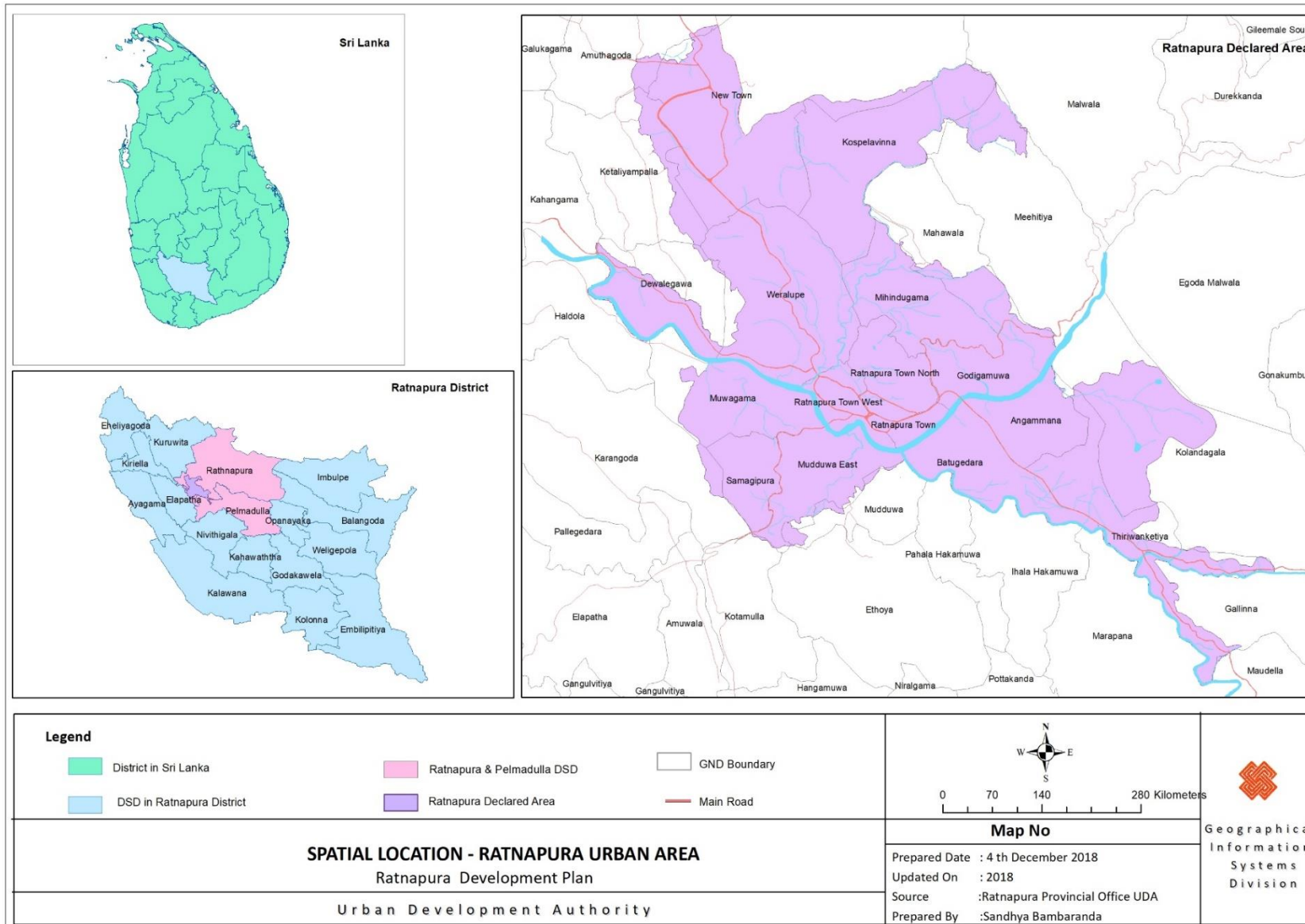
Figure No.2.1 Cross Section of Ratnapura Town



Source: Studio 5 (2017/18) – City School of Architecture, Colombo

Ratnapura Development Plan

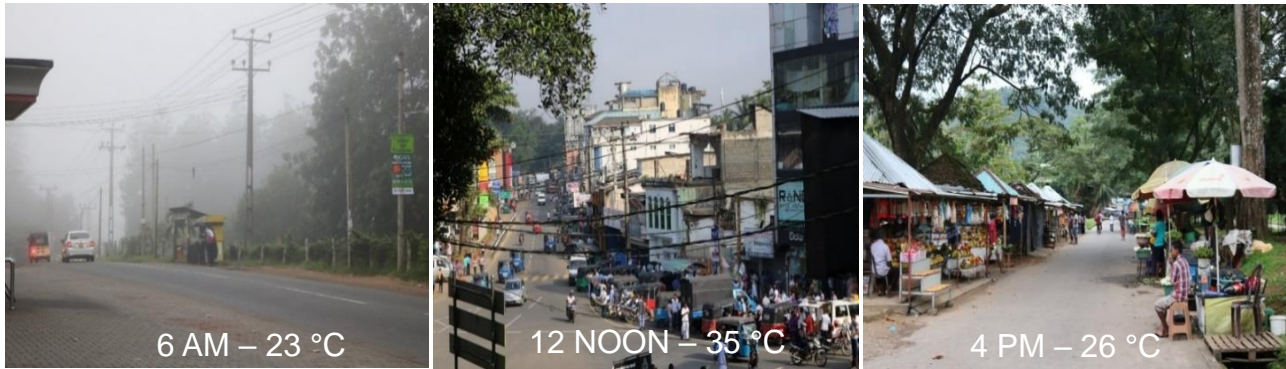
Map No. 2.1. Spatial Location of Ratnapura MC Area



Ratnapura Development Plan

The normal annual temperature is 29.44⁰ C and records witness that the highest temperature within March and the lowest temperature within January of the year. The normal rainfall within town varies from 3000 mm to 4000 mm. and records witness that the highest rainfall from May to June in South East monsoon period and from September to October in inter monsoon period.

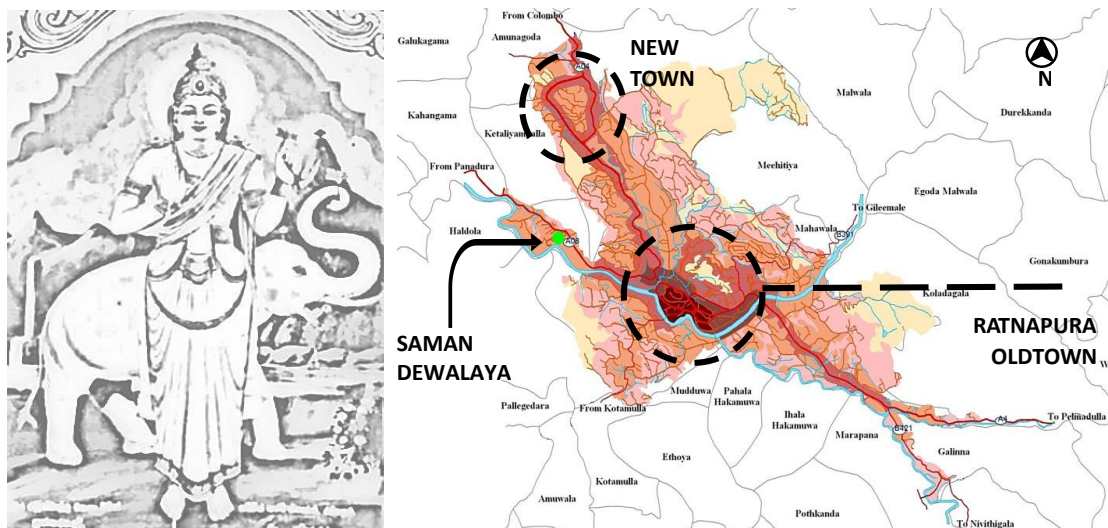
Figure No. 2.2. Climate Condition of Ratnapura Town



Source: Studio 5 (2017/18) – City School of Architecture, Colombo

Sri Padaya and God Sumana Saman are two main icons when people remember Ratnapura City. Apart from the Kalu River there were few man-made pathways to enter Ratnapura to climb Sri Padaya according to the sources. Moreover, Raja Mawatha (King's Path) starts from Ratnapura to climb Sri Padaya is a major evidence for it. Relating to the ancient past, Sumana Saman Dewalaya has hundreds of years of history by now. Moreover, it is evident from the historical records that Ratnapura town has won a world level attraction about the quality of Gems in Ratnapura area. Further, as mentioned in these documents the Kalu Ganga had used as a naval trade route from Western shoe to Sabaragamuwa Province from ancient times.

Figure No. 2.3. Location of Saman Dewalaya

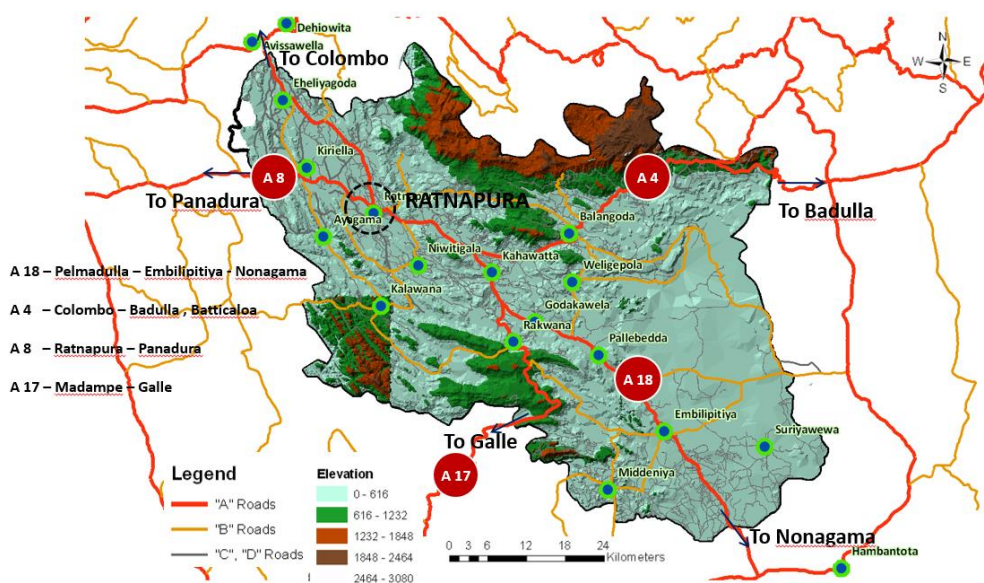


Source: Studio 5 (2017/18) – City School of Architecture, Colombo

According to ‘The National Physical Planning Policy and Plan of Sri Lanka (2011-2030)’ prepared by the Department of National Physical Planning, Ratnapura town belongs to the Protected Area Network. As Ratnapura town is situated within the central fragile area, these matters become as key factors that must be taken into consideration when determining the intensity of the town’s development. In order to balance ecological balance in the country and protect the city itself, Ratnapura town has identified which cannot be exceeded its population over 100,000 by 2030 although Ratnapura City is the capital of Ratnapura district.

Ratnapura town is located in a regionally important landmark to which help to maintain the direct connections with Eastern, Southern and Central Provinces in the Island. Also, there is a trend of further development of said importance with the existing Hambantota Urban Development Plan. Especially as a key turning point of Colombo – Batticaloa road, the Ratnapura town directly joins to Western - Eastern Provinces and it connects with Southern Province along Ratnapura – Kalawana road. To grab the potential out of this strategic node an expressway has suggested to across Ratnapura town connecting Colombo and Pelmadulla area according to the National Physical Plan.

Figure No. 2.4. Regional Connectivity of Ratnapura Town



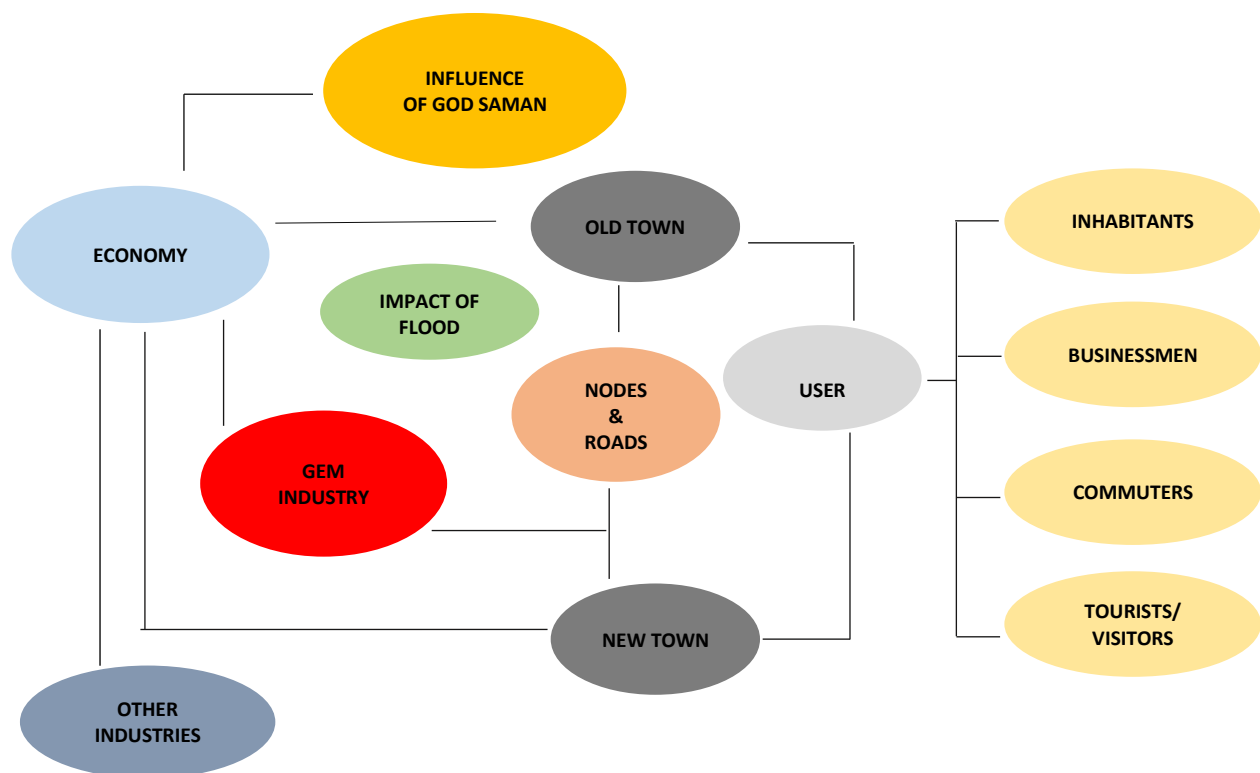
Source: Regional Study (2006/10) – Department of Town & Country Planning, University of Moratuwa

Being a major transportation node and the provincial capital of Sri Lanka Ratnapura attracts over 100,000 commuters from all areas of the district every day in addition to the existing residential population around 49,083. Following are the reasons to increase of commuting population to obtain services in the town. (Refer Annexure 01 for more details)

- For employment purposes.
- To obtain health & educational facilities.
- Economic purposes such as Gems dealing.
- To obtain transportation to travel other areas.
- To obtain services for agriculture purposes.
- To obtain banking and financial facilities.

Additionally, centralizing of administrative functions and education activities within the town and recently enhancing of health facilities have been affected to above situation. Also Ratnapura town acts as the key supply center of many social and economic services for villagers and people in following towns prevalent in a large range. Thus, it provides important services as the first order town of Sabaragamuwa Province and the main administrative center, regionally and locally.

Figure 2. 5. Economic Structure of Ratnapura Town



Source: Studio 5 (2017/18) – City School of Architecture, Colombo and Urban Development Authority

Thus, Rathnapura town's economic activities are based on location and geographical features. Accordingly, the town's economic foundation has based on certain nodes and determined on the gem industry. So, many economic activities have taken place in the area to facilitate to the gem industry.

2.2 Planning & Situational Context

Ratnapura has developed as a Dual City caused by a previous planning attempt of shifting administrative functions to a disaster free location which is around 5km away from the commercial city.

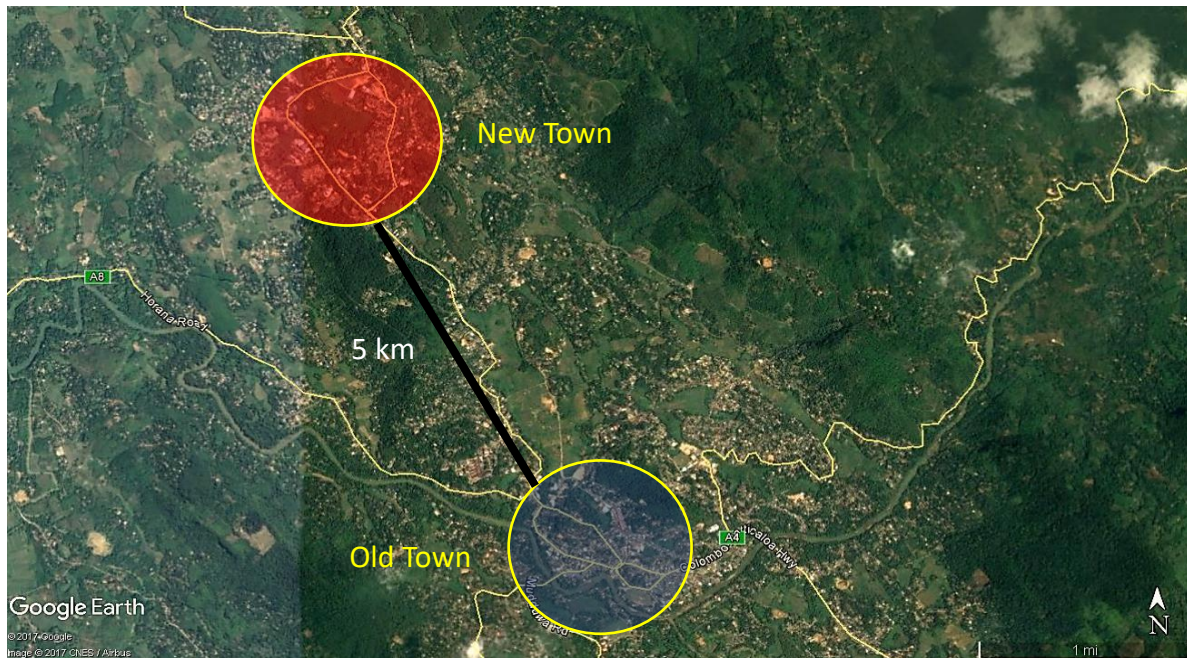


Figure No. 2.6. Ratnapura as a Dual City

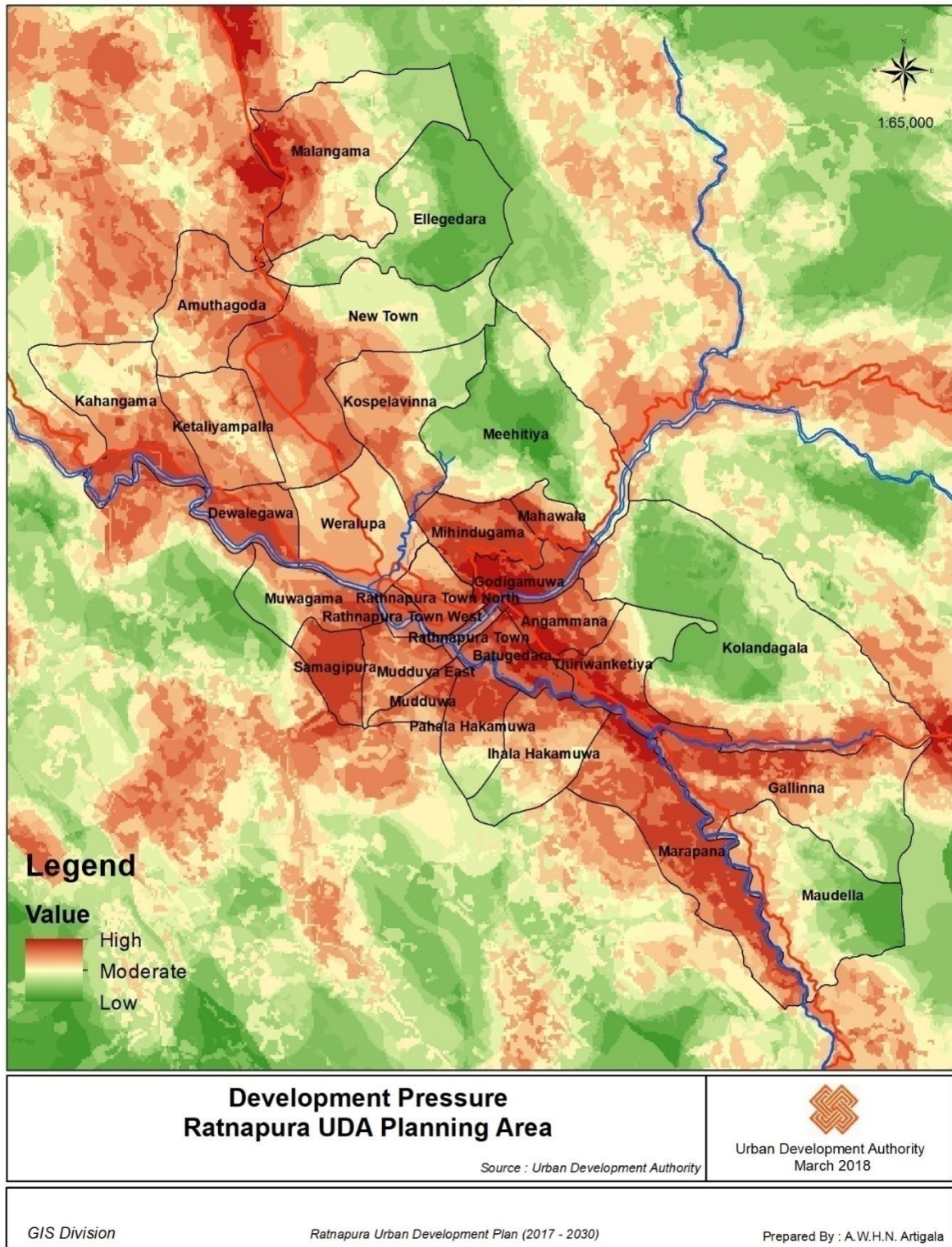
Source: Urban Development Authority

The total land extent of the planning area which has been analyzed for this study is 70.43 km² and the total no of population in the specific area is 69, 994. People comes to the Ratnapura city for two major reasons. For commercial needs and gem trading activities people come to the old town and for the administrative service needs they come to new town. The natural growth rate is 1.0 and the expected population of planning area in 2030 is 77,925 according to the analysis.

Thus, Development Pressure analysis was carried out to identify the areas where significant pressure has been imposed by the forces of demand for land for development. Planned development activities, as well as the spontaneous growth process direct such forces of demand into various locations depending on the accessibility, proximity, market range and the type of development. In order to identify its impact spatially, a Development Pressure

Index has been formulated with the relevant factors, namely, the Level of Accessibility, Urban Potential as a result of connectivity, Existing Population Density and the Types of Land use.

Map No. 2.2. Development Pressure Analysis



Source: Research & Development Division, Urban Development Authority

2.3 Delineation of the Planning Boundary

The delineation of the planning boundary is based on the following three aspects.

a) The Functional Region

Ratnapura is a place where commuting population is higher than the existing population. Those people come for the gem business, administrative needs and daily needs as per the perception survey. Since Ratnapura is an administrative capital and a service center, the catchment of each has considered at the preparation stage of the preparation of development plan. (Refer annexure 02)

Through the Development Pressure Analysis (Map No. 2.2), it could be observed that the recent developments, combined with the long process of urban growth over the years in the region, imposed more pressure for development in certain areas than others. Observably, there is a positive correlation between development pressure and the ongoing trends of urban development. The analysis shows that the development pressure is increasing towards major arteries from the Ratnapura City Center and the trend goes towards Kuruwita area. Ellegedara, Meehitiya and Kolandagala areas experience moderate levels of development pressure.

b) The Geographic Characteristics

Rathnapura belongs to the South West topographical region in Sri Lanka. The elevation of the city varies from lowest 18m to 305m above the mean sea level, but normally the town lies below 50m. The area of Rathnapura can be divided into 4 geographical parts, such as steep slopes, river valleys, low lying land and plains. (Refer annexure 03)

Godegedara, Katandola, Mudduwa, Muwagama, Weralupe and Rathnapura Town are in the lowest mean sea level in the MC area while Mahawela and Thiriwanaketiya areas are in the high mean sea level. Kospalawinna North, Galkaduwa, and Mudduwa west are hilly areas with dissect slopes

c) The Administrative Divisions

The UDA declared area is similar with the boundary of Ratnapura Municipal Council area which includes 22.2km² with eighteen (18) Grama Niladhari Divisions. Thus, the ultimate plan will effect on 49,083 residual populations in RMC and 100,000 daily commuting population to Ratnapura Town. (Refer annexure 04)

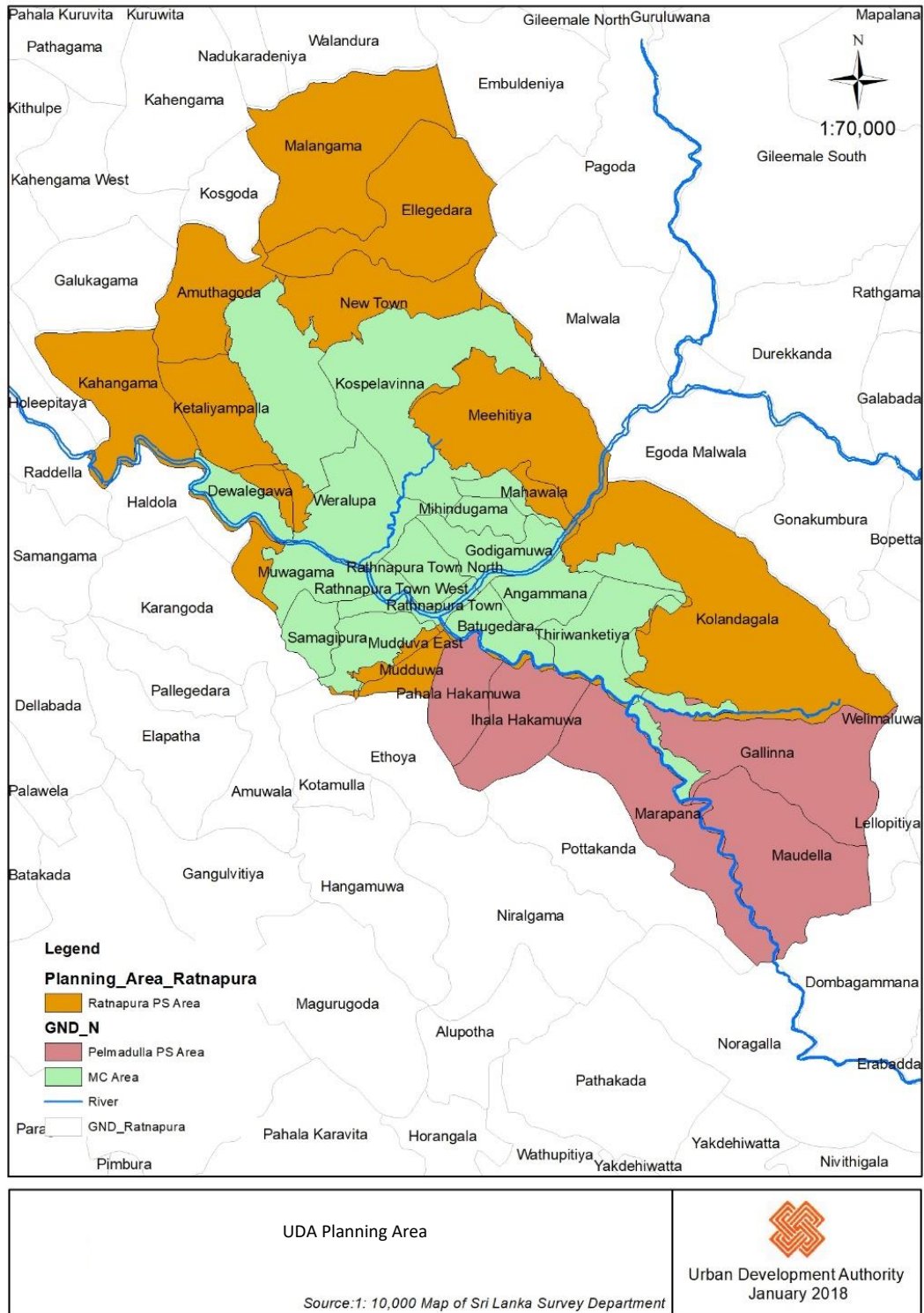
Table 1.1. Brief of Development Planning Area

	Planning Area	Implementing Area (UDA Declared Area / MC area)
No. of DSD	02	01
No. of GND	29	18
Land Extent (Sq. km)	70.43	22.2
Residual Population	69,994	49,083
Expected Population by 2030	77,824	62,604
Population Growth Rate	1.0	1.0
Commuter Population	100,000	100,000
Expected Commuter Population by 2030	150,000	150,000

Source: Urban Development Authority

The planning boundary was demarcated to gain the maximum benefit out of the future development in Ratnapura Development Plan. More exactly, the planned, focused strategic interventions are going to address the land use objectives, streetscape design, and roadway conditions of the Ratnapura Municipal Council area but the benefits of those intervention will go for the planning area which consist three adjoining local authorities of Ratnapura District as per the new development plan.

Map No.2.3. UDA Planning Area



Source: Urban Development Authority

Majority of the population belongs to the Sinhala – Buddhist category (Refer annexure 05) but people who belongs to the other races and religions also lives peacefully in RMC area. Around 70% of the working force is 18 – 60 in Ratnapura (Refer annexure 06) but there can be seen a tendency of dropping the proper education system after O/L s. (Refer annexure 07)

A total of 49,083 from the total population were employed in 8major sectors of the city's economy in the year of 2016. More than 30% of them were employed as government officers, while half of the total working population was employed in private businesses, and self-employment which relates with gem industry and agriculture crops. (Refer annexure 08)

From the total of UDA declared area (RMC boundary), residential category covers about 40% of the area and it is the major coverage. Residential development can be seen along the main roads as linear developments and within agricultural lands as isolated clusters. (Refer annexure 09) There is a tendency of converting agricultural lands to residential use in several wards. Recent development occurs at new town area as a planning decision.

The economy based on old town and new town but the catchment of each town is different. Old town mainly catering for local population and new town catering for the entire province due to administrative activities. Gem Trade has been established at the nodes of clock tower, Ambagahayata and Demuwawatha Street. 3% of contribution goes to the GDP from gem trade and 25 % of the trading industry are Ratnapura traders. 30% of the minors are Ratnapura minors according to the Gem & Jewelry statistics.

CHAPTER 03

NEED OF THE DEVELOPMENT PLAN

Ratnapura Development Plan prepared to address the issues emerged as well as harnesses the potentials of the area. Plans are prepared for areas which are already experiencing significant development pressures or some of the negative effects of growth and development in an effort to find solutions to these problems and to manage future growth and meet and address local issues and needs through the alignment of local area planning. Issues of the Ratnapura area was identified through, the view of the planner, detailed analysis and stakeholder's view regarding the area. Problems were prioritized According to the context, magnitude and significance and the Need of the development plan of Ratnapura can be identified as follows;

Ratnapura has formed with a natural environment and human settlement as any other town in Sri Lanka. Currently, Ratnapura is a city which consist with natural forests, urban forests, rivers, mountains with rich bio diversity. Besides, it is famous for the Gem over the existing forest cover, hydrology pattern and topography and it has made this town special among island-wide cities. At the same time, there are encroachments, deforestation, illegal mining activities, unauthorized constructions which happened due to human activities can be seen. This has cause to create a conflict between natural environment and human settlements. Clearing up this existing situation, there can be few identical issues related with the Ratnapura Town.

Problems of the Planning Area

➤ Flood

Considering the disaster history of Ratnapura, three types of flood have been identified with the time gaps. Critical flood, major flood and minor flood are those categories. (Refer annexure 10) Ratnapura is prone to have an annual flood in May – June and October months due to the rainfall pattern. (Refer annexure 11 and 12) Apart from that, the city affected by major flood in 10 years gap which grabs national wide attention for it. The city itself flooded about 80% of land in it around 2 – 5 days when it affected with this flood disaster. (Refer annexure 14 and 15) It is being recorded as per the disaster

management center information that the no of flood affected families are 206 and people area 1203 in the 2017 incident.

Flood in Ratnapura city disturbed to the National, Regional and Local level connections and smooth flows. It gives direct and indirect effects to the society while damaging physical properties, giving emotional effects and long term effects. Ratnapura is the focal point of the supply chain in the district. Considering the commercial activities in Ratnapura, retail and wholesale activities act the major part of it. Around 700 shops has been registered in the municipal council and over 80% of it gets affected by annual flood. (Refer annexures 13) Noticeably, the entire population of the planning area, which is around 70,000 depends on this focal point of supply. In fact, the flood damages to the local supply chain annually and the local authorities and other local level institutions have to spend an extra cost to recover the supply chains in a cleaned environment later on.

Ratnapura is the nodal point of the west - east connection of the country (A004). Also, it is the countryside road which connects Colombo and Panadura (western region) with Hambantota (southern region) and Batticaloa (East region). Apart from that, Ratnapura is the administration capital of the Sabaragamuwa province and Ratnapura district. The commuter population of the city is over 100,000 including health and education facilities. 30% of the school population in Ratnapura district comes to the schools which are located at the heart of the city. The catchment of provincial base hospital which is located in Ratnapura served more than 5000 people daily and the private and government health institutions including base hospital serves not less than 10,000 people daily. Thus, flood damages to the regional connectivity and the smooth service flow of the city at this viewpoint.

Moreover, flood in Ratnapura city disturbed to the national level financial stability since the disaster situation requires government finance and other supportive networks to recover short term and long term targets of recovering people and properties. It has to spend an extra allocation for settling and resettling people with proper service delivery and it requires excessive money and valuable official and non-official time of government officers annually.

Figure No. 3.1. Final Situation of 2017 Major Flood**SUMMARY SITUATION UPDATE 27 MAY 2017, 0800HRS:**

District	Affected		Impact			Displaced People
	Families	People	Deaths	Missing	Injured	
Kegalle	1,437	5,250	2	2	6	2,261
Ratnapura	4,815	18,031	47	-	2	4,844
Katunayake	8606	37,492	37	72	22	4,829
Gampaha	4,41	19,535	2	-	1	7127
Matara	*	6,003	11	17	-	*
Hambanthota	1,860	4,405	1	-	-	-
Galle	32,215	128,047	-	-	2	1,218
Matale	7	31	-	-	1	-
Colombo	2,672	10,849	-	-	-	772
Kandy	9	40	-	-	-	-
Batticaloa	4	20	-	-	-	-
Trincomalee	206	696				
Vavuniya	31	102				
Mullaitivu	26	70				
TOTAL	56,529	230,571	100	91	34	27,054

Source: Disaster Management Center

Thus, the flood in Ratnapura is a critical problem in the planning area which is needed a solution through a development planning intervention.

➤ **Degrading the sense of the place**

Any city in the world has to have an identity to be remembered by people worldwide. Ratnapura is “The Gem City” since ancient time. It is evident from the historical records of sailors such as Plini, Hi-yun-san and I-ban Batuta that Ratnapura town has won a world level attraction about the quality of Gems in Ratnapura area. Further, as mentioned in these documents the Kalu Ganga had used as a naval trade route from Western shore to Sabaragamuwa Province from ancient times. It is believed that due to availability of plenty of Gems, later it was called as ‘Ruwan Puraya’, ‘Ratnapuraya’. (Source: Sabaragamuwa Wansha Kathawa)

Moreover, Ratnapura is famous for both mining and trading activity in gem industry. 30% of the mining populations still belongs to the Ratnapura as their native place while 70% comes from other areas to Ratnapura. In gem trading only 25% traders belongs to the Ratnapura and the Beruwala gem market, Thailand Gem market and other markets in worldwide dragging the trading power from Ratnapura Market by now.

Figure No. 3.2. Employment of Gem Mining and Trading

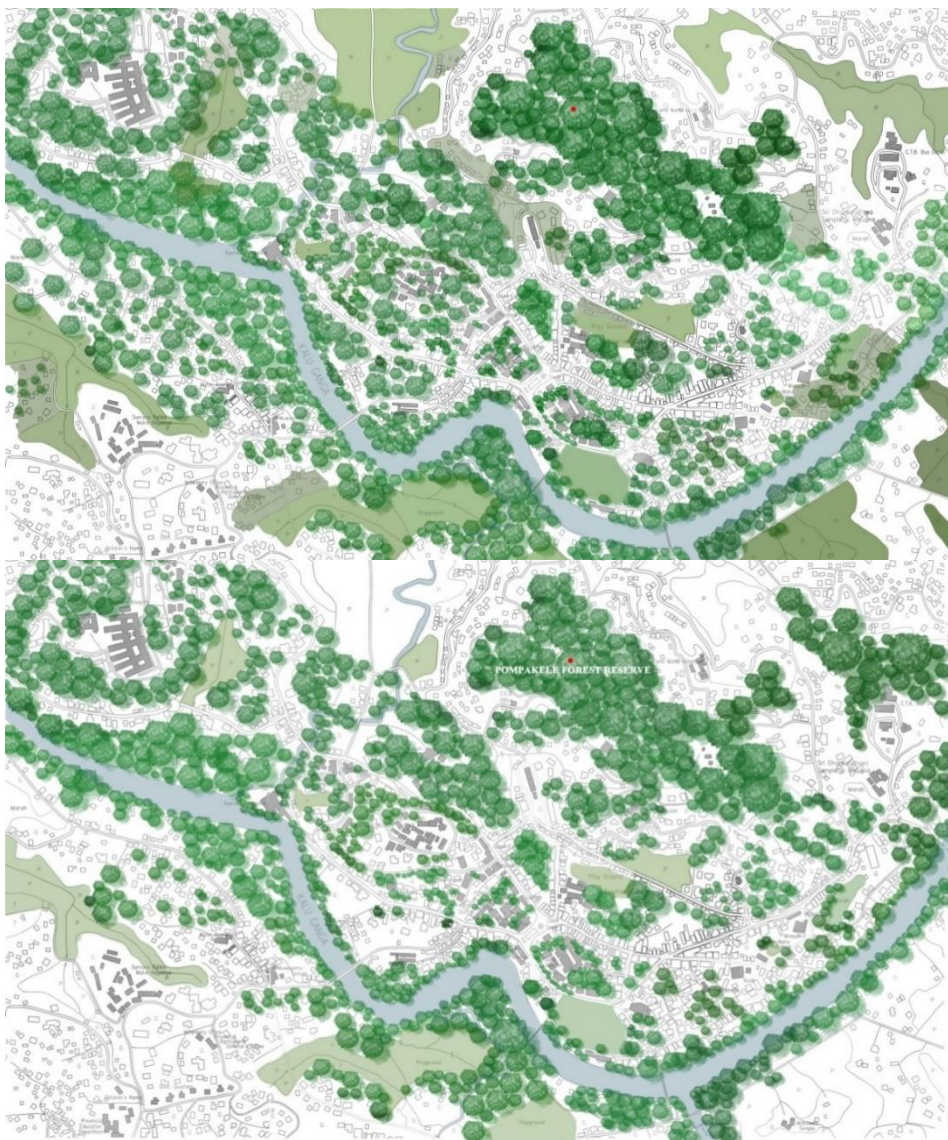
Source: Regional Study (2006/10) – Department of Town & Country Planning, University of Moratuwa

At the same time, nearly 1/3rd of the people in the gem industry are minors and small scale traders while minority engaged with the top level of gem trading. The total chain can be understanding through the gem value chain which has attached to the annexures. Regarding the mining sector, the worth of the gem getting double and more when the chain starting from first buyer. So the local people won't get the maximum benefit of the real worth of the gem stones and the people whom get the benefits do not invest that money into Ratnapura again. Thus, local money leakage to the other cities and countries through gem trading cause to degrade the sense of the place in Ratnapura.

➤ **Decreasing the forest cover**

Ratnapura is the gateway of hill country. It is a norm that settlement evolve near water bodies therefore it is evident Ratnapura city have evolved in this location due to the flow of the Kalu river. But later on the deforestation happened and the forest cover has been reduced around 10% within the planning area by 2017. Falling of trees by rural poor, organized felling for commercial purpose and forest cover has been converted to commercial plantation were the reasons for it.

Figure No. 3.3. Decreasing the Forest Cover



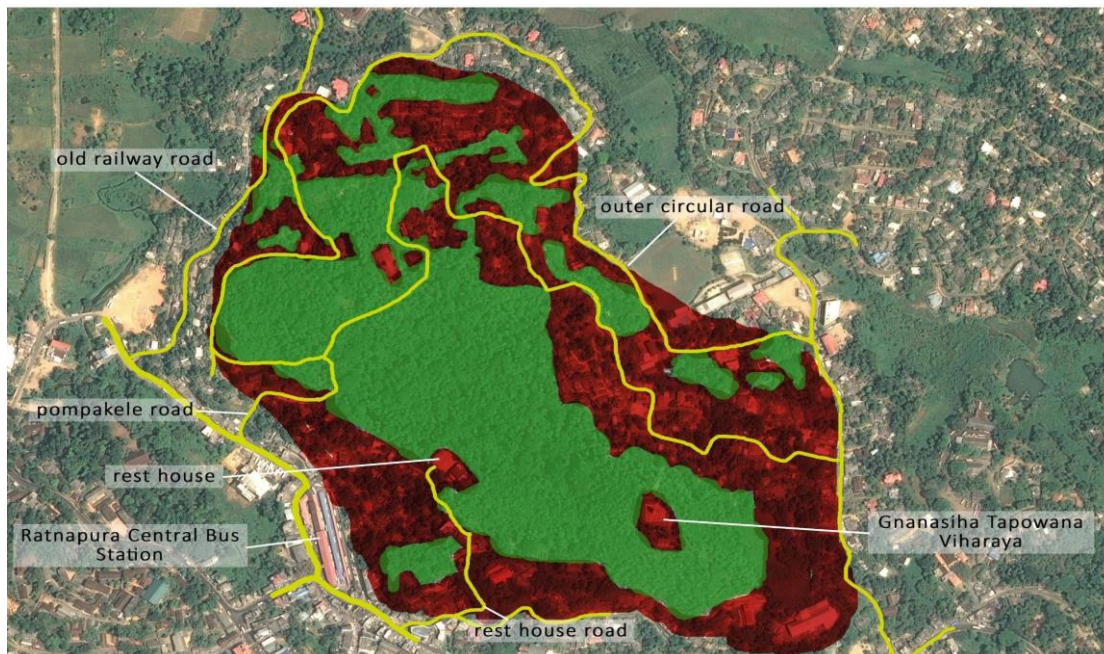
Green Cover 2007

Green Cover 2017

Source: Studio 5 (2017/18) – City School of Architecture, Colombo

Moreover, Ratnapura is the only city which has an urban forest, grown in naturally apart from the Udawatta Forest in Kandy and currently the Pompakele Urban forest has lost around 30% of its area due to encroachments.

Figure No. 3.4. Encroachments to the Pompakele Urban Forest



Source: Studio 5 (2017/18) – City School of Architecture, Colombo

Forest area in Ratnapura is an important factor for the local as well as national geographic situation since it is identified as a part of the central fragile area to be preserved in order to keep the balance of environmental sustainability of Sri Lanka.

In the meantime, decreasing the forest cover cause for increase the urban heat as well. The temperature of Ratnapura city is increasing up to 31°C at day time in dry seasons (December – March). Being located in a basin area which doesn't have smooth wind flow and with the influence of the humidity, people feel around 35°C at day time of a sunny day although the actual temperature is 31°C. Thus, it is become inconvenient to the local people to walk and work in the day time in sunny days. (refer annexures for more details) Thus, to overcome this heat issue, a planning intervention is needed.

➤ **Traffic congestion**

Ratnapura is the nodal point of the west - east connection of the country (A004). Also, it is the countryside road which connects Colombo and Panadura (western region) with Hambantota (southern region) and Batticaloa (East region). Thus, in regional transport network, Ratnapura is a city where should have a smooth traffic flow and easily pass over. But, due to geographic situation and spatial arrangement it does not happen as it should be.

Considering the geographic situation, the town has formed as an island due to the three entrances are bridges. Apart from that, two major roads (Panadura Road & Malwala Road) which connects adjacent to the bridges brings more vehicular to the city through those bottlenecks. It is around 2500 vehicles entering to the city through A 004 road at once in a peak time. (Refer annexure 16, 17 and 18)

Figure No. 3.5. Reasons for Traffic Congestion in Ratnapura



Source: Urban Development Authority

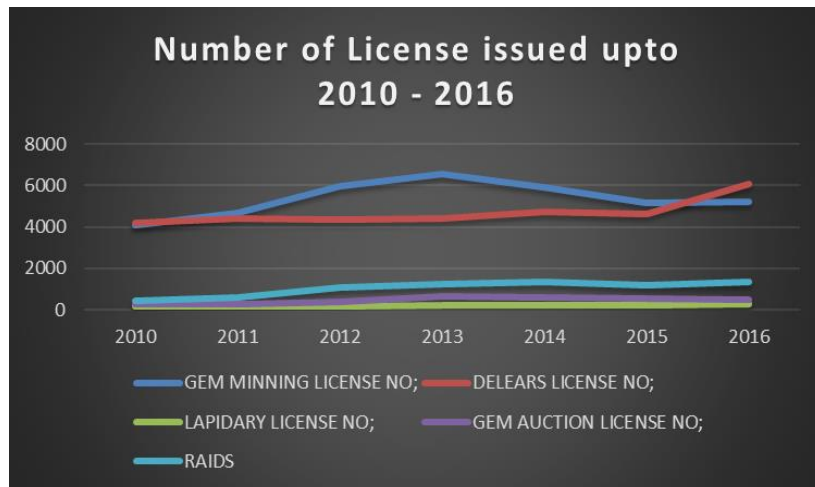
Considering the spatial arrangement, five major schools have been located at the heart of the city and about 12,000 of school children (30% of total no of school children in the schools of planning area) and around 10,000 more students who comes for the tuition purpose makes more activities which blocks the A004 road. The service supply of the city has been distributed into various parts of the city and it makes more people and vehicular movement within the city at the same time.

Moreover, the vehicular which doesn't need to enter the city has to pass this way at present due to non-existence of bypass roads. This situation creates a heavy traffic flow on A 004 road which makes vehicles wait not less than 15 minutes to pass the city limit in a sunny time and more than 20 minute in a rainy time. The traffic disturbs to the people activities and vice versa.

Traffic in Ratnapura city disturbed to the National, Regional and Local level transport connections and smooth flows. It gives direct and indirect effects to the society while wasting time of all. In the local level, it creates a discomfort to the local community by trafficking to the local service delivery since Ratnapura is the focal point of the service distribution in the district. Traffic affects to the regional connectivity and the smooth service flow of the city in the meantime. Thus, there is a need of having a strategic intervention to Ratnapura to overcome this issue.

➤ **Land of the planning area is unstable for larger scale developments due to horizontal mines**

The whole planning area located on the gem beds and people has tended to have horizontal mines everywhere in searching of gem stones. Ratnapura is issuing more than 6000 licenses annually for gem mining and it is believed that the no of illegal mines high in some areas. Mines should close in a proper manner after the work done but there are improper sand/gem mining and abundant the mines at present. Due to the risk, it is bit risky for larger scale development projects to be carried out in this land due to the unstable situation of the land. (Refer annexure 22 and 23)

Figure No. 3.6. Issuing of Mining License

Source: Gem & Jewelry Authority

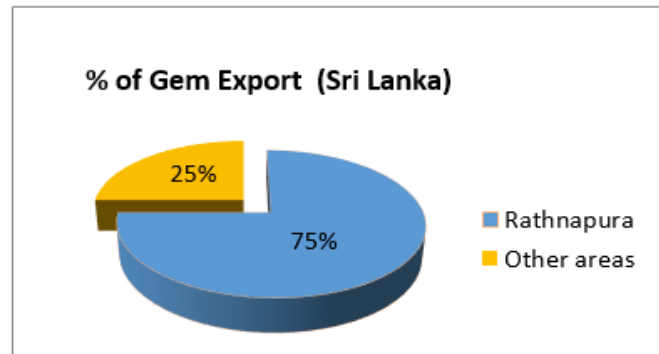
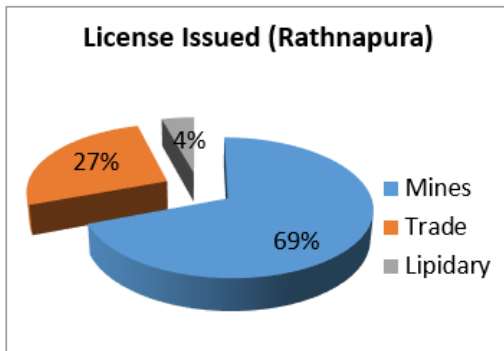
Potentials of the Planning Area

➤ International Acceptance for Gems

Gem Industry owned a bigger place in Ratnapura economy since pre-colonial period. It is in the 5th place of the export economy in the Sri Lanka according to the statistics of Central Bank Latest reports. 3% of contribution is given to the national economy by Gem industry at present. (Refer annexure 21) Sri Lanka is well known for quality gems and it has received a special place for cut and polishing of gems. Traders, buyers and sellers are already knowing that Ratnapura is the best place and hang around in Ratnapura due to the belief of every worthy gem in Sri Lanka comes to Ratnapura before it goes to an international buyer. Catchment of the Ratnapura Gem business covers entire Sabaragamuwa province with Uva, Central and Western provinces in national wide. (Refer annexure 20)

The Gem business in Ratnapura has been established due to two major reasons. Geographical location and process of it were those. Ratnapura has located in a geographical location where gem beds area laid down. Moreover, the city itself and the planning area are bearing gem lands around 90% of it according to the Gem & Jewelry Authority. (Refer annexure 22 and 23)

Figure No. 3.7. Gem Exports and License Issuing



Source: Gem & jewelry Authority

Considering the processes of gem industry, those gem trading processes have already been established in Ratnapura from ancient time. (Refer annexure 19) The nodes, streets, squares have been organized by people and the time periods of the particular places are known to them. Thus it is easy to have a smooth flow of gem trading with the acceptance of nationally and internationally.

Marketing is the hardest part of any product. The current society spend a lot on it since it is needed for having financial benefits. In this case, Ratnapura already has the national and international acceptance for the gem industry and as the gem city so the potential has to be tapped through the development plan.

➤ **Historic, Religious and Cultural Identity of the City**

Ratnapura is a city with a cultural identity of Sri Padaya and God Saman since King's era. The oldest Sri Pada route started from Ratnapura and still it is being used by people. (Refer annexure 24) Saman Dewalaya is a hotspot which attracts people throughout the year with a variation in special occasions. Around 5000 to 6000 devotees visited Saman Dewalaya and around 20 shops opened at dewalaya premises in a regular day while the devotees number increased up to 100,000 and shops up to 150 in perahara season. (Refer annexure 25 and 26)

Also, Ratnapura has an identity with the heritage places which was built and used in Ehelepole Era and Colonial era. Apart from that the planning area and the adjoining area to that boundary consist with ancient temples and various identical places. Thus, the planning area belongs to Kuruwita – Ratnapura (Minipura) Tourism zone and it has centralized to four major tourism zones (Seethawaka,

Samanala, Udawalawa & Sinharaja). Ratnapura National Museum is one of the 10 museums which ruled under department of national museums. It is also a potential for the city of Ratnapura by now. (Refer Annexure 27 and 28)

Considering the Saman dewalaya, other tourism attractive places and being located at the center of four tourism zones, Ratnapura has a potential of developing as a major tourism destination with providing no of employment opportunities to the citizens easily.

But, according to the analysis, it attracts less number of local tourists and the foreign tourism attraction is remarkable low at present. Thus a planning intervention is needed to tap this potential.

➤ **Rich Bio-diversity**

Bio diversity has been created when the environment has necessary soil, humidity, rainfall, temperature and fauna & flora. Considering the situation of Ratnapura, the average annual temperature is 27.1 °C. Annual mean rain fall is 3760mm. First Inter monsoon (March – April - 14.8%), South West Monsoon (May – September - 50.6%), Second Inter Monsoon (Oct – November -21.55%), North East Monsoon (Dec – Feb- 13.4%). Moreover, high rainfall is connected with high humidity. The highest diurnal variation occurs in the least humid month February. Least variation occurs in the most humid months May and June. Ratnapura has various soil types which is beneficial for preserving natural forest cover. (Refer annexures for more details) (*Source: Environmental Profile of the Ratnapura District - Central Environmental Authority*) At the same time, Ratnapura has a variety of species and higher no of endemics in it due to the consistence within the wet zone. (Refer annexure 29)

Urban forests are lesser to be seen in many countries as well as in Sri Lanka. But apart from Udawatta Urban forest in Kandy, Sri Lanka, Ratnapura has its' own urban forest close to the city center. All these elements create a rich bio diversity in Ratnapura which is not yet tapped.

➤ **Kalu River and Inland Water Bodies**

Kalu River meanders closest to the city and it flows slowly within the city limits and apart from Kalu River, Wey River and several other waterfalls and streams within the planning area. Also, 80% of the planning area consist with inland water bodies. Thus, the surface water potential has a potential to use these inland water bodies for the aesthetic beauty to the city and the lives of people in it. (Refer annexure 30)

➤ **Major Transportation Node & construction of Ruwanpura Expressway**

Ratnapura is the nodal point of the west - east connection of the country (A004). Also, it is the countryside road which connects Colombo and Panadura (western region) with Hambantota (southern region) and Batticaloa (East region). Thus, it is an identical transportation node in west – east road network and west – southern countryside road network.

Apart from that, the development of the Ruwanpura Expressway and bypass road, are likely to change the development trend in Ratnapura in the near future. That change will have a direct impact upon the present development trends in the area because of the easy and fast access which makes by those two to the city from outside and inside. (Refer annexure 31)

Being the gateway to hill country, down south and east coast brings large number of commuter to Ratnapura. Also, it will take nearly one hour to reach Ratnapura from Colombo after constructing of Ruwanpura Expressway. Thus, as a strategic point in the existing transport network and proposed road network, the potential is yet too harnessed.

These all identified issues are significant for the future development of Ratnapura. At the same time the known untapped potentials are yet to be harnessed and used. Thus, address these identified situations are prime activity to boost the future economy of Ratnapura in this development planning intervention. Also, considering the potentials over issues, it is recognized that the situation is directing to the vision which relates with Gem to flourish the Ratnapura town in future.

Volume I
Part II

Minister's Approval

Gazette Notification

CHAPTER 04

THE PLANNING FRAMEWORK

4.1 Vision

'The Gem City of Sri Lanka in the Greens'

4.2 Vision Statement

Ratnapura will be re-established as 'The Gem City' to compete with the world and it will attract people with the elegance of being an iconic city in Sri Lanka in future. Ratnapura City will play as magnet and it will boost the economy through gem industry. All the other local sectors will align to thrive this major economic source. Having gem beds, mining culture and trading process will strengthen the Gem City concept and the term gem city will be facilitated with its history, culture and environment.

Greens refer to the beauty that represented by the natural environment. The term greens are most commonly used to reflect the environmental variety. Environment typically portray views at city or views from the mountain ridge. The forests, rivers, lakes, green patches and blue network make up green sense. Especially this term represents the environment of Ratnapura.

Thus, the aim of this vision is to direct the future spatial developments in the entire city towards facilitating a creative economy, based on gem industry and get the support of culture, heritage and inland nature based tourism to flourish it. Accordingly, this plan envisages the Ratnapura area (as physically defined) to prompt the image of the Sabaragamuwa region through expanding its values of places & lives with prominent level while being the national icon of gems.

Ratnapura is a place which consisting with gem resource. Also, it has high potential for tourism. Apart from that, preservation and conservation of the environmental and cultural resources are needed. Here, the vision focuses to utilize the economic resources of Ratnapura in proper way with preservation and conservation of other resources. Therefore,

the term speaking greens is used to enhance the natural resources of area which is having a very rich bio-diversity in the Sri Lanka.

In 2030 the Ratnapura economic activities will be open directly to the other regions and other countries through boosting the development of gem industry and tourism through utilize the resources. Moreover, Ratnapura will be act as a magnet of Sri Lanka to attract the entire country and to be comes table in national level economy as well.

4.3 Goals

Goal 1: Make Ratnapura, ‘The National Center for Gem related business in Sri Lanka’.

Goal 2: Create Ratnapura, ‘An attractive Destination for Visitors in Sri Lanka’.

Goal 3: Create Ratnapura, ‘A livable City’ for the local community.

4.4 Objectives

Goal 1:

1. Facilitating Gem Industry to contribute GDP by 7% share by 2030.
2. Facilitating the Gem related activities and an attractive environment/streetscape by 2030.

Goal 2:

1. Facilitating to enhance green space up to 40 % by 2030.
2. Facilitating to enhance the archeological value of cultural and historical sites of Ratnapura and convert it into economic value by2030.
3. Facilitating to attract 100,000 tourists per annum for boosting the gem related eco-tourism by 2030.

Goal 3:

1. Facilitating to create a vibrant city space with gem industry related economic opportunities to the local community by 2030.
2. Facilitating to create a disaster resilient city through green blue network by 2030.

CHAPTER 05

SWOT AND DETAIL ANALYSIS

Strategic SWOT is a developed version of SWOT which provides a vision based baseline assessment. It considers the internal and external potentials as well as issues in achieving the prospected vision. This sub section of the baseline assessment explains the strengths, weakness, opportunities and threats in developing Ratnapura as “The Gem City of Sri Lanka in the Greens”.

Goal 1: Make Ratnapura, ‘The National Center for Gem related business in Sri Lanka’.

Table 5.1: SWOT analysis for Goal 01

Goal 01	Make Ratnapura, ‘The National Center for Gem related business in Sri Lanka’.
<p>Strengths</p>	<ul style="list-style-type: none"> ➤ International market presence - Gem Industry remain at the 5th place in the export economy & 3% of contribution gives to the GDP by Gem Industry by 2017 ➤ Location - Suitable Geographical Location ➤ Culture - Gem trading culture and the chains of it has been already established. ➤ Skilled Labor Force - 1/3rd (30%) of the labor force are involved in gem mining sector and 1/4th (25%) involved in gem trading sector ➤ Brand Recognition -International

	<p>identity as a gem trading point and International acceptance for quality gems</p> <ul style="list-style-type: none"> ➤ Accessibility- Located only 100 km away from Colombo (commercial capital)&located in a major transportation node
Weaknesses	<ul style="list-style-type: none"> ➤ Inadequate of Gem industry related facilities
Opportunities	<ul style="list-style-type: none"> ➤ Proposed Ruwanpura Expressway
Threats	<ul style="list-style-type: none"> ➤ Flood ➤ Local money leakage to the other cities and countries through gem trading

Source: Planning Team of UDA - 2018

Strengths

1. Gem Industry remain at the 5th place in the export economy & 3% of contribution gives to the GDP by Gem Industry by 2017

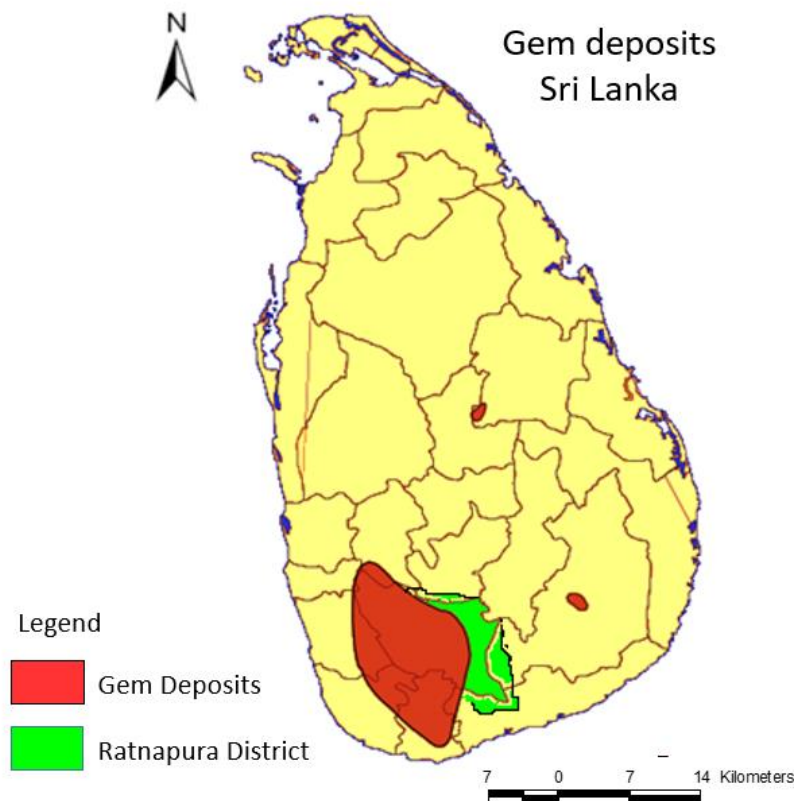
Gem Industry owned a bigger place in Ratnapura economy since pre-colonial period. It was remained at the 5th place of the export economy in the Sri Lanka according to the statistics of Central Bank 2016 report. 3% of contribution is given to the national economy by Gem industry at present. (Refer annexure 21)

2. Suitable geographical Location

Ratnapura has located in a geographical location where gem beds area laid down. Location of Ratnapura town in a valley between South West Mountain slopes and the central uplands. (Refer annexure 3) The normal annual temperature is 29.44⁰ C and the normal rainfall within town varies from 3000 mm to 4000 mm. These factors have become as a special factor for its geological conditions which is favorable for creating

gem beds in a long run. Moreover, the city itself and the planning area are bearing gem lands around 90% of it. (Source: Gem & Jewelry Authority) (Refer annexure 22 and 23)

Figure 5.1 Gem Deposits – Sri Lanka



Source: Regional Study (2006/10) – Department of Town & Country Planning, University of Moratuwa

3. Gem trading culture and the chains of it has been already established.

Considering the processes of gem industry, those gem trading processes have already been established in Ratnapura from ancient time. The nodes, streets, squares have been organized by people and the time periods of the particular places are known to them. The below mentioned diagram shows those processes of it. Thus it is easy to have a smooth flow of gem trading with the acceptance of nationally and internationally.

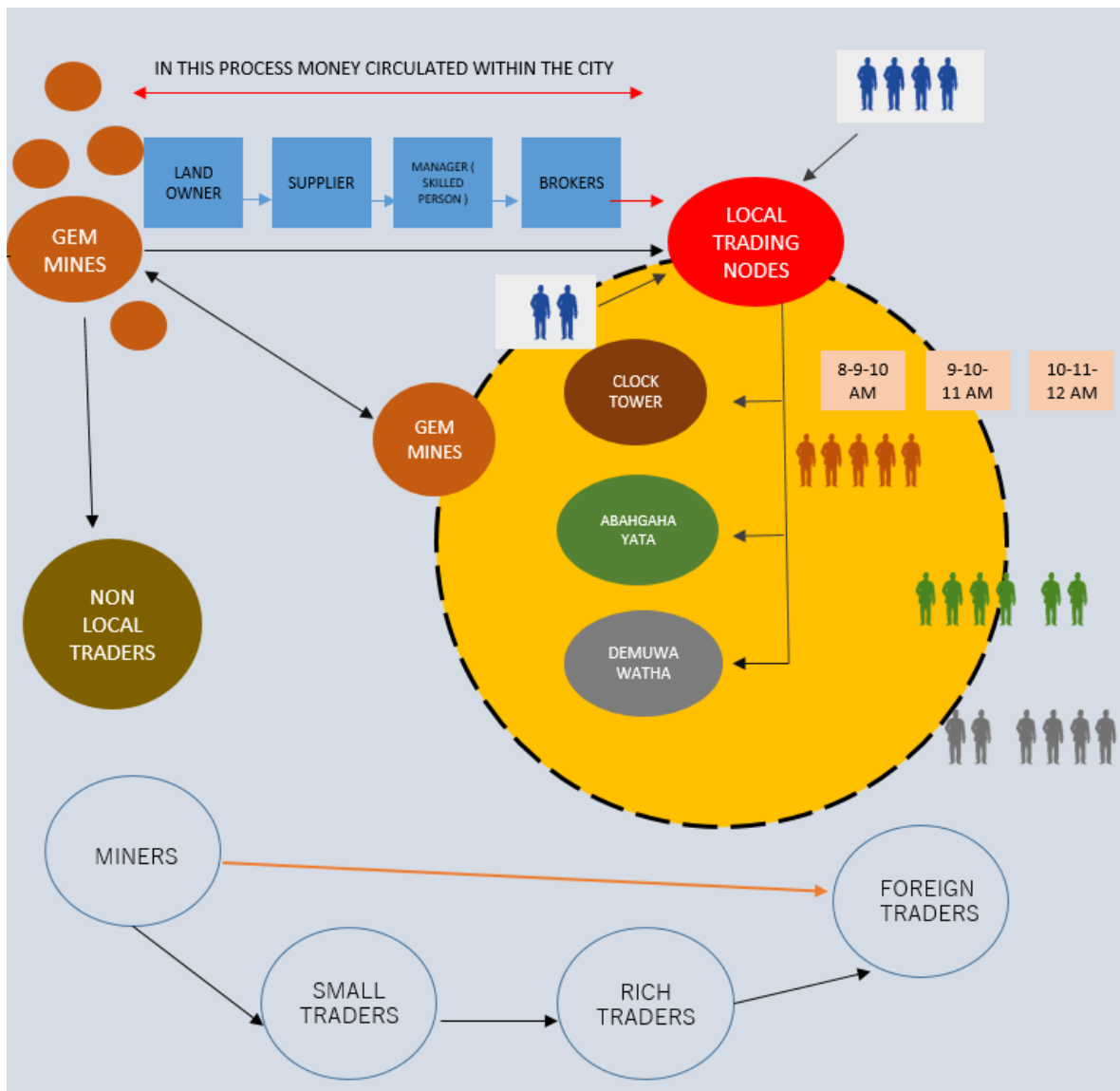


Figure 5.2 Process and Chains of Gem Culture

Source: Studio 5 (2017/18) – City School of Architecture, Colombo

4. $\frac{1}{3}^{\text{rd}}$ (30%) of the labor force are involved in gem mining sector and $\frac{1}{4}^{\text{th}}$ (25%) involved in gem trading sector– Labor force

Ratnapura is famous for both mining and trading activity in gem industry. $\frac{1}{3}^{\text{rd}}$ of the total population engaged with the mining industry and $\frac{1}{4}^{\text{th}}$ of the total population engaged with the trading industry by now.

Figure 5.3. Employment of Gem Mining and Trading



Source: Regional Study (2006/10) – Department of Town & Country Planning, University of Moratuwa

5. International identity as a gem trading point and International acceptance for quality gems – Brand recognition

Ratnapura has produced three of the world’s largest blue sapphires, including the “Blue Belle of Asia” ‘(which adorned the British crown and holds the world record for any Sapphire sold at an auction); as well as the ‘Star of India’, displayed at the New York Museum of Natural History. Correspondingly, Sri Lanka has been known as a land of gems throughout history. King Solomon was said to have procured a great ruby for the queen of Sheba from Serendip (Sri Lanka’s former name). It is believed that Sinbad’s visit to the mountains of Serendib, refers to Ratnapura in Sri Lanka. (Source: *Sabaragamuwa Wansha Kathawa*)

6. Located only 100 km away from Colombo & being located in a major transportation node – Accessibility

Accessibility is a major factor which influence to the business. Ratnapura is located at a major transportation node and the 101 km is accessible within 3 hours from the

commercial capital in Sri Lanka through A004 road. It is about 97 km via Panadura road and apart from that, Ratnapura is accessible to Colombo via southern expressway due to Galanigama interchange by 98 km. (refer figure 2.4)

Weaknesses

1. Lack/ inadequate of gem industry related facilities
 - No an additional transport mode to come (rail/ water/ air transport)
 - Absence of academic opportunities to learn gemology and do further researches
 - Absence of larger scale / government gem museums
 - Absence of diversified, value added gem related economy
 - Absence of attractive streetscapes to facilitate gem related economy

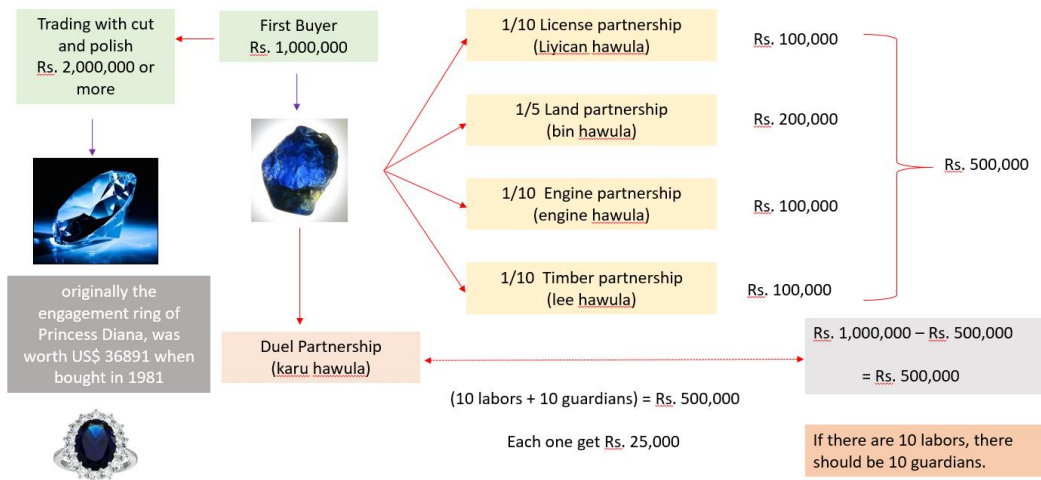
Ratnapura is accessible only through road transportation and it takes nearly 3 hours in one trip between commercial capital (Colombo) and Ratnapura. But, in the sense of gem business businessmen are unlikely to spend hours on roads. Although it's located at a strategic location, there is no railway, expressway, airport or a novel base to enter the city for the moment is a weakness because of it.

Ratnapura has skilled labor force to do gem mining and gem trade but the majority took the knowledge through generations. Therefore, people who comes from the outside doesn't have a proper way of entering to the gem market. Also, for the people who is eager to learn about gemology and do researches furthermore has no way of having an educational opportunity up to university education.

Absence of diversified gem related economy and absence of government authorized gem museums with auction facilities have created an unfavorable situation for the gem market activities at present. Ratnapura produces row gems to the market and the value added part, which is more important within the gem industry is missing at present. It has created a huge money leakage to the city currently.

The total chain can be understanding through the following example. This example has given based on the assumption of the founded gem is worth Rs. 1,000,000 to the first buyer.

Figure 5.5. Example for a money leakage in the gem industry chain from mining to trading



Source: Urban Development Authority

When the chain goes and starting from first buyer, the worth of the gem getting double and more. So the local people won't get the maximum benefit of the real worth of the gem stones. Thus, diversified and value added gem related economy is under-utilized yet.

At present, there is no an attractive streetscape in Ratnapura. Almost all the streets are same for the eyes of strangers. Identity of a gem city has lost in the city streetscape and it has catered to only for the confusion and congestion within the city.

Opportunities

1. Proposed Ruwanpura Expressway

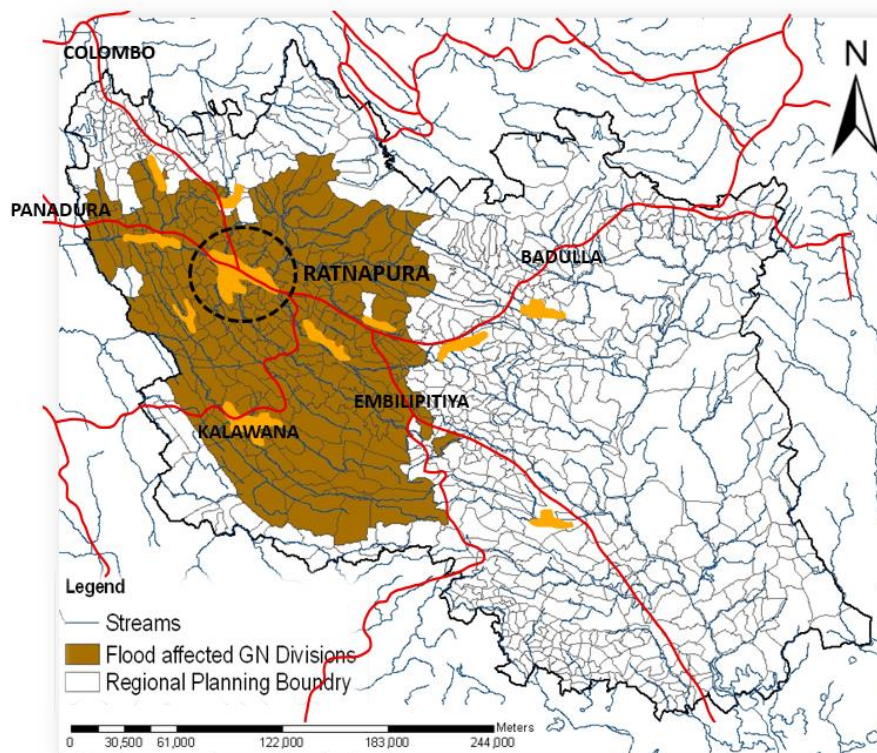
Proposed Ruwanpura Expressway is 73.9 km from the Kahatuduwa interchange to Palmadulla. The Project has been decided to complete by 2021 and it will improve the connectivity, accessibility and reduce the time which is more important to business people. It is anticipated that the new expressway will reduce commuting time between Colombo and Ratnapura to 45 minutes. (Refer annexure 32)

Threats

1. Flood

Ratnapura getting affected by three types of flood termed critical flood, major flood and minor flood. It is prone to have an annual flood in May – June and October months due to the rainfall pattern. (Refer the annexures for more details) Apart from that, the city affected by major flood in 10 years gap which grabs national wide attention for it. The city itself flooded about 80% of land in it around 2 – 5 days when it affected with this flood disaster. This situation damage for the connectivity, accessibility, physical infrastructure and city beautification. Simultaneously, local level institutions have to spend an extra cost and labor force to recover the supply chains and cleaning.

Figure 5.6. Flooded Area – Ratnapura Region

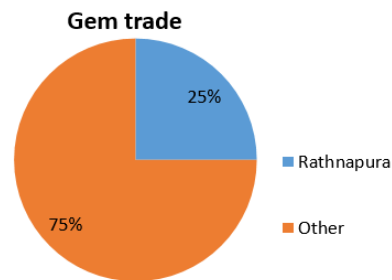


Source: Regional Study (2006/10) – Department of Town & Country Planning, University of Moratuwa

2. Local money leakage to the other cities and countries through gem trading

In gem trading only 25% traders belongs to the Ratnapura. The other buyers are from and the Beruwala gem market, Thailand Gem market and other markets in worldwide dragging the trading power from Ratnapura Market by now.

Figure 5.7. Gem Trade



Source: Regional Study (2006/10) – Department of Town & Country Planning, University of Moratuwa

Goal 2: Create Ratnapura, ‘An attractive Destination for Visitors in Sri Lanka’

Table 5.2: SWOT analysis for Goal 02

Goal 02	Create Ratnapura as ‘An attractive Destination for Visitors’ in Sri Lanka
Strengths	<ul style="list-style-type: none"> ➤ National & International popularity as the ‘Gem City’ ➤ Sabaragamuwa Maha Saman Dewalaya ➤ Historic, religious and cultural importance and significant sites (20 - 25 places) ➤ Rich bio diversity ➤ Kalu river and inland water bodies ➤ Major transportation node
Weaknesses	<ul style="list-style-type: none"> ➤ Inadequate linkage between gem industry and tourism industry ➤ Improper facilities to experience the sites ➤ Decreasing the forest cover ➤ Urban Heat ➤ Land of the planning area is unstable for larger scale developments due to horizontal mines
Opportunities	<ul style="list-style-type: none"> ➤ Centralized to four major tourism zones and belongs to central fragile area ➤ Proposed Ruwanpura expressway
Threats	<ul style="list-style-type: none"> ➤ Flood

Source: Planning Team of UDA - 2018

Strengths

1. National & international popularity as the Gem City

Any city in the world has to have an identity to be remembered by people worldwide. Ratnapura is “The Gem City” since ancient time. It is evident from the historical records

of sailors such as Plini, Hiyunsan and IbanBatuta that Ratnapura town has won a world level attraction about the quality of Gems in Ratnapura area. It is believed that due to availability of plenty of Gems, later it was called as 'Ruwan Puraya', 'Ratnapuraya'.
(Source: Sabaragamuwa WanshaKathawa)

2. Sabaragamuwa Maha Saman Dewalaya

Ratnapura has a strong cultural background which is related with God SumanaSaman. Sri Padaya and God Sumana Saman are two main icons when people remember Ratnapura City. The Sabaragamuwa Maha Saman Devalaya is considered the main Devalaya of god Saman except for the Shrine at top of Sri Padaya and relating to the ancient past, Sumana Saman Dewalaya has hundreds of years of history by now. Currently it is a hotspot which attracts more than 5000 people daily and the number gets increased according to the seasons of the year. It is attracting around 150,000 devotees in its annual *Esala Perahara* (procession) season by now. (Refer annexure 26)

3. Historic, religious and cultural importance and significant sites

Ratnapura is a city with a cultural identity of Sri Padaya and God Saman since King's era. Moreover, Ratnapura has an identity with the heritage places which was built and used in Ehelepole Era and Colonial era. Around 20 historical places and no. of ancient temples have been established within the planning area as identified.

4. Rich bio diversity

Ratnapura has a variety of species and higher no of endemics in it due to the consistence within the wet zone. Considering the situation of Ratnapura, the average annual temperature is 27.1 °C. Annual mean rain fall is 3760mm. It has various soil types which is beneficial for preserving natural forest cover.

Table 5.3. Bio Diversity of Ratnapura Region

	No. Of Species Of Ratnapura	Total In Sri Lanka	100%	No. Of Endemic In Ratnapura	Total in Sri Lanka	100%
Butterflies	65	242	26.85%	21	41	51.21%
Fishes	10	64	15.62%	7	17	41.17%
Amphibians	19	38	50.00%	8	19	42.10%
snakes	29	90	32.22%	14	39	35.89%
Birds	141	384	36.71%	24	26	95.00%
mammals	40	85	47.05%	7	12	58.33%

Source: Young Biologists Association, Sri Lanka

Urban forests are lesser to be seen in many countries as well as in Sri Lanka. But apart from Udawatta Urban forest in Kandy, Sri Lanka, Ratnapura has its' own urban forest close to the city center. All these elements create a rich bio diversity in Ratnapura.

5. Kalu river and inland water bodies

As mentioned in historic documents, the Kalu Ganga had used as a naval trade route from Western shoe to Sabaragamuwa Province from ancient times. Kalu River meanders closest to the city and it flows slowly within the city limits. Apart from Kalu River, Wey River and several other waterfalls and streams within the planning area. Also, 80% of the planning area consist with inland water bodies. (Refer annexure 30)

6. Major transportation node

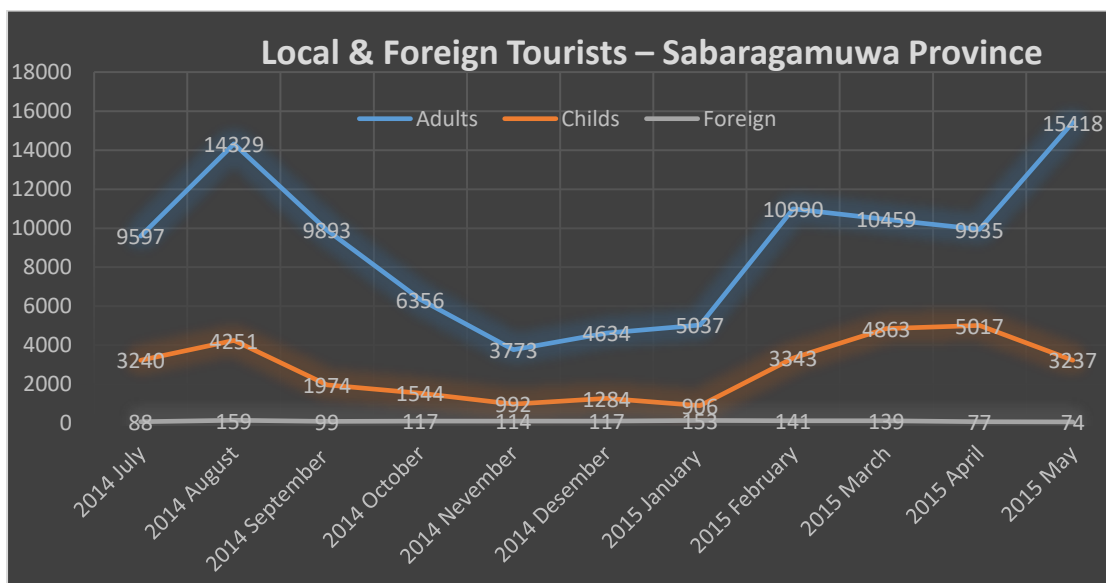
Ratnapura is located in a major transportation node and it is connected with east, west and south of the Sri Lanka. Thus, as a tourism attraction point, it is easy accessible and within 3 hours it can be reached from Colombo (101 km).

Weaknesses

1. Inadequate linkage between gem industry and tourism industry

Ratnapura located at the center of four tourism zones and it is a major tourism channel to hill country and down south. But still the foreign tourism who dropped by Ratnapura is incredibly low. Also, gem industry has not been linked with the tourism and the local economy has lost an identical part of it which can thrive foreign income easily.

Figure 5.8. Foreign and Local Tourists – Sabaragamuwa Region



Source: Ministry of Tourism, Provincial Council – Ratnapura

2. Improper facilities to experience the sites

Improper facilities to experience the site in term of no proper guidance and access. Ratnapura has lot of tourism related potential. But most of the tourist not much aware to access these places. The reason behind is no proper tourism guide plans and sign boards to attract the tourists and to direct the tourists for the tourism potential places. (ex: historical value temples)

3. Decreasing the forest cover

Forest area in Ratnapura is an important factor for the local as well as national geographic situation since it is identified as a part of the central fragile area to be preserved in order to keep the balance of environmental sustainability of Sri Lanka. But due to the deforestation, the forest cover has been reduced around 10% within the planning area by 2017. Moreover, Ratnapura is the only city which has an urban forest, grown in naturally apart from the Udawatta Forest in Kandy and currently the Pompakele Urban forest has lost around 30% of its area due to encroachments. (Refer annexures for more details) Losing the forest cover is a negative fact in the creation of an attractive tourism destination by 2030, if it continues at this rate.

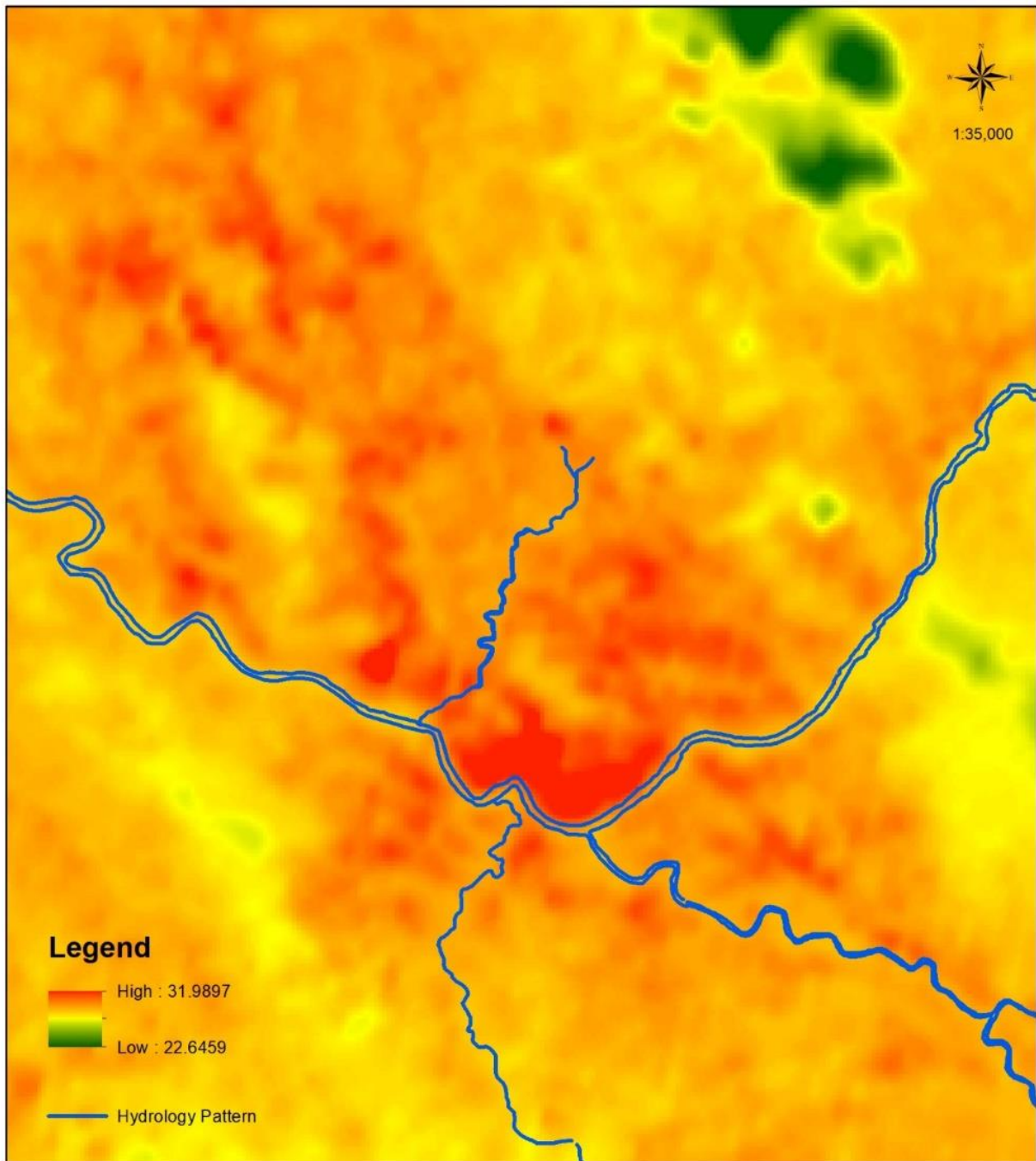
4. Urban Heat

The temperature of Ratnapura city is increasing up to 31°C at day time in dry seasons (December – March). Being located in a basin area which doesn't have smooth wind flow and with the influence of the humidity, people feel around 35°C at day time of a sunny day although the actual temperature is 31°C . Thus, if this heat continues, it is become inconvenient to the visitors to walk and having a leisure time in the day time in sunny days. (Refer map 5.1)

5. Land of the planning area is unstable for larger scale developments due to horizontal mines

The whole planning area located on the gem beds and people has tended to have horizontal mines everywhere in searching of gem stones. Ratnapura is issuing more than 6000 licenses annually for gem mining and it is believed that the no of illegal mines high in some areas. Mines should close in a proper manner after the work done but there are improper sand/gem mining and abundant the mines at present. Tourism is related with various kind of construction projects and it is bit risky for larger scale development projects to be carried out in this land due to the unstable situation of the land. (Refer annexure 22 and 23)

Map No. 5.1. Urban Heat



<p>Urban Heat - Ratnapura Ratnapura UDA Planning Area</p> <p>Source : Urban Development Authority</p>	 <p>Urban Development Authority April 2018</p>
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Opportunities

1. Centralized to four major tourism zones and belongs to central fragile area

Ratnapura tourism zone which includes Kuruwita & Ratnapura (Minipura) is centralized into four major tourism zones termed Seethawaka, Samanala, Sinharaja and Udawalawa in Sabaragamuwa Province and it belongs to the central fragile area according to the National Physical Plan. These four zones attract more than 100,000 tourists annually. (Refer annexure 28)

2. Proposed Ruwanpura expressway and bypass road

Proposed Ruwanpura Expressway is 73.9 km from the Kahatuduwa interchange to Palmadulla. The Project has been decided to complete by 2021 and it is anticipated that the new expressway will reduce commuting time between Colombo and Ratnapura to 45 minutes. It will improve the connectivity, accessibility and reduce the time which is more important for local and foreign tourists in the future. (Refer annexure 32)

Threats

1. Flood

Ratnapura getting affected by three types of flood termed critical flood, major flood and minor flood. It is prone to have an annual flood in May – June and October months due to the rainfall pattern. (Refer the annexures for more details) Apart from that, the city affected by major flood in 10 years gap which grabs national wide attention for it. The city itself flooded about 80% of land in it around 2 – 5 days when it affected with this flood disaster. This situation damage for the connectivity, accessibility, physical infrastructure and city beautification which directly connect with the tourism. Simultaneously, accommodation facilities to the tourists will be at high risk getting flooded since those are built in sensitive areas or adjutant to sensitive areas. (Refer annexure 15)

Goal 3: Create Ratnapura, ‘A livable City’ for the local community.

Table No. 5.4: SWOT Analysis for Goal 03

Goal 03	Create Ratnapura as ‘A livable City’ for the local community
Strengths	<ul style="list-style-type: none"> ➤ Ideal demographic condition ➤ Social infrastructure is at an acceptable condition ➤ City formed as a dual city and service delivery formed as clusters
Weaknesses	<ul style="list-style-type: none"> ➤ Having a strong economic base but it is not yet used for elevating of the city or people in it. ➤ Traffic congestion ➤ Losing greenery and lack of comfortability of walking ➤ Absence of alternative transport modes ➤ Absence of cafes and restaurants ➤ Increasing level of crimes ➤ Less inspiration for cultural activities ➤ Lack of active and passive recreational spaces
Opportunities	<ul style="list-style-type: none"> ➤ Proposed Ruwanpura expressway and bypass road
Threats	<ul style="list-style-type: none"> ➤ Flood

Source: Planning Team of UDA - 2018

Strengths

1. Ideal demographic condition

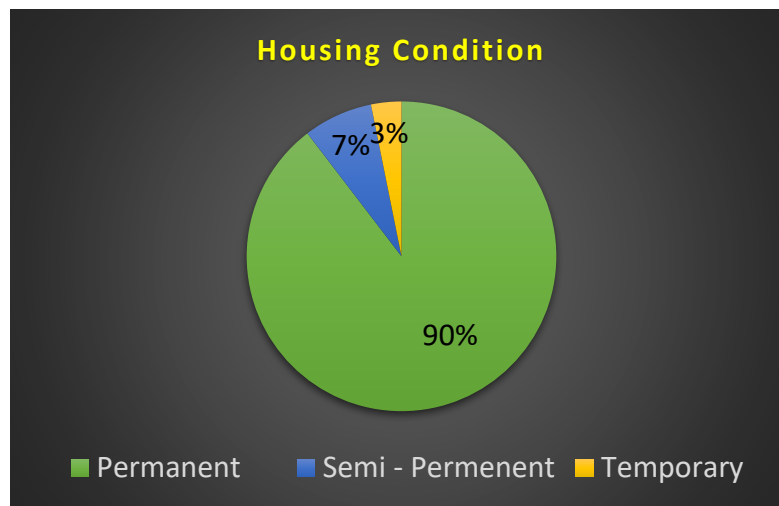
The variety of people and jobs needed to make a city work. A total of 69,994 from the total population were employed in 8 major sectors of the city’s economy in the year of 2016. More than 30% of them were employed as government officers, while half of the total working population was employed in private businesses, and self-employment which

relates with gem industry and agriculture crops. Also, considering the racial and ethnic diversity and age diversity of Ratnapura. majority of the population belongs to the Sinhala – Buddhist category but people who belongs to the other races and religions also lives peacefully in this planning area. 70% of the working force is 18 – 60 in Ratnapura. The natural growth rate is 1.0 and the expected population in 2030 is 77,925 according to the analysis. To make Ratnapura as a livable city in 2030, the particular demographic condition is ideal.

2. Social infrastructure is at an acceptable condition

Ratnapura is famous for health, education and court services within the Sabaragamuwa province since it is the major service provider for those facilities. 5 main stream schools including one boys’ school and three girls’ schools, 01 base hospital with three private hospitals, court complex with necessary facilities are those. Furthermore, 90% of the housing is at permanent condition within the Ratnapura.

Figure 5.9. Housing Condition – Ratnapura



Source: Resource Profile 2015 – Ratnapura DSD

3. City formed as a dual city and service delivery formed as clusters

In Ratnapura, the city has been formed mainly into two clusters as administration activities and commercial activities. The New Town act as the administration capital of the Sabaragamuwa Province and 90% of the land belongs to the government institutions

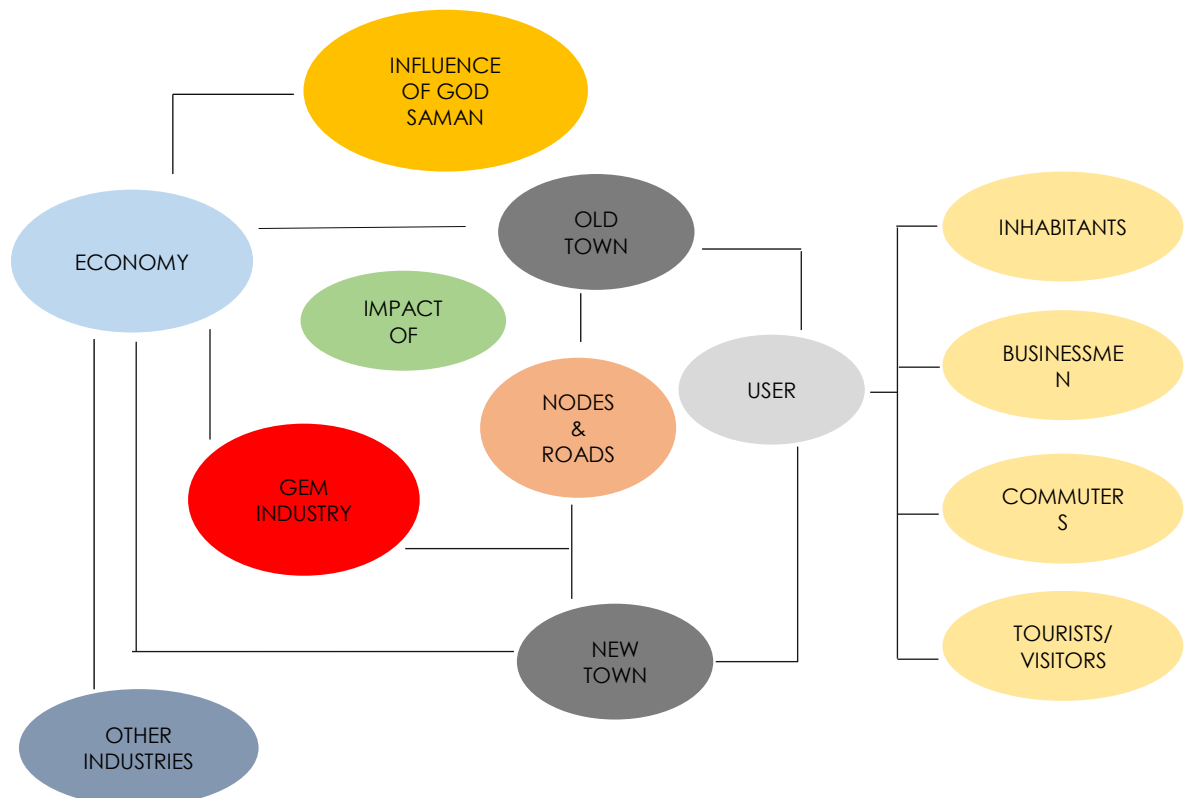
in it. The Old Town act as the commercial capital and almost 90% of the commercial activities centralized into old town. Simultaneously, Ratnapura has been formed as clusters when considering the service delivery. New Town for the administration activities, Court Junction for the court activities, Hospital Junction for the health activities, old town for the commercial and educational activities can be seen in narrow down view.

Weaknesses

1. Having a strong economic base but it is not yet used for elevating of the city or people in it.

Thus, Ratnapura town’s economic activities are based on location and geographical features. Accordingly, the town’s economic foundation has based on certain nodes and determined on the gem industry. So, many economic activities have taken place in the area to facilitate to the gem industry but the money which comes through the industry not being invest for the city and people.

Figure 5.10. Economic Structure of Ratnapura City

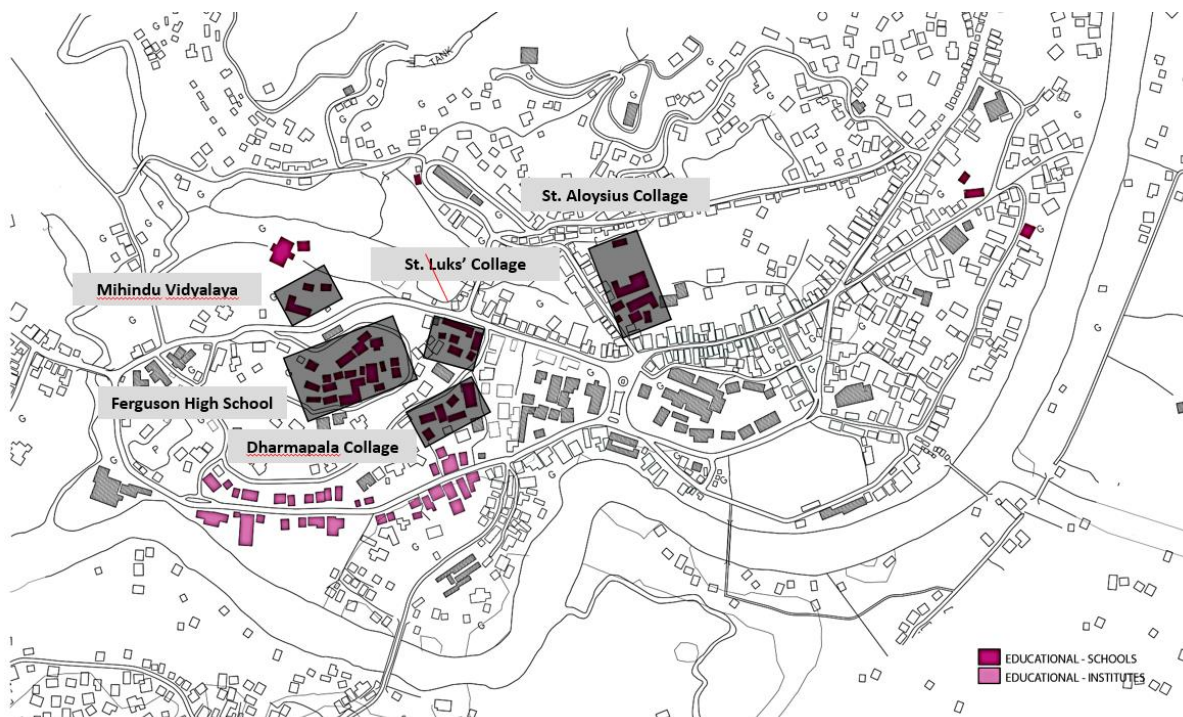


Source: Studio 5 (2017/18) – City School of Architecture, Colombo and UDA

2. Traffic congestion

Considering the spatial arrangement, five major schools have been located at the heart of the city and about 12,000 of school children (30% of total no of school children in the schools of planning area) and around 10,000 more students who comes for the tuition purpose makes more activities which blocks the A004 road. The service supply of the city has been divided into various parts of the city and it makes more people and vehicular movement within the city at the same time. (Refer annexure 16, 17 and 18)

Figure 5.11. Spatial Arrangement of Ratnapura City



Source: Studio 5 (2017/18) – City School of Architecture, Colombo and UDA

Moreover, the vehicular which doesn't need to enter the city has to pass this way at present due to non-existence of bypass roads. This situation creates a heavy traffic flow on A 004 road which makes vehicles wait not less than 15 minutes to pass the city limit in a sunny time and more than 20 minute in a rainy time. The traffic disturbs to the people activities and vice versa. In the local level, it creates a discomfort to the local community

by trafficking to the local service delivery since Ratnapura is the focal point of the service distribution in the district.

3. Losing greenery and lack of comfortability of walking

Forest cover of Ratnapura has been reduced around 10% within the planning area by 2017 compared to the situation of 2007. Moreover, the Pompakele Urban forest has lost around 30% of its area due to encroachments since it is the only urban forest, grown in naturally apart from the Udawatta Forest in Kandy and currently. In the meantime, decreasing the forest cover cause for increase the urban heat as well. The temperature of Ratnapura city is increasing up to 31°C at day time in dry seasons (December – March) people feel around 35°C at day time of a sunny day although the actual temperature is 31°C with the influence of the humidity and being located in a basin area which doesn't have smooth wind flow. Thus, it is become inconvenient to the local people to walk and work in the day time in sunny days.

4. Absence of alternative transport modes

The only way of entering to Ratnapura is A004 road currently. Although it's located at a strategic location, there is no railway, expressway, airport or a novel base to enter the city for the moment.

5. Absence of cafes and restaurants

Having plenty of cafes and restaurants is a good indication that a city is very livable. It probably doesn't come as a surprise that many of the town that scored well in this area are particularly popular with businessman, tourists and local people in various categories. In Ratnapura, only about 5 cafes can be seen to stay and have a chat. (Pizza Hut, KFC, KeleKade, P&S, Rathnaloka)

6. Increasing level of crimes

The level of crimes have been increased up to 22% from 19% in offence about body and decreased up to 78% from 81 in offence about properties according to the Police records in 2016 and 2017. (Refer annexure 34)

7. Less inspiration for cultural activities

Ratnapura has a strong cultural background which is related with God Sumana Saman. In August, the Saman Dewala Perahara season begins and the city gets trigger with it. But, the city doesn't held any other cultural event although it has a cultural identity. There is 01 theater, 01 national museum and 02 libraries in Ratnapura. But, there is an absence of having enough space and aesthetic beauty in those places. The places have been under-utilized at the moment.

8. Lack of active and passive recreational spaces

Ratnapura has to satisfy with the allocated 0.066 km² recreational space by present and it is not yet utilized for now. Children's park at riverside occupied by the unauthorized settlers and Ehelepola Museum premises lost its beauty with the damages of flood. (Refer annexure 35)

Opportunities

1. Proposed Ruwanpura expressway and bypass road

Proposed Ruwanpura Expressway is 73.9 km from the Kahatuduwa interchange to Palmadulla. The Project has been decided to complete by 2021 and it is anticipated that the new expressway will reduce commuting time between Colombo and Ratnapura to 45 minutes. The expressway will be an easy access to the local community as a fast way of travelling between Ratnapura and Colombo. (Refer annexure 32)

The bypass road has been decided to construct 3.5 km from Court junction to Warakathota bridge as 4 lane road. The road will bypass the city center and construct upon pillars at the lower contour level to avoid the damage of flood. It will improve the connectivity, accessibility and reduce the time which is more important for the local

community and commuter population. Also, it will act as the major connecting channel in flood season.

Threats

1. Flood

Ratnapura getting affected by three types of flood termed critical flood, major flood and minor flood. It is prone to have an annual flood in May – June and October months due to the rainfall pattern. (Refer the annexures for more details) Apart from that, the city affected by major flood in 10 years gap which grabs national wide attention for it. The city itself flooded about 80% of land in it around 2 – 5 days when it affected with this flood disaster. This situation cause for the property damages and emotional effects to the local community. It is been recorded as per the disaster management center information that the no of flood affected families are 206 and people area 1203 in the 2017 incident. (Refer annexures for more details) this situation create a dependable community in a long run due to the government aids in the meantime. Also, it damages to the physical infrastructure, connectivity and city beatification of the city.

Ratnapura is the focal point of the supply chain in the district. Considering the commercial activities in Ratnapura, retail and wholesale activities act the major part of it. Around 700 shops has been registered in the municipal council and over 80% of it gets affected by annual flood. Noticeably, the entire population of the planning area, which is around 70,000 depends on this focal point of supply. In fact, the flood damages to the local supply chain annually and the local authorities and other local level institutions have to spend an extra cost to recover the supply chains in a cleaned environment later on. (Refer annexure 33)

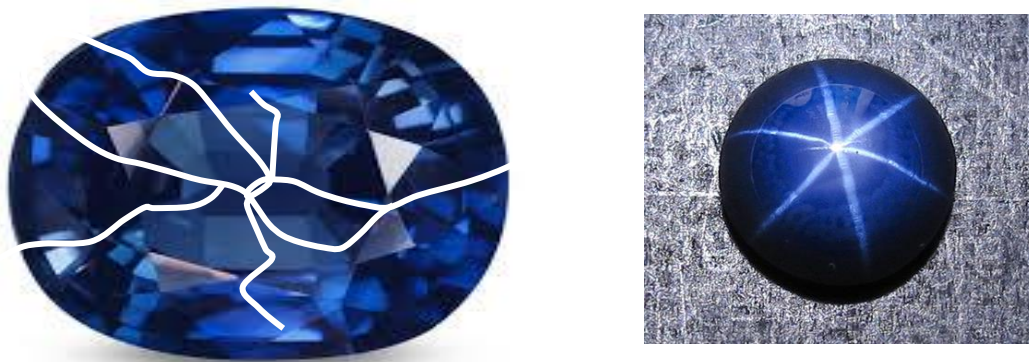
CHAPTER 06

THE PLAN

6.1 Concept Plan

Ratnapura Development Plan has based on the metaphor of “Blue Star Sapphire” to achieve the vision of “The Gem City of Sri Lanka in Greens” in 2030. This Star Sapphire is a representation or a symbol of the gem city which is going to be re-established in future. Considering the three basic characters of the particular sapphire, it is being visible that the physical formation of the road structure of Ratnapura town represents the six lines of the gem and it is a well-known factor that Ratnapura is famous for blue sapphires. Thus the concept has invented considering the above factors.

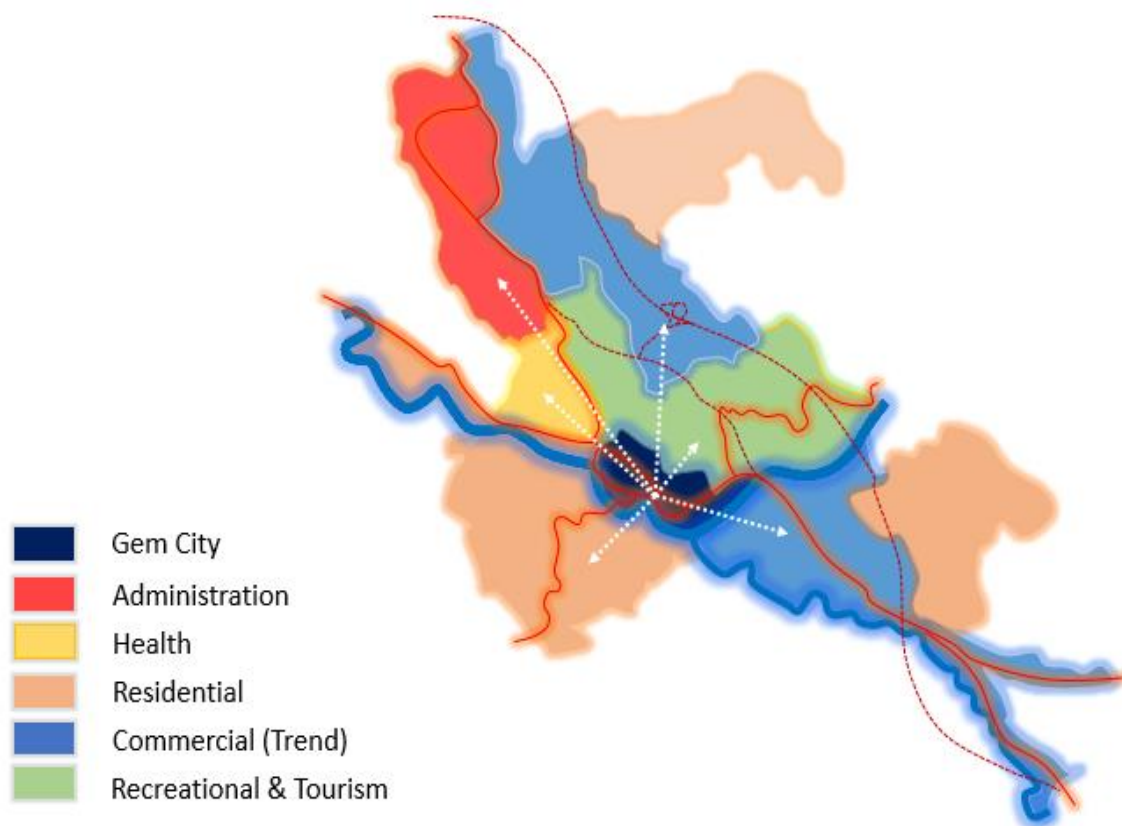
Figure 6.1. Blue Star Sapphire as The Metaphor of Ratnapura Urban Development



Blue Star Sapphire has three interesting facts. It cannot be identified unless it does not perform in a suitable environment. The worth of the gem increased when it gets cut at the right place by a trained and experienced gem cutter. Star Sapphire has two layers as color layer and lines layer. When the both layers are sharp and thick, the worth of the gem getting increased.

Considering the above three facts, Ratnapura Development Plan will help to create a suitable environment to make this city shine in future. The plan itself has a zoning plan which has done keenly to increase the worth of the city.

Figure 6.2. Concept of the Development Plan



Ratnapura Town will develop based on the star shape by 2030 through zoning regulations of land use strategy. Administrative, commercial, residential, health, recreational and the trend of the commercial development will be pushed out from the city center to six directions by facilitating those functions in each direction.

Moreover, the outer layer of the city center will be covered with the green and blue layer while the inner city will be strengthened based on six principals to make this gem city worth and compete with other cities in future. Connectivity, Identity, Adoptability, Opportunity, Livability and Beauty are the above mentioned principals. This will be achieved by,

1. Connectivity through convenient transportation
2. Identity through gem industry promotion
3. Adoptability through disaster resilience

4. Opportunity through diversified economic activities
5. Livability through creating more public spaces
6. Beauty through green blue network

The vision for Ratnapura focuses on six outcomes that will be achieved over the long term according to the metaphor, it has based. Similarly, the development will be happened towards six directions in future. These are supported by a set of strategic objectives and Directions that clarify the steps that the government will take to achieve them.

6.2 Proposed Land Use Plan

Ratnapura development will be directed in to Kuruwita and Warakatota directions according to the analysis of Development Pressure and there is a trend of emerging small townships based on junctions of Weralupa and Batugedara. These townships will be accessed and benefited through the proposed by pass road in future apart from the main road. Also, being a valley, prone to the disasters, scarcity of developable lands, high commuter population and several other factors have been considered when preparing land use plan.

Proposed land use plan is focused on achieving its goals and objective in order to pursue the vision of the plan. Thus, it has expected to facilitate Ratnapura Town to become a national Gem Center with marketing spaces, refreshment and accommodation facilities together with smooth transportation system. The New Town will be facilitated as the provincial administration capital by providing necessary facilities for it. Creating a recreational cluster between Ratnapura town and New Town to have a visual linkage between those two is another purpose of this land use plan.

Moreover, facilitate to clustering services like health, administrative and commercial is done through the plan. It is expected that providing necessary facilities for those clusters is easier when scattered those in a particular boundary.

Ruwanpura expressway will be act as a channel of connecting Ratnapura with Commercial capital of Sri Lanka within shorter period of time apart from the A 004 road. Besides, the proposed Weralupa lake will be a sea plane destination for tourists and Kalu river will be used as a novel route for tourism purpose. These projects also have been incorporated within other strategies when preparing land use plan.

Ultimately, the land use plan will be served the purpose of creating Ratnapura as a National Gem Center of Sri Lanka.

Map No. 6.1. Proposed Land Use Map

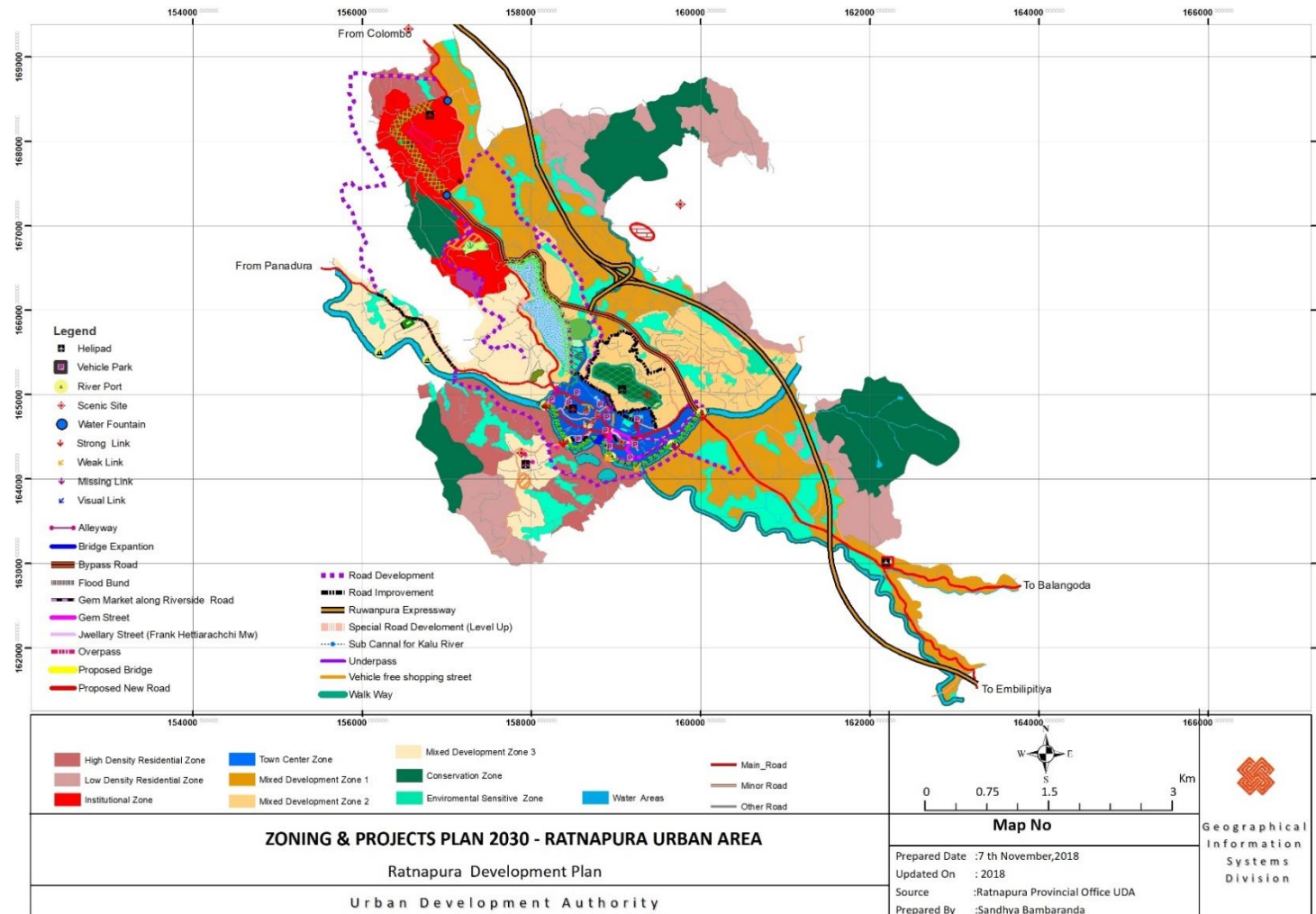


Figure 6.3. Existing Skyline of Ratnapura

Existing Skyline

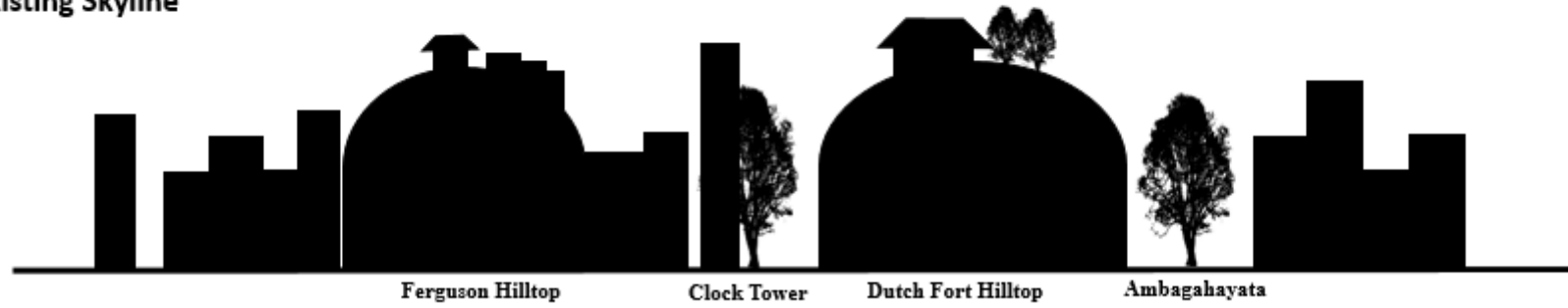
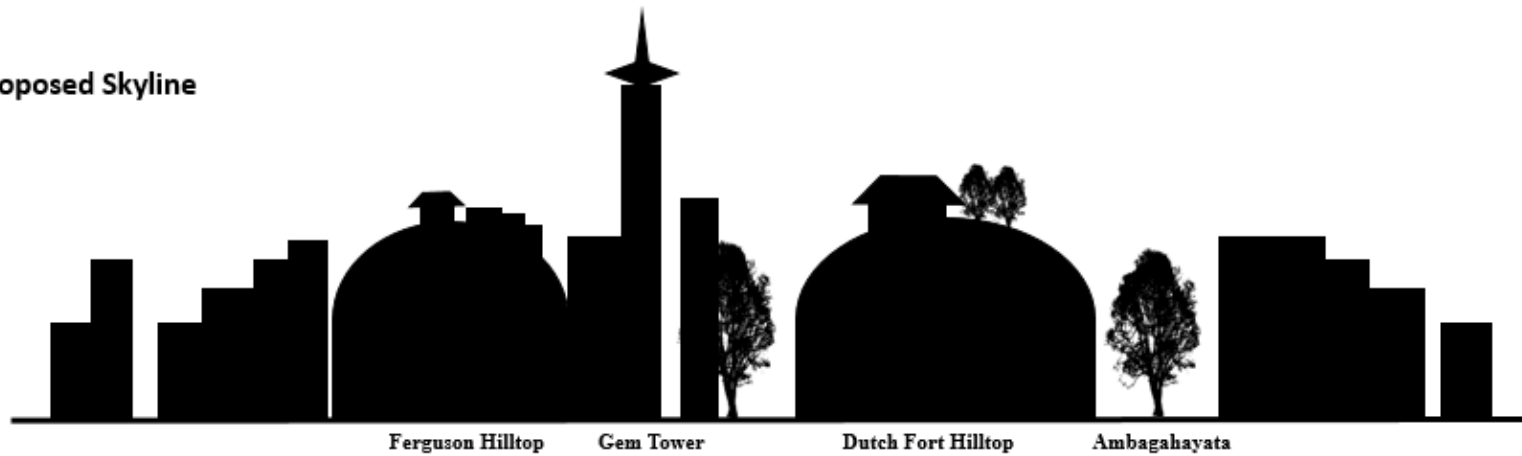


Figure 6.4. Proposed Skyline of Ratnapura

Proposed Skyline



6.3 Social and Physical Infrastructure Development Strategies

6.3.1 Service Plan

6.3.1.1. Housing

Housing is for peoples living and it has many interrelated aspects in the context of built environment in Ratnapura. The total number of housing within the MC area is 9864 according to the analysis done by UDA based on the statistics of divisional secretariat in 2017. Out of the particular housing lot, 79.1% is permanent, 19.5% is semi-permanent and 1.4% is temporary.

More accurately, 50% out of the temporary housing is situated in Kospelavinne, Thiriwanaketiya, Pulingupitiya and Mudduwa areas which belongs to the reservations of rivers and railway and 50% of the semi-permanent housing placed in Saman Place, New Town and Samangipura area of the town where the residents of government lands positioned. The low income people reside in these areas without having the complete ownership can be seen in such areas. (Refer annexure 36)

Though non-residential usages have developed in Ratnapura town – North, Ratnapura Town – East which belong to the town center, the residential activities too have been placed with a much density. The main reason for that is the existing facilities available in the town center.

In determining the housing need around Ratnapura town, the main problem is this area often vulnerable for natural disasters rather than other towns in Sri Lanka. The area may need more housing supply than the amount determined due to the landslides and floods occur within extreme rainy season.

Table No. 6.3.1.1. Housing

Year	Population	Number of Houses	Number of Families	Housing Deficit
2011	49085	9864	10908	1044
2016	52520	10603	11671	1068
2021	56197	11398	12488	1089
2026	59131	12253	13362	1109

2030	62604	13171	14298	1127
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Source: Field Surveys of the Urban Development Authority

In determining the housing deficit above, the following assumptions too were used in addition to the existing housing scarcity.

- The population growth rate is 1.5
- The number of members in a family is 4
- The annual housing growth rate is 4.5
- The annual houses depreciation is 1%

The number of semi-permanent houses i.e. 1944 out of the existing housing units in the town i.e. 9864 can be further developed in same places and the number of temporary houses i.e. 249 which are located in flood prone areas also must be added to the number of housing deficit as houses that must be re-constructed. The expected housing deficit up to 2030 is 1127 according to the analysis.

STRATEGY 1.1

Construction of New Housing Projects within the MC boundary

1. Galkaduwatta – Middle Income Housing Project (400 units)
2. Muwagama (Colin Crescent) – Middle Income Housing Project (200 units)
3. New Town – Rental Basis apartment complex for officers (200 units)
4. Hidellana - 33 Acre Housing Project (250 units)

STRATEGY 1.2

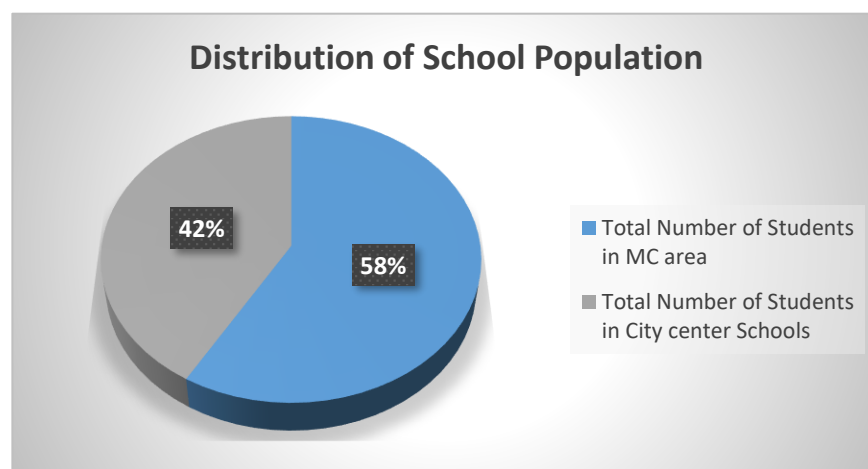
Construction of New Housing Projects in identified locations of outer area of the MC boundary

1. Mahawala– High Income Housing Project (200 units)
2. Kahangama – Low Income Housing Project (200 units)

6.3.1.2. Education

Regarding the education facilities to the people in MC area, total number of students is 24,705 and the total number of teachers is 1,074 by 2017. Among those students 38% is studying (17,528) in the schools which is located at the city center. More precisely, 38% students of it (10,888) studying in the schools which is located beside the A004 road. Additionally, around 8000 students comes for the tuition purpose to Ratnapura.

Figure 6.3.1. Distribution of School Population



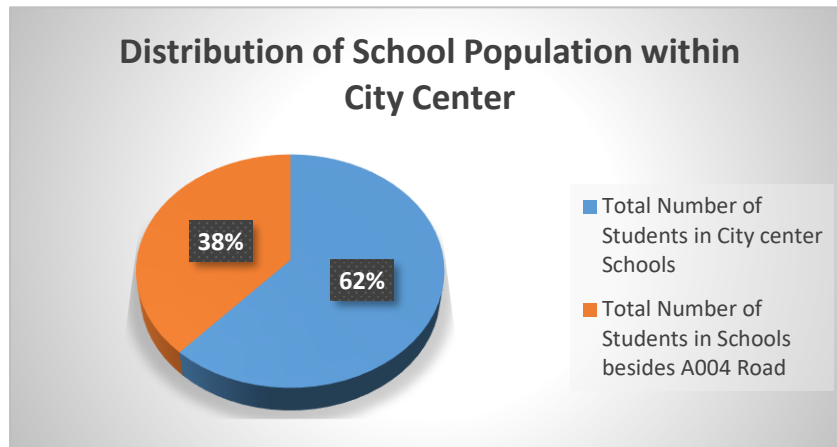
Source: Analysis of the Urban Development Authority based on Education Department Information

Areas where the education facility does not serve the requirement of “A Primary School within 1 km and A Secondary School within 3 km” needed to be served with new schools and the city center schools which does not have enough space for the future expansion have to be served with new locations. 04 schools with 6633 children have been identified to shift considering above factors and these schools can be shifted completely or partially to the identified new locations in future.

Schools which have not enough space for future expansion

- St. Aloysius Boys’ School
- St. Luke’s Collage
- Dharmapala Collage
- Mihindu Collage

Figure 6.3.2
of School
within City



Distribution
Population
Center

Source: Analysis of the Urban Development Authority based on Education Department Information

Tertiary Education

Tertiary education is increasingly important on achieving the vision of the Gem City. Also, it has been recognized as a major driver of economic competitiveness in an increasingly knowledge-driven economy. It can be seen that Technical Collage, Hotel School, NAITA and various other institutions serve the area by giving tertiary education for the school leavers based on New Town, Ratnapura. Thus, it is an emerging need of establishing an international gemology academia in a suitable location and facilitate to the existing gem training center to serve the purpose. Moreover, the Medical Faculty of Sabaragamuwa University will be located adjacent to the Ratnapura Base Hospital Premises and the above mentioned tertiary education will require more space for the people who are going to be professionals in future.

STRATEGY 2.1

Identification of suitable lands for Schools

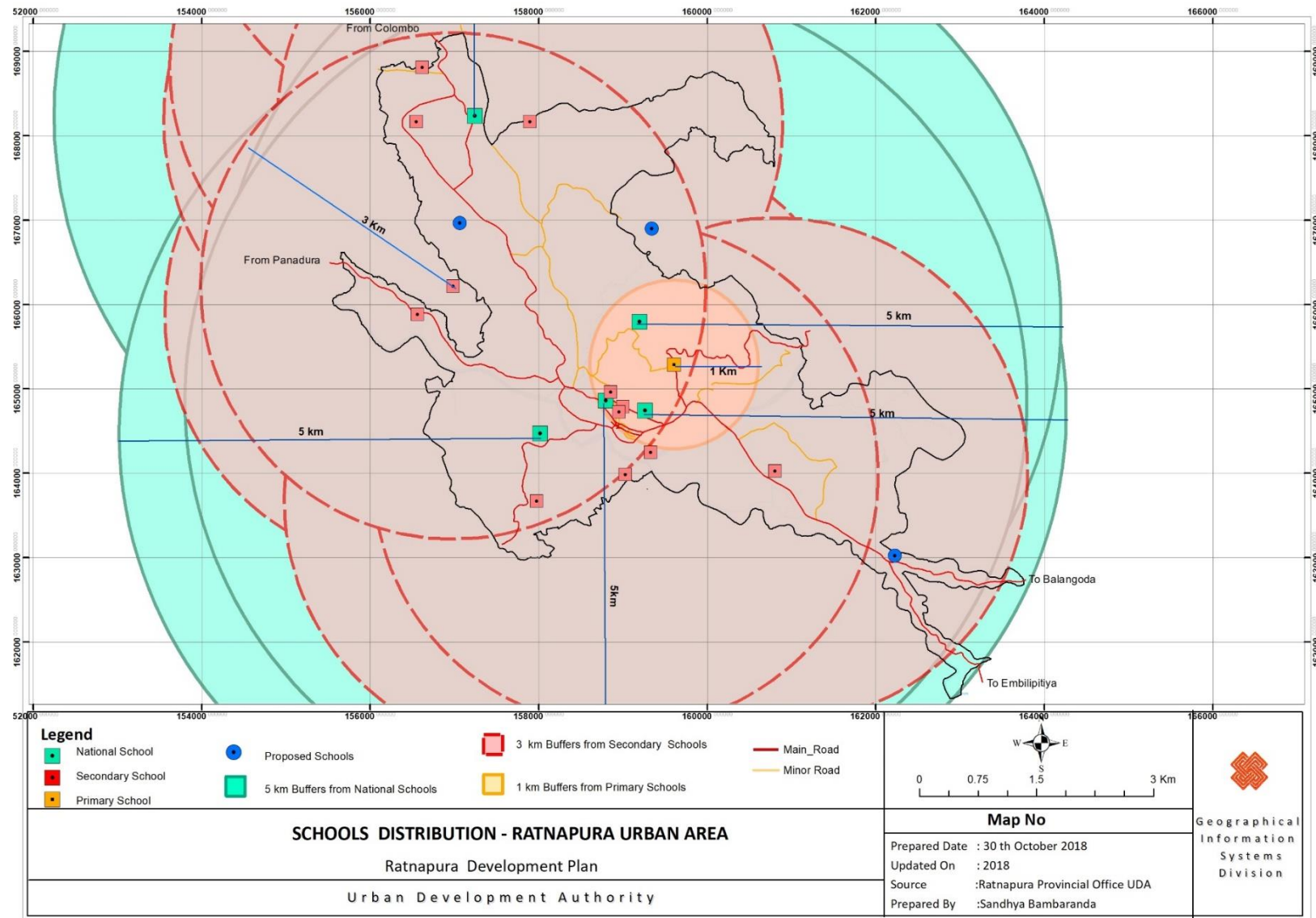
1. Thiriwanaketiya proposed school – 4000 students
2. New Town proposed school – 4000 students
3. Mahawalawatta proposed school – 2000 students

STRATEGY 2.2

Identification of suitable lands for establishing a gemology academia

1. Mahawalawatta area

Map No. 6.3.1.2. Education Facilities



6.3.1.3. Health

The health facilities are developed based on the Ratnapura Provincial General Hospital. In comparing year 2003, the number of in-patients has been increased by more than Hundred Thousand. Many special services within Ratnapura town are conducted by the Ratnapura Provincial General Hospital which indicates by following table.

Table 6.3.1.3: Ratnapura Provincial General Hospital - Facilities and Staff Composition – 2017

Year	Number of Beds	Number of In-patients	Beds/Patients Ratio (Daily)	Outpatients (per day)	Doctors	Doctors / Patients Ratio	Specialist Doctors	Nurses/Male Nurses	Other Staff	Patients arrive to the Clinic (per day)	Percentage of beds according to the patients
2016	1057	116749	1.2:1	924	207	1:1.3	32	674	945	1112	82%
2006	964	1600	1:7	2100	142	11:3	20	366	575	-	-

Source: Ratnapura General Hospital

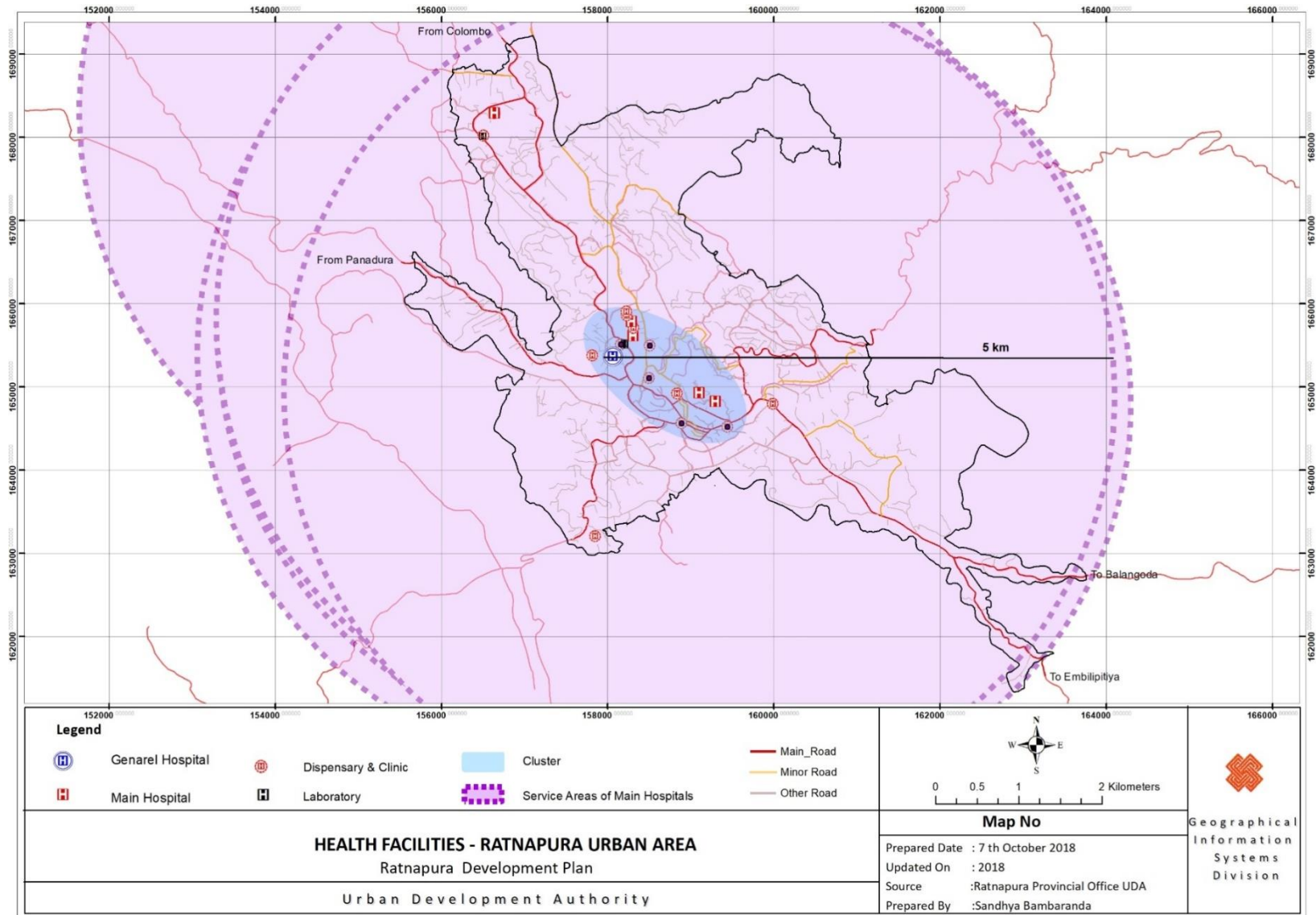
In addition to above, services are provided to urban people by three hospitals with facilities, an Ayurveda hospital and three private specialist services centers.

STRATEGY 3.1

Establishment of a Health Cluster

Ratnapura Base Hospital, two private hospitals and proposed medical faculty of Sabaragamuwa University will create a Health Service Base Cluster around Hospital Junction by 2020. Thus facilitating this health cluster through regulations is the identified strategy for Health Sector Development of the town.

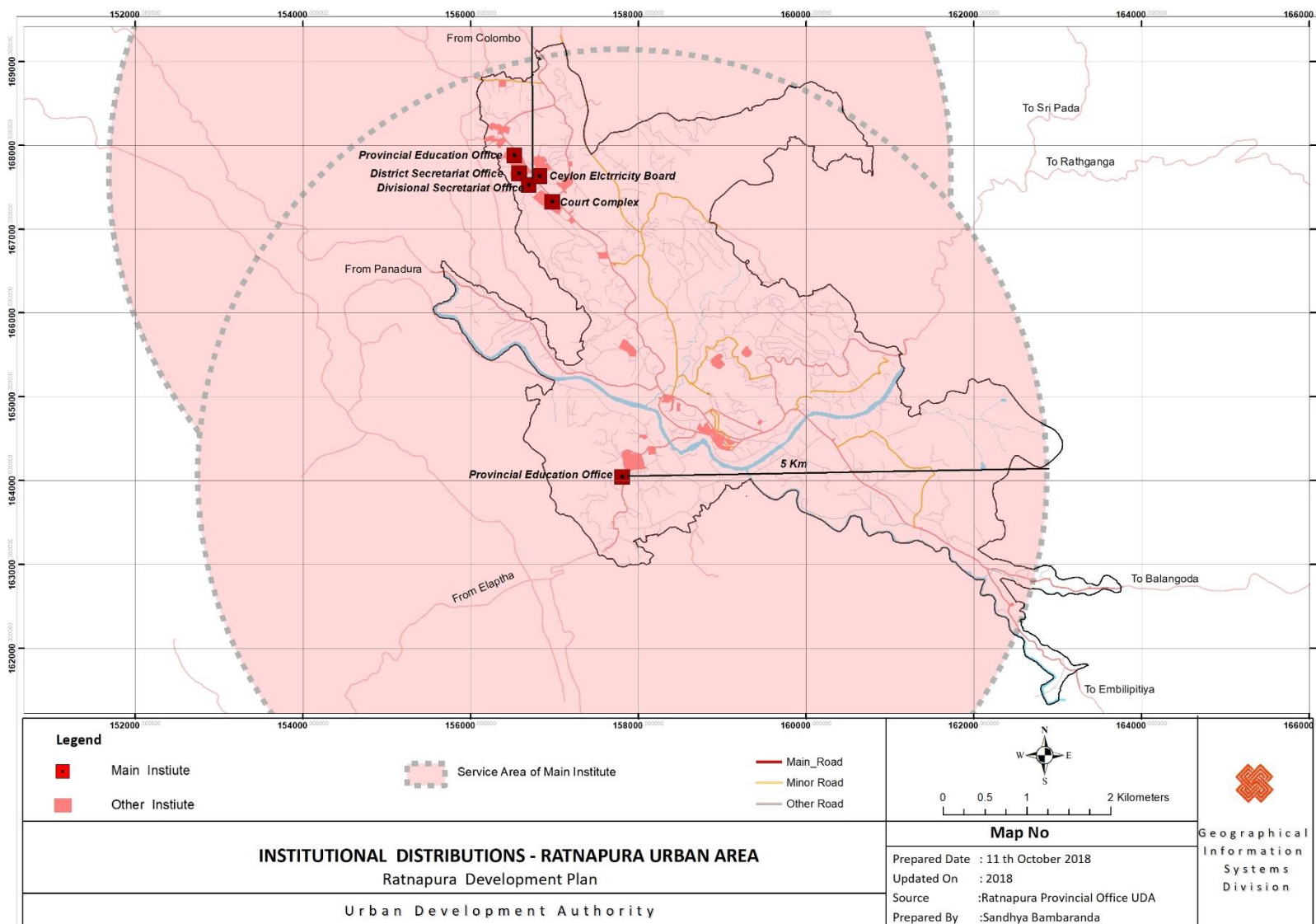
Map No. 6.3.1.3: Health Facilities



6.3.1.4. Administrative Service

Ratnapura is a place where commuting population is higher than the existing population. Those people come for the gem business, administrative needs and daily needs as per the perception survey. Since Ratnapura is an administrative capital and a service center, the catchment of each has considered at the preparation stage of the preparation of development plan. Shifting administrative institutions from old town to the new town effected to clustering administrative service into one cluster

Map No. 6.3.1.4: Administration Service



6.3.2 Transportation

Ratnapura is the nodal point of the west - east connection of the country (A004). Also, it is the countryside road which connects Colombo and Panadura (western region) with Hambantota (southern region) and Batticaloa (East region). Thus, in regional transport network, Ratnapura is a city where should have a smooth traffic flow and easily pass over. But, due to geographic situation and spatial arrangement it does not happen as it should be.

Figure 6.3.2.1: Reasons for Traffic Congestion

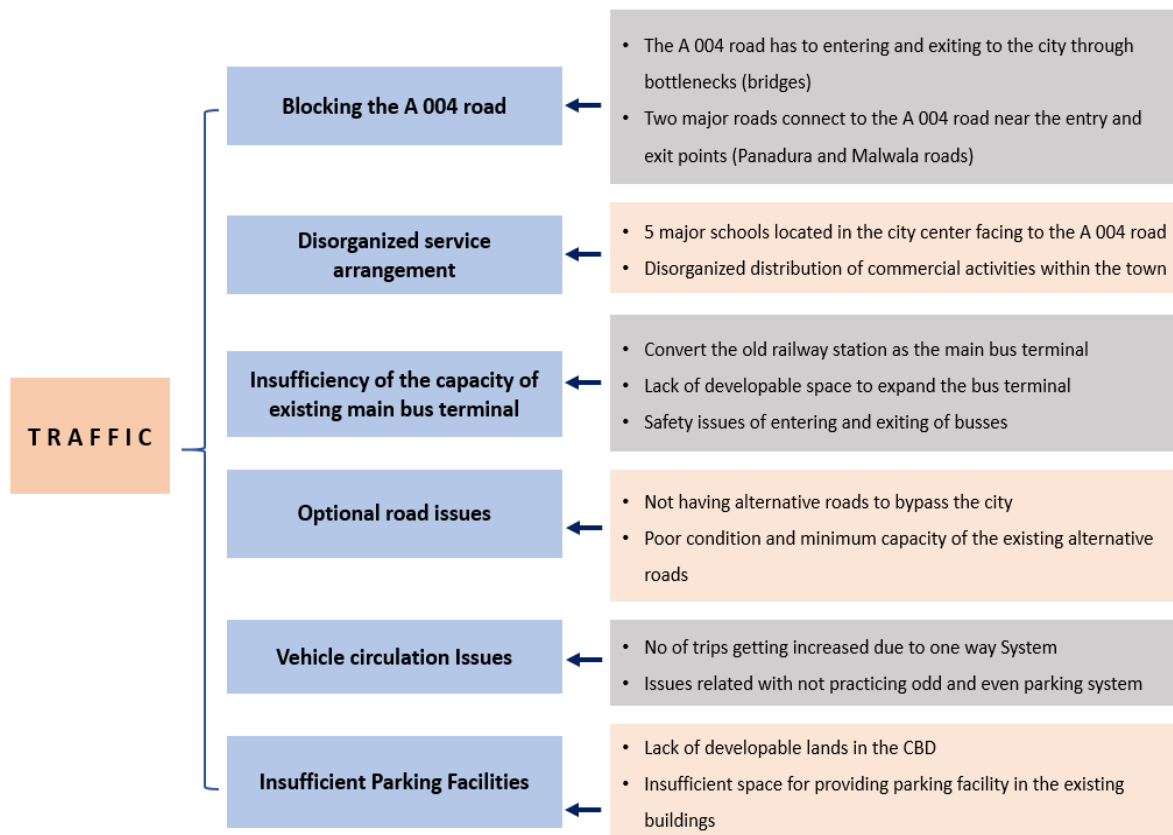
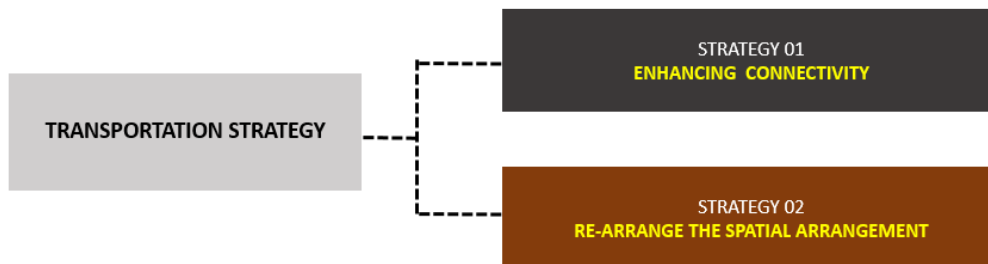


Figure 6.3.2.2. Existing Bus Terminal of Ratnapura

Captured by : Hasini Artigala, March 2018

Transportation strategy has been introduced to overcome the above issues and have a convenient transportation.

Figure 6.3.2.3. Transportation Strategy



STRATEGY 01

Enhancing the Connectivity

For these needs Ratnapura development plan will provide spaces through zoning regulation and special projects.

STRATEGY 1.1

Construction of New Roads

1. Construction of Ruwanpura Expressway
2. Construction of the bypass road from Court Junction to Warakathota Bridge
3. Construction of a new road from Good Shed Road to Church Road through Thanakolakotuwa

STRATEGY 1.2

Development and Re-development of Roads

1. Redevelopment of the road from Batugedara Junction to Karapincha Road as an alternative road
 - Phase 1 – Development of the road from Batugedara Junction to Mudduwa Junction
 - Phase 2 - Development of the road from Mudduwa Junction to Panadura Road through Balibathgoda Bridge

- Phase 3 –Road Improvement of Panadura Road from Kotambegawa to Saman Dewalaya
 - Phase 4 -Development of the road from Panadura road (near Saman Dewalaya) to Karapincha Junction
2. Redevelopment of the old railway from Palm Garden to Outer Circular Road as an alternative Road
 3. Redevelopment of the road from Thanakolakotuwa to Main Street
 4. Redevelopment of the road from Senanayaka Mawatha to Kudugalwatta Port
 5. Redevelopment of Godawela Road
 6. Development of the road from hospital to New Town through Saman Pedesa as an alternative road
 7. Road Improvement between Railway Road and Godawela Road
 8. Road Improvement of River-edge Road
 9. Road Improvement of Outer Circular Road and developing it as an alternative road
 10. Road Improvement of Inner Circular Road and developing it as an alternative road
 11. Road Improvement of the road from Kemananda Mawatha to Ginihiriya

STRATEGY 1.3

Construction of New Bridges and Redevelopment of Existing Bridges

1. Construction of Balibathgoda Bridge to connect Balibathgoda road and Panadura Road
2. Construction of Kudugalwatta Bridge
3. Redevelopment of the bridge near Seewali Ground
4. Redevelopment of the bridges at entering points of the town with identical structures

STRATEGY 1.4

Walkability improvement

1. Construction of an underpass from Church road to Main Bus Stand to avoid the traffic near Indika Hotel
2. Construction of overpasses at Puingupitiya Junction and St.Lukes Junction
3. Green alleyway improvement within the city

STRATEGY 1.5

River Transportation Improvement

1. Construction of river port series at identified locations
 - a. Phase 1
 - i. Main River Port – Existing Children’s Park behind the Seevali ground conversion to a river port
 - ii. New river port construction near hanging bridge close to Saman Dewalaya
 - b. Phase 2
 - i. New river port construction near Warakathota Bridge
 - c. Phase 3
 - i. New river port construction at Kudugalwatta
 - ii. New river port construction at Ayurweda Junction
 - iii. New river port construction at Kotambegawa

STRATEGY 02

Re-arrange the Spatial Arrangement

STRATEGY 2.1

Bus Terminal Development Walkability improvement

1. Development of the main bus terminal at the old town
2. Development of overflow parking at the old town
3. Construction of a new bus terminal at new town (long distance bus service to Pelmadulla direction)

STRATEGY 2.2

Development of Parking Facilities

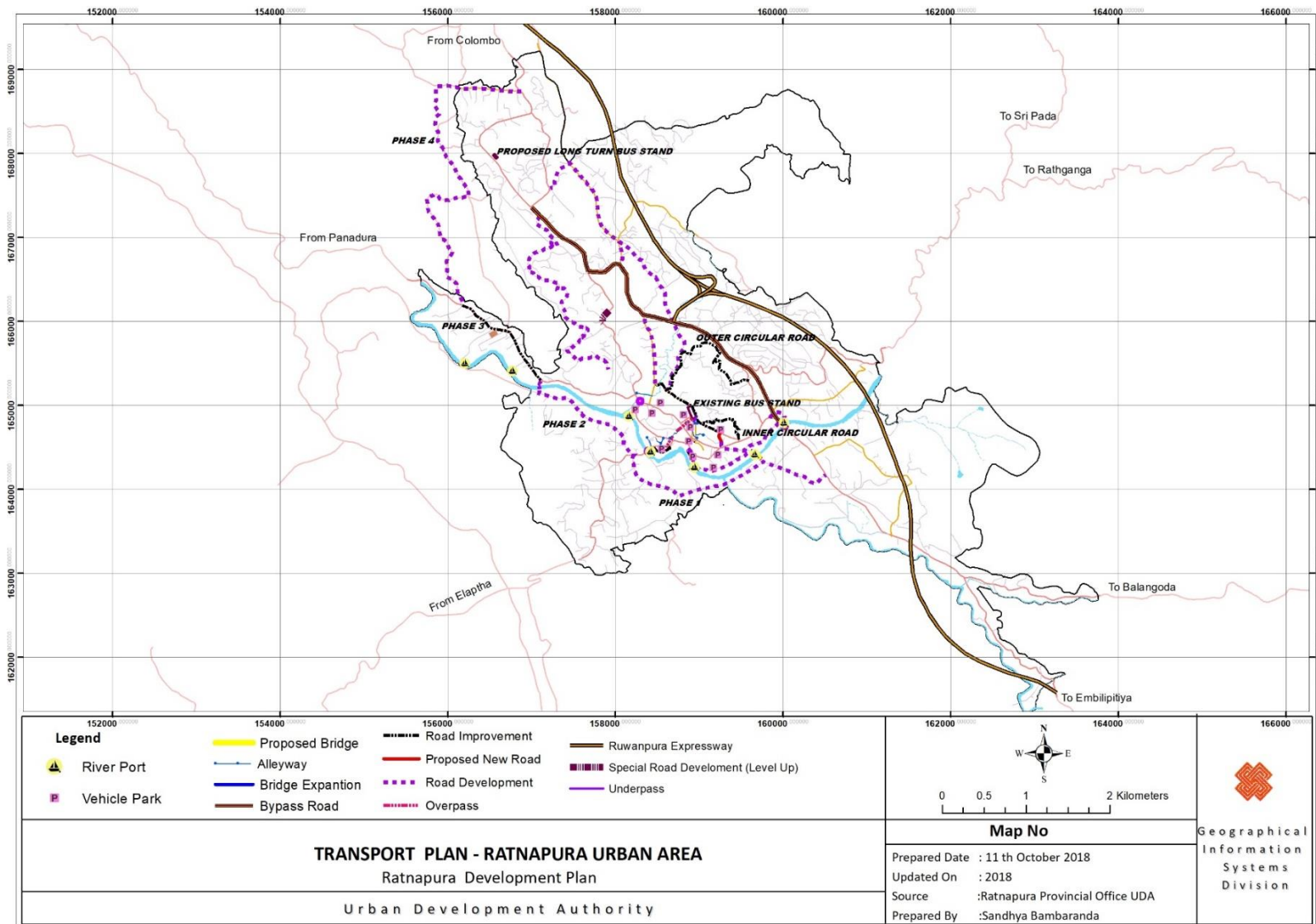
1. Development of parking facilities at the identified places in the city
 - a. Post Office Premises
 - b. Nagahamuttettuwa Premises
 - c. Polhunuwe Premises, Good shed Road

STRATEGY 2.3

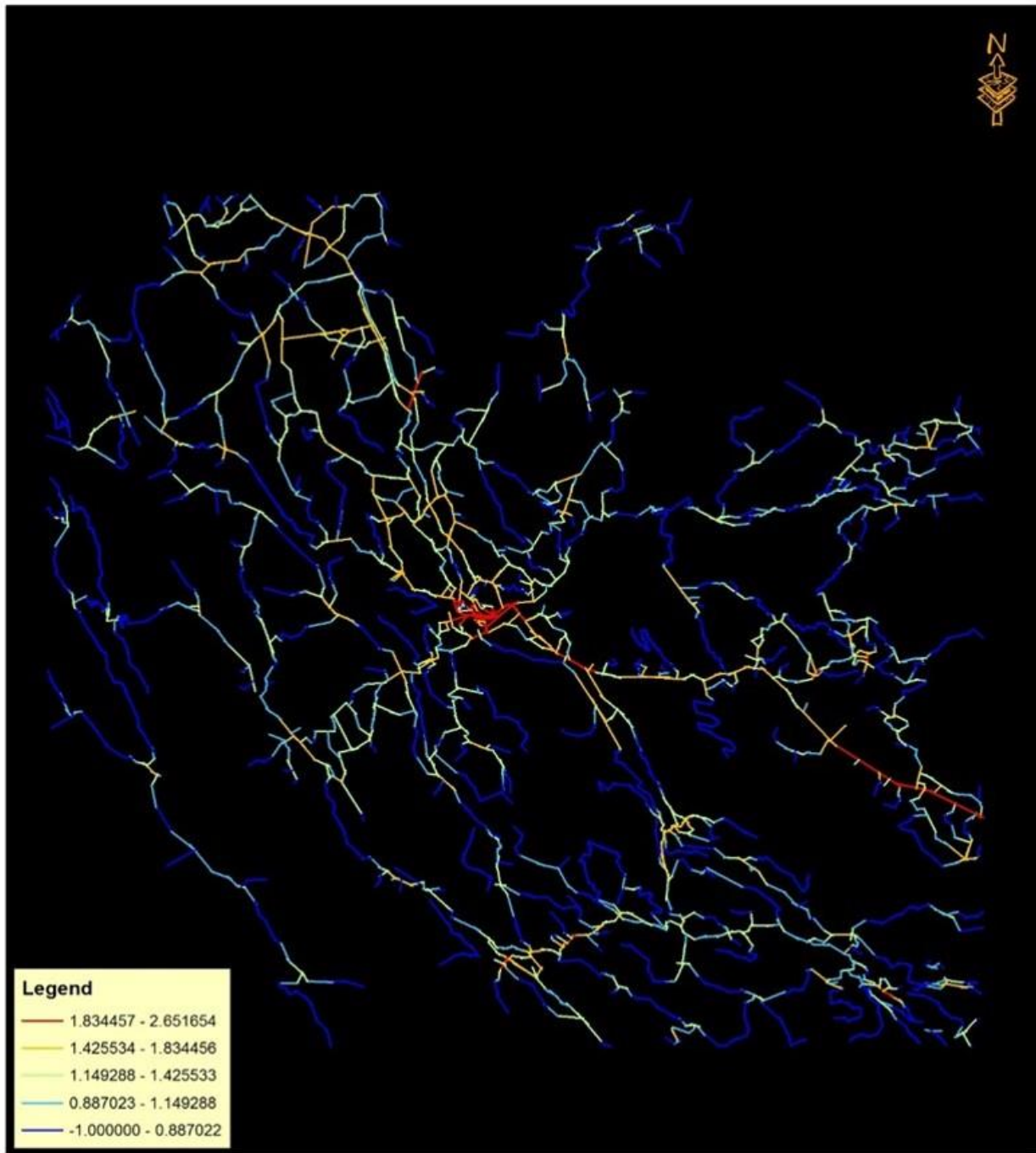
Relocate incompatible land uses which are located in the CBD to appropriate locations through zoning plan

1. Clustering of activities through zoning regulations

Map No. 6.3.2.1. Proposed Transport Plan



Map No. 6.3.2.2. Connectivity of Proposed Planning Area – Existing Situation



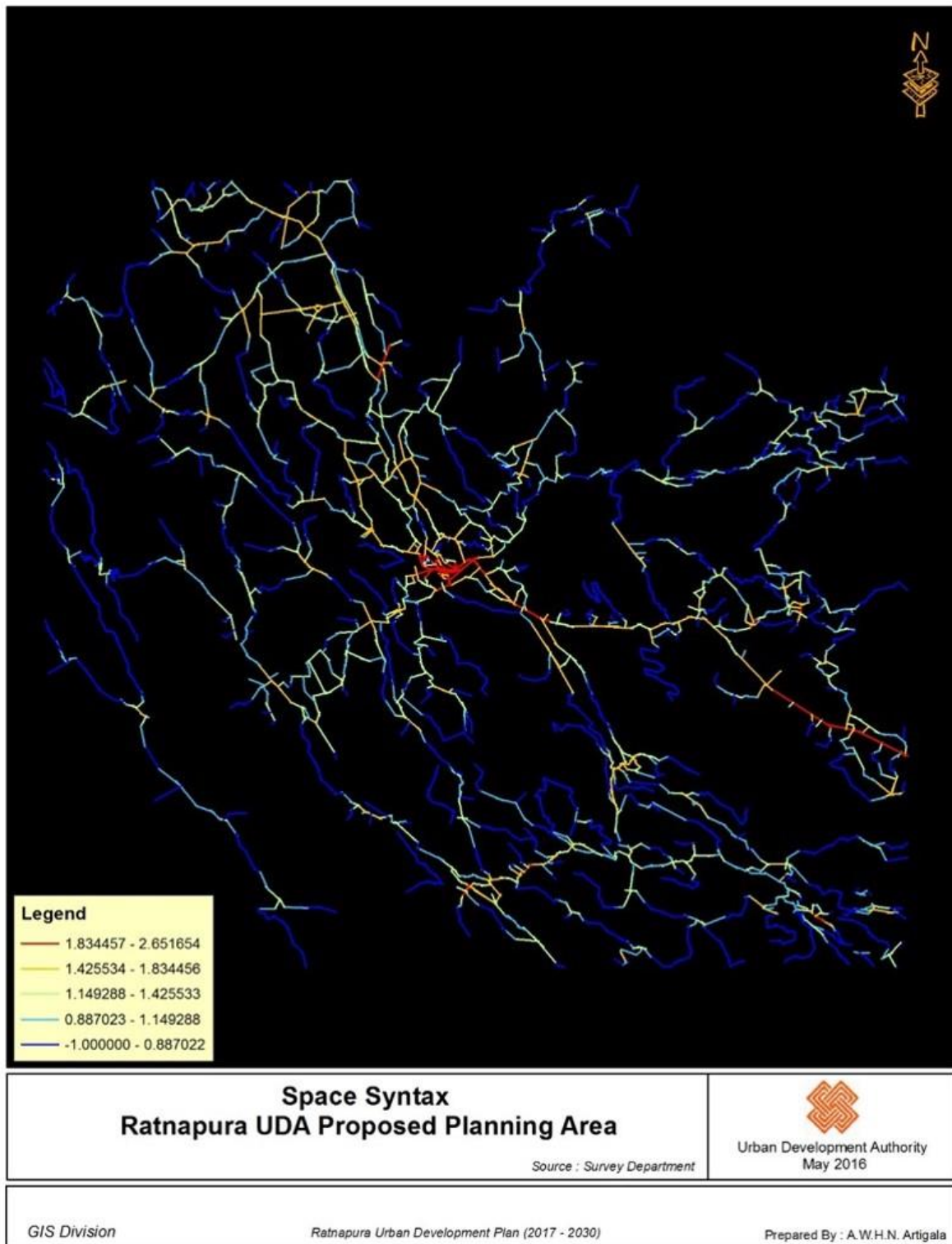
**Space Syntax
Ratnapura UDA Proposed Planning Area**

Source : Survey Department



Urban Development Authority
May 2016

Map No. 6.3.2.3. Connectivity of Proposed Planning Area – Proposed Situation



6.3.3 Water Supply

Supply of pipe water within the town is being carried by the National Water Supply Drainage Board. The length of water supply ways within the town is approximately 75 km. The daily individual water consumption in the town is 120 liters and it is insufficient for urban consumption. Five (05) water collecting tanks within the town are available and their total capacity is 4500 m³. The following table describes the water connection amount according to the usages.

Table 6.3.3.1. Water Consumption – 2017

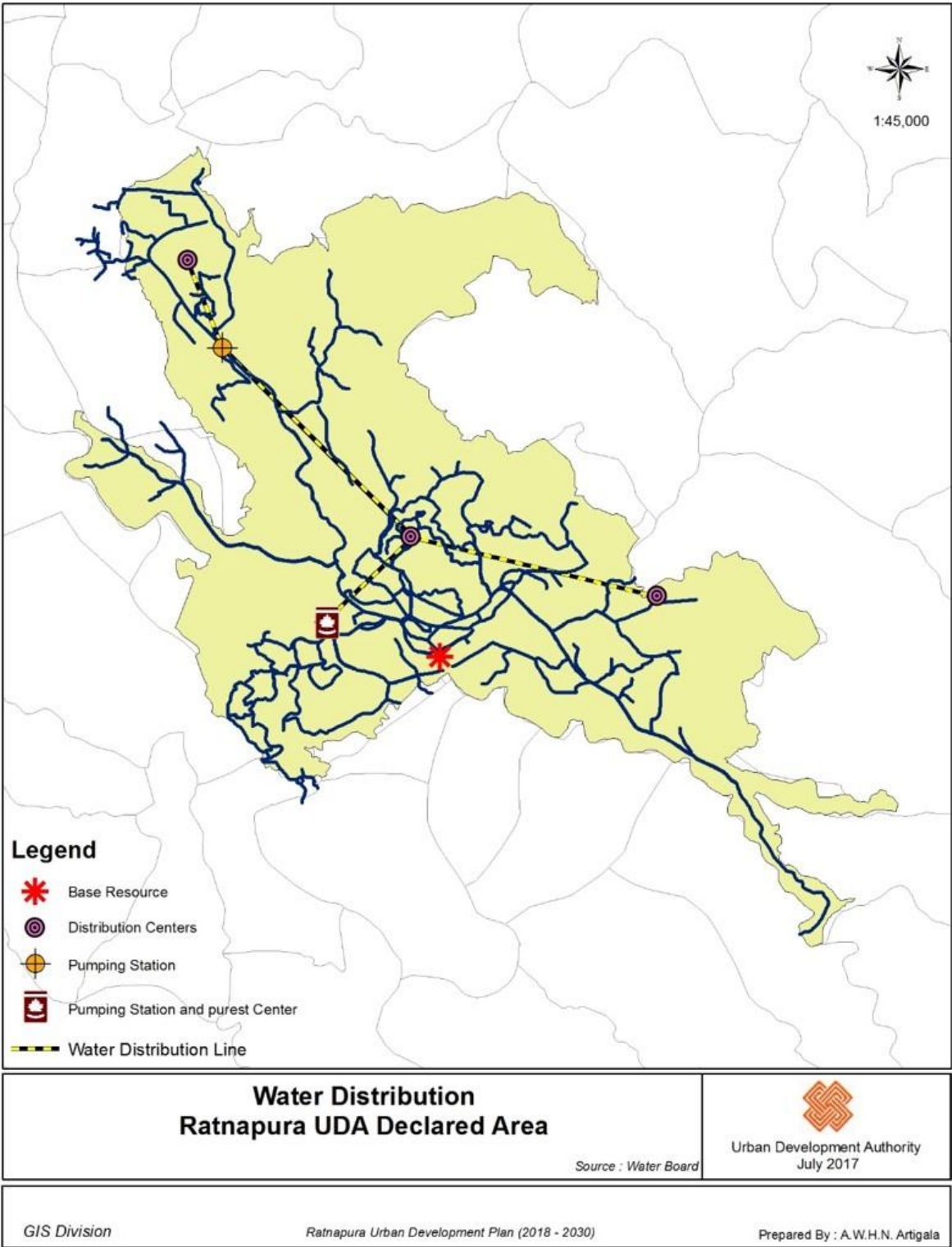
Usage	Number of Connections	Percentage
Residential	6447	80.89
Commercial	1233	15.47
Industries	44	0.55
Government Institutions (together with schools)	196	2.46
Religious	42	0.53
Hotels	08	0.10
Total	7970	100.0

Source: National Water Supply and Drainage Board, 2017

The water supply is mainly directed for residential usage and has obtained only 79.5% from the total number of houses. Certain areas where the water supply is not available, unprotected wells and river water is being used and this is an unprotected situation.

About 150 Nos. of common taps within the town for low income residences and for usage of migrants who arrive to the town have been established by the Municipal Council.

Map No.6.3.3.1. Existing Water Distribution



Future water demand of Ratnapura Town is affected by housing need, commercial need and commuter need including tourism and recreational activities. Additionally, the town will need seasonal water requirement based on Saman Dewala Perahera season in August/ September.

Table 6.3.3.2. Water Consumption Need for 2030

		120 L per day	Liters	Total (Liters)
Existing Residual Population	49,083	49083*120	5,889,960	5,889,960
Commuting Population	100,000	20 percent (24 L)	2,400,000	2,400,000
Expected Residual Population	62,604	62604*120	7,512,480	7,512,480
Expected Commuter Population	150,000	20 percent (24 L)	3,600,000	3,600,000
Seasonal Requirement (per Day)	100,000	20 percent (24 L)		2,400,000
Total (Liters)			19,402,440	21,802,440

However, the prevailing water supply in Ratnapura town is insufficient for urban area and it has been assumed that ‘Greater Ratnapura Water Supply Project’ and ‘Rural Water Supply Project’ will be able to meet the projected demand by 2030. Additionally, following suggestions are made to fulfill the increasing water consumption.

1. Further development of existing water supply system under extensive water scheme. (increasing the capacity)
2. Awareness programmes for safe usage of unprotected wells.
3. Increasing capacity of the water tank in “Pompa Kele” Forest) by 13000 cubic meters.
4. Construction of a water tank in the new town with a capacity of 10,000 cubic meters.
5. Construction of a new well nearby river edge road.
6. Development of communal water facilities by small water projects.

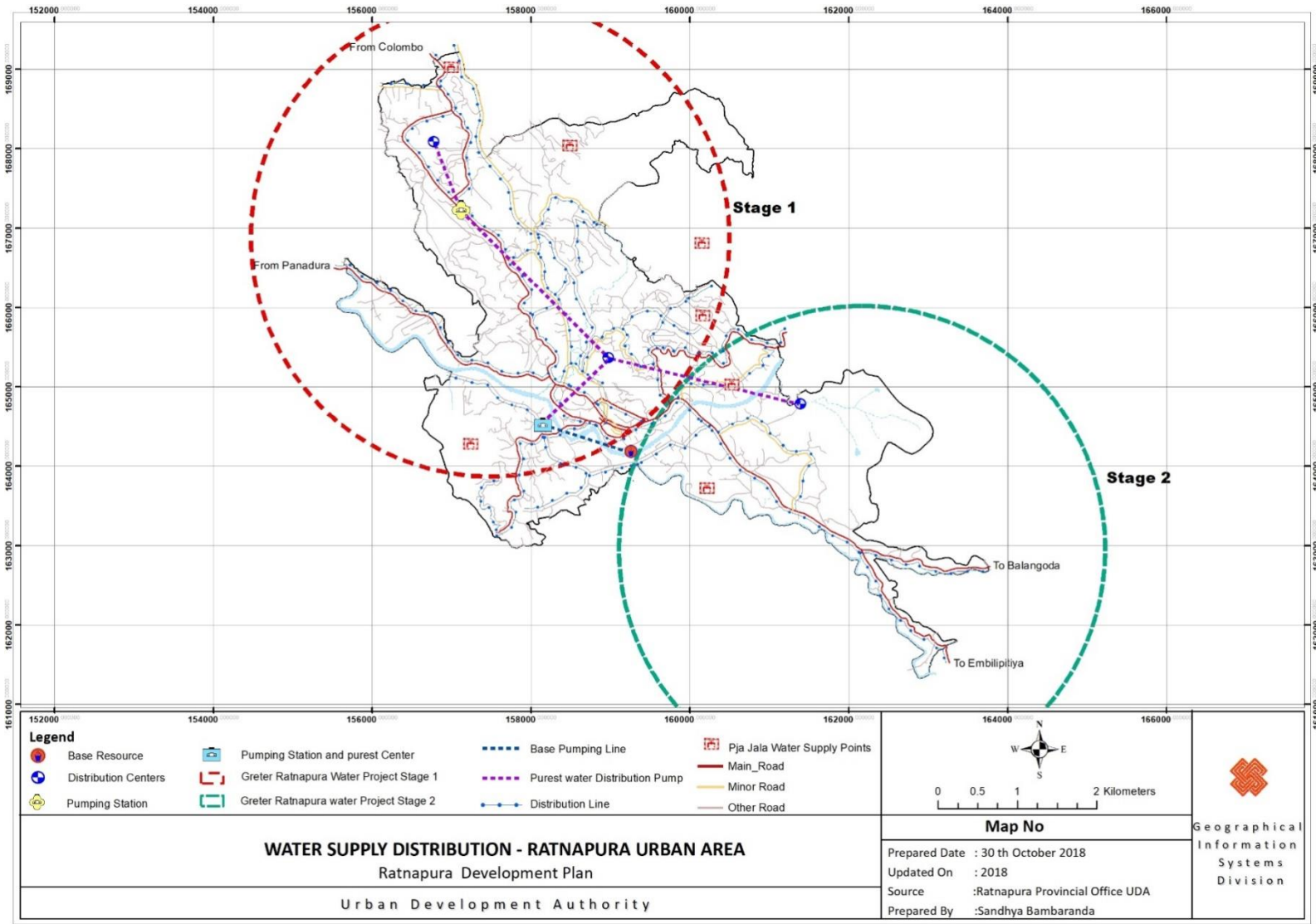
Details about Greater Ratnapura Water Supply Project

Covered DSD – Ratnapura, Kuruwita, Pelmadulla

Target Population - 160,000

Construction Stages - Stage I (2013 – 2015) and Stage II (2020 – 2023)

Map No. 6.3.3.2. Water Supply Distribution for 2030



6.3.4 Electricity and Data Lines

Continuous power supply is a major element in the Ratnapura town development. For a continuous supply of power in Ratnapura it is very essential to have strong and smart transmission and distribution. The details about electricity consumption in the town indicates as follows.

Table No. 6.3.4.1. Electricity Consumption 2018

Sector	Connections	Percentage %
Residential	9864	74.0
Commercial	3213	24.0
Government & non-Government Institution	198	1.5
Industry	89	0.4
Religious	48	0.1
Total	13412	100.0

Source: Electricity Board, 2017

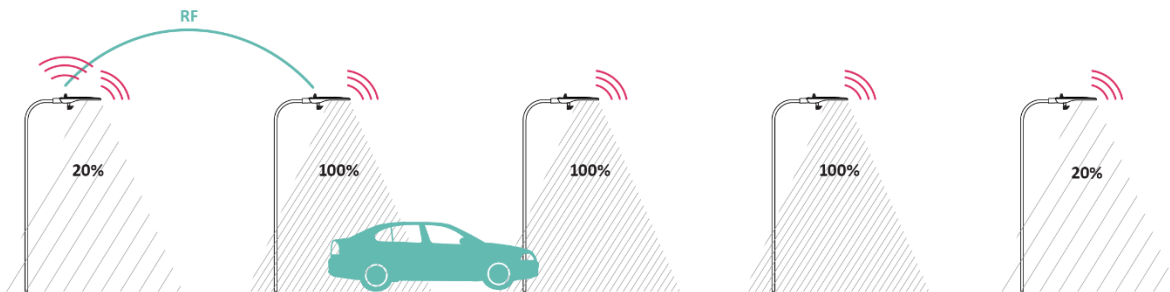
Accordingly, to the CEB information 90 – 120 (KW) Electricity units concerned as average usage and it was assumed that 105(KW) electricity units for each units of given sector according to this situation as average. Hence, existing requirement of electricity units are 1408260 KW. Moreover, it is considered that the electricity supply to the Ratnapura urban development area is 100% covered by 2018 according to the Ceylon Electricity Board.

In each year, flood and extreme weather situation is expected and more commonly it damages to the above-ground utility poles. Thus it is suggested by the Ratnapura Development Plan to put power lines underground within the urban development area. Additionally, it is suggested to install water and telephone services together as a joint trench when installing electric services underground. A joint trench can contain multiple utilities and usually this is part of the planning for new infrastructure.

Street Lighting

The proposed lighting is designed to be well distributed, illuminating routes and key features. It will be achieved from an 'Intelligent Motion Sensor Street Lighting Control System' (Smart/ Intelligent Street Lighting) that automatically activates when a car or pedestrian walk on the streets. The Linear Parks and walkways of New Town, Lake Round and river banks are needed to be covered with street lighting with the above mentioned technology. To be more specific, the light is automatically adjusted to an optimized minimum light level if there is no activity in the area and it will be an energy saving and a sustainable method to the town.

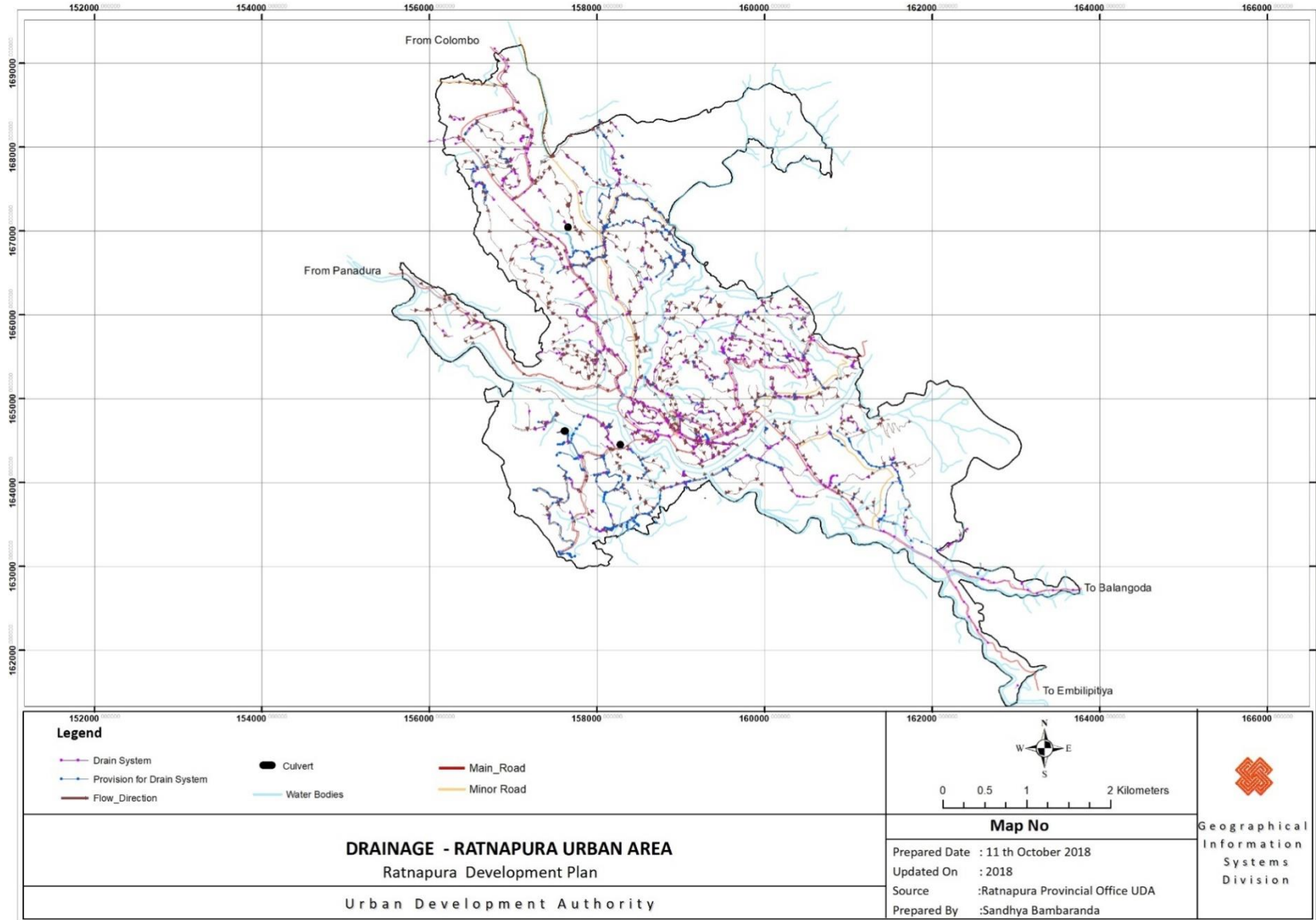
Figure 6.3.4.1. Smart Street Lightning System



6.3.5 Drainage and Sewer Lines

The area has elongate paralleled ridges which are systematical and being gentler towards the east. The drainage system is developed in a rectangular shape. However, the local drainage network is frequently changed due to gem mining, causing an impact on the flow direction and flow pattern of drainage network. Thus, introducing of a central sewerage system and counseling public to use only water-sealed toilets are advisable through this development plan to achieve its vision in 2030.

Map No. 6.3.5.1 Drainage Plan – Ratnapura



6.3.6 Waste Management

Municipal solid waste (MSW) is a term usually applied to a heterogeneous collection of wastes produced in urban areas, the nature of which varies from region to region (UNEP, 2005). MSWM refers to the collection, transfer, treatment, recycling, resource recovery and disposal of solid waste in urban areas (Schübeler, 1996). Mainly, urban wastes can be categorized into two major components: organic and inorganic.

There, MSW includes wastes generated from residential, commercial, industrial, institutional, construction, demolition, process, and municipal services.

Waste generation increases with population expansion and economic development. Improperly managed solid waste poses a risk to human health and the environment.

Existing situation of Ratnapura Municipal Council Area

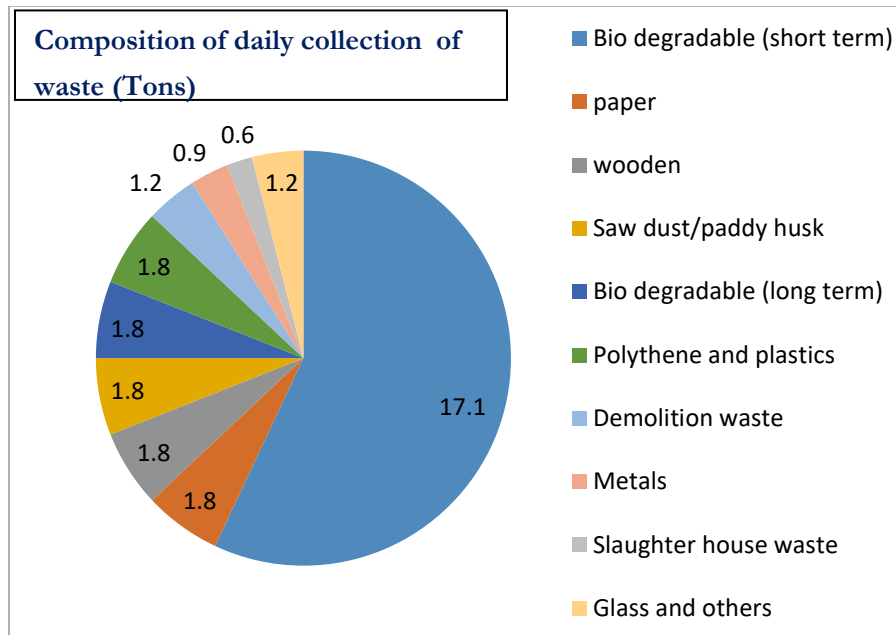
According to the data provided by the Municipal Council, Ratnapura, the collection of solid waste per day is approximately 30 Mt tons. Composition of waste generation shows the table 01.

table 01 – Composition of waste Generation

Waste type	Number of tons
Bio degradable (short term)	17.1
paper	1.8
wooden	1.8
Saw dust/paddy husk	1.8
Bio degradable (long term)	1.8
Polythene and plastics	1.8
Demolition waste	1.2
Metals	0.9
Slaughter house waste	0.6
Glass and others	1.2

Source: Municipal Council, Ratnapura

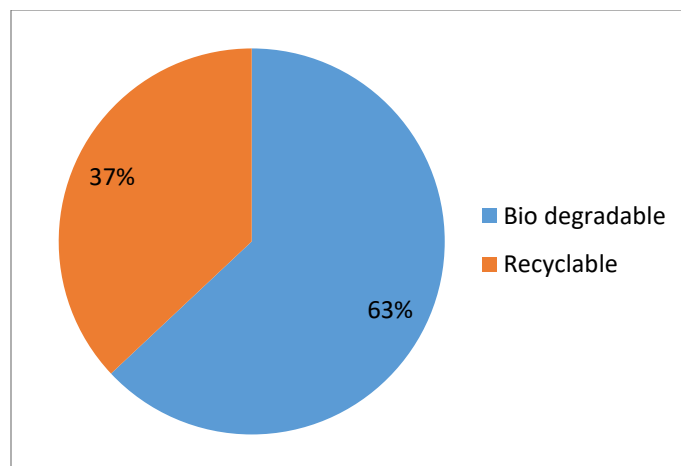
Figure 6.3.6.1. Summary of Waste Collection



Source: Municipal Council, Ratnapura

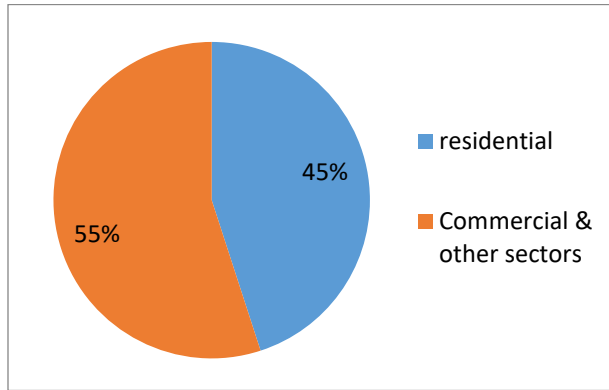
The municipal waste composition varies depending on the community status. As well as the other areas of Sri Lanka organic part is high (63%) in the Ratnapura municipal council area also.

Collection of Municipal Solid Waste by Type



Source: Municipal Council, Ratnapura

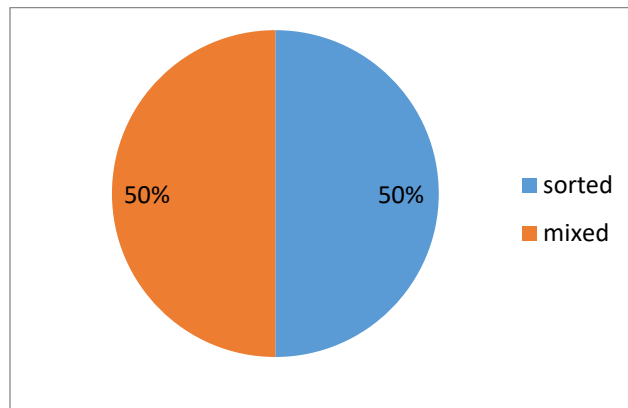
Collection Municipal Solid Waste by Source of Origin



Source: Municipal Council, Ratnapura

Only 50% of the collected waste are sorted into organic and inorganic waste at the source of generation

Collection of Municipal Solid Waste by Type



Source: Municipal Council, Ratnapura

At present the MC practices to open dump the collected waste in Kanadola area in approximately 08 acres land belonging to the municipal Council. Approximately 25 tons of generated solid waste bring to this disposal site and at the site 12% (3 tons) of waste is used to produce compost fertilizer. 1% of the waste is being recycled and the rest is 84% (21 tons) and it is used to open dump without doing any treatment.

Waste in the urban center, common areas and the areas located along main roads are collected daily as door-to-door collection. On the other hand, the waste in by roads are collected as 03 days per week. Further, Municipal Council has distributed compost bins in every households in Devalegawa GN division of the town limits.

There are about one People Health Inspectors, 04 health supervisors, 12 work supervisors and 15 drivers and 50 laborers for the process of collection and transportation of solid waste. Vehicles used for garbage collection includes 12 tractors, 14 trailors, 02 compactors, 2 hand carts and 01 huller. (Source Ratnapura MC)

Municipal Council earns approximately Rs. 300,000 per month by selling recyclable materials like plastic, poletene, tin, iron, cardboard and paper to the buyers. They produce 40,000 kg of compost fertilizer per month by using biodegradable waste.

Population of the area in 2011 was 49,083 and in addition to these, there are approximately 20,732 household units. Average per capita waste generation per day is 06Kg within the MC limits. The forecasting population for the year 2030 will be 62, 604 and it is estimated that the forecasting waste generation will be 38 tons.

Identified issues

1. Shortage of vehicles and equipment for collection, sorting, transport, processing, and transfer of waste to disposal sites.
2. Lack of sufficient space for existing compost yard to cater generated bio degradable waste.
3. Lack of storage facility and sorting area for recyclable items.

At present Municipal council has no sufficient resources to manage daily collected waste. Approximately 23 Mt of solid waste is disposed at Kanadola dumping site. Disposal of waste in to the land situated at Kanadola area where 3 km away from the town doesn't carried out according to an environmental friendly way. Disposing of waste without segregation has been created many health issues.

The Projection of Solid Waste Generation

Waste generation of Ratnapura MC area in future will be based on housing need, commercial need and commuter need including tourism and recreational activities. Additionally, the town will have seasonal waste generation based on Saman Dewala Perahera season in August/September.

Table No. 6.3.6.2. The projection of solid waste generation

		kg per day	kg	Total (kg)	
Existing Residual Population	49,083	1.0	49,083.00	49,083.00	* Was te gen erati on base d on the
Commuting Population	100,000	0.2	20,000.00	20,000.00	
Expected Residual Population	62,604	1.0	62,604.00	62,604.00	
Expected Commuter Population	150,000	0.2	30,000.00	30,000.00	
Seasonal Requirement (per Day)	100,000	0.2		20,000.00	
Total (kg)			161,687	181,687	

assumption of waste generated per capita per day is 1 kg

* Commuter waste generation based on the assumption of waste generated per capita per day is 20% of its consumed daily quantity

* Seasonal waste generation based on the assumption of waste generated per capita per day is 20% of its consumed daily quantity

Waste Management

(I) Strategy 1 - Reduction of Waste Generation

Introduce methodologies to encourage domestic, commercial and industrial sectors for reduction of waste generation.

- (a) Awareness-creation and education programme will be organized in public places and schools to educate and mobilize the citizens to apply the principles of 10Rs and minimize waste and particularly to discourage the excessive use of polythene and plastic products.
- (b) Where possible, the users will be encouraged to re-use polythene and paper. The use of material and products such as plastic and paper plates, cups and serviettes should be discouraged through public campaigns. Instead, the use of conventional and more permanent material like ceramics crockery and cloth napkins will be promoted. The restaurants, hotels and institutions should be encouraged to use re-usable material to the best possible extent.

(ii) Strategy 2 - Maximize Resource Recovery

- (a) Segregation of waste at the point of origin i.e., house, office, school or institution, etc. Local authority directs the households, shops and institutions not to mix recyclable waste with biodegradable waste and will encourage them to keep the properly designed bins labeled separately according to the National colour code for collection by the informal sector recyclers or by the local authority.

- Biodegradable (Food) – Green
- Paper - Blue,
- Plastic - Orange,
- Metal - Brown
- Glass - red

- (b) Regular education and public awareness sessions should be organized in each locality with the help of residents' associations and other NGOs. Through such sessions, '**No separation-No collection**' policy must be communicated and adopted using participatory techniques.

(iii) Strategy 3: Promote conversion of all short term biodegradable waste material into compost and promote community participation to ensure sustainable composting

- (a) Composting of bio-degradable waste should be promoted. Bio-degradable matter from residences and small scale generators should be composted at the point of origin using composting bins, and other appropriate and low-cost technologies that can generate energy or manure. Home composting should be encouraged for purchase of compost bins.
- (b) Biodegradable waste from large scale generators (some hotels, restaurants, hospitals, markets etc.) and residences where home composting is not practical should be composted in decentralized composting plants with simple technologies like windrowing, static files etc.

(iv) Strategy 4 - Facilitate environmentally sound, economically feasible appropriate waste treatment technologies to treat all non-biodegradable waste

- (a) Introduce an awareness programme at all levels to promote reuse practices
- (b) Return of Recyclable material to the market.
- (c) The Municipal Council should be facilitating the services provided by the private informal sector. This is the sector that organizes the recycling of city waste. Therefore, as an integral part of the SWM strategy, the Council will facilitate its operations through registration of these service providers, regular consultation with them, collaborating with NGOs to recognize rag-picker associations and issuing an identity card system to provide recognition and legal protection to the group.

(d) The Council should be encouraged recycling as a livelihood and facilitate area-based waste recycling enterprises and coordinate different recyclers and help improve their capacity. It will also and recognize and network the CBO's and other resident level waste recycling and purchasing agents and also encourage the entry of Community Based Organizations.

(v) Strategy 5 - Institutional mechanisms should be established to prevent hazardous biomedical / healthcare waste entering the municipal waste stream

- (a) Make mandatory source segregation of Healthcare waste
- (b) Establish mandatory requirement for treatment of waste to convert healthcare waste in to non-infectious, material before final disposal or discharging
- (c) Establish final disposal option for Health Care Waste eg: Incineration
- (d) Establish institutional mechanisms at all healthcare institutions to ensure that waste is treated and disposed by an authorized facility, with a monitoring mechanism

(vi) Strategy 6 - E-Waste Management

E-wastes are considered dangerous, as certain components of some electronic products contain materials that are hazardous, depending on their condition and density. The hazardous content of these materials pose a threat to human health and environment. Discarded computers, televisions, VCDs, stereos, copiers, fax machines, electric lamps, cell phones, audio equipment and batteries if improperly disposed can leach lead and other substances into soil and groundwater. Many of these products can be reused, refurbished, or recycled in an environmentally sound manner so that they are less harmful to the ecosystem. hazards of e-wastes, the need for its appropriate management and options that can be implemented.

- (a) Hand over Electronic Waste to a Certified E-Waste Recyclers

(vii) Strategy 7 - Strengthen Waste Collection and Transport System

- (a) Introduce door to door collection system
- (b) Create awareness among public about waste collection time schedule
- (c) Introduce horn bell collection system - The collection truck plays music to inform residents of its approach. Residents come out with dustbins or bags.
- (d) Provision of necessary instruments / equipments for Local Authority where compost sites are being operated
- (e) Use compartmentalized vehicles
- (f) Use handcarts to reach places inaccessible by large vehicles

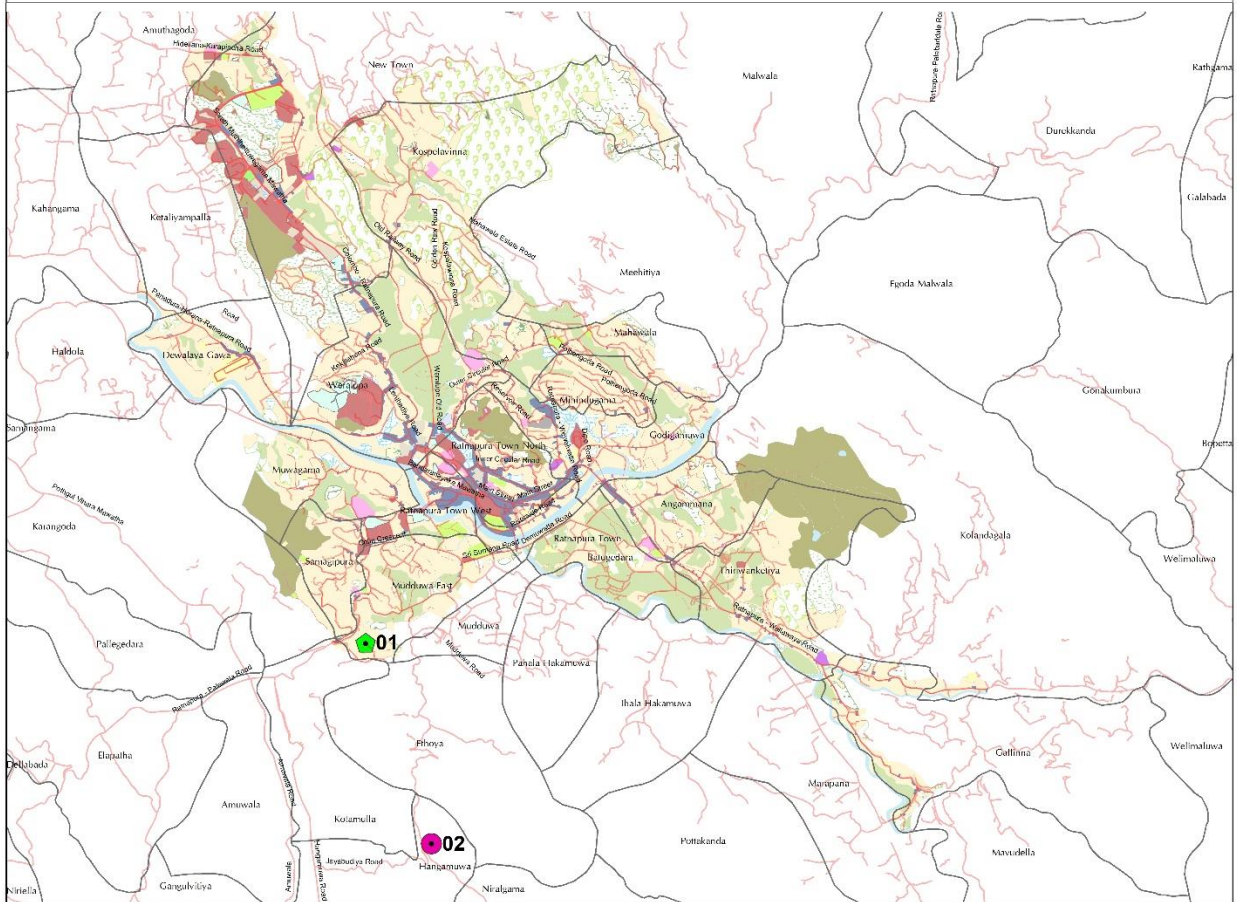
(viii) Strategy 8 – Establishment of Sanitary Land fills

Land filling should be limited to non-recyclable, non-compostable and inert material generated through the waste treatment process. Sanitary landfill for disposal of residue by using appropriate technology in line with minimization of impact on health and environment.

(ix) Strategy 9 - Awareness programmes

The public corporation and the public participation are other important facts. A proper SWM can start in the household level by the implementation of 10R concept to give an effort to minimize the waste. Reduce and Reuse practices should be built within the public through awareness programmes and health related workshops.

(x) Strategy 10 - Regular monitoring and evaluation systems should be established to ensure system improvement



	<p>Map No : 01</p>	<p>Environment & Landscape Division</p>
<p>SOLID WASTE MANAGEMENT PLAN FOR RATHNAPURA MUNICIPAL COUNCIL AREA 2018-2030</p>	<p>Updated On : 2018 Source : Field Survey Data Prepared By : Gayan Samarakoon</p>	
<p>URBAN DEVELOPMENT AUTHORITY</p>		

Solid Waste Management Strategy

STRATEGY 1.1

Systemize the waste collection

a. Bell Collection System

Allowing waste compactors to collect waste by door to door system in selected days of the week falls for this category. Community base awareness program for reduction and reuse of waste at house hold level, Community base program for improving composting at household level and improve community participation in source – separation of waste also needed to be happen simultaneously.

b. GPS Technology

Controlling vehicle activity based on safety, advanced vehicle performance data, responsive service, boost billing accuracy, reduce fuel consumption and maintenance costs are the benefits of using GPS technology.

c. Introducing Mobile Application

It will improve communication between general public and drivers (waste collectors), and reduce route times. These kind of apps allow users to manage their waste and recycling, find nearby locations for pick-up, discover industry news and insights and increase their knowledge about where items should go to avoid landfill buildup.

STRATEGY 1.2

Make compulsory of waste segregation

a. Bio–degradable waste

Composting method can be used for bio-degradable waste. School base and household base awareness program on waste management can be used for it. Simultaneously, expansion of existing compose yard at Kanadolato cater extra 10 tons of degradable waste is possible at present.

b. Recycle waste

It is better to use 'Further Segregation' method by arranging the centers for it. The recycle waste can convert into financial resource after that. Also Construction of sorting area and storage facility for recyclable items also needed to be done simultaneously.

c. Land Filling waste

This method can be used to constructing roads and creating various products. Rambukkanda Site is an ideal solution for the sanitary landfilling method.

SWM Action Plan for Ratnapura MC

Items	Indicator	Situation 2017	Target in 2022
1. Waste Minimization (Reduction of discharge amount)	Number of household doing onsite home compost	6% (2014)	10%
2.Compost production	Receiving waste amount for offsite composting (ton/day)	2.3 ton/day	15 ton/day
	Compost production at Kanadola (ton/month)	2.3 ton/month	15 ton/month
3. Recycling	Sales amount of recyclable wastes at Kanadola (ton/day)	0.14 ton/day	10.5 ton/day
4. Awareness	Percentage of 5 separation categories at generation level	0 %	80 %
	Number of annual awareness rising programs on SWM in 15 divisions	3	15
5.Training/ education	Number of training for staffs of RMC	Not regular	biannually
6. Waste disposal	Final disposal amount (ton/day)	47.3 ton /day	27.2 ton/day
	Acquisition of a Rambukkanda land and construct a sanitary landfill	Proposed	To be achieved

Table No. 6.3.6.3. Solid Waste Management Plan - RMC

6.4 Economic Development Strategy

Ratnapura Economy structure has been based on two towns called old town and new town. The economy based on old town and new town but the catchment of each town is different. Old town mainly catering for local population and new town catering for the entire province due to administrative activities. The economic activities happening on nodal points and along the arteries and the gem industry works as the base resource of the Ratnapura economic structure.

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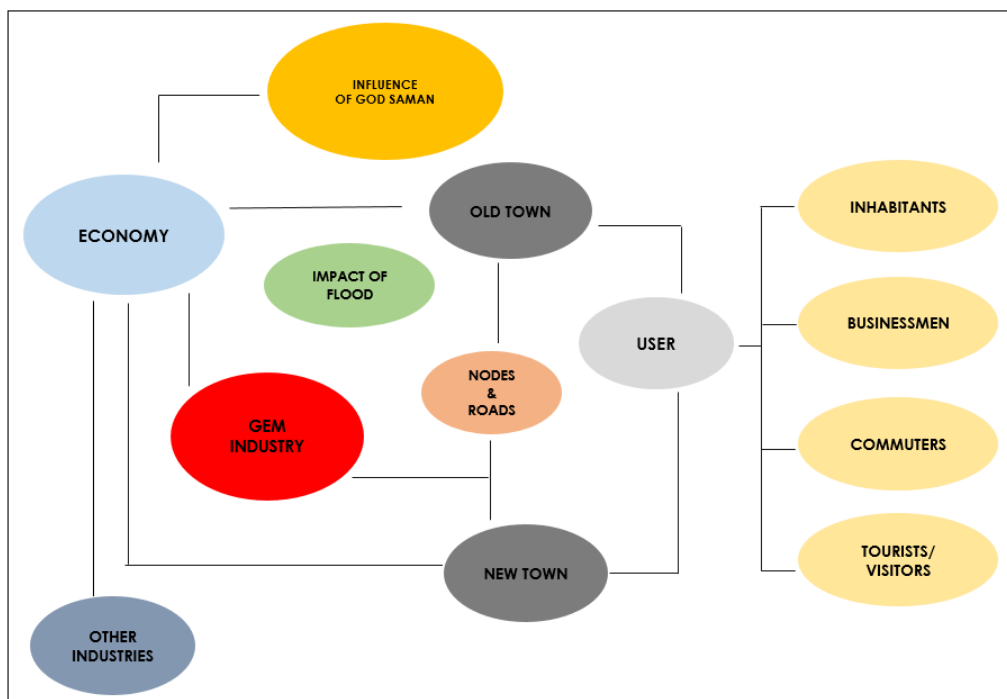
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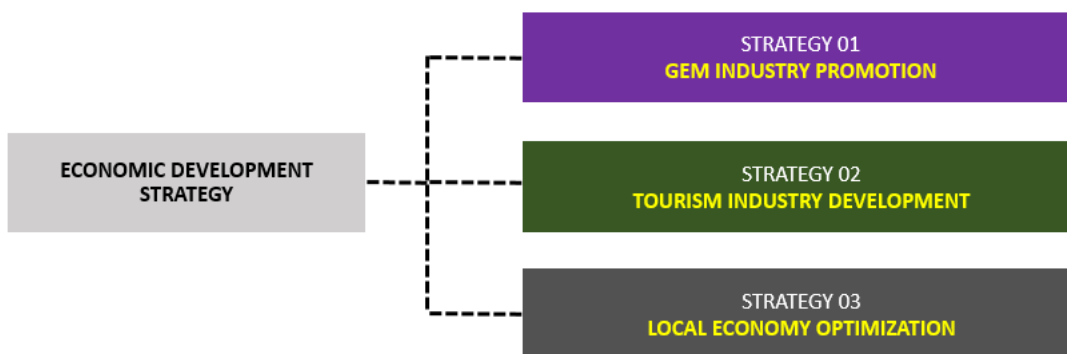


Source: Urban Development Authority

Gem Industry owned a bigger place in Ratnapura economy since pre-colonial period. It is in the 5th place of the export economy in the Sri Lanka according to the statistics of Central Bank Latest reports. 3% of contribution is given to the national economy by Gem industry at present. (Refer annexures for more details) At present, 25 % of the gem trading industry are Ratnapura traders and 30% of the minors belongs to Ratnapura while others come from various parts of the country according to the Gem & Jewelry statistics. Thus, using this base resource to thrive the economy and linking it with the cultural and environmental identity to strengthen the local economy is the economic development strategy of Ratnapura Development Plan.

Concerning the vision of 2030, economic development strategy facilitates to the four main pillars of the Ratnapura economy to flourish.

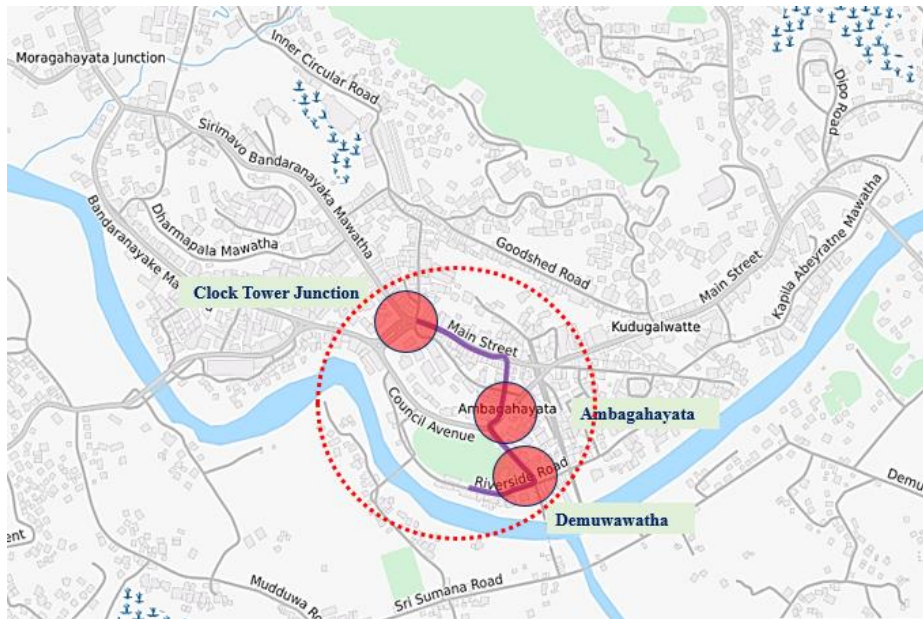
Figure 6.4.2. Economic Development Strategy



Strategy 01 – Gem Industry Promotional Strategy

According to the vision of “The Gem City of Sri Lanka in Greens”, the economic development strategy has to offer priority to gem industry promotion. At the same time, the first goal of the plan is Make Ratnapura, ‘The National Center for Gem related business in Sri Lanka’. To achieve that goal, it is needed for facilitating Gem Industry to contribute GDP by 7% share by 2030 and facilitating the Gem related activities with an attractive environment/streetscape.

Figure 6.4.3. Existing Gem Nodes and Streets



Source: Urban Development Authority

STRATEGY 1.1

Diversify the Income Generating Sources Related with Gem Culture

Gem culture has been established already with the places and processes but for generating more income, it is needed to diversify the income generating sources related with Gem culture. Since the gem market has been seized to Beruwala and other areas by this time, the gem culture still lays on Ratnapura with traditional mining, identical nodes and streets, specific time periods, etc. Thus it is needed to convert this value of gem culture into income generating sources rather than grabbing gem trade to Ratnapura back. But in a long run, Ratnapura will be the trading hub when it gets facilitated with the necessary physical infrastructure for gem trading.

Physical Development Needs

- ✓ Easy access to Ratnapura with less time of arriving
- ✓ Market space for international gem community
- ✓ Refreshment places for the businessmen
- ✓ Accommodation facilities for the international and national businessmen
- ✓ Gathering spaces

Market Needs

- ✓ Luxurious boutique spaces and demonstration areas

- ✓ High end local gem shops
- ✓ Rating space for the congested market & tool shops
- ✓ Extended market space
- ✓ Small shops with hand crafted jewelry items
- ✓ Customized products, spaces for local entrepreneurs to exhibit their businesses
- ✓ DIY* gem cutting and demonstration area (traditional/international)

** DIY is the activity of decorating, building, and making fixtures and repairs at home by oneself rather than employing a professional.*

For these needs Ratnapura development plan will provide spaces through zoning regulation and special projects.

1. Construction of Ruwanpura Expressway
2. Redevelopment of Main Street, Shaviya Mawatha and Demuwawatha Streets as Gem Streets and facilitate those streets with relevant streetscape with gem identity
3. Promote Main Street for high end local gem shops
4. Promote Shaviya Mawatha for local gem gem shops
5. Promote Demuwawatha for DIY* gem cutting and demonstration area, (traditional/international)
6. Convert Luxmi Cinema Complex (abandoned) into a gem related commercial project with rating spaces and tool shops
7. Development of Food City Premises as a gem square (an open space) for extending gem market
8. Development of Frank Hettiarachchi Mawatha to facilitate gem related jewellery business with necessary streetscape
9. Provide more spaces for gem related activities through zoning regulation with special guidelines

STRATEGY 1.2

Convert Historical Buildings for Facilitating Gem Culture

Gem industry needs supportive factors to be thrived as museums, auction spaces, restaurants and accommodation. Ratnapura has around 15 historical buildings which can be converted its use as refreshment spaces and accommodation spaces which facilitates to gem culture. It will give an identical feeling to the businessmen who comes to Ratnapura for trading purpose.

1. Renovation of Dutch Fort and change use as the National Gem Museum with conference halls and auction facilities
2. Renovation of Library building and change use as a restaurant/ refreshment space for gem businessmen
3. Renovation of Police buildings and change use as a restaurant/ refreshment space for gem businessmen

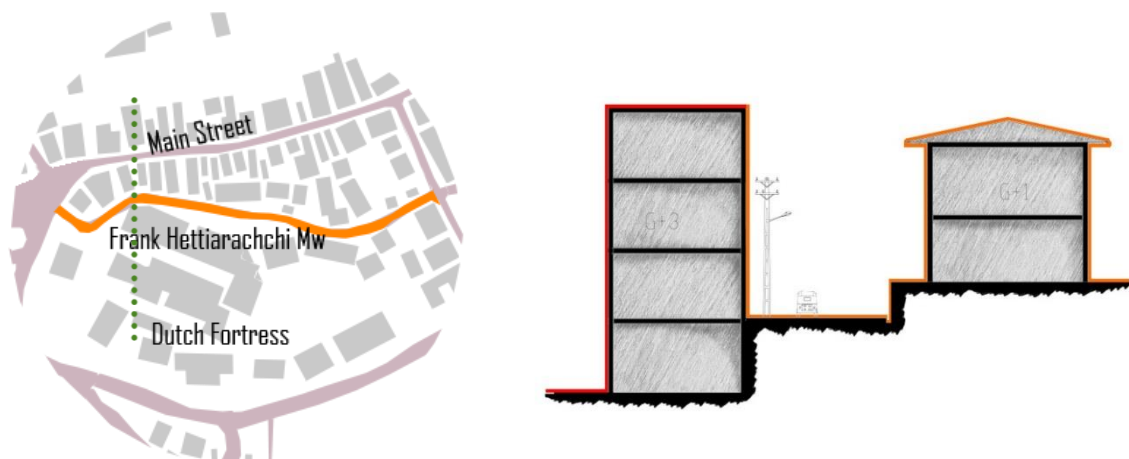
STRATEGY 1.3

Connect Tourism Activities with Gem Culture

Gem industry will be populated if it gets supported by tourism culture while it has all the resources to do so. Thus, linking tourism activities with the iconic gem culture is needed.

- ✓ Facilitating to exploring traditional gem mining culture
- ✓ Facilitating to explore and experience further about gem varieties
- ✓ Facilitating to learn further about gem related jewelry production
- ✓ Facilitating to buy gem related jewelry productions

Figure 6.4.4. Frank Hettiarachchi Mawatha as a Jewelry Street



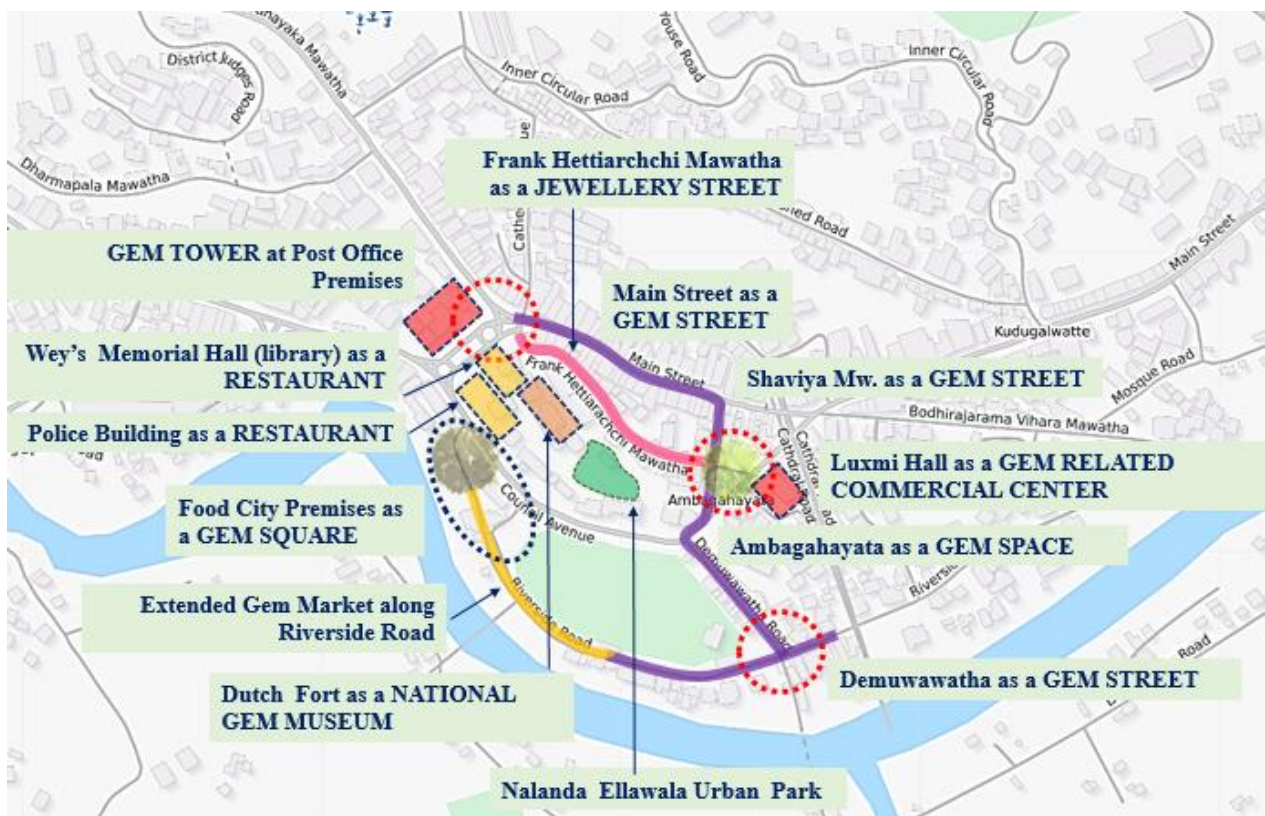
STRATEGY 1.4

Provide Educational and Training Opportunities for Gem Related Studies

There is no specific space for learning about gems in a scientific way for the beginners and the people who interested on it. Ratnapura development plan will provide space for those people to learn and explore more about it.

- Establishment of a National Gem Museum at Dutch Fort
- Promotion of gem training center at Hidellana

Figure 6.4.4. Proposed Gem Nodes, Streets & Squares with Facilities



Strategy 02 – Tourism Industry Development Strategy

Create Ratnapura, ‘An attractive Destination for Visitors in Sri Lanka’ is the second goal of the Ratnapura Development Plan. To achieve that goal, facilitating to enhance green space up to 40 %, facilitating to enhance the archeological value of cultural and historical sites of Ratnapura and convert it into economic value as well as facilitating to attract 100,000 tourists per annum for boosting the gem related eco-tourism by 2030 are needed. In additionally, facilitating to create a vibrant city space is another objective of the goal of creating a livable city.

STRATEGY 2.1

Provide an alternative transport mode to access Ratnapura

Ratnapura needed to have an alternative transport mode when it focused on tourism development since it has only one mode of transport (A 004 road) by now. Being located in a valley and surrounded by a mountain range make the situation hard but introducing a sea plane destination would not give a harmful effect in the long run.

1. Introducing a sea plane destination based on Weralupa Water Retention Lake

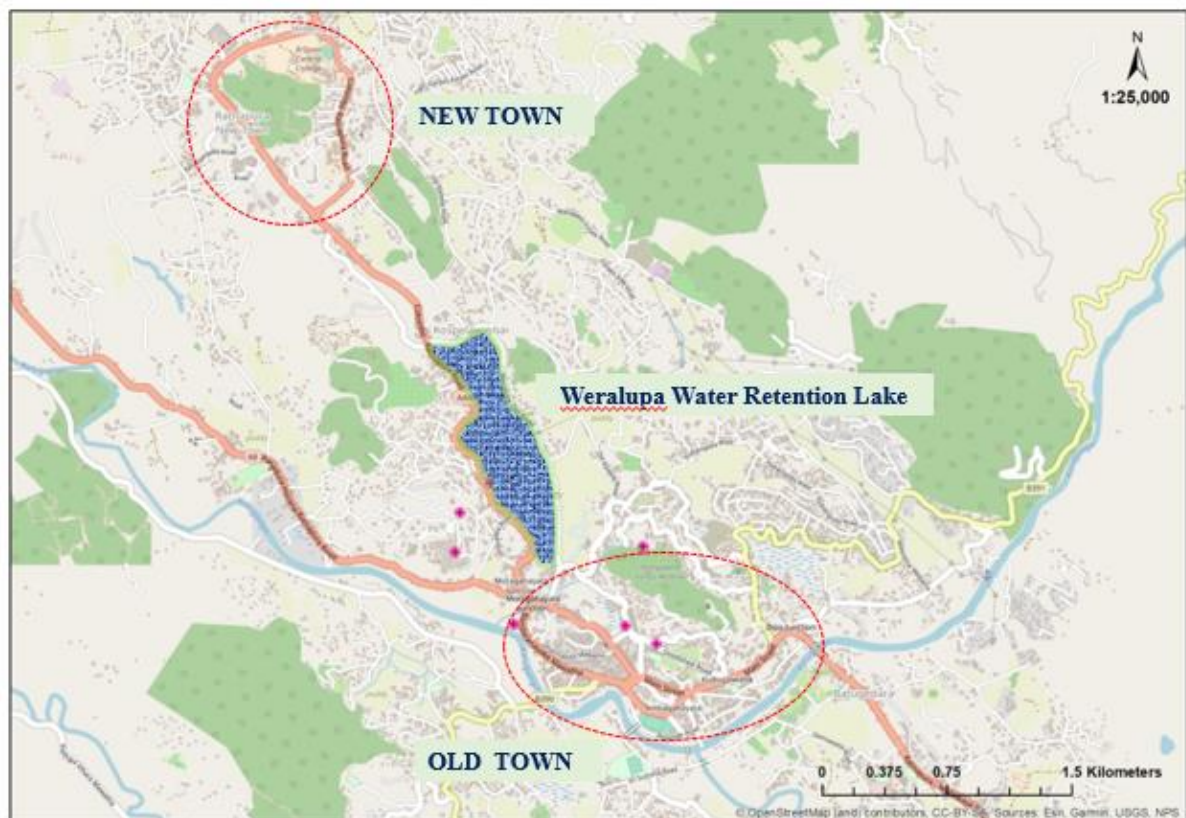


Figure 6.4.5. Weralupa Water Retention Lake

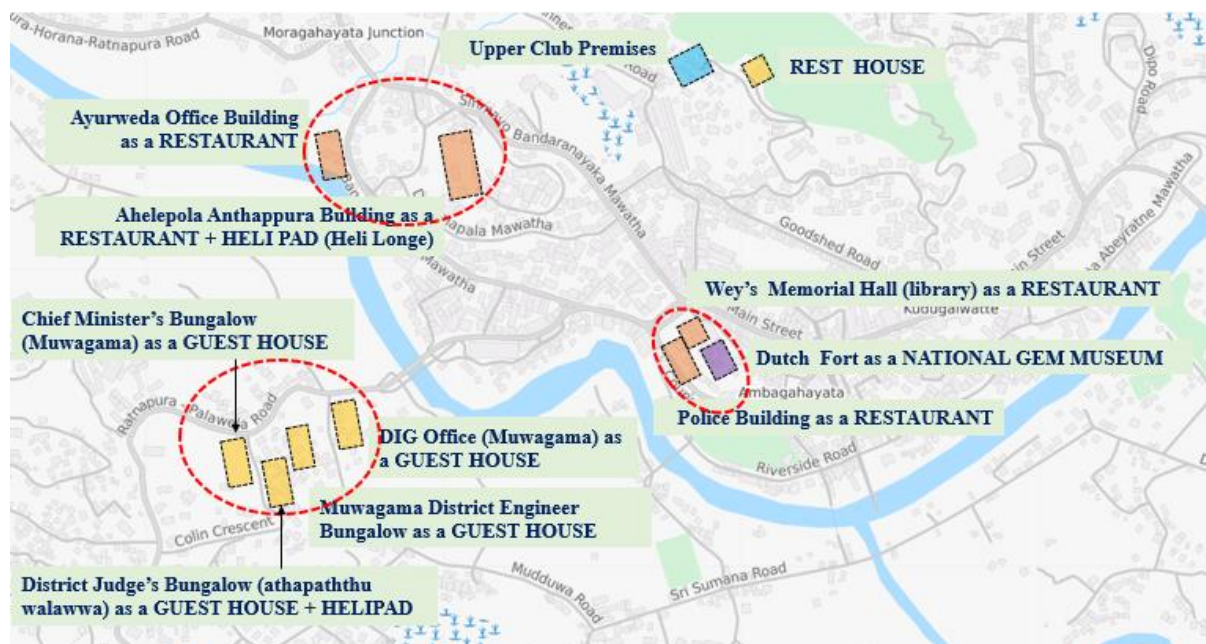
STRATEGY 2.2

Convert Historical Buildings to Facilitate Accommodation and Refreshments

Tourism industry needs to be flourished with the supportive factors of restaurants and accommodation. Ratnapura has around 15 historical buildings which can be converted its use as refreshment spaces and accommodation spaces which facilitates to tourism culture. It will give an identical feeling to the tourists who comes to Ratnapura for recreational purpose.

1. Renovation of Ayurveda office building and change use as a restaurant
2. Renovation of DIG office building at Muwagama and change use as a guest house
3. Renovation of District Judge's Bungalow and change use as a guest house
4. Renovation of Former Chief Minister's Bungalow and change use as a guest house
5. Renovation of District Engineer's bungalow and change use as a guest house
6. Renovation of Ehelepola Harem and change use as a restaurant

Figure 6.4.6. Historic Buildings Conversion



STRATEGY 2.3

Developing a Blue Green Network to promote Tourism

The Blue Green Network Strategy aims to create an attractive and environmentally sustainable urban environment that also provides more economic opportunities while addressing the threats from flooding and future climate change. It will be based around waterways (blue) and parks (green). These are managed together through a combination of infrastructure, ecological restoration and urban design to connect people and nature across the city.

The strategy focuses on four themes which are:

Theme 1 - Enhancing ecosystem services and ecological connectivity

Theme 2 - Providing opportunities for economic development

Theme 3 - Connecting our communities

Theme 4 - Protecting our communities from natural hazards

The Strategy identifies Kalu River as the major water way and it has the potential of providing the greatest opportunity for recreational and economic development as a primary corridor. Work around minor waterways would focus on creating ecological corridors that support biodiversity and increase public amenity throughout the city. Cross city connections will link suburbs away from waterways with green space, schools and other facilities.

Implementing the Strategy would reduce the problems caused by flooding, enhance and help to restore ecological corridors and stream edges, improve water quality, increase “sense of place”, and connect people and places together. It would also seek to respect and provide acknowledgement of Ratnapura cultural and historical values and may also lead to economic development and an increase in tourism opportunities.

1. Construction of Weralupa Water Retention Lake
2. Construction of Weralupa Ground
3. Construction of Aqua Base Theme Park near the Weralupa Ground Premises
4. Construction of Wetland Park at Lenthadiya Premises
5. Development of Pompakele Urban Forest and Angamma Forest Reserve to facilitate bio-diversity investigation for school children and researchers
6. Redevelopment of the natural swimming pool at Pompakelaya
7. Construction of river port series at identified locations
 - a. Phase 1

- i. Main River Port – Existing Children’s Park behind the Seewali ground conversion to a river port
 - ii. New river port construction near hanging bridge close to Saman Dewalaya
- b. Phase 2
 - i. New river port construction near Warakathota Bridge
- c. Phase 3
 - i. New river port construction at Kudugalwatta
 - ii. New river port construction Ayurweda Junction
 - iii. New river port construction Kotambegawa

STRATEGY 2.4

Developing Scenic Spots to promote Tourism

A scenic spot is the spatial carrier of all tourism activities, a place focusing on tourism and relevant actions and an independently administered area possessing matching tourism facilities and providing equivalent tourism services. Thus, sustainable development of scenic spots emerges to be an important area on the tourism development. Moreover, the sustainable development of tourism occupies a dominant position in Sustainable Development Goals (SDGs) of the whole world at present. In the opinion of the World Tourism Organization (WTO), sustainable development of tourism should not only meet existing demands from scenic spots and tourists but also meet future ones. Expected outcomes of this strategy are, strengthening the competitiveness and improving the sustainable capacity of the identified scenic spots.

Table No. 6.4.1. Scenic Sites

Name of Scenic Site	Main Attractions or Activities	Development of Promotion
Ananda Maithree Temple premises	Hilltop	Preservation of scenic areas and view sheds
Kajugaswatta Temple Premises	Giant Buddha Statue, Hilltop	Preservation of scenic areas and view sheds
Weeragoda Temple Premises	Giant Buddha Statue	Preservation of scenic areas and view sheds
Nalanda Ellawala Urban Park	Urban Scenery	Additional artwork and landscaped gardens could contribute to the scenic quality of the site.
Ehelepola Harem	Urban Scenery	Additional artwork and landscaped gardens could contribute to the scenic quality of the site.
Ayurveda Office Building (near Moragahayata Bridge)	River Scenery	Additional artwork and landscaped gardens could contribute to the scenic quality of the site.
Former Chief Minister's Bungalow Premises (Near Government Quarters at Muwagama)	Hilltop	Additional artwork and landscaped gardens could contribute to the scenic quality of the site.
Upper Division of Mahawalawatta	Hilltop	Additional artwork and landscaped gardens could contribute to the scenic quality of the site.

Strategy 03 – Local Economy Optimization

Local Economy Optimization is more than just economic growth. It is promoting participation and local dialogue, connecting people and their resources for better employment and a higher quality of life for both men and women living in the town.

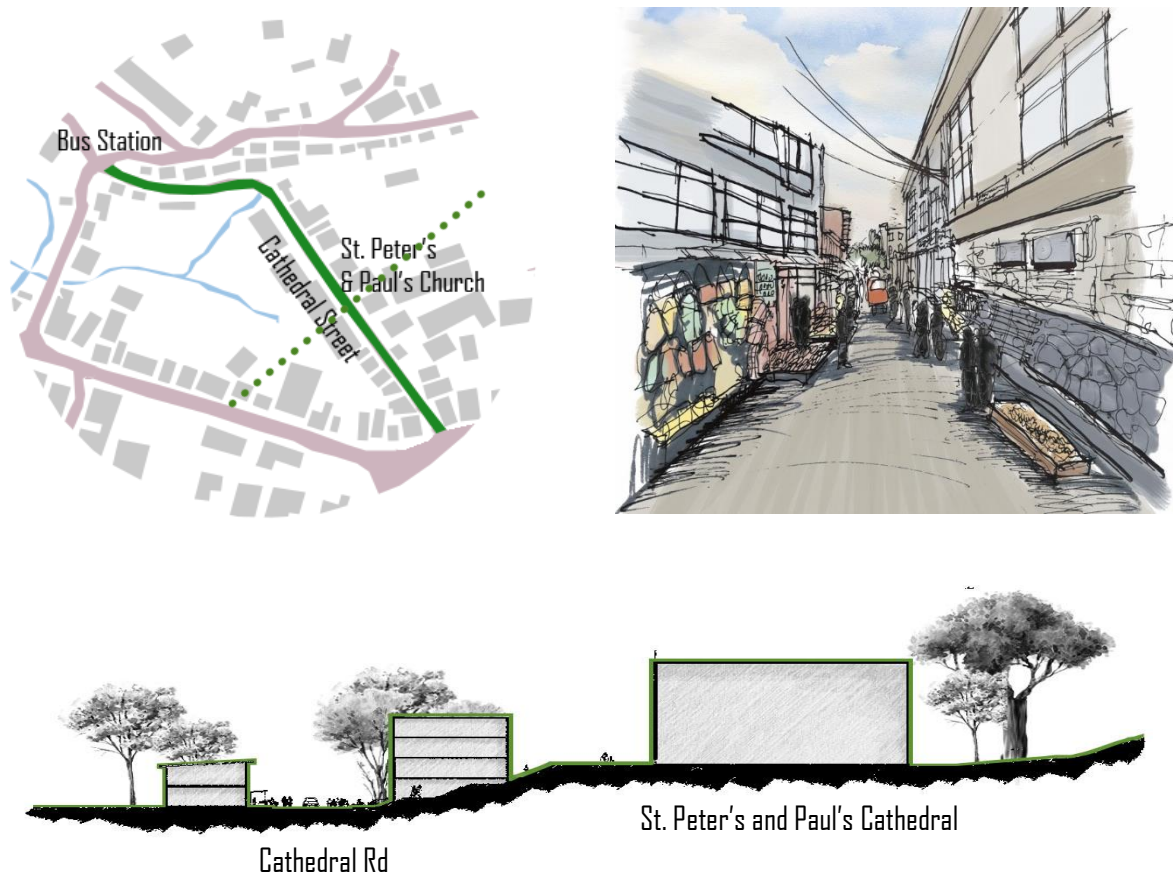
STRATEGY 3.1

Facilitating and Promoting the shopping street culture of Ratnapura

Pedestrian-oriented shopping streets can be key to making communities more livable, particularly when they are well designed, managed and strategically connected to networks of public transit, pedestrian paths and bike routes. At the same time, it will boost the economy by facilitating to the inhabitants and visitors to buy local products in a low-cost.

1. Development of Church road as a vehicular free shopping street

Figure 6.4.7. Church Road Development



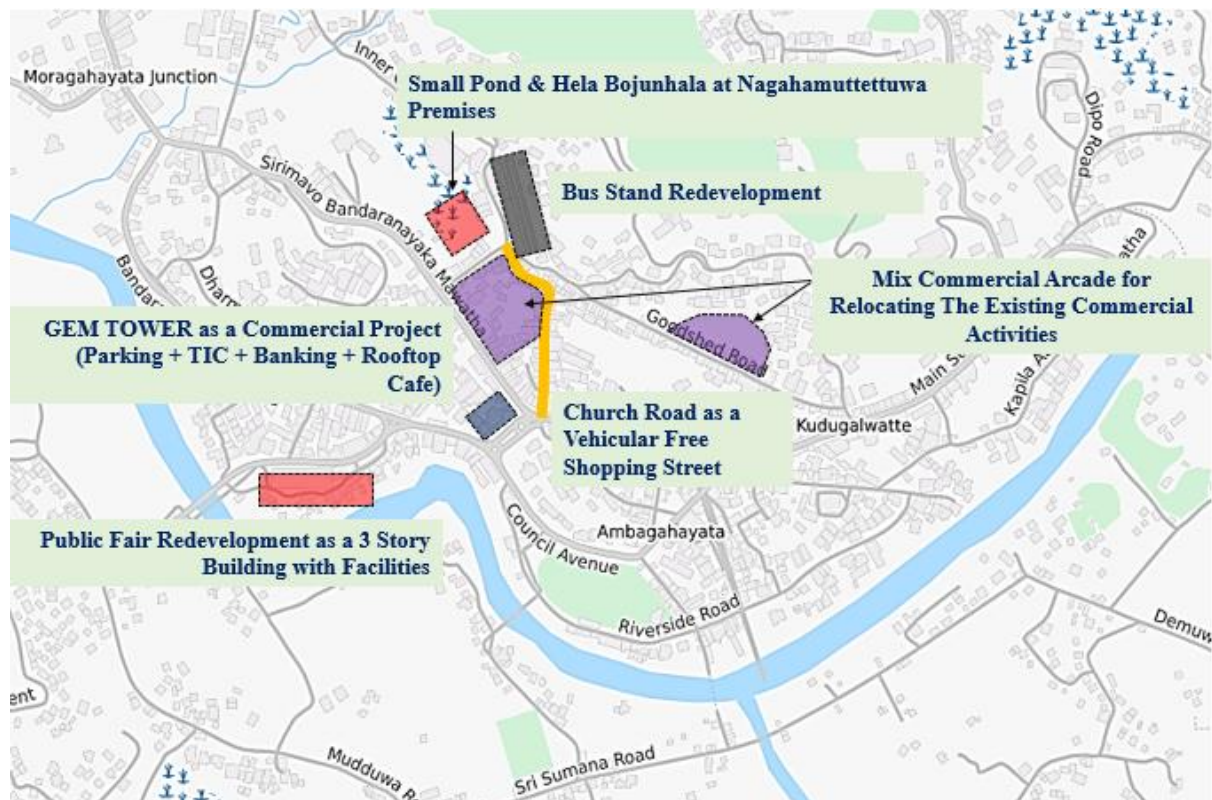
STRATEGY 3.2

Facilitating to the existing commercial structure of the town

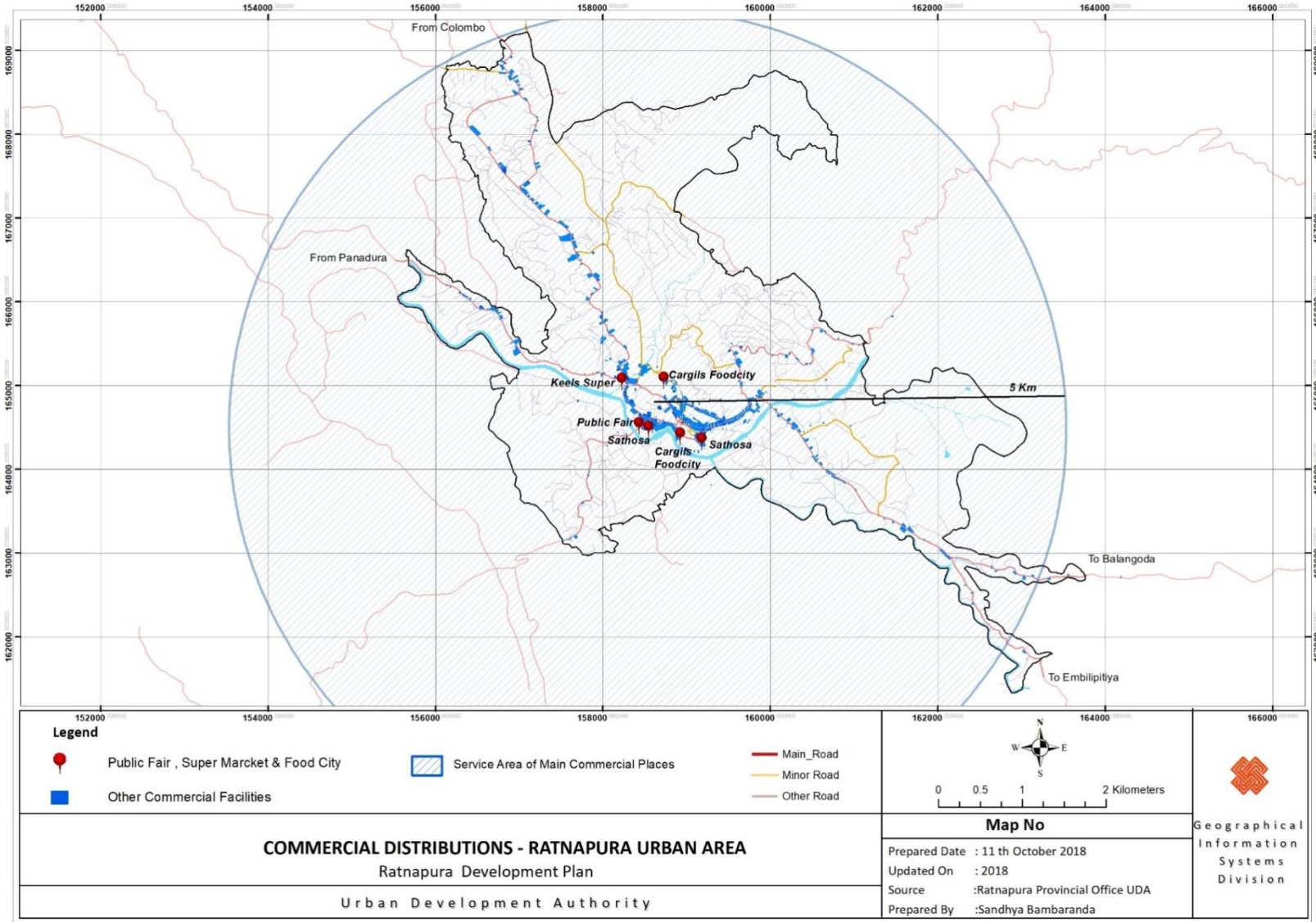
Ratnapura Town is a base for wholesale and retail industry since the municipal council area surrounded by extremely rural population (nearly 80%). Moreover, the textile industry, public fair which happens daily basis and banking with other financial activities have based on Ratnapura Town. Thus, it is needed to facilitate to the existing commercial structure in order to sustain the catchment of those.

1. Construction of a multi-purpose commercial building adjacent to the Seewali Ground
2. Redevelop the Public Fair Complex as a three story building and facilitate it with sanitary facilities and other necessary facilities
3. commercial complex at Polhunuwe Premises, Good shed Road
4. Construction of a Hela bojunchala (local food cafeteria) at Nagahamuttettuwa Premises
5. Economic efficiency through clustering the activities
6. Giving or allowing to have compatible uses through zoning regulations

Figure 6.4.8. Local Economy Optimization Projects



Map No. 6.4.1. Existing Commercial Distribution

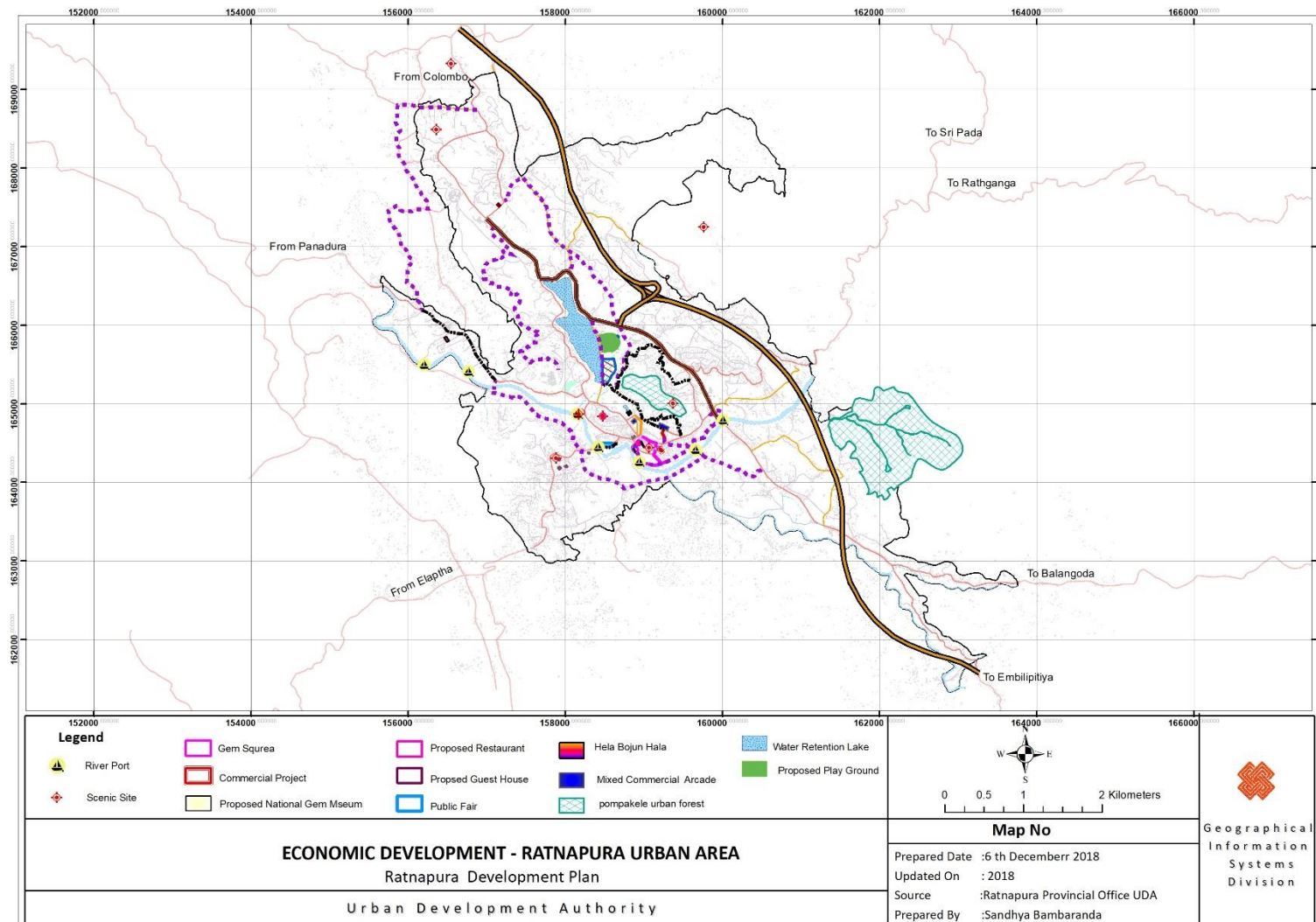


STRATEGY 3.3

Zoning regulation

Within the Zoning regulation process, Ratnapura municipality area has divided into 09 zones in which certain land uses are permitted or prohibited. The type of zone determines whether planning permission for a given development is granted and it will facilitate into local economy optimization at the end.

Map No. 6.4.2. Proposed Economic Development

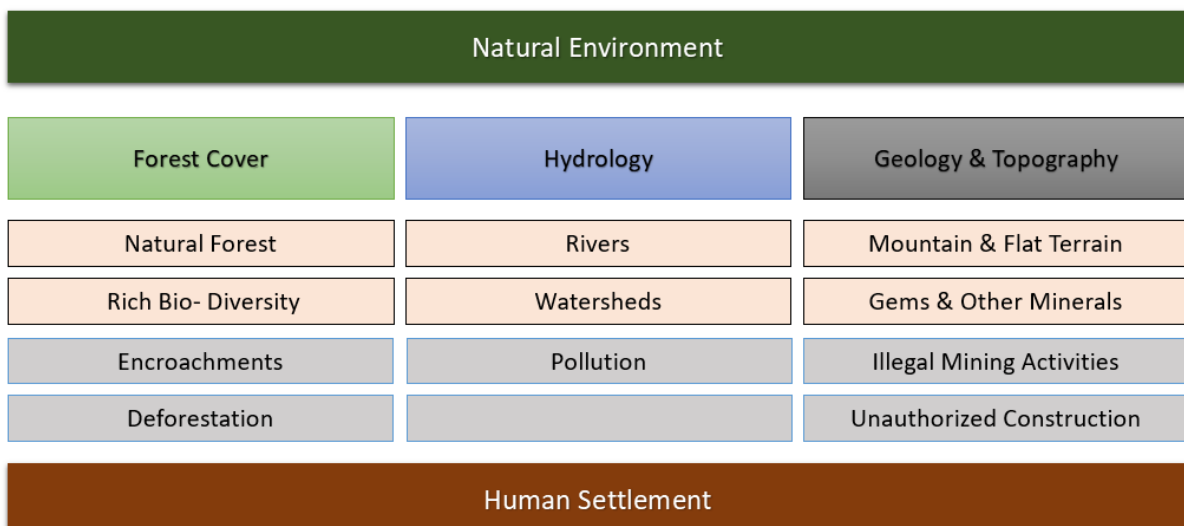


6.5 Environment Sustainable Strategies

Ratnapura is the gateway of hill country and it belongs to the central fragile area as per the National Physical Plan. But currently, the forest cover has been reduced around 10% within the planning area due to deforestation due to various reasons and it has caused for increase the urban heat in Ratnapura as well.

At the same time, the Pompakele Urban Forest is located close to the town center as an urban lung and the planning area has a variety of species and higher no of endemics in it due to the consistence within the wet zone. Moreover, 80% of the planning area consist with inland water bodies including Kalu River. (Refer chapter 6 for further information)

Figure 6.5.1. Environmental Structure of Ratnapura Town



Environment Management Strategy

Concisely, Ratnapura Environmental structure has based on forest cover, hydrology with geology and topography. Nonetheless it is seen a struggle between natural environment and human settlement at present. Thus, an arrangement between these two and harness the potential of natural environment to the up lift of human settlement is the environment sustainable strategy of Ratnapura Development Plan.

Concerning the vision of 2030, environment sustainable strategy will facilitate to achieve the goal of “Create Ratnapura, ‘A livable City’ for the local community” through the objectives of facilitating to enhance green space up to 40 % and facilitating to create a disaster resilient city through green blue network by 2030.

Figure 6.5.2. Environment Sustainable Strategy



6.5.1. Conservation Plan

STRATEGY 1.1

Conservation of Wetlands, Water retention & Detention Areas.

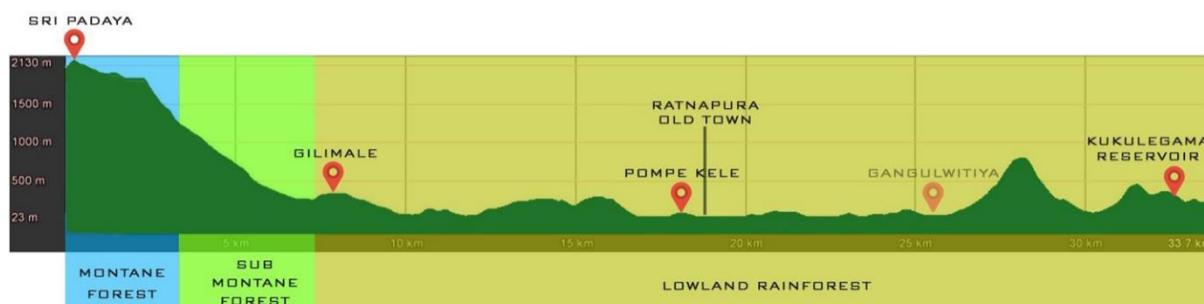
This plan suggested to reserve the marshes, paddy fields, abandoned paddy fields and catchment areas as flood retention & detention areas according to the flood hazards of the area. Development activities of the adjacent areas must be done in compliance to the relevant laws & regulations under the recommendations of relevant institutes.

Paddy and Abandoned Paddy Areas are zoned under “Environmental Sensitive Zone” and all the development activities of the above areas should be done according to the Agrarian Services Act.

STRATEGY 1.2

Conservation of Forests

Existing forest cultivation, forest reserves (Muwagama, Angamma) and forest parks (Pompakele) should be conserved.

Figure 6.5.3. Pompakele as a Green Lung

Source: Urban Development Authority

STRATEGY 1.3

Conservation of Scenic Sites

Most of the roads in Rathnapura Urban area run through scenic sites. “Sri Pada”, the world Heritage sacred place can be seen very beautifully while travelling on these roads. Apart from that, the small hill tops within the municipality are scenic sites itself as given details in economic development strategy. Accordingly, it is proposed to conserve the identified scenic sites within the town. It is suggested to control exhibition of advertisement boards in these places and development activities which disturbs scenic beauty of the area. These sites will provide passive recreation to the municipality.

Table No. 6.5.1. Scenic Sites

Name of Scenic Site	Main Attractions or Activities
Ananda Maithree Temple premises	Hilltop
Kajugaswatta Temple Premises	Huge Buddha Statue, Hilltop
Weeragoda Temple Premises	Huge Buddha Statue
NalandaEllawala Urban Park	Urban Scenery
Ehelepola Harem	Urban Scenery
Ayurveda Office Building (near Moragahayata Bridge)	River Scenery
Former Chief Minister’s Bungalow Premises (Near Government Quarters at Muwagama)	Hilltop
Upper Division of Mahawalawatta	Hilltop

6.5.2 Landscape Management Plan

Beautification is the improvement of the visual appearance and aesthetics of the town. This can range from simple, purely visual elements, such as annual planting and colorful banners, to functional elements such as street lighting, furniture, and tree planting, as well as major infrastructure projects such as road and sidewalk creation and restoration.

This plan aims to ensure that the vision of the town can be achieved through a long term, co-ordinated and informed approach to landscape management. Ratnapura has formed with a diverse landscape with green and blue network which requires an expert management to optimization of existing natural resource. Thus, Natural Landscape (trees/ forests/ riverine/ mountains), Artificial Landscape (houses/ roads/ parks) and the Urban Landscape (urban parks/ gardens/ small public gardens/ people parks) has been considered within the Ratnapura Development Plan.

Expected outcomes of the plan

- a) Conserving and enhancing the character and diversity of the Ratnapura Landscape.
- b) Focusing on preservation, restoration and the creation of parks, nature centers and recreational areas
- c) Providing a healthier atmosphere for wildlife and the generations to come

To attract visitors and establish town's pride in national arena, it is essential to improve the appearance of the town. Regarding the goals of the Ratnapura Development Plan, the future Ratnapura will be a tourist destination and a location where people want to live, work and cherish. The strategy is focusing to develop community-owned, vibrant, pedestrian-friendly, clean, green and sustainable streetscape of Ratnapura town, with special reference to the Gem Culture and Aquatic Resources.

Figure 6.5.4. Urban Green Pockets



Image Source: Studio 5 (2017/18) – City School of Architecture, Colombo

STRATEGY 2.1

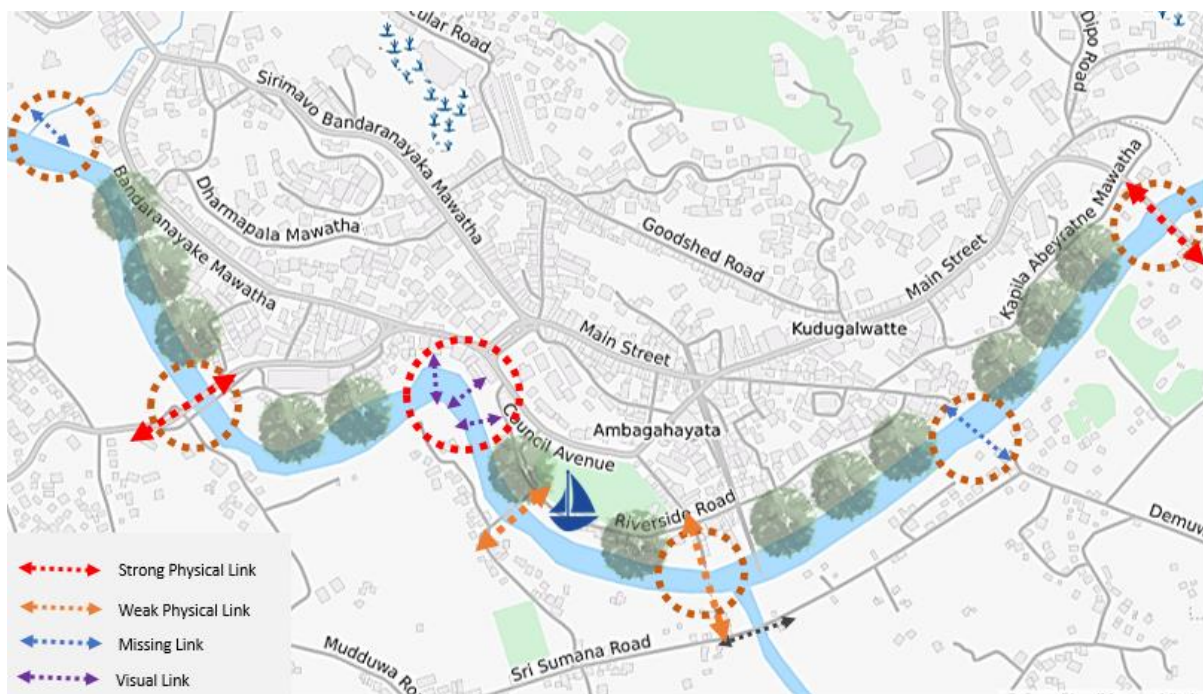
Landscape of Old Town

STRATEGY 2.1.1

Landscape of River Banks

The Kalu River Strip is a major site for the Ratnapura Town. The specific strip can use as a linear park for serving typical, evolving urban needs which have risen with the time. Also, the plants which selected for planting along riverbanks should be those that are hardy in Ratnapura region while also being unaffected by water levels.

Figure 6.5.5. River Front Development and Landscaping



STRATEGY 2.1.2

Landscape of Scenic Sites

Identified scenic sites in Ratnapura reflect local identity and the character of landscape in those sites. It helps defining the self-image of the people who inhabit in Ratnapura and a sense of place that differentiates Ratnapura from other town. It is the dynamic backdrop to people's lives. Thus, beautifying Scenic Sites with necessary landscape is a requirement.

STRATEGY 2.1.4

Landscape of Streets

Ratnapura is famous for Gem Streets since ancient time and some streets work as shopping streets in the town. Thus, landscaping of streets are required in Ratnapura Town Development.

Street Type #1 - Proposes changes to Main Street to be the main linear space of gem trading commercial activity. This two-way street will have wide sidewalk with sitting areas.

Street Type #2 - Proposes changes to Shaviya Mawatha to be an extended linear space of gem trading commercial activity. This street will be facilitated with a fine landscape.

Street Type #3 - Proposes changes to Demuwawatha Street to be a linear space for gem trading commercial activity. This street will be facilitated with a fine landscape which is business friendly.

Street Type #4 - Proposes changes to Church Road / Cathedral Road (street) to be a linear space for walker friendly commercial activity. This street will be facilitated with a fine landscape which is business friendly.

Street Type #5 - Proposes changes to Senanayaka Road, Bandaranayaka Road, Sirimavo Bandaranayaka Mawatha (Colombo – Batticaloa A 004 Road) and Good Shed Road to be walker friendly roads with fine landscape which consists shady areas and sidewalks.

Figure 6.5.6. Nodes and Streets of Ratnapura CBD

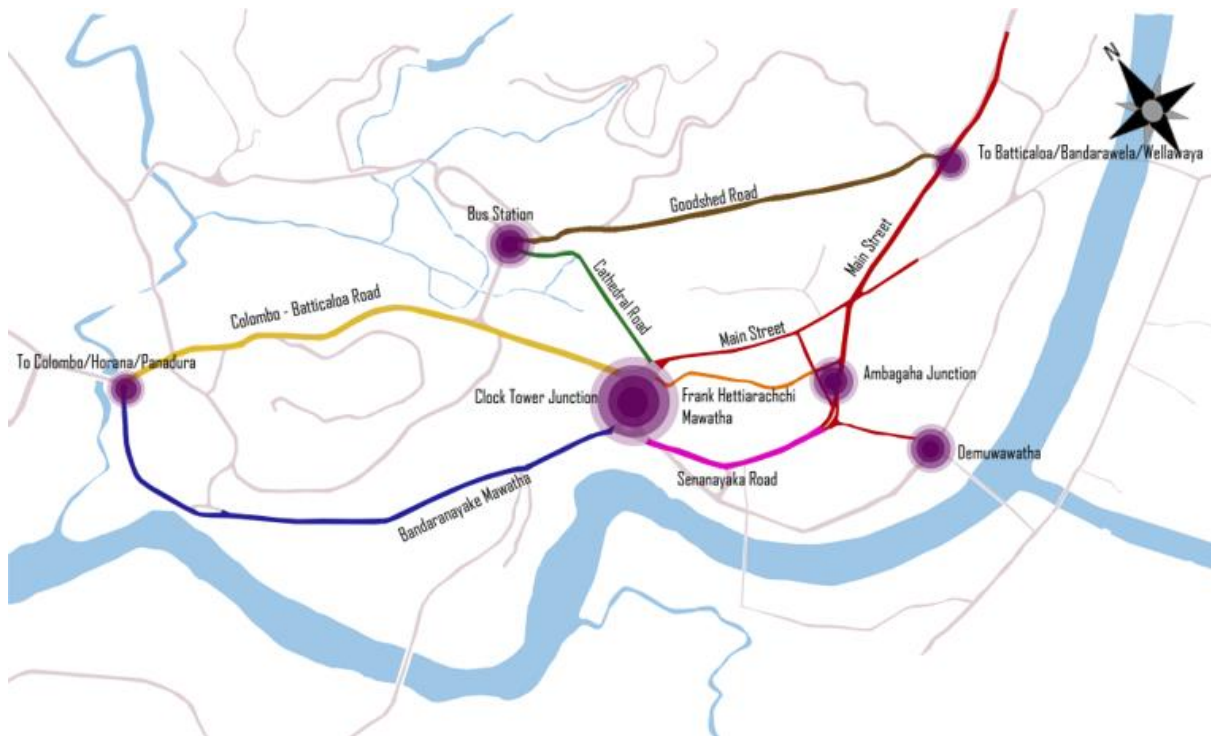


Image Source: Studio 5 (2017/18) – City School of Architecture, Colombo

STRATEGY 2.1.5

Landscape of Alleyways

The redesign of alleyways located in commercial area of Ratnapura is typically undertaken to effect economic development and to develop a sense of community and a sense of place through these spaces. Some allies are pedestrian- related, while other allies are transportation- and work-oriented. None the less, it is required to redesign alleyways to revitalizes social life and promote walkability in the commercial area of the town.

Identified Alleyways

- Entering from Lee Maduwa near Moragahayata – exit at KeleKade
- Entering from world trade – exit at Nawathena
- Entering from Dharmapala Collage – exit at IOC (Bandaranayaka Mawatha)
- Entering from Good Shed Road (Palitha Stors) – exit at Church Road and in front of Aloka Hospital
- Entering in front of Indika Hotel – exit at Church Road
- Entering from public fair – exit in front of DFCC
- Entering from Shan – exit in front of the public fair

Figure 6.5.7. Identified Alleyways



Image Source: Studio 5 (2017/18) – City School of Architecture, Colombo

STRATEGY 2.5

Landscape of Public Open Spaces

Establishing and maintaining urban parks helps revitalize communities in a variety of ways including increasing economic development opportunities; increasing daily physical activity; reconnecting children with nature; and reducing crime by providing safe, healthy alternatives for at-risk youth. But most importantly, urban parks play an important role in improving public health. Thus, it is recommended to provide enough shade and a proper landscape for the identified public open spaces.

1. Nalanda Ellawala Urban Park
2. Nanamaladola Reserve as an urban pocket park
3. YMBA premises as a green public space
4. Ehelepola Museum Premises as the Central Park with a small pond at Nagahamuttettuwa Premises
5. Wetland Park at Lenthadiya Premises

STRATEGY 2.2

Landscape of New Town

STRATEGY 2.1.3

Landscape of Nodes

Major nodes in Ratnapura are identified from the field pattern and characterized according to the presence of relevant features and land uses from the viewpoint of their functions. Hence, it has been identified that water should be the main feature of node base landscape. Water feature will be designed to be both a reflective and active water element with 'white noise'.

- Construct a water fountain at Hidellana Junction
- Construct a water fountain at Court Junction

STRATEGY 2.6

Landscape of Rooftops

A green roof assists with city storm water management by reducing and delaying storm water runoff and absorbing pollutants in rainwater. Also, it helps to reduce urban heat island effect by lowering air temperature. Even very small urban roof areas can make a difference. Thus, it is recommended to convert rooftops within the town center into green roofs with suitable landscape.

STRATEGY 2.7

Landscape of Paving

The proposed paving may give urban trees the rooting space they need to grow to full size. This must integrate healthy ecology and thriving cities, with the living tree canopy above, the city's traffic on the ground, and living tree roots below.

STRATEGY 2.8

Landscape of Lighting

The proposed lighting is designed to be well distributed, illuminating routes and key features. It will be achieved from a variety of sources which include feature lighting to trees and planters, under lighting from buildings where they form roofs for pedestrian and vehicular passage and wall wash lighting. The aim is to provide safely set alight routes throughout the town combined with atmospheric lighting to key areas and 'Smart Lighting System' has been proposed for it. (Refer Electricity and Data Lines chapter for more details)

6.5.3 Disaster Risk Management Plan

Ratnapura is an urban area in the country which was identified as a frequently flooding area and with recorded landslides, cyclone and the lightning situations too. There are many reasons for these situations and some are natural while some reasons are absolutely becoming man made. But mostly Ratnapura affects with the flood situation. (Refer Chapter 6 for further information)

Simultaneously, local knowledge on disaster, disaster management skills and training skills of the community, disaster management interventions by the government and non-government organizations, a resource base for hydrological, geological, geomorphologic and biological resources, major transportation node (1st order node in Ratnapura), leadership and institutional push up for an integrated development, historic, religious and cultural identity of the city and development of a new town by planning interventions in a more safer location are the potentials of this area.

Disaster Management Strategy

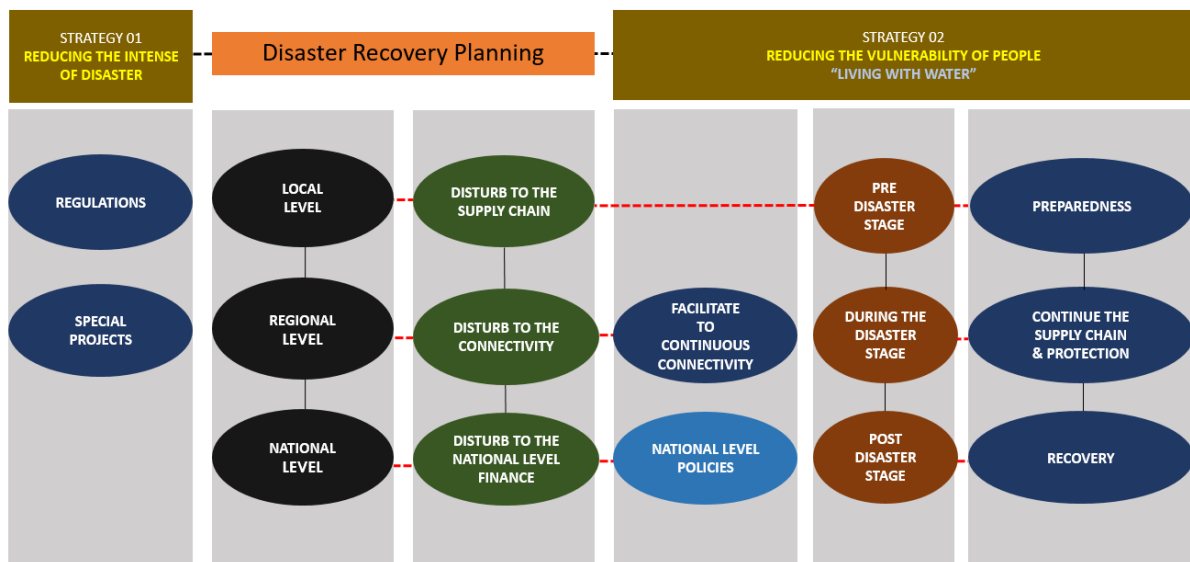


Figure 6.5.8..Disaster Management Strategy

STRATEGY 3.1

Reduce the Intensity of Disaster

STRATEGY 3.1.1

Regulations

Action 01: Introduce regulations for disaster areas

Preparation of hazard zonation mapping and land use controls will be based on flood-plain zoning maps and landslide zoning maps. Thus, there are three kind of zones as prohibited zones, restricted zones and warning zones concerning the flood categories minor floods, major floods, critical floods.

Criteria considered to identify the for vulnerability landslide are slope range & category, bedrock geology, landform, land use, former landslides, hydrology & drainage. According to that the following restrictions will be given to the people.

Prohibited (Highly Vulnerable) Areas

- No development is allowed
- Relocation of existing settlements
- Reforestation Programs

Restricted (Moderately Vulnerable) Areas

- Existing Settlements should be strictly followed the methods of building improvements
- New constructions allow only if they follow the specific building regulations
- Prohibition of mining activities

Warning (Less Vulnerable) Areas

- Encourage the settlers to follow the building regulations

Action 02: Introduce regulations for living with landslides & floods

- Introduce guidelines for construction of buildings in high & moderately vulnerable areas of flood

- Introduce strict regulations to create parking space in ground floor within flood prone areas
- Introduce regulations to restrict creating cement walls to separate home gardens (to allow smooth water flow in disaster situations)
- Introduce guidelines for construction of buildings in moderate land slide prone areas

Strategy 02: Land Use Controls

Guidelines through the zoning regulations.

Strategy 03: Restrictions for Mining Activities in selected areas

Guidelines for the mining activities in high and moderate land slide vulnerable areas

Strategy 04: Protecting River & Cannel Reservations

Strict guidelines for the reservation areas

Strategy 05: Minimize surface and ground water to reduce the pressure of city drainage lines

- Domestic waste water filtering system
- Green Roof System

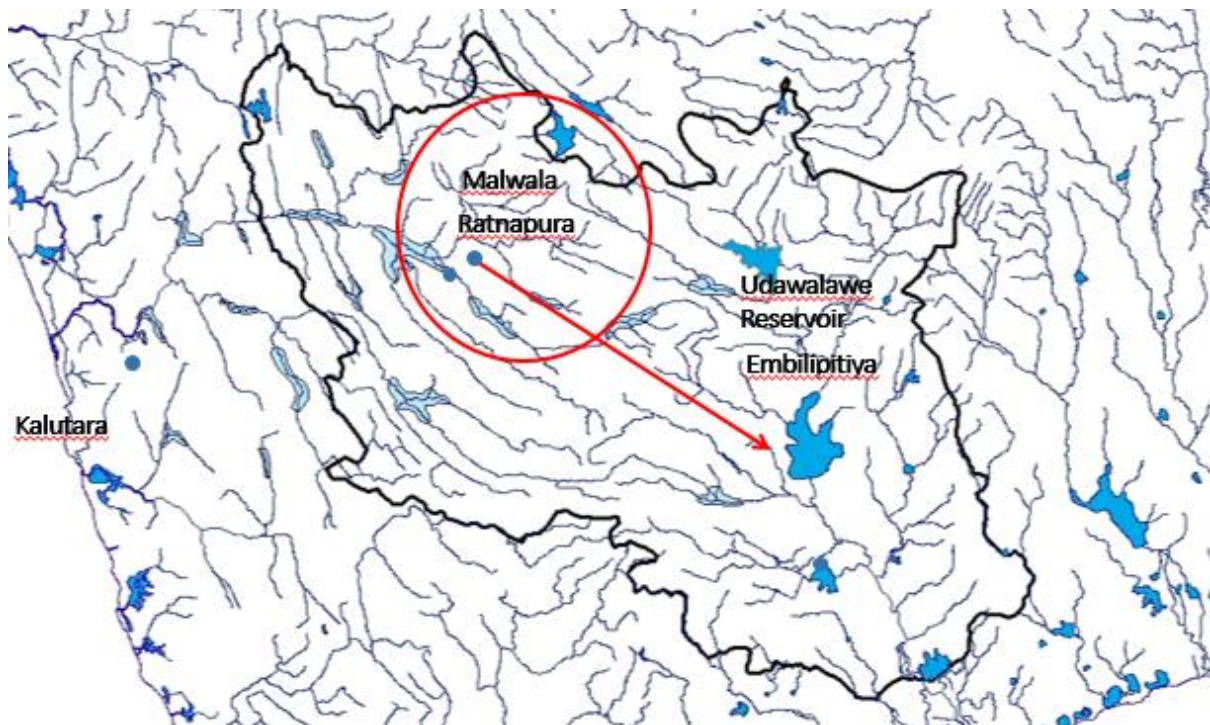
STRATEGY 3.1.1

Special Projects

Strategy 01: Diversion of Kalu River

OPTION 01: Diversion of Kalu River to Udawalawa Reservoir

Figure 6.5.9. Kalu River Diversion



OPTION 02: Diversion of Kalu River through Weralupa Lake in Flood Season (Excessive Water Flow)

Strategy 02: Convert water retention areas into recreational spaces

Project 01: Construction of Water Retention Lake at Weralupa

Project 02: Construction of Play Ground at Weralupa

Project 03: Convert Lenthatiya Retention land as a wetland park

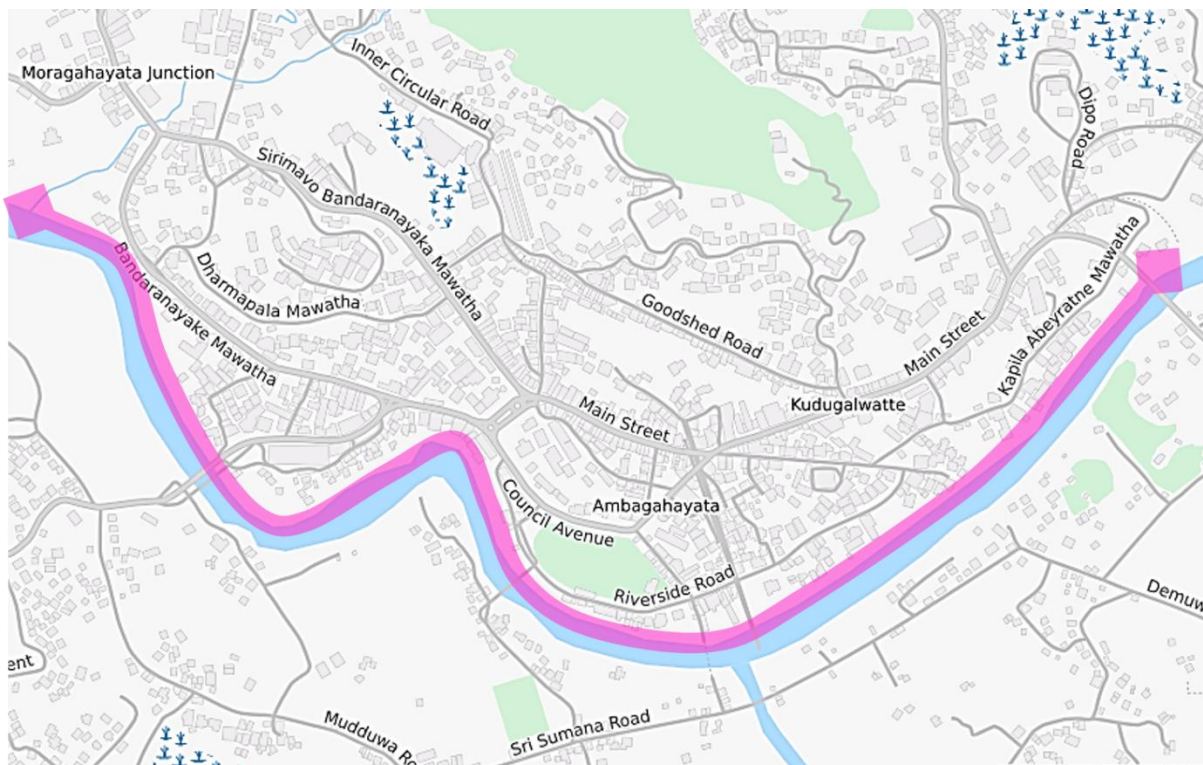
Project 04: River Front Development along the Kalu River Reservation Area (in selected areas)

Project 05: Flood Dike & River Front Development along the Kalu River Bank

Strategy 02: Construct of Flood Dike

Dike is a barrier of stone or earth used to hold back water and prevent flooding. It is one of the greatest feats of hydraulic engineering ever executed, the water was eliminated and the land made useful. Thus, construction of flood dike from Warakatota bridge area to Ayurweda office area will be beneficial for protecting the town itself from the annual flood.

Figure 6.5.9. Flood Dike



Strategy 03: Improve slope stability

- Application of Biotechnical stabilization and soil bioengineering stabilization (Soft – Engineering Solutions) in Ratnapura – Colombo road in front of the National museum
- Use Mesh net technology to stabilize the slope and to prevent the slope slipping in the location of the upper terrain near the starting point of the off circular road Ratnapura

Strategy 04: Facilitate Smooth Transportation Network in Disaster Period

- Proposed Bypass Road - Weralupa Junction to Warakathota Bridge
- Road Redevelopment – Ratnapura Base Hospital to New Town

Strategy 05: Construct helipad locations for emergency services

- Helipad Location 01 – Former District Judge’s Bungalow
- Helipad Location 02 – Upper Club Premises
- Helipad Location 03 – Seewali Collage Ground Premises
- Helipad Location 04 – District Judge’s Bungalow (AthapattuWalawwa) Premises
- Helipad Location 05 – Proposed Thiriwanaketiya School Premises

Figure

6.5.10.

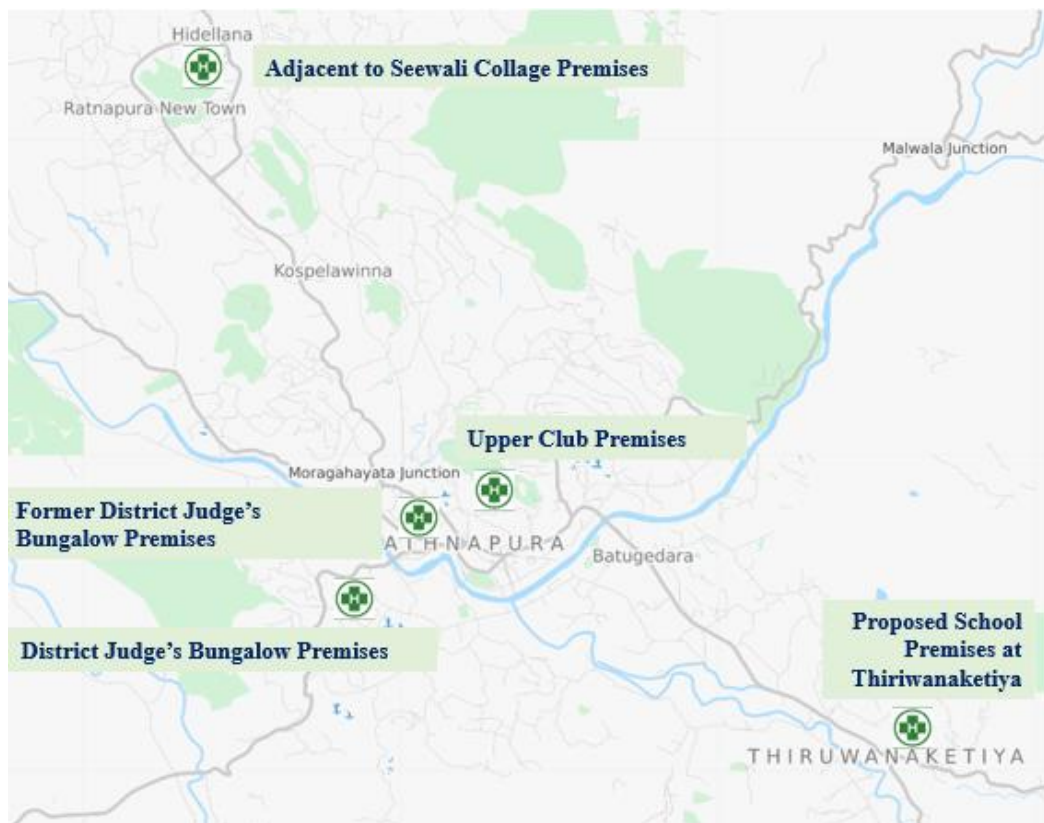
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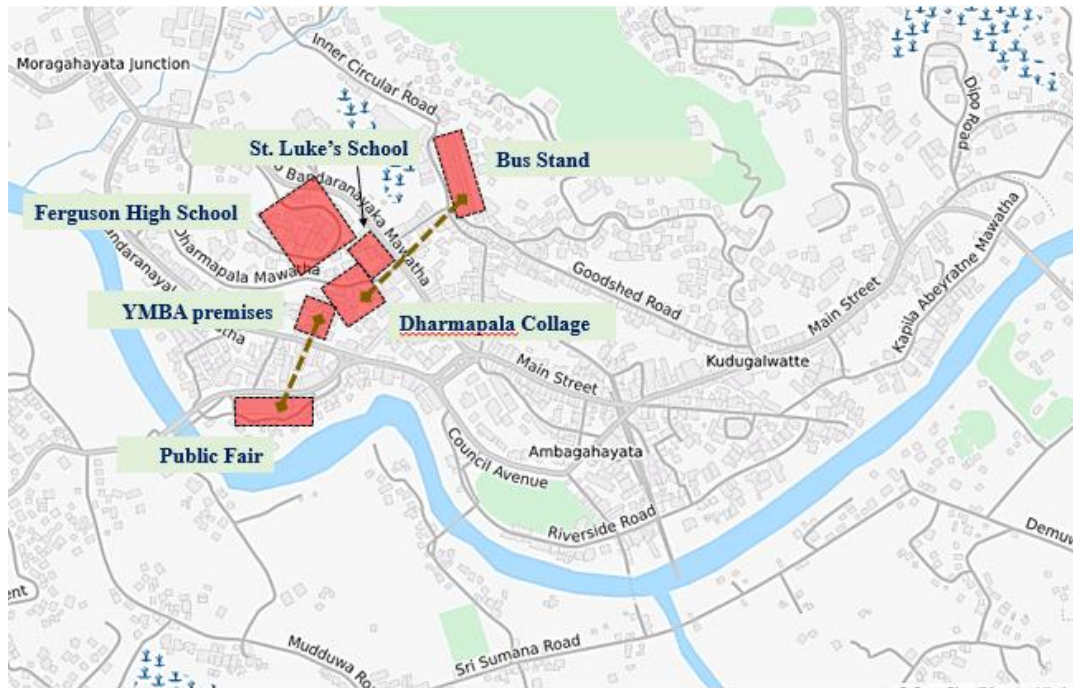
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Strategy 07: Construct Overhead Bridges

- From Dharmapala Collage to Bus Terminal
- From YMBA Premises to Public Fair Premises

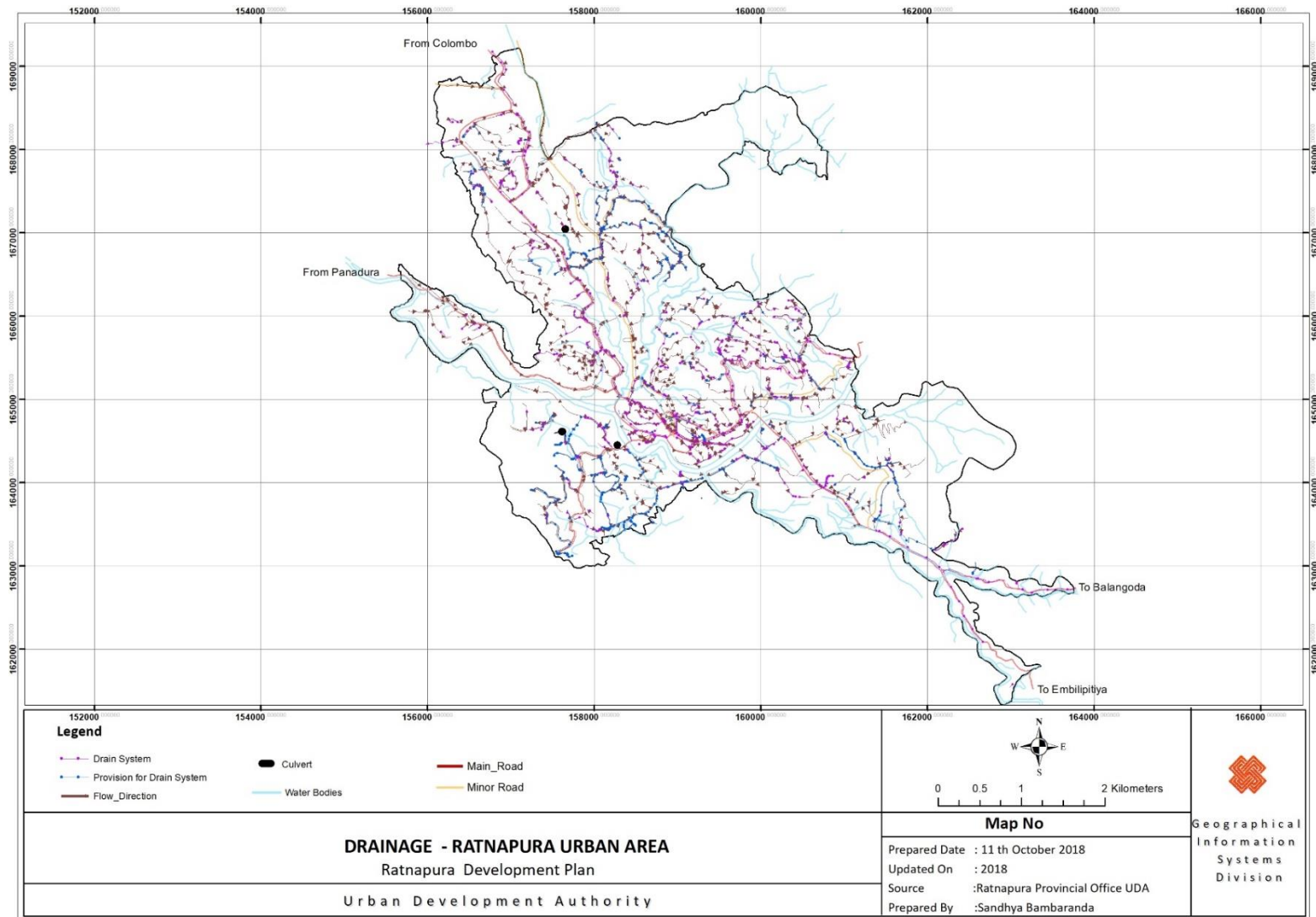
Figure 6.5.11. Overhead Bridges



Strategy 05: Drainage Plan


Revisit of the Existing Drainage Plan of Ratnapura Municipal Council and clear the channels

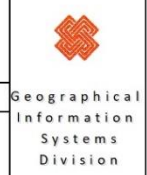
Map No. 6.5.1. Drainage Network of Ratnapura



Legend

- Drain System
- Provision for Drain System
- Flow_Direction
- Culvert
- Water Bodies
- Main_Road
- Minor Road


 W E
 N S
 0 0.5 1 2 Kilometers



DRAINAGE - RATNAPURA URBAN AREA
 Ratnapura Development Plan
 Urban Development Authority

Map No
 Prepared Date : 11 th October 2018
 Updated On : 2018
 Source :Ratnapura Provincial Office UDA
 Prepared By :Sandhya Bambaranda

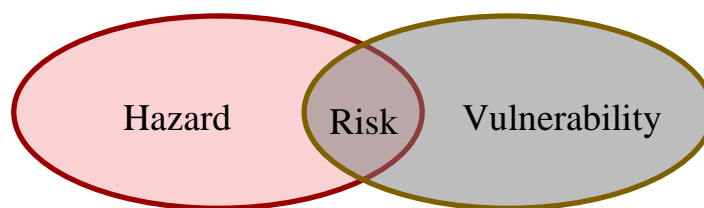
Geographical
 Information
 Systems
 Division

STRATEGY 3.2

Reduce the Vulnerability of People

In an attempt on Disaster management, the first step is to analyze the level of vulnerability with the inputs of Hazard maps and the descriptions of elements at risk (Social, Economic, Physical and Environmental assets). Maps prepared to illustrate different vulnerability dimensions were further used in preparing strategies and strategic action projects to reduce the vulnerability while increasing resiliency to the disasters.

Figure 6.5.11. Environmental Vulnerability



STRATEGY 3.2.1

Pre Disaster Stage

Strategy 01: Introduce Mobile Early Warning System (MEWS) - DMC

Use mobile application of FLOOD for forecasting disaster situation make people aware,

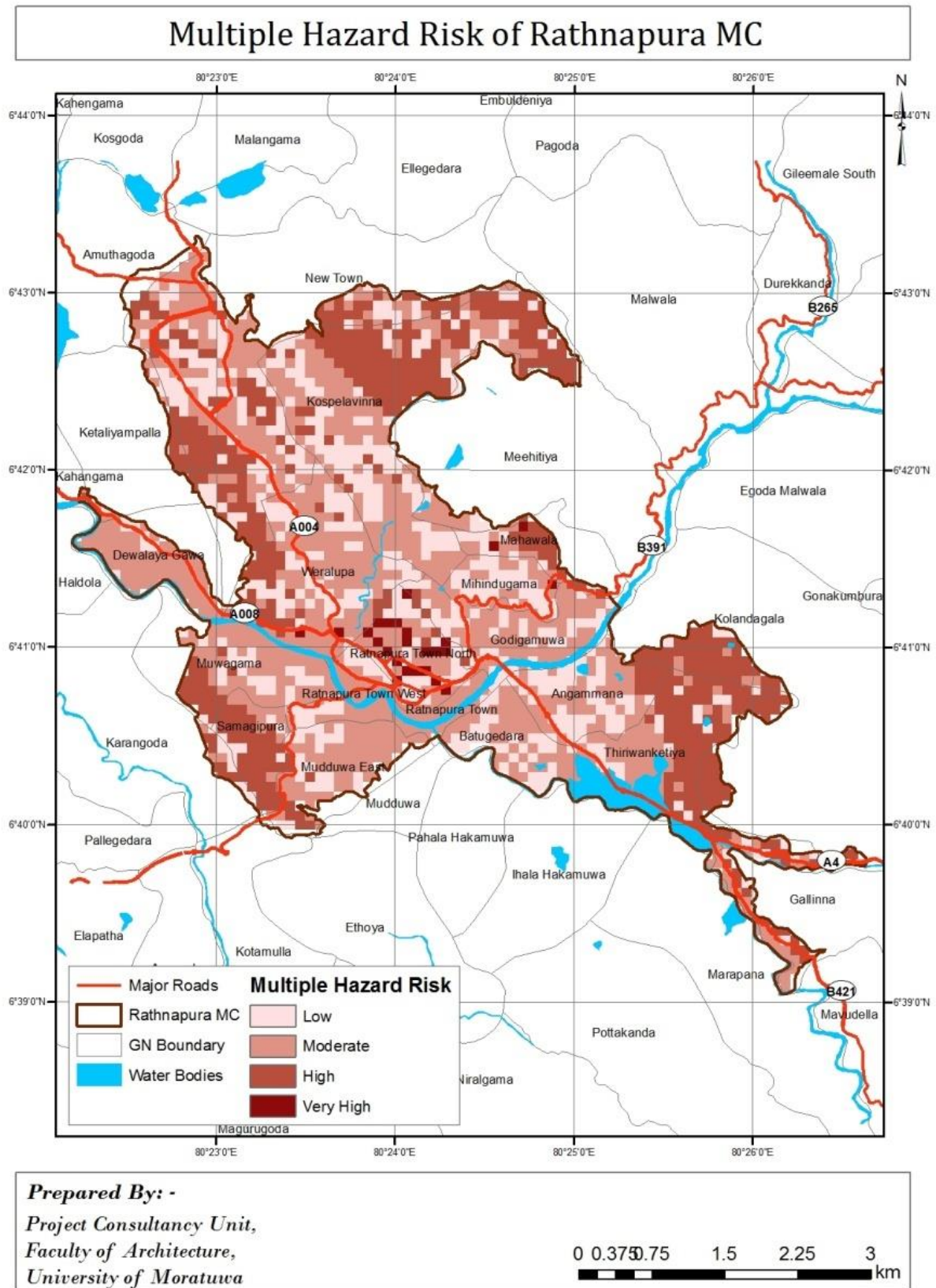
- ✓ Before One Week
- ✓ Before 2 days
- ✓ During the disaster
- ✓ After the disaster (till 01 month)

Strategy 02: Introduce Early Warning System (EWS)

Link with Irrigation Department for forecasting disaster situation& make people aware through Divisional Secretariat

- | | |
|----------|---|
| Step I | Preparation for Response |
| Step II | Observation & Monitoring |
| Step III | Communication and Dissemination |
| Step IV | Follow-up, Review & Sustainability (DMC with SL Navy) |

Map No. 6.5.1. Multiple Hazard Risk of Rathnapura



Source: Project Consultancy Unit, University of Moratuwa

Strategy 03: Pre Disaster Review Meeting:

The overall objective of the meeting is for the parties who have a greater responsibility of the Disaster Management(DM) to revisit the plan in order to ensure that the disaster management system will function optimally for the forthcoming situation.

The following facts need to be discussed in the review meeting:

- Revisit overall plan, assessing whether the plan is sufficient for response
- Agree upon the roles and responsibilities of the parties involved in theDM
- Update important data focusing on the most vulnerable groups such as women, pregnant and lactating mothers, elderly, children and people with disabilities
- Clarify the communication and dissemination systems
- Repair and maintain equipment
- Making the community aware of the evacuation plans and signs and location of shelters/evacuation areas

STRATEGY 3.2.2

During the Disaster

Strategy 01: Setting up a disaster aid network in city center during disaster periods

Disaster aiding through District Secretariat Office directly with the help of Police Station.

Strategy 02: Setting up a disaster aid network in an outside the city center (MC area) during disaster periods

Disaster aiding through Divisional Secretariat with the help of Sri Lanka Navy and Kuruwita Army Base.

STRATEGY 3.2.3

Post Disaster Stage

Strategy 01: Short-term recovery activities

Disaster aiding team helps to the victims to cleanup, temporary housing, and setting up the supply chain (Access to food and water) again.

Strategy 02: Long-term recovery activities

Disaster aiding team helps to the victims through relocation, redevelopment loans and legal assistance.

Strategy 03: Post Disaster Review Meeting:

The overall objective of the meeting is to assess the effectiveness of the systems and the performance of the stakeholders at the time of a flood situation. The following facts need to be discussed in the review meeting:

The following facts need to be discussed in the review meeting:

- Review positive experiences
- Document learning
- Refine the roles and the responsibilities of the various stakeholders.
- Update important data
- Analyze the areas for improvement of the early warning system
- Visit the flood affected areas and observation stations and check the condition of the equipment.
- Update the Early Warning System and share it with communities and stakeholders

6.5.4 Public Open Spaces Plan

Open space provides an array of social, health, economic and environmental benefits to individuals and to the community as a whole. In all its open space is an essential ingredient for enhancing the livability of an area and improving the quality of life of its residents. Increasing densities, population growth, and climate change and resource depletion will place further importance on the provision of quality open spaces. Easy access to well designed and diverse open spaces will assist in not only managing the impacts of these challenges, but also enhancing the benefits that open spaces provide. Thus, creation of more public spaces is needed in Ratnapura Development Plan.

Active Recreational Places Ratnapura MC Area

Table No. 6.5.2. Existing Parks & Playground – 2018

No	Type of Parks & Playground	Extent (ha)	Existing Use/Uses	GN Division
	Existing Pocket Parks (EPP)			
1.	EPP ₁	0.1	Playground	Batugedara
2.	EPP ₂	0.1	Playground	Mihindugama
3.	EPP ₃	0.1	Playground	New Town
4.	EPP ₄	0.1	Playground	Muwagama
	Sub Total	0.4		
	Existing Mini Parks (EMP)			
5.	EMP ₁	0.3	Redeveloped	Rathnapura Town West
6.	EMP ₂	0.4	Redeveloped	Rathnapura Town North
7.	EMP ₃	0.6	Batugedara Playground	Batugedara
8.	EMP ₄	0.3	Mihindugama Playground	Mihinduga, Godigamuwa
9.	EMP ₅	0.3	Mahawela Ground	Mihindugama
10.	EMP ₆	0.3	Godigamuwa Ground	Mihindugama
11.	EMP ₇	0.2	Suriyan Ground	Meehitiya
12.	EMP ₈	0.7		Meehitiya
13.	EMP ₉	0.3		Weralupa, Kospelavinna
14.	EMP ₁₀	0.2	Hidellana Kanda Ground	New Town
15.	EMP ₁₁	0.5	Kudugalwatta Ground	Rathnapura Town North, Rathnapura Town, Godigamuwa
	Sub Total	3.6		
	Existing Local Parks (ELP)			
16.	ELP ₁	1.8	Seewalee Playground	Rathnapura Town North
17.	ELP ₂	2.9	Mudduwa Playground	Mudduuwa East
	Total	4.7		

According to the Urban Development Authority's standards, a minimum extent of 1.4 hectares per 1000 population must be allocated for common open space while preparing the development plan. Census statistic records indicate that the population within Ratnapura Municipal Council Area in 2011 was 49,083. According to the development plan's data analysis, it has predicted that the population by 2030 as 64,340. Accordingly, a minimum extent of 85.6 hectares has to be allocated as common open spaces by 2030.

STRATEGY 4.1

Lakes and Ponds

1. Construction of a Water Retention Lake at Weralupa water retention area
2. Construction of a pond at Nagahamuttettuwa Premises

STRATEGY 4.2

Play Grounds and Children's Parks to be redeveloped

1. Redevelopment of Monarawila Ground
2. Redevelopment of Mudduwa Ground
3. Redevelopment of Seevali Ground
4. Construction of Weralupa Ground
5. Redevelopment of Children's Park at New Town
6. Construction of Children's Park near Weralupa Ground

STRATEGY 4.3

Aqua Base Theme Parks

1. Construction of Aqua Base Theme Park near the Weralupa Ground Premises

STRATEGY 4.4

Wetland Parks

1. Construction of Wetland Park at Lenthadiya Premises

STRATEGY 4.5

Urban Pocket Parks

6. Renovate and redevelop the YMBA premises as a green public space
7. Development of Nanamaladola Reserve as a urban pocket park
8. Development of Nalanda Ellawala Urban Park

STRATEGY 4.6

Forests and Urban Forests

1. Development of Pompakele Urban Forest and Angamma Forest Reserve to facilitate bio-diversity investigation for school children and researchers
2. Redevelopment of the natural swimming pool at Pompakelaya

STRATEGY 4.7

Linear Parks

1. One of the four main rivers called “Kalu Ganga” flows through the limits of Ratnapura Municipal Council. This plan proposed to develop the 66ft. Reservation area of the river as linear park under the concept of linear parks aiming to conserve the area as flood detention and it is suitable to create a walkway on the reservation.
2. One of the tributary of Kalu Ganga called “Way Ganga” also flows through this urban limits and the suitable places of the 15ft reservation of that is also suggested to develop under the concept of linear parks.
3. Katugasela Stream reservation and Canal reservations are also suggested to develop as walkways.
4. It is suggested to develop walkways around the proposed Weralupa water Retention Lake and Nagahamuttettuwa pond.

Proposed Public Outdoor Recreation Space Plan – 2030 (Rathnapura MC Area)**Table No. 6.5.3. Proposed PORS**

No	Type of Parks	Extent (ha)
1.	Pocket Parks (PPP)	0.2
2.	Mini Parks (PMP)	1.4
3.	Linear Parks (PLi.P)	76.4
4.	Forest Park (PFP)	20.9
	Sub Total	98.9
5.	Existing PORS	8.7
	Grand Total	107.6

Table No. 6.5.4. Public Outdoor Recreational Space Plan – Permitted Activities

No.	Park Category	Extent	Permitted Uses
1	Pocket Park	Less than 0.2 ha (0.5 acre)	<ul style="list-style-type: none"> · Scattered play spaces · Rest areas · Garden patches
2	Mini Park	0.2 –1.0ha (0.5- 2.5 A)	<ul style="list-style-type: none"> · Children’s play area · Small grassed playground · Linear woodland park · Rest garden
3	Linear Park	Depend on the existing river/Oya/Ela/Road/railway reservations	<ul style="list-style-type: none"> · Walking · Jogging · Cycling · Nature trails
4	Forest Park	Depend on the forest type	<ul style="list-style-type: none"> · Information Center · Nature trails · Canopy walkways · Walkways · Camping (Limited activities) · Research

Passive Recreational Places Ratnapura MC Area

STRATEGY 4.8

Public Library

The existing libraries are located at the old town center and new town. Nonetheless the use of old town library does not compatible to that place and the space is not enough for the demand since it is the major library which has larger catchment in and around Ratnapura. It is suggested to shift the location of it and construct a new library with more space within a calm and quite environment.

- a. Facilitate to the library at New Town with proper landscape
- b. Proposed Library at Museum Premises, Ratnapura

STRATEGY 4.9

Cinema Halls

- a. Jothi - Bandaranayake Mw (seating capacity - 200-250)
- b. Lakshmi - Kudugalwatta - (seating capacity - 200-250)
- c. Imperial - at Telecom - (seating capacity - 200-250)

STRATEGY 4.10

Theaters and Art Galleries

The existing city hall at Municipal Council building is used for exhibition of stage drama. Nearly 12000 school children studying within the heart of the city and 10% of it needs to use this space occasionally. Nonetheless the use of it does not compatible to that place and the space is not enough for the demand of school children at least. It is suggested to construct a new theater with seating 750 - 1000 seating capacity, close to the museum premises with an art gallery.

6.6 Culture and Heritage Management Strategies

6.6.1 Heritage Areas

Archeological sites, Cultural Sites & Religious places

While religious places, Archaeological buildings & sites also in Rathnapura Urban area must be conserved.

I. The Historic Maha Saman Devalaya

This Plan proposes to conserve 9 one of this main religious places in Sabaragamuwa Province considering its historical and archaeological values of the Devalaya and Pooja Bhoomi area. In the colonial period under the Dutch this place had been used as a Fortress by Dutch for their war activities. There is a tunnel also can be seen here.

II. Ehelepola Walawwa

The place where Ehelepola Adhikaran lived has been presently developed as a museum park. It is proposed to conserve these places considering historical values and further suggested to establish the museum park.

III. Dutch Fortress

Presently used this historically important building by Gem & Jewelry Authority which was used by Dutch as their fortress. Further It is suggested to conserve the Police Department building also considering its historical importance which was used by the foreigners at the past.

6.6.2 Cultural Festivals (Saman Dewalaya Perahera)

The Maha Saman Devalaya Esala Perahera originates from the Sabaragamuwa district in Sri Lanka. Its purpose interweaves history, tradition and heritage that are unique to the island. Every year in September, the town of Ratnapura and the Devalaya lights up in festivities as the Maha Saman Devala Perahera parades through the streets while locals and tourists alike flock to see this sacred marvel that has been in practice for centuries.



Figure 6.5.12 Saman Dewala Perahera

Captured by: Fowzan Faws, 2016

6.6.3 Archeological Conservation Areas

Table No. 6.5.5. Archeological Conservation Area

Place	GND
Maha Saman Dewalaya	Dewalegawa
Ehelepola Walawwa	Ratnapura Town
Dutch Fort	Ratnapura Town
Wey's Memorial Hall (Library)	Ratnapura Town
Gallen Wiharaya	Weralupa
St. Paul's Cathedral	Ratnapura Town
Ganegoda Wiharaya	Thiriwanaketiya
Jayasumanarama Maha Wiharaya	Thiriwanaketiya

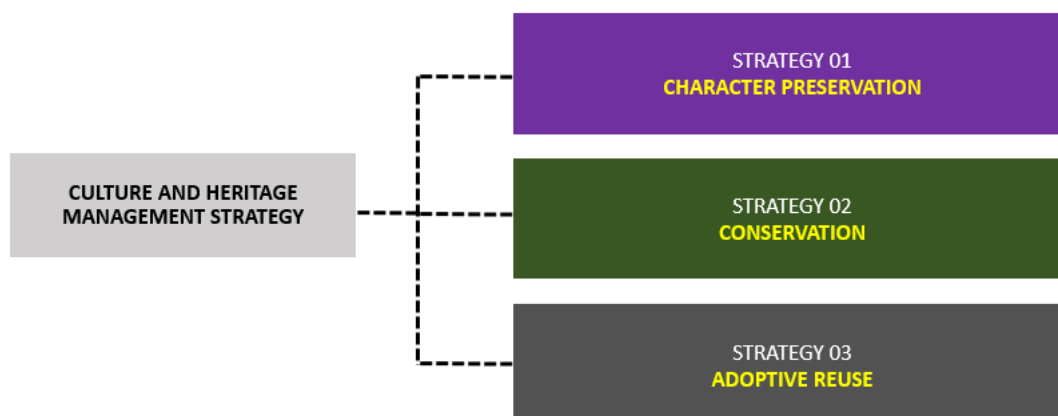
Culture and Heritage Management Strategy

Cultural heritage management is about striking a balance between developing the tourism industry, generate revenue while still conserving the physical integrity of sites, promoting and celebrating their educational, historic and cultural values.

According to UNESCO, heritage is our legacy and cultural identity that we pass on to the next generation. Tangible features, such as monuments, groups of building, and both historic and natural sites, are considered as part of our heritage by UNESCO. However intangible features, such as oral traditions, folk music and dances also make up our cultural heritage.

Concisely, Ratnapura culture has based on God Sumana Saman, Saman Dewalaya and Gem Industry. The heritage of it has based on the Ehelepola era and colonial era. It is grasped in a nutshell that Ratnapura has a strong culture and heritage base which is yet to be adored through the urban development. Thus, a preservation of the culture and heritage while converting the value of the historical and cultural background to the upliftment of people who lives in the town is the culture and heritage management strategy of Ratnapura Development Plan.

Figure 6.5.13. Culture & Heritage Management Strategy



Concerning the vision of 2030, culture and heritage management strategy will facilitate to achieve the goals of “Create Ratnapura, ‘A livable City’ for the local community” and “Create Ratnapura, An attractive Destination for Visitors in Sri Lanka. Those will be achieved through the objectives of facilitating to attract 100,000 tourists for boosting the gem

related eco-tourism and creating a vibrant city space with gem industry related economic opportunities to the local community.

STRATEGY 01 - Character Preservation

Saman Dewalaya area and Gem Streets have their own special character which has a historical value. Thus, it is needed to be recognized, protected and enhanced while providing for the economic, physical and social wellbeing of the communities within the town.

STRATEGY 1.1

Character Preservation of Gem Streets

1. Redevelopment of Main Street, Shaviya Mawatha and Demuwawatha Streets as Gem Streets and facilitate those streets with relevant streetscape with gem identity

Figure 6.5.14. Nodes and Streets of Ratnapura CBD

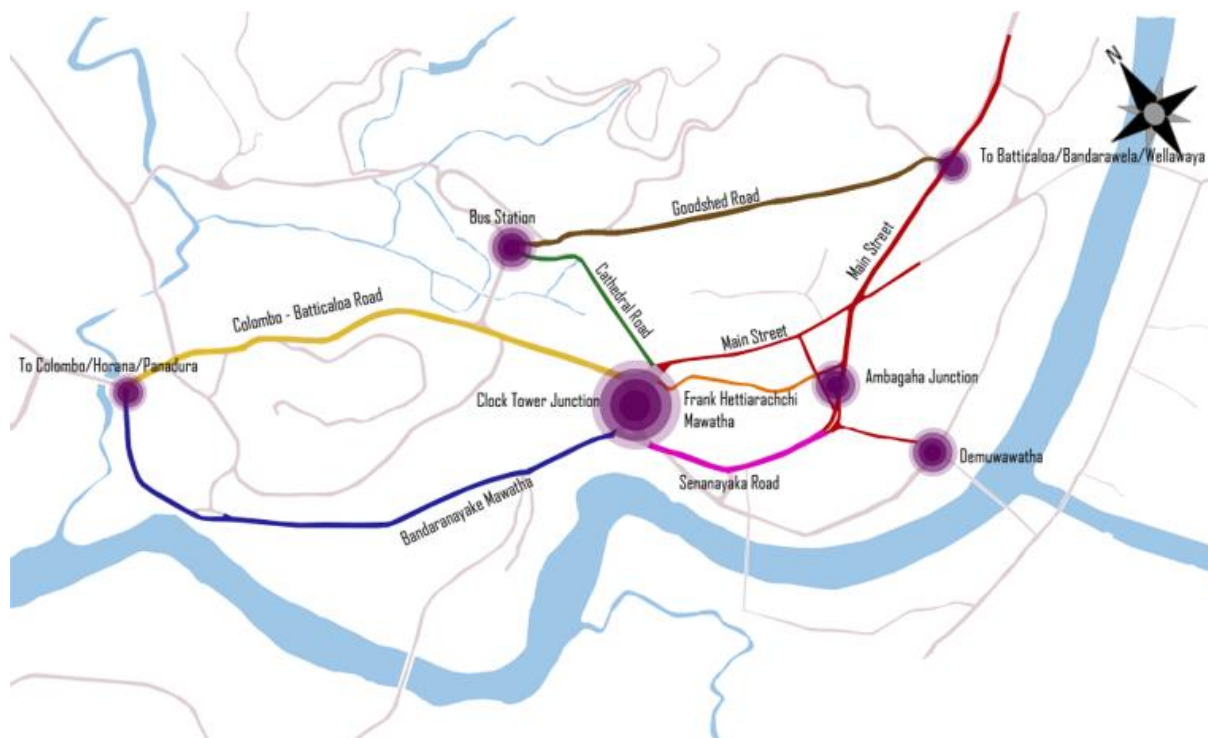


Image Source: Studio 5 (2017/18) – City School of Architecture, Colombo

STRATEGY 1.2

Character Preservation of surrounding area of Saman Dewalaya

1. Redevelopment 1 km distance along the Panadura road from Saman Dewalaya with necessary guidelines to the buildings through zoning plan

2. Redevelopment of Panadura road from Saman Dewalaya to Kotambegawa as a Perahera Streets and facilitate it with relevant streetscape with Dewalaya identity

STRATEGY 02 – Conservation

Conserving urban heritage – historical buildings, festivals, art forms, dance, music and lot more fall under conservation. Nonetheless, effective conservation of heritage resources helps in revitalizing local economy and bringing about the sense of identity, pride and belonging to the residents.

STRATEGY 2.1

Conservation of cultural, historical and archeological sites according to the archeological policies & regulations. (List has been attached to the annexures)

STRATEGY 03 – Adaptive Reuse

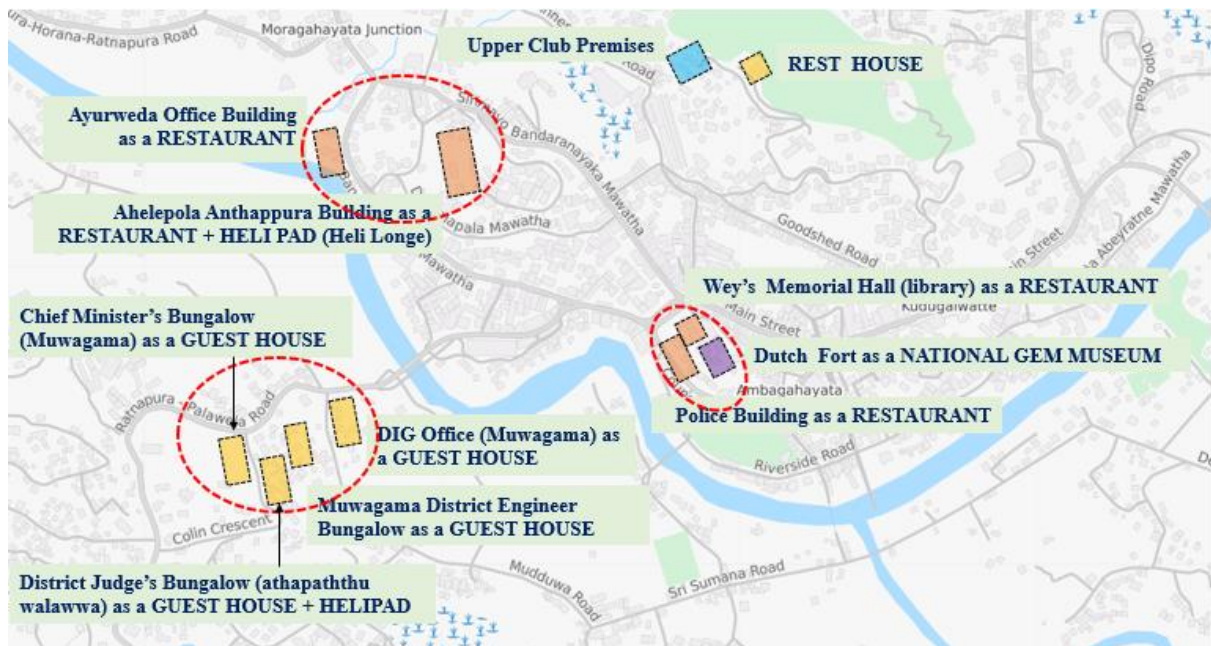
Ratnapura has around 15 number of historical buildings which is able to reuse for the purpose other than it was designed. Typically, it is closely related to historic preservation and conservation around cities with rich history.

STRATEGY 3.1

Adaptive Reuse of the Identified Historic Buildings

1. Renovation of Dutch Fort and change use as the National Gem Museum with conference halls and auction facilities
2. Renovation of Library building and change use as a restaurant
3. Renovation of Police buildings and change use as a restaurant
4. Renovation of Ayurweda office building and change use as a restaurant
5. Renovation of DIG office building at Muwagama and change use as a guest house
6. Renovation of District Judge's Bungalow and change use as a guest house
7. Renovation of Former Chief Minister's Bungalow and change use as a guest house
8. Renovation of District Engineer's bungalow and change use as a guest house
9. Renovation of Ehelepola Harem and change use as a restaurant.

Figure 6.5.15. Historic Buildings Conversion



6.7 Implementation Strategy

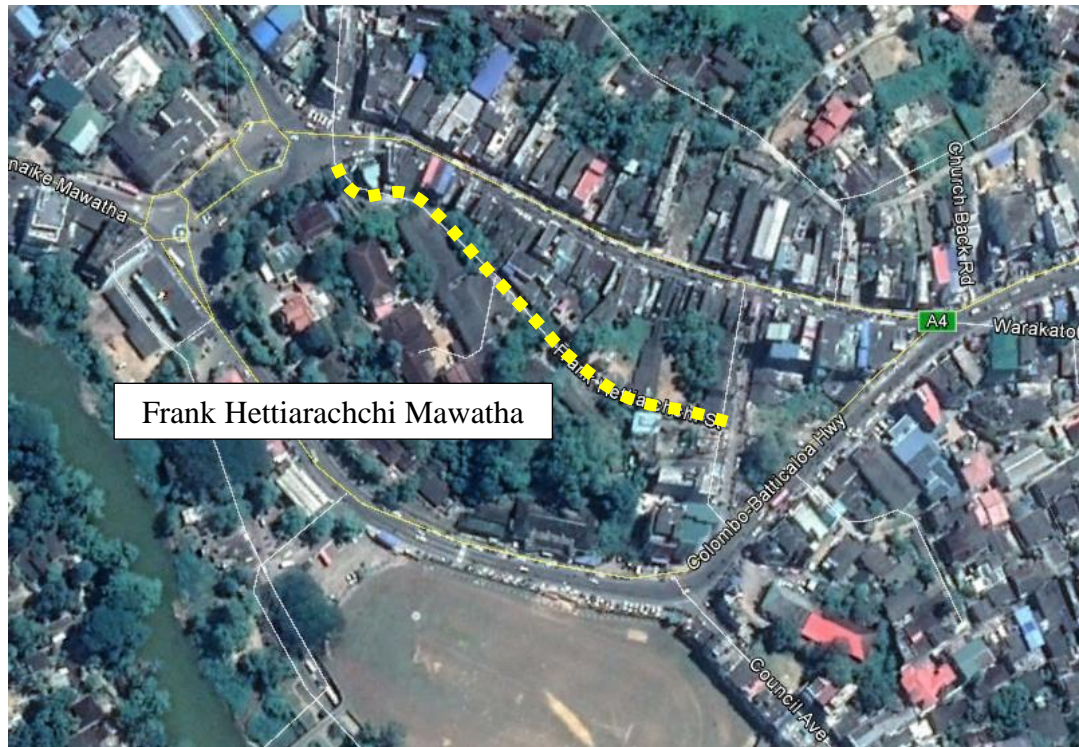
6.7.1 Strategic Action Projects

1	Jewellery Street Development Project in Frank Hettiarachchi Mawatha
2	Dutch Fort Renovation Project as the National Gem Museum
3	Library Building Renovation Project as a Restaurant
4	Historic Building Renovation Project as Guest Houses
5	Ayurweda Office Building Renovation Project as a Restaurant
6	Ehelepola Harem Building Renovation Project as a Restaurant
7	Weralupa Recreational Cluster Development Project
8	Pompakele Urban Forest Development Project
9	Nalanda Ellawala Urban Park Redevelopment Project
10	Gem Square Development Project at Food City Premises
11	Gem Streets Development Project in Main Street, Shaviya Mawatha and Demuwawatha Road
12	Gem Tower Construction Project at Post Office Premises
13	YMBA premises Renovation and Redevelopment Project as a green public space
14	Ehelepola Museum Premises Redevelopment Project as the Central Park of the City
15	Nagahamuttettuwa Premises Development Project with Helabojunhala and Pond
16	Scenic Site Development Project
17	Multi-Purpose Building Construction Project at Museum Premises for Library, Auditorium and Art Gallery
18	Church Road Development Project as a vehicular free shopping street
19	Alleyway Improvement Project in Old Town
20	Disaster Aid Center Construction Project with helipad at Upper Club Premises
21	Helipad Construction Project at Former District Judge's Bungalow Premises
22	Main Bus Terminal Development Project at the Old Town
23	Godawela Road Redevelopment Project
24	Optional Road Redevelopment Project from Hospital to New Town (Saman Pedesa)
25	Parking Facilities Development Project at the identified places in Old Town
26	Sanitary Facilities Development Project of Old Town

27	Administration Complex Project
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Frank Hettiarachchi Mawatha Development Project Under Ratnapura Town Development Plan

1. **Sector** - Urban Development
2. **Project Name** - Frank Hettiarachchi Mawatha Development Project
3. **Project Location**



4. Specify the Project Location

Site	Province	District	Division	Location
01	Sabaragamuwa	Ratnapura	Ratnapura Town	Old Town

5. Rational of the Project

The Economy of Ratnapura is based on the Gem Industry and it has owned a bigger place in Ratnapura economy since pre-colonial period. It is in the 5th place of the export economy in the Sri Lanka according to the statistics of Central Bank Latest reports. 3% of contribution is given to the national economy by Gem industry at present. But gem related jewellery industry hasn't been famous yet in Ratnapura. At present, 25 % of the Ratnapura people engaged with gem trading industry and there is a high possibility for them to gain the benefit of value added gem industry. It is expected that forecasted tourism population will create more direct and indirect economic opportunities through jewellery industry.

Moreover, Gem Culture has been established already in Ratnapura with the places and processes but for generating more income, it is needed to have an identical, attractive streetscape which facilitate to the jewellery market and gem culture. For that, Jewellery Street Development Project in Frank Hettiarachchi Mawatha will serve the purpose.

6. Following benefits are taken from the project

- Specialized street for jewellery industry
- Identical streetscape with unique architectural value
- An arcade structure for supporting commercial activities
- Luxurious boutique spaces for jewellery
- Customized products, spaces for local entrepreneurs to exhibit their businesses

7. Expected Project Inputs

- Identical streetscape with sign boards for national and international business people
- Suitable paving and lighting system for the selected area
- Drainage System

8. Financing Plan

Components	2021(Rs. Mn)
Jewellery Streets Development Project	200 Mn

9. Project Operation & Maintenance

Project planning, consultation, project management and monitoring will be done by Urban Development Authority. Lawyers will be relocated in the proposed lawyers complex in New Town. The developed Gem Streets will be maintained by separate management committee which will be appointed by the Urban Development Authority.

**Dutch Fort Renovation Project
Under Ratnapura Town Development Plan**

- 10. Sector** - Urban Development
- 11. Project Name** - Dutch Fort Renovation Project
- 12. Project Location**



3.1 Specify the Project Location

Site	Province	District	Division	Location
01	Sabaragamuwa	Ratnapura	Ratnapura	Town Centre

3.2 The Total Area of Land required for the project – 1 Acre

3.3 The cost of land if it is being perched – Not Applicable

4 Rational of the Project

Dutch fort is a significant place in Ratnapura town since colonial era. The fort is located at the small hilltop in the town center. It was used for the security purposes and administration activities before and is it is used as the official space of Gem and Jewellery Authority at present. Since this space is surrounded by gem related activities and located in a safe location for disasters, it has identified as the most suitable place for establishing the National Gem Museum. Thus, renovating this space and converting it into a gem museum is needed for preserving the historic and cultural heritage of the town in order to serve the economic development of it.

The expected Gem Museum project will offer its guests an insight into the structure and stratification of various crystals and gem stones. It will hold some unique gem stones and rare specimens of precious stones; while also featuring some old equipment used to source the gem stones and create handmade jewelry. Thus, it is expected that the project will help boosting the Ratnapura tourism and more than 5,000 people will indirectly benefit from this project. Also, it will address the young generations of Ratnapura so they know about their cultural roots and to raise awareness about heritage among all different ages in Ratnapura.

5 Following benefits are taken from the project

- Exhibition galleries
- Conference hall
- Auction Center
- Small retail outlet
- Customized products, spaces for local entrepreneurs to exhibit their businesses
- Parking facilities

6 Financing Plan

Components	(Rs. Mn)
Gem Museum Project	100 Mn

7 Project Operation & Maintenance

Police Department activities will be relocated into the allocated Police Department premises at New Town. Also, Gem and Jewellery Department will be given a space within the renovated Dutch Fort. Joint venture method will be applied for this project among Urban Development Authority, Archeological Department and Gem and Jewellery Authority. The renovation will be done by Urban Development Authority and consultation, designing and project management parts will be included for it apart from the renovation. Maintenance will be done by Gem and Jewellery Authority.

**Library Building Renovation Project
Under Ratnapura Town Development Plan**

- 13. Sector** - Urban Development
- 14. Project Name** - Library Building Renovation Project
- 15. Project Location**



3.1 Specify the Project Location

Site	Province	District	Division	Location
01	Sabaragamuwa	Ratnapura	Ratnapura	Town Centre

3.2 The Total Area of Land required for the project – 40 perch

3.3 The cost of land if it is being perched – Not Applicable

4 Rational of the Project

Library building was known as a Wey’s Memorial Hall in colonial era and it is located at the heart of the city which is close to Dutch Fort Entrance. Presently the building used for the library. Since this space is surrounded by gem related activities and located in a safe location for disasters, it has

identified as the most suitable place for establishing a restaurant for targeting the gem businessmen and the people who loves to have a luxury experience in a gem related environment. Thus, renovating this space and converting it into a restaurant is needed for preserving the historic and cultural heritage of the town in order to serve the economic development of it.

It is expected that the project will help boosting the Ratnapura tourism and the people who comes to the Gem Museum will be facilitated through this project.

5 Following benefits are taken from the project

- Refreshment Facilities
- Sanitary facilities
- Customized products, spaces for local entrepreneurs to exhibit their businesses
- Parking facilities

6 Financing Plan

Components	(Rs. Mn)
Library Building Renovation Project	50 Mn

7 Project Operation & Maintenance

The existing library will be relocated within the Multi-Purpose building which is going to be constructed at Ehelepola Museum Premises. It will be included to the building together with an Auditorium and Art Gallery.

Joint venture method will be applied for this project between Urban Development Authority and Archeological Department. The renovation will be done by Urban Development Authority complies with the conditions of Archeological Department. Maintenance will be done by Urban Development Authority later on.

Historic Building Renovation Project as Guest Houses Under Ratnapura Town Development Plan

16. Sector - Urban Development

17. Project Name - Historic Building Renovation Project as Guest Houses

18. Project Location



3.1 Specify the Project Location

Site	Province	District	Division	Location
01	Sabaragamuwa	Ratnapura	Ratnapura	Muwagama

3.2 The Total Area of Land required for the project – 04 acers

3.3 The cost of land if it is being perched – Not Applicable

4 Rational of the Project

Ratnapura has insufficient accommodation facilities for the local and foreign tourists and businessmen by now. Two third of the existing guest houses are not having enough space and Ratnapura identity together with nice views. Those who having such views are located bit far from the city center cause to avoiding Ratnapura as a place to accommodate by foreign and local tourists.

These particular buildings are constructed according to the British architecture and now used as government quarters and offices like DIG office. All are located in small hilltops which have calm and quite environment with nice views together of Kalu river and Sri padaya. Moreover, these places are being situated close to the town center and have easy access through Muwagama Road. One of the proposed helipad location is going to be established here and it will be a plus point on grabbing the tourism attraction indirectly simultaneously. Thus, renovating these buildings and converting those into guest houses are needed for preserving the architecture character and boosting the city economy while serving the need of accommodating guests of Ratnapura.

It is expected that the people who comes to the Gem related activities and tourism activities will be facilitated through this project.

5 Following benefits are taken from the project

- Accommodation Facilities
- Refreshment Facilities
- Entertainment Facilities
- Sanitary Facilities
- Parking facilities

6 Financing Plan

Components	(Rs. Mn)
Historic Building Renovation Project as Guest Houses	200 Mn

7 Project Operation & Maintenance

Relocation will be needed in prior to this project and DIG office will be relocated at the given location to the Police department by Urban Development Authority. Other quarters will be relocated within the UDA lands in New Town.

Joint venture method will be applied for this project between Urban Development Authority and Archeological Department. The renovation will be done by Urban Development Authority complies

with the conditions of archeological department. 6% of the fund will be taken for consultation, designing and project management of the given project to the Urban Development Authority apart from the renovation cost. Maintenance will be done by Urban Development Authority.

**Ayurweda Office Building Renovation Project
Under Ratnapura Town Development Plan**

- 19. Sector** - Urban Development
- 20. Project Name** - Ayurweda Office Building Renovation Project
- 21. Project Location**



3.1 Specify the Project Location

Site	Province	District	Division	Location
01	Sabaragamuwa	Ratnapura	Ratnapura	Town Centre

3.2 The Total Area of Land required for the project – 1 acer

3.3 The cost of land if it is being perched – Not Applicable

4 Rational of the Project

Ratnapura has insufficient refreshment facilities for the local and foreign tourists and businessmen by now. Two third of the existing restaurants are not having enough space and Ratnapura identity together with nice views. Those who having such views are located bit far from the city center cause to avoiding Ratnapura as a place to get refreshed by foreign and local tourists.

This particular building is constructed according to the British architecture and now it is being used for the Ayurveda Office in Ratnapura. The place is located at the bank of Kalu river with a nice view together and it had been used as a pub in British era according to the folk stories. This place is located at the edge of town center and has easy access from anywhere of the town. Also, the proposed river port at this place will grab the tourist attraction indirectly. Thus, renovating this space and converting it into a restaurant is needed for preserving the architecture character and boosting the city economy through serving the need of refreshing guests of Ratnapura.

It is expected that the project will help boosting the Ratnapura tourism and the people who comes to the Gem related activities will be facilitated through this project.

5 Following benefits are taken from the project

- Refreshment Facilities
- Entertainment Facilities
- Sanitary Facilities
- Parking facilities

6 Financing Plan

Components	(Rs. Mn)
Ayurveda Office Building Renovation Project	50 Mn

7 Project Operation & Maintenance

The activities of the Ayurveda office will be relocated to the proposed administration complex at the New Town and joint venture method will be applied for this project between Urban Development Authority and Archeological Department. The renovation will be done by Urban Development Authority complies with the conditions of Archeological Department and 6% of the fund will be taking for consultation, designing and project management of the given project. Maintenance will be done by Urban Development Authority later on.

Ehelepola Harem Building Renovation Project Under Ratnapura Town Development Plan

22. Sector - Urban Development

23. Project Name - Ehelepola Harem Building Renovation Project

24. Project Location



3.1 Specify the Project Location

Site	Province	District	Division	Location
01	Sabaragamuwa	Ratnapura	Ratnapura	Town Centre

3.2 The Total Area of Land required for the project – 80 perch

3.3 The cost of land if it is being perched – Not Applicable

4 Rational of the Project

Ratnapura is historically famous for colonial era as well as Ehelepola era. The buildings constructed following those architecture styles are hidden treasures which is yet to be discovered. Ehelepola Harem building is one of those hidden wealth to the town due to the appearance and location. It is located at the small hilltop which is in the heart of the city and has a unique scenic view. The building had been constructed according to the Kandian architecture at first and used as a harem in Ehelepola era according to the historical reports. Later on, the British architecture was mixed in it

and used and a bungalow of British rulers and it is being used by Archeological Department as the district office by now.

Since this space is located in an attractive place with free of disasters and the historical and cultural importance in it, it has identified as one of the most suitable place for establishing a restaurant for targeting the local and foreign tourists who loves to have a royal experience in a historic environment. Also, one of the proposed helipad location is going to be established adjacent to this premises and it will be act as a heli-longue in disaster free seasons, adding a plus point to the tourism attraction indirectly.

Thus, renovating this space and converting it into a restaurant is needed for preserving the historic and cultural heritage of the town in order to serve the economic development of it. Moreover, it is expected that the people who comes to the tourism and recreational purposes will be facilitated through this project.

5 Following benefits are taken from the project

- Refreshment Facilities
- Entertainment Facilities
- Sanitary Facilities
- Parking facilities

6 Financing Plan

Components	(Rs. Mn)
Ehelepola Harem Building Renovation Project	150 Mn

7 Project Operation & Maintenance

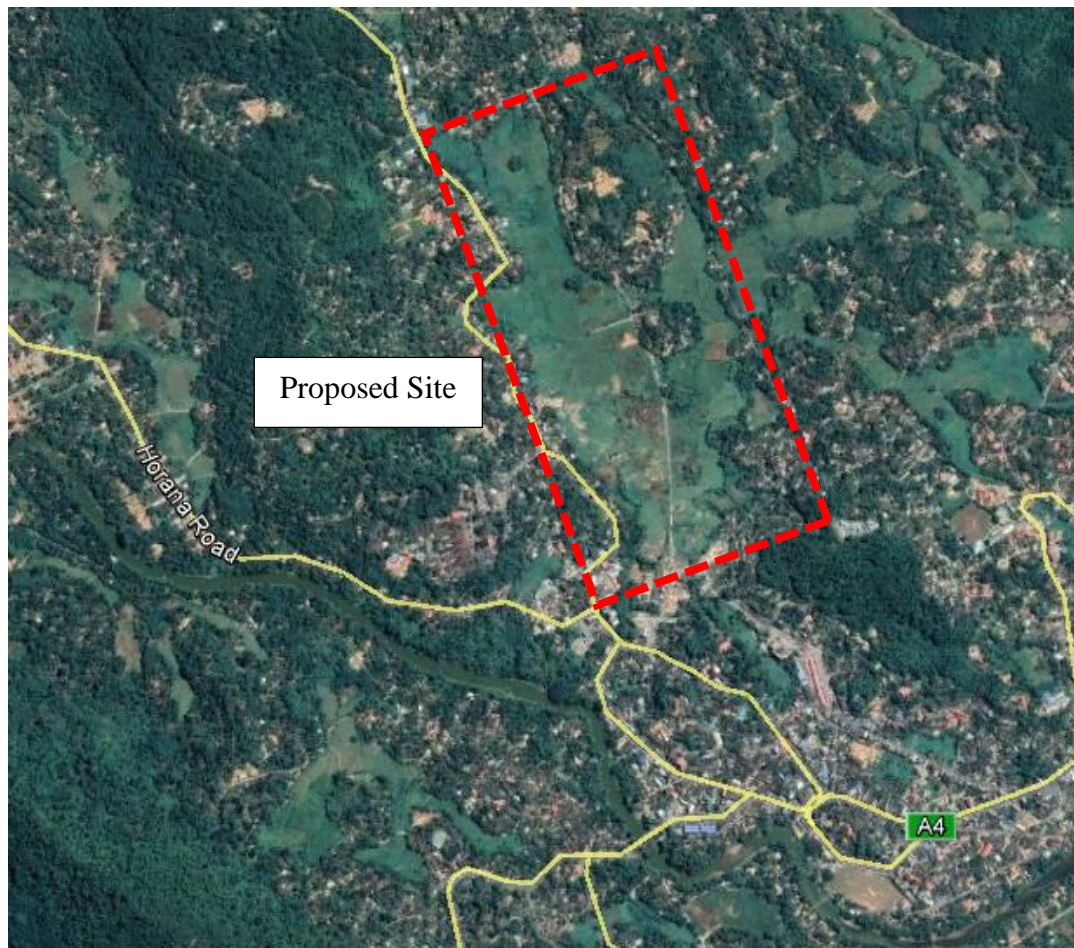
Archeological office will be shifted to the proposed administration complex at the New Town and joint venture method will be applied for this project between Urban Development Authority and Archeological Department. The renovation and maintenance will be done by Urban Development Authority.

**Weralupa Recreational Cluster Development Project
Under Ratnapura Town Development Plan**

25. Sector - Urban Development

26. Project Name - Weralupa Recreational Cluster Development Project

27. Project Location



3.1 Specify the Project Location

Site	Province	District	Division	Location
01	Sabaragamuwa	Ratnapura	Ratnapura	Weralupa

3.2 The Total Area of Land required for the project – 10 acers

3.3 The cost of land if it is being perched – Not Applicable

4 Rational of the Project

Ratnapura is famous for aquatic resource since kingdom era due to the topographic situation in it. Also, 80% of the planning area consist with inland water resources including Kalu River, Wey River, waterfalls and several other streams. Thus, the richness of underground and surface water table has a hidden potential of using it for creating a livable city for 2030. Weralupa Water Retention Lake and Aqua Base Theme Park have been proposed to grab the local and foreign tourism attraction by using the richness of underground and surface water table. It is expected that these projects will re-establish the aquatic culture and create more direct and indirect economic opportunities to the Ratnapura citizens through boosting the tourism industry.

Considering the spatial arrangement of Ratnapura town, five major schools have been located at the heart of the city and about 12,000 of school children studies in those schools. It is around 30% of total no of school children in the schools of planning area. Due to the land scarcity of the town, it is hard to allowing each school having their own playground for the students and children's park for kids. Thus, the proposed Weralupa Ground and Children's Park will solve the suitable land scarcity for these children.

Moreover, the New Town is located around 5 km away from Ratnapura town and these two towns are developing isolated as duel cities by now. There can't be seen any visible link between those other than the A004 road which crossing both towns and there isn't any possibility of a corridor development due to the natural barriers. Thus, creating a visual link through an aquatic recreational area between Ratnapura town and new town is another purpose if this project.

5 Proposed Elements

- Water Retention Lake
- Aqua Base Theme Park
- Play Ground
- Children's Park

6 Following benefits are taken from the project

- Sea Plane Destination
- Jogging tracks
- Walking paths
- Swan boats
- Floating restaurants
- Water base activities
- Refreshment Facilities
- Entertainment Facilities
- Sanitary Facilities
- Parking facilities

7 Financing Plan

Components	(Rs. Mn)
Weralupa Recreational Cluster Development Project	1500 Mn

8 Project Operation & Maintenance

Land acquisition will be needed in prior due to the selected lands are abundant paddy fields which belongs to the private owners at present. Additionally, Irrigation Department will be consulted during this project.

The construction will be done by Urban Development Authority and 6% of the fund will be taking for consultation, designing and project management of the given project apart from the construction cost. Maintenance will be done by Municipal Council, Ratnapura.

**Pompakele Tourism Development Project
Under Ratnapura Town Development Plan**

- 28. Sector** - Urban Development
- 29. Project Name** - Pompakele Tourism Development Project
- 30. Project Location**



3.1 Specify the Project Location

Site	Province	District	Division	Location
01	Sabaragamuwa	Ratnapura	Ratnapura	Town Centre

3.2 The Total Area of Land required for the project – 15 acers

3.3 The cost of land if it is being perched – Not Applicable

4 Rational of the Project

Ratnapura is located in the central fragile area under the National Physical Plan – 2050. Pompakele Urban forest is one of the precious gift to Ratnapura from nature since it is rare to see a naturally grown urban forest within an urban limit at present. It is kind of a mini rain forest and famous for

bird watchers and researchers for years. Currently, the forest itself working as a green lung for the Ratnapura town and rich in bio diversity. Moreover, the attractiveness of tourism in an urban environment depends more on the variety the city has to offer and not based on one individual elements. Pompakele premises has a natural swimming pool to accommodate visitors and the richness of bio diversity within a small premises has a hidden potential of attracting the attention of local and foreign tourists in that scenario. Thus, Pompakele Tourism Development Project has been proposed for use this opportunity to create more direct and indirect economic opportunities to the Ratnapura citizens through boosting the tourism industry.

5 Following benefits are taken from the project

- Recreation area within a reasonable walking distance
- A balanced ecosystem which encourages a healthy environment
- Academic space for environmental researches, school children and bird watchers
- Reduce stress and improve physical health
- The presence of trees, parks, and green spaces make Ratnapura more enjoyable place to live, work, and play
- Increase in residential property value in surrounded area and
- Create direct and indirect economic opportunities

6 Expected Project Inputs

- Swimming Pool development
- Pathway development
- Refreshment Facilities
- Sanitary Facilities
- Parking facilities

7 Financing Plan

Components	(Rs. Mn)
Pompakele Tourism Development Project	100 Mn

8 Project Operation & Maintenance

Joint venture method will be applied for this project between Urban Development Authority and Municipal Council, Ratnapura. Physical development activities will be done by Urban Development Authority and consultation, designing, project management and construction phases will be included for it. Maintenance will be done by Municipal Council, Ratnapura.

**Nalanda Ellawala Urban Park Redevelopment Project
Under Ratnapura Town Development Plan**

- 31. Sector** - Urban Development
- 32. Project Name** - Nalanda Ellawala Urban Park Redevelopment Project
- 33. Project Location**



3.1 Specify the Project Location

Site	Province	District	Division	Location
01	Sabaragamuwa	Ratnapura	Ratnapura	Ratnapura

3.2 The Total Area of Land required for the project – 80 perch

3.3 The cost of land if it is being perched – Not Applicable

4 Rational of the Project

Ratnapura has insufficient open spaces for the inhabitants and visitors due to haphazard development activities. Nalanda Ellawala Urban Park is an existing park which was established few decades ago. The place was used as a view point of soldiers in colonial period and still it has some evidences regarding that. Since Nalanda Ellawala Urban Park is located at one of the main hilltops within the heart of the city with a nice scenic view, there is a possibility of developing it as an urban space.

It is expected that the people who comes to the tourism activities and inhabitant's live styles will be facilitated through this project.

5 Following benefits are taken from the project

- Seating Facilities
- Refreshment Facilities
- Sanitary Facilities

6 Financing Plan

Components	(Rs. Mn)
Nalanda Ellawala Urban Park Redevelopment Project	70 Mn

7 Project Operation & Maintenance

Joint venture method will be applied for this project among Urban Development Authority, Archeological Department and Municipal Council, Ratnapura. The redevelopment will be done by Urban Development Authority complies with the conditions of archeological department. Consultation, designing and project management of the given project will be done by Urban Development Authority. Maintenance will be done by Municipal Council, Ratnapura.

**Gem Square Development Project at Food City Premises
Under Ratnapura Town Development Plan**

34. Sector - Economic Development

35. Project Location - Old Town – Food City Premises, Ratnapura



3.1 Specify the Project Location

Site	Province	District	Division	Location
01	Sabaragamuwa	Ratnapura	Ratnapura Town	Old Town

3.2 The Total Area of Land required for the project – 1 Acers

3.3 The cost of land if it is being perched – Not Applicable

36. Rational of the Project

The City of Ratnapura is located 100 km away from South east of Colombo and it is the Capital of Sabaragamuwa Province. The Economy of Ratnapura is based on the Gem Industry and it has owned a bigger place in Ratnapura economy since pre-colonial period. It is in the 5th place of the export economy in the Sri Lanka according to the statistics of Central Bank Latest reports. 3% of

contribution is given to the national economy by Gem industry at present. At present, 25 % of the gem trading industry are Ratnapura traders and 30% of the minors belongs to Ratnapura while others come from various parts of the country according to the Gem & Jewelry statistics. Thus, using this base resource to thrive the economy is highly needed and facilitating it through the physical development is required.

Moreover, Gem Culture has been established already in Ratnapura with the places and processes but for generating more income, it is needed to extend the market space related with Gem culture. For that, Gem Square Development Project at Food City Premises will serve the purpose.

37. Expected Project Outputs / Following benefits are taken from the project

- Market space for local gem community
- Refreshment places for the businessmen with sanitary facilities
- Gathering spaces
- Rating space for the congested market
- Extended market space

Urban Development Authority (UDA) will be done project planning and consultation of the project. Project management and monitoring part will be done by the Municipal Council, Ratnapura. This is one of the economic development priorities as convenience to gem industry.

38. Financing Plan

Components	2021(Rs. Mn)
Gem Square Development Project	70 Mn

39. Project Operation & Maintenance

The developed Gem Square will be maintained by separate management committee which will be appointed by the Urban Development Authority.

Gem Streets Development Project Under Ratnapura Town Development Plan

- 40. Sector** - Urban Development
- 41. Project Name** - Gem Streets Development Project
- 42. Project Location**



43. Specify the Project Location

Site	Province	District	Division	Location
01	Sabaragamuwa	Ratnapura	Ratnapura Town	Town Centre

44. Rational of the Project

The City of Ratnapura is located 100 km away from South east of Colombo and it is the Capital of Sabaragamuwa Province. The Economy of Ratnapura is based on the Gem Industry and it has owned a bigger place in Ratnapura economy since pre-colonial period. It is in the 5th place of the export economy in the Sri Lanka according to the statistics of Central Bank Latest reports. 3% of contribution is given to the national economy by Gem industry at present. At present, 25 % of the gem trading industry are Ratnapura traders and 30% of the minors belongs to Ratnapura while others

come from various parts of the country according to the Gem & Jewelry statistics. Thus, using this base resource to thrive the economy is highly needed and facilitating it through the physical development is required.

Moreover, Gem Culture has been established already in Ratnapura with the places and processes but for generating more income, it is needed to have an identical, attractive streetscape which facilitate to the gem market and gem culture. For that, Gem Street Development Project in Main Street, Shaviya Mawatha and Demuwawatha Road will serve the purpose.

45. Following benefits are taken from the project

- Specialized streets for gem trading
- Identical streetscapes
- Arcades for boosting commercial activities
- Suitable paving and lighting for the selected area
- Luxurious boutique spaces
- High end local gem shops
- Customized products, spaces for local entrepreneurs to exhibit their businesses
- Gem cutting and demonstration spaces (traditional/international)

46. Expected Project Inputs

- ✓ Identical streetscape with sign boards for national and international business people
- ✓ Arcades for boosting commercial activities
- ✓ Suitable paving and lighting for the selected area
- ✓ Luxurious boutique spaces
- ✓ High end local gem shops
- ✓ Customized products, spaces for local entrepreneurs to exhibit their businesses
- ✓ Gem cutting and demonstration spaces (traditional/international)

Urban Development Authority (UDA) will be done project planning and consultation of the project. Project management and monitoring part will be done by the Municipal Council, Ratnapura. This is one of the economic development priorities as convenience to gem industry.

47. Financing Plan

Components	2021(Rs. Mn)
Gem Streets Development Project	170 Mn

48. Project Operation & Maintenance

The developed Gem Streets will be maintained by separate management committee which will be appointed by the Urban Development Authority.

**Gem Tower Construction Project
Under Ratnapura Town Development Plan**

49. Sector - Urban Development

50. Project Location - Post Office Premises – Town Center



2.1 Specify the Project Location

Site	Province	District	Division	Location
01	Sabaragamuwa	Ratnapura	Ratnapura	Town Center

2.2 The Total Area of Land required for the project – 1 Acer

2.3 The cost of land if it is being perched – Not Applicable

51. Rational of the Project

The City of Ratnapura is located 100 km away from South east of Colombo and it is the Capital of Sabaragamuwa Province. The Economy of Ratnapura is based on the Gem Industry and it has owned a bigger place in Ratnapura economy since pre-colonial period. The gem culture has been established already in Ratnapura with the places and processes but for generating more income, it is needed to

attract more business people and affordable people for luxury items. Thus it is needed to convert this value of gem culture into income generating sources by facilitating more commercial spaces which related with gem culture. Also, Ratnapura will be the trading hub when it gets facilitated with the necessary physical infrastructure for gem trading in a long run.

Since this city is located in a valley which is close to the Kalu river, there is an emerging need of making people getting ready for having high-rise experience by 2030. The Gem Tower Construction Project at Post Office Premises will be a 15 story tower sky view restaurant experience for the Ratnapura people as it will be located at the heart of the city. Thus, the gem tower project is highly needed for the economic development of the town in order to serve the luxury commercial needs together with luxury accommodation facilities. +

Land sharing method will be applied for this project and post office will be shifted to the administration complex which is planned to construct in New Town by UDA to release the land.

52. Following benefits are taken from the project

- Refreshment places with sky view experience
- Luxury accommodation facilities for the international and national businessmen
- Gathering spaces
- Luxurious boutique spaces
- High end local gem shops
- Supporting structure for telecommunication purposes
- Customized products, spaces for local entrepreneurs to exhibit their businesses
- Parking facilities

53. Financing Plan

Components	2021(Rs. Mn)
Gem Tower Construction Project	500 Mn

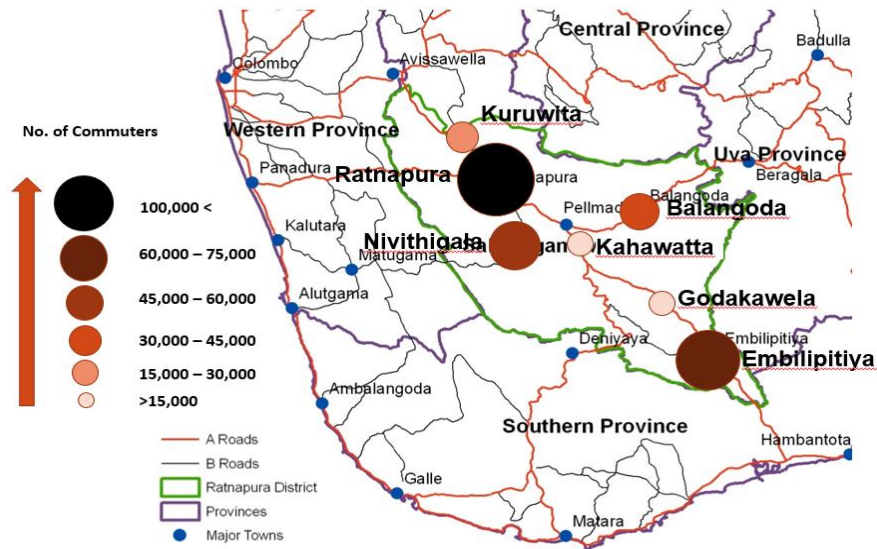
54. Project Operation & Maintenance

The constructed Gem Tower will be maintained by Urban Development Authority.

ANNEXURES (Part I and Part II)

Annexure 01

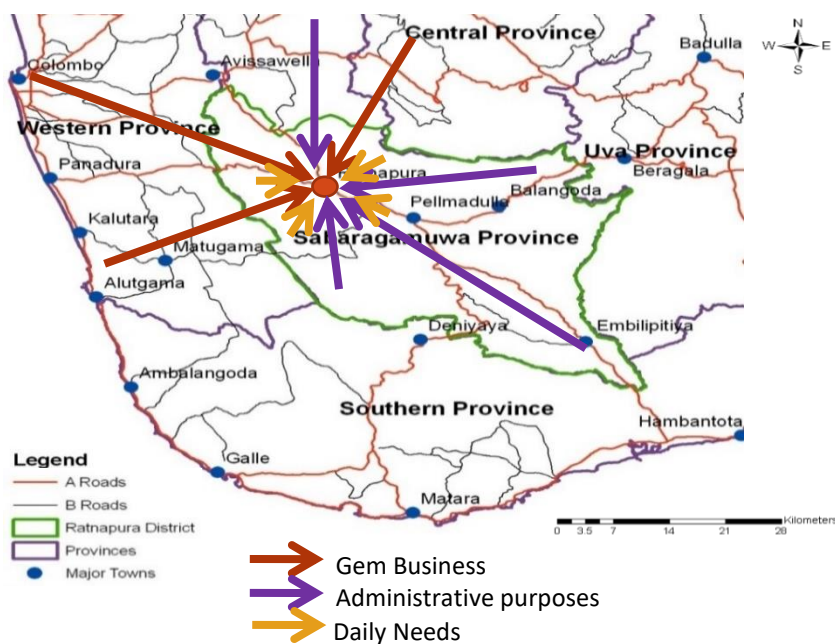
Commuter Population of Ratnapura



Source: Regional Study (2006/10) – Department of Town & Country Planning, University of Moratuwa

Annexure 02

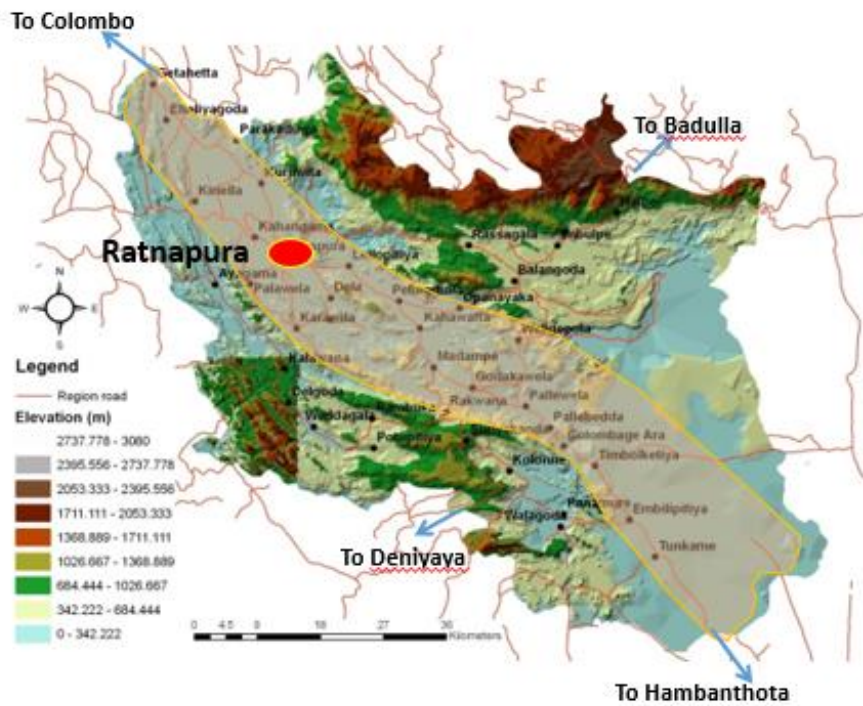
Functional Boundary of Ratnapura



Source: Regional Study (2006/10) – Department of Town & Country Planning, University of Moratuwa

Annexure 03

The Geographic Characteristics



Source: Regional Study (2006/10) – Department of Town & Country Planning, University of Moratuwa

Annexure 04

Population Distribution – 2017

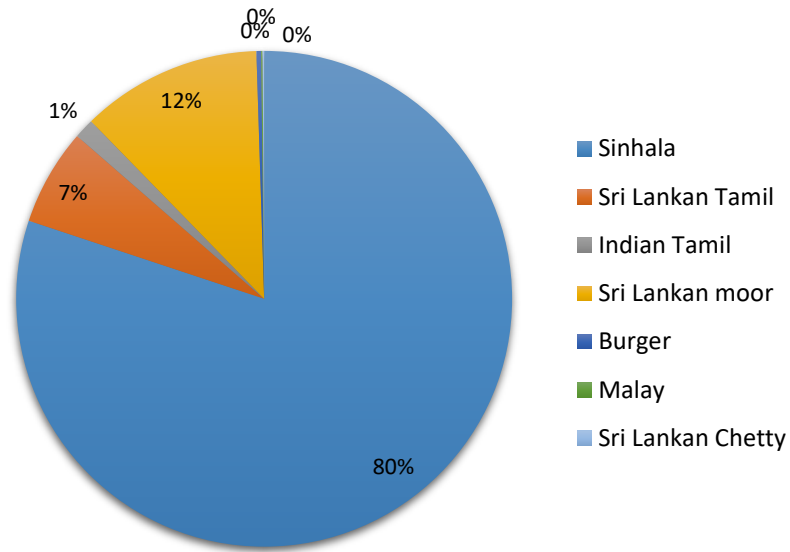
GND	GND Number	Population	Area (Hectares)	Gross Population Density per 1 Hectare
Angamma	181C	2154	103.87	21
Batugedara	180	1835	90.39	20
Devalegoda	151A	1950	74.42	26
Godigamuwa	152	2854	122.77	23
Koladagala	181A	222	132.24	2
Kospenavinne	153A	5076	450.28	11
Mahawala	152C	1346	38.20	35
Mihindigama	152D	6006	54.45	110
Mudduwa	182A	164	5.49	27
Mudduwa East	182A	3950	102.66	38
Muwagama	182	2208	105.49	21
New Town	153A	3521	311.59	11
Ratnapura Town	152	1641	29.01	57
Ratnapura Town - North	152E	4596	86.20	53
Ratnapura Town – West	152F	1283	51.12	25
Samangipura	182C	3002	75.64	40
Thiriwanakeriya	180B	2442	174.22	14
Weralupa	153A	4833	210.00	23
Total		49083	2218	557

Population according to Grama Niladhari Division

Source: Based on 2011 data of Census and Statistics Department

Annexure 05

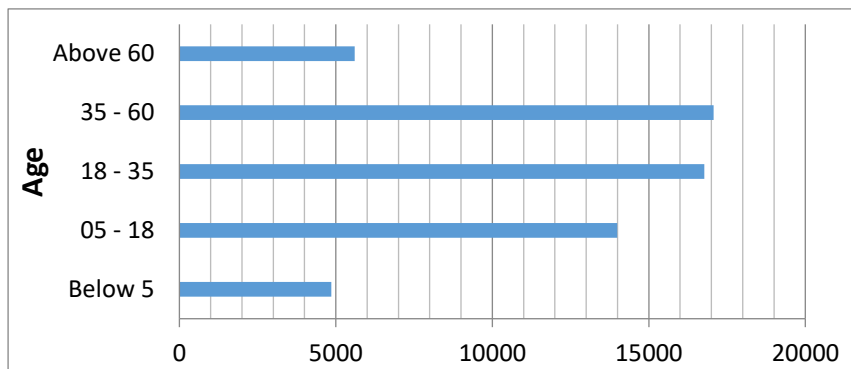
The Existing Land Use Pattern – 2017



Source: Resource Profile Ratnapura

Annexure 06

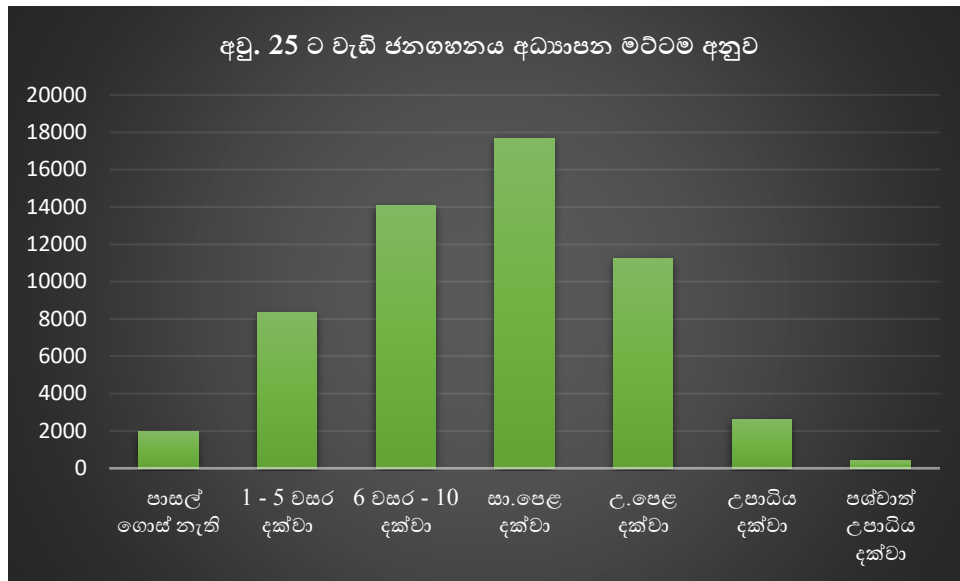
Population Distribution by Age groups



Source: Resource Profile Ratnapura

Annexure 07

Education System

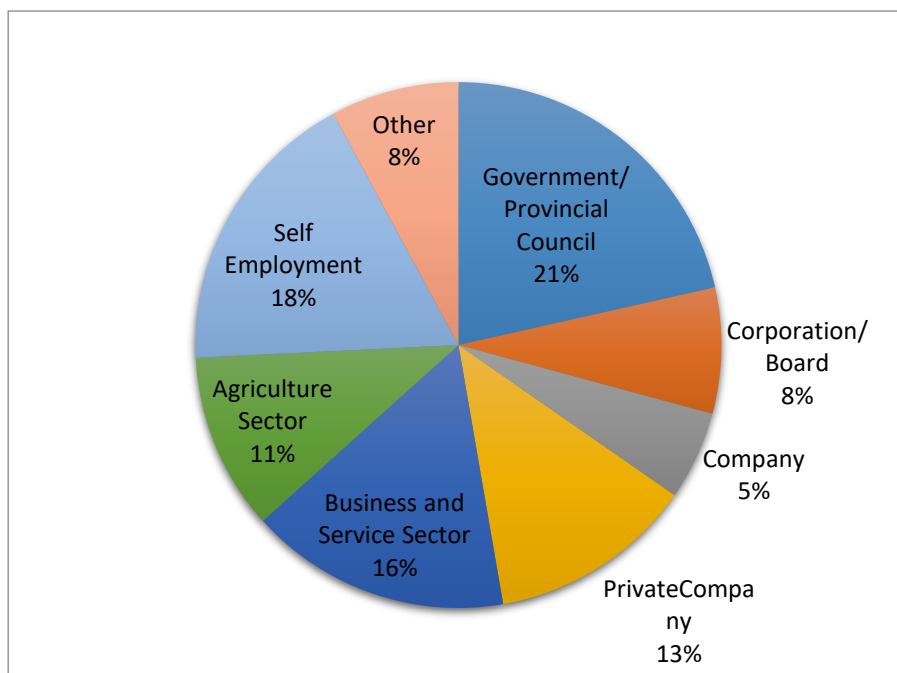


Source: Resource Profile Ratnapura

Annexure 08

Population Employment Ratnapura 2017

by Sector in MC Area –



Source: Resource Profile Ratnapura

Annexure 09**The Existing Land Use Pattern – 2017**

Utilization	Land Extent (Hectares)	Percentage from the whole Land
Residential	951.2	42.90
Commercial	46.57	2.10
Industries	0.22	0.01
Administrative Institutions	88.72	4.00
Highways	117.55	5.30
Playgrounds, parks and open lands	22.18	1.00
Religious	4.43	0.20
Urban forests / scrubs	307.85	13.88
Cemeteries	0.22	0.01
Paddy lands	252.85	11.40
Garden plantations (Tea/Rubber/Coconut)	312.73	14.10
Mixed crops / garden plantations	26.61	1.20
Wetlands	11.99	0.50
Water ways	66.54	3.00
Blank lands	8.02	0.40
Total	2218	100.00

Source: Field surveys 2017 – Urban Development Authority

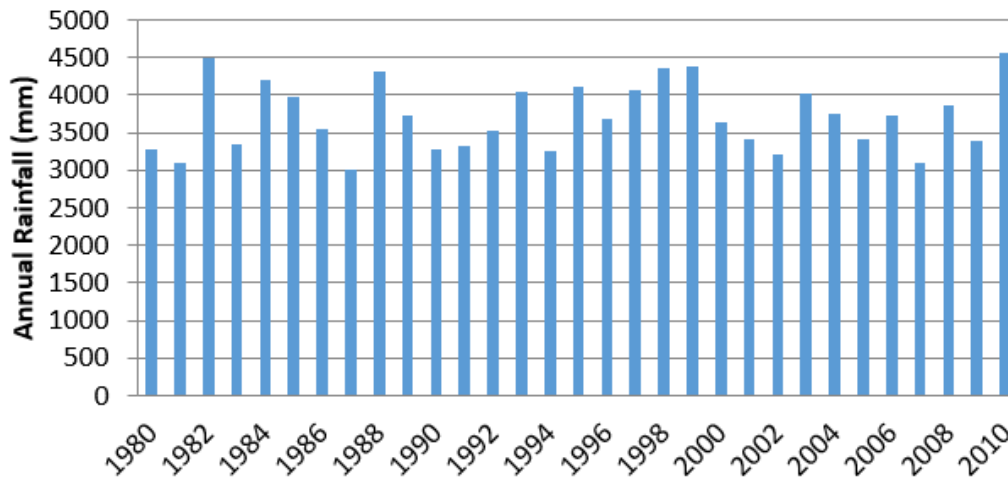
Annexure 10**Disaster History of Ratnapura**

Type of flood	Return period	Level of flood	Recorded years
1. Critical Floods	50Year	Over 80ft MSL	1913, 1947, 1989 , 2003 , 2017
2. Major Floods	10Year	70ft MSL – 80ft MSL	1857, 1872, 1893, 1924, 1957, 1969, 1978, 1982,1993, 2017
3. Minor Floods	01Year	66ft MSL – 70ft MSL	1939, 1940, 1966, 1967 , 2006 , 2017

Source: Irrigation Department – Ratnapura

Annexure 11

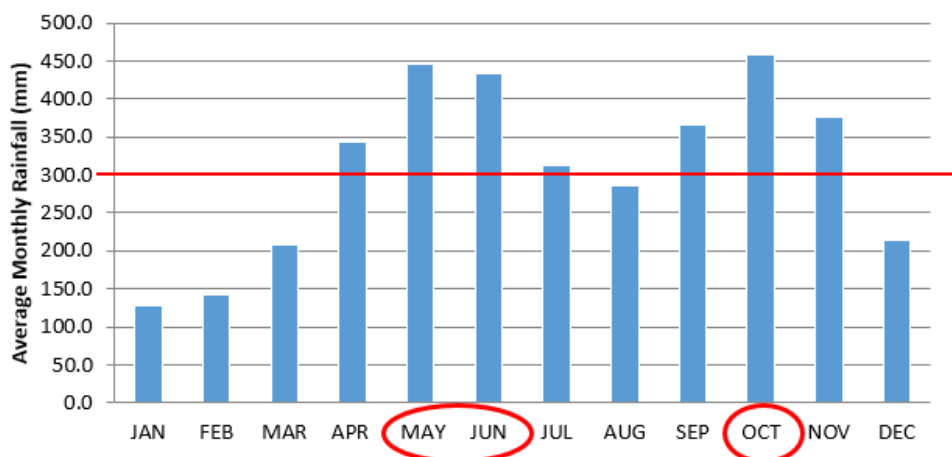
Annual Rainfall Pattern



Source: Irrigation Department – Ratnapura

Annexure 12

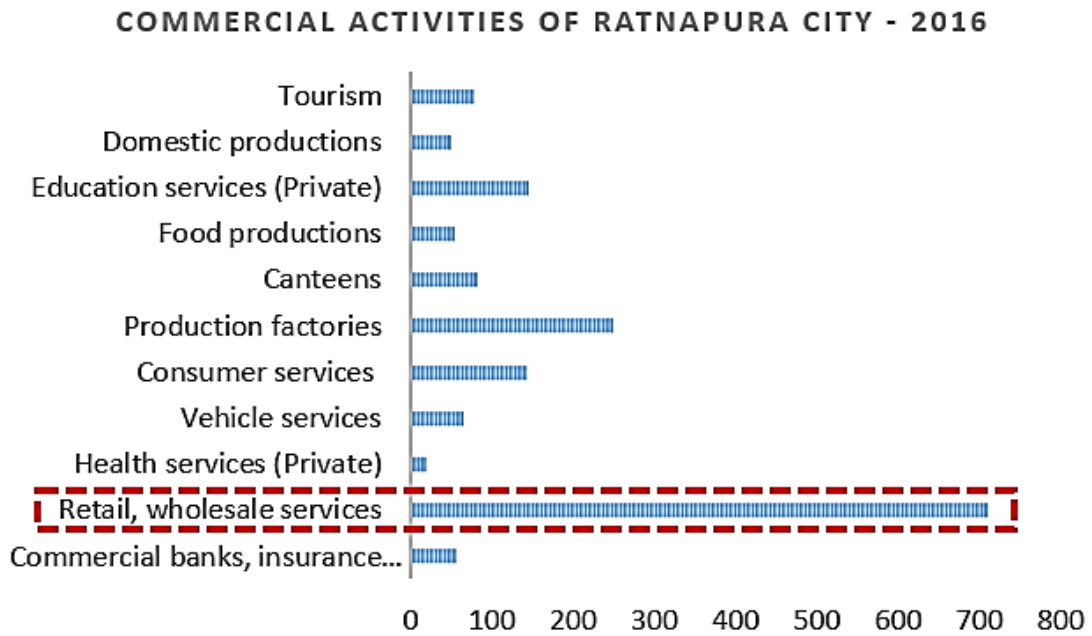
Average Monthly Rainfall



Source: Irrigation Department – Ratnapura

Annexure 13

Distribution of Commercial Activities of Ratnapura Town

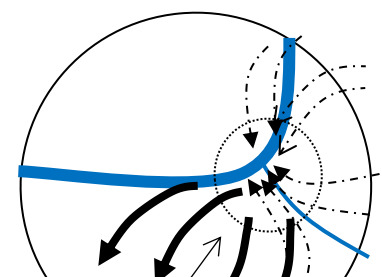


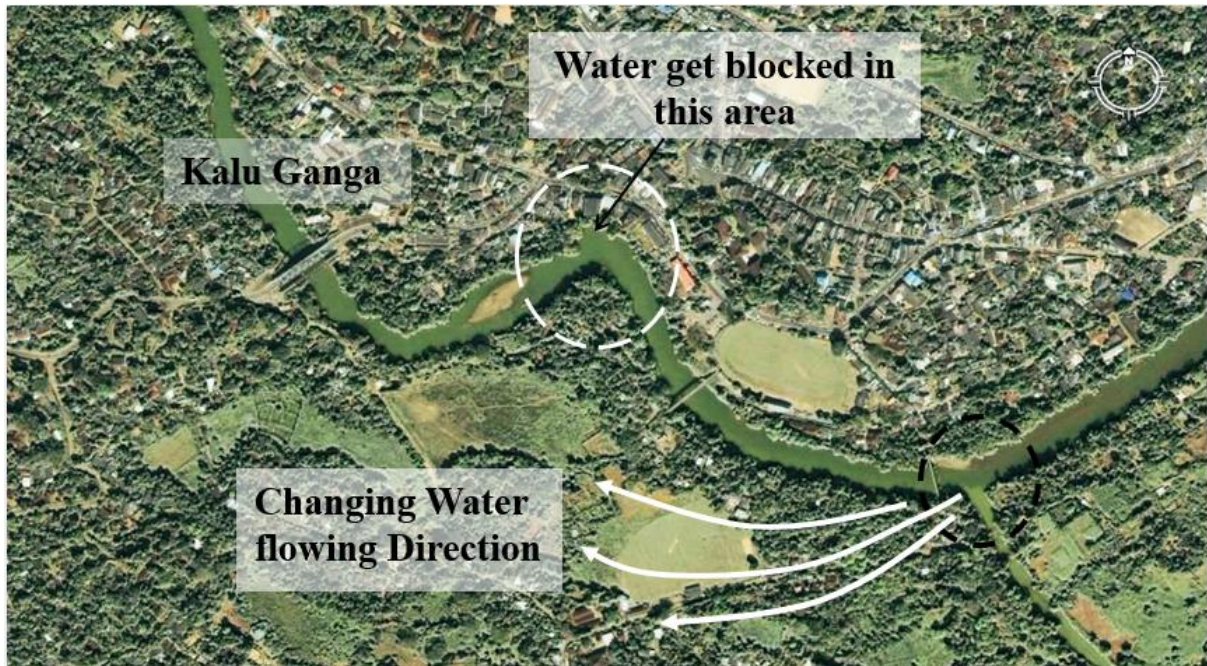
Source: Municipal Council – Ratnapura

Annexure 14

Reasons for Flooding

High pressure of water

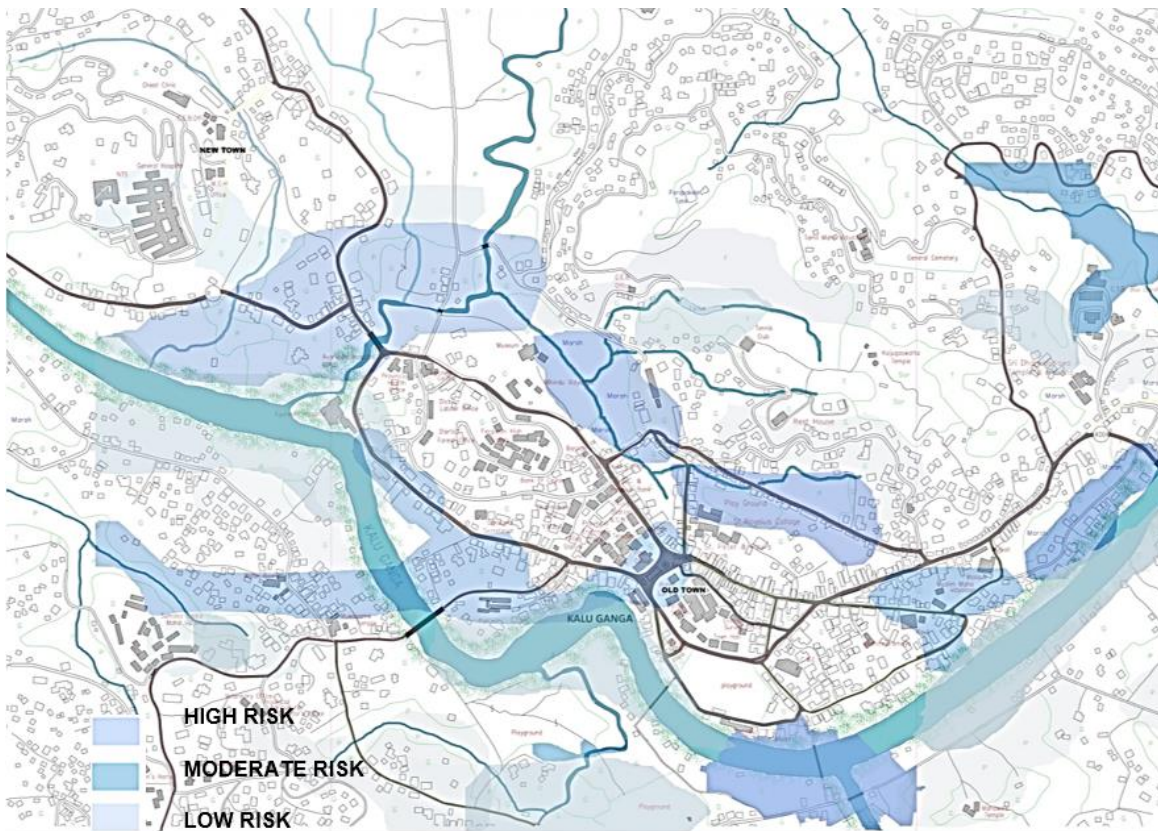




Source: Regional Study (2006/10) – Department of Town & Country Planning, University of Moratuwa

Annexure 15

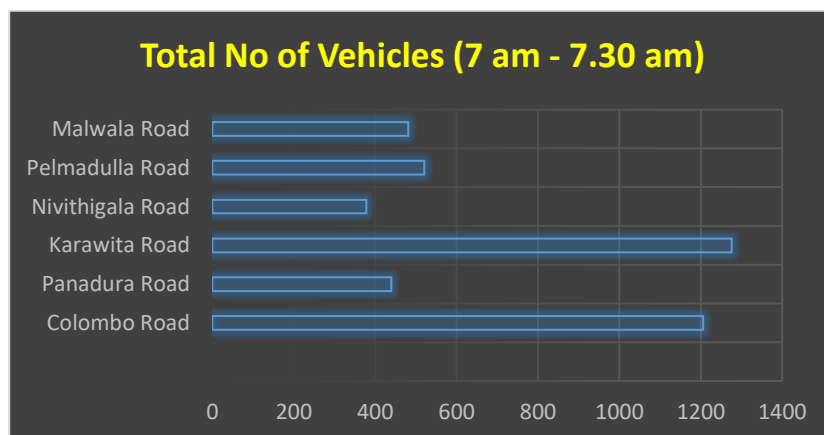
Flooding Area within the City Center



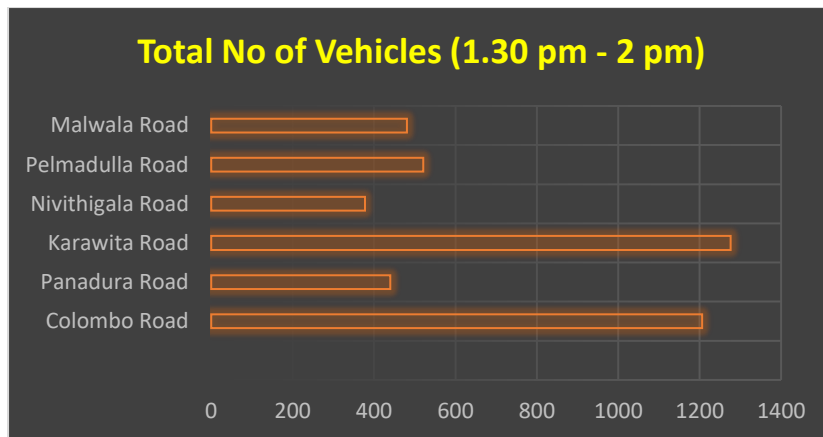
Source: Studio 5 (2017/18) – City School of Architecture, Colombo

Annexure 16

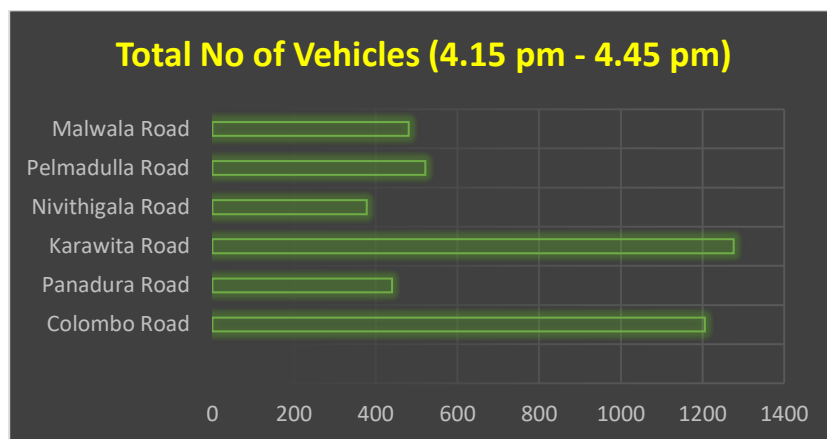
Traffic Congestion according to the Time Period



Source: Field surveys 2017 – Urban Development Authority



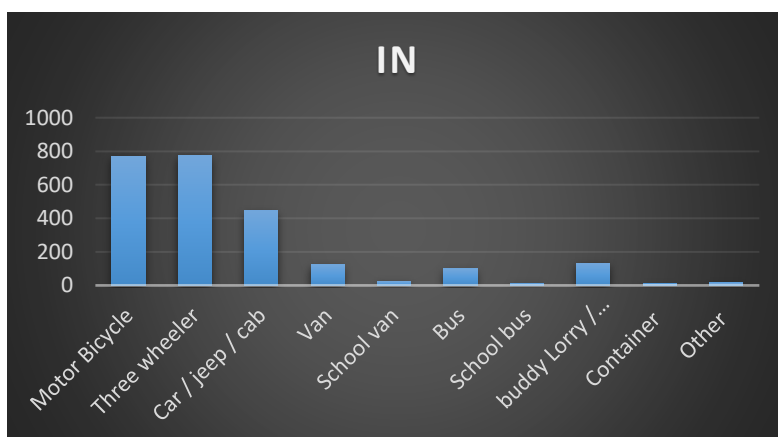
Source: Field surveys 2017 – Urban Development Authority



Source: Field surveys 2017 – Urban Development Authority

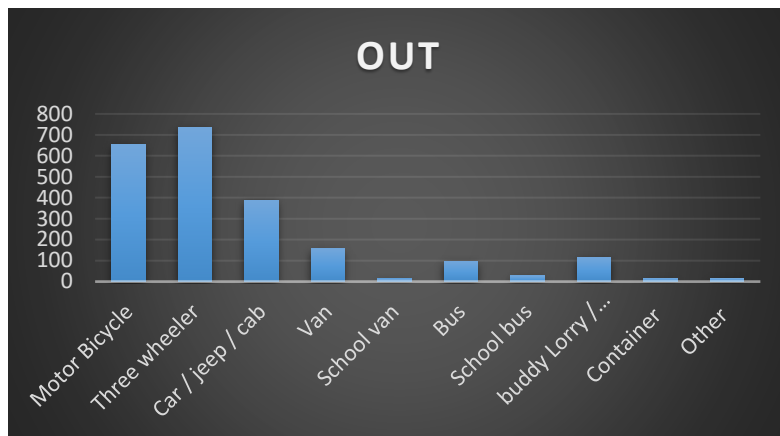
Annexure 17

Traffic Congestion according to the Vehicular Flow (Entering to the City)



Source: Field surveys 2017 – Urban Development Authority

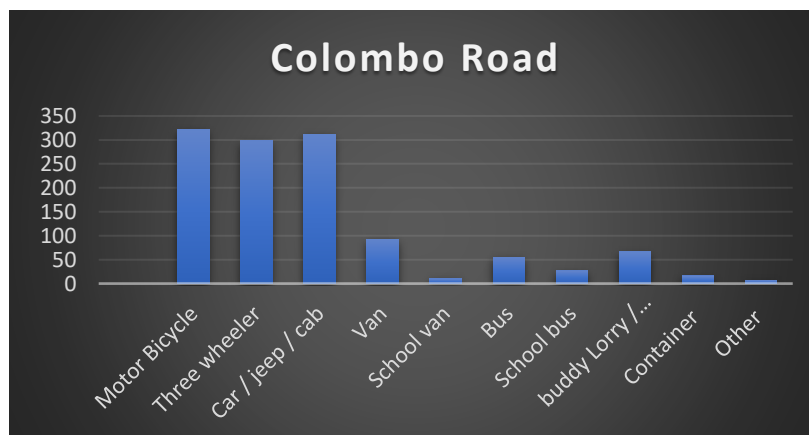
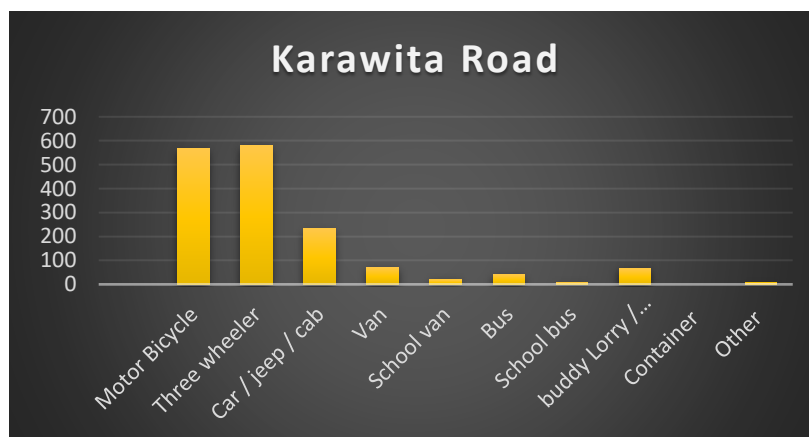
Traffic Congestion according to the Vehicular Flow (Exit from the City)



Source: Field surveys 2017 – Urban Development Authority

Annexure 18

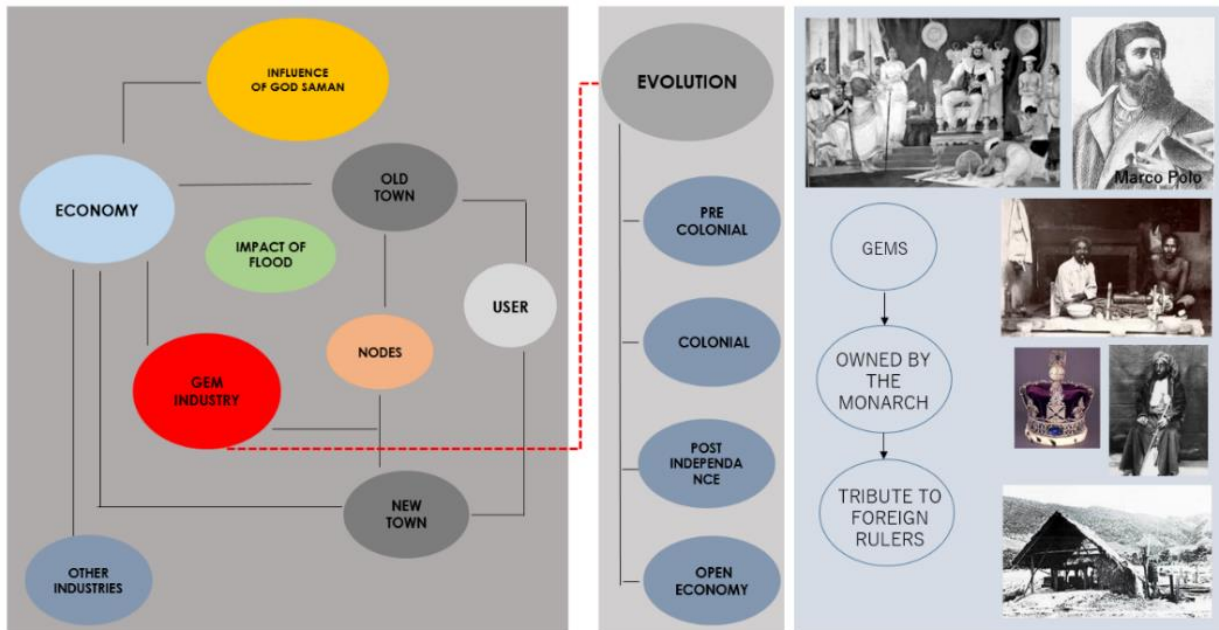
Traffic Congestion according to the Vehicular Types (Colombo Road & Karawita Road)



Source: Field surveys 2017 – Urban Development Authority

Annexure 19

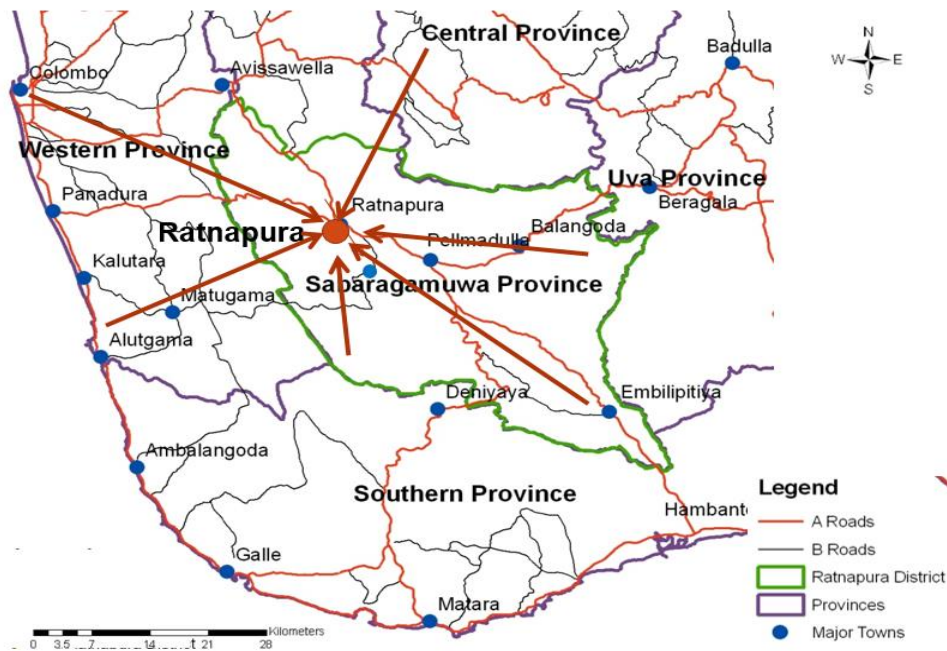
International Acceptance for Gems



Source: Studio 5 (2017/18) – City School of Architecture, Colombo

Annexure 20

Catchment of the Gem business

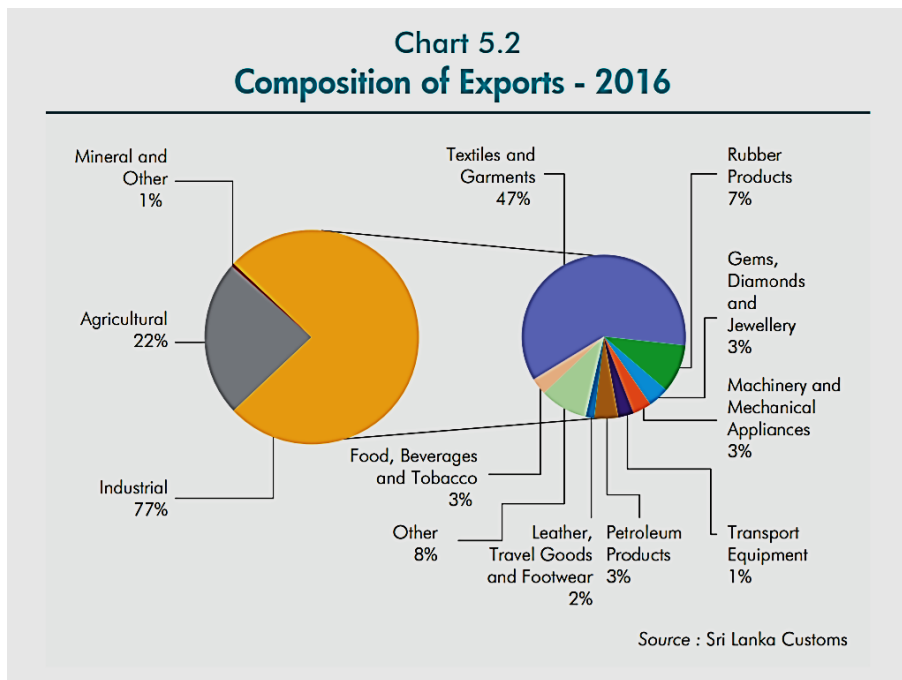


Source: Regional Study (2006/10) – Department of Town & Country Planning, University of Moratuwa

Annexure 21

Exports –

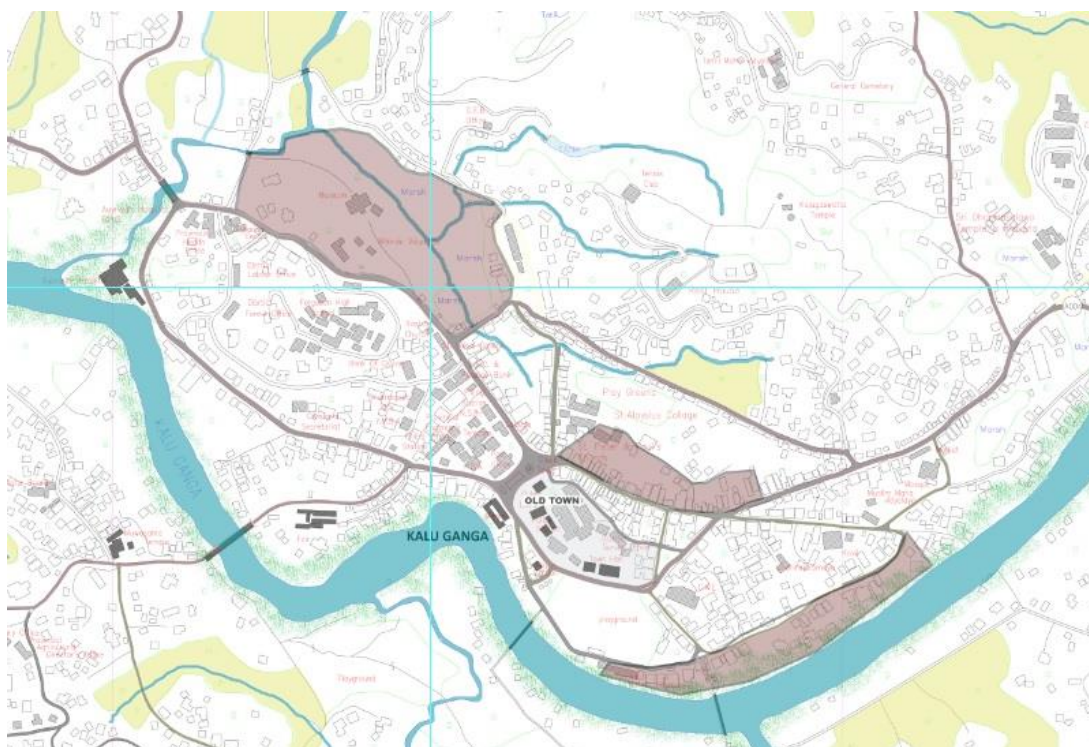
Composition of 2016



Source: Central Bank Report 2016 – Sri Lanka

Annexure 22

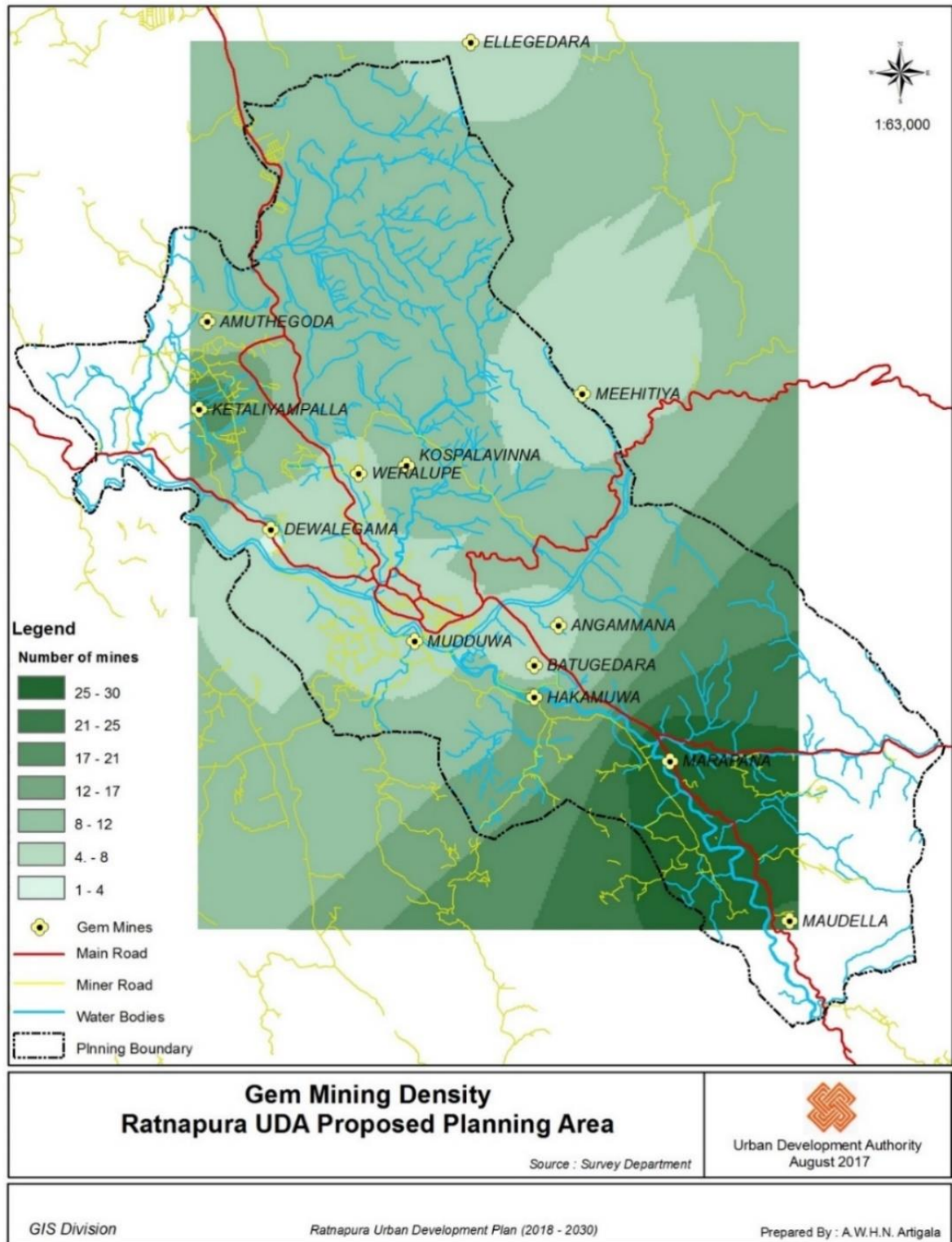
Mining Areas at the City Center



Source: Studio 5 (2017/18) – City School of Architecture, Colombo

Annexure 23

Mining Areas of the Planning Area



Annexure 24

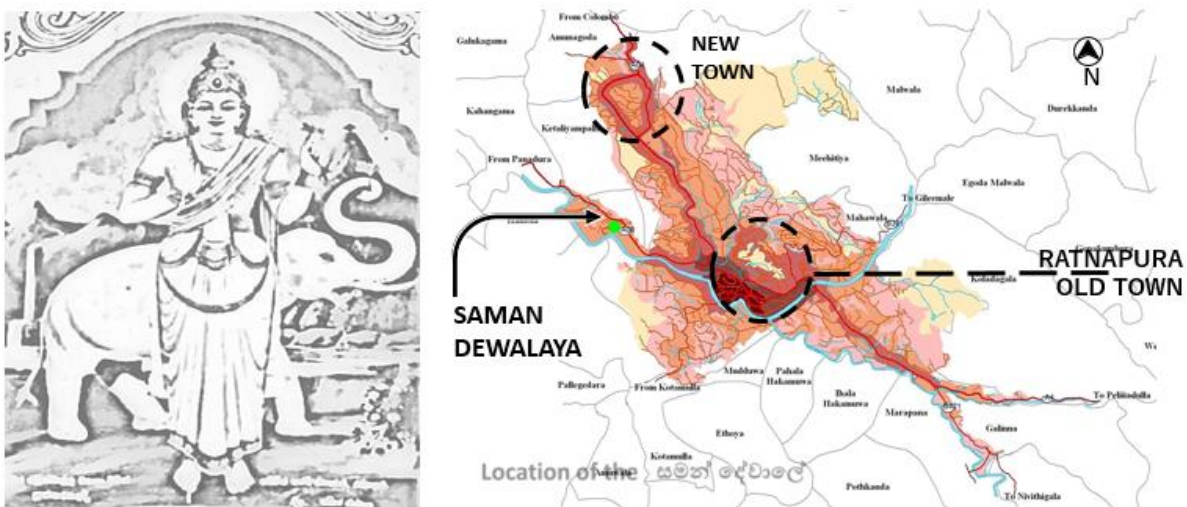
The oldest Sri Pada Route (Adam's Peak)



Source: Studio 5 (2017/18) – City School of Architecture, Colombo

Annexure 25

Location of Saman Devalaya in Ratnapura



Source: Studio 5 (2017/18) – City School of Architecture, Colombo

Annexure 26**Visitors Amount for Saman Dewalaya**

Number of Visitors - Sabaragamuwa Maha Saman Devalaya	
Daily	5,000 – 6,000
Saturday, Sunday & Poya Days	9,000 – 10,000
School Vacation Period	10,000 – 12,000
January 1 st	200,000 – 400,000
Perahera Season (August)	50,000 – 150,000
Sri Pada Season (Per one day)	5,000 – 12,000
Sellers in Devala premises (Daily)	15 – 20
Sellers in Perahera Season	80 – 150
Sellers – After Perahera Season	15 – 25

Source: Field surveys 2017 – Urban Development Authority

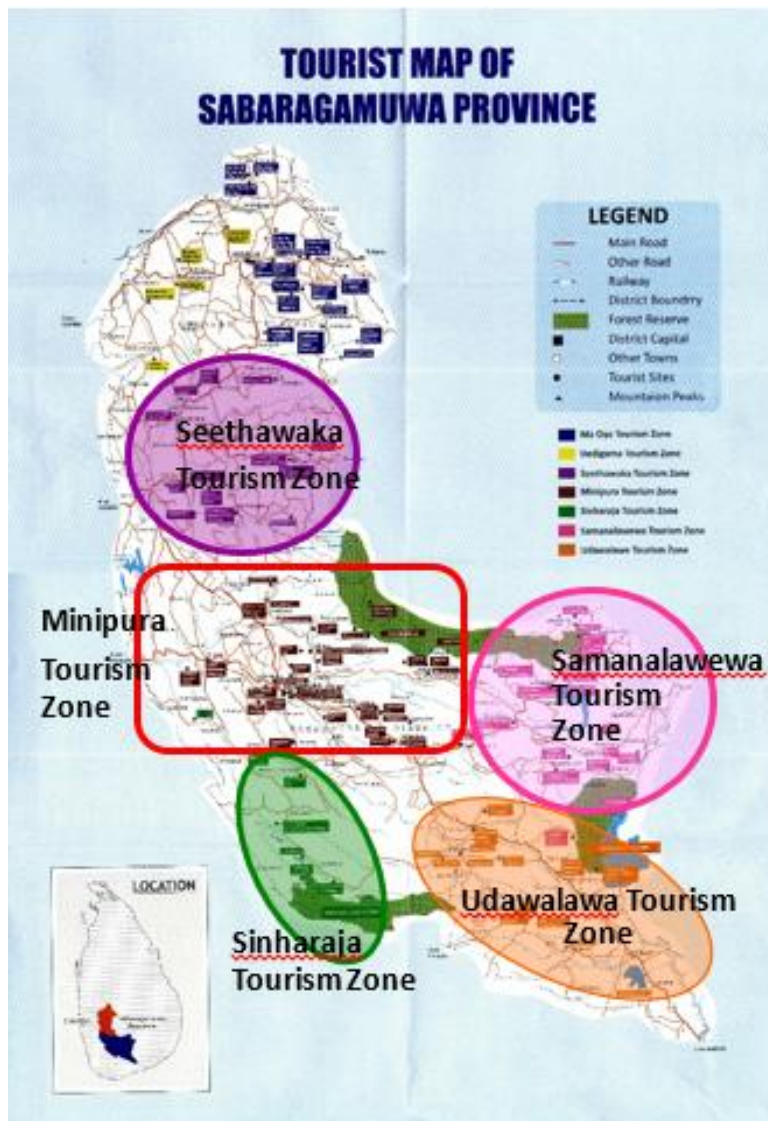
Annexure 27**Visitors Amount for Ratnapura Museum**

Details of Museums - 2016				
Museums	Foreign Tickets		Local Tickets	
	No. of Foreign Tourists	Revenue (in Rs.)	No. of Domestic Tourists	Revenue (in Rs)
Colombo National Museum	46,643	27,419,700	166,092	3,216,990
Natural History Museum	5,303	3,061,800	64,887	940,245
Kandy National Museum	0	0	0	0
Ratnapura National Museum	135	38,100	28,327	348,905
Galle National Museum	174	51,000	1,059	8,090
Anuradhapura Folk. Museum	169	50,400	7,305	94,070
Dutch Museum	4,090	2,013,000	5,510	100,280
Galle Maritime Museum	2,925	837,000	40,780	419,325
Independence Memorial Museum	501	144,000	26,607	205,695
Hambanthota National Museum	42	21,000	1,987	26,175
Total	59,982	33,636,000	342,554	5,359,775

Source: Department of National Museums

Annexure 28

Tourist Map of Sabaragamuwa Province

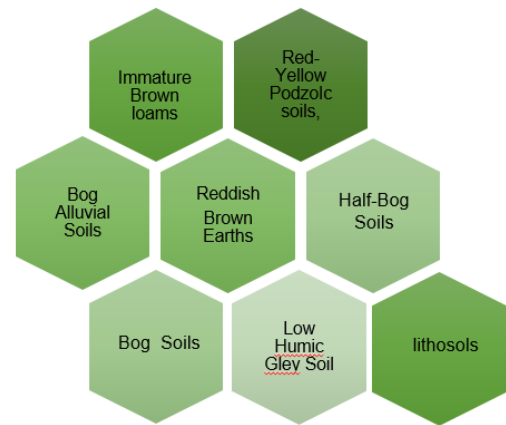
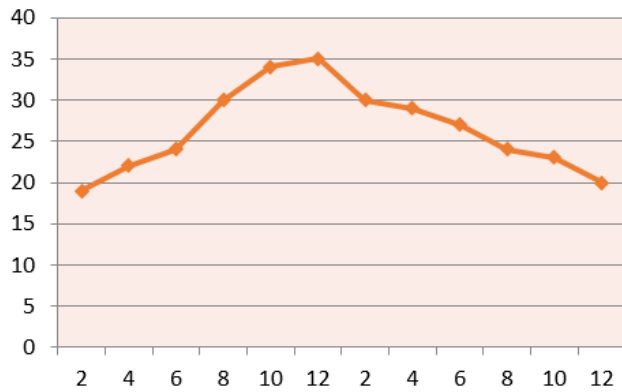


Source: Tourism Ministry, Sabaragamuwa Provincial Council

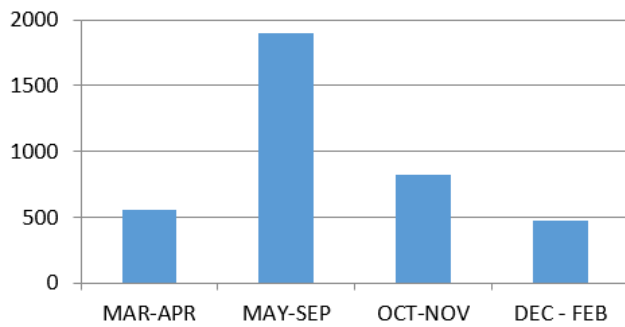
Annexure 29

Details of Ratnapura Bio-diversity

DAILY TEMPERATURE VARIATION

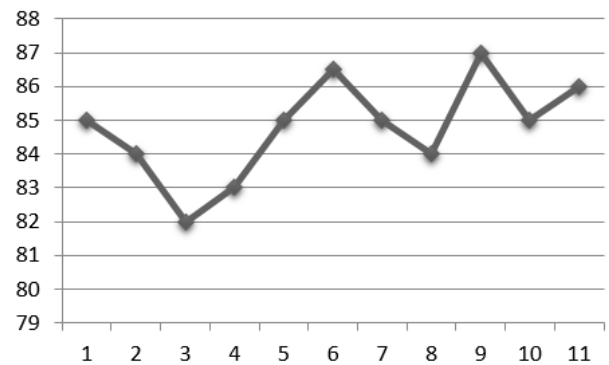


ANNUAL RAINFALL PATTERN



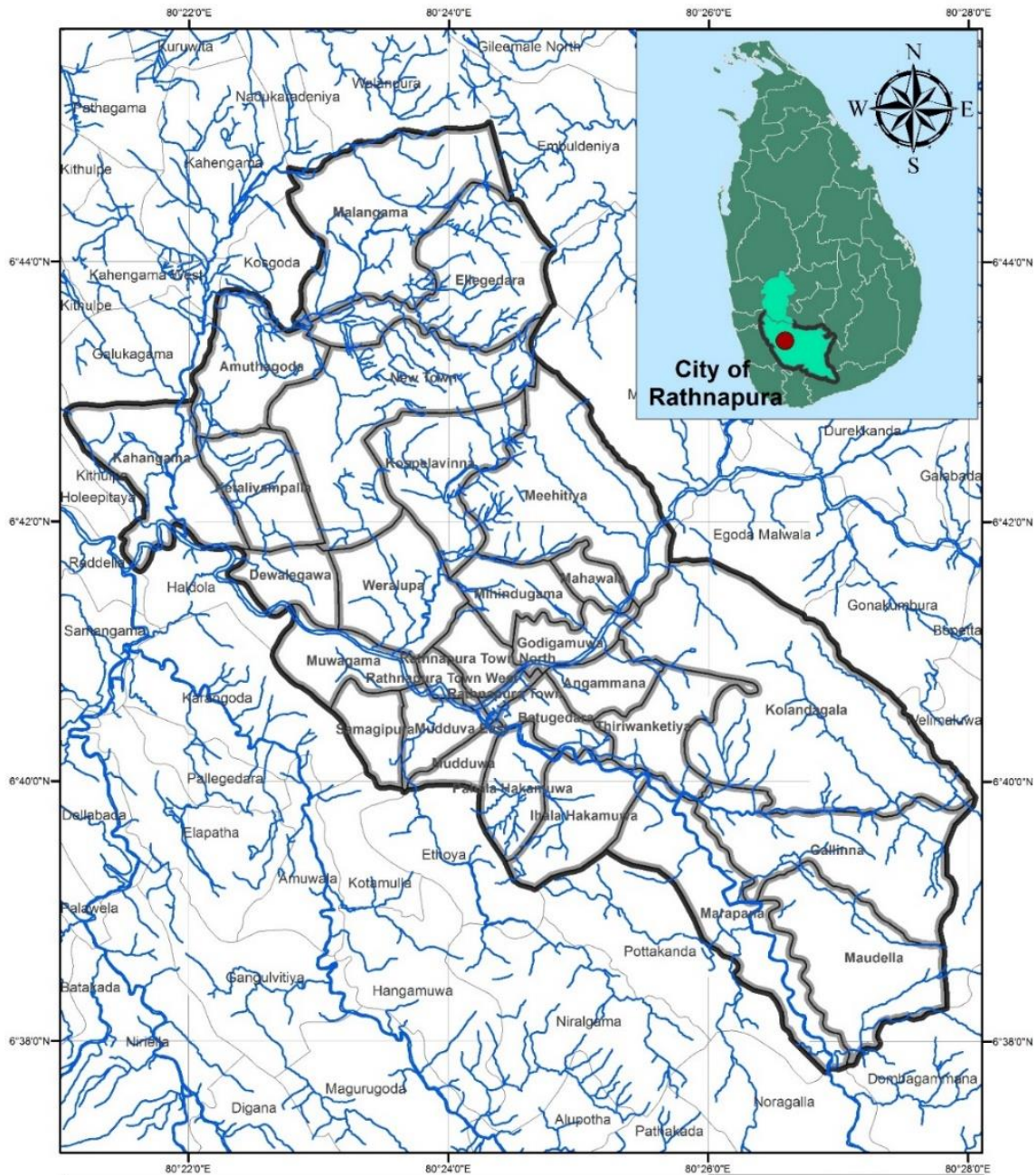
Source - Environmental Profile of the Ratnapura District - Central Environmental Authority


MEAN RELATIVE DAILY HUMIDITY



Annexure 30

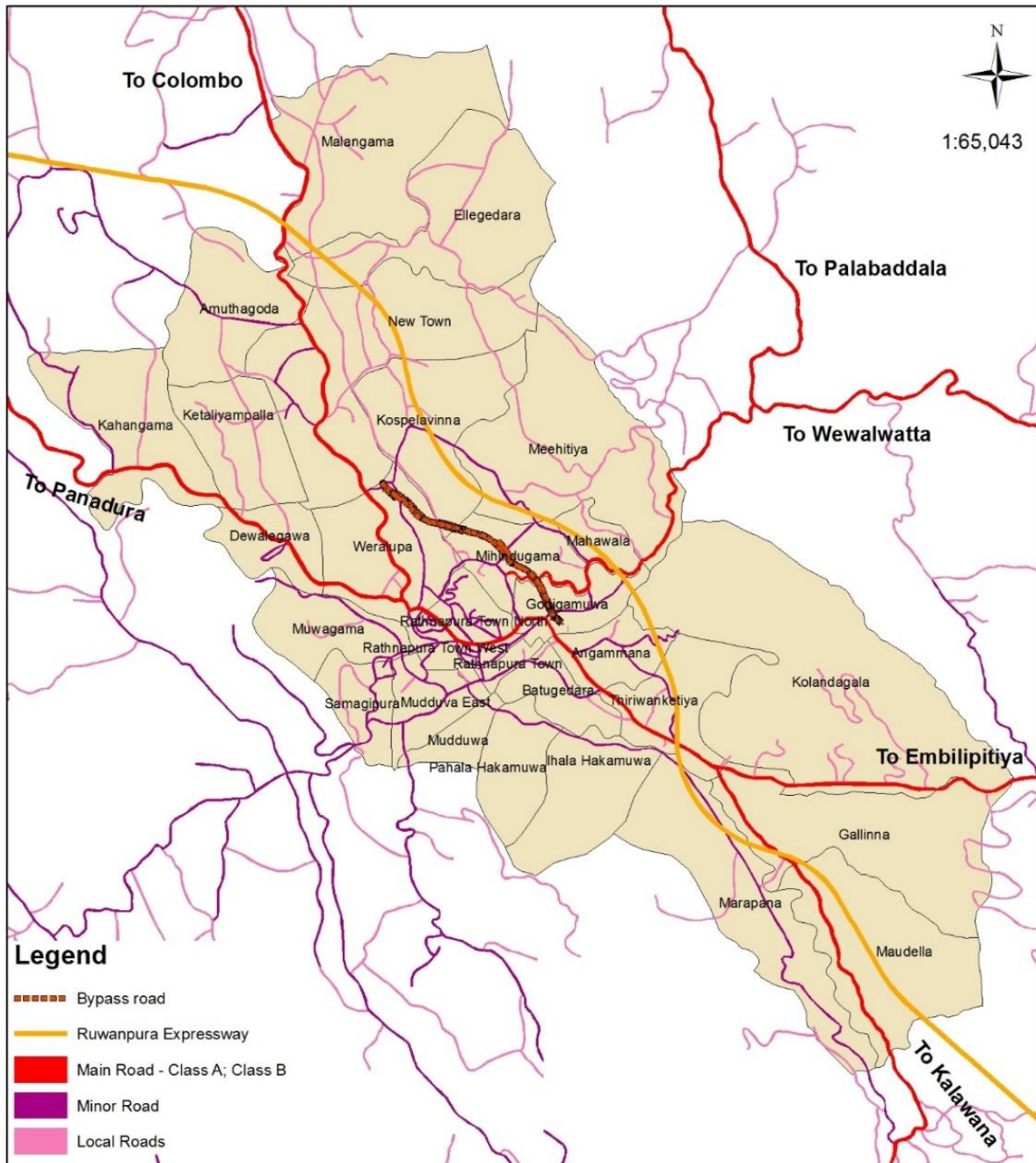
Kalu River and Inland Water Bodies



<p>Hydrology Network in Rathnapura UDA Planning Area</p> <p><i>Source: Field Visits and Google References</i></p>	 <p>Urban Development Authority March 2018</p>	
<p>GIS Division</p>	<p>Rathnapura Urban Development Plan (2017 - 2030)</p>	<p>Prepared By: A.W.H.N. Artigala</p>

Annexure 31

Ruwanpura Expressway



Connectivity - Ratnapura UDA Proposed Planning Area		 Urban Development Authority May 2016
Ratnapura Development Plan	Source : Survey Department	

Annexure 32

Details about Ruwanpura Expressway Project

Ruwanpura Expressway Project

Project Name	Project Type	Funding Agency	Location	Length (km)	Width (m)	Date of Commencement	Target Completion Date	Description	Progress as at 31.12.2017
Ruwanpura Expressway Project	Expressway Construction	Not yet finalised	Kathaduwa to Pelmadulla via Rathnapura. Interchanges at Horana, Ingiriya, Kiriella, Kuruwita and Rathnapura	73.9	20.4	2018 (Not finalized)	2021 (Not finalized)	<ul style="list-style-type: none"> Feasibility Study is in final stage. Environmental Impact Assessments Land Acquisition Resettlement Action Plan Procurement Civil Work Resettlement Grievance Redress Mechanism 	99% 95% 18% Prepared 40% Not started Included in RAP

Source: Road Development Authority

Annexure 33

**Summary
 Situation – 2017
 Flood**

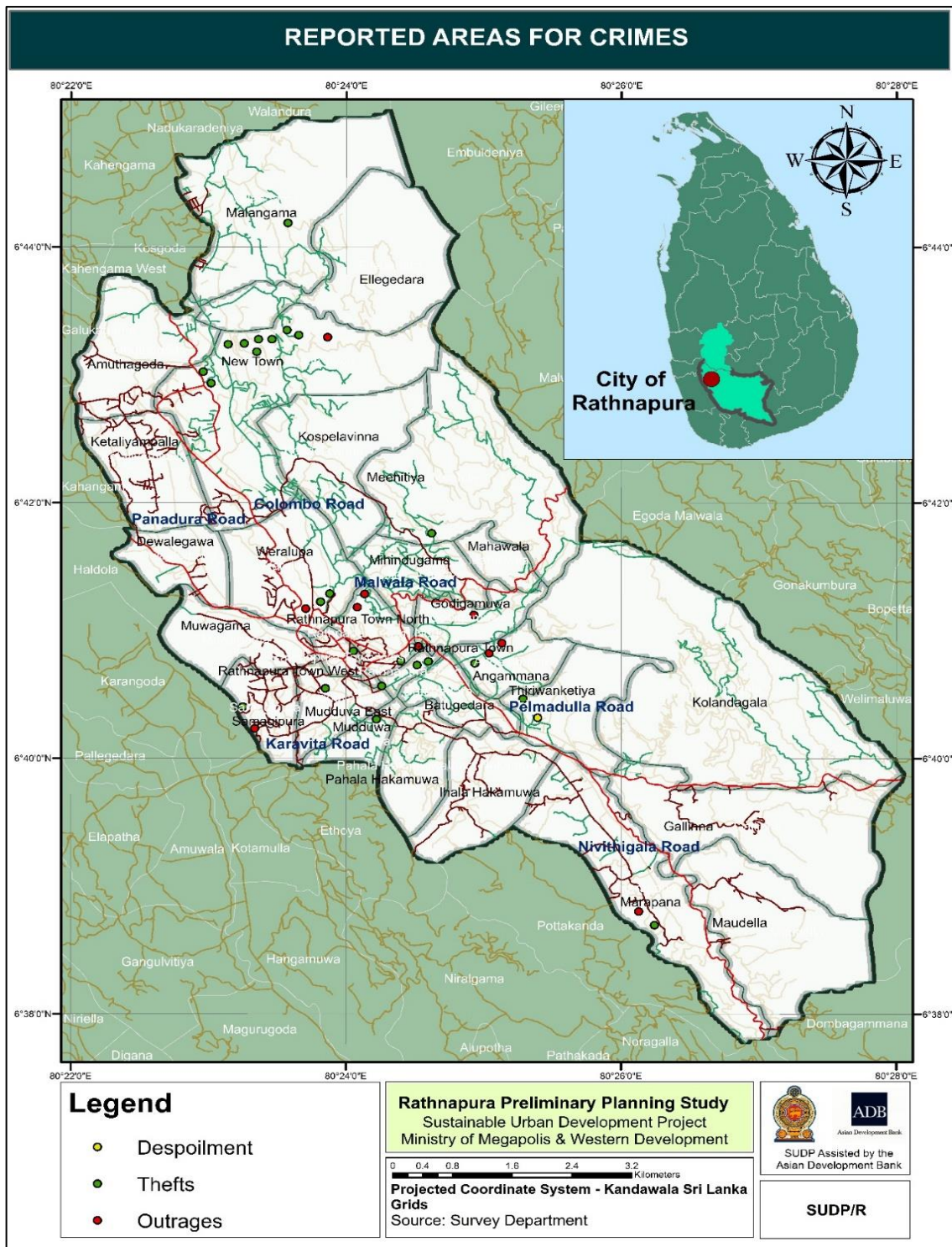
SUMMARY SITUATION UPDATE 27 MAY 2017, 0800HRS:

District	Affected		Impact			Displaced People
	Families	People	Deaths	Missing	Injured	
Kegalle	1,437	5,250	2	2	6	2,261
Rathnapura	4,815	18,031	47	-	2	4,844
Katunara	8606	37,492	37	72	22	4,829
Gampaha	4,41	19,535	2	-	1	7127
Matara	*	6,003	11	17	-	*
Hambanthota	1,860	4,405	1	-	-	-
Galle	32,215	128,047	-	-	2	1,218
Matale	7	31	-	-	1	-
Colombo	2,672	10,849	-	-	-	772
Kandy	9	40	-	-	-	-
Batticaloa	4	20	-	-	-	-
Trincomalee	206	696				
Vavuniya	31	102				
Mullaitivu	26	70				
TOTAL	56,529	230,571	100	91	34	27,054

Source: Disaster Management Center

Annexure 34

Reported Areas for Crimes



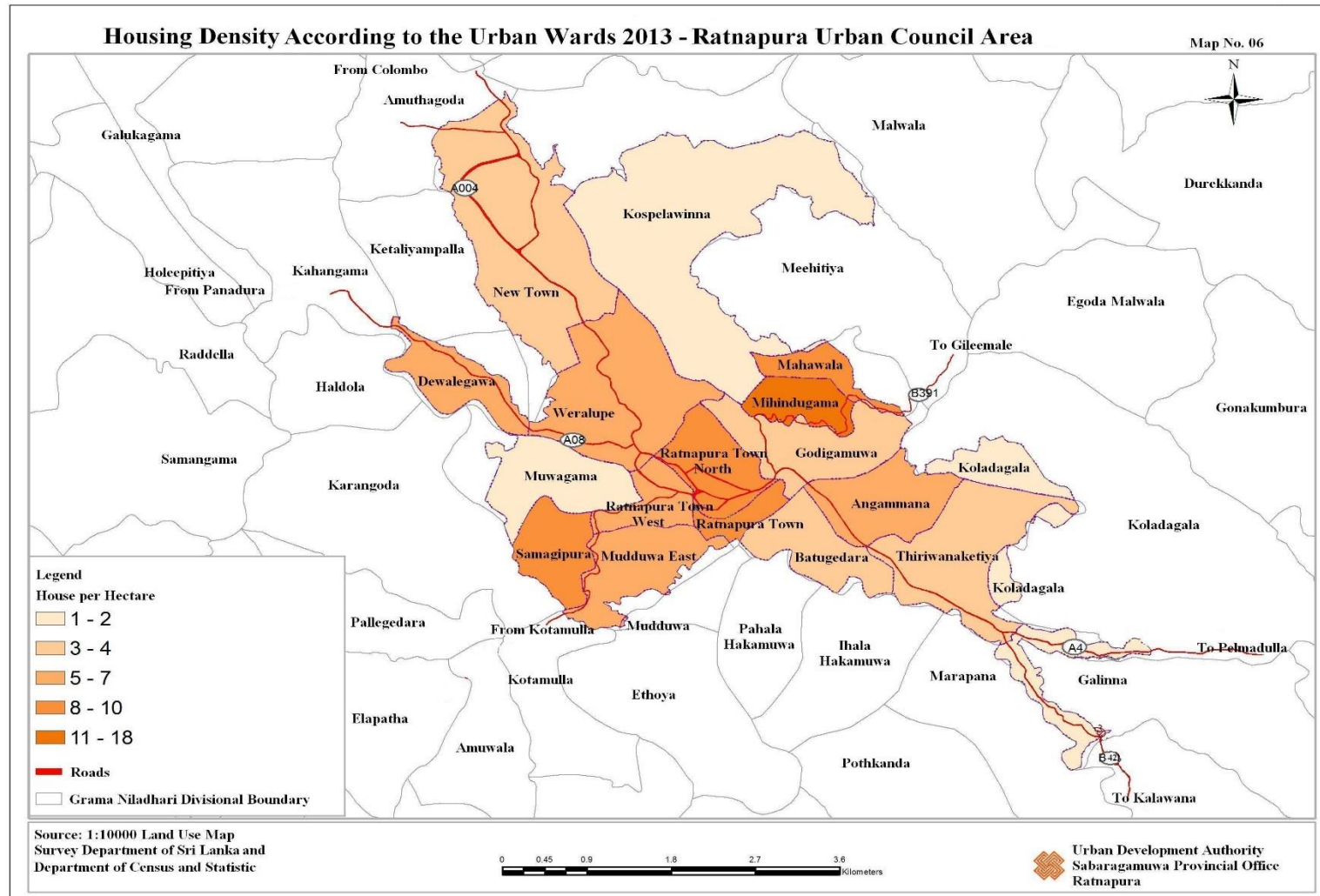
Annexure 35

Open Spaces



Annexure 36

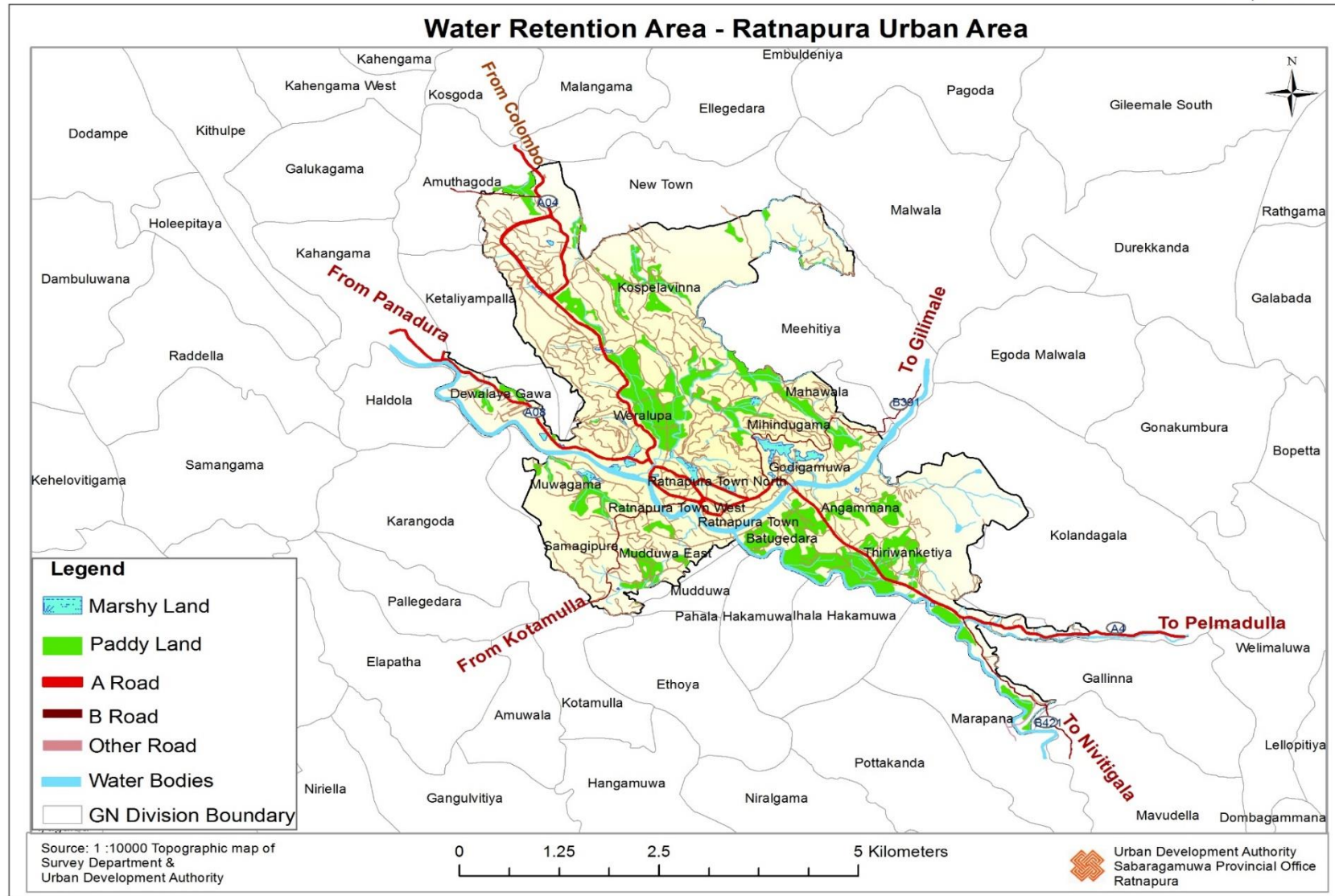
Housing



Annexure 37

Water Retention Areas

Map No : 09



Annexure 38

Disaster Risk

