# NAWALAPITIYA

Development Plan 2024 - 2034



Urban Development Authority
Central Provincial Office - Kandy

# NAWALAPITIYA URBAN AREA DEVELOPMENT PLAN

2024 -2034





Urban Development Authority
Ministry of Urban Development, Construction and Housing

#### Nawalapitiya Urban Area Development Plan 2024-2034

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**Nawalapitiya Urban Area Development Plan 2024 - 2034** mainly consists of three parts as Part I, II and III. The Part I consists of the background study, preliminary studies, the need of the plan, the planning framework, the SWOT analysis and the plan. The Part II consists of the strategic plan that supposed to implement to achieve the anticipated vision. The part III consists of the Planning and Building Regulations and, Zoning Regulations pertaining to the planning boundary for the period of 2024 - 2034.

Nawalapitiya Urban Area Development Plan 2024 - 2034 has been prepared by the Central Provincial office of Urban Development Authority.

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- III. GIS Division UDA (Providing ArcGIS Spatial data layer & technical assistants)

## **ACKNOWLEDGEMENT**

The Central Provincial office - UDA has taken the lead to provide the supervision for the preparation of the Nawalapitiya Urban Area Development Plan 2024 - 2034.

It is our privilege to Honorable Minister Prasanna Ranatunga, Minister of Urban Development & Housing for approving the Nawalapitiya Urban Area Development Plan 2024 - 2034 under the provision of Urban Development Authority Act No. 41 of 1978 as amended by the Act No. 04 of 1982. Further, it is our privilege to Minister Prasanna Ranatunga, Minister of Urban Development & Housing and Mr. Secretary to Minister of Urban Development and Housing for their guidance and supports in this process.

Special gratitude offered on behalf of the planning team and the UDA, to the officials and the staff of Nawalapitiya Urban Council, Pasbage Korale Pradeshiya Sabha, and Ganga Ihala Korale Pradeshiya Sabha and also to the Secretary, Pasbage Korale Divisional Secretariat and the staff for their generous support given for the successful completion of this development plan.

Appreciatively thankful to Chairman of UDA Eng. Mr. Lokubogahawattage Kumudu Lal, Director General of UDA Archi. Mr. Mahinda Withanaarachchi, Deputy Director General (Planning) – Zone 1 of UDA Plnr. M.P. Ranatunga, Director (Central Province) of UDA plnr. D.M.S.B. Dissanayake, Performing Director (Legal) of UDA Attorney at Law Mrs. D.M. Kiriwattuduwa, Director (Strategic Planning) of UDA Plnr. Mrs. W.A. Rupa Ranjani on behalf of the planning team for their incomparable courage, guidance and welcoming support.

In the end, Director – Environment & Landscape division L. Archi. Mrs. C.K.E. Kalupahana and the staff of the division, Director - Geographical Information System & ITS Plnr. Ms. J.P.S. Somasekara and the staff of the division and all the staff of Strategic Planning Division – UDA, staff members of all divisions UDA are gratefully appreciating on behalf of the planning team for their support to the successful completion of this task.

## HONORABLE MINISTER'S FORWARD



Towards realization of "Nawalapitiya" City Development.

In accordance with the President Ranil Wickramasinghe's manifesto, in order to effectively realize the goals and objectives to build a fully developed Sri Lanka by 2048, it is vital to implement new development plans to steer the country towards the right direction.

The Urban Development Authority implements and enforces Urban Development Plans taking into consideration the existing gaps and inconsistencies prevailing among the cities of same district as well as among the districts of same province as a result of the country's urbanization process. Accordingly, Development Plans have been published so far for 30 priority cities identified by the Urban Development Authority and another set of Development Plans targeting 50 cities are currently in the process of preparation and are planned to be legalized within this year. Nawalapitiya Development Plan is also one such plans and preparations are in place to formulate more plans in the year 2024.

Priority has been given in the Nawalapitiya Development Plan for the residential population and the threshold population obtaining services from the Nawalapitiya town and there is potential to further develop it as a service center. Also, the Development Plan has identified to utilize the existing environmental system as well as the places with economic value in a sustainable manner as it benefits the urban population.

The comments and suggestions of professionals, experts, stakeholders and community were obtained during the preparation of this plan and the planning approach adopted included utilization of modern analysis methods and technical tools.

The contribution made by the Chairman, Director General, Planning Team, and the relevant staff members of UDA who contributed to the Plan in numerous ways in order to successfully complete the plan is highly commendable. I believe that the Nawalapitiya Development Plan (2024-2034) will be successfully implemented through the cooperation and collective contribution of the relevant local authorities, state and private sector agencies and the general public.

Prasanna Ranathunga Honorable Minister of Urban Development & Housing

## HONORABLE UDA CHAIRMAN'S FORWARD

The Urban Development Authority is the main agency responsible for planning and implementation related to urban area management in Sri Lanka. The primary objective of the establishment of the Urban Development authority in 1978 has been to promote and regulate the development of these areas through integrated planning and implementation.

Accordingly, the Authority has been empowered to prepare development plans under Section IIA, part 8 A (1) of the Urban Development Authority Amended Act No. 4 of 1982 for urban areas as declared by the minister in charge. Therefore, Nawalapitiya Development Plan (2024 -2034) has been prepared considering the physical, economic, social and environmental aspects of the area.

The Nawalapitiya Development Plan (2024 -2034) has been prepared as to address the identified existing problems while optimally utilizing the potentials in order to ensure favorable development in the area through adopting strategic approach and introducing development zones and zoning regulations. Therefore, I request all the stakeholders and the public to contribute to the realization of the vision of this plan through implementation of the plan serving to the best interest of the public.

I would like to express my heartfelt thanks to the planning team of the Urban Development Authority for their support in completing Nawalapitiya Development Plan (2024 -2034) within the stipulated time. I am also grateful to all the stakeholders and the community who have supported and contributed to the successful completion of these tasks and I hope that you will continue to extend your utmost support to the successful implementation of the plan.

Nimesh Herath Chairman Urban Development Authority

# MESSAGE OF COMMISSIONER OF LOCAL GOVERNMENT



It is a privilege to share this public message through the Nawalapitiya Development Plan prepared for the period 2024–2034 by the Urban Development Authority. It is important to note that producing such an integrated plan, which considers multiple sectors, is no easy task. Developing a spatial plan for an already established urban area involves

incorporating necessary amendments and proposing contextually appropriate solutions, making it a particularly challenging endeavor.

Among the local authorities within the Kandy District, the Nawalapitiya Urban Council and its urban area stand out as a significant locale. This region is environmentally sensitive while also experiencing a high demand for residential and commercial development. Achieving sustainable development in this context requires a well-crafted plan that integrates the potential of various sectors, including social, economic, environmental, and physical domains. The proposed plan aims to enhance the quality of life for the public while ensuring balanced and sustainable development.

The Urban Development Authority has also proposed strategies to improve the area's infrastructure while conserving sensitive environmental factors. Identifying and addressing the development needs of the area is a challenging task that cannot be accomplished by the local authority alone. Therefore, the guidance and proposals provided by the Urban Development Authority through this plan are highly appreciated.

Finally, this development plan, created in collaboration with the Urban Development Authority, relevant local authorities, other governmental institutions, and the general public, must be effectively launched and implemented to achieve its stated goals and realize its vision. I extend my heartfelt encouragement and best wishes for the successful execution of this plan.

A. M. K. C. K. Atapattu

Commissioner of Local Government

Central Province

## **PREFACE**

According to the powers of section 3(1) and (2) of the Urban Development Authority Act No. 41 of 1978, the Minister in charge of Urban Development has been empowered to declare an area as an Urban Area and accordingly No. 26/8 dated March 07, 1979, the Minister in charge of Urban Development has declared the Nawalapitiya local area as an Urban Area.

This development plan of the Nawalapitiya Urban Area has been prepared for the period of 2024-2034, with the aim of achieving physical, economic, environmental and social sustainable development for the people of the area. Further, the information related to the area until 2022/23 is used for this purpose.

The Nawalapitiya Urban Area Development Plan 2024-2034 consists of three parts namely; Part I, Part II and Part III

The Part I consists of five chapters and the Chapter or describes background and the scope of the Nawalapitiya Urban Area Development Plan, the stakeholders and consulting organizations that contributed to the preparation of the development plan and the planning steps followed in the preparation of the development plan. In the Chapter 02, the Planning and Situational context under the physical, economic, environmental and social aspects, have been analyzed comprehensively. And also, the national & regional relations of the Nawalapitiya area, previous planning attempts and its importance, as well as determining the planning boundary for which the plan should be prepared is also discussed here.

The Chapter o<sub>3</sub> focuses on the requirement of producing a plan and in the Chapter o<sub>4</sub>, the desired vision of the development plan, the goals to reach the vision and the related objectives are discussed. The strengths, weaknesses, development opportunities and threats (SWOT) of the area in relation to the identified development objectives have been analyzed in detail by the Chapter o<sub>5</sub>.

In the part II, the means of opening up the opportunity to achieve the vision and achieve the desired future development through the long-term goals of this plan, is explained under the Strategic Plans in the Chapter o6. The Chapter o7 in the Part III of the report, the proposed land use plan through the identified development strategies for the period 2024-2034 will be discussed under spatial development strategy. Further, the Social and Physical Infrastructure Facility Development Strategy, Economic Development Strategy and Sustainable Environmental Development Strategy are described at length in the same chapter, and the development Projects proposed to achieve the desired goals are also mentioned here.

Finally, the Chapter o8 contained with the special guide-lines that highlight the urban design approach and the Chapter o9 consist with proposed reservations on roads and other special areas.

## **Government Notice**

## APPROVAL OF THE DEVELOPMENT PLAN FOR LIMIT OF NAWALAPITIYA URBAN COUNCIL AND PART OF PRADESHIYA SABHA LIMIT OF PASBAGE KORALE

I, Prasanna Ranathunga, Minister of Urban Development and Housing do hereby approve the Development Plan for the enactment of development plan for limit of Nawalapitiya Urban Council and Part of Pradeshiya Sabha limit of Pasbage Korale after consideration of recommendation made by the Board of Management of the Urban Development Authority on 12th June, 2024 by virtue of the powers vested in me under Section 8 "F" of the Urban Development Authority (Amendment) Act No. 4 of 1982.

Prasanna Ranathunga (M.P)

Minister of Urban Development and Housing

Prasanna Ranatunga (M.P)

Minister of Urban Development and Housing Ministry of Urban Development and Housing

2<sup>nd</sup> Floor, "Sethsiripaya" Battaramulla

Ministry of Urban Development and Housing, 12<sup>th</sup>Floor,

"Sethsiripaya" Stage II

Battaramulla.

Date: 27. 08 2024

# **Gazette Notification**



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(Published by Authority)

# PART I: SECTION (I) — GENERAL

#### **Government Notifications**

# APPROVAL OF THE DEVELOPMENT PLAN FOR LIMIT OF NAWALAPITIYA URBAN COUNCIL AND PART OF PRADESHIYA SABHA LIMIT OF PASBAGE KORALE

I, Prasanna Ranathunga, Minister of Urban Development and Housing do hereby approve the Development Plan for the enactment of Development plan for limit of Nawalapitiya Urban Council and Part of Pradeshiya Sabha limit of Pasbage Korale after consideration of recommendation made by the Board of Management of the Urban Development Authority on 12th June, 2024 by virtue of the powers vested in me under Section 8 "F" of the Urban Development Authority (Amendment) Act. No. 4 of 1982.

Prasanna Ranathunga (M.P.), Minister of Urban Development and Housing.

Ministry of Urban Development and Housing, 12th Floor, "Sethsiripaya", Stage II, Battaramulla, 27th August, 2024.



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# APPROVAL OF THE DEVELOPMENT PLAN FOR LIMIT OF NAWALAPITIYA URBAN COUNCILAND PART OF PRADESHIYA SABHA LIMIT OF PASBAGE KORALE

NOTICE is hereby given to the General Public of the Democratic Socialist Republic of Sri Lanka under Section 8(G) of the Urban Development Authority Law, No. 41 of 1978 as amended by the Act, No. 4 of 1982 that I, Prasanna Ranathunga, the Minister in charge of the subject of Urban Development & Housing, by virtue of the powers vested in me under Section 8(F) of the said Act, No. 4 of 1982 have approved the Development Plan for limit of Nawalapitiya Urban Council and Part of Pradeshiya Sabha Limit of Pasbage Korale prepared under Section 8 (A) of the said Act, on the day of 27th August, 2024.

Prasanna Ranathunga (M.P.), Minister of Urban Development and Housing.

Ministry of Urban Development and Housing, 12th Floor, "Sethsiripaya", Stage II, Battaramulla, 31st August, 2024.

# APPROVAL OF THE DEVELOPMENT PLAN FOR LIMIT OF NAWALAPITIYA URBAN COUNCIL AND PART OF PRADESHIYA SABHA LIMIT OF PASBAGE KORALE

PUBLIC are hereby informed that the Development Plan prepared for the approval of the Development Plan for the limit of Nawalapitiya Urban Council and Part of Pradeshiya Sabha limit of Pasbage Korale under Section 8 (A) of the Urban Development Authority Law, No. 41 of 1978 as amended by the Act, No. 4 of 1982, has been approved on 27th August, 2024, by Hon. Prasanna Ranathunga, Minister of Urban Development & Housing, by virtue of powers vested on him under Section 8 (F) of the said Act.

Nimesh Herath, Chairman, Urban Development Authority.

30th August, 2024.

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# **PART I**

# **CHAPTER 01**

# **Background of the Development Plan**

# 1.1 Introduction

Preparation of a development plan for the future of a city begins by examining the underlying trends of the social, economic, political and environmental forces. Because the nature of the development of a city is driven by more or less strengths and weaknesses of the above forces, inverse and direct proportionately nature of the forces. Urban development authority is the apex 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 a 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 inhabitants of the development area.

Nawalapitiya was incorporated as "Nawalapitiya Town Council" on o1st January 1933 under the Town & Country Planning Ordinance. Later on, Nawalapitiya town council area was declared as urban development area on 4th August 1980 and special gazette notification no 100/4 under the Urban Development Authority Act No: 41 of 1978.

As a result of declaration of Nawalapitiya Urban Council area as an urban development area, Urban Development Authority initiates the preparation of Nawalapitiya development plan considering physical, economic, social and environmental aspects of the Nawalapitiya declared urban development area.

Even though there is a draft plan prepared for the time period of 2008-2025, new planning intervention is required because the existing Nawalapitiya development plan has several limitations in terms of meeting the current demands of development. Since its preparation was based on the ground situation more than ten years ago, it needs to

be updated to meet the present and emerging situation. On the other hand, it is accepted that a physical development plan has to be updated each 10 years' time period in order to meet the present-day trends.

After declaration of Nawalapitiya Urban development area in 1980, the fringe of urban areas has sprawled outwards within the Nawalapitiya Urban Council limits within a 40 years of time period. This development plan will guide the urban development in said area after identifying the planning boundary in a rational manner.

The preparation of the town development plan was started in early 2018 and a comprehensive study of the city's structure and its surrounding aspects was carried out to find out the context of the Nawalapitiya area. This development plan has also introduced developmental strategies and guidelines for the next 10 years (2024-2034).

Nawalapitiya Urban Area Development Plan 2024–2034 address only for the area which has higher urban characteristics. Sprawling urbanization is a typical characteristic of the fringe of an urban area; planned intervention is required in such an area rather than letting haphazard developments occur. Considering the planning area and urban hierarchy, this development plan belongs to the local level plan category.

# 1.2 Stakeholders of the Plan

Nawalapitiya Urban Area Development Plan 2024–2034 was prepared by the Central provincial office of Urban Development Authority with the consultation of relevant stakeholder agencies.

## **Main Stakeholder and Consultation Agencies**

- Divisional Secretariat office of Pasbage Korale
- 2. Nawalapitiya Urban Council
- 3. Pasbage Korale Pradeshiya Sabha
- 4. Central Environmental Authority
- 5. Sri Lanka Mahaweli Authority
- 6. Road Development Authority
- 7. National Building Research Organization (NBRO)
- 8. Provincial Road Development Authority

- National Housing Development Authority
- 10. Sri Lanka Tourism Development Authority
- 11. Natural Resource Management Centre
- 12. Archaeological Department
- National Water Supply & Drainage Board
- 14. Irrigation Department
- 15. Disaster Management Centre

## **Other Stakeholder Groups and Agencies**

- 1. Sri Lanka Railway Department
- 2. Department of Wildlife Conservation
- 3. Sri Lanka Police Nawalapitiya
- 4. Forest Conservation Department
- 5. Sri Lanka Telecom
- 6. Sri Lanka Postal Department
- 7. Tourist Hotel Owners Association
- 8. Private Sector Housing Developers
- 9. Trade community representatives

# 1.3 Scope of the Development Plan

According to the National Physical Plan 2050 (Annexure 01), the Nawalapitiya Urban Council area and the whole study area is located within the "Central Environmental Sensitive" area which has limited the density of development. Considering this factor, Nawalapitiya urban area development plan accommodates only for the number of residential populations, which is forecasted according to natural growth rate and the calculated commuter population.

The planning boundary is delineated by overlapping the results of analyses of functional, physical and administrative boundaries. The result interprets that the urban area is beyond the Nawalapitiya urban council area. In that sense, this Nawalapitiya Urban Area Development plan will address the whole Nawalapitiya Urban Council (UC) area and part of Pasbage Korale Pradeshiya Sabha. Nawalapitiya UC area does not comprise the "Greater Kandy Urban Area" and therefore development attention towards this area is limited and there is only one previous planning attempt that could be identified in this area which is 2008-2025 Nawalapitiya UC development Plan by the Urban Development Authority.

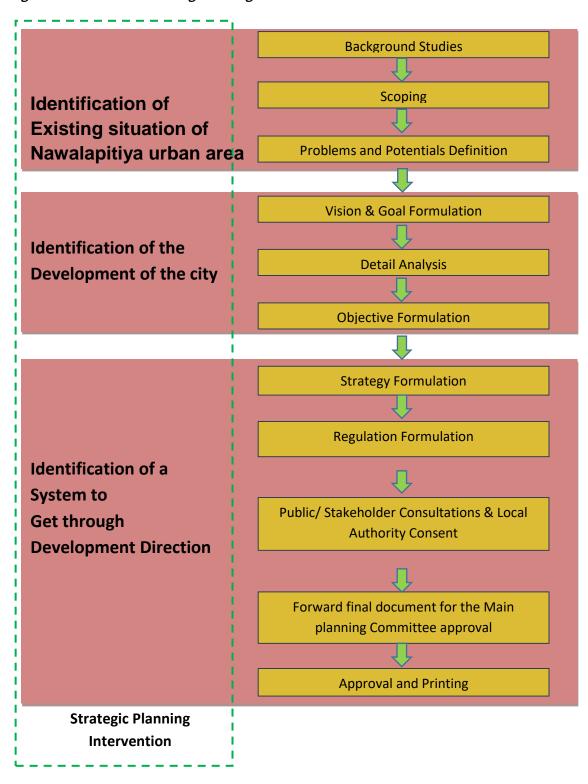
Majorly this development plan considered the base as a locational advantage of Nawalapitiya UC area because of the linkage with several tourism destinations of hill country including Sri Pada, Galaboda falls, Kadiyanlena falls and many other waterfalls. Considering the context of the urban development area, Nawalapitiya will be developed as a service providing town center for its catchment area which caters to the Nawalapitiya area.

# 1.3.1 Limitations

In early 2020 the whole world faced a pandemic which severely affected almost all countries. Even the worst time has ended because of the global vaccination program; people are dying around the world to date. Right after the above Covid 19 pandemic, the whole world and Sri Lanka faced economic recession and the economic crisis was worsen in the year 2022. In 2018, Sri Lanka's GDP value was 87.9 billion USD consequently the economic crisis hit the Sri Lankan economy hard and reduced the GDP by 7 billion USD in 2021 (Source: https://www.statista.com/).

# **1.4 Planning Process**

Figure 1.1: Flow Chart Showing Planning Process



Source: Central Provincial Office, Urban Development Authority (2021)

## 1.4.1 Background Studies

As an initial step under the background studies, a study was carried out for population, housing, health, educational, tourism, employment, infrastructure facilities, topography, economy and environmental situation and trends on relevant sectors for 04 divisional secretariat divisions, Ganga Ihala, Udapalatha, Kothmale and Pasbage Korale.

## 1.4.2 Scoping

After studying past planning exercises focusing on the Nawalapitiya urban area and getting experiences of them and as a result the future direction of planning studies has been done under this stage. Further the possible ways are searched in preparing development planning under broad guidelines specified in the National Physical Plan regarding Nawalapitiya area development. Also identified the impacts of development projects which are implemented under the Nawalapitiya town development plan 2008 -2025 (Annexure 02).

## 1.4.3 Problems and Potentials Definition

With the background study of Nawalapitiya urban development area, some key problems are identified through a survey and an analysis of it which hinder the sound and worthy behavior of a town. Further identified potentials which inherit to the town itself will be utilized for the development.

#### 1.4.4 Public/ Stakeholder Consultation

A stakeholder's workshop has been organized with the participation of residents of the town, town users, institutions which are contributing towards good supremacy of the town and participants who may concern about the Nawalapitiya town and gathered problems & constraints from them and was able to identify undisputable problems & constrains by following the deify method in this workshop. Accordingly, such recognized problems and constraints after analyzing them with more details, the priority problem areas were identified to be addressed when preparation of the development plan.

Figure 1.2: Stakeholders' Meeting Held at Nawalapitiya









Source: Central Provincial Office, Urban Development Authority

## 1.4.5 Vision & Goals Formulation

With the development direction of Nawalapitiya urban area, a vision is determined where achieving the determined vision; three (3) Goals have been identified & finalized.

# 1.4.6 Detail Analysis

Strength, weaknesses, opportunities and threats (SWOT) analyses of the planning area have been done in achieving the o3 goals. In this process, environmental sensibility analysis, bearing capacity analysis, vision analysis, suitability analysis, inter urban relationship analysis methods etc. have been applied.

# 1.4.7 Objective Formulation

In achieving the determined goals via SWOT analysis, objectives have been independently determined in achieving 03 goals.

# 1.4.8 Strategy Formulation

New regulations, guide plans etc. regarding achieving objectives have been identified and described under following headings and included in Chapter 6th of this development plan.

- 1. Conceptual plan
- 2. Social and Physical Infrastructure development strategies
- 3. Economic development strategies
- 4. Sustainable environmental development strategies
- 5. Projects Implementation strategies
- 6. Development Zones and Zoning guidelines
- 7. Urban Design guide plan

# **CHAPTER 02**

# **Preliminary Studies**

# 2.1 Study Area

Nawalapitiya urban area is located centered to the Gampola, Dolosbage, Ginigathhena, Kothmale and Pussellawa town centers. Those town centers are located within Pasbage Korale, Kothmale, Udapalatha and Ganga Ihala divisional secretariat divisions. To delineate the Nawalapitiya urban development area it was considered above o4 divisional secretariat divisions to analyze the functional, geographical and administrative boundaries. After overlaying the results of those analyses, the Nawalapitiya urban development area boundary was delineated.

Land use of the study area can be identified as mentioned in Table 2.1.

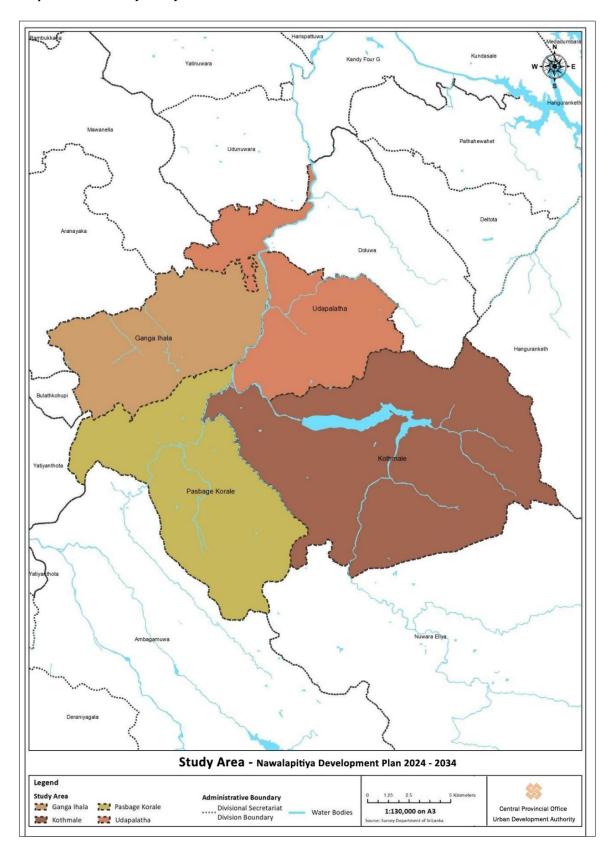
Table 2.1: Land-use of the Study Area

Category	Distribution (Ha)	Percentage (%)
Tea	24766.3	47.2
Home Gardens	7758.2	14.8
Forest	5380	10.3
Roads	4065.7	7.7
Scrub	3904.9	7.4
Paddy	2317	4.4
Rubber	1300	2.5
Water Bodies	1185	2.3
Other Plantation	1049.8	2.0
Rock	721.3	1.4
Built up Area	11.3	0.1
Marsh	6.8	0.0
Total	52466.3	100.0

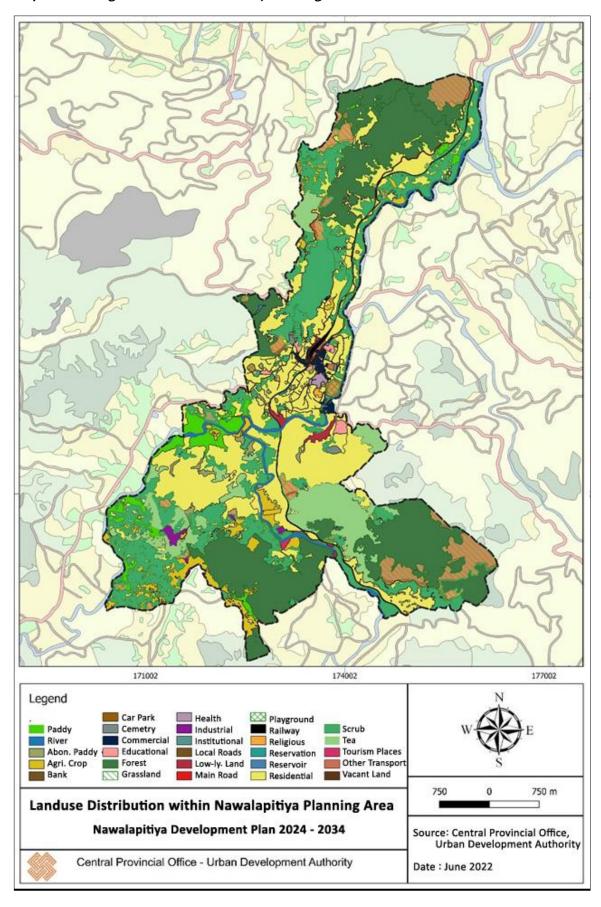
Source: Survey Department

The majority distribution of Land use in the study area can be observed as Tea plantations (47.2%). Residential type land use is also predominant within the study area which is 14.8% of the total land extent.

Map 2.1: Preliminary Study Area



Map 2.2: Existing Land-use Distribution of Planning Area



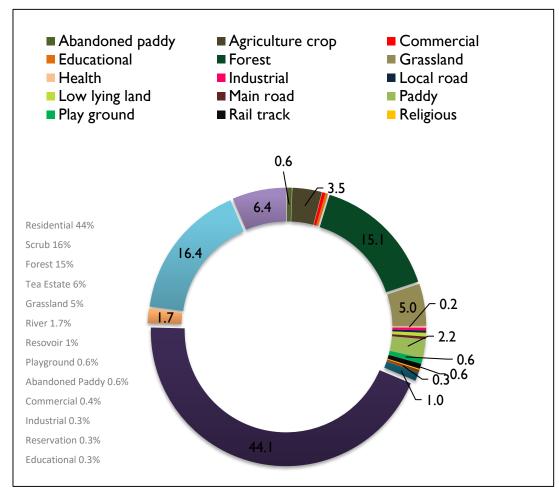


Figure 2.1: Chart Showing Land-use Distribution (%) of the Study Area

Source: Central Provincial Office - UDA

# 2.2 Delineation of the Planning Boundary

# 2.2.1 Introduction.

Area comprising the Planning boundary is the area addressed by this development plan. All the Planning and Development regulations and strategic projects are formulated to the area comprising this boundary.

With the scientific analysis, the final planning boundary has been delineated. To delineated functional boundary following aspects have been considered,

- 1. Development Pressure
- 2. Land Values
- 3. Connectivity Analysis
- 4. Population Density

Result of the overlaid above parameters represents the functional order of the study area.

Physical boundary delineation was next step and below factors were considered for the analysis,

- 1. Environmental Sensitivity
- 2. Tin Layer
- 3. Hydrology

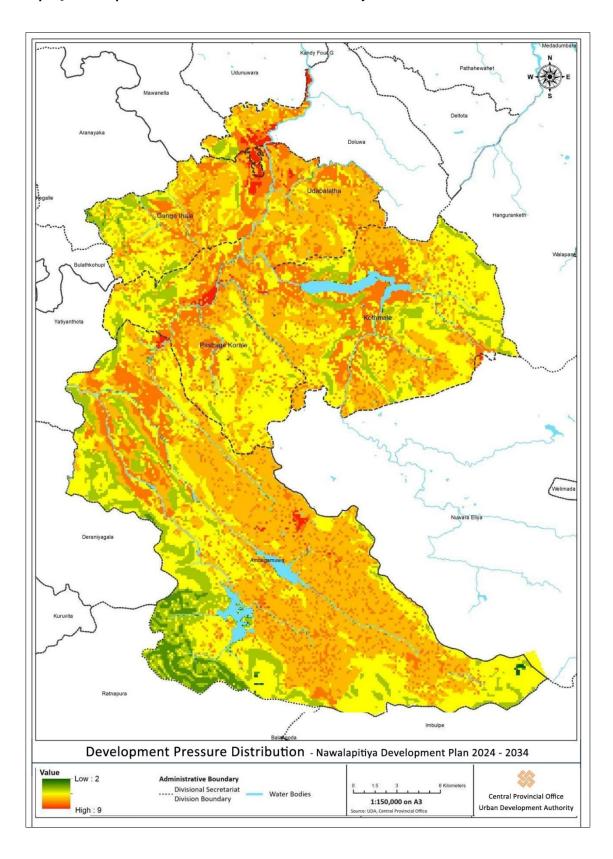
Administrative boundary consideration was the next step and following boundaries were considered for the analysis.

- 1. GN Boundary
- 2. DSD Boundary
- 3. LA Boundary

## 2.2.2 Functional Boundary

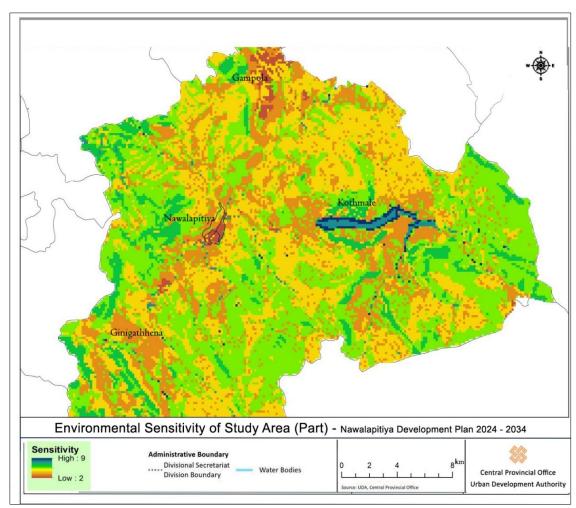
Pasbage Korale, Kothmale, Ganga Ihala and Udapalatha Divisional Secretariat Divisions are considered as study areas of this development plan. Development Pressure analysis has been done for that land area considering residential population distribution pattern, built-up area distribution pattern and existing infrastructure facilities distribution pattern. According to result of the analysis (Map 2.3) it rationally interprets that along the Kandy-Nawalapitiya AB 13 road and Nawalapitiya-Ginigathhena B 319 road has the highest development pressure, which means predominantly higher human activities density can be observed within that carried Even the higher order towns such as Gampola and Gelioya are located along this highway.

Map 2.3: Development Pressure Distribution within Study Area



# 2.2.3 Geographical Boundary

Environmental sensitivity analysis has been done for the same study area to find out the areas which should be identified as lower the development density and should be protected. It is considered environment sensitive areas, terrain, water bodies and wetlands to generate the result out of this analysis (Map 2.4). The result obtained from this analysis is considered as one set of categories to delineate planning boundaries out of the study area.

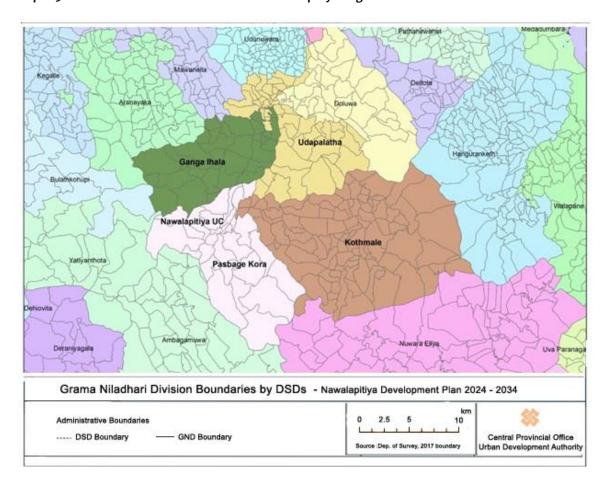


Map 2. 4: Environmental Sensitivity of Study Area (part)

### 2.2.4 Administrative Boundary

Within the study area there are four divisional secretariat divisions which are Pasbage Korale, Kothmale, Ganga Ihala and Udapalatha Divisional Secretariat Divisions and six local authorities which are Gampola Urban Council, Nawalapitiya Urban Council,

Udapalatha Pradeshiya Sabha, Pradeshiya Sabha, Ganga Ihala Pradeshiya Sabha, and Kothmale Pradeshiya Sabha (Annexure o3). Among these local authorities, Gampola town development plan is already begun with simultaneously to this development plan.



Map 2. 5: Grama Niladhari Boundaries within Nawalapitiya Regional Area

### 2.2.5 Planning Boundary

Final Planning boundary was delineated through overlaying the Functional, Geographical and Administrative boundaries of the study area. Final planning boundary is consisted with Nawalapitiya North, Nawalapitiya East, Nawalapitiya South, Nawalapitiya West Grama Niladhari divisions and part of Imbulpitiya and, Bawwagama, Warakawa Grama Niladhari divisions belongs to Nawalapitiya Urban Council area and Aluthgama, Karahandungala, Kendopitiya, Pallegama, Weligampola, Weligodawatta

Grama Niladhari divisions belongs to Pasbage korale Pradeshiya Sabha area. Planning boundary is comprised with 1993 Ha. of land.

Table 2. 2: Grama Niladhari Divisions belongs to Planning Boundary

Bawwagama	Nawalapitiya West	Nawalapitiya East	Weligampola
Karahandungala	Pallegama	Nawalapitiya North	Weligodawatta
Kendopitiya	Warakawa	Nawalapitiya South	Imbulpitiya (part)
Aluthgama			

# 2.3 Planning and Situational Context

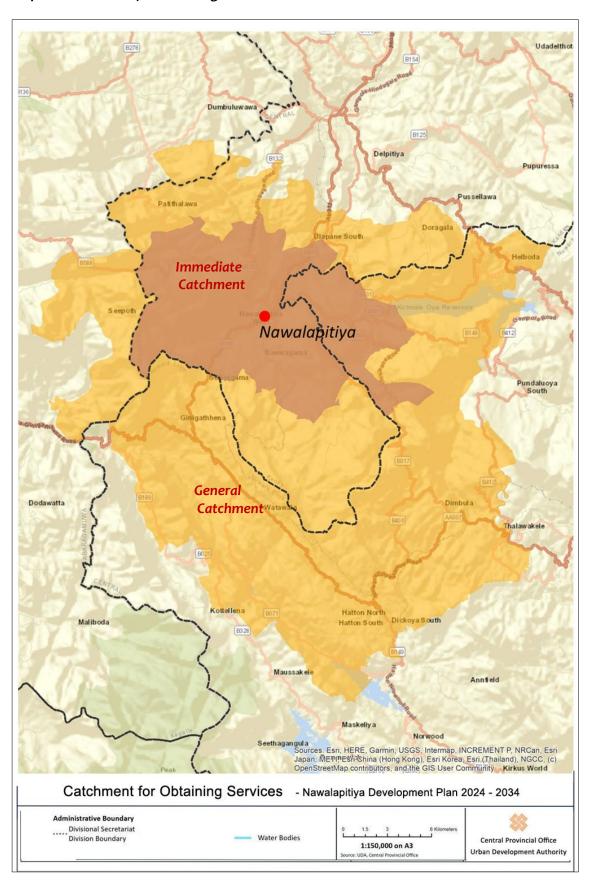
Nawalapitiya Urban Council area is located in the relatively southern corner in Kandy district of Central province. More specifically 36 km along the Kandy-Nawalapitiya AB13 highway. Nawalapitiya Planning area is contained with Nawalapitiya Urban Council area and o8 Grama Niladhari divisions from Pasbage Korale Pradeshiya Sabha area. Since the ancient Kingdom era, Nawalapitiya was known area among country people because of it located on the "Sri Pada" route.

According to the climatic zones of Sri Lanka, Nawalapitiya planning area is belonging to wet zone with average annual rainfall in-between 4000 mm 5000 mm. The maximum temperature is in-between 27.9  $^{\circ}$  C - 32  $^{\circ}$  C and the average temperature is around 22 $^{\circ}$  C - 25  $^{\circ}$  C which means the planning area has a salubrious climate all around the year.

Nawalapitiya Urban Council area bounded by the Mahaweli River of its Eastern and Southern directions meanwhile Western boundary is bounded by the "Dolosbage" mountain range.

Nawalapitiya serves for daily services obtaining catchment of 73,000 of population and special services obtaining population catchment of 278,000 such as health, the educational and administrative services (Map 2.6).

Map 2.6: Catchment for Obtaining Services



### **History and City Evolution**

Sri Pada Holy Mountain is a well-known destination among Buddhist, Islamic, and Catholic pilgrims and they are traveling to this holy mountain from different regions of the country since the king monarchy era. During that era pilgrims from all over the island used to visit to worship this sacred mountain by foot. Nawalapitiya was known township since the kings' era because of its geographical location. "Ambagamuwa Sellipiya" is the oldest written archaeological evidence that can be found regarding the pre-colonial history of the Nawalapitiya area. According to that ancient document, pilgrims used to get rest at this particular location while they travel to the holly mountain of Sri Pada. The geographical location of Nawalapitiya is the special reason for preference as the resting place because the Mahaweli River is flowing alongside the plain terrain bounded by the Dolosbage mountain range. Resting and bathing has taken place in this area and people called this place "Naana Wala Pitiya." Later it evolved as "Nawalapitiya" to ease the pronunciation.

After the British invasion, they initiated agricultural plantations in their colonies. First, the "Cinchona" plant and then the "Coffee" plants were cultivated by them. With "Tea" becoming a world-famous drink, the British planted tea plant all over the mountain areas in the hill country. As "Tea" became one of the most popular drinks around the world, the British spread their tea estates all over the hill country area. Then they built the rail tracks to interconnect Colombo and towns in the hill country area to transport goods and supplies. During that rail construction, the British identified Nawalapitiya as one of the main railway stations of the up-country rail track. In 1894 Nawalapitiya railway station was opened by the British and since then the town has emerged as a major railway town in Sri Lanka. At present 5% of daily commuters use the train as their transportation mode, rather in Sri Lanka, it was only 2%.

Nawalapitiya town council was introduced on January 1st of 1933 as one of the first town councils in Sri Lanka. After the establishment of the Urban Development Authority in the year 1978, as the apex body in urban development, Nawalapitiya Town was declared as an urban development area on 4th August 1980 by the special gazette no 100/4 for the purpose of properly planned development of the town. In 2008, the Central Provincial Office of Urban Development Authority has been

initiated the Nawalapitiya Town development plan with the objective of improving the urban standards in the Nawalapitiya town area. By that project, Urban Development Authority could have been implemented following projects with the coordination of other government agencies.

- Police station
- Courts complex
- Base hospital
- Jayathilaka sports complex
- Supermarket complex
- Road development
- Façade development
- Urban Council building development

Draft zoning plan also has been prepared by the Nawalapitiya Urban council development plan 2008-2025, and it had been presented to the Main Planning committee and received the approval.

Nawalapitiya is a Satellite town connected to Kandy, which is one of the National City according to the manifesto (Annexure 04). Distances from the Nawalapitiya town center to other major towns can be identified by Table 2.3.

Table 2.3: Distances from the Nawalapitiya Town Center to Other Major Towns

Town Center	Road Category	Distance
Kandy	AB13	36 km
Nuwara Eliya	A 07	65 km
Colombo	A 07	120 km
Kurunegala	A 10	77 km

Source: Google Earth Pro

According to the hierarchy of towns within Central province, Nawalapitiya town can be identified as a 3<sup>rd</sup> order town center, and from the Kandy district, it would be identified as a 2nd order town center (Annexure 05).

Presently o6 development projects are being implemented within the Nawalapitiya Urban council area and o2 development projects are being implemented in the periphery area.

# **Demography**

Residential population within the planning boundary is equal to 32, 810 of total population within the planning boundary in the year of 2020. Considering 2001 and 2011 census data, population growth rate within the planning area can be calculated as 0.89 percent. It is relatively higher when compared with the Sri Lankan average population growth rate of 0.75 percent. Population distribution within the planning area according to the Grama Niladhari division vice present in Table 2. 4.

Table 2. 4: Population Distribution within Planning Area by Grama Niladhari Divisions

GND	Population in
	2022
Bawwagama	7607
Karahandungala	2236
Kendopitiya	3335
Nawalapitiya East	1756
Nawalapitiya North	2734
Nawalapitiya South	3225
Nawalapitiya West	3772
Pallegama	1737
Warakawa	2327
Weligampola	1314
Weligodawatta	2088
Imbulpitiya (Part)	17
Total	32148

Source: Department of Census and Statistics

According to the Population pyramid of the Planning area, 29.4% of the total population belongs to the age category of 31-60 which is a greater potential for planning area. (Population Pyramid is attached to Annexure 6).

Average residential population density within the planning boundary is equal to 18 persons per Ha. Grama Niladhari division vice population density presents in Table 2. 5.

Table 2. 5: Population Density Distribution within Planning area by Grama Niladhari Divisions

GND	Population in	Area in Ha.	Population
	2022		Density per
			Ha.
Bawwagama	7607	488	15
Karahandungala	2236	59	37
Kendopitiya	3335	348	9
Nawalapitiya East	1756	56	31
Nawalapitiya North	2734	34	80
Nawalapitiya South	3225	105	30
Nawalapitiya West	3772	45	83
Pallegama	1737	172	10
Warakawa	2327	183	12
Weligampola	1314	112	11
Weligodawatta	2088	164	12
Imbulpitiya (Part)	17	2.5	6
Total	32148	1768.5	18

Source: Department of Census and Statistics

Sinhala, Tamil and Muslim population percentage within Planning boundary area are 34%, 30% and 33%, respectively. Comparatively, Nawalapitiya urban development area can be considered as multi ethnic region and cultural, religious events held during the year.

Based on the natural growth rate of the population within the planning area, there will be 37,754 total population in 2032 and it is an increment of 5,606 number population which is during the planning period.

### **Housing**

The total number of housing units within the planning area is equal to 7,972 in the year 2022 and the household size is equal to 4.3. Table 2.6 represents the existing and forecasted housing quantity within the planning area.

Table 2. 6: Existing and Forecasted Housing Quantity within the Planning Area

GND Name	No of housing existing units (2022)	No of housing units in 2032 (forecast)
Aluthgama	436	546
Bawwagama	1928	2427
Karahandungala	502	662
Kendopitiya	938	1425
Nawalapitiya East	511	511
Nawalapitiya North	709	865
Nawalapitiya South	861	977
Nawalapitiya West	1035	1129
Pallegama	492	559
Warakawa	618	690
Weligampola	343	395
Weligodawatta	566	664
Imbulpitiya(Part)	3	3
Total	8,942	10,629

Source: 2032 housing requirement forecast using the data provided by Department of Census and Statistics, 2022.

Average housing density within the Nawalapitiya Planning area can be calculated as 04 units per hectare. The main cause for relatively low density is Tea estate type land use category. Even though the whole planning area shows relatively low value, Nawalapitiya urban council area represents 40 numbers of housing units per hectare considering exclusively residential type land use.

When considering the housing information, 8942 number of housing units are there in the planning area. Among them 2,863 belongs to Nawalapitiya UC area and occupied by 2911 number of families and it indicates there is a requirement of housing units in future by means at the present housing deficit recorded as around 48. Bawwagama GN has the highest number of housing units in planning area. Highest number of housing density can be observed in Nawalapitiya north GN division which is 17 units per hectare.

A Comfortable home for each family is promised according to his Excellency presidents' manifesto of "Vistas of Prosperity and Splendor", with this development plan will be proposed the strategies to achieve that objective within the planning area.

Among 8,942number of housing units, 673 number of housing units are line/row houses and shanties which needed to be upgrade. Among those, Bawwagama and Uda Rambukpitiya GN divisions have 394 number of line/row houses meanwhile Bawwagama and Nawalapitiya west GN divisions have 25 number of shanty houses.

312 number of housing units are owned by the government and the people are living under lease or rent in those housing units. 757 housing units are privately owned and rented/ leased houses for people. There are 94 number of housing units which are constructed in encroached lands within the planning area.

#### **Health**

Nawalapitiya Base hospital is the main service center which attracts around 5,000 commuter population to the town center. This hospital acts as the prominent hospital within this region.

When it considers the population to bed ratio in planning area, it is 1:74 which accommodate beyond the Nawalapitiya town area catchment.

Table 2. 7: Health Status of Nawalapitiya Base Hospital

Health Stats	
Resident patients per month	3,462
Number of Wards	18
Number of beds	443
OPD patients per month	28,523
Number of deliveries in the year of 2018	2,981

Source: Nawalapitiya Base Hospital (2019)

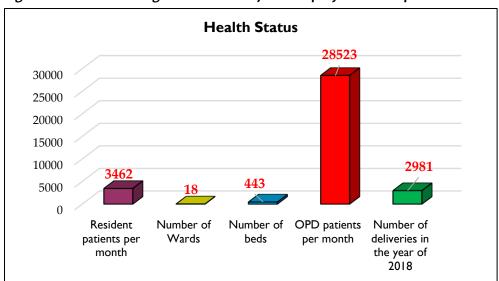


Figure 2.2: Chart Showing Health Status of Nawalapitiya Base Hospital

Source: Nawalapitiya Base Hospital (2019)

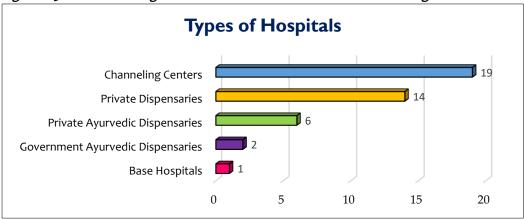
Except the Nawalapitiya base hospital, there are other health related services can be observed.

Table 2.8: Health Services Distribution within Planning Area

Health Service	Quantity
Government Ayurvedic Dispensaries	2
Private Ayurvedic Dispensaries	6
Private Dispensaries	14
Channeling Centers	19

Source: Field visits and Resource Profile, Pasbage Korale Divisional Secretariat

Figure 2.3: Chart Showing Health Services Distribution within Planning Area



Source: Field visits and Resource Profile, Pasbage Korale Divisional Secretariat

Infant mortality of Sri Lanka is 8 deaths per 1,000 live births, when it compares with the Nawalapitiya Planning area is 10 which is relatively higher value. There is District Hospital located in Nawalapitiya UC area which has 443 number of beds catering for the catchment exceeding Nawalapitiya UC area.

### **Education**

In the context of educational status, Figure 2.4 represents the educational qualifications of people within the planning boundary.

The literacy rate of Planning area equal to 94% when it compares to the literacy rate of Sri Lanka, it is 96.3%.

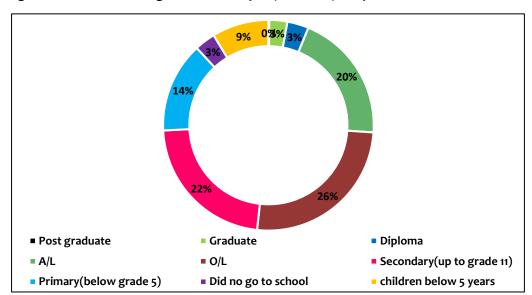


Figure 2.4: Chart Showing Educational Qualification of People

Source: Resource Profile, 2020, Pasbage Korale Divisional Secretariat

o8 number of schools including o1 national school, o4 Maha vidyala and o3 Primary Schools located within Nawalapitiya UC area to provide educational facilities for children.

### ❖ Infrastructure

### **Drinking Water**

When considering about the accessibility of drinking water, according to the NWSDB data, it is predicted that about 27% of the total population has the ability to obtain pipe borne water. Around 73% is not receiving water from NWSDB. Besides pipe borne water, people tend to use ground water, tube wells, public water pipes, and rivers for the necessity of water requirement. NWS&DB has planned new water supply scheme projects for Nawalapitiya Area.

- Galaboda Ella Water Supply Scheme Project is intended to cover 37% of the demand.
- Nawalapitiya Pallegama Water Supply Scheme Project is intended to cover 22% of the demand.

When it considers about the accessibility to drinking water, 1,066 number of housing units are obtaining water form a protected well within or outside the premises, among total of 7,227 number of housing units. 159 number of housing units obtain water from unprotected wells. 3,867 number of housing units are obtaining water from the tap lines (Public water line) which are located within or outside their premises. The special asseveration is within planning area 1,449 number of housing units are obtaining water from rural water projects.

### **Electricity**

95% of the housing units within the planning area have the access to the national grid for electricity. Amongst them Bawwagama GN division has the highest number of housing units which do not use electricity from the national grid when compared to others. Other than electricity, households are tended to use firewood, kerosene oil and gas. Bawwagama GN division is the utmost area to use all the other sources as the maximum housing units of the area are located in this GN division.

95% of housing units located within planning area have the electricity supply from the national grid. Meanwhile 379 number of housing units obtain the energy infrastructure by the kerosene and among them 120 of housing units are located in Bawwagama GND.

### **Solid Waste & Sewer**

Solid waste generation within the Nawalapitiya UC area is about 5.25 tons per day. Out of total generation, 3.5 tones stand decomposing waste. Remaining o.85 tones are non-decomposing waste with o.85 tones recyclable and o.9 tones non-recyclable waste. Solid waste recycling plant is located at Imbulpitiya which has a land extent of 5 Acres. Non- decomposing waste will be transported to recycling facilities.

The details of the waste generation are tabulated in Table 2.9.

Table 2.9: Waste Generation Details

Daily Collection	Decomposing waste	Non- decomposing waste (Recyclable)	Non- decomposing waste (Non- recyclable)	Dumping Site
5.25 tones	3.5 tones	o.85 tones	o.9 tones	Imbulpitiya

Source: Resource Profile, 2020, Pasbage Korale Divisional Secretariat

Figure 2.5: Solid Waste Management Plant at Imbulpitiya





Source: UDA, Central Province (site visit)

Solid waste generation quantity is 5.25 Metric tons per day and those waste recycle and dump at Imbulpitiya waste disposal and compost production plant site. Even the site has the capacity to recycle the sewer waste generate in the planning area and the waste treatment plant has the capacity to manage the waste even for next 13 years.

The sewerage treatment plant located at Imbulpitiya is capable of managing the sewerage within the Nawalapitiya UC area for the succeeding decade.

#### **Communication Facilities**

Fixed telephone, Internet facility, Fax and TV/radio facilities are observed under this category. Bawwagama GN division shows the highest amount of internet facility and TV/radio facility whiles the Nawalapitiya South and Warakawa demonstrations lowest in internet facility and TV/radio facilities respectively. Pallegama area has the maximum number of fax facility usages; however, fax facility is not used commonly within the area. According to the existing communication facilities, Fixed TP, Internet, Fax, TV/radio by consumers are 33.1%, 46.7%, 0.5% and 97.7% respectively.

### **Transportation**

According to existing travel pattern, percentages of using transportation modes by commuters by Buses, Three Wheelers, Trains, Vans, Motor cycles, Lorries, cars are 56.5%, 17.5%, 10.1%, 7.6%, 1.4%, 1.3% and 1.2% respectively (Table 2.10). The Nawalapitiya town mostly functions around 9 am to 10 pm. Around 55,000 commuter population daily visit to the town except special days such as Thai-Pongal. 82% out of total commuter population, visit to the city for the purpose of obtain the services like shopping, healthcare and administrative purposes (Pasbage Korale DSD, Nawalapitiya UC, Nawalapitiya Police station, Post office). 14.5% of the commuter population visit to the town for schooling purpose. The rest is for job purpose which means 2.9% out of overall commuter.

Table 2.10: Passenger Travel Mode

Transportation mode	Daily commuting Population			
	Number	Percentage		
Buses	31541	56.5		
Three Wheelers	9788	17.5		
Trains	5655	10.1		
Vans	4241	7.6		
by foot	2501	4.5		
Motor cycles	761	1.4		
Lorries	706	1.3		
Cars	657	1.2		
Total	55850 100			

Source: Resource Profile, 2020, Pasbage Korale Divisional Secretariat

# Economy

In economic perspective, total labor force in the planning area is equal to 19,203 from that population, 14,678 are employed and 4,524 are unemployed respectively 76.4% and 23.6% percentages from the total labor force. Employment categories of the Nawalapitiya Planning area can be observed as in the Table 2.11 and Figure 2.6.

The prominent economic activity of Nawalapitiya UC area is service sector and there are 1,137 number of registered shops within the Nawalapitiya UC area. According to records there are only 93 people engaged in agriculture sector within Nawalapitiya UC area and it is only 1% from the total labor force of Nawalapitiya UC area.

Table 2.11: Employment by Category

Employment Sector	Quantity	Percentage
Private	4428	30.2
Daily Wage/ Labour	2678	18.2
Estate	2203	15.0
Government	1806	12.3
Agricultural	1377	9.4
Self-Employment	1162	7.9
Foreign	794	5.4
Other	230	1.6
Total	14678	100.0

Source: Resource Profile, 2020, Pasbage Korale Divisional Secretariat

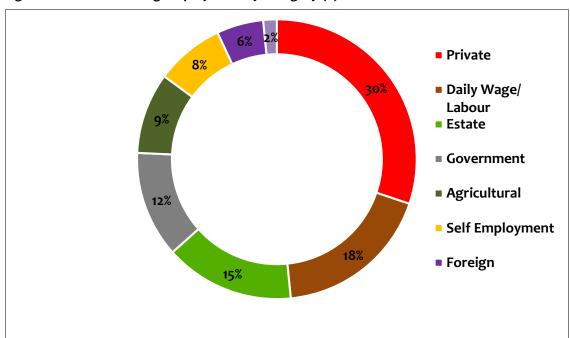


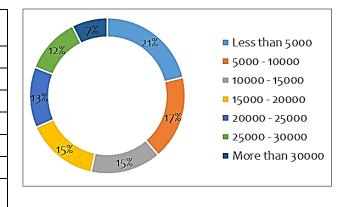
Figure 2.6: Chart Showing Employment by Category (%)

Source: Resource Profile, 2020, Pasbage Korale Divisional Secretariat

Table 2.12: Monthly Income Distribution Distribution (%)

Monthly No of Percentage **Families** Income (%) 1801 Less than 5000 21.2 5000 - 10000 1486 17.5 10000 - 15000 1249 14.7 1275 15000 - 20000 15.0 20000 - 25000 1072 12.6 25000 - 30000 986 11.6 More than 630 7.4 30,000 Total 8,498 100.0

Figure 2.7: Chart Showing Monthly Income



Source: Resource Profile, 2020, Pasbage Korale Divisional Secretariat

# **CHAPTER 03**

# **Need of the Development Plan**

# 3.1 Introduction

The purpose of preparing Nawalapitiya Urban Area Development Plan is to identify existing potentials to overcome the issues in planning area. Also, there is possibility to increase the economic status through the locational advantages of Nawalapitiya. Managing the present urbanizing trends and address the future scenarios to harness the opportunities and eliminate the threats is the prominent objective of this development plan.

A stakeholders meeting has been organized in obtaining views of stakeholders regarding existing potentials and problems of the town and identified problems & potentials further discussed at that meeting. Raised problems and potentials were prioritized using the method of Delphi Technique (Annexure 07). Context, magnitude, and significance of such identified issues and potentials had been further studied. Alleviating those problems by using the potentials of the area is the main mechanism used by this plan. At the time of preparing this plan was a harsh time for the Sri Lankan economy due to Covid 19 pandemic and many other reasons.

Nawalapitiya is a town located within a geographically significant context. As a result of that constructions and developments need to be more sensitive to the landscape of the area. As the regulating body of urbanization related issues, the Urban Development Authority has a vast responsibility to address the need related to that. As a town which provides services to catchment of 310,000 of population, the town needs to be facilitated with convenience and efficient for the users.

During the time period of preparing this Nawalapitiya Urban Area development plan, Sri Lanka is passing a critical economic period which can be led to serious economic loss if the situation is not well handled. Hence this development plan lays the foundation for creating a stable and self-sustained economy within the Nawalapitiya planning area and for its catchment.

# 3.2 Identified Issues.

3.2.1 Sprawling of uncontrolled developments towards hazardous areas and mountainous areas (Sensitive areas).

#### Context

Nawalapitiya urban area is located in-between 571.5 m contour interval line and 793.3 m contour interval line which is 221.8 m elevation gap. Allowing development for such areas should be critically evaluated before implementation. Since the prevailing regulations does not address the unique geographical setting of the area, it is mandatory to delineate development regulations to the planning area.

### **Significant**

National Physical Plan 2050 of Sri Lanka has been identified Nawalapitiya area as a highly environmental sensitive area and demarcated the central hill region as "Central Environment Sensitive" area. Since the National Physical Plan identified that way, the Urban Development Authority has the responsibility to guide the physical developments within urban areas of the said Central Environment Sensitive area.

### **Magnitude**

35% percentage of the land within the planning area is dispersed above the contour level of 645 meter. Hence these development activities are vulnerable to prone disasters basically due to slope of the area.

# 3.2.2 Lack of User Convenience.

### Context

The vision of the Nawalapitiya Urban Area development plan is to thrive the tourism attraction in the Nawalapitiya area. Hence the Nawalapitiya urban area will be the

services providing center for those tourists and also local commuters who visit to the town. Convenient urban space availability for those who visit to Nawalapitiya area will be vital to spread the good name of Nawalapitiya.

# **Significant**

When it considers the significance of the issue of user convenience, the importance of addressing the user convenience issue is attached to the proposed vision of the Nawalapitiya urban area development plan.

# Magnitude

Figure 3.1: Existing Condition of Pedestrian Paths









Source: UDA, Central Province (site visit)

By the field visits to the Nawalapitiya planning area, it was identified that the existing situation of pedestrian paths are in dilapidated condition and the immediate rehabilitation is required.

### 3.2.3 Not being optimally used of the potentials of the planning area.

### **Context**

An example of illustrating existing potentials not being optimally used within the planning area is less tourism visit to the tourism hotspots located within the planning area and the surrounding.

### **Significant**

Presently Sri Lanka is facing a severe economic crisis due to the foreign currency shortage which pumps to the Sri Lankan economy. Due to Covid-19 situation, the economy of the country worsened and is yet to be recovered. One of the main sources to generate foreign currency to the country is Tourism industry, which was affected very hard due to the Covid-19 situation.

# **Magnitude**

The present per capita income of the people who are living in the Planning area is lower when compared with the Kandy district per capita income. Through Nawalapitiya urban area development plan, it is expected to maximize the per capita income of the people within the Nawalapitiya planning area.

Table 3.1: Issues Prioritizing Index

			Social behaviour (City users)	Natural & Build Enviornment	Town Economy	Sub weightage	Final
No.	Main Issue	Sub Issues	1.1	1.1	1.1		
		1.1 Absance of proper parking areas	5	2	2	9	
		1.2 Absance of standard pavements	5	4	4	13	
		1.3 Absance pf Street lights	5	4	3	12	
1	Lack of user conveinience	1.4 Absance of landscaped areas	4	5	4	13	82
		1.5 Absance of adequate public facilities	5	3	4	12	
		1.6 Frequent Flooding	5	5	4	14	
		1.7 Lack of Infrastructure for tourism developments	2	2	5	9	
2	Sprawlling of uncontrolled developments towards hazardus areas and mountanance areas	2.1 Sprawlling of developments towards hilly araes 2.2 Disaster Vulnarability	2	5	1 4	8 14	22
3	Not being optimally use of the	3.1 Underutilized government lands 3.2 Nature based tourism sites	2	3	5	10 10	20
	potentials of the planning area	3.2 Nature based tourism sites	42	39	42.1	10	20

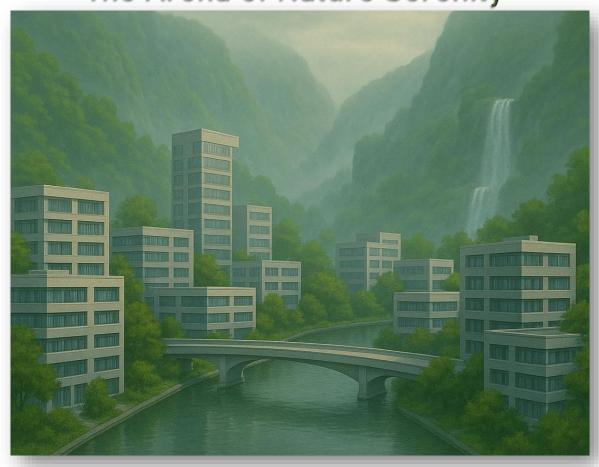
Source: UDA, Central Province (site visit)

# **CHAPTER 04**

# Framework of the Development Plan

4.1 Vision

"The Arena of Nature Serenity"



"The Arena of Natural Tranquility with Misty
Hills, Lush Green Spectrum and
Rhythmic Waterfalls"

# 4.2 Vision Statement

Lush green mountains, blue streams and mountain peaks are the natural assets that can observe in Nawalapitiya surrounding area. Basis of the vision of Nawalapitiya urban area development plan can be considered as geographical and natural setting which is unique to this region. Attractive natural environment which can be converted to the monetary value through the tourism is the hidden gem behind the Arena of Nature Serenity.

Nawalapitiya to be the most secured destination in central hills which offers the sceneries of diverse collection of virgin natural landscapes while providing services to its periphery with adequate infrastructure facilities. Further the vision expresses creation of smooth and sensed urban space for the tourists' who visits destinations Nawalapitiya surrounding area.

Catchment with 310,000 of population can be identified within planning region, due to 3<sup>rd</sup> level town hierarchy of Central province and 2<sup>nd</sup> level town according to the town hierarchy of Kandy district. As a result of this, approximately 52,000 number of daily commuters visit Nawalapitiya urban area to obtain services.

The urban area is located in the middle of lush green and blue water environment also eye pleasing and calmness of the surrounding environment makes the urban space more vibrant.

# 4.3 Goals

- Goal 01 The most nature serine destination in the Northern Corridor towards Sri Pada by 2032.
- Goal 02 -The best infrastructure facilitated service town in boarder of southern boundary of Kandy district to cater its catchment by 2032.
- **Goal 03** A sustainable economy within a compacted space in central hills by 2032.

# 4.4 Objectives

G1: The most nature serine destination in the Northern Corridor towards Sri Pada by 2032.

# **Objectives:**

- 1. To introduce 12 diversified tourism sites including serine waterfalls and its experiences hidden in virgin ecosystems.
- 2. To provide site specific complimentary infrastructure by 2025 for identified 03 tourist destinations.
- 3. To open up water front of Mahaweli River for water front developments by 2032.
- 4. To 100% manage developments which are sprawling towards the environmental sensitive areas and maintain the urban form by 2032.

# G2: The best infrastructure facilitated service town in boarder of southern boundary of Kandy district to cater its catchment.

### **Objectives:**

- 1. To ensure infrastructure facilities in terms of Water, Electricity and Waste water for the planning area to cater predicted residential and commuter population (Approx. 120,000).
- 2. To facilitate for new 992 number of housing units to ensure 100% balance housing requirement for the planning area by 2033.
- 3. To ensure proper solid waste and waste water system for 36,500 residential and 56,000 commuter population by 2032.
- 4. To ensure walkability with open spaces network in identified areas including Nawalapitiya town center.
- 5. To upgrade 6% existing railway usage up to 10% as a major public transport mode to achieve sustainable, inter transport activities.

# G3: A sustainable economy within a compacted space in central hills by 2032.

# **Objectives:**

- 1. To open up existing 10 ha of underutilized lands in center of Nawalapitiya town for mixed developments by 2033.
- 2.Generation of \$ 225,000 revenue per month through tourism sector.
- 3. Generate 4,500 number of job opportunities in tourism sector to eliminate the unemployment rate by 100%.

# **CHAPTER 05**

# **SWOT Analysis**

# 5.1 Summarized SWOT Analysis

G1: The most nature serine destination in the Northern Corridor towards Sri Pada.

- 1. Nawalapitiya town located in the route of Sri Pada, 36km distance from Kandy and 52km distance to Sri Pada.
- 2. 4.3 km of the overall boundary of Nawalapitiya UC is bounded by Mahaweli river.
- 3. Western boundary configured with mountainous topography.
- 4. Existing different green spectrum covering 1/3 rd area due to different vegetation types such as," Forest, Tea, Grasslands/ Paddy... etc."
- 5. Existing salubrious and delightful climate throughout the year.

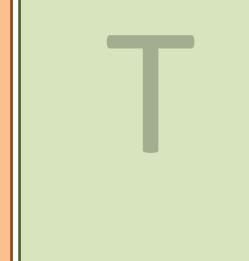
- 1. Unavailability of complimentary facilities and infrastructure such as, Star class tourist accommodation facilities within town limits.
- 2. Sprawling of developments towards mountainous and disaster vulnerable area without any control and violating regulations.
- 3. 750 m area Mahaweli river has been act as a back yard for the many developments.
- 4. Development of building facades and streets incompatible to the existing natural setting of the town.
- 1. Unavailability of complimentary facilities and infrastructure such as, Star class tourist accommodation facilities within town limits.
- Sprawling of developments towards mountainous and disaster vulnerable area without any control and violating regulations.
- 3. 750 m area Mahaweli river has been act as a back yard for the many developments.
- 4. Development of building facades and streets incompatible to the existing natural setting of the town.

- 1. Surrounded emerging town centers such as, Hatton, Ginigathhena town centers with complimentary activities.
- 2. Surrounded Star class tourist accommodation facilities.
- 3. Pandemics such as Covid-19 could impact to the travel behavior

G2: The best infrastructure facilitated service town in boarder of southern boundary of Kandy district to cater its catchment.

- Existing Solid Waste and Sewer treatment plant has capacity to manage the solid waste during the planning period.
- Jayatilaka indoor stadium is one of the major indoor stadium and national play ground in Sri Lanka therefore it attracts more commuter people even from far distances.
- 3. Nawalapitiya base hospital and 05 dominant schools attract 7,500 commuter population to the town daily.
- Number of projects which are implemented by the UDA identified through Nawalapitiya UC development plan 2008-2025.
- 5. Location of existing Rail network and bus stand at a shorter distance which would be able to use for transport oriented development.
- 6. Existing Land use pattern which has potential to distribute infrastructure facilities without
- Nawalapitiya town has direct regional linkages with Kandy, N'Eliya, Gampola, Hatton, Kotmale and Ginigathhena towns it causes to attract more commuter population.
- 2. Proposed Nawalapitiya water supply scheme
- 3. 3rd order town center in Central province and 2nd order in Kandy District.
- 4. Government manifesto emphasis to upgrade the tourism services centers with vital infrastructure facilities.

 Improper drainage system within the Nawalapitiya town limit which course for flash floods in every year when heavy rainfalls.



# G3: A sustainable economy within a compacted space in central hills.

- 1. 10 ha of underutilized railway lands which would be use for proper development to economic generation.
- 2. 51,000 No of commuter and residential population per day to the Nawalapitiya town center.
- Development projects carried out by the different government institutes including UDA.
- Low percentage with academic qualification from the total residential population of the planning area.
- 2. Relatively low income level and the high unemployment rate from the total residential population of the planning area.
- 1. Located within the Central Environment Sensitive area defined by the gazetted National Physical Structure plan 2050.



# 5.2 Detailed SWOT Analysis

**SWOT Analysis of Goal 01** - The most nature serine destination in the Northern Corridor towards Sri Pada by 2032.

# Strengths

1. Nawalapitiya town located in the route of Sri Pada, 36km distance from Kandy and 52km distance to Sri Pada.

Nawalapitiya town center is located in the Northern direction relative to the Sri Pada holly mountain. During the worshiping season of Sri Pada, around 3 Million of the pilgrim population visits the Sri Pada holy mountain, among them approximately 750,000 which is 25% travel through Nawalapitiya town center. This factor creates a potential to attract tourists to Nawalapitiya town center who travel to Sri Pada Holly Mountain.

# 2. 4.3 km of the overall boundary of Nawalapitiya UC is bounded by Mahaweli River.

Western direction and Southern direction of Nawalapitiya town area is bounded by the Mahaweli River which is the longest river in Sri Lanka.

### 3. Western boundary configured with mountainous topography.

Dolosbage mountain range is located western direction relative to the Nawalapitiya town center. Since this mountain range has several scenic viewpoints, it has the potential to attract nature trail tourists.

# 4. Existing different green spectrum covering 1/3<sup>rd</sup> area due to different vegetation types such as, "Forest, Tea, Grasslands/ Paddy etc."

According to the land uses within planning area, it represents 754 ha of land which is 37.8% belongs to green cover lands. Forest, Tea, Grass Lands and Paddy are main land use categories within the planning area and it is approximately  $\frac{1}{3}$  of land cover within the planning area.

### 5. Existing salubrious and delightful climate throughout the year.

The Planning area is belonging to the "Wet zone" among the climatic zones in Sri Lanka. 3,000 mm - 5,000 mm annual average rainfall is expected from South West monsoon and the average temperature 17 °C -29 °C degrees. These all factors represent the salubrious climatic condition of the Planning area.

### Weaknesses

 Unavailability of complimentary facilities and infrastructure such as, Star class tourist accommodation facilities within town limits.

When the tourists visit to see places, they need proper accommodation facilities to stay and spend time. Since the planning area comprises only two star-class hotels and less than 25 hotel rooms to stay in, the tourists are unwilling to stay and spend their leisure time in such places.

2. Sprawling of developments towards mountainous and disaster vulnerable area without any control and violating regulations.

As represented in the contour map and slope map of the planning area, 25% percentage of lands belongs to the above 45-degree slope category and 45% percentage of lands belongs to in-between 30-45-degree slope category.

3. 750 m area Mahaweli River has been acting as a back yard for the many developments.

Since the Nawalapitiya municipal council area bounded by the Mahaweli River in Eastern direction, there is vulnerability to dump the solid waste and sewer in to the river. The strip of 750-meter distance is already densely constructed and the Mahaweli River is not visible to the town area.

SLOPY LANDS MORE THAN 45 DEGREE 0 0.475 0.95 Klömeters

Figure 5.1: Sloppy Lands Distribution (over 45 degree)

Source: UDA, Central Province

# 4. Development of building facades and streets incompatible to the existing natural setting of the town.

Existing building façade is typical signboard filled type façade and it need to be developed as compatible with the natural setting of the area.

# Opportunities

 Better A and B grade road network causes to prefer this town route for drive to destination.

Road network is the key infrastructure to establish and develop a town center. Table 5.2 represents the major road names which are connecting the adjacent town centers.

Table 5.1: Distance to Nearby Town Centers within Proximity Area

	Town	Accessible Road Name	Distance
1	Kandy	AB13	36km
2	Gampola	AB13	17km
3	Ginigathhena	B319	14km
4	Hatton	A7	25km
5	Thalawakele	B317	45km
6	Aranayake	B278	28km
7	Kotmale	B506	15km

2. Major rail station is located in Nawalapitiya and 75,000 no of Sri Pada pilgrims travel through this railway line for the season.

Distance from Nawalapitiya to Hatton through railway is only 33km, Hatton is the final destination of those who travel to Sri Pada by train. Annually approximately 750,000 pilgrims travel through Nawalapitiya to Sri Pada, among them 10% which is about 75,000 pilgrims travel by train. This can be considered potential because travelers can get off the train and visit the identified travel destinations surrounding Nawalapitiya.

3. Surrounded by 07 serene waterfalls within 10km radius from the town center.

Hidden waterfalls located close proximity to the Planning area is having a huge gravity to attract many tourists to the Planning area. Within a 10-kilo meter radius of the town area, there are 07 spectacular waterfalls located with scenic natural landscapes.

➤ Kadiyanlena falls

> Sudugala falls

➤ Galaboda falls

> Asupini Ella falls

- ➤ Hangaran Oya falls
- Rambukpitiya Ella falls

Figure 5.2 represents the locations of picturesque waterfalls, and the routes to those waterfalls.

Dumbuluw iwi

Figure 5.2: Waterfalls within Proximity of Nawalapitiya Planning Area

Kadiyanlena falls Galabodafalls Sudugala Falls Hangaran Oya falls Patted as Rambukpitiya Falls Kaluwala Ellafalls Kabaragala Trail Raassagala Trail Little Danigala 10 km Craighead View Point Tea estates Mahaweli maha seya Kothmale reservoir

Source: Google Earth Pro Map and Field Observation

### 4. Surrounded green mountains create sceneries and vistas.

Not only the picturesque waterfalls but also scenic mountainous geography adds significance value to the Planning area. Tourists, who interest on nature, are very much interested on these natural landscapes. Nature trails are best way to satisfy those tourists. There are attractive nature trails which begin from the close proximity to the Nawalapitiya town center.

- Kabaragala Trail
- Raassagala Trail

- Little Danigala
- Craighead View Point
- 5. The existing railway network is built through the very scenic route from Kandy to Ella where every tourist can enjoy the journey.

Among the global tourists, it is considered the Kandy to Ella railway journey through Nawalapitiya Railway is one of the most beautiful train trips in the world. There are many positive reviews among several websites which are providing tourism related information. This can be utilized as an opportunity to expose the tourism destinations located within Nawalapitiya area for the local and international tourists.

### Threats

1. Surrounded emerging town centers such as, Hatton, Ginigathhena town centers with complimentary activities.

Hatton is one of the towns with major railway station which is located in the path to Sri Pada. As well as Ginigathhena town is a major town located 14 km away from the Nawalapitiya town center. Gampola town is the closest higher order town to the Nawalapitiya town. These town centers also cater for larger catchment despite the scale of the town. Within the Central province, Hatton and Gampola town centers can be considered as 3rd order towns while Ginigathhena is in 4<sup>th</sup> (Annexure 05).

#### 2. Surrounded Star class tourist accommodation facilities.

Within the distance of 10km to 20km radius distance from the Nawalapitiya town center, there are around 30 number of star class tourist hotels which could make attractiveness to other town centers such as Hatton, Kotmale and Ginigathhena. Only 02-star class tourist hotels available within 10 km radius from the Nawalapitiya town center (Figure 5.3).



Figure 5. 3: Locations of Tourist Hotels within Proximity of Nawalapitiya

Source: Google Map

# 3. Pandemics such as Covid-19 could impact to the travel behavior.

During the year of 2020 and 2021 whole world was in the feared with the Covid-19 pandemic which was spread through the breathing air. This sort of situations can be disastrous to the industries like tourism. During this pandemic period, countries in whole world were locked down and restricted the arrivals of tourists. The Figure 5.4 represents the decline of tourist arrival to the Sri Lanka. Eventually it took almost 02 years to solve the travel bans around the world for tourists.

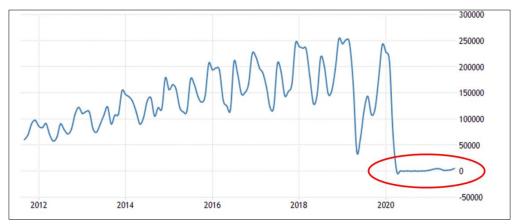


Figure 5.4: Chart Showing Tourist Arrival by Year – National Level

Source: SLTDA. 2022

**SWOT Analysis of Goal 02** - The best infrastructure facilitated service town in boarder of southern boundary of Kandy district to cater its catchment.

# Strengths

1. Existing Solid Waste and Sewer treatment plant has capacity to manage the solid waste during the planning period.

Solid waste generation quantity is 5.25 Metric Tons per day and those waste recycle and dump at Imbulpitiya waste disposal and compost production plant site. Even the site has the capacity to recycle the sewer waste generate in the planning area and the waste treatment plant has the capacity to manage the waste even for next 13 years.

2. Jayathilake indoor stadium is one of the major indoor stadium and national play ground in Sri Lanka therefore it attracts more commuter people even from far distances.

Sri Lanka has only limited infrastructure for athletics, swimming and indoor games. When it comes to all the sports facilities at one place, there is no more other than the Sugathadasa stadium and this Jayathilake stadium. Specialty of this Jayathilake indoor stadium is it has the infrastructure facilities for all kind of games from athletics, swimming, boxing, badminton, Volleyball, Basketball, Netball to gymnasium. Most of

the national level sports events held at this venue which is economically supportive to the Nawalapitiya town center.

### 3. Nawalapitiya base hospital and 05 dominant schools attract 7,500 commuter populations to the town daily.

In terms of social infrastructure category, every higher order town has or need better health facilities for the town users and dwellers. Nawalapitiya base hospital is the best health facility within this region. At the same time not only the health, but also education infrastructure is another vital social infrastructure which every higher order city is facilitating. o5 major schools of this region are located within the Nawalapitiya town center which is attracting the commuters daily to the town center. Altogether health and educational social infrastructure facilities cater for 7,500 daily commuters within Nawalapitiya town center.

Table 5.2: Health Statistics within Nawalapitiya Urban Area

Medical Facility	Amount	No of Wards		No of Ambulance	Theaters	Laboratories
Base Hospital	1	18	443	4	3	2
Estate Hospitals	1	2	10			
Ayurveda Hospitals	2					
Private Hospitals	1					
Private Dispensaries	12					

Health Stats of Nawalapitiya Hospital			
Resident patients per month	3462		
Number of Wards	18		
Number of beds	443		
OPD patients per month	28523		
Number of deliveries in the year of 2018	2981		

Source: MOH, Nawalapitiya, 2022

### 4. Number of projects which are implemented by the UDA identified through Nawalapitiya UC development plan 2008-2025.

"Nawalapitiya Urban Council area development plan 2008-2025" was the 1st proper urban development plan, which is prepared by the Urban Development Authority. The plan was prepared in the year of 2008. Key projects and development regulations were derived through that plan. Even though that development plan was not gazetted as legal document, several key development projects were implemented within the Nawalapitiya urban council area. New super market complex, Courts complex, Police station, Hospital upgrading, Jayathilake sports complex development, Facade improvement, new urban council building construction and Baily road development are key projects which are implemented through that development plan (Annexure 02).

### 5. Location of existing Rail network and bus stand at a shorter distance which would be able to use for transport-oriented development.

In geographic context of Nawalapitiya town center, it has very limited land availability for the developments. In that sense it is infeasible to widen the roads due to possible future heavy demand of private vehicles. The only feasible solution is providing safe, convenient, fast, reliable and affordable public transportation system. As a railway town, Nawalapitiya town has many things to offer this kind of public transport-oriented intervention. The main strength and benefit are railway station and bus stand each other located at proximity walkable distance to initiate a multi model transit terminal. The distance between these two elements is about 20 meters.

### 6. Existing Land use pattern which has potential to distribute infrastructure facilities without any disturbances.

Existing urban formation of Nawalapitiya urban development area can be identified as a monocentric urban form. This form has several positive parameters in terms of providing physical infrastructure. Since the town has a single center, visitors and travelers not get confused while they are traveling. When providing sewer system and drainage network, this urban formation creates benefits during the implementation of such projects.

#### Weaknesses

1. Improper drainage system within the Nawalapitiya town limit which causes for flash floods in every year when heavy rainfalls.

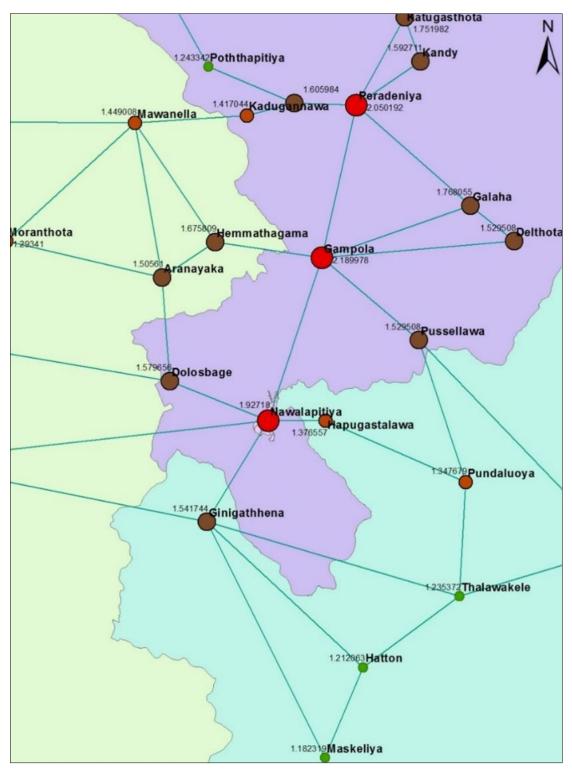
Existing drainage network was built many years ago by the British. Due to the decay and result of various human misbehaviors present situation of said drainage network is dilapidated and immediate actions needed to be taken.

#### Opportunities

 Nawalapitiya town has direct regional linkages with Kandy, N'Eliya, Gampola, Hatton, Kotmale and Ginigathhena towns it causes to attract more commuter population.

Connectivity is act as a catalyst to attract higher number of commuter population to any particular town. According to the connectivity analysis, Nawalapitiya has relatively higher connectivity level according to the connectivity analysis (Figure 5.5). When there is higher connectivity, potential for development also higher.

Figure 5.5: Level of Connectivity



Source: UDA, Central Province

#### 2. Proposed Nawalapitiya water supply scheme

Drinking water supply scheme proposed by National Water Supply and Drainage Board.

#### 3. 3rd order town center in Central province and 2nd order in Kandy District.

In order to get the interest of the various institutions and other agencies for the development proposals, a town should be a relatively higher order one. In that sense, Nawalapitiya can be considered as a 3rd order town in according to the Central Province town hierarchy and 2nd order town in according to the Kandy district town hierarchy. Even the interest of preparation of Nawalapitiya urban area development plan from Urban Development Authority side also due to this higher order town hierarchy of Nawalapitiya.

# **SWOT Analysis of Goal 03** - A sustainable economy within a compacted space in central hills.

#### Strengths

1. 10 ha of underutilized railway lands which would be use for proper development to economic generation.

Land is the most valued asset for a particular planning area, in the context of Nawalapitiya planning area the core is the geographic context is high terrain and sloppy lands. Therefor the value of flat land is reasonably high and scares. Most of the railway towns in Sri Lanka has a common issue which is large amount of lands belongs to the railway department and it is very hard to take release for the developments. As a railway town Nawalapitiya also has the same issue. These lands can be converted in to highly return on investments which helpful to uplift the economic status of the planning area.

2. 51,000 No of commuter and residential population per day to the Nawalapitiya town center.

Commuters are one of the most valuable opportunities for a town. Commuters always visit for the town to buy services or goods. This is where considered as main part of the economic engine of the city or town.

3. Development projects carried out by the different government institutes including UDA.

Various development projects are already being implemented within the Nawalapitiya UC area by various government agencies including the drainage improvement project.

#### Weaknesses

1. Located within the Central Environment Sensitive area defined by the gazetted National Physical Structure plan 2050.

Planning area is located within the Central Environment Sensitive area according to the National Physical Structure plan (Annexure no o1). This region of Environment Sensitive is defined for the conserve the environment systems of the hill country and to protection of origins and water catchments of water bodies of Sri Lanka. Hence well planned and closely monitored physical developments should be done within this region while not facilitation the mega infrastructure projects.

#### Opportunities

1. Low percentage with academic qualification from the total residential population of the planning area.

According to the Figure 5.6, half of the population within planning area have only educated up to Ordinary Level or lesser than that. This will impact to the improvement of tourism sector because educated labor force is a positive catalyst to leverage the tourism industry.

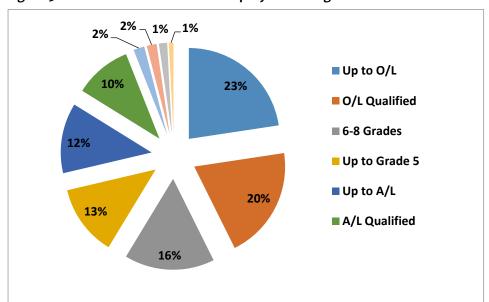


Figure 5.6: Education Levels in Nawalapitiya Planning Area

Source: Resource Profile 2022

## 2. Relatively low-income level and the high unemployment rate from the total residential population of the planning area.

Since the income level is lower when it compares with the other regions of the Kandy, willingness for investments by the residents will be low in the tourism sector. This will affect negatively for the upgrade of economy within the planning area.

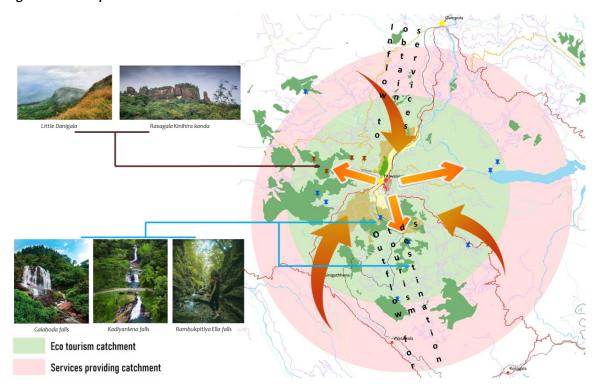
# **PART II**

#### **CHAPTER 06**

### The Plan

#### 6.1 Concept Plan

Figure 6.1: Conceptual Plan



Since the Nawalapitiya area consists of highly uneven and sloppy terrain, it needs to address the urban form to minimize the vulnerabilities to natural and man-made hazards. The concept of the Nawalapitiya Urban area development plan has addressed this scenario through the zone factors.

Formulated Urban form of this development plan derives through the 03 predefined analyses which are,

- 1. Livability analysis
- 2. Sensitivity analysis
- 3. Potential analysis

Development densities of the planning area have been derived based on the result obtained through the above analysis. Further Planning and Development regulations will be imposed on this region.

Concentrated development is suitable for the Nawalapitiya planning area mainly due to environmental factors. This development scenario is endorsed by the results of the analysis. Optimum utilization of the suitable lands for developments while conserving the natural and environmental values is expected within the planning area through this planning concept.

The vision, Goals, and Objectives of the Nawalapitiya Urban Development area plan are mainly focused on grabbing the tourism-related potential to boost the economy of the planning area. Hence exploring the untapped tourism attractive sites has been considered the main priority of this development plan. In order to utilize the monetary value out of the tourism sector, it is compulsory to provide the necessary facilities to the Nawalapitiya urban area. The Center of the town and eco catchment has planned to provide necessary services and infrastructure for the tourists who needed. The region where waterfalls, mountain peaks, and nature trails are located is identified as an Eco-tourism catchment in this concept plan. Promotion and exposure to those tourist destinations have been done by this development plan.

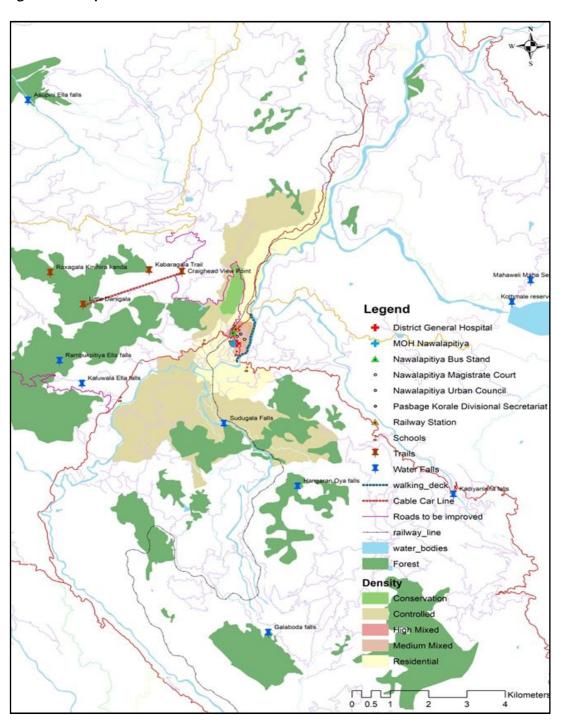
The outer area, where people live and obtain services from Nawalapitiya town is considered as services providing catchment through this development plan. Basic social infrastructure such as base hospital, courts complex, and other government institutes are located in Nawalapitiya town center which are providing services to the periphery. The creation of a town center where people can obtain services conveniently and efficiently is one of the main goals of this development plan and the concept plan also illustrates that scenario. Town center based special zone is designated for develop according to the detail guidelines to create attract town center for the dwellers and commuters. Apart from the center of the town, periphery will be developed as residential activity-based area according to the concept plan.

Nawalapitiya town center will be developed as commercial center to provide services for its periphery which included 310,000 of population. Highly dense physical

development has been projected for that area. As well along the Nawalapitiya – Gampola road and Nawalapitiya – Kothmale road has been projected as relatively high dense physical development but it will be lower than the town center area.

#### 6.2 Proposed Land use plan

Figure 6.2: Proposed Land-use Plan



The vision of the Nawalapitiya urban area development plan is to expose the serene nature to the world and attract more tourists to this region and boost the economy through it. Identified strategic projects and building regulations are represented in spatially through the proposed land use plan. The concept of the Nawalapitiya Urban development area has been illustrated in real ground through the proposed land use plan.

#### Proposed Urban Form along section o1 (A-B)

Anticipated development over the planning area has mainly been categorized into 03 densities. Relatively higher density, relatively medium density, and relatively lower density are the 03 types of densities that are delineated through this development plan. The area from the northern planning boundary, up to Nawalapitiya town center has been identified as a higher density area for physical development while the uses are oriented basically towards commercial and mixed. When the cross-section is considered from the Waligodawatta area to the Kendopitiya area, the spatial pattern changes as presented in Figure 6.3. Waligodawatta area has been identified as conservation based lower density physical development mainly due to geographical factors; hence the anticipated level of development is the lowest within the planning area. And then shows the town center area as shown in the figure no 10 which represents the zone with highest zone factor. Then the figure represents the relatively higher dense mixed residential zone which has prominently suburban characteristics. This zone carries the residential based developments and ancillary services for residential activities. Then again environmentally conservation zone with lower density physical development. It is permissible to build facilities for the tourists, within these zones as mentioned in the permissible uses in Chaptor 07.

A-B

Figure 6.3: Cross Section of Proposed Urban form Along Section A-B

#### Proposed Urban Form along section 02 (C-D)

From the point A to B along the cross section, the built density will be gradually decreased along the cross section. Nawalapitiya East, Nawalapitiya North, and Nawalapitiya West GN divisions are the commercial oriented high built up dense area as per the concept plan while Karahadungala and Waligampola are identified as lower density develops area identified by the concept plan. Residential oriented mixed-use type developments will be allowed in the said area. Zone factors of the area are delineated as per the anticipated developments.

This development plan has proposed to develop the lands along the Mahaweli River as to provide accommodation facilities for the local and foreign tourists.

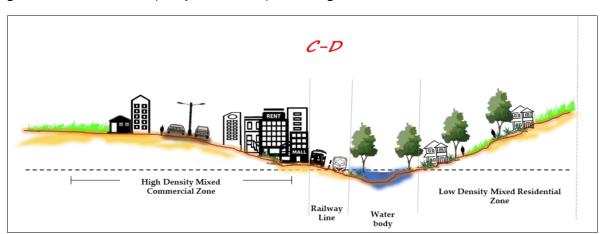


Figure 6.4: Cross Section of Proposed Urban form Along Section C-D

#### 6.3 Social and Physical Infrastructure Development Strategy

#### 6.3.1 Social Infrastructure Development Strategic Plan

Health services, Educational services, and residential facilities have been discussed under the Social Infrastructure development strategic plan. Expected catchment to be served, expected facilities to be served in each sector is discussed within this chapter.

#### 6.3.1.1 Health Service Plan

As identified by this development plan, Nawalapitiya base hospital will act as the dominant health facility in the planning area. According to the data provided by the hospital, it has 443 beds and 14 wards to medicate the patients. Monthly approximately around 3,500 resident patients get treatments by the hospital. As identified by this development plan, the catchment which includes 278,000 residential population obtain the services provided by this hospital, as well the amount of residential population will be increased up to 310,000 by 2032 as expected by this development plan. Since the Kandy Municipal council area development plan does not allow further expanding the health facilities of Kandy General Hospital, it is vital to allocate required health facilities within hospitals located periphery. Hence it is encouraged to allocated necessary health facilities to the Nawalapitiya base hospital with human and equipment resources.

Designation Control of Control of

Figure 6.5: Catchment for the Nawalapitiya Base Hospital

Further with the tourism focused development of the planning are, it is required to have the necessary health facilities in accordance with the international standards. As identified by this development plan the hospital needs the following facilities to cater the service catchment in standard manner.

- 1. Establishment of vehicle parking facility at hospital premises.
- 2. Establishment of Tourist caring special unit.
- 3. Number of beds to be increased by 500 units with proposed new building to cater the catchment and to reduce the congestion of Kandy general hospital.

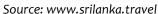
According to novel global trends, it is proposed to adapt the existing healthcare system converting in to the SMART healthcare system by the 2032. The purpose of this system is to introduce user friendly healthcare system with efficient and convenient for the dwellers, commuters and travelers. In initial stage, this facility can be easily adapted to outdoor patient's division and clinic treatment facility within the hospital.

High-density mixed commercial zone and high-density mixed residential zones are the areas that can invest in private sector hospital projects.

Sri Lanka has its ancient medication system (Ayurveda) with using indigenous inputs and techniques. Foreign tourists are interest on such healing mechanisms and there is special tourism culture relate to that. Uses related to this category are allowable in all zones within declared area of Nawalapitiya urban development area.

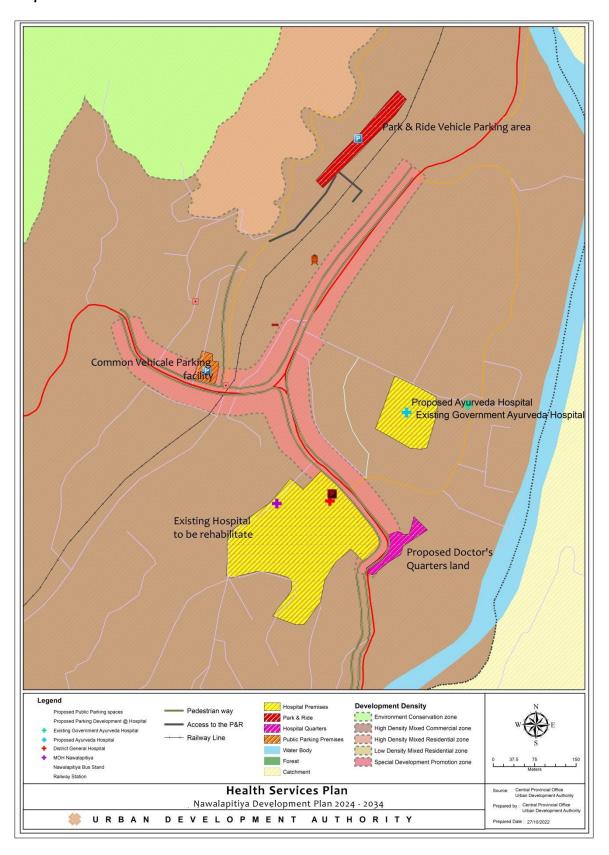
Figure 6.6: Ayurveda practices of Sri Lanka







Map 6.1: Health Services Plan



#### 6.3.1.2 Educational Service Plan

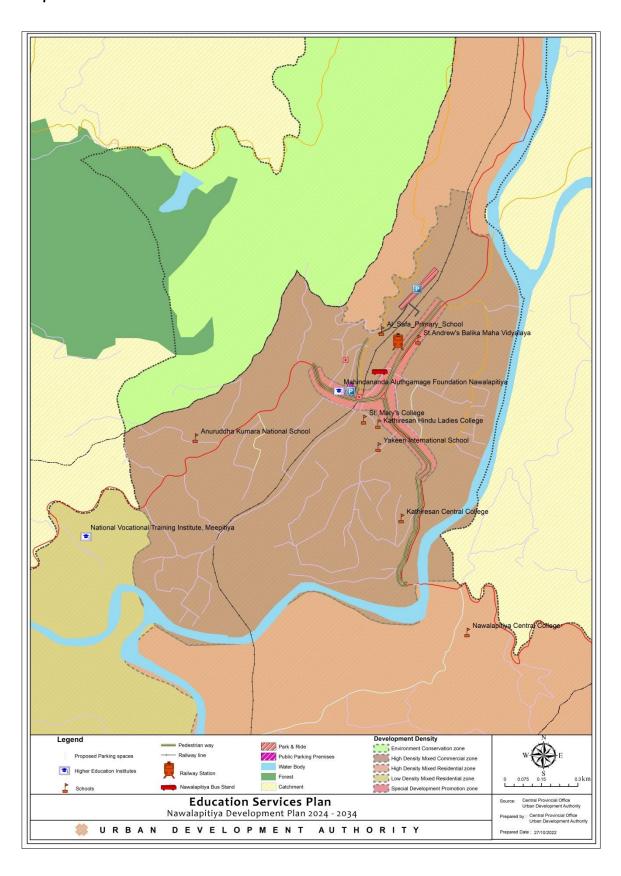
As identified by the Nawalapitiya urban area development plan the population in the planning area 26%, is educated up to the Ordinary Level, 20% is educated up to the Advance Level, 3% is educated up to the Diploma level and another 3% are graduated. Which means more than 50% of the population is in better educational status while the 05 major government schools deliver the educational facility for the students in planning area and the catchment area. Teacher – student ratio of the schools within planning area is 1:24 while the international standard is equal to 1: 25.

Further considering the existing Jayathilake stadium and related facilities, it is proposed to establish a Sports related higher education facility center as a Public Private Partnership project. Presently Central Province does not have a proper sports-related higher education facility. This will be a beigest opportunity to harness the existing potential of the Jayathilake stadium.



Figure 6.7: Proposed Land for Sports Related Higher Education Facility

Map 6.2: Education Services Plan



#### 6.3.1.3 Settlement Plan

One of the objectives formulated by this development plan is to facilitate a new 992 housing units to ensure a 100% balance housing requirement for the planning area by 2031. Land is the main scares resource for housing developments within urban areas. The modern solution for that issue is to develop houses in the vertical direction which are multi-storied apartments or multi-storied condominiums. Since this development plan is identified Nawalapitiya area as moderately densify area, this development plan does not cater for large scale residential developments. Forecasted population by GND vice is mentioned in the Table 6.1.

Table 6.1: Population Forecast - 2032

GND_Name	Population in 2022	Forecasted Population
		in 2032
Bawwagama	7607	9014
Karahandungala	2236	2965
Kendopitiya	3335	4547
Nawalapitiya East	1756	1495
Nawalapitiya North	2734	2928
Nawalapitiya South	3225	3301
Nawalapitiya West	3772	3431
Pallegama	1737	1787
Warakawa	2327	2522
Weligampola	1314	1434
Weligodawatta	2088	2361
Imbulpitiya	17	19
Total	32148	35803

Source: 2032 population predicted using 2022 census data provided by Resource Profile

Distributions of existing (2022) and forecasted housing units by GND vice are presented in Table 6.2. Overall, it represents an increment of nearly 2000 housing demand in year 2032.

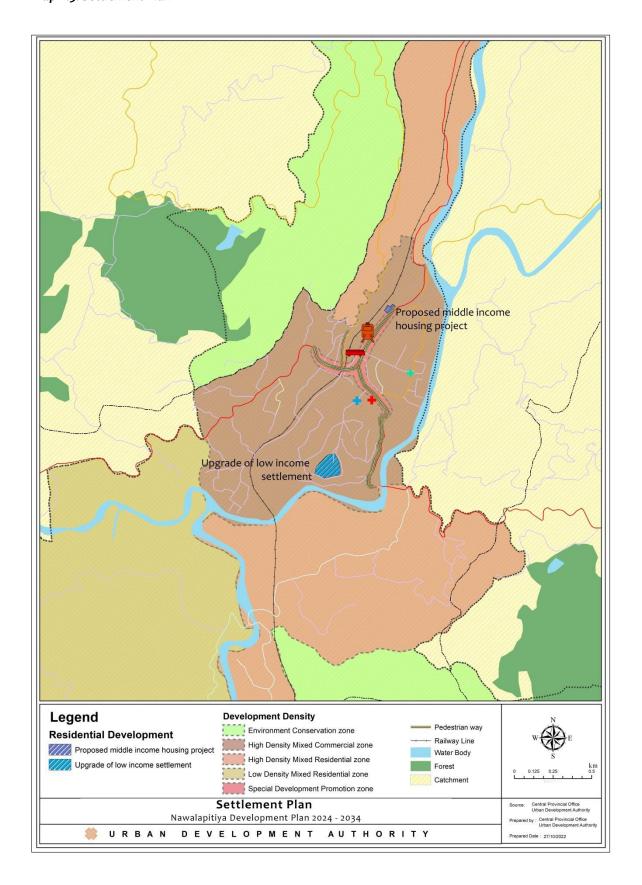
Declared part of Pasbage Korale Pradeshiya Sabha area has been identified as residential focused developments. Furthermore, allowable residential development types and categories are being described under the Development Zones and Zoning Guidelines topic of Chapter 07.

Table 6.2: Housing Requirement Forecast -2032

GND_Name	Housing Units in 2022	Forecasted Housing Units in 2032
Bawwagama	1928	2427
Karahandungala	502	662
Kendopitiya	938	1425
Nawalapitiya East	511	511
Nawalapitiya North	709	865
Nawalapitiya South	861	977
Nawalapitiya West	1035	1129
Pallegama	492	559
Warakawa	618	690
Weligampola	343	395
Weligodawatta	566	664
Imbulpitiya	3	3
Total	8942	10629

Source: 2032 housing requirement predicted using 2022 census data provided by Dep. of Census & Statistics

Map 6.3: Settlement Plan



#### 6.3.2 Physical Infrastructure Development Strategic Plan

Road development, Parking & Road Passenger Facilitation, Transport Centers Development, water supply, electricity supply, Sewerage & Waste Water Management and solid waste management are discussed under this chapter.

#### 6.3.2.1 Road Development Plan

Roads are the veins of any urban area that carries every mobile thing throughout which is the same in the context of human body veins that carries blood to keep alive a human. Roads mentioned in Table 6.3 refers to the major roads which are driven through the Nawalapitiya town center. Among those roads, Dolosbage – Nawalapitiya road is proposed to improve up to standard levels. Many tourist destinations are located based on the access of Nawalapitiya – Dolosbage road.

Table 6.3: Road Hierarchy

Road Classification	Road name	Grade	
Level 01	Kandy - Nawalapitiya	AB13	
	Ginigathhena - Nawalapitiya	B319	
Level 02	Kothmale - Nawalapitiya	B317	
	Dolosbage - Nawalapitiya	B318	

Source: Open Street Map Data

Kandy – Nawalapitiya road is proposed to improve as mentioned in the urban development guide plan in chapter 8 as it is coming under the Special Development Promotion zone.

#### 6.3.2.2 Parking & Road Passenger Facilitation Plan

Public vehicle parking facility is proposed to cater for the vehicle parking demand and to initiate park and ride facility for the commuters who travel through public transportation modes. As identified by the preliminary studies, existing pedestrian paths and alley ways have to be rehabilitated to enhance the walkability of the Nawalapitiya town center.

#### 6.3.2.3 Transport Centers Development Plan

Nawalapitiya railway station and the bus stand are located close proximity distance to each other and this potential has been utilized to establish multi model transit terminal within Nawalapitiya Urban Area to facilitate the local and foreign tourists.

Hence the Planning area has limited lands for the development activities; the Nawalapitiya urban area development plan has considered the public transportation as the main transportation mode. For the commuters who are travelling across the Nawalapitiya to other higher order cities can use the train or other public transportation mode while they can park their vehicles at the park & ride site allocated for the vehicle parking close to the railway station. Further it is proposed to establish a vehicle parking facility at the Nawalapitiya base hospital premises for the hospital visitors and for the staff.

Figure 6.8: Transport Center Development



#### 6.3.2.4 Water Supply Plan

According to the National Physical Plan, Nawalapitiya planning area is located within environmentally sensitive region of central hills. Therefore, plan itself has controlled the massive developments within the planning area. The development plan only facilitates for the excess population increase from the natural growth rate. There will be 35,803 inhabitants within the planning area according to the population forecasting.

Table 6.4: Water Requirement

GND	Population in 2032	Water requirement in 2032 (160 liters per capita)	Water requirement in 2032 (cubic meters)
Bawwagama	9,014	1,442,240	1442.24
Karahandungala	2,965	474,400	474.4
Kendopitiya	4,547	727,520	727.52
Nawalapitiya East	1,495	239,200	239.2
Nawalapitiya North	2,928	468,480	468.48
Nawalapitiya South	3,301	528,160	528.16
Nawalapitiya West	3,431	548,960	548.96
Pallegama	1,787	285,920	285.92
Warakawa	2,522	403,520	403.52
Weligampola	1,434	229,440	229.44
Weligodawatta	2,361	377,760	377.76
Imbulpitiya	19	3,040	3.04
Total	35,803	5,728,480	5728.48

Source: Water requirement calculated using projected population

#### Water requirement for commuters

- Total commuters per day = 55,850
- Water requirement for commuters = 55,850 \* 5 liters per capita = 279,250 liters
- Water requirement for commuters in cubic meters = 279.25
- As per the calculations, total water requirement for the planning area per day is equal to 6,007.73 cubic meters. Proposed

#### 6.3.2.5 Electricity Supply Plan

In long term, Electricity polls which are on the ground are proposed to laying under the ground within the Special Development Promotion zone. Since this development plan has proposed to control the massive developments within the planning area, only for

the 35,803 inhabitants and 55,850 numbers of commuters are the forecasted threshold population to provide electricity supply.

#### 6.3.2.6 Sewerage & Waste Water Management Plan

As per the result of preliminary analysis, it is necessary to Nawalapitiya urban area to implement a waste water management project. According to the proposed Nawalapitiya urban area development density, the town area needs proper Sewerage & Waste Water Management project to manage the sewerage and waste water.

With the coordination of Water supply and drainage board, it has calculated and the total waste water generate per day as 7,409 cubic meters per day by the year of 2032. Identified area for implement said project is represents in Table 6.5 and Figure 6.9

Table 6.5: Waste Water Generation Amount Per Day

GND	Total WW (m³/day)
Bawwagama	1,379
Karahandungala	358
Kendopitiya	-
Nawalapitiya East	458
Nawalapitiya North	554
Nawalapitiya South	687
Nawalapitiya West	914
Pallegama	-
Warakawa	-
Weligampola	-
Weligodawatta	-
Migrant Population (Floating)	3,060
Migrant Population (Permanent)	-
TOTAL	7,409

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Figure 6.9: Tentative Piped Sewer Coverage Area

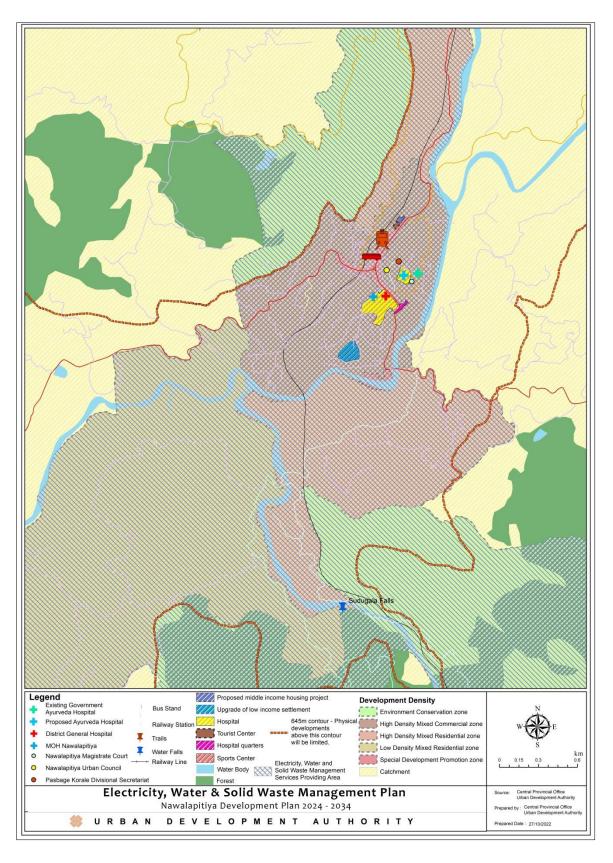
Source: Google Erath Pro Images

#### 6.3.2.7 Solid Waste Management Plan

Solid waste is one of the key issues that every urban area is facing all around the world and yet sustainable answers are hard to come by. Yet the Nawalapitiya has the sustainable solution for the solid waste issue. Responsibility of managing the solid waste entirely by the urban council is not successful way therefore participating whole community for that task is the successful way to manage the solid waste. 3R concept (Reuse, Reduce, and Recycle) should apply for the entire planning area to manage the solid waste. Imbulpitiya solid waste management site is the final dumping site of collecting solid waste from the entire urban council area. Presently the site has the capability to produce fertilizers from the degradable solid waste. Further

improvements with novel advanced technologies and skilled labour for effective production of composite fertilizer is needed to be introduced.

Map 6.4: Electricity, Water & Solid Waste Management Services Providing Area



#### 6.4 Economic Development Strategy

o3rd Goal of this plan has emphasized the target to accomplish the sustainable economy to achieve the vision of "The arena of nature serenity". The path to achieve sustainable economy is formulated under o3 objectives. Which are,

- 1. To open up existing underutilized lands in center of Nawalapitiya town for mixed developments by 2031.
- 2. Generation of \$ 225,000 revenue per month through the tourism sector.
- 3. Generate 4,500 number of job opportunities in tourism sector to eliminate the unemployment rate by 100%.

#### 6.4.1 Introduction

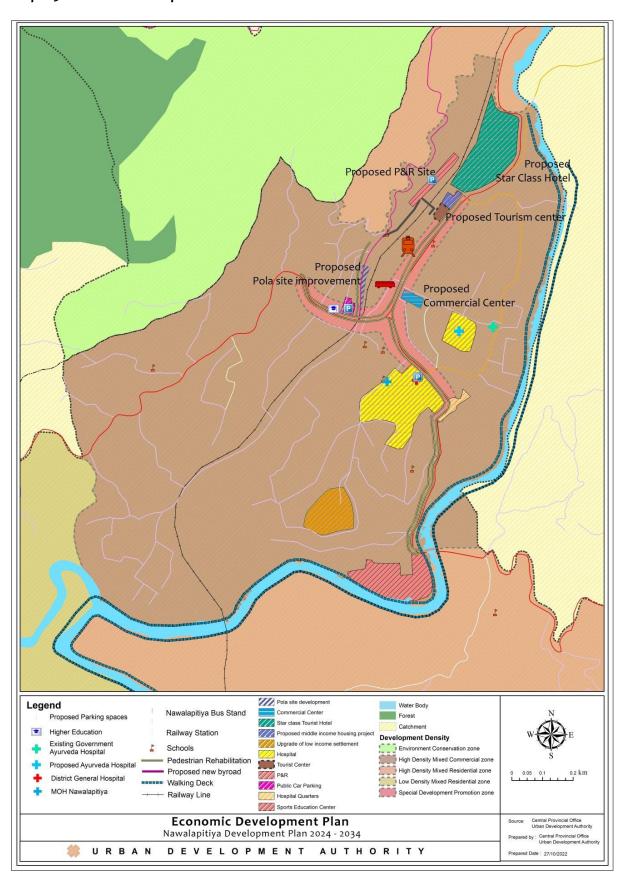
Utilizing the existing underutilized lands through economically viable projects is key strategy to uplift the economy of Nawalapitiya. As the catchment with 310,000 population by the year of 2032, it is vital to provide necessary facilities to cater such catchment.

Other sector which has identified to support to the economy of the Nawalapitiya is tourism sector. Generate foreign remittance while creating new job opportunities is important to create sustainable economy while uplifting the economic standard of the Nawalapitiya urban area.

#### 6.4.2 Trade & Commerce Development Plan

As identified by the preliminary analysis the Nawalapitiya town predominantly acts as a services-oriented town. Refurbishment of existing weekly fair area and land adjacent to that is identified as a priority project to implement with the coordination of the department of railway. Commercial center development within old urban council land, mixed use commercial building development within land located next to Gampola road which is owned by the department of railway are identified key projects to achieve sustainable economy development of planning area.

Map 6.5: Economic Development Plan



#### 6.4.3 Tourism Development Plan

Experience the uniqueness of Nawalapitiya with relaxing breeze and rhythmic water falls is the tagline of Nawalapitiya tourism development strategy.

#### **Forecast of Tourist Arrivals**

The estimation of 100 -200 of tourist arrival per day at Nawalapitiya has been forecasted considering three scenarios;

- Tourist carrying capacity in terms of possible accommodation capacity
- Tourist carrying capacity in terms of space availability of visiting places
- Tourist carrying capacity in terms of infrastructure availability

Evaluation results indicated that the scenario considering the tourist carrying capacity in terms of space availability of visiting places is the most appropriate and reasonable scenario to predict the number of Tourist Arrivals in Nawalapitiya Planning Area. Accordingly, the estimated no. of tourist arrivals for year 2032 is forecasted tourism arrival by this plan is 100 - 200 per day. (Number of tourists visits Ella approximately 250,000 per year, SLTDA)

- Expected contribution to Nawalapitiya Planning area, \$ 50 per tourist per day
- Expected revenue per month is approximately, \$ 225,000

#### Unique vegetation character

• 70% green coverage creates the Green Spectrum nowhere else to find unique climatic condition

#### Four seasons of Nawalapitiya

- Winter (December-February) Spring- (March to May) Summer-(June-August)
- Autumn- (September –November)

Rural life style of people of the Nawalapitiya attract the nature lovers, Honeymoon couples & Explorers. Hence this uniqueness is you all to experience in exclusive manner and this approach is to enhance the way you feel the experience of Nawalapitiya.

#### **Tourism Promotion Strategy**

The focus of the Tourism Promotion Strategy of Nawalapitiya development plan is to enhance the tourism experience in Nawalapitiya. It proposes various projects to promote existing natural attractions and introduce diverse tourism activities in Nawalapitiya. Further, it focuses on improving tourist facilities within Nawalapitiya. The strategy consists of two sub strategies namely;

- 1) Tourism activity diversification strategies.
- 2) Tourism facilitation strategies.

Tourism promotion strategy of "Nawalapitiya' consist with mainly three sub strategy as below to promote best tourist attraction destination in northern corridor towards "Sri Pada".

- **1. Sites identification** Identification of sites which are located in and around within 5km -10km distance.
- 2. Sites improvement with specific complimentary infrastructure
- 3. Marketing and promotion

#### Site identification

The plan has been identified the major tourist attraction sites based on following og categories such as, Waterfalls, Nature Trails and other places reservoirs and cultural areas.

#### **Waterfalls**

- 1. Galaboda falls
- 2. Hangaran Oya falls
- 3. Kadiyanlena falls
- 4. Kaluwala Ella falls
- 5. Rambukpitiya Ella falls
- 6. Sudugala Falls

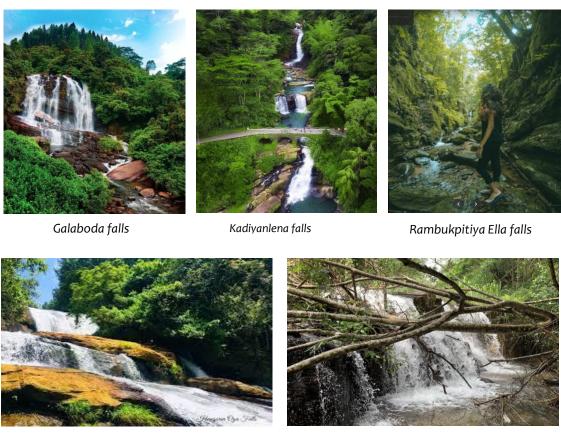
### Nature Trails

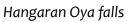
- 1. Craighead View Point
- 2. Kabaragala Trail
- 3. Little Danigala
- 4. Raxagala Kinihira kanda

#### **Other Places**

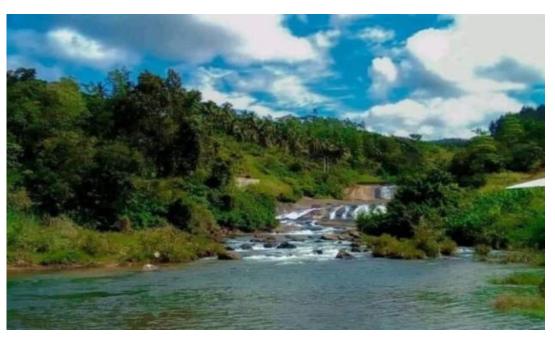
- 1. Kothmale reservoir
- 2. Mahaweli Maha Seya

Figure 6.10: Waterfalls within Proximity of Nawalapitiya





Kaluwala Ella falls



Sudugala Falls

Figure 6.11: Nature Trails within Proximity of Nawalapitiya

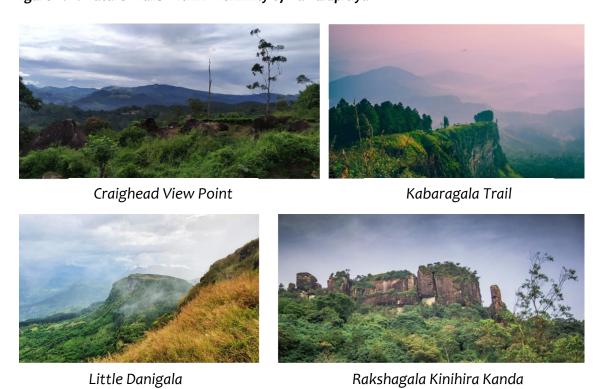


Figure 6.12: Other attractive Places within Proximity of Nawalapitiya



#### Identification and Promotion of Tourist Routs.

#### **DAY 01 – Route 01**

Figure 6.13: Proposed Tourist Route 01

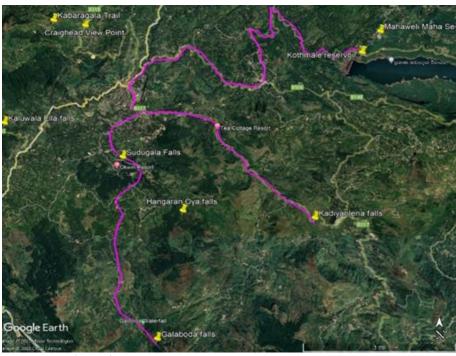


Source: Google Erath Pro Images

Route of drives through the Western direction of the planning area, hence this loop road drives through the mountainous area it has several trails and hikes to climb for tourists. The routes begin from the Dolosbage road and passing through the Craighead view point, Kinihira Kanda, Dhanigala, Rambukpitiya falls and Kaluwala Ella falls the destinations to visit.

#### **DAY 02 – Route 02**

Figure 6.14: Proposed Tourist Route 02



Source: Google Erath Pro Images

Tourism route drives through the western direction passing through the water falls, Galaboda falls, Hangaran oya falls, Sudugala falls, Kadiyanlena falls and Kothmale reservoir.

#### Sites improvement with specific complimentary infrastructure

Camping site and glamping sites will be developed at the Little Dhanigala and Craighead viewpoint tourist destinations. Galaboda waterfall site is proposed to develop according to the detail layout plan in Figure 6.15 to facilitate the tourists.

Figure 6. 15: Proposed Galaboda Site Improvement

Source: Google Erath Pro Images

- 1. Main access road development to the entrance gate.
- 2. Parking spaces with related facility development in surrounding area of entrance gate.
- 3. Development of walkway from entrance gate to the waterfall.
- 4. Development of Passenger Bridge.
- 5. Development of existing view point and projection of viewing deck to the waterfall.
- 6. Development of cable car in front of waterfall from right hill side to other side.
- 7. Development of baby playing pond as naturally.
- 8. Development of changing room, public toilet and resting premises.
- 9. Development of environment sensitive hotel with kabanas the right side of the hill.

Interactive activities within the tourism sites are encouraged implementing. Introducing Zipping line as adventurous activity and site seeing activity from Craighead View point to Little Danigala Peak is another new project proposed to implement. The Total length of the ride 1.6 km and it has been proposed as the longest ride within Sri Lanka

Craighead View point

Kaburagaia Trui

Pead View Point

Little Danigala Peak

Figure 6.16: Proposed Zip Line Path

Source: Google Maps

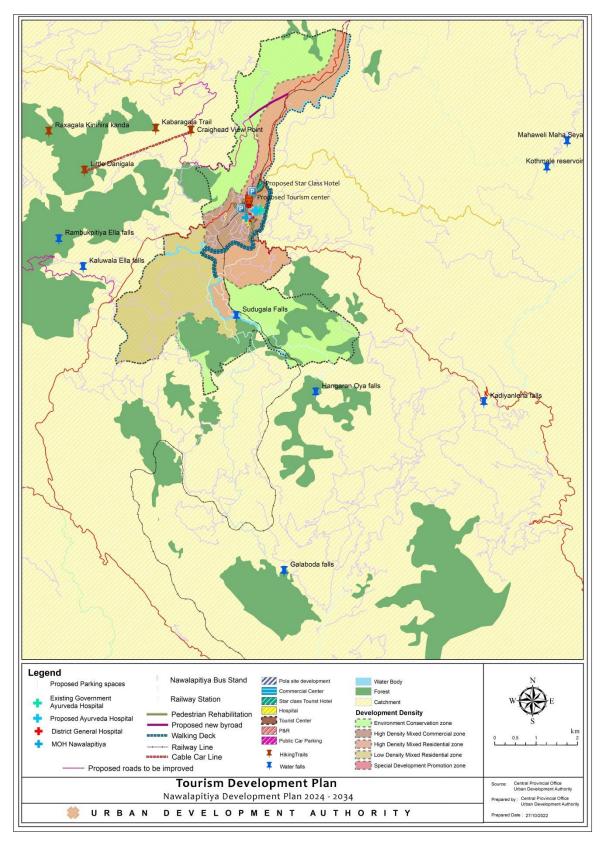
#### Marketing and promotion

Sri Lanka tourism development authority should take necessary actions to promote and market the tourism sites located at Nawalapitiya to highlight among international tourists.

- Putting display boards in public places in other countries.
- Put narration boards from Nawalapitiya town center to all tourism destinations.
- Display tourism destinations map in Nawalapitiya railway station.

 Distribute tourism destination guide map specially for foreign tourists in major railway stations.

Map 6.6: Tourism Development Plan



#### 6.5 Sustainable Environment Development Strategy

The vision of the Nawalapitiya urban area development plan is based on the biodiversity and high quality of the natural environment that will support sustainable tourism, this relationship of the tourism industry and the environment quality will support the overall development of the Nawalapitiya town.

In this backdrop of the sustainable environment development strategy should be based on the,

- 1. Environment conservation plan
- 2. Landscape Plan
- 3. Disaster risk reduction plan
- 4. Public Outdoor Recreational Space Plan

#### 6.5.1 Environment Conservation Plan

Nawalapitiya urban area is consisting of flat terrain and covered with mountain range with rich biodiversity and different ecosystems which are providing ecological services and values for the community and inhabitants. Forest cover and Mahaweli River with canal system in the Nawalapitiya is both locally and nationally very important. It plays a valuable role to balance the daily temperature in the city and periphery.

Environment conservation plan has prepared by considering the Nawalapitiya planning area existing natural forest areas, wetlands, existing paddy lands, water retention detention areas, Mahaweli River and canal system and geomorphology. The zoning plan recognize the protecting these conservation areas it will be benefit to long run while making use of them for the development of the tourism industry.

Accordingly, Map, 6.7 -environment conservation plan has identified four environment conservation zones which are,

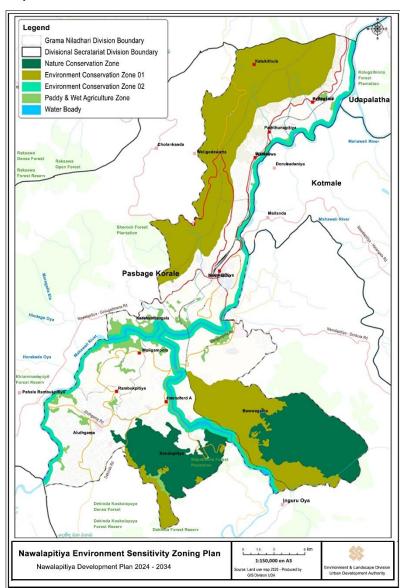
- Nature Conservation Zone
- Environment Conservation Zone 1
- Environment Conservation Zone 2
- Paddy Cultivation & Wetland agriculture zone

#### **❖** Nature Conservation Zone

Nature conservation zone is included already declared area as an Environmental Protection area, sanctuary special conservation areas or world heritage site, forest areas was published by National Act/gazette notification. Permitted activities should be implemented according to the already declared under Local Act/Gazette notification area as a Wildlife area, sanctuaries, Environmental sensitive areas etc.

Permitted uses in the nature conservation zone,

- o Nature trail development, educational path, camping site
- Tree planting for habitat development
- o Removal of invasive trees & plants (Pine plantation)



Map 6.7: Environment Conservation Plan

#### **Environment Conservation Zone 1** (Tea cultivation zone)

The tea plantation with residential and the natural landscape uses an identified this zone will be permitted tourism related activities. New activity should not change the current use of land in order to many such activities a set of regulation will be introduce under this development plan incorporate in to the zoning regulation.

#### **Environment Conservation Zone 2** (Mahaweli river reservation)

60-meter reservation from the embankment of the river is included to the environment conservation zone 2. This reservation area is subject to management of Sri Lanka Mahaweli authority. Sixty-meter reservation area is accommodated to development with the guide line the of the Mahaweli authority.

Environment conservation project / permitted uses,

- Nature trail development
- Tree planting for habitat development
- Removal of invasive trees & plants (Pine plantation)
- Educational path
- Changing room development

- Sanitary facility development
- Landscape development
- Vehicle parking development
- Nature trail development
- Water purification tree planting

#### **❖** Paddy Cultivation & Wetland agriculture zone

This area includes the existing cultivated paddy fields, abandoned paddy fields and associated areas such as Deniya and Ovita.

- Wetland Related Agriculture
- Epiphytic cultivations
- Mining in accordance with (GS&MB) and CEA guidelines, conditions and regulations, including irregular site rehabilitation (Clay Pits and Soil mining)
- Eco-friendly aquaculture ponds
- Department of Agrarian development acts included activities can be allowed with the other relevant agencies' approvals.

#### 6.5.2 Landscape Plan

High Density Commercial Zone which has defined by this development plan is proposed to landscape as mentioned in Chapter o8 (will be gazette as an amendment to this plan).

#### 6.5.3 Disaster Risk Reduction Plan

Zoning guidelines and common guidelines has mentioned in Chapter 07 for reduce and mitigate the possible hazards.

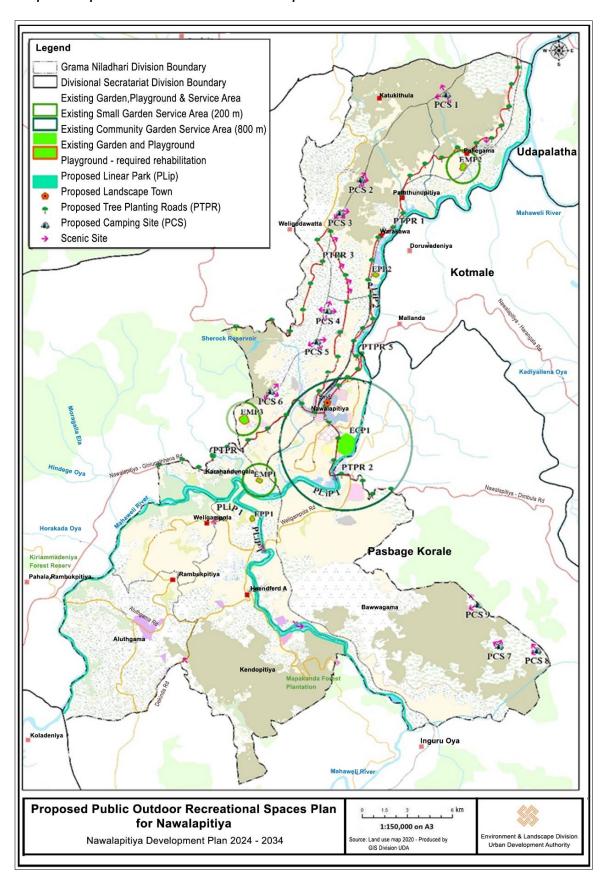
#### 6.5.4 Public Outdoor Recreational Space Plan (PORS)

There are many benefits to setting up and maintain the public outdoor recreational space. It plays an important role for mental and physical benefiting for community and commuter population through the reducing carbon footprint. Improving children, youth adult heath and children attach to the nature and get the experience of environment and its habitat. Improvement of economy development opportunities and increase land values of peripheral areas. Decrease of the heat of the city temperature and provide more shade areas and new open spaces with water front development. Considering the hierarchy of open space with stranded it is recommended to create those identified public outdoor recreational space with landscaping, lighting facade improvement of identified streets in the city center. passive recreational spaces have created by the natural environment spaces of Nawalapitiya and periphery.

#### **Proposed Public outdoor recreational spaces**

- 1. Liner park development project at Mahaweli river water front
- 2. Hiking with camping site development project
- 3. Street plant with linear park development project
- 4. Kadiyallena passive and active recreational development project
- 5. Nature trail development project at urban forest
- 6. City center railway reservation landscaping project
- 7. Façade improvement project in town center
- 8. Redevelopment of existing playgrounds

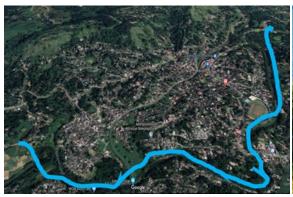
Map 6.8: Proposed Public Outdoor Recreational Spaces Plan



#### 6.6 Proposed Projects Under Environment Conservation Plan

❖ Linear Park development project at Mahaweli River water front

Figure 6.17: Linear Park Development Project Along Mahaweli River





#### **Project Components**

- Changing room development
- Sanitary facility development
- Landscape development
- Vehicle parking development
- Nature trail with gathering spaces development
- Water purification tree planting

This reservation area subject to management of Sri Lanka Mahaweli authority. Sixty-meter reservation area is accommodated to development, following the guide provided by the Mahaweli Authority.

Hiking with camping site development project

Figure 6.18: Proposed Hiking with Camping Site Development Project





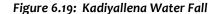
The forest camping site is proposed at the current Pine forest which is located in Nawalapitiya town area. Nawalapitiya development plan proposes to regrow the existing Pine Forest. The current Pine forest has been planted by the department of forest for the purpose of obtaining timber. However, the Pines forest gets deserted during the timber cutting season and it downgrades the image of Nawalapitiya Therefore, Nawalapitiya development plan will be proposed to regrow it as a natural Forest with native plant. The area of the pine forest is proposed to replanting by using the management plan without cutting all the timber.

- ✓ Within the area of the Pine Forest distributed it is proposing to develop two forest camping sites within this forest with required facilities. Further, it is proposed to introduce several adventure games within the site.
- ✓ Within the area of Grassland spared in the Warakawa Patthunupitiya GN division it is proposed to develop stargazing camping site top of the hilly areas. Along with the camping facilities it is proposed to setup the necessary telescope and relevant astrophotography equipment.

#### Regulations for camping site

Regulations and guidelines mentioned in the TOURISM ACT No. 38 of 2005 related to the camping and hiking should be followed by the relevant parties.

#### Kadiyallena water fall passive and active recreational development project







The Blue Green Network Strategy aims to create an attractive and environmentally sustainable urban environment that also provides more economic opportunities with the tourism. These are provided infrastructure, ecological restoration and urban design to connect local and foreign tourist and nature across the city.

The strategy focuses on, enhancing ecosystem services and ecological connectivity, providing opportunities for economic development in the city, providing the greatest opportunity for recreational and economic development activity around waterfall, it would be focus on creating ecological corridors that support increase of biodiversity and nature friendly community throughout the city.

There are targeted project activities are identified and It will be support to increase of passive and active recreational activities with ecological values and services for the community.

#### **Project activities**

- Resting area development
- Infrastructure development
- Changing room development
- Sanitary facility development

- Landscape development
- Vehicle parking development
- Nature trail development

#### **❖** Town center landscape improvement

Natural environment and manmade environment are not compatible with together in Nawalapitiya town. Manmade environment has filled with only hard landscape features and create ugly image of the city.

Nawalapitiya town is almost developed as commercial and administration activities Ownerships of the land are mainly depend on the private sector and existing buildings are reached maximum floor area ratio. It can be seen in uneven sky line and unfinished roof tops with ugly walls. Building façade and name boards are other factor of diminishing of city values. Use of building materials and colors in the town center, it is effectives to increase of urban heat in the city.

So, there are strategic solutions to minimize the above situation and achieve the goals and objectives in the plan.

- Steel landscape and name board design
- Roof top green garden

- Construction of Roof top pool
- Indoor planting
- Vertical green garden

#### Steel landscape and name board design

Considering the above situation. street landscape development is creating shade space for the city use and reduce the heat condition and carbon emission in the city. balance the hard and soft landscape spaces will be adding new soft landscape spaces. Further the street lay-out will also be improved with provisions for pavements and landscaping areas depending on the situations and the space availability.

#### ❖ Roof top green garden and Construction of Roof top pool

Nawalapitiya town center is not enough open spaces and totally cover with buildings and streets. So, it is expected to improve the beauty of the city, cooling environment and healthy air condition while roof top green garden and roof top pool are being constructed the guide lines and regulations of this plan. All the existing buildings in the town center will be introduced Air pollution control indoor plant to reduce indoor spaces heat and carbon emission.

Figure 6.20: Roof Top Green Garden Concept





## ❖ Nature trail development project at urban forest

Figure 6.21: Nature Trails Concept





Nature trail development project will be accommodated facility of tourist attraction and up lift the heath of the citizen.

## **6.7 Project Implementation Strategy**

6.7.1 Introduction

### 6.7.2 Prioritizing the Projects

**Table 6.6: Priority Projects** 

Priority No	Description	Responsible Agency
01	Introduction of Tourism & Hospitality related training programs within existing vocational training centers.	Central Province - Tourism Department
02	Development of New park and ride facility within Nawalapitiya Railway premises.	CGR, RDA, UDA, UC
03	Development of Nawalapitiya base hospital premises with state-of-the-art facilities.	Nawalapitiya Hospital, Ministry of Health
04	New vehicle parking facility at Nawalapitiya base hospital premises.	Nawalapitiya Hospital, Ministry of Health, UC
05	Establishment of Sports related higher education center.	Provincial Council-CP, Ministry of Sports

06	Mixed development project at Railway station premises.	CGR, UDA, UC
07	New by pass road connecting Dolosbage road and Gampola roads.	RDA
08	Establishment of new mixed development with parking facility at old courts complex at Nawalapitiya.	UDA, UC
09	New residential complex (middle income category), New Ayurveda treatment center and restaurant (main access level) in front of Nawalapitiya base hospital premises.	
10	Improvement of existing drainage network and establishment of new drainage system within Nawalapitiya town center.	RDA, UC
11	Establishment of state-of-the-art waste water management and sewer management system within Nawalapitiya town center.	NWSDB, UC
12	Rehabilitation of existing weekly fair near Dolsbage Road of Nawalapitiya with vehicle parking facility. (During the other days the weekly fair land will be used as three wheelers and other vehicles parking area)	UC, UDA
13	Establishment of urban park with open weekly fair and parking spaces next to existing weekly fair land.	UC, UDA
14	Improvement of Imbulpitiya solid waste management site.	UC
15	New mixed development within Nawalapitiya railway land (Land located adjacent to Gampola road).	CGR, UDA, UC
16	New commercial center development within old Nawalapitiya urban council area land.	UC, UDA

17	Improvement of 02 <sup>nd</sup> level roads to enhance the accessibility to identified tourism sites.	RDA, PRDA, UC
18	Introduce tourism related activities for tourist hot spots (zip line from Craighead View point to Little Danigala Peak, cable car etc).	Central Province - Tourism Department
19	Establishment of compulsory facilities for tourists within site level (Sanitary facilities, Glamping, Camping etc.).	Central Province - Tourism Department, UC & PS
20	Improvement of road junctions,  I. Cargills junction  II. In front of St. Mary's college	RDA, UC
21	Improvement of all the pedestrian paths within Nawalapitiya urban area with all the facilities including landscaping and disable friendly elements.	RDA, UC
22	Development of facades of Nawalapitiya town center according to the guide plan regulations defined by this plan.	UDA, UC
23	Construction of new bridge at Nawalapitiya – Ginigathhena road infront of the Anurudhdha Kumara national school.	RDA, UC
24	Electricity, Telecom and other utility cables laying under the ground.	RDA, UC
25	Display route maps and guiding maps implement to distribute information for tourists.	RDA, UC & PS
26	Displaying the tourism detail plan of Nawalapitiya area in Nawalapitiya railway station and other public places.	CGR, RDA, UC
27	Displaying advertisements within train compartments and outside.	CGR

# 6.7.3 Detail of Projects

# Project 01

Project Name	Development of New commercial complex project for old
	Nawalapitiya urban council premises
Project	Development of shopping complex
Project Proposal	Development of shopping complex at old UC building premises. This will provide quality shopping environment for public. Also, the development will positively impact for the landscape of the area.

## **Project Location**

Location.	Province	District.	Divisional	Local Authority
		_	Secretory area	
	Central	Kandy	PasbageKorale	Nawalapitiya U/C
Access	Nawalapitiya	a - Gampola Rd	/ UC Road	
Location map		Pititez s Residence  Picable twoffice  Cable twoffice  Charka Sathosa - Nawa  ara Residurant Ba19  Nawaiiapitty		Consider Ginama  AB13  Ver Bus (step  Conselle Food City
Surrounded	Commercial			
Land use				

# Requirement of the Project

Nature of	New		Building		Extension		Land	
the Project		٧	develop-ment	٧		-	Development	V
beneficial	eneficial Environmental			٧	Economical	٧	Social	V
sectors								
Project	Provide solution for commercial spaces requirement							
objectives	• Op	tim	ally utilize the urb	an	land			
	• Ind	rea	se the income obt	ain	from the prop	erty	•	
	Provide parking space within the proposed development							
Necessity of	The proposed development will be solving the lack of commercial space							
the Project	issue within town center							

## **Details of the Project Land**

Details of the	Government	Another Gov. Institute	Local Authority	Private	Remarks
ownership	Yes	-	Yes	-	The Land belongs to the NUC
Details of the survey plan	Survey Plan No.	Name of the Surveyor	Date		Land Extent
	-	-	-		About 60 Perch

## **Project Context**

# Project 02

Project time	Short	_	Middle		Long	_	Total		About
Duration	term		term		term		Estimat	ed	Rs,100mn
	<b>(</b> 01		<b>(</b> 01 -	٧	(03 <)		cost		,
	Year)		3 <b>Year)</b>						
Funding method	Pre-sale	-	Treasury	-	PPP	٧	Other		-
Project details	Only Proje	ect p	roposal.	I	I	1			
Infrastructure	Water	-	Electricity		Other	-			
requirement		٧		٧					
Zone	High density commerc			z <b>ial</b> Zoning			,	Yes	
	zone			Compatibility					
History (If relate	d)			Old	d UC build	ing	that has	wit	hin the site
				no	w been co	mp	letely der	moli	ished
Present situation				Vacant					
Existing <b>Th</b>	Existing The land currently uses for parking, especially in public pola (fair) day							a (fair) day,	
Situation Su	ındays								

Project Name	Development of vehicle park at Nawalapitiya Base Hospital
Project	Vehicle park development
Project Proposal	Development of existing vehicle park as two storied building for serve the requirement of Nawalapitiya Hospital

## **Project Location**

Location.	Province	ovince District		Local Authority			
			Secretory area				
	Central	Kandy	PasbageKorale	Nawalapitiya U/C			
Access	Kothmale Road	d					
Location map		SnjLanka lihstrance navalar	Oostriet General Hospital, Newalar	illy Care and Channel Center  Gently  Wowkipz  Whavalapitya Medica			
Surrounded	Hospital / Com	mercial / Resid	lential				
Land use							

# Requirement of the Project

Nature of the	New		Buildi	ng		Extensio	n		Land	
Project		٧	develo	pment	:			-	Development	-
beneficial	Environmental		ental	٧	Eco	nomical	al <b>V</b>		Social	٧
sectors										
Project	•	Es	tablishı	ment of	Plar	ned city c	om	por	nents	
objectives	•	Pr	ovide a	dequat	e par	king space	es f	or l	nospital premises	
	•	Optimally utilize the urban lands								
Necessity of	The proposed development will be solving the lack of commercial									
the Project	space issue within town center									

## Details of the Project Land

	Government	Another Gov.	Local	Private	Remarks
		Institute	Authority		
Details of the	-	Yes	-	-	Land belongs to the
Land ownership					Nawalapitiya hospital
Details of the	Survey Plan	Name of the	Date		Land Extent
survey plan	No.	Surveyor			
	-	-	-		About 18 Perch

## **Project Context**

Project time	Short	-	Middle		Long	-	Tota	nl	About
Duration	term		term		term		Estir	mated	Rs,100mn
	<b>(</b> 01		(01 -3 <b>Year)</b>	٧	<b>(</b> 03 <b>&lt;)</b>		cost		
	Year)								
Funding method	Pre-sale	-	Treasury	-	PPP	٧	Oth	er	-
Project details	Only Proje	Only Project proposal							
Infrastructure	Water		Electricity		Other			-	
requirement		-		٧					
Zone	High dens	ity co	mmercial	Zo	oning Cor	npatib	ility	Y	es
	zone	-					-		
History (If related	l)	Land belong to hospital premises					es		
Present situation	Vacant								
Existing <b>T</b>	Existing The land currently uses for park vehicles that comes to hospital.								
Situation									

# Project 03

Project Name	Development park and ride facility within the
	Nawalapitiya Railway premises.
Project	Development of Railway land which in front of Railway
	Station.
Project Proposal	Development of Public car Park facility to promote "park
	& ride" system specially for the people Who works at
	other areas within the region such as Gampola, Hatton etc.

## **Project Location**

		1	T	T
Location.	Province	District	Divisional	Local Authority
			Secretory area	
	Central	Kandy	PasbageKorale	Nawalapitiya U/C
Access	Nawalapitiya -	Gampola Rd		
Location map	O de la company con de la company	valapitiya	Phawalantiya Bus stop	Commercial Bank  Caunity Kitchen Fam
Surrounded	Commercial / R	esidential		
Land use				

# Requirement of the Project

Nature of the Project	New	Buildii V develo	ng opment	٧	Extensio	n -	Land Development	-
Beneficial sectors	Environ	mental	٧	Ecor	nomical	٧	Social	٧
Project objectives	• 1	Reduce t town area	note public transportation uce traffic congestion & vehicular movements within n area mally utilize the urban lands					within
Necessity of the Project		The proposal would solve the parking issue within town center and lead to minimize the traffic congestion.						

## Details of the Project Land

	Government	Another	Local	Private	Remarks
		Gov.	Authority		
Details of the		Institute			
Land	-	Yes	-	-	Land belongs to the
ownership					CGR
Details of the	Survey Plan	Name of	Date		Land Extent
survey plan	No.	the			
		Surveyor			
	-	-	-		About 03 Rood

## **Project Context**

Project time	Short	-	Middle		Long	-	Tota	al	About
Duration	term		term		term		Esti	mate	Rs,100mn
	<b>(</b> 01		<b>(</b> 01 -	٧	<b>(</b> 03		d cc	st	
	Year)		3 <b>Year)</b>		<)				
Funding	Pre-sale	-	Treasury	-	PPP	٧	Oth	er	-
method									
Project details	Only Proje	ect p	roposal						
Infrastructure	Water		Electricit		Other			-	
requirement		-	у	٧					
Zone	High dens	sity o	ommercial	Z	oning Co	mpati	bility	)	⁄es
	zone								
History (If relate	ed)	Land belong to CGR				GR			
Present situatio	n				Vacant				
Existing <b>T</b>	he land curr	ently	vacant <b>and</b>	shru	bs exist				
Situation									

# Project 04

Project Name	Improvement of existing drainage network and develop
	new drainage system within Nawalapitiya town center.
Project	Nawalapitiya town center drainage system Development
	Project.
Project Proposal	Improvement of existing drainage network and Develop
	new drainage system in Nawalapitiya Town cente for
	solve the existing flood situation.

# **Project Location**

Location.	Province	District.	Divisional Secretory area	Local Authority
	Central	Kandy	PasbageKorale	Nawalapitiya U/C
Access	Gampola Rd, Ko Dolosbage Rd.			Vogans park Rd and
Location map			Nawalapitiya	
Surrounded Land use	Commercial / Re	sidential		

# Requirement of the Project

Nature of the Project	New	<b>V</b> Buildii develo	ng opment	٧	Extensio		-	Land Development	-
Beneficial sectors	Enviror	nmental	٧	Ecor	nomical	<b>V</b>		Social	V
Project objectives	•	To establi vehicles.	solve the existing flood situation establish a safe mobility for both pedestrians and nicles. improve the quality of roads and pavement						
Necessity of the Project	The pro	The proposal would solve the flood situation in Nawalapitiya town							

## Details of the Project Land

	Government	Another	Local	Private	Remarks
		Gov.	Authority		
Details of the		Institute			
Land	-	Yes	-	-	Land belongs to
ownership					the RDA
Details of the	Survey Plan	Name of	Date		Land Extent
survey plan	No.	the			
		Surveyor			
	-	-	-	•	-

## **Project Context**

Project time	Short		Middle		Long	-	Tota	-	About
Duration	term		term		term			nated	Rs,100mn
	<b>(</b> 01	٧	<b>(</b> 01 -	-	<b>(</b> 03 <b>&lt;)</b>		cost		
	Year)		3 <b>Year)</b>						
Funding method	-	-	Treasury	٧	PPP	-			Can request for foreign funds as well
Project details	Only Proje	ect p	roposal						
Infrastructure	Water		Electricity		Other			-	
requirement		-		-					
Zone	High dens	sity o	ommercial	Zc	ning Con	npatibil	ity	Ye	es
	zone								
History (If relate	d)			Land belong to RDA					
Present situation	า	-							
Existing Ex	Existing Existing drains of road sides/shoulders is discontinued and not meet					not meet			
Situation th	e required	capa	city.						

# Project 05

Project Name	New by pass road connecting Dolosbage road & Gampola road
Project	Road Development Project.
Project Proposal	Road Development proposal connecting Dolosbage road and Gampola road. The by-road start from Dolosbage road and connected to the Gampola road near by the 3rd Rail gate.

## **Project Location**

Location.	Province	District.	Divisional	Local Authority
	Central	Kandy	Secretory area PasbageKorale	Nawalapitiya U/C
Access	Dolosbage Rd,			
Location map	© Sathmuni Sa	etiptesia;e	-Image © 2524 Arbus	Patrithunupitya Ha
Surrounded	Predominatel	y Residential a	nd Mixed	
Land use				

# Requirement of the Project

Nature of the Project	New	٧	Building development		٧	Extension	_	Land Development	-			
Beneficial sectors	Enviro	nm	ental	٧	Ec	onomical	٧	Social	٧			
Project objectives	•	To	devel	opment o	of e	e solution fo fficiency veh lanned city		e traffic congestion	on			
Necessity of the Project	_	The proposal would solve the traffic problem in town center and would smooth the transportation										

## Details of the Project Land

	Government	Another	Local	Private	Remarks
		Gov.	Authority		
Details of the		Institute			
Land	-	-	-	Yes	-
ownership					
Details of the	Survey Plan	Name of	Date		Land Extent
survey plan	No.	the			
		Surveyor			
	-	-	-		-

### **Project Context**

r roject contex								
Project tim	ne Short term		Middle		Long	٧	Total	About
Duration	(01 Year)		term		term		Estimated	Rs,100mn
		-	<b>(</b> 01 -	-	<b>(</b> 03 <b>&lt;)</b>		cost	
			3 <b>Year)</b>					
Funding method	-	-	Treasury	<b>V</b>	PPP	-	Other	Can request for foreign funds as well
Project details	only Projec	t pro	posal					
Infrastructure	Water		Electricity		Other		-	
requirement		-		_				
Zone		.ow	ommercial density	Z	oning C	omp	atibility	es es
History (If rela	ited)			-			·	
Present situat	ion			-				
Existing	Private lands l	ocate	d both side	of t	the iden	tifie	d traces	
Situation								

# Project o6

Project Name	Establishment of new mixed development project with parking facility at old court premises
Project	Mixed Development Project
Project Proposal	Development commercial building with Parking facility of UDA Land. And it can be helped to minimaxed and land can
	be used optimum level

# **Project Location**

Location.	Province	District	Divisional Secretory area	Local Authority
	Central	Kandy	Pasbage Korale	Nawalapitiya U/C
Access	Municipal Co	uncil Road		
Location map	manuChanel center	Nawalapiliya Bus stop	sha Chema ⊽neatre	Ogrand Pavillon Banquethiail
Surrounded	Commercial	/ Residential		
Land use				

# Requirement of the Project

Nature of the Project	New	٧	Building development		V	Extension	Extension		Land Development	-		
Beneficial sectors	Enviro	nm	imental <b>v</b>		Ecor	nomical	٧		Social	٧		
Project objectives	•	To	maxin	nize the	urba	business an land utile city with	iza	tion	components			
Necessity of the Project	•	The proposal would solve the parking issue and will make a quality space for commercial activities										

# Details of the Project Land

	Government	Another Gov.	Local Authority	Private	Remarks
Details of the		Institute	ridenoney		
Land ownership	-	Yes	-	-	-
Details of the	Survey Plan	Name of	Date		Land Extent
survey plan	No.	the			
		Surveyor			
	-	_	_		-

# **Project Context**

Project time	Short		Middle		Long	٧	Total	About
Duration	term		term		term		Estimated	Rs,100mn
	<b>(</b> 01	_	(01 -3 <b>Year</b> )	_	<b>(</b> 03 <b>&lt;)</b>		cost	113,10011111
	Year)							
Funding method	-	-	Treasury	٧	PPP	٧	Other	-
Project details		I		I	l			
Infrastructure	Water		Electricity		Other	Sani	tary facilitie	s required
requirement		٧		٧				
Zone	Mixed de	velo	pment zone	Zor	ning		Yes	
				Cor	mpatibilit	У		
Existing	The buidi	ng is	delapidated	I			<b>,</b>	
Situation								

# Part III

#### **CHAPTER 07**

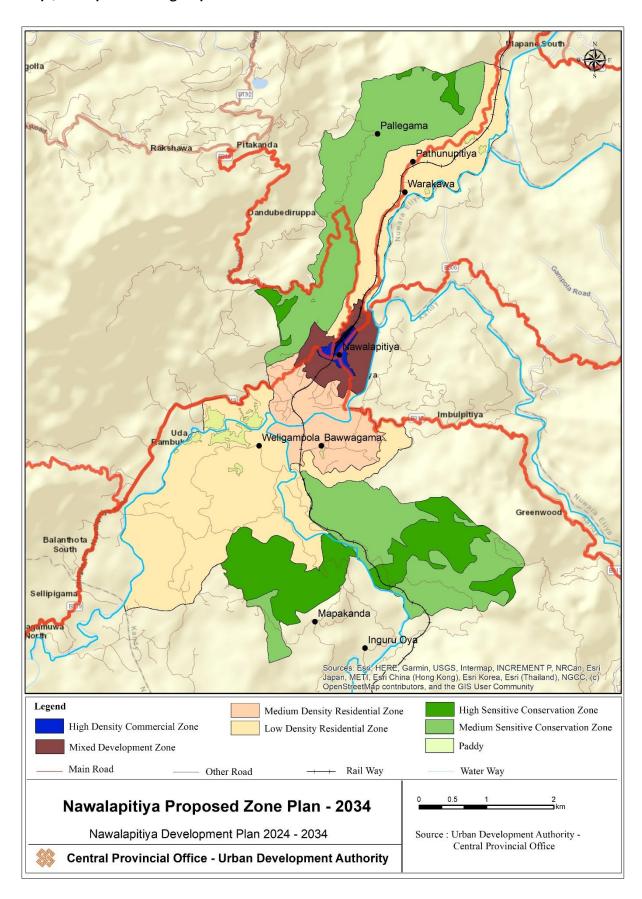
## **Development Zones and Zoning Guidelines**

#### 7.1 Introduction

Zoning approach of the Nawalapitiya urban area development plan specifically has been considered the density, character, terrain, natural landscape and the water ways of the area as these components are highly influence to its natural beauty as well as to accommodate residence and tourism activities in Nawalapitiya. Hence, the plan has proposed character-based density zones for Nawalapitiya area by considering the natural disasters, unique environmental features and setting. Considered above those elements' development promotion zones, development restriction zones, and special development promotion zone has been identified by the zoning plan. The Nawalapitiya urban area zoning categories is, its defined based on the contour intervals due to its geographical setting.

The Nawalapitiya urban area shall have five (o5) zones which promote Commercial activities prominent areas/ Residential prominent areas/ Environment Conservation areas. These five (o5) activity prominent Zones identified within three broader density zones as high, moderate and low. The reason for demarcation of different activity prominent zones within the identified broader density zones is to maintain the character of the area while preserving the environment sensitive areas and to promote development activities only for suitable areas. Also, it will enable a variety of experiences in different areas without resulting in homogeneous developments throughout.

Map 7.1: Proposed Zoning Map



#### 7.2 Development Zones

The proposed development zones are:

- I. High Sensitive Conservation Zone
- II. Medium Sensitive Conservation Zone
- III. Low Density Residential Zone
- IV. Medium Density Residential zone
- V. Mixed Development Zone
- VI. High Density Commercial Zone

#### 7.3 Zoning Factor

The zone factor is a new concept introduced in place of a practically implemented Floor Area Ratio, which was previously made in the planning and building regulations. This determines the size of the maximum development allowed in a given area. In particular, the property owner is given a reasonable opportunity to carry out his development. Nawalapitiya Urban Area Development Plan 2024-2034 is expected to be a density-based development for the area by the year 2034. Especially relatively high densities will be expected in Mixed Development Zone and High-Density Commercial Zone. Low density will be expected in Low Density Residential zone and Medium Density Residential Zone. Environment Conservation zone will be maintained as High Sensitive Conservation zone and Medium Sensitive Conservation zone. is expected to establish the proposed urban form by 2032 accordingly.

Prior to determining the extent of the maximum development in a given area, identification of suitable areas for the development should be carried out first. Determination of High-Density, moderate density and low-density development zones will be determined through the analysis based on city activity patterns. The conclusions drawn by a detailed analysis of the findings must be complemented by the practical implementation of the area. These developments should be balanced with the aspects of physical, social, environmental and economic.

Accordingly, the zones have determined the territories based on the environmental sensitivity, the intensity of development and its direction, the distribution of the

infrastructure facilities, the development in commercial activities, the geographical conditions and the density of the population. That is, if the region's zone factor is higher than the other regions, it is a strong gateway infrastructure for, a high commercial development, and a high population attraction within the region. The zone factor is low if the area has an environmentally sensitive area or it is due to less of land for development or there is a shortage of infrastructure facilities, and lower level of the desired urban form.

Accordingly, the Zone Factor has been provided for each zone under the development plan.

Table 7.1: Development Zones and Respective Zone Factor

Zone	Zone Factor
High Sensitive Conservation zone	0
Medium Sensitive Conservation Zone	0.1
Low Density Residential Zone	0.5
Medium Density Residential zone	1.0
Mixed Development Zone	1.75
High Density Commercial Zone**	2.0

\*\* High Density Commercial Zone – This zone will be developed as per the guide plan contained with this plan (Chapter o8).

The zoning factor-based Floor Area Ratio (FAR) is noted in Table 7.2. The FAR accordingly depend on width of the access and land extent of each individual cases.

Table 7.2 : Applicable FAR According to the Assigned Zone Factor

Schedule 6 Form A - Permissible Floor Area Ratio																		
	Zo	ne factor	= 0.50 -	0.74	2	Zone fac	tor = 0.75-	0.99	Z	Zone fa	ctor = 1.0	0-1.24	2	Zone factor = 1.25-1.49				
	M	linimum	Road Wie	dth	Minimum Road Width				N	/Iinimu	ım Road '	Width	I	Minimu	m Road V	Width		
Land extent (Sq.M)	**6m	9m	12m	15m or above	**6 m	9m	12m	15m or above	** 6m	9m	12m	15m or above	** 6m	9m	12m	15m or above		
150 less than 250	0.8	0.9	0.9	0.9	1.3	1.3	1.4	1.4	1.6	1.7	1.8	1.9	2.0	2.2	2.3	2.4		
250 less than 375	0.9	1.0	1.2	1.3	1.3	1.6	1.8	2.0	1.8	2.2	2.4	2.7	2.2	2.7	3.0	3.3		
375 less than 500	0.9	1.0	1.2	1.4	1.3	1.6	1.9	2.1	1.9	2.2	2.5	2.8	2.3	2.8	3.2	3.4		
500 less than 750	1.0	1.1	1.3	1.5	1.4	1.7	2.0	2.2	2.0	2.3	2.7	3.0	2.4	3.0	3.4	3.5		
750 less than 1000	1.0	1.2	1.4	1.7	1.5	1.8	2.2	2.5	2.1	2.4	2.9	3.3	2.6	3.0	3.6	4.0		
1000 less than 1500	1.1	1.3	1.5	1.8	1.6	1.9	2.3	2.7	2.2	2.5	3.0	3.6	2.7	3.1	3.8	4.5		
1500 less than 2000	1.1	1.4	1.7	2.0	1.7	2.1	2.5	3.0	2.3	2.7	3.4	4.0	2.9	3.4	4.2	5.0		
2000 less than 2500	1.2	1.5	1.8	2.1	1.8	2.3	2.7	3.1	2.4	2.8	3.5	4.2	3.0	3.5	4.4	5.4		
2500 less than 3000	1.2	1.6	2.0	2.4	1.9	2.4	3.0	3.6	2.5	3.2	4.0	4.7	3.1	3.8	4.7	5.8		
3000 less than 3500	1.3	1.7	2.1	2.5	2.0	2.5	3.1	3.7	2.6	3.4	4.2	5.0	3.2	4.0	5.0	6.2		
3500 less than 4000	1.4	1.8	2.2	2.6	2.2	2.6	3.3	3.9	2.8	3.6	4.3	5.3	3.3	4.3	5.5	6.6		
More than 4000	1.5	1.9	2.3	2.8	2.5	2.8	3.5	4.0	3.0	3.8	4.5	5.5	3.5	4.5	6.0	7.0		

Cont....

	Z	one facto	r = 1.50-1	.74		Zone fac	ctor = 1.75-	1.99	Z	Zone fa	ctor = 2.0	0-2.24	7	Zone fac	ctor = 2.2	5-2.49
	N	Iinimum	Road Wie	dth		Minimu	nimum Road Width			Minimu	m Road `	Width	Minimum Road Width			
Land extent (Sq.M)	**6m	9m	12m	15m or above	**6 m	9m	12m	15m or above	** 6m	9m	12m	15m or above	** 6m	9m	12m	15m or above
150 less than 250	2.4	2.6	2.7	2.8	2.8	3.0	3.2	3.3	3.0	3.4	3.6	3.8	3.0	3.4	3.6	4.0
250 less than 375	2.6	3.2	3.6	4.0	3.0	3.4	4.3	4.7	3.2	3.6	4.5	4.5	3.5	3.8	4.5	5.0
375 less than 500	2.7	3.3	3.8	4.2	3.2	3.5	4.5	5.0	3.4	3.7	4.8	5.2	3.6	4.5	4.7	5.5
500 less than 750	2.8	3.4	4.0	4.5	3.4	3.6	4.7	5.5	3.5	4.0	5.0	6.0	3.7	5.0	5.0	6.0
750 less than 1000	3.1	3.6	4.3	5.0	3.5	3.8	5.1	6.0	3.6	4.5	5.7	6.5	3.8	5.1	6.0	6.5
1000 less than 1500	3.2	3.8	4.6	5.5	3.6	4.0	5.4	6.5	3.7	5.0	6.1	8.0	3.9	5.3	6.5	8.5
1500 less than 2000	3.4	4.0	5.0	6.0	3.7	4.2	5.8	7.0	3.8	5.1	6.7	9.0	4.0	5.4	7.0	*10
2000 less than 2500	3.5	4.2	5.2	6.5	3.8	4.4	6.2	7.5	3.9	5.2	7.1	*10	4.0	5.5	7.5	*10.5
2500 less than 3000	3.6	4.4	5.5	7.0	3.9	4.6	6.5	8.0	4.0	5.3	7.4	*10.5	4.0	5.6	7.5	*11
3000 less than 3500	3.7	4.6	6.0	7.5	4.0	4.8	6.9	8.5	4.0	5.4	7.6	*11	4.0	5.7	8.0	*11.5
3500 less than 4000	3.8	4.8	6.3	7.7	4.0	5.0	7.3	9.0	4.0	5.5	7.8	*11.5	4.0	5.8	8.0	*12
More than 4000	4.0	5.0	6.5	8.0	4.0	5.2	7.5	9.5	4.0	5.6	8.0	*12	4.0	5.9	8.0	*UL

Cont.....

					Form A	A - Pern	nissible Fl	oor Area I	Ratio							
Land extent (Sq.M)	Zone factor = 2.50-2.74  Minimum Road Width				Zone factor = 2.75-2.99  Minimum Road Width				Zone factor = 3.00-3.24  Minimum Road Width				Zone factor = 3.25-3.49  Minimum Road Width			
	150 less than 250	3.0	3.4	3.6	4.0	3.0	3.4	3.6	4.0	3.0	3.4	3.6	4.0	3.0	3.4	3.6
250 less than 375	3.5	4.0	5.0	5.5	3.5	4.2	5.0	5.5	3.5	4.4	5.0	5.5	3.5	4.6	5.0	5.5
375 less than 500	3.6	4.6	5.2	6.0	3.6	4.7	5.2	6.0	3.6	4.8	5.2	6.0	3.6	4.9	5.2	6.0
500 less than 750	3.7	5.1	5.5	6.5	3.7	5.2	5.5	6.5	3.7	5.3	5.5	6.5	3.8	5.4	5.5	6.5
750 less than 1000	3.8	5.2	6.5	7.0	3.8	5.3	7.0	7.5	3.8	5.4	7.0	7.5	4.0	5.5	7.5	8.0
1000 less than 1500	3.9	5.4	7.0	9.0	3.9	5.5	7.5	9.0	3.9	5.6	7.5	9.0	4.0	5.7	8.0	9.0
1500 less than 2000	4.0	5.5	7.5	*10.5	4.0	5.6	7.5	*10.5	4.0	5.7	8.0	*10.5	4.0	5.8	8.0	*11
2000 less than 2500	4.0	5.6	7.5	*11	4.0	5.7	8.0	*11	4.0	5.8	8.0	*11	4.0	5.9	8.0	*11.5
2500 less than 3000	4.0	5.7	8.0	*11.5	4.0	5.8	8.0	*11.5	4.0	5.9	8.0	*11.5	4.0	6.0	8.0	*12
3000 less than 3500	4.0	5.8	8.0	*12	4.0	5.9	8.0	*12	4.0	6.0	8.0	*12	4.0	6.0	8.0	*12
3500 less than 4000	4.0	5.9	8.0	*12	4.0	6.0	8.0	*12	4.0	6.0	8.0	*12	4.0	6.0	8.0	*12
More than 4000	4.0	6.0	8.0	*UL	4.0	6.0	8.0	*UL	4.0	6.0	8.0	*UL	4.0	6.0	8.0	*UL

Cont .....

	Zo	ne facto	r = 3.50-	3.74	Zone factor = 3.75-4.00 Minimum Road Width					
Land extent	Mi	inimum	Road W	idth						
(Sq.M)	**6m	9m	12m	15m or above	**6 m	9m	12m	15m or above		
150 less than 250	3.0	3.4	3.6	4.0	3.0	3.4	3.6	4.0		
250 less than 375	3.5	4.8	5.0	5.5	3.5	5.0	5.0	5.5		
375 less than 500	3.6	5.0	5.2	6.0	3.6	5.4	5.2	6.0		
500 less than 750	3.8	5.5	5.5	6.5	4.0	5.7	5.5	6.5		
750 less than 1000	4.0	5.6	7.5	8.0	4.5	6.0	7.5	8.0		
1000 less than 1500	4.2	5.8	8.0	9.0	4.5	6.5	8.0	9.0		
1500 less than 2000	4.2	6.0	8.0	*11	4.5	7.0	8.0	*11		
2000 less than 2500	4.2	6.2	8.0	*11.5	4.5	7.0	8.0	*12		
2500 less than 3000	4.2	6.4	8.0	*12	4.5	7.0	8.0	*12		
3000 less than 3500	4.2	6.5	8.0	*12	4.5	7.0	8.0	*12		
3500 less than 4000	4.2	6.5	8.0	*12	4.5	7.0	8.0	*12		
More than 4000	4.2	6.5	8.0	*UL	4.5	7.0	8.0	*UL		

UL - Unlimited

Floor area allocated for parking facilities are not calculated for FAR

Above Floor Area Ratio shall not be applicable for the zones where number of floors or FAR indicated under the zoning regulations

Above Permissible FAR may be restricted under the development plan based on the slope of the land

Clearance shall be taken from National Building Research Organization for the lands having slope more than 11°

\* FAR more than or equal to 10.0 shall be permitted only for the roads having minimum of 12m (from road center) Building Line, if not maximum FAR shall be limited to 9.0

\*\*Minimum road width of 7m shall be consideded for the roads identified as 7 m wide in the particular Development Plans

Source: Extraordinary Gazette No. 2235/54 Dated 08<sup>th</sup> July 2021

#### 7.4 Common Guidelines for Nawalapitiya Planning Area

- 1. Under Section 3 of the Urban Development Authority Act No. 41 of 1978, these regulations are valid for all areas within the administrative boundaries of the Nawalapitiya Urban Council area which has been declared as an Urban Development Area in the Special Gazette No. 100/4 dated 04.08.1980 and Part of Pasbage-Korale Pradeshiya Sabha area which has been declared recently as an Urban Development Area.
- 2. For planning and development regulations related to any development activity not covered by the Nawalapitiya Development Plan, the UDA Planning and Development Regulations, published in Gazette No. 2235/54 dated 8<sup>th</sup> July 2021, shall be effective.
- 3. When a place or property is designated for a particular use only by the zoning plan of the Nawalapitiya Development Plan, the place or property shall be used only for that designated purpose.
- **4.** The zoning regulations of Nawalapitiya Development Plan require that any development work submitted for approval shall have a minimum land extent of 150 square meters. But if an area does not have piped born water facilities, the minimum land extent of the land for development shall be 250 square meters.
- 5. The Urban Development Authority shall define any area comprised in the development plan as a special development area by a gazette notification or circular notification.
- **6.** If any special regulations imposed by the central government for a special project area, they will supersede the regulations set out in this plan.
- 7. Uses, restrictions and prohibitions for any construction belonging to the special project areas designated by the authority in accordance with the above rule o5 and other regulations or restrictions prescribed by this plan, assignment, exemption or implementation of tasks imposed for the area by the authority.
- **8.** The proper wastewater management mechanism shall be implemented for the developments which are exceeding 4000 square feet facing a waterbody. The Authority can request for a landscape plan along with the building plan where necessary.

- **9.** When constructing a new religious building or reserving a place for a new religious place, a recommendation from the Pasbage Korale Divisional Secretory shall be obtained with the consent of the people representing the area.
- **10.** If any legally implemented use does not fit the zone by the effective date of the regulations of the plan, the authority has the power to consider extending the period of the said use and adding a new section.
- 11. The installation of permanent signboards or advertisements should not be perpendicular to the street or should not be obstructed to the appearance of the building. Permissions will not grant for installation of advertisements or signboards in existing boundary walls and/or banks which enhancing traffic congestion, vehicles accidents or blocking natural scenic beauty.
- 12. Approval is considered to continue existing uses in the proposed zoning plan. If such use is to be modified or expanded, prior approval shall be obtained from the preliminary planning clearance of the Authority. In this case, the maximum floor area is considered for up to 10% for infrastructure and staff development.
- 13. If any development activity which is not covered by the regulations of the development plan, Urban Development Authority has the sole power to take decision of such activity.
- 14. Notwithstanding the provisions of the Development Plan, it may be lawful of using of any block of land, prohibit or control or releasing of any regulation or introduction of new regulations or guidelines with the intension of achieving the objectives of the Development Plan shall happen only through the decisions taken by the Main Planning Committee of the UDA.
- 15. If any block of land is fallen within two or more local authorities, it shall be considered the particular land belongs to the local authority where access road belongs. If the access is from two roads, the wider road should be considered and if the both roads are in same width the local authority which larger portion of land fall shall be considered.
- **16.** No person shall use any site or building for the purpose, except the use approved in the Development Permit.
- 17. In case of a property and building which fallen within two Zones, the relevant zone should be the zone belongs main access road.

- **18.** In case of a property fallen within more than two zones it will be lawful if it considered with the compatibility of objectives of the Development plan.
- 19. The boundaries of the zoning plan have provided in X (Longitude), Y (Latitude) (Annexure 09). The coordinates defined on Prime Meridian: Greenwich (0.0), Datum: D\_WGS\_1984. These X and Y coordinates shown by the Decimal Degree in Google Earth are the final boundary in case there is any contradiction.
- **20.** The Urban Development Authority will decide the final decision on the issue of zoning boundaries.
- 21. If the boundary change occurs at a time defined by both the boundaries, physical boundaries, and (Google Earth) geographical coordinates shown in the zoning plan, the physical boundary should be taken as the boundary of the region.
- **22.** Lands identified for public open spaces, sports, and recreational activities by the PORS plan shall be used only for the permitted uses.
- 23. Permits for reclamation of existing paddy lands and water retaining lowlands in all zones shall be considered subject to the following factors through the decisions taken by the Urban Development Authority.
  - I. Impact courses to the water draining network of the area.
  - II. Impact courses to the surrounding paddy or lowland network.
  - III. Impact courses to the surrounding land use pattern.
  - IV. Adequate infrastructure facilitates to the proposed use.
  - V. Shall be compatible with the other regulations mentioned in this plan.

If all the above facts are met, the Urban Development Authority shall consider granting permission for the respective use. Also, the proposed development shall comply with the regulations of the zone where the respective paddy land is located.

- **24.** The regulations pertaining to the environmental conservation zone of this zoning plan shall be enforced in the development works carried out on the lands used for commercial crop cultivation (tea, rubber etc.) in each zone.
- **25.** The guidelines and regulations of the Cemeteries Ordinance must be adhered to when conducting any development work within cemeteries or burial grounds.
- **26.** Construction of monuments and tombstones outside approved cemeteries or burial grounds will not be permitted.

- **27.** Before allocating a land or part of land as a burial ground, the permission of the relevant authority shall be obtained.
- **28.** A recommendation from the Divisional Secretary and approval from the relevant authority shall be obtained when relocating a burial ground or in a new construction or in the construction of a crematorium.
- **29.** If no reservation or buffer zone has been declared for an environmentally sensitive area under any special regulation or guideline, the Urban Development Authority is authorized to establish such reservations or buffer zones and restrict or prohibit development within these areas.
- **30.** In cases where a specific land or property use is not specified under the applicable uses, the proposed use must align with the existing land use and context.
- 31. If any special regulations imposed by the central government for a special project area, they will supersede the regulations set out in this plan.
- 32. The Urban Development Authority has the power to revise the zone factor for each area in the future due to special conditions and developments that may occur in the future.
- 33. If a proposed land development is located adjacent to a water source, development guidelines and recommendations must be obtained from the relevant authorities regarding its reservation.
- 34. When proposing to erect a building classified under Category A or B, as per the UDA general regulations outlined in Special Gazette No. 2235/54 dated 28.07.2021, on land with a slope of 10 degrees or more, it is required to submit a contour map along with certification from a licensed surveyor.
- **35.** For proposed developments classified under Category A or B (as per the UDA general regulations outlined in Special Gazette No. 2235/54 dated 28.07.2021), a notice board must be displayed containing details and contact information of the owner, contractor, and architect, as well as the date and number of the plan approved by the Relevant Authority.
- **36.** When proposing to develop a boundary wall, it must be erected at a distance of on meter from the existing road edges and constructed only after reaching an agreement with the relevant local authority.

- 37. When deciding the number of floors for a proposed development, the calculation should consider the height from the lowest ground level of the existing buildings in the line to the highest point of the proposed building. This includes the ground floor, lower ground floor(s), and upper floor(s). If a water tank and/or elevator room is included in the proposal, the maximum allowed height for these structures is 3.3 meters, and they must not exceed 10% of the allowed plot coverage.
- **38.** When a swimming pool is proposed on the top of a building classified under Category C, the building will then be considered as Category B. Additionally, the height of the swimming pool must be limited to 01 meter.
- 39. The allowable maximum floor area ratio (FAR) will be determined as outlined in Chapter 07, in accordance with the zone factors specified for each zone. However, in cases where issues arise regarding the total floor area, the UDA retains the authority to make decisions, considering development trends and vehicle movement patterns.
- **40.** During the construction of buildings, the slope of the proposed land should be considered while determining the permissible floor area related to the zone factor given in table x and the Floor area ratio should be determined in accordance with the specifications given in 40.1
- **41.** A preliminary planning clearance from the Urban Development Authority shall obtained for any development activity proposed to be carried out within the High-Density Commercial Zone.
- **42.** When sub-dividing a sloppy land, the minimum plot size shall be maintained in accordance with the specifications given in table below.

Slope of the Land (In Degrees)	Permissible Minimum Land Extent (Sqm.)	Permissible Minimum Depth and Width of the Land
0 ° -10 °	150	
11° - 20°	250	Shall be compatible with planning and Development Regulations
21° -30°	500	
31 ° -45 °	750	
More than 45°	1000	Shall be considered only if the recomendations including PPC by UDA, recomendation of NBRO and recomendation of Charted Structural Engineer have been granted.

**43.** During the construction of buildings, the slope of the proposed land should be considered while determining the permissible floor area. Accordingly, the determined developable floor area shall be allowed as follws.

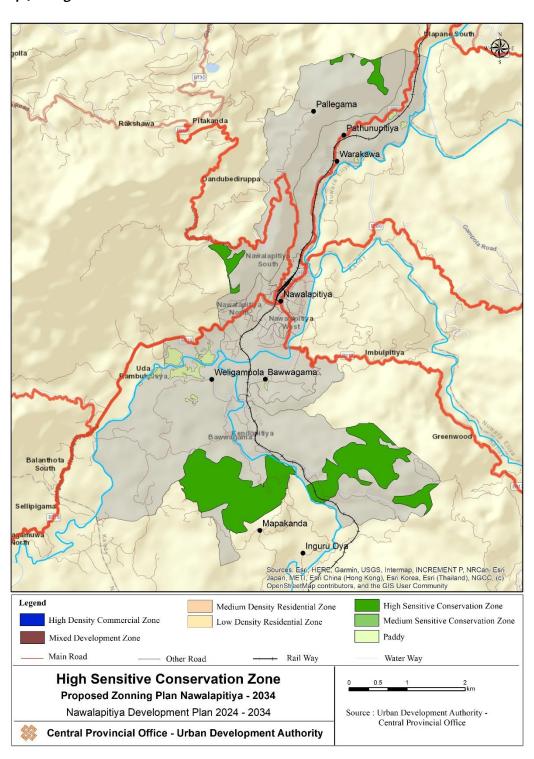
Slope angle of	Permissible total floor	Percentage of allowable total floor area
the Land	area	
(In degrees)		
0 ° -10 °	Shall be compatible	100%
	with zoning regulations.	
11° -20°	Shall be compatible	75%
	with zoning regulations.	
21° -30 °	Shall be compatible	50%
	with zoning regulations.	
31 ° -45 °	Shall be compatible	35%
	with zoning regulations.	
More than 45°	Shall be compatible	25%
	with zoning regulations.	Permission will be only considered if
		Urban Development Authority
		preliminary Planning Clearance,
		recommendation from National Building
		& Research Organization and
		recommendation from Chartered
		Structural Engineer will be provided.

### 7.5 Development Zoning Guidelines

The zoning plan of the Nawalapitiya Development Plan has identified 05 development zones and the development regulations applicable to each zone are as follows.

### 7.5.1. High Sensitive Conservation zone

Map 7.2: High Sensitive Conservation Zone



### 7.5.1.1 Regulations and Permissible Uses for High Sensitive Conservation Zone

Table 7.3: Zoning Regulations of High Sensitive Conservation Zone

01. High Sensit	01. High Sensitive Conversation Zone		
Zone Defenition	In the zone plan, the area near the north-west-south boundary has been identified as an ecologically sensitive area with forested areas located in the upper parts of the hills and with low accessibility. There are water sources in this section and these areas should be protected from any use. However, in case of special projects, the general regulations of the Urban Development Authority shall be complied with.		
Boundaries	Map No. 7.2		
Zone Factor	N/A		
Zoning Guidelines	<ol> <li>Not allowed any physical development (Physical structures).</li> <li>Shall be use as water resources</li> </ol>		

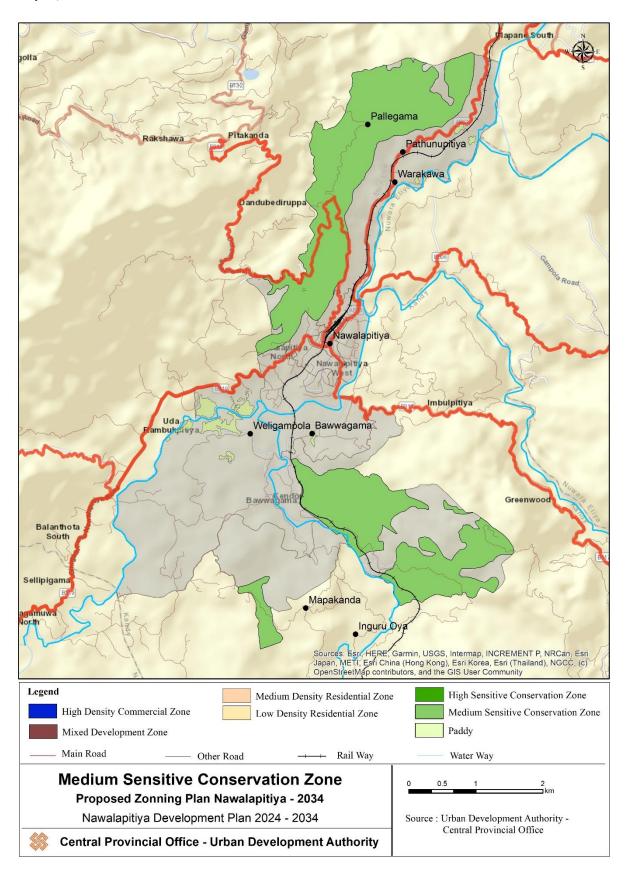
### 7.5.1.2 Permissible Uses for High Sensitive Conservation Zone

Table 7. 4: Permissible Activities of High Sensitive Conservation Zone

No.	Permissible uses
(a.) Tourism	(activities)
i.	Camping Sites
ii	Trekking & hiking
iii	Rock Climbing
iv	Tourism related services & infrastructures

#### 7.5.2 Medium Sensitive Conservation zone

Map 7.3. Medium Sensitive Conservation Zone



# 7.5.2.1 Regulations and Permissible Uses for Medium Sensitive Conservation Zone.

Table 7.5: Zoning Regulations of Medium Sensitive Conservation Zone

02.	Medium Sensitive Conservation Zone	
Zone Defenetion	This region can be identified as 2 areas, the northern and southern part, and north and west of Dolosbage road, accessible from Dolosbage road and mountain road where the northern part is located. The particular area is sloppy and some area are steep sloppy. Dolosbage road only has residential expansion nearby. The southern part is adjacent to the Badulu railway line and the Mahaweli river and this region shall be maintained as a protected area.	
Boundaries	Map 7.3	
Zone Factor	0.1	
Permissible maximum plot coverage	30%	
Permissible Hight limits	10m form the existing ground level.	
Zoning Guidelines	<ol> <li>The minimum land extent shall not be less than 40 perches in case of subdivision and development of land.</li> <li>Any development of the lands adjacent to the railway line shall landscape using suitable plants with the recommendations of the Department of Railway.</li> <li>No permission for any developments other than activities such as mountain climbing, hiking and visiting the natural environment that do not harm the natural environment for the development of the tourism industry.</li> <li>More than 60% of frontage of Tourism related Buildings shall camouflage by using natural plants to blend with surrounding environment and landscape.</li> <li>The minimum land extent shall not be less than 80 perches for development of tourist hotels and constructions shall carryout according to the nature of the land.</li> <li>For tourist hotels, the maximum height is 10 meters from the ground, and recommended colors for roofs and walls shall be used.</li> <li>Recommended to use shades of colours in Black &amp;, Green for colour washing of existing buildings as follows,</li> </ol>	
	cont	

Recommended Wall Colors	Name	Hex Value	RGB Value
7 7 7	Olive Green	#636b2f	Rgb(99,107,47)
	Hunter Green	#2c5f34	Rgb(44,95,52)
	Dark Green	#023020	Rgb(2, 48, 32)
	Fern Green	#4F7942	Rgb(79, 121, 66)
	Army Green	#454B1B	Rgb(69, 75, 27)
	Eucalyptus	#5F8575	Rgb(95, 133, 117
	Gunmetal Grey	#353E43	Rgb(53,62,67)

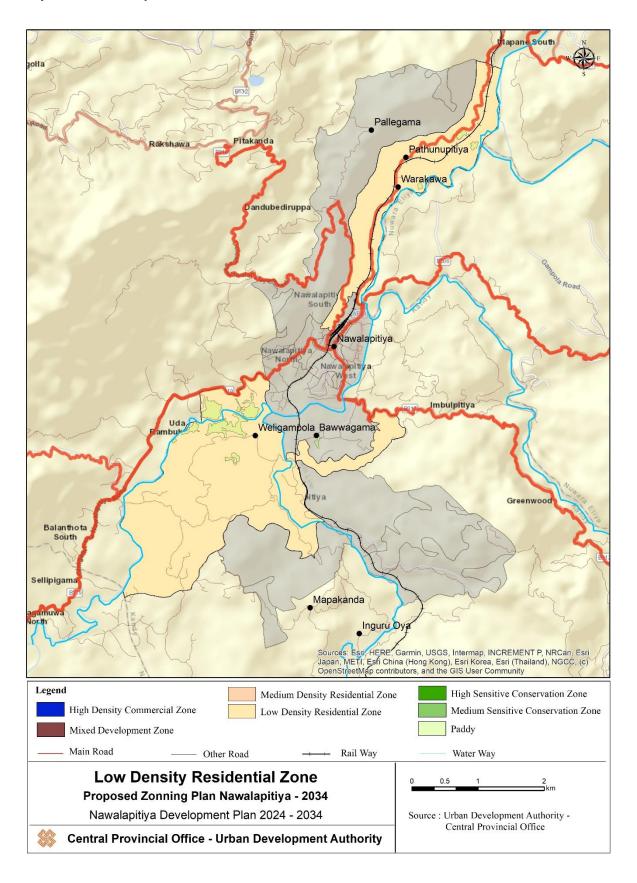
Table 7.6: Permissible Activities of Environment Conservation Zone

(a.) Commer	cial
i.	Retail shops
ii	Plant nurseries
iii	Tourism related services providing shops
(b.) Resident	ial
i.	Single Unit Houses
(c.) Health	
i.	Ayurvedic medical centers
ii.	Massage centers
(e.) Institutio	onal
i	Professionals offices
ii	Banks and Financial Institutions
(g.) Tourism	
i.	Restaurant
ii	Holiday Resorts
iii.	Tourist Hotels
iv.	Guest House
V	Cabana
vi	Tourism Bungalows

vii	Boutique Hotels		
(h.) Industries	(h.) Industries		
i.	Cottage industry/ Handicraft products / Indoor equipment (non-		
	polluting)		
ii	Saw mills		
iii.	Quarry mining		
iv.	Wood/ Furniture industry		
V	Textile industry		
vi	High Tech/ IT related industry		
vii	Foods related industry		
viii	Tea and other agriculture related industry		
(i.) Public and	(i.) Public and recreational		
i	Parks		
ii	Open spaces		
iii.	Landscaping Areas		
iv.	Cinemas/ Open Theatres/ Art Galleries/Museum		

#### 7.5.3. Low Density Residential Zone

Map 7.4: Low Density Residential Zone



### 7.5.3.1 Regulations and Permissible Uses for Low Density Residential Zone

Table 7.7: Zoning Regulations of Low-Density Residential Zone

03. Low Density Residential Zone		
Zone Definition	The zone located Between the Mahaweli River on both sides of the Nawalapitiya - Gampola main road and the Medium sensitive Conservation zone and the area up to the northern boundary and the medium density residential zone south of the Ambagamuwa Road is the part between the planning area boundaries in the south. There is a higher residential density on both sides of the railway line and the road and less residential density on either side of the road. It has slope from west to east. The remaining part of this zone is located in the southern part and is accessed by a number of main roads and side roads and steep slope is there from north to south directions.	
Boundaries	Map 7.4	
Zonning Factor	0.5	
Zoning Guidlines	(01) The minimum land extent shall not be less than 10 perches in case of subdivision and development of land.	

# 7.5.3.2 Permissible Uses for Low density Residential Zone

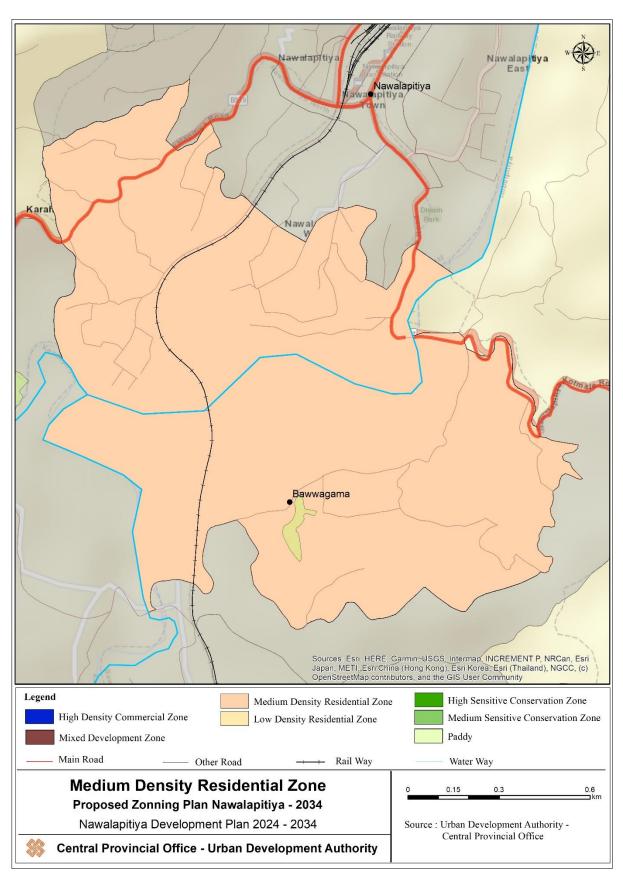
Table 7.8: Permissible Activities of Low-Density Residential Zone

(a.) Commercial		
i.	Retail shops	
ii	Gas filling stations for vehicles and electric charging points.	
iii	Bakery	
iv	Salons/ Beauty Parlors	
V	Showrooms/ Furniture shops	
vi	Hardware	
xii.	Studios	
xiii.	Communication centres	
ix	Plant nurseries	
Х	Vehicle Service Centres	
xi	Garage	
xii	Electric item repairing centres	
xiii.	Grinding mills	
xiv	Tourism related services providing shops	
XV	Weddings and Functions related services providing shops	
i.	Single Unit Houses	
i.	Single Unit Houses	
ii.	Residential Apartments	
iii.	Multiple Unit Houses	
iv.	Hostels	
٧.	Quarters	
(c.) Healt		
i.	Pharmacies	
ii.	Medical advisory service centers	
iii.	Ayurvedic medical centers	
iv.	Massage centers	
٧.	Laboratories and Sample collecting centers	
vi.	Veterinary Clinics	
vii	Laboratories and Sample collecting centers	
(d.) Educa	ational	
i.	Kindergartens and preschools	
ii.	Private Tuition Classes	
iii.	Schools	

(e.) Institutional		
i	Professionals offices	
ii	Banks and Financial Institutions	
iii.	ATM Centers	
(f.) Socia	l Services	
i.	Community centres / Cultural centres	
ii.	Libraries	
iii.	Body fitness centres/ Gymnasium	
iv.	Day-care Centres	
٧.	Elders orphanage/ Children's orphanage	
(g.) Tour	ism	
i.	Restaurant	
ii.	Reception Hall	
iii.	Holiday Resorts	
iv.	Tourist Hotels	
V	Guest House	
vi	Cabana	
vii.	Tourism Bungalows	
viii	Boutique Hotels	
(h.) Indu		
i.	Cottage industry/ Handicraft products / Indoor equipment	
	(non-polluting)	
ii.	Other industries	
iii.	Warehouses	
iv.	Printing related industries	
V	Saw mills	
vi	Quarry mining	
vii	Wood/ Furniture industry	
viii	Textile industry	
ix	High Tech/ IT related industry	
Х	Foods related industry	
xi	Tea and other agriculture related industry	
(i.) Public	c and recreational	
i.	Children's parks	
ii.	Parks	
iii.	Open spaces	
iv.	Landscaping Areas	
٧.	Cinemas/ Open Theatres/ Art Galleries/Museum	
vi.	Sports Complexes (Outdoor)	
vii.	Sports Complexes (Indoor)	
	1 . , , ,	

### 7.5.4. Medium Density Residential zone

Map 7.5: Medium Density Residential Zone



# 7.5.4.1 Permissible Uses for Medium Density Residential Zone

Table 7.9: Zoning Regulations of Medium Density Residential Zone

04. Medium Density Residential Zone		
Zone Definition	This area is an area where the Mahaweli River passes through the central area to the east and there is an agricultural activity on both sides of the river. Also, the Badulu railway line is an area where there is a medium-density residential development, with access to the Ambagamuwa road and Kothmale road through a number of side roads. The part on both sides of the river has a plain nature and the areas on both sides are located with mountains and slopes. There is an agricultural activity on both sides of the river and the northern part is more populated.	
Boundaries	Map 7.5	
Zone Factor	1.0	
Zoning Guidelines	<ul> <li>(01) The minimum land extent shall not be less than 10 perches in case of subdivision and development of land.</li> <li>(02) The minimum extent of land shall be determined according to the General Regulations No. 2235/54 dated 2021.07.08.</li> <li>(03) Any development planning adjacent to the Mahaweli River shall be designed frontage towards the Mahaweli River.</li> <li>(04) 06 meters wide land strip parallel to the Mahaweli River shall be landscaped and maintained as a green strip using suitable plants.</li> <li>(05) When carryout any development activities on both sides of the railway line, with the agreement of the railway department, the area facing to the railway line shall be landscaped.</li> <li>(06) The recommendation from the National Building Research Organization (NBRO) shall obtained prior to any development activities.</li> </ul>	

# 7.5.4.2 Permissible Uses for Medium density Residential Zone

Table 7.10: Permissible Activities of Medium Density Residential Zone

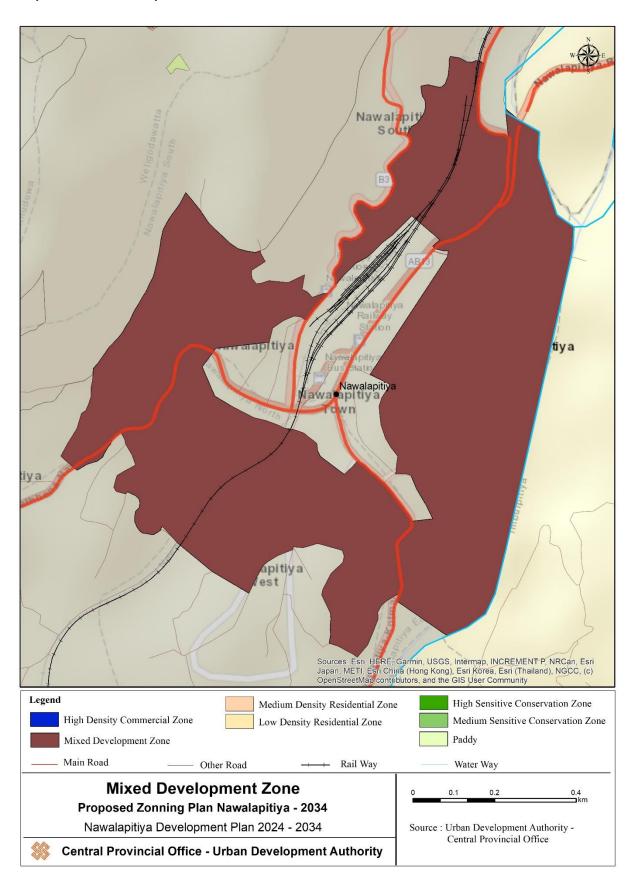
No.	Permissible uses		
(a.) Commerc	ial		
i.	Retail shops		
ii.	Supermarkets		
iii.	Liquor bar		
iv.	Filling stations		
v.	Gas filling stations for vehicles and electric charging points.		
vi.	Bakery		
vii.	Salons/ Beauty Parlors		
viii.	Showrooms/ Furniture shops		
ix.	Vehicle Spare parts		
х.	Hardware		
xi.	Whole Sale stores		
xii.	Studios		
xiii.	Communication centres		
xiv.	Plant nurseries		
xv.	Vehicle Service Centres		
xvi.	Garage		
xvii.	Electric item repairing centres		
xviii.	Funeral parlors and funeral reception halls		
xix.	Laundry and Cloth cleaning centres		
xx.	Grinding mills		
xxi.	Tourism related services providing shops		
xxii.	Weddings and Functions related services providing shops		
xxiii.	Car sale showrooms		
xxiv.	Multi floor parking		
xxv.	Open parking lot		
xxvi.	Broadcasting station		
xxvii.	disposal recycle collection centers		
(b.) Residenti	al		
i.	Single Unit Houses		
ii.	Residential Apartments		
iii.	Multiple Unit Houses		
iv.	Hostels		
v.	Quarters		

(c.) Healt	h		
i.	Pharmacies		
ii.	Medical advisory service centers		
iii.	Ayurvedic medical centers		
iv.	Massage centers		
٧.	Laboratories and Sample collecting centers		
vi.	Veterinary Clinics		
vii.	Hospitals		
viii.	Laboratories and Sample collecting centers		
(d.) Educ	ational		
i.	Kindergartens and preschools		
ii.	Private Tuition Classes		
iii.	Schools		
(e.) Instit	utional		
i.	Government offices		
ii.	Private offices		
iii.	Professionals offices		
iv	Banks and Financial Institutions		
٧	ATM Centers		
(f.) Socia	l Services		
i.	Community centres / Cultural centres		
ii.	Libraries		
iii.	Body fitness centres/ Gymnasium		
iv.	Day-care Centres		
٧.	Elders orphanage/ Children's orphanage		
(g.) Touri	sm		
i.	Restaurant		
ii.	Reception Hall		
iii.	Holiday Resorts		
iv	City Hotels		
٧.	Tourist Hotels		
vi.	Guest House		
vii.	Cabana		
viii.	Tourism Bungalows		
ix.	Boutique Hotels		
х.	Clubs & lodges		

(h.) Industries			
i.	Cottage industry/ Handicraft products / Indoor equipment (non-polluting)		
ii.	Other industries		
iii.	Warehouses		
iv.	Printing related industries		
V	Saw mills		
vi	Quarry mining		
vii	Wood/ Furniture industry		
viii.	Textile industry		
ix.	High Tech/ IT related industry		
х	Foods related industry		
xi	Tea and other agriculture related industry		
(i.) Public a	nd recreational		
i.	Children's parks		
ii.	Parks		
iii.	Open spaces		
iv.	Landscaping Areas		
V.	Cinemas/ Open Theatres/ Art Galleries/Museum		
vi.	Sports Complexes (Outdoor)		
vii.	Sports Complexes (Indoor)		
viii.	Assembly hall		

### 7.5.5 Mixed Development Zone

Map 7.6: Mixed Development Zone



# 7.5.5.1 Regulations and Permissible Uses for Mixed Development Zone

Table 7.11: Zoning Regulations of Mixed Development Zone

05. Mixed Development Zone			
Zone Definition	This zone is accessible from Nawalapitiya - Gampola road, Nawalapitiya Ambagamuwa road, Nawalapitiya Kothmale road, Bailey road and other side roads and it has been densified with commercial, residential and mixed development activities and the zone comprises with the main schools, hospitals and other service areas.		
Boundaries	Map 7.6		
Zone Factor	1.75		
Allowable Plot Covarage	As per the general regulations published in the Gazette No. 2235/54 dated 08.07.2021.		
Zoning Guidlines	<ul> <li>(01) The minimum land extent shall not be less than 06 perches in case of subdivision and development of land.</li> <li>(02) The minimum extent of land shall be determined according to the General Regulations No. 2235/54 dated 2021.07.08.</li> <li>(03) Any development planning adjacent to the Mahaweli River shall be designed frontage towards the Mahaweli River.</li> <li>(04) 06 meters wide land strip parallel to the Mahaweli River shall be landscaped and maintained as a green strip using suitable plants.</li> <li>(05) When carryout any development activities on both sides of the railway line, with the agreement of the railway department, the area facing to the railway line shall be landscaped.</li> <li>(06) The recommendation from the National Building Research Organization (NBRO) shall obtained prior to any development activities.</li> <li>(07) The minimum land extent and use of plots of land within the 60-meter reservation of Mahaweli River shall be in accordance with the requirements of the Mahaweli Development Authority.</li> </ul>		

# 7.5.5.2 Permissible Uses for Mixed Development Zone

Table 7.12: Permissible Activities of Mixed Development Zone

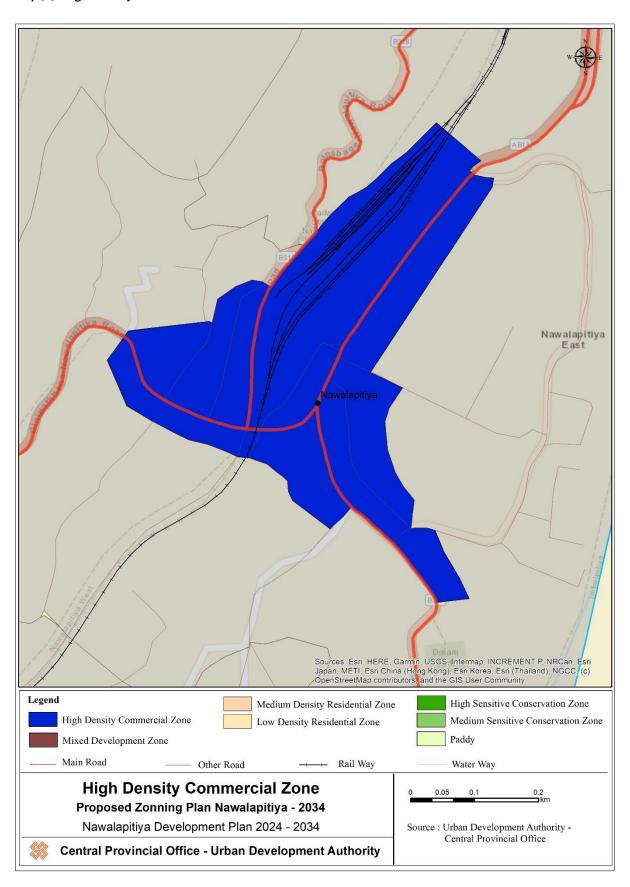
No.	Permissible uses		
(a.) Comn	nercial		
i.	Retail shops		
ii.	Supermarkets		
iii.	Liquor bar		
iv.	Filling stations		
٧.	Gas filling stations for vehicles and electric charging points.		
vi.	Bakery		
vii.	Salons/ Beauty Parlors		
viii.	Showrooms/ Furniture shops		
ix.	Vehicle Spare parts		
х.	Hardware		
xi.	Whole Sale stores		
xii.	Studios		
xiii.	Communication centers		
xiv.	Plant nurseries		
XV.	Vehicle Service Centers		
xvi.	Garage		
xvii.	Electric item repairing centers		
xviii.	Funeral parlors and funeral reception halls		
xix.	Laundry and Cloth cleaning centers		
XX.	Grinding mills		
xxi.	Tourism related services providing shops		
xxii.	Weddings and Functions related services providing shops		
xxiii.	Car sale showrooms		
xxiv.	Multi floor parking		
xxv.	Open parking lot		
xxvi.	Broadcasting station		
(b.) Resid	ential		
i.	Single Unit Houses		
ii.	Residential Apartments		
iii.	Multiple Unit Houses		
iv.	Hostels		
٧.	Quarters		

(c.) Health	1		
i.	Pharmacies		
ii.	Medical advisory service centers		
iii.	Ayurvedic medical centers		
iv.	Massage centers		
٧.	Laboratories and Sample collecting centers		
vi.	Veterinary Clinics		
vii.	Hospitals		
viii.	Laboratories and Sample collecting centers		
(d.) Educa	tional		
i.	Kindergartens and preschools		
ii.	Private Tuition Classes		
iii.	Schools		
(e.) Institu	ıtional		
i.	Government offices		
ii.	Private offices		
iii.	Professionals offices		
iv	Banks and Financial Institutions		
V	ATM Centers		
(f.) Social	Services		
i.	Community centers / Cultural centers		
ii.	Libraries		
iii.	Body fitness centers/ Gymnasium		
(g.) Touris	sm		
i.	Restaurant		
ii.	Reception Hall		
iii.	Holiday Resorts		
iv	City Hotels		
٧.	Tourist Hotels		
vi.	Guest House		
viii.	Tourism Bungalows		
ix.	Boutique Hotels		
х.	Clubs & lodges		
(h.) Industries			
viii.	Textile industry		
ix.	High Tech/ IT related industry		
Х	Foods related industry		
	<u> </u>		

(i.) Public and recreational		
ii.	Parks	
iii.	Open spaces	
iv.	Landscaping Areas	
٧.	Cinemas/ Open Theatres/ Art Galleries/Museum	
vii.	Sports Complexes (Indoor)	
viii.	Assembly hall	

### 7.5.6 High Density Commercial Zone

Map 7.7: High Density Commercial Zone



# 7.5.6.1 Regulations and Permissible Uses for High Density Commercial Zone

Table 7.13: Zoning Regulations of High-Density Commercial Zone

o6. High Density Com	mercial Zone		
Zone Definition	Commercial uses are widespread within this area on both sides of the road up to the starting point of Bailey Road on the Nawalapitiya - Gampola main road, on the Nawalapitiya - Kothmale road up to the junction in front of the district hospital and on the Nawalapitiya - Ambagamuwa main road up to the Kanda Devala Road junction. This is the Central Business District (CBD) area and is a high-density development area, 90% of which is built adjacent to each other. The buildings range from 1-8 storeys and area is a flat terrain. It is also expected to develop an orderly city center		
Boundaries	in this region.  Map 7.7		
Zone Factor	2.0		
Allowable Plot	As per the general regulations published in the Gazette No.		
Covarage	2235/54 dated 08.07.2021.		
Zoning Guideline	<ul> <li>(o1) If there is a public road to the side space or the rear open space in addition to the access from the main road, the authority shall have the power to consider the said space as rear space (rear space).</li> <li>(o2) Urban Development Authoity Priliminary Planning Clearanace shall obtain beforeplanning any development within this zone.</li> <li>(o3) In cases where it is practically impossible to show the required parking space in the premises, the related fee shall be paid to Nawalapitiya Municipal Council and Pasbagekorale Pradeshiya Sabha.</li> <li>(o4) Subject to the recommendation of the Road Development Authority (RDA), the authority has power to consider building limit as 10 meters.</li> <li>(o5) The maximum height of the building shall be limited to 12 meters and the Preliminary Planning Clearance (PPC) form Urban Development Authority shall be obtained for the facade plan along with the building application.</li> </ul>		

# 7.5.6.2 Permissible Uses for High Density Commercial Zone

Table 7.14: Permissible Activities of High-Density Commercial Zone

No.	Permissible uses		
(a.) Comi	mercial		
i.	Retail shops		
ii.	Supermarkets		
iii.	Liquor bar		
iv.	Salons/ Beauty Parlors		
٧.	Showrooms		
vi.	Studios		
vii.	Communication centers		
viii.	Electric item repairing centers		
ix.	Laundry and Cloth cleaning centers		
х.	Tourism related services providing shops		
xi.	Weddings and Functions related services providing shops		
xi.	Car sale showrooms		
xii.	Multi floor parking		
xiii.	Open parking lot		
(1.) = 1			
(b.) Resid	dential		
i.	Single Unit Houses		
ii.	Residential Apartments		
iii.	Multiple Unit Houses		
iv.	Hostels		
٧.	Quarters		
(- \ 1110	L		
(c.) Healt i.			
	Pharmacies  Modical advisory comise contars		
ii.	Medical advisory service centers		
iii.	Ayurvedic medical centers		
iv.	Massage centers  Laboratories and Sample collecting centers		
V.	Laboratories and Sample collecting centers		
vi.	Veterinary Clinics		
vii.	Hospitals		

(d.) Institutional		
i.	Government offices	
ii.	Private offices	
iii.	Professionals offices	
iv	Banks and Financial Institutions	
V	ATM Centers	
(f.) Soci	al Services	
i.	Community centers / Cultural centers	
ii.	Libraries	
iii.	Body fitness centers/ Gymnasium	
(g.) Tourism		
i.	Restaurant	
ii.	Boutique Hotels	

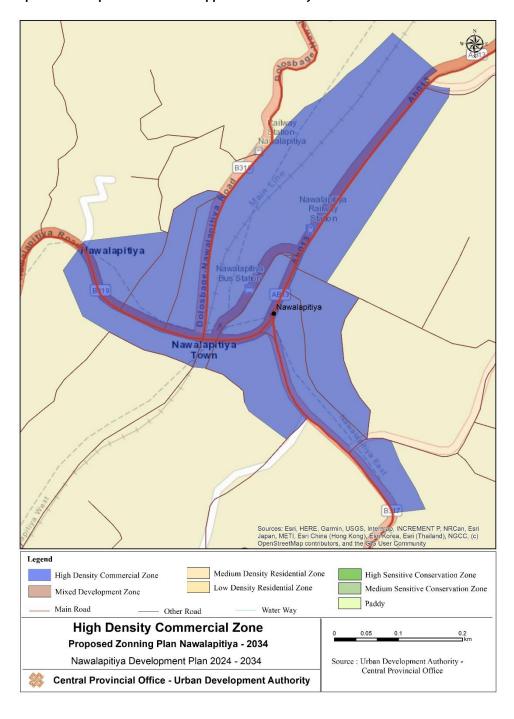
# Chapter o8

# **Urban Design Guide Plan**

### 8.1 Introduction

### **Special Guidelines for High Density Commercial Zone**

Map 8.1: Special Development Guidelines Applicable Boundary



The approval for the developments within this boundary will be granted following the basic requirements noted below;

- 1. All the development activities proposed within this boundary should obtain a preliminary planning clearance from Urban Development Authority.
- 2. The existing lands with an area of less than 150 square meters are permitted to develop residential buildings up to a maximum height of 10 meters. For other types of developments, the context will be taken into consideration.
- 3. If the land area is 150 square meters or more, a building with a height of up to 15 meters is permitted. Additional height may be allowed if it complies with other applicable regulations.
- 4. For developments on existing land lots with an area of less than 150 square meters, a rear space of 2.28 meters is sufficient.

\*

A detailed planning guide plan for this area is to be prepared and will be gazette as an amendment to this plan.

# **CHAPTER 09**

# Proposed Road Width, Building Lines and Reservations

# 9.1 Building Line & Proposed Road Width

Table 9.1: Nawalapitiya Planning Area Road Inventory

#### **ROAD INVENTORY**

Province: CENTRAL Nawalapitya UC

Nawaiapitya oc			
Serial number	Name of the Road	Proposed Road width (m)	Building line (m)
1	Nawalapitiya - Gampola Road	15	15
2	Nawalapitiya - Ambagamuwa Road	15	15
3	Nawalapitiya - Kothmale Road	15	15
4	Dekinda Road	7.5	7.5
5	Gonndennawa circular Rd.	7	4.5
6	By road going to G64 Elec.Post at Gampola road	7	4.5
7	Steps in Gondennawa Waththa road	7	4.5
8	Belli Road	7	6
9	Madagahawathura by road	7	4.5
10	Thearter Road	7	6
11	Council Road	7	6
12	Police quarters road	7	4.5
13	Gampola Back lane	7	6
14	Kothmale backlane	7	4.5
15	Soysakelley circle road	7	6
16	Soysakelley 8 Lane	7	4.5
17	Darmapala 7th Lane	7	4.5
18	Darmapala Mawatha	7	4.5

19	Mahakubura 5th lane	7	4.5
20	Soysakelle to Mahakubura by road	7	4.5
21	Uththupilla road	7	4.5
22	Godamuduna Road	7	4.5
23	Sorthouse Road	7	4.5
24	Kithulkote Road	7	4.5
25	Cemetry Road	7	4.5
26	Vogans Park road	7.5	4.5
27	Jayasundara road	7	6
28	Panithudumulla 3Rd Lane	7	4.5
29	Sinappudeniya road	7	4.5
30	Karahadungala road	7	4.5
31	Ketthe Road	7	4.5
32	Owita road	7	4.5
33	Abamulla road	7	4.5
34	Dolosbage back lane	7	4.5
35	Hill road	7	4.5
36	Kavisvara Mawatha (Court Road)	7	6
37	Veekanda pathana road	7	4.5
38	Ranaviru Mawatha at Dolosbage road	7	4.5
39	Abagamuwa 3rd lane	7	4.5
40	Kande Dewala road	7	4.5
41	Panigodamulla road	7	6
42	Hetti Pilla Road	7	4.5
43	Muslim cemetry road	7	4.5
44	Jethawanarama road	7	4.5
45	Jethawanarama Circle road	7	4.5
46	Hadungala waththa road	7	4.5
47	Panithuduwa road (Muslim Cemetry Road)	7	4.5
48	Abagamuwa 5th lane	7	4.5

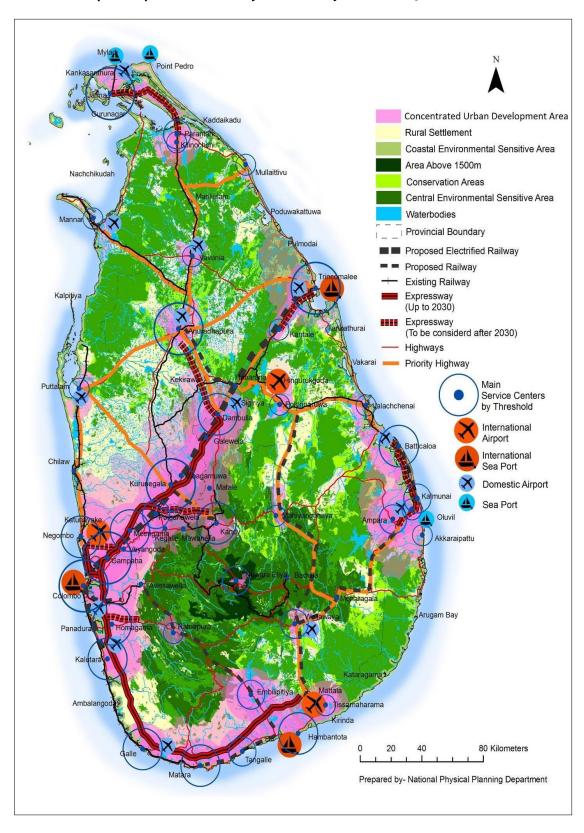
### **ROAD INVENTORY**

Province: CENTRAL Pasbage Korale PS

No	code	Road Name	Proposed Rd width (M)	Building Line- (M)
Weli	igodawatta		, ,	, , ,
1.	CK.P.B.E 052	Katukithula Rd	7	4.5
2.	CK.P.B.E 053	Ihala Kandu Mw	7	4.5
3.	CK.P.B.E 054	Suhada Mw	7	4.5
4.	CK.P.B.E 055	Katukithula Ihala Mw (New)	7	4.5
5.	CK.P.B.E 056	Pussemankada Rd	7	4.5
6.	CK.P.B.E 057	Pussemankada Sub Rd 1	7	4.5
7.	CK.P.B.E 061	Gonawalapathana Sub Rd 1	7	4.5
8.	CK.P.B.E 062	Gonawalapathana Sub Rd 2	7	4.5
9.	CK.P.B.E 065	Shemrock Elders home Rd	7	4.5
Paql	legama			
10	CK.P.B.E 041	Agyruwala Rd	7	4.5
11	CK.P.B.E 044	Andangoda Rd	7	4.5
12	CK.P.B.E 046	Tiltan Pahala Rd	7	4.5
13	CK.P.B.E 047	Pallegama Pansala Rd near by Tiltan Factory	7	4.5
War	akawa	, ,	1	1
14	CK.P.B.E 038	Warakawa Rd	7	4.5
15	CK.P.B.E 039	Warakawa Gammadda Rd	7	4.5
16	CK.P.B.E 040	Pethmagahinna Rd	7	4.5
17	CK.P.B.E 042	MountKamel Rd	7	4.5
18	CK.P.B.E 043	MountKamel Sub Rd	7	4.5

### **Annexures**

Annexure 1: Proposed Spatial Structure by National Physical Plan 2050

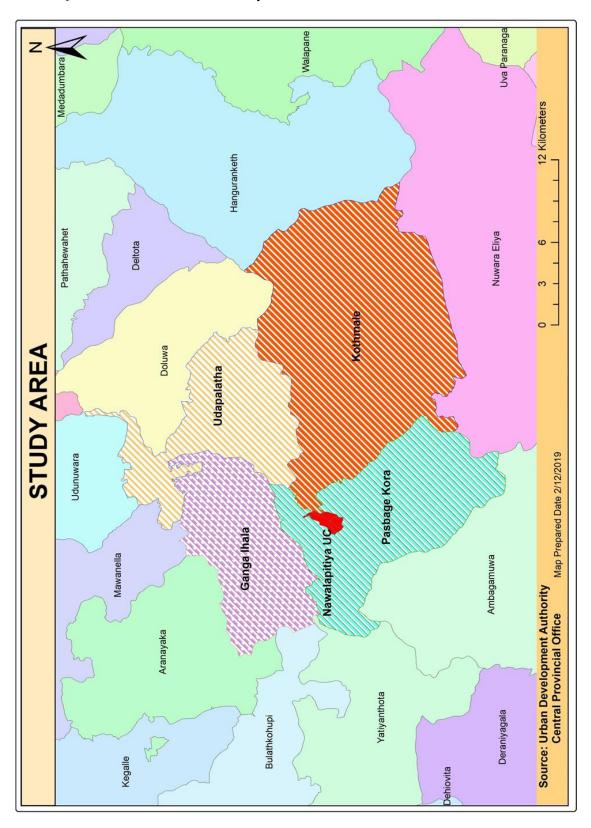


Annexure 2: Successfully Implemented Projects Proposed by Nawalapitiya 2008-2025 Development Plan

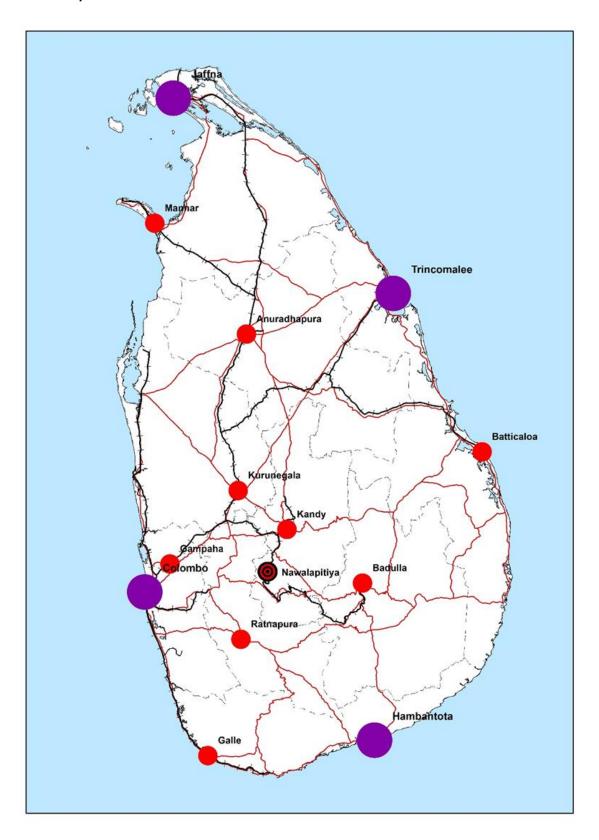


- I. Police Station Building
- II. Super Market Complex
- III. Base Hospital Building
- IV. Court Complex
- V. Jayathilaka Sports Complex

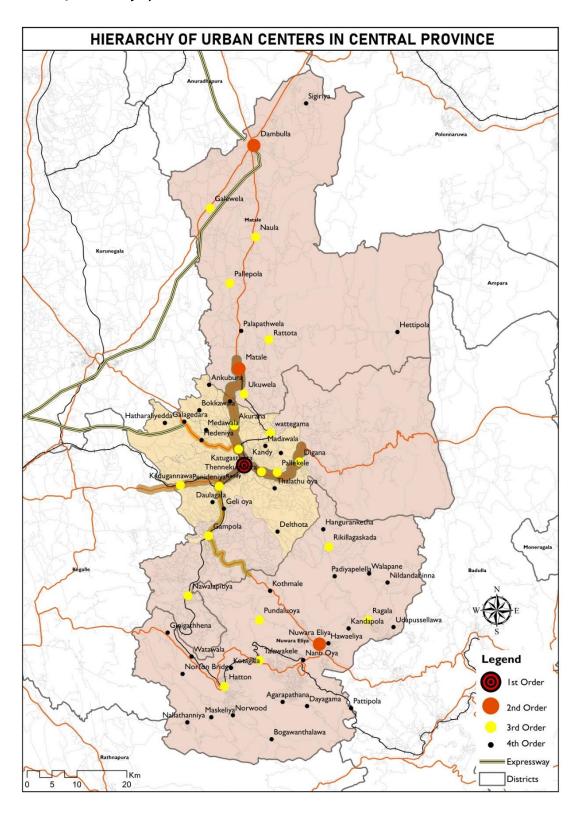
Annexure 3: Local Authorities within Study Area



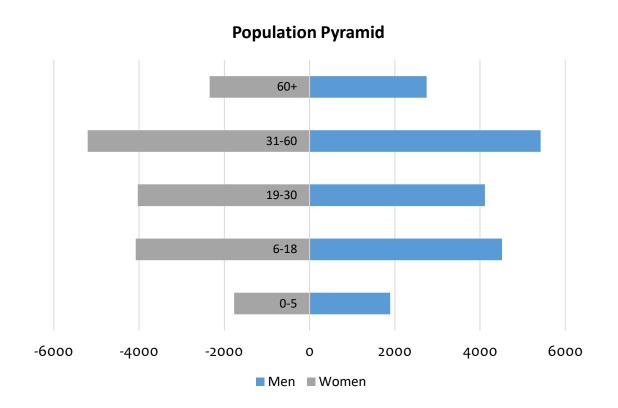
# **Annexure 4: National Cities**



Annexure 5: Hierarchy of Urban Centers



Annexure 6: Population Pyramid (based on population records provided by Department of Census 2012)



Age	Men	Women
0-5	1892	1768
6-18	4515	4079
19-30	4116	4031
31-60	5423	5205
60+	2748	2346

## Annexure 7: Result of Delphi technique

Identified Experts		ntifie	d issu	es th	roug	h sta	kehc	older	mee	eting
		В	С	D	E	F	G	Н	I	J
Director of the UDA CP	7	7	10	8	6	5	10	10	1	9
Deputy Director(Planning) of the UDA CP	6	10	10	9	5	1	10	10	1	8
Deputy Director(Land) of the UDA CP	5	7	8	9	7	2	9	10	1	10
Assistant Director of the UDA CP	6	8	9	8	8	3	7	9	2	7
Environmental Planner of the UDA	5	7	6	8	9	4	8	8	3	6
Town Planner	6	8	9	7	8	3	7	7	2	8
Land Officer of the UDA	5	7	9	8	6	2	6	10	3	9
Planning Officer 01 of the UDA	5	7	10	9	5	1	6	8	1	10
Planning Officer 02 of the UDA	4	9	9	10	6	2	8	9	2	10
Planning Officer 03 of the UDA	6	9	6	10	8	3	7	8	9	8
Planning Officer 04 of the UDA	8	8	10	9	7	4	8	7	7	9
Planning Officer 05 of the UDA	7	7	10	9	8	5	9	8	2	7
Planning Officer o6 of the UDA	5	7	9	10	10	6	8	9	6	10
Planning Officer 07 of the UDA	6	8	10	8	9	7	7	8	5	7
Total	81	109	125	122	102	48	110	121	45	118
Ranking	8	6	1	2	7	9	5	3	10	4

# Issues raised from the stakeholder analysis:

- A. No proper place for weekly fair
- B. Frequent floods due to breakdowns of drainage line
- C. Uncontrolled developments cause diminishes the scenic beauty
- D. Lack of Walkability
- E. Lack of vehicle parking facility
- F. Traffic congestion
- G. Landslides due to encroachment of sensitive areas
- H. Underutilized railway lands
- I. CCTV surveillance for safety
- J. Lack of disable facilities

## **Annexure 8: Zonning Boundaries**

## **High Density Commercial Zone** (Map 7.7)

#### North

Starting 10 meters north of the point where the Ela intersects (near Anuruddha Kumara National School) and the centreline of the Ambagamuwa road bridge, the boundary then extends eastward to the point where it meets the centreline of Hill Road. From there, it follows the centreline of Hill Road, moving north, northeast, and east, until it reaches the centreline of Dolosbage Road. The boundary then continues 20 meters northeast along the centreline of Dolosbage Road to the point where it intersects the centreline of the PS Road that connects to Dolosbage Road. The boundary follows the centreline of the PS Road, moving east and northeast, and reach to the point at the geographical coordinates of 7° 3′ 32.85″N, 80° 32′ 17.0″E.

#### **East**

Starting from the last-mentioned point, extend sout heast to the point where it meets the centreline of the Gampola–Nawalapitiya Road. Then, continue along the centreline of the same road in the southwest direction to the point where it intersects the centreline of Balley Road. From there, follow the centreline of Balley Road for 50 meters in the southeast direction, reaching the geographical coordinates of 7° 3′ 32.85″N, 80° 32′ 17.0″E. Next, from the last-mentioned point, extend straight south to the point where it intersects the centreline of Cinema Road. Then, follow the centreline of Cinema Road for 30 meters in the east direction to the point where it meets the centreline of the by-road connecting to Cinema Road. Continue along the by-road southward until you reach the geographical coordinates of 7° 3′ 8.92″N, 80° 32′ 17.0″E, which marks the southern boundary.

#### South

Starting from the last-mentioned point, turn towards the west direction and extend straight to the point where it meets the centreline of Kothmale Road. Then, continue along the centreline of Kothmale Road towards the northwest up to the point where it meets the centreline of Soysa Kele Road. Next, continue along the centerline of Soysa Kele Road for 10 meters towards the southwest, then continue straight in the northwest direction until reach the point where it intersects the centrelines of Jayasundara Road and

Penithudumulla Road. Thence, continue along the centreline of Penithudumulla Road, heading northwest, south, and again northwest, until reach the point where it intersects the centreline of Ela, which flows adjacent to Anuruddha National College.

#### West

Starting from the last-mentioned point, continue along the centreline of Ela towards the north and end at the starting point mentioned in the above northern boundary.

## Mixed Development Zone (Map 7.6)

#### North

Starting from the geographical coordinates 7° 3′ 8.92″ N, 80° 32′ 17.0″ E, which are located at the centreline of Kande Dewala Road, continue along the centreline of the same road towards the east and southeast directions until reaching the point where it meets the centreline of Hill Road. Then, continue along the centreline of Hill Road towards the south and east directions until reaching the centreline of Dolosbage Road. Next, follow the centreline of Dolosbage Road towards the north until reaching the geographical coordinates 7° 3′ 8.92″ N, 80° 32′ 17.0″ E. Then, continue along the centreline of the by road that connects to Dolosbage Road towards the north until reaching the geographical coordinates 7° 3′ 8.92″ N, 80° 32′ 17.0″ E. Thence, continue straight towards the east, intersecting the centreline of the Nawalapitiya-Gampola Road and meeting the point locates at the centreline of Mahaweli River.

## **East**

Starting from the last-mentioned point, continue along the centreline of the Mahaweli River towards the south and southwest directions, reaching the geographical coordinates  $7^{\circ}3'8.92"N, 80^{\circ}32'17.0"E$ .

## South

Starting from the last-mentioned point, continue straight to the point located at the centreline of Jayathilake Playground Access Road. Thben, along the centreline of the said road, continue until reach the centreline of Kothmale Road. Next, continue along the centreline of Kothmale Road towards the north until meet the centreline of the by road

connecting to Kothmale Road. Then, along the centreline of the said by road, continue towards the southwest and northwest directions respectively until reach the geographical coordinates 7° 3' 8.92" N, 80° 32' 17.0" E. Thence, continue towards the east until reach the geographical coordinates 7° 4' 8.92" N, 80° 32' 17.0" E, which is located at the centreline of Soysa Kele Water Tank Road. Then, continue along the centreline of the said road towards the north and west directions respectively, until you reach the centreline of Soysa Kele 4th Lane. Thence, along the centreline of Soysa Kele 4th Lane, continue towards the southwest until reach the point where it meets the centreline of Uthupihilla by road. Then, along the centreline of Uthupihilla by road, continue towards the northwest until reach the end of the road, where it intersects with the Badulla railway and reach the centreline of Jayasundara Road. Thence, along the centreline of Jayasundara Road, continue until reach the geographical coordinates 7° 3' 8.92" N, 80° 32' 17.0" E, located at the four-way junction. Thence, continue along the centreline of the road leading south until reach the geographical coordinates 7° 7' 8.92" N, 80° 32' 17.0" E.

## West

Starting from the last-mentioned point, continue along the centreline of the road leading north and continue towards northwest until reaching the centreline of Jethawana Road. Then, along the centreline of Jethawana Road, continue respectively towards northwest, southeast, and again northwest directions, and reach the geographical coordinates 7° 7' 8.92" N, 80° 32' 17.0" E. Thence, along the centreline of the by road starting from there, continue respectively towards northwest, northeast, and north directions, and reach the geographical coordinates 7° 7' 8.92" N, 80° 32' 17.0" E, which is noted as the starting point of the north boundary.

## **Medium Density Residential Zone** (Map 7.2)

#### North

Starting from the geographical coordinates 7° 3' 8.56" N, 80° 31.28" E, continue towards the east along the centreline of Urban Council Road and reach the centreline of a by road located at the geographical coordinates 7° 3' 17.96" N, 80° 31' 38.77" E. Thence, along the centreline of the said by road, continue respectively towards the south and southeast

reaching the point where it meets the centreline of Ambagamuwa Road. Thence, continue along the centreline of Ambagamuwa Road towards the northeast where meet the centreline off Jethawana Road, and then lead along the centreline of Jethwana Road, respectively towards the southeast, northwest, and south directions, until reaching the geographical coordinates 7° 3′ 10.99″ N, 80° 31′ 46.41″ E. From there, continue respectively towards the southwest, south, east, and again southeast directions until reaching the point where it meets the centreline of Jayasundara Road. Then, continuing along the centreline of Jayasundara Road, proceed straight towards the southwest and reach the geographical coordinates 7° 3′ 2.57″ N, 80° 31′ 56.91″ E, where the centreline of Soysa Kele 4th Lane is located. Thence, continue along the centreline of Soysa Kele 4th Lane, respectively towards the northeast and east, passing through Soysa Kele Junction and Water Tank Road, until reaching the endpoint of the road at the geographical coordinates 7° 3′ 0.42″ N, 80° 32′ 4.22″ E. From there, continue straight towards the southwest and reach the geographical coordinates 7° 3′ 59.28″ N, 80° 32′ 4.22″ E, where the centreline of Urban Council Road is located. Then, continue along the centreline of Urban Council Road, respectively towards the southeast, north, and northeast directions, until reaching the point where it meets the centreline of Kothmale Road. Thence, intersecting the centreline of Kothmale Road, continue straight to the south and reach the point where it intersects the centreline of the Mahaweli River.

#### **East**

Starting from the last-mentioned point continue along the centreline of Mahaweli river respectively to the directions of southwest and south directions reach the centreline of Kothmale Road and, thence lead along the centreline of Kothmale Road respectively towards east and south directions and reach the geographical coordinates 7° 2'42. 50 °N-80°32'.22.20°E. Thence, along the centreline of Urban Council Road exist at the east direction continue respectively towards east and south directions reach to the geographical coordinates 7° 2'27. 42 °N -80°32'22.67°E.

#### South

Starting from the last-mentioned point along the centreline of the Urban Council Road leads towards west direction and reach the centreline of the by road located at geographical coordinates 7° 2'22.65 °N - 80°32'6.25 °E. Thence, along the centreline of said road continue more towards the west direction and reach to the centreline of another by road located at geographical coordinates 7° 2 24. 32 °N -80°32'.2.06°E. Thence, along the centreline of said by road continue respectively towards south and northwest directions and reach the centreline of Mapakanda-Weligampola Road. Thence, along the Mapakanda-Weligampola Road continue respectively towards west, south and again west directions and reach to the centreline of Mahaweli River.

## West

Starting from the last mentioned point along the centreline of Mahaweli River respectively leading towards north and northeast directions reach to the geographical coordinates 7° 2′50.28 °N -80°31′.31.06°E. Thence, along the Centreline of Ela which is located at the mentioned coordinates continue strait towards the north and reach the geographical coordinates 7° 2′59.34 °N -80°31′.31.81°E. Thence, continue strait towards north directions and reach the geographical coordinates 7° 3′2.77 °N -80°31′.31.16°E which is located at the centreline of Ambagamuwa Road. Thence, continue again strait to north direction up to the geographical coordinate 7° 3′9.54 °N - 80°31′.29.52°E which located at the mid of three-way junction and, thence continuing towards north direction and end at the starting point mentioned in the north boundary which is located at the geographical coordinates 7° 3′ 8.56" N, 80° 31.28" E.

## **Low Density Residential Zone** (Map 7.4)

#### North

Starting from the geographical coordinates 7° 2′56.41°N - 80°30′.58.34°E that located at the centreline of Ambagamuwa Road continue respectively towards east, north and again east directions and reach the geographical coordinates 7° 3′2.77 °N - 80°31′.31.16°E that exist at

the centreline of same road. Thence, continue towards south direction and reach to the geographical coordinates 7° 2'59.34 °N - 80°31'.31.81°E that exist at the centreline of Mahaweli River. Thence, continue along the centreline of Mahaweli River towards southeast direction and reach to the geographical coordinates 7° 2'46.79 °N - 80°31'.33.38°E and, further continue along the centreline of Mahaweli River respectively towards southwest, southeast and south directions and reach to the centreline of Weligapola Road and, thence along the centreline of Weligampola Road reach to the Nawalapitiya towan area and meet the geographical coordinates 7° 3'2.33.15 °N - 80°31'.49.60°E. Thence, along the centreline of by road initiating at the last mentioned point continue towards south, east and northeast directions and reach to the geographical coordinates 7° 2'24.32 °N -80°32'.2.06°E. Thence, along the centreline of the road that initiating from the last mentioned point continue respectively towards southeast and east directions and reach to the geographical coordinates 7° 2'22.65 °N - 80°32'.6.25°E. Thence, along the centreline of the by road that exist at the last mentioned point continue respectively towards the northeast, southeast and east directions and reach to the geographical corrdinates 7° 2'27.42 °N - 80°32'.22.67°E. Thence, along the centreline of the by road that exist at the lastmentioned point continue respectively towards north, northeast, east, northwest, northeast and west directions and reach to the geographical coordinates 7° 2'42.50 °N -80°32'.22.20°E where located at the centreline of Kothmale Road. Thence, along the centreline of Kothmale Road continue respectively towards northeast and east directions and reach to the geographical coordinates of 7° 2'45.46 °N - 80°32'.34.40°E.

## **East**

Starting from the last mentioned point continue towards southeast direction and reach to the geographical coordinates 7° 2'42.92 °N - 80°32'.35.89°E. Thence, continue towards south direction and reach to the geographical coordinates off 7° 2'40.78 °N - 80°32'.35.85°E. Thence, continue to east direction and reach to the geographical coordinates of 7° 2'38.81 °N - 80°32'.37.67°E. Thence, continue again to the east and south direction up to meet the centreline of existing public road. Thence, along the centreline of said public road continue towards the south until reach to the geographical coordinate 7° 2'34.23 °N - 80°32'.37.84°E.

#### South

Starting from the last-mentioned point continue towards southwest direction and reach to the geographical coordinates 7° 2'18.23 °N - 80°32'.15.58°E and, thence continue towards west direction and reach to the geographic coordinates of 7° 2'17.40 °N - 80°32'.4.36°E where exist at the centreline of a by road. Thence, along the centreline of said by road continue towards southwest direction and reach to the geographical coordinates 7° 2'16.17 °N - 80°32'.2.29°E. Thence, continue towards the west direction until meet the geographical coordinate 7° 2'14.70 °N - 80°31'.59.97°E that located at the centreline of another by road. Thence, along the centreline of said road towards west direction and meet the geographical coordinate 7° 2'15.19°N - 80°31'.51.79°E. Thence, turn and continue towards northwest direction until reach the geographic coordinate 7° 2'22.79°N - 80°31'.48.06°E. Thence, continue towards west direction up to meet the centreline of Badulla railway. Thence, along the centreline of Badulla railway continue respectively towards south and southeast directions and reach to the geographical coordinates 7° 1'55.22°N - 80°31'56.95°E. Thence, continue towards southeast direction until reach the geographical coordinate 7° 1'52.87°N - 80°31 59'.64°E that exist at the centreline of Samanagala Gama Road. Thence, continue along the centreline of said road towards west direction and reach to the geographical coordinates 7° 1'51.70°N - 80°31'.55.44°E. Thence, continue to south direction and reach the geographical coordinates 7° 1'39.92°N - 80°31'56.41°E. Thence, continue to southwest direction and reach to the geographical coordinates 7° 1'36.63°N - 80°31'53.96°E that located at the centreline of Mapakanda Road. Thence, continue along the centreline of Mapakanda Road towards northwest direction until reach to the geographical coordinate 7° 1'37.77°N - 80°31'51.24°E. Thence, along the centreline that start from last mentioned point continue towards west direction and reach to the geographical coordinate 7° 1'39.27°N - 80°31'43.85°E. Thence, further along the centreline of other by road initiate from last mentioned point continue towards west direction until reach the geographical coordinates 7° 1'40.39°N - 80°31'40.42°E. Thence, continue towards north direction and reach the geographical coordinates 7° 1'47.62°N - 80°31'42.29°E. Thence, continue to northwest direction and reach the geographical coordinates 7° 1'51.96°N -80°31'34.27°E and thence, continue again to west direction until reach the geographical oordinate 7° 1′50.95°N - 80°31′31.28°E. Thence, continue to southwest direction and reach to the geographical coordinate 7° 1'48.07°N - 80°31'28.50°E. Thence, continue to west direction until reach the geographical coordinates 7° 1′48.57°N - 80°31′26.13°E and thence reach to the centreline of by road that exist at the geographical coordinate 7° 1′55.45°N - 80°31′26.03°E. Thence, continue to west direction and reach to the geographical coordinates 7° 1′55.90°N - 80°31′17.89°E and, thence continue towards southwest direction and reach to the geographical coordinates 7° 1′52.17°N - 80°31′12.78°E that exist at the centreline of a by road. Thence, continue along the centreline of said by road towards northeast direction until reach the geographical coordinates 7° 1′55.85°N - 80°31′14.63° that exist at the western boundary of Kendopitiya (1097) Grama Niladhari Division. Thence, along the western boundary of said Grama Niladhari Division (GND) continue respectively towards southwest, northwest, east, north and west directions and reach to the geographical coordinates 7° 2′9.03°N - 80°31′6.81°E where intersect the boundaries of Kendopitiya GND (1096) and Weligampola GND. Thence, reach to the geographical coordinate 7° 2′10.59°N - 80°30′56.29°E that located same Weligampola GND boundary and, from there continue along the southern boundary of Weligampola GND towards west and south directions until reach the geographical coordinate 7° 2′5.86°N - 80°30′46°E.

## West

Starting from the last-mentioned point continue along the western boundary of Weligampola GND respectively towards northwest, west, northeast and again west directions until reach the geographical coordinates 7° 2'16.52°N - 80°31'40.00°E that exist at the centreline of Mahaweli River. Thence, ccontinue along the centreline of Mahaweli River respectively towards north, northeast, east directions and reach the geographical coordinates 7° 2'40.92°N - 80°30'59.19°E that exist at the boundary of Karahandungala GND (1107). Thence, continue along the western boundary of Karahandungala GND towards north direction and reach the geographic coordinates 7° 5'38.89°N - 80°33'13.81°E where exist at the starting point of North boundary of this low residential zone.

## **Medium Sensitive Conservation Zone – 1** (Map 7.3)

## North

Starting from the geographical coordinates 7° 5'29.53 °N /80°32'.15.19°E reach to the northern boundary of Weligodawaththa GND (1102). Thence, along the northern boundary of said GND continue towards east direction and reach to the geographical coordinates 7° 5'33.20 °N /80°32'.31.47°E. Thence, continuing to south direction and reach to the geographical coordinates 7° 5'31.18°N /80°32'.31.66°E and, thence continue to southeast direction and reach to the geographical coordinate 7° 5'30.52 °N /80°32'.32.42°E. Thence, continue again towards the northeast direction and continue towards eaast direction and reach to the geographical corrdinates 7° 5'32.18 °N /80°32'.37.50°E. Thence, respectively continues respectively towards northeast and north direction until meet the geographical coordinate 7° 5'35.80 °N /80°32'.38.85°E that exist at the northern boundary of Weligodawaththa GND. Thence, continue along the northern boundary of said GND towards east direction until reach the geographical coordinate 7° 5'36.68 °N /80°32'.42.66°E. Thence, continue towards southeast direction until reach the geographic coordinate 7°5'35.75 °N /80°32'.43.86°E. Thence, continue towards south direction and reach the geographical coordinate 7° 5'34.66 °N /80°32'.44.25°E and, thence continue towards east direction and reach 7° 5'34.69 °N /80°32'.44.49°E and again continue towards north and reach the geographical coordinate 7° 5'35.83°N /80°32'.44.83°E. Thence, continue towards northeast direction up to the geographical coordinate 7° 5'36.26 °N /80°32'.45.39°E that exist at the northern boundary of Weligodawaththa GND. Thence, along the northern boundary of said GND continue towards east direction and rech to the geographical coordinate 7° 5'34.28 °N /80°32'.50.90°E. Thence, continue to the southwest direction and reach the geographical coordinate 7° 5'33.29 °N /80°32'.49.03°E. Thence, continue south until meet the geographical coordinate 7° 5'31.36 °N /80°32'.48.65°E and, from there continue towards southeast direction to reach the geographical coordinate 7° 5'30.14°N /80°32'.49.50°E. Thence, turn to northeast direction and reach the geographical coordinate 7° 5'32.42 °N /80°32'.53.61°E and, again to the southeast and reach geographical coordinate 7° 5'27.17°N /80°32'.56.42 °E. Thence, continue towards south direction and reach the geographical coordinate 7° 5'20.76 °N /80°32'.52.55°E. Thence, continue towards southeast and reach geographical coordinate 7° 5'20.76 °N /80°32'.52.55°E and, further continuing to southeast reach 7° 5'13.83 °N /80°33'.1.82°E. Thence, continue respectively to the directions of northest and north until reach the geographical coordinate 7° 5'35.04 °N /80°33'.0.70°E that located at the northern boundary of Weligodawaththa GND. Thence, continue towards east along the said northern boundary up to the end of it.

## **East**

Starting from the last-mentioned point reach to the geographical coordinate 7° 5'38.49 °N /80°33'.13.81°E and thence, continue up to the coordinate 7° 3'29.15°N /80°31'.58.44°E that exist at the centreline of by road.

## South

Starting from the last-mentioned point continue respectively towards north and west directions and reach to the geographical coordinate 7° 3'37.42 °N /80°31'.53.66°E. Thence, continuing towards southwest direction and reach the geographical coordinate 7° 3'20.02 °N /80°31'.44.45°E that locate the centreline of Urban Council road.

## West

Starting from the last mention point reach to the point that exist at the western boundary of Nawalapitiya-South GND (1086). Thence, continue along the said boundary towards east direction and reach the southern boundary of Weligodawaththa GND. Thence, again continue along the northern boundary of Nawalapitiya-South GND towards east direction and reach the geographical coordinates 7° 3′24.04 °N /80°31′.40.91°E. Thence, continue to north direction and reach 7° 3′28.29 °N /80°31′.40.78°E and, thence towards southwest direction up to 7° 3′26.57 °N /80°31′.38.08°E and, again towards north direction and to the point 7° 3′.33.27 °N /80°31′.35.03°E and, thence continue towards northeast direction and reach to the geographical coordinate 7° 3′46.02 °N /80°31′.44.26°E. Thence, continue towards west direction up the geographical coordinate 7° 3′42.28 °N /80°31′.33.82°E and, thence continue respectively towards northeast and northwest directions until reach the geographical coordinates 7° 3′50.53 °N /80°31′.31.88°E that exist at the western boundary of Weligodawaththa GND. Thence, continuing along the western boundary of said GND towards north direction and end at the starting point noted at the north boundary.

## **Medium Sensitive Conservation Zone – II** (Map 7.3)

## North

Starting from the geographical coordinate 7° 2'22.30 °N /80°31'.45.13°E that located at the centreline of Badulla railway and continue towards east direction reach to the geographical coordinate 7° 2'22.79 °N /80°31'.48.06°E. Thence, continuing to east direction up to the point 7° 2'18.23 °N /80°32'.15.58°E that exist the eastern boundary of Bawwagama (083) GND. Thence, along the eastern boundary of said GND reach to the geographical coordinate 7° 2'8.01 °N /80°32'.40.79°E. Thence, continue towards southeast direction until reach the geographical coordinate 7° 1'58.18 °N /80°32'.51.78°E and, again continue towards wwest direction and rech 7° 1'53.28 °N /80°31'.33.83°E. Thence, again continue respectively towards south and southeast directions and reach the geographical coordinate 7° 1'46.54 °N /80°31'.36.56°E. Thence, continuing towards northwest direction and reach the geographical coordinate 7° 1'50.68 °N /80°32'.29.41°E and, thence continue towards south and reach the coordinate 7° 1'38.67 °N /80°32'.30.01°E.

## South

Staring from the last-mentioned point reach to the geographic coordinates of 7° 1'35.07 °N /80°32'.17.64°E that exist at the western boundary of Bawwagama GND.

## West

Starting from the last mentioned point the western boundary of Bawwagaa GND (the centreline of Mahaweli River) continue respectively towards north and northwest directions and reach the geographical coordinate 7° 1'49.15°N /80°32'.3.83°E. Thence, continuing towards northwest direction until reach the centreline of Smmanalagama Road and thence, along the centreline of said road continue towards the northwest direction and reach the geographical coordinate 7° 1'54.05 °N /80°31'.58.39°E. Thence, reach to the geographical coordinate 7° 1'55.22 °N /80°31'.56.95°E that exist at the centreline of Badulla railway and, thence continue along the centreline of railway towards north direction and end at the point where it initiate the north boundary of this zone.

## **Medium Sensitive Conservation Zone – III** (Map 7.3)

## North

Starting from the geographical coordinate 7° 1'25.74 °N /80°32'.27.97°E continue to the northeast direction by crossing the railway and, reach to the geographical coordinate 7° 1'29.66°N /80°32'.31.70°E where exist at the intersecting point of Samanalagama Road and sub road. Thence, along the centreline of the Samanalagama Road continue towards northeast direction and reach to the geographical coordinate 7° 1'32.05°N /80°32'.35.97°E and, thence continue respectively towards north and northeast direction and, reach to the geographical coordinate 7° 1'42.51°N /80°32'.39.30°E. Thence, continue towards southeast direction and reach to the geographical coordinate 7° 1'37.26°N /80°32'.55.33°E and, from there respectively continue towards northwest and northwards and reach to the geographical coordinate 7° 1'44.01°N /80°32'.47.03°E. Thence, continue respectively towards southeast and northeast directions and reach to the geographical coordinate 7° 1'40.68°N /80°33'.10.16°E. Thence, proceed respectively towards north and northeast directions and reach to the geographical coordinate 7° 1'50.74°N /80°33'.11.51°E. From the last-mentioned point continue again respectively towards southeast and north directions and reach to the geographical coordinate 7° 1'54.32°N /80°33'.17.02°E that exist at the eastern boundary of Bawwagama GND.

## East

Starting from the last mentioned point proceed towards the southeast direction along the eastern boundary of Bawwagama GND and reach to the geographical coordinate 7° 1'37.52°N /80°33'.33.18°E that exist at the intersecting point of western boundary of Greenwood GND (1082) and eastern boundary of Bawwagama GND. Thence, proceeding towards southwest direction and reach to the geographical coordinate 7° 1'36.55°N /80°33'.32.29°E. Thence, continuing towards western direction and reach to the geographical coordinate 7° 1'29.67°N /80°33'.7.76°E. Thence, proceed towards southwards and reach 7° 1'26.86°N /80°33'.6.46°E and, thence continue towards eastwards and reach to the geographical coordinate 7° 1'23.19°N /80°33'.17.81°E. Thence, continue towards southeast direction and reach to the geographical coordinate 7° 1'18.00°N /80°33'.22.94°E that exist at the southern boundary of Bawwagama GND.

#### South

Starting from the last-mentioned point continue towards westwards along the southern boundary of Bawwagama GND and reach to the geographical coordinate 7°1′12.04°N /80°32′.36.93°E. Thence, continue along the southern boundary of Bawwagaa GND and reach to the point where meet the northern boundary of Mapakanda GND (1100).

#### West

Starting from the last-mentioned point continue along the western boundary of Bawwagama GND and reach again to the starting point noted in North boundary.

## **Medium Sensitive Conservation Zone – IV** (Map 7.3)

## North

Starting from the geographical coordinate 7° 1'20.46°N /80°31'.19.57°E and, continue towards eastward and reach to the geographic coordinate 7° 1'25.76°N /80°31'.34.66°E.

#### **East**

Starting from the last-mentioned point proceed respectively towards north and northwest directions and, reach to the geographical coordinate 7° 1'22.35°N /80°31'.32.77°E. Thence, continue to westward and reach to 7° 1'21.63°N /80°31'.31.25°E location and, thence continue again towards west direction and reach to the geographic coordinate 7° 1'11.25°N /80°31'.34.18°E. Thence, continue respectively towards northeast and northward until reach to the geographical coordinate 7° 1'9.75°N /80°31'.35.32°E that exist at the eastern boundary of Kendopitiya (1097) GND. Thence, continue along the eastern boundary of Kendopitiya GND and reach to the geographic coordinate 7° 0'55.58°N /80°31'.41.30°E where meet the southern boundary of same GND.

## South

Starting from the previously mentioned point, continue along the southern boundary of the Kendopitiya GND until reach to the point where the southern boundary intersects with the western boundary of the Kendopitiya GND.

#### West

Starting from the last-mentioned point continue along the western boundary of Kendopitiya GND respectively towards north, west and again to the north and reach to the geographical coordinate 7° 1'20.46°N /80°31'.19.57°E where initiate the North boundary of this zone.

# **High Sensitive Conservation Zone – 1** (Map 7.2)

## North

Starting from the geographical coordinate 7° 1′52.71°N /80°31′12.78°E continue respectively towards east, northeast and reach to 7° 1′55.45°N /80°31′21.03°E that exist at the centre point of Municipal Road which connected to the Dekinda Road. Thence, continue along the centreline of that road towards southeast direction and reach to the 7° 1′48.57°N /80°31′26.13°E. thence, continue respectively towards east, northeast, southeast and south until reach to the 7° 1′40.39°N /80°31′40.42°E. Thence, continue again respectively towards east, south and again to east up to the geographical coordinate 7° 1′36.63°N /80°31′53.96°E. Thence, continue respectively towards north and northeast directions and reach to the geographic coordinate 7° 1′52.87°N /80°31′59.64°E.

## **East**

Starting from the last-mentioned point continue towards southeast direction until reach to the eastern boundary of Kendopitiya GND. Thence, continue along the eastern boundary of said GND towards southeast and south directions until reach to the point where intersect the eastern boundary of Kendopitiya GND and northern boundary of Mapakanda-north GND. Thence, continue along the eastern boundary of Kendopitiya GND towards southward until where meet the southern boundary of Kendopitiya GND.

## South

Starting from the last-mentioned point continue along the eastern boundary of Kendopitiya GND towards southwest direction and reach to the geographical coordinate 7° 1′9.79°N /80°31′35.32°E. Thence, proceed respectively towards north and northeast directions until reach to the 7° 1′25.76°N /80°31′34.66°E. Thence, continue towards

westward and reach to the point where the eastern boundary of Kendopitiya intersect the southern boundary of same GND.

#### West

Starting from the last-mentioned point continue towards north along the western boundary of Kendopitiya GND and, reach to the initiation point noted at the North boundary.

## **High Sensitive Conservation Zone – II** (Map 7.2)

#### North

Starting from the geographical coordinate 7° 1'35.07°N /80°32'17.64°E, continue respectively towards north, east and again to the north and thence, to southeast directions and reach to the 7° 1'46.54°N /80°32'36.56°E. Thence, continue respectively towards north, east and northwest directions and reach to 7° 1'28.01°N /80°32'40.79°E that exist at the eastern boundary of Bawwagama GND. Thence, continue towards eastward along the Bawwagama GND boundary and reach to the 7° 2'10.19°N /80°32'55.97°E.

## **East**

Starting from the last-mentioned point continue towards eastward along the eastern boundary of Bawwagama GND and reach to the 7° 1′54.32°N /80°33′17.02°E. Thence, continue respectively towards west, southeast, northwest and reach 7° 1′50.74°N /80°33′11.51°E. Thence, respectively continue towards west, south, east and again to the south directions and reach to the geographical coordinate 7° 1′40.68°N /80°33′10.16°E.

## South

Starting from the last-mentioned point continue respectively towards southwest and northwest directions until reach to the 7°1'44.01°N/80°32'47.03°E. Thence, continue respectively towards south and east direction until reach the geographical coordinate 7° 1'37.26°N /80°32'55.33°E and thence, continue respectively towards northwest and southwest directions until reach the geographical coordinate 7° 1'25.74°N /80°32'27.97°E which is located on the western boundary of Bawwagama GND.

#### West

Starting from the last-mentioned point along the western boundary of Bawwagama GND continue respectively towards northwest and north directions and reach to the initiation point noted at the north boundary.

## **High Sensitive Conservation Zone – III** (Map 7.2)

#### North

Starting from the geographical coordinate 7° 1'29.67°N /80°33'7.76°E and continue towards east direction and, reach to the geographical coordinates 7° 1'36.55°N /80°33'32.29°E where locate on the eastern boundary of Bawwagama GND.

#### **East**

Starting from the last-mentioned point continue along the eastern boundary of Bawwagaama GND towards south direction and reach to the geographical coordinates of 7° 1′18.00°N /80°33′22.94°E.

## South

Satrting from the last-mentioned point continue towards westwards and reach to the geographical; coordinates 7° 1'25.52°N /80°33'8.02°E.

## West

starting from the last-mentioned point continue towards northeast direction and reach to the initiation point noted at the North boundary.

## **High Sensitive Conservation Zone – IV** (Map 7.2)

# North

Starting from the geographical coordinate 7° 3'49.23°N /80°31'23.33°E where locate at the western boundary of Weligodawaththa GND and continue towards east direction along the western boundary of Weligodawatta GND and reach to the geographical coordinate 7° 3'50.53°N /80°31'31.88°E. Thence, continue respectively towards southeast and southwest

directions and reach to the geographical coordinate of 7° 3'42.28°N /80°31'33.82°E. Thence continue towards east direction and reach to the coordinate 7°3'46.02°N /80°31'14.26°E.

#### **East**

Starting from the last-mentioned point continue towards southwest direction and reach to the geographical coordinate 7° 3'33.27°N /80°31'35.03°E. Thence, continue respectively towards south, east and again to the south directions up to reach the geographical location 7° 3'24.04°N /80°31'40.91°E where located on the southern boundary of Weligodawaththa GND.

#### South

Starting from the last-mentioned point continue along the western boundary of Weligodawaththa GND towards west direction and reach to the geographical coordinate  $7^{\circ}3'23.54^{\circ}N/80^{\circ}31'35.96^{\circ}E$ .

## West

Starting from the last-mentioned point continue along the boundary of Weligodewaththa GND towards north and northwest directions respectively until reach to the initiation point noted at the north boundary.

## **High Sensitive Conservation Zone – V** (Map 7.2)

## North

Starting from the geographical coordinate 7° 5'34.28°N /80°32'50.90°E where located on the northern boundary of Weligodewaththa GND and continue towards east direction and reach to the geographical coordinate 7° 5'35.04°N /80°33'0.70°E.

## **East**

Starting from the last-mentioned point continue along the boundary of the said GND respectively towards south, east and again south directions and reach to the geographical coordinate 7° 5'14.08°N /80°33'3.18°E.

#### South

Starting from the last-mentioned point continue towards southwest direction and reach to the geographical coordinate 7° 5'20.76°N /80°32'52.55°E.

## West

Starting from the last-mentioned point continue towards northwest direction and reach to the geographical coordinate 7° 5'32.42°N /80°32'53.61°E. thence, continue northeast direction and reach to the geographical coordinate 7° 5'34.28°N /80°32'50.90°E which is the initiation point noted at the northern boundary of this zone.

## **High Sensitive Conservation Zone – VI** (Map 7.2)

#### North

Starting from the geographical coordinate 7° 5'33.20°N ,80°32'31.47'E where located on the north boundary of Weligodawaththa GND and continue along the same boundary towards eastward and reach to the geographical coordinate 7° 5'35.80°N /80°32'38.85°E.

## **East**

Starting from the last-mentioned point continue towards south direction and reach to the geographical coordinate 7° 5'32.18°N /80°32'37.50°E.

## South

Starting from the last-mentioned point continue towards northwest direction and reach to the geographical coordinate  $7^{\circ}$  5'31.18°N  $/80^{\circ}$ 32'31.66°E where meet the western boundary of this zone.

## West

Starting from the last-mentioned point continue towards north direction and reach to the initiation point noted at the northern boundary of this zone.

# **High Sensitive Conservation Zone – VII** (Map 7.2)

## North

Starting from the geographical coordinate 7° 5'36.68°N /80°32'42.66°E which is located on the northern boundary of Weligodawaththa GND and thence, continue along the said boundary towards east direction and reach to the geographical coordinate of 7° 5'36.26°N /80°32'45.39°E.

## **East**

Starting from the last-mentioned point continue towards south direction and reach to the geographical coordinate of 7° 5'34.69°N /80°32'44.49°E.

## South

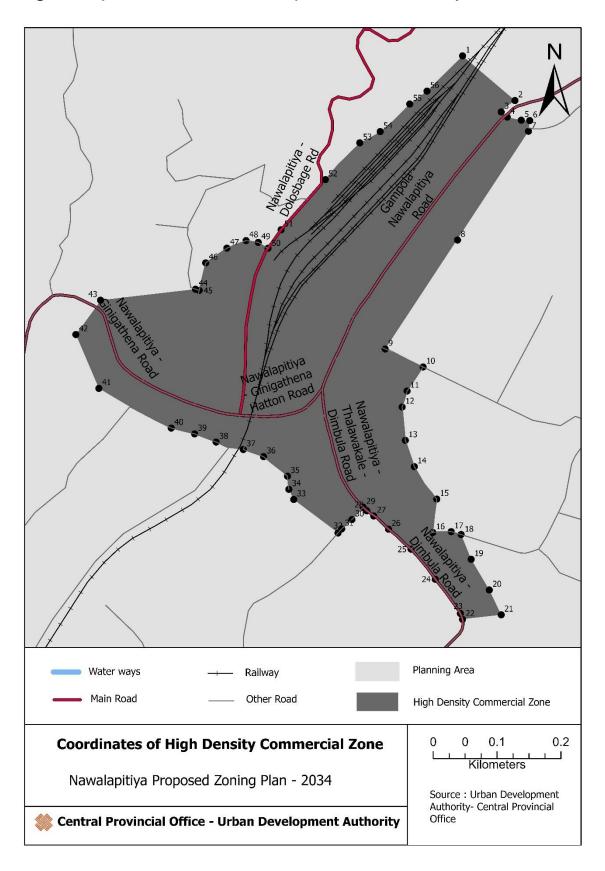
Starting from the last-mentioned point continue towards west direction and reach to the geographical coordinate 7° 5'34.66°N /80°32'44.25°E.

## West

Starting from the last-mentioned point continue towards northwest direction and reach to the initiation point noted at the northern boundary of this zone.

# **Annexure 9: Coordinates for Zonning Boundaries**

# High Density Commercial Zone Boundary – Geo-coordinates Map



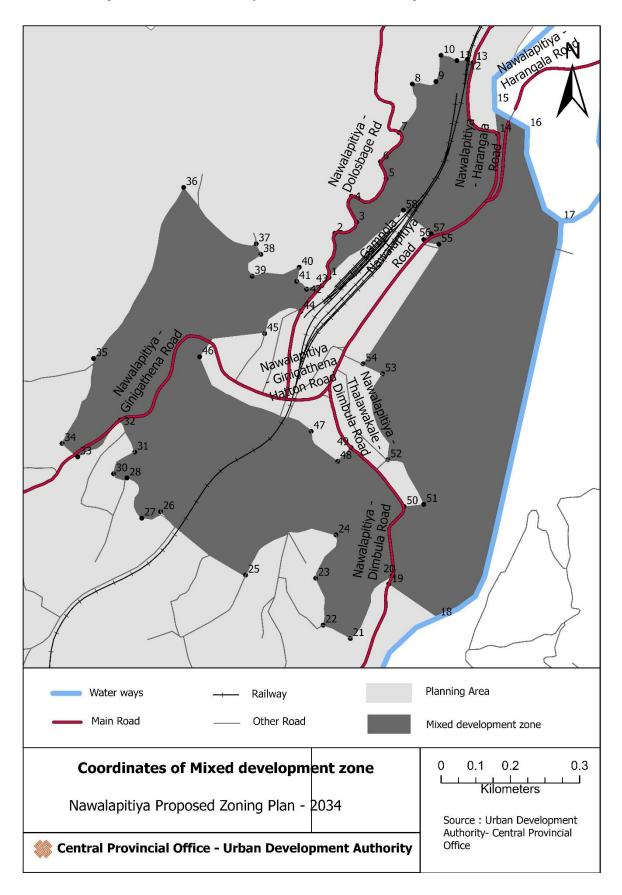
# High Density Commercial Zone Boundary – Geo-coordinates Table

No	Х	Υ
1	80.53614	7.059053
2	80.53676	7.058519
3	80.5366	7.058382
4	80.53667	7.05832
5	80.53684	7.058283
6	80.53694	7.058278
7	80.53692	7.05815
8	80.53608	7.056849
9	80.53521	7.055546
10	80.53566	7.05533
11	80.53547	7.055043
12	80.53541	7.054851
13	80.53545	7.054452
14	80.53556	7.054138
15	80.53583	7.053749
16	80.53578	7.05335
17	80.536	7.05336
18	80.53612	7.053325

19	80.53624	7.053029
20	80.53646	7.052662
21	80.5366	7.052365
22	80.53614	7.05231
23	80.53611	7.05238
24	80.53581	7.05279
25	80.53552	7.05315
26	80.53525	7.05339
27	80.53507	7.053548
28	80.53499	7.05361
29	80.53495	7.053653
30	80.53481	7.053504
31	80.53469	7.053392
32	80.53465	7.053343
33	80.53412	7.053744
34	80.53406	7.053866
35	80.53404	7.054024
36	80.53376	7.054258
37	80.53351	7.054343

38	80.53319	7.054432
39	80.53293	7.05453
40	80.53265	7.054599
41	80.53179	7.055074
42	80.53151	7.055718
43	80.53181	7.056128
44	80.53294	7.056261
45	80.53299	7.056246
46	80.53306	7.056576
47	80.53332	7.056752
48	80.53355	7.056842
49	80.53369	7.056821
50	80.53381	7.05675
51	80.53397	7.056972
52	80.5345	7.057572
53	80.53491	7.058012
54	80.53515	7.058146
55	80.5355	7.058476
56	80.53571	7.058631

# Mixed Development Zone Boundary - Geo-coordinates Map



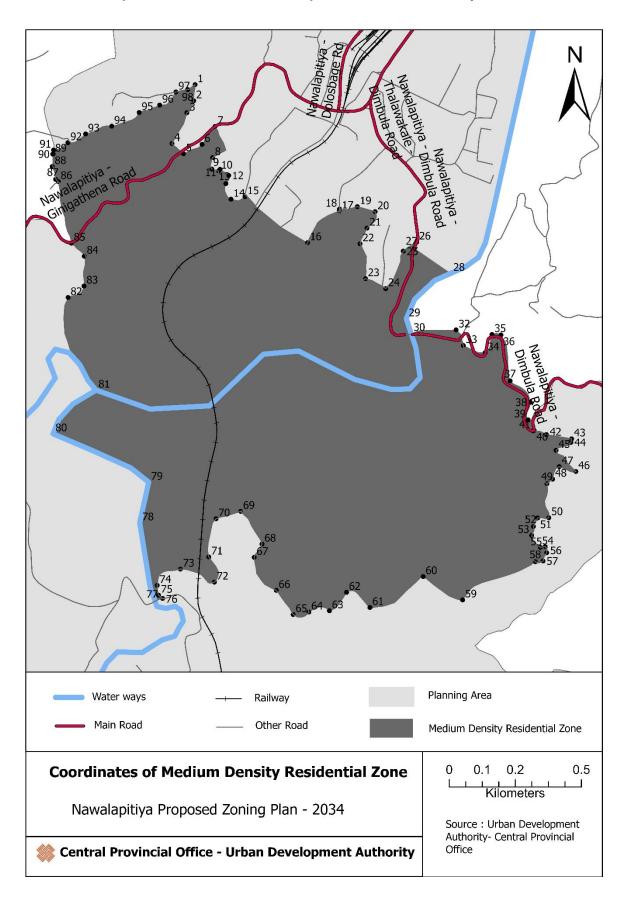
# Mixed Development Zone Boundary – Geo-coordinates Table

No	Х	Υ
1	80.53445	7.057521
2	80.53458	7.058525
3	80.53507	7.05878
4	80.53496	7.059368
5	80.53575	7.059767
6	80.53562	7.060154
7	80.53604	7.060819
8	80.53634	7.061917
9	80.53688	7.061976
10	80.53699	7.062571
11	80.53735	7.062452
12	80.53759	7.062482
13	80.53773	7.062418
14	80.53827	7.060781
15	80.53821	7.061467
16	80.53896	7.06091
17	80.53972	7.058809
18	80.53692	7.049783
19	80.53581	7.050552

20	80.53588	7.050739
21	80.53493	7.049314
22	80.53431	7.049619
23	80.53415	7.050685
24	80.53461	7.05167
25	80.53256	7.050756
26	80.53063	7.052198
27	80.5302	7.05205
28	80.52986	7.052964
30	80.52956	7.05306
31	80.53004	7.053552
32	80.52971	7.05428
33	80.52875	7.053441
34	80.52839	7.053749
35	80.5291	7.05568
36	80.53115	7.059568
37	80.53279	7.058287
38	80.5329	7.058046
39	80.5327	7.057553
40	80.53377	7.057752

41	80.53372	7.057433
42	80.53394	7.057256
43	80.53429	7.057338
44	80.53381	7.05675
45	80.53299	7.056246
46	80.53151	7.055719
47	80.53404	7.054024
48	80.53465	7.053343
49	80.53495	7.053653
50	80.53615	7.052315
51	80.5366	7.052365
52	80.53578	7.053378
53	80.53566	7.05533
54	80.53522	7.055558
55	80.53694	7.058278
56	80.5366	7.058382
57	80.53676	7.058519
58	80.53614	7.059053
59	80.55019	7.093067

# Medium Density Residential Zone Boundary – Geo-coordinates Map



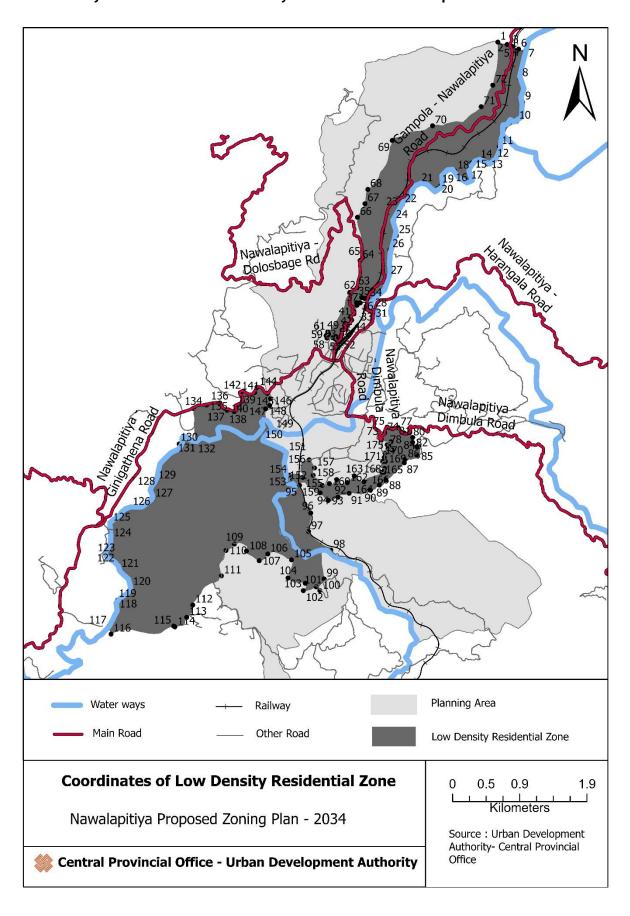
# Medium Density Residential Zone Boundary – Geo-coordinates Table

No	Х	Υ
1	80.5291	7.055557
2	80.52906	7.055065
3	80.52885	7.054696
4	80.52839	7.053756
5	80.52875	7.053441
6	80.52931	7.053728
7	80.52971	7.05428
8	80.52963	7.053323
9	80.52961	7.052972
10	80.52982	7.052913
11	80.52986	7.052964
12	80.53013	7.052778
13	80.53004	7.052529
14	80.5302	7.05205
15	80.53063	7.052129
16	80.53254	7.050722
17	80.53352	7.051689
18	80.53352	7.051749
19	80.53406	7.051822
20	80.53461	7.05167
21	80.53436	7.051166
22	80.53415	7.050685
23	80.53431	7.049619
24	80.53493	7.049314
25	80.53547	7.050459
26	80.53588	7.050739
27	80.53581	7.050552
28	80.53692	7.049783
29	80.53556	7.048393
30	80.53571	7.047944
32	80.53708	7.048049
33	80.5373	7.047571
34	80.53797	7.04735
35	80.53818	7.04791

36	80.53845	7.047895
37	80.53873	7.046488
38	80.53936	7.045837
39	80.53929	7.045296
40	80.53947	7.044977
41	80.53944	7.044961
42	80.53984	7.044847
43	80.54061	7.044716
44	80.5406	7.044608
45	80.54014	7.044364
46	80.54075	7.043716
47	80.54024	7.043864
48	80.54004	7.043481
49	80.53986	7.043342
50	80.53992	7.042303
51	80.53958	7.042294
52	80.53945	7.042029
53	80.5394	7.041759
54	80.53966	7.041394
55	80.53981	7.041416
56	80.53985	7.041229
57	80.53974	7.040977
58	80.53951	7.040956
59	80.53728	7.039785
60	80.53608	7.040499
61	80.53445	7.039553
62	80.53373	7.040017
63	80.53321	7.039452
64	80.53258	7.039413
65	80.5321	7.039339
66	80.53158	7.040077
67	80.53091	7.041088
68	80.53115	7.041494
69	80.53049	7.042496
70	80.52974	7.04227

71 72	80.52952	7.0411
72	00 53000	
1	80.52969	7.04033
73	80.52865	7.04073
74	80.52794	7.04023
75	80.52798	7.03993
76	80.5281	7.03983
77	80.52788	7.039743
78	80.52741	7.042144
79	80.52768	7.04339
80	80.52476	7.044868
81	80.52607	7.046206
82	80.52522	7.049041
83	80.5257	7.049393
84	80.52571	7.050307
85	80.52532	7.050707
86	80.52491	7.052594
87	80.52483	7.052658
88	80.52473	7.053051
89	80.52475	7.053432
90	80.52476	7.053433
91	80.52477	7.053555
92	80.52521	7.053781
93	80.52575	7.054048
94	80.52655	7.054286
95	80.52739	7.054705
96	80.52802	7.054933
97	80.52851	7.055334
98	80.52887	7.055407
99	80.55382	7.094121
100	80.55382	7.094121
101	80.55382	7.094121
102	80.55382	7.094121
103	80.55382	7.094121

# Low Density Residential Zone Boundary - Geo-coordinates Map



# Low Density Residential Zone Boundary – Geo-coordinates Table

No	Х	у
1	80.55382	7.094121
2	80.55496	7.093833
3	80.55538	7.09369 6
4	80.5554	7.093703
5	80.5556	7.0936
6	80.5564	7.093257
7	80.55717	7.092974
8	80.55655	7.089614
9	80.5568 9	7.08672
10	80.55614	7.084361
11	80.554	7.081223
12	80.55344	7.079665
13	80.55256	7.079062
14	80.55138	7.079546
15	80.5506	7.079205
16	80.55023	7.078318
17	80.5502	7.076955
18	80.54853	7.078188
19	80.54677	7.076386
20	80.54643	7.076048
21	80.54407	7.076611
22	80.54203	7.074047
23	80.54178	7.073664
24	80.54093	7.072081
25	80.54128	7.070215
26	80.5404 8	7.068477
27	80.54028	7.065201
28	80.53824	7.062009
31	80.53827	7.060781
32	80.53817	7.06084 8
33	80.53763	7.061121
34	80.53773	7.062418
35	80.53759	7.062482
36	80.53735	7.062452
37	80.53699	7.062571
38	80.53681	7.061905
39	80.53634	7.061917
40	80.53643	7.061607
41	80.53604	7.060819

42	80.53603	7.060537
43	80.53562	7.060154
44	80.53575	7.059767
45	80.53525	7.059234
46	80.53496	7.059368
47	80.53488	7.059146
48	80.53504	7.05866 9
49	80.53458	7.058525
50	80.53454	7.057992
51	80.53441	7.057774
52	80.53445	7.057519
53	80.5342	7.057343
54	80.53394	7.057256
55	80.53372	7.057433
56	80.53377	7.057752
57	80.53341	7.057579
58	80.5327	7.057553
59	80.5326	7.057847
60	80.5329	7.05804 6
61	80.53279	7.058287
62	80.53552	7.063191
63	80.5364	7.063771
64	80.53678	7.067124
65	80.53712	7.067521
66	80.53647	7.072468
67	80.5374	7.074158
68	80.53774	7.075919
69	80.54077	7.081962
70	80.54575	7.083783
71	80.55176	7.086136
72	80.55321	7.088801
73	80.53937	7.045259
74	80.53984	7.04584
75	80.54014	7.046536
76	80.54081	7.046342
77	80.54149	7.046482
78	80.54226	7.045795
79	80.54291	7.04588 8
80	80.54294	7.045876
81	80.5433	7.045262
82	80.54329	7.044656
		/

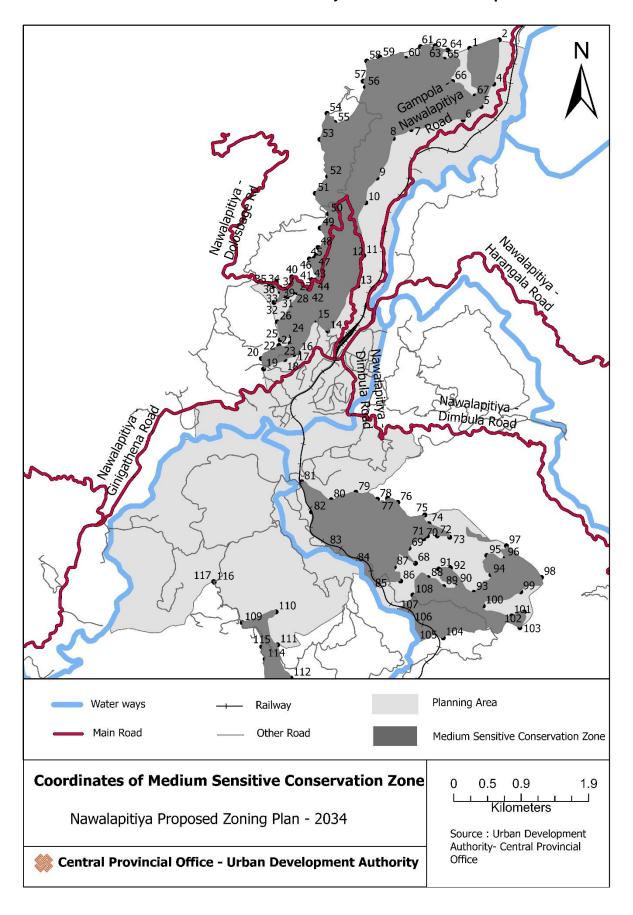
83	80.54379	7.044114
84	80.54405	7.044164
85	80.54392	7.042958
86	80.54234	7.042566
87	80.54225	7.042123
88	80.53998	7.040018
89	80.53918	7.039377
90	80.53807	7.038737
91	80.53543	7.038359
92	80.53406	7.037871
93	80.53285	7.037467
94	80.53185	7.038406
95	80.5293	7.039358
96	80.53069	7.035924
97	80.53043	7.033626
98	80.53318	7.031339
99	80.53234	7.027768
10	80.53181	7.02634
0	0	(
101	80.53135	7.026792
102	80.52977	7.026328
103	80.53001	7.027232
10 4	80.52788	7.027904
105	80.52832	7.030136
10	80.52537	7.03085
6		, , ,
107	80.52431	7.030029
10 8	80.52273	7.031221
10	80.52125	7.032085
9	90.53034	7 024202
110	80.52021	7.031303
111	80.51964	7.028155
112	80.5161	7.024553
113	80.51535	7.023025
114	80.51389	7.021852
115	80.51374	7.021951
116	80.50599	7.020957
117	80.50573	7.021961
118	80.50673	7.023942
119	80.50679	7.02514
120	80.50841	7.026728
121	80.5069 8	7.028974

122	80.50673	7.029629
123	80.50542	7.030746
124	80.50602	7.032733
125	80.50593	7.034671
126	80.50838	7.03660
		4
127	80.51115	7.037658
128	80.5109	7.038976
129	80.51155	7.039885
130	80.51442	7.044456
131	80.51582	7.044938
132	80.51644	7.044701
134	80.51617	7.04885
		8
135	80.5178	7.049275
136	80.51943	7.049524
137	80.52034	7.048631
138	80.52122	7.048453
139	80.52146	7.049113
14	80.52225	7.049774
0		
141	80.52198	7.050788
142	80.52236	7.050987
143	80.52375	7.050816

144	80.52403	7.051446
145	80.52532	7.050707
14 6	80.52573	7.050059
147	80.52561	7.049203
14 8	80.5251	7.048803
14 9	80.52607	7.046206
150	80.52476	7.04486 8
151	80.52768	7.04339
152	80.52788	7.039743
153	80.5281	7.03983
154	80.52804	7.04059
155	80.52969	7.04033
156	80.53049	7.042496
157	80.53115	7.041494
158	80.53099	7.04059 6
159	80.5321	7.039339
16 0	80.53299	7.039559
161	80.5339	7.04005 9
162	80.5352	7.039684

163	80.53608	7.04049 9
16	80.53728	7.039785
4		
165	80.53951	7.04095
		6
16	80.53974	7.040977
6		
167	80.53981	7.041416
16	80.53958	7.042294
8		
16	80.53992	7.042303
9		
170	80.53978	7.042812
171	80.53986	7.043342
172	80.54024	7.043864
173	80.54075	7.043716
174	80.54037	7.044186
175	80.54014	7.044364
176	80.54061	7.044716
177	80.53944	7.044961
178	80.53445	7.057521
179	80.53445	7.057521

Medium Sensitive Conservation Zone Boundary - Geo-coordinates Map



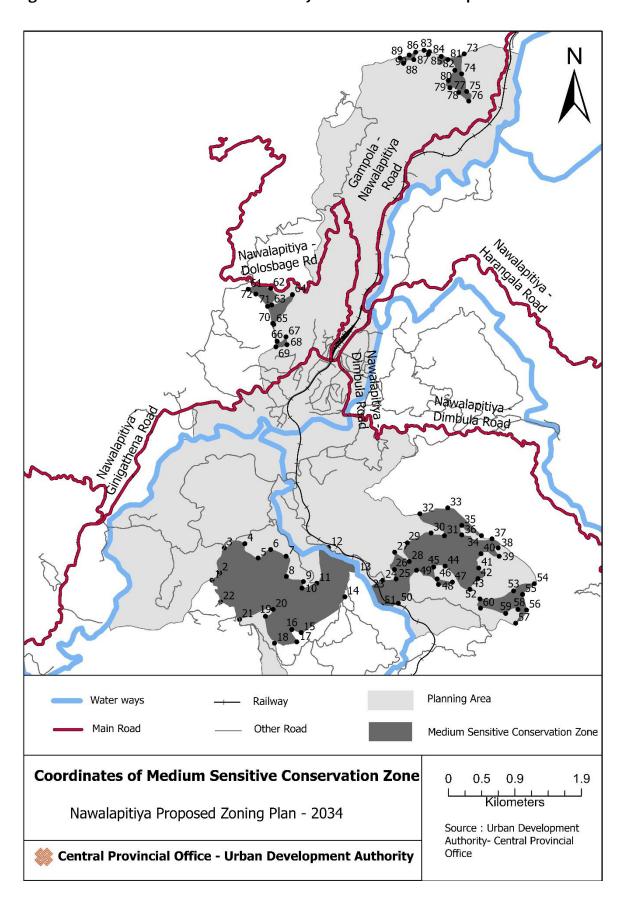
# Medium Sensitive Conservation Zone Boundary – Geo-coordinates Table

No	Х	Υ
1	80.55019	7.093067
2	80.55382	7.094121
4	80.55315	7.088668
5	80.5516	7.085889
6	80.54938	7.084242
7	80.54297	7.083057
8	80.54077	7.081962
9	80.53877	7.077085
10	80.53736	7.074039
11	80.53712	7.067521
12	80.53678	7.067124
13	80.5364	7.063771
14	80.53269	7.058245
15	80.53115	7.059568
16	80.5291	7.055557
17	80.52851	7.055334
18	80.52739	7.054705
19	80.52477	7.053555
20	80.52448	7.054841
21	80.52665	7.056357
22	80.52666	7.056438
23	80.52805	7.056713
24	80.528	7.057855
25	80.52681	7.057127
26	80.52647	7.059354
27	80.52891	7.062966
28	80.52857	7.063038
29	80.5277	7.062438
31	80.52738	7.062552
32	80.52605	7.061753
33	80.52681	7.063052
34	80.52601	7.063766
35	80.52552	7.064028
36	80.52633	7.064269
37	80.52682	7.063562
38	80.52736	7.063384
39	80.52808	7.063882
40	80.52825	7.064908

41	80.52912	7.064209
42	80.53041	7.063145
43	80.5307	7.064551
44	80.53114	7.064506
45	80.53042	7.067117
46	80.53101	7.06719
47	80.53123	7.067522
48	80.53149	7.068522
49	80.53174	7.070908
50	80.53277	7.072665
51	80.53114	7.075198
52	80.53266	7.077258
53	80.53171	7.081846
54	80.5326	7.08506
55	80.53355	7.083933
56	80.53733	7.088291
57	80.53704	7.089021
58	80.5375	7.091502
59	80.5391	7.092008
60	80.54234	7.091815
61	80.54412	7.09328
62	80.54569	7.092971
63	80.54594	7.093405
64	80.54747	7.092857
65	80.54707	7.091713
66	80.54807	7.088991
67	80.55082	7.087196
68	80.5435	7.0296
69	80.54272	7.031466
70	80.54453	7.032627
71	80.54496	7.032969
72	80.5462	7.032988
73	80.54772	7.032817
74	80.54515	7.034492
75	80.54466	7.035558
76	80.54132	7.037098
77	80.54005	7.037606
78	80.5388	7.037498
79	80.53614	7.038347
	1	

80	80.53311	7.037419
81	80.52948	7.039644
82	80.53069	7.035924
83	80.53265	7.03174
84	80.53609	7.029578
85	80.53823	7.026412
86	80.54167	7.027411
87	80.54089	7.029143
88	80.54507	7.027825
89	80.54697	7.02673
90	80.54871	7.027016
91	80.54638	7.028896
92	80.54781	7.029015
93	80.55071	7.026017
94	80.5528	7.028182
95	80.5523	7.030561
96	80.55456	7.030252
97	80.55473	7.031754
98	80.55904	7.027867
99	80.55648	7.026085
100	80.55186	7.024344
101	80.55538	7.023101
102	80.55691	7.023601
103	80.55637	7.021659
104	80.54693	7.020409
105	80.54369	7.020016
106	80.54308	7.022246
107	80.54137	7.02376
108	80.54319	7.025684
109	80.52213	7.022277
110	80.52631	7.023612
111	80.52649	7.019541
112	80.52814	7.015448
113	80.52512	7.014076
114	80.52495	7.017794
115	80.52454	7.019307
116	80.51867	7.02727
117	80.5186	7.027339

High Sensitive Conservation Zone Boundary – Geo-coordinates Map



# High Sensitive Conservation Zone Boundary – Geo-coordinates Table

No	Х	Υ
1	80.51867	7.02727
2	80.51964	7.028155
3	80.52021	7.031303
4	80.52278	7.031821
5	80.52444	7.030022
6	80.52599	7.031093
7	80.52794	7.030251
8	80.52796	7.02772
9	80.53009	7.027078
10	80.52992	7.026268
11	80.53176	7.026875
12	80.53324	7.031356
13	80.53682	7.028169
14	80.53529	7.025178
15	80.52982	7.020707
16	80.52865	7.021083
17	80.52928	7.019548
18	80.52648	7.019385
19	80.52535	7.022741
20	80.52631	7.023612
21	80.52211	7.022341
22	80.51975	7.024547
23	80.53848	7.026042
24	80.54003	7.027259
25	80.54167	7.027411
26	80.54148	7.028591
27	80.5415	7.030761
28	80.54333	7.0296
29	80.54308	7.031922
30	80.54605	7.03316

31	80.54772	7.032817
32	80.54466	7.035558
33	80.54814	7.036298
34	80.55235	7.032822
35	80.5499	7.034107
36	80.5499	7.032917
37	80.55367	7.032427
38	80.55445	7.031299
39	80.55456	7.030252
40	80.5523	7.030561
41	80.55202	7.028777
42	80.55192	7.027444
43	80.55092	7.026112
44	80.54781	7.029015
45	80.54638	7.028896
46	80.54681	7.027421
47	80.54871	7.027016
48	80.54697	7.02673
49	80.54424	7.028491
50	80.54198	7.024375
51	80.53991	7.024027
52	80.55216	7.024915
53	80.55637	7.025914
54	80.55896	7.026818
55	80.55749	7.025481
56	80.55799	7.023518
57	80.55663	7.021868
58	80.55691	7.023601
59	80.55538	7.023101
60	80.55223	7.023758
61	80.5232	7.063643

62   63   64   65   66   67   68   69   70   71	80.52601 80.52614 80.52872 80.5264 80.52681 80.52792 80.52805 80.52666 80.52626	7.063766 7.061681 7.062966 7.05924 7.057127 7.057684 7.056713 7.056438 7.059372
64 65 66 67 68 69 70	80.52872 80.5264 80.52681 80.52792 80.52805 80.52666 80.52626	7.062966 7.05924 7.057127 7.057684 7.056713 7.056438
65 66 67 68 69 70	80.5264 80.52681 80.52792 80.52805 80.52666 80.52626	7.05924 7.057127 7.057684 7.056713 7.056438
66 67 68 69 70	80.52681 80.52792 80.52805 80.52666 80.52626	7.057127 7.057684 7.056713 7.056438
67 68 69 70	80.52792 80.52805 80.52666 80.52626	7.057684 7.056713 7.056438
68 69 70	80.52805 80.52666 80.52626	7.056713 7.056438
69 70	80.52666 80.52626	7.056438
70	80.52626	
	-	7.059372
71	80.52562	, ,,,,,,,
		7.061504
72	80.52415	7.063048
73	80.55019	7.093067
74	80.54987	7.090575
75	80.55051	7.088362
76	80.55077	7.087173
77	80.5495	7.088243
78	80.5484	7.088834
79	80.54822	7.089742
80	80.54903	7.091027
81	80.54815	7.092355
82	80.54733	7.09276
83	80.54517	7.093526
84	80.54586	7.093339
85	80.54571	7.093021
86	80.54412	7.09328
87	80.5439	7.092348
88	80.5426	7.091891
89	80.54216	7.092561
90	80.54332	7.09294