DIADEM SOVEREIGN SRI LANKA

Rejuvenation of the Past Glory
of the Wetland City

CAPITAL CITY DEVELOPMENT PLAN
2019 - 2030

Volume I
Part II

Ministry of Megapolis & Western Development
Urban Development Authority
Sri Lanka

Capital City Development Plan – 2019-2030
Volume I - Part II

Published by
Urban Development Authority – Sri Lanka
6th & 7th Floors, "Sethsiripaya", Battaramulla, Colombo, Sri Lanka

Website – www.uda.gov.lk
Email – info@uda.gov.lk
Telephone - +94 112 873 637

Published in June, 2019

Capital City Development Plan – 2019-2030 is delivered through a series of publications; Volume 01 Part I, Volume 01 Part II & Volume 02. *Volume I Part I* contains the situational analysis and the explanations on the need of a plan. *Volume I Part II* contains a detailed elaboration on the plan including vision, goals, objectives, broader strategies, strategic projects and implementation mechanism. *Volume II* is a separate document which contains both special andgeneral Planning & Building Regulations applicable to Capital City within the period of 2019–2030.

Capital City Development Plan – 2019-2030 was prepared by Western Province Division and Research & Development Division of Urban Development Authority with the consultation of relevant stakeholder agencies.

Direct Supervision by:
Dr. Jagath Munasinghe ***Chairman - UDA,*** Eng. S.S.P. Rathnayake ***Director General - UDA,*** Plnr. D.M.B. Ranathunga ***Additional Director General - UDA,*** Plnr. K.A.D. Chandradasa ***Former Additional Director General - UDA,*** Plnr. M.P. Ranathunga ***Deputy Director General (Planning) - UDA,*** Plnr. Janak Ranaweera ***Director (Development Planning & R&D),*** Plnr. Y.A.G.K. Gunathilaka ***Director (Western Province),*** Plnr. Lalith Wijayarathna ***Former Director (Development Planning)***

Planning Team:
Plnr. Sugath Premasiri ***Deputy Director (Planning), Western Province,*** Plnr. Thamara jayagoda ***Deputy Director (Planning), Western Province,*** Plnr. B.L. Ranjith ***Assistant Director (Planning), Western Province,*** Plnr. Subha Kukulevithana ***Assistant Director (Planning), Western Province,*** Plnr. Nadeepa Palliyaguru ***Planning Officer, Western Province,*** Plnr. Chaminda Senevirathna ***Planning Officer, Western Province,*** Plnr. Indu Witharana ***Planning Officer, Western Province,*** Plnr. Ruwan Udaya Kumara ***Planning Officer, Western Province,*** Plnr. Anuradha Kanchani ***Assistant Planning Officer, Western Province,*** Plnr. J. Nadeesha karunasena ***Assistant Planning Officer, Western Province,*** Plnr. Sukhitha Ranasinghe ***Planning Assistant Officer, Research & Development,*** Ms. Thilini Niluka ***Assistant Planning Officer, Western Province,*** Ms. Harshani Silva ***Assistant Planning Officer, Western Province,*** Ms. Sathya Jeewanthi Meepagala ***Assistant Planning Officer, Western Province,*** Ms. Maheshi Nanayakkara ***Assistant Planning Officer, Research & Development,*** Ms. Aloka Fraser ***Assistant Planning Officer, Research & Development.***

Acknowledgement

Preparation of Capital City Development Plan (CCDP) is a collaborative work undertaken by the *Western Province and Research & Development Divisions of Urban Development Authority* in consultation with relevant stakeholder agencies. Throughout the process which continued for nearly one and half years, there were many who contributed to (CCDP) in numerous ways.

Our sincere gratitude is extended to the *Minister of Megapolis & Western Development,* **Honorable Minister Patali Champika Ranawaka** for his guidance and support in making this exercise a success. The counsels and support given by Secretary to the Ministry of Megapolis & Western Development and the fellow staff at Ministry are also highly valued.

Our special thanks is extended to the *Mayors, Chairmen, Council Members, Commissioners* and staff of all 04 Local Authorities; *Sri Jayawardenapura Kotte Municipal Council, Kaduwela Municipal Council, Maharagama Urban Council and Kotikawatte - Mulleriyawa Pradeshiya Sabha* for their great cooperation and contribution towards CCDP.

Special gratitude is extended to all relevant key stakeholder agencies of both state and private sector for sharing their comments, suggestions and ideas along with numerous valuable input data without which the CCDP won't be a reality. The comments, recommendations and suggestions given by general public; especially the *Capital City Community* in the means of stakeholder meetings, focused group discussions, business forums, through the website and other social media are also highly appreciated.

Chairman of Urban Development Authority, **Dr. Jagath Munasinghe** is recalled with great appreciation for initiating the process of preparing CCDP, guidance given by introducing many innovative planning techniques and applications and for continuous supervision and encouragement given throughout the process. Special thanks is also extended to *Director General of UDA,* **Eng. S.S.P. Rathnayake**, *Additional Director General, Deputy Director Generals and Directors of all Divisions of UDA* for their encouragement, supervision and counsel given. The continuous direct guidance and encouragement given by *Director (Western Province & R&D)* **Plnr. Janak Ranaweera** is also remarked with great appreciation.

Special gratitude is extended to *Development Planning Division, Research & Development Division, GIS Division, Enforcement Division, Environmental & Landscape Division, Project Management Division and Urban Regeneration Project Office of UDA* for their cooperation. In addition, all staff of UDA is remembered with utmost gratitude for their support towards CCDP in numerous ways.

Further, special thanks is extended to external parties who worked with us to make CCDP a reality such as **Mr. Indula Jayasekara** for 3D visualization of special project areas, **Mooniak** for designing of all publish materials, **Ms. Krishani Perera** for Strada Modeling and **Mr. Darshana Lakmal & Ms. Navodi Imalsha** for designing presentation panels and all who contributed towards CCDP in numerous ways.

Honorable Minister's Forward

Having established under the provisions of the Urban Development Authority Law: Act No. 41 of 1978, the Urban Development Authority by now has completed 40 years of service contributing to the urban development in Sri Lanka. At this moment the UDA marks another milestone by completing a comprehensive Development Plan for another decade for Capital City Region.

The Capital City is the administrative hub of Sri Lanka and it has also gained a considerable position in the international context as a unique wetland city in the world. The role of the Capital City is crucial, not only for the administration of the country, but also in Sri Lanka's journey to become a developed nation. Thus, the Capital City Development Plan 2030 shall be viewed as a scenario that has both national and international significance.

Our effort is to support the Administrative Capital City's role as a unique wetland city by shaping up its physical environment while ensuring city livability standards and efficient functioning of the city with upgraded infrastructure facilities. Also, we aim at addressing prevailing city issues with strategic actions. The specialty of this plan is that it doesn't limit to solve prevailing issues but attempts to envisage a broader vision for the city while harnessing its untapped potentials so far.

My understanding is that the preparation of this Plan involved extensive consultation of professionals, expertise, stakeholders and the communities, while engaging modern methods, sound techniques and innovative approaches. In this regard, I appreciate the extraordinary efforts of the Chairman, Director General, Planning Team and all staff of Urban Development Authority those who contributed in numerous ways to successfully complete this work. I also appreciate the support and contribution of relevant local authorities, state and private sector agencies and general public which worked equally on the same platform to make Capital City Development Plan a success.

Hon. Patali Champika Ranawaka
Minister of Megapolis and Western Development

Chairman's Forward

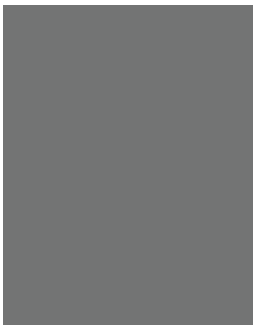
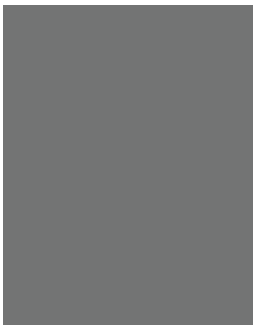
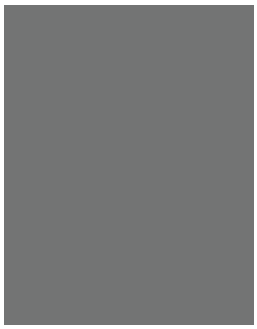
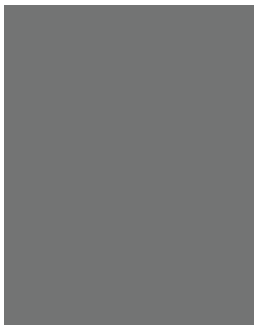
Today, the Urban Development Authority (UDA) is the apex planning and plan implementation body in Sri Lanka that is responsible for managing the state of the urban environments of the nation. The Authority was established in 1978 with the objective of introducing integrated planning and implementation, in order to promote and regulate developments for the common benefit of the urban areas. With the existence of Sri Jayawardenapura Kotte as the capital city of Sri Lanka for over three decades, it is high time that we view in retrospect to observe the achievements and successes as well as the drawbacks and failures it has gained. We can be happy of the developments which have been commenced up to now, but certainly we need to accept that we could achieve much more on this unique city area. This Capital City Development Plan 2030 is a framework towards such noble objective of making the administrative capital and its surrounding areas a unique wetland city in a highly competitive, livable, sustainable and adorable manner to attract the attention of the rest of the world.

For the implementation of this Plan, we have not forgotten that our path is not as smooth as silk, but as rough as gravel, full of challenges, filled with uncertainties, and fouled by vicious intents. Yet the UDA today is equipped with necessary systems, tools and strategies to face such challenges, withstand those uncertainties, to make the Capital City: the 'Diadem Sovereign of Sri Lanka'.

I take this opportunity to offer my sincere gratitude to the Team of the UDA who had to work hard and committed to deliver this comprehensive work and also to all those who have supported and contributed with various means towards its formulation and hope the equal and continuous support of the all of them will be there towards its successful implementation.

Dr. Jagath Munasinghe
Chairman, UDA

Message from Mayors and Chairmen of Local Authorities

We extend our gratitude towards Urban Development Authority for the initiative taken to prepare a common plan amalgamating our 04 Local Authority Areas into an integrated planning area as Administrative Capital City. It is important to understand that the local authority boundaries drawn in legal documents are no longer reflected in real grounds, as all these areas function as a single entity accommodating the expansion of the capital city. Hence, we believe, by adopting a single plan, we will be able to develop all 04 Local Authority Areas in an equal way following a shared vision.

We appreciate UDA's attempt to make Capital City Development Plan a collaborative and participatory exercise by incorporating the recommendations, suggestions and criticisms given by us; the representatives of general public. Hence, we declare it as our plan and ensure our future collaboration and support in the implementation of Capital City Development Plan within the next eleven years. Also, we request all citizens and stakeholders of Capital City to act at individual and corporate levels to lead the city towards the shared vision as envisaged by the Capital City Development Plan - 2030

APPROVAL OF THE DEVELOPMENT PLAN FOR THE CAPITAL CITY COMPRISING OF SRI JAYEWARDENEPURA KOTTE MUNICIPAL COUNCIL, KADUWELA MUNICIPAL COUNCIL, MAHARAGAMA URBAN COUNCIL, KOTIKAWATTA - MULLERIYAWA PRADESHIYA SABHA AREAS

I, Patali Champika Ranawaka, Minister of Megapolis and Western Development do hereby approve the Development Plan for the Capital City comprising of Sri Jayewardenepura Kotte Municipal Council, Kaduwela Municipal Council, Maharagama Urban Council, Kotikawatta - Mulleriyawa Pradeshiya Sabha Areas having considered the recommendation made by the Board of Management of the Urban Development Authority on 28th June 2019 by virtue of the powers vested in me under Section 8F of the Urban Development Authority (Amendment) Act No. 4 of 1982.

.....

Patali Champika Ranawaka,
Minister of Megapolis and Western Development.

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

Date: 28th June, 2019

ශ්‍රී ලංකා ප්‍රජාතාන්ත්‍රික සමාජවාදී ජනරජයේ ගැසට් පත්‍රය
අති විශෙෂ
The Gazette of the Democratic Socialist Republic of Sri Lanka
EXTRAORDINARY

අංක 2129/94 - 2019 ජූනි මස 28 වැනි සිකුරාදා - 2019.06.28
No. 2129/94 - FRIDAY, JUNE 28, 2019

(Published by Authority)

PART I : SECTION (I) — GENERAL

Government Notifications

NOTICE OF APPROVAL OF THE DEVELOPMENT PLAN FOR THE CAPITAL CITY COMPRISING OF SRI JAYEWARDENEPURA KOTTE MUNICIPAL COUNCIL, KADUWELA MUNICIPAL COUNCIL, MAHARAGAMA URBAN COUNCIL, KOTIKAWATTA - MULLERIYAWA PRADEHSHIYA SABHA AREAS

NOTICE is hereby given to the General Public of the Democratic Socialist Republic of Sri Lanka under Section 8G of the Urban Development Authority Law, No. 41 of 1978 as amended from time to time that I, Patali Champika Ranawaka, the Minister in charge of the subject of Megapolish & Western Development, by virtue of the powers vested in me under Section 8F of the said law, had approved the development plan on the 28th day of June, 2019 for the capital city comprising of Sri Jayewardenepura Kotte Municipal Council, Kaduwela Municipal Council, Maharagama Urban Council, Kotikawatta - Mulleriyawa Pradeshiya Sabha Areas, prepared under Section 8A of the said Law.

PATALI CHAMPIKA RANAWAKA,
Minister of Megapolis and Western Development.

28th June 2019.

Approval of the Development Plan for the Capital City comprising of Sri Jayawardenepura Kotte Municipal Council, Kaduwela Municipal Council, Maharagama Urban Council, Kotikawatta - Mulleriyawa Pradehshiya Sabha Areas

Public are hereby informed that the Development Plan prepared under Section 8A of the Urban Development Authority (Amendment) Act, No. 4 of 1982, for the Capital City comprising of Sri Jayewardenepura Kotte Municipal Council, Kaduwela Municipal Council, Maharagama Urban Council, Kotikawatta - Mulleriyawa Pradehshiya Sabha Areas have

1A PG 4553 — 177 (06/2019)
This Gazette Extraordinary can be downloaded from www.documents.gov.lk

been approved on 28th June 2019, by Hon. Patali Champika Ranawaka, Minister of Megapolis and Western Development by virtue of powers vested on him under Section 8 "F" of the said Amendment Act.

DR. JAGATH MUNASINGHE,
Chairman,
Urban Development Authority.

28th June 2019.

07 - 4553/1

APPROVAL OF THE DEVELOPMENT PLAN FOR THE COLOMBO COMMERCIAL CITY AREA COMPRISING OF COLOMBO MUNICIPAL COUNCIL, DEHIWALA - MOUNT LAVINIA MUNICIPAL COUNCIL, KOLONNAWA URBAN COUNCIL, BORALESGAMUWA URBAN COUNCIL, PELIYAGODA URBAN COUNCIL, WATTALA - MABOLA URBAN COUNCIL, WATTALA PRADESHIYA SABHA AND KELANIYA PRADESHIYA SABHA AREAS

NOTICE is hereby given to the General Public of the Democratic Socialist Republic of Sri Lanka under Section 8G of the Urban Development Authority Law, No. 41 of 1978 as amended from time to time that I, Patali Champika Ranawaka, the Minister in charge of the subject of Megapolis & Western Development, by virtue of the powers vested in me under Section 8F of the said law, had approved the development plan on the 28th day of June, 2019 for the Colombo Commercial City Area comprising of Colombo Municipal Council, Dehiwala - Mount Lavinia Municipal Council, Kolonnawa Urban Council, Boralesgamuwa Urban Council, Peliyagoda Urban Council, Wattala - Mabola Urban Council, Wattala Pradeshiya Sabha and Kelaniya Pradeshiya Sabha Areas, prepared under Section 8A of the said Law.

PATALI CHAMPIKA RANAWAKA,
Minister of Megapolis and Western Development.

28th June 2019.

Approval of the Development Plan for the Colombo Commercial City Area comprising of Colombo Municipal Council, Dehiwala - Mount Lavinia Municipal Council, Kolonnawa Urban Council, Boralesgamuwa Urban Council, Peliyagoda Urban Council, Wattala - Mabola Urban Council, Wattala Pradeshiya Sabha and Kelaniya Pradeshiya Sabha Areas

Public are hereby informed that the Development Plan prepared under Section 8A of the Urban Development Authority (Amendment) Act, No. 4 of 1982, for the Colombo Commercial City Area comprising of Colombo Municipal Council, Dehiwala - Mount Lavinia Municipal Council, Kolonnawa Urban Council, Boralesgamuwa Urban Council, Peliyagoda Urban Council, Wattala - Mabola Urban Council, Wattala Pradeshiya Sabha and Kelaniya Pradeshiya Sabha Areas have been approved on 28th June 2019, by Hon. Patali Champika Ranawaka, Minister of Megapolis and Western Development by virtue of powers vested on him under Section 8 "F" of the said Amendment Act.

DR. JAGATH MUNASINGHE,
Chairman,
Urban Development Authority.

28th June 2019.

07 - 4553/2

NOTICE OF APPROVAL OF THE DEVELOPMENT PLAN FOR THE MORATWUA MUNICIPAL COUNCIL AREA

NOTICE is hereby given to the General Public of the Democratic Socialist Republic of Sri Lanka under Section 8G of the Urban Development Authority Law, No. 41 of 1978 as amended from time to time that I, Patali Champika Ranawaka, the Minister in charge of the subject of Megapolis & Western Development, by virtue of the powers vested in me under Section 8F of the said law, had approved the development plan on the 28th day of June, 2019 for the Moratuwa Municipal Council Area, prepared under Section 8A of the said Law.

PATALI CHAMPIKA RANAWAKA,
Minister of Megapolis and Western Development.

28th June 2019.

Approval of the Development Plan for the Moratwua Municipal Council Area

Public are hereby informed that the Development Plan prepared under Section 8A of the Urban Development Authority (Amendment) Act, No. 4 of 1982, for the Moratuwa Municipal Council Area has been approved on 28th June 2019, by Hon. Patali Champika Ranawaka, Minister of Megapolis and Western Development by virtue of powers vested on him under Section 8 "F" of the said Amendment Act.

DR. JAGATH MUNASINGHE,
Chairman,
Urban Development Authority.

28th June 2019.

07 - 4553/3

NOTICE OF APPROVAL OF THE DEVELOPMENT PLAN FOR THE KALUTARA URBAN DEVELOPMENT AREA COMPRISING OF KALUTARA URBAN COUNCIL AND KALUTARA PRADESHIYA SABHA AREAS

NOTICE is hereby given to the General Public of the Democratic Socialist Republic of Sri Lanka under Section 8G of the Urban Development Authority Law, No. 41 of 1978 as amended from time to time that I, Patali Champika Ranawaka, the Minister in charge of the subject of Megapolis & Western Development, by virtue of the powers vested in me under Section 8F of the said law, had approved the development plan on the 28th day of June, 2019 for the Kalutara Urban Development area comprising of Kalutara Urban Council and Kalutara Pradeshiya Sabha Areas, prepared under Section 8A of the said Law.

PATALI CHAMPIKA RANAWAKA,
Minister of Megapolis and Western Development.

28th June 2019.

Approval of the Development Plan for the Kalutara Urban Development Area comprising of Kalutara Urban Council and Kalutara Pradeshiya Sabha Areas

Public are hereby informed that the Development Plan prepared under Section 8A of the Urban Development Authority (Amendment) Act, No. 4 of 1982, for the Kalutara Urban Development area comprising of Kalutara Urban Council

and Kalutara Pradeshiya Sabha Areas have been approved on 28th June 2019, by Hon. Patali Champika Ranawaka, Minister of Megapolis and Western Development by virtue of powers vested on him under Section 8 "F" of the said Amendment Act.

DR. JAGATH MUNASINGHE,
Chairman,
Urban Development Authority.

28th June 2019.

07 - 4553/4

NOTICE OF APPROVAL OF THE DEVELOPMENT PLAN FOR THE BERUWALA URBAN DEVELOPMENT AREA COMPRISING OF BERUWALA URBAN COUNCIL AND BERUWALA PRADESHIYA SABHA AREAS

NOTICE is hereby given to the General Public of the Democratic Socialist Republic of Sri Lanka under Section 8G of the Urban Development Authority Law, No. 41 of 1978 as amended from time to time that I, Patali Champika Ranawaka, the Minister in charge of the subject of Megapolis & Western Development, by virtue of the powers vested in me under Section 8F of the said law, had approved the development plan on the 28th day of June, 2019 for the Beruwala Urban Development area comprising of Beruwala Urban Council and Beruwala Pradeshiya Sabha Areas, prepared under Section 8A of the said Law.

PATALI CHAMPIKA RANAWAKA,
Minister of Megapolis and Western Development.

28th June 2019.

Approval of the Development Plan for the Beruwala Urban Development Area comprising of Beruwala Urban Council and Beruwala Pradeshiya Sabha Areas

Public are hereby informed that the Development Plan prepared under Section 8A of the Urban Development Authority (Amendment) Act, No. 4 of 1982, for the Beruwala Urban Development area comprising of Beruwala Urban Council and Beruwala Pradeshiya Sabha Areas, have been approved on 28th June 2019, by Hon. Patali Champika Ranawaka, Minister of Megapolis and Western Development by virtue of powers vested on him under Section 8 "F" of the said Amendment Act.

DR. JAGATH MUNASINGHE,
Chairman,
Urban Development Authority.

28th June 2019.

07 - 4553/5

PRINTED AT THE DEPARTMENT OF GOVERNMENT PRINTING, SRI LANKA.

Table of Contents

Acknowledgement III
Honorable Minister's Forward IV
Chairman's Forward V
Message from Mayors and Chairmen of Local Authorities VI
Honorable Minister's Approval VII
Gazette Notification VIII
Table of Contents XII
Acronyms XV

1. Planning the Capital City 01

1.1 The Vision 02
1.1.1. Vision Statement 02
1.1.2. Planners Perception on Capital City Development Plan 02
1.2 Strategic Goals 03
1.3 Objectives 04

2. SWOT Analysis 07

3. The Plan 50

3.1 Land Use Strategy 50
3.2 Projection of Population, Floor Space and Commuter 66
3.2.1. Proposed Population Projection for the Capital City 66
3.2.2. Proposed Spatial Change for the Capital City 71
3.2.3. Proposed Commuter Population of the Capital City 74

4. Utility Management Strategy 77

4.1 Introduction 78
4.1.1 Aims & Objectives 78
4.1.2 The Approach 78

4.2 Scope of the Strategy 79

4.3 Strategic Intervention for the Utility Management : Physical Infrastructure 79
Electricity Supply 79
Water Supply 83
Solid Waste Management 87
Waste Water Treatment and Disposal system 90

4.4 Provision of adequate Social Infrastructure 96
Education Institutions 96
Health Institutions 101

5. Transport Development Strategy **105**

5.1 Introduction **106**
5.1.1 Aims and Objectives 106
5.1.2 The Approach 106

5.2 Scope of the Strategy **108**
5.3 Present Statues **108**
5.4 The Projected situations in 2050 **111**
5.5 Strategic Interventions **113**
5.6 Impacts of Road Widening Proposal of Transport Strategy **130**

6. Settlement Development Strategy **139**

6.1 Introduction **140**
6.1.1 Aims and Objectives 140
6.1.2 The Approach 140

6.2 Scope of the Settlement Strategy **140**
6.3 Strategic Interventions for Settlement Development **142**
6.4 Impact of the Settlement Development Strategy **166**

7. Economic Development Strategy **167**

7.1 Introduction **168**
7.1.1 Aims and Objectives 168
7.1.2 The Approach 168

7.2 Scope of the Economic Development Strategy **169**
7.3 Identification of Main Economic Driving Clusters in the Area **169**
7.4 Predictions on Economic Development **173**
7.5 Strategic Intervention for economic Development Strategy **174**
7.6 Major Strategic Economic Development Projects **174**
7.7 Impacts of Strategic Economic Development Projects **198**

8. Administrative Cluster Development Strategy **199**

8.1 Introduction **200**
8.1.1 Aims and Objectives 200
8.1.2 The Approach 200

8.2 Scope of the Administrative Development Strategy **200**
8.3 Strategic Interventions for Administrative Cluster Development **201**
8.4 Strategic Projects for Administrative City Development **204**
8.5 Impact of Administrative City Development Strategy **212**

9. Wetland Management Strategy **213**

9.1 Introduction **214**
9.1.1 Aims and Objectives 214
9.1.2 The Approach 215

9.2 Scope **215**
9.3 Strategic Intervention for wetland Management **216**
9.4 Strategic Projects in Wetland Management Strategy **218**
9.5 Impacts of the Wetland Management Strategy **231**

10. Urban Design Strategy **239**

10.1 Introduction **240**
10.1.1 Aims and Objective 240
10.1.2 Approach 240

10.2 Scope **241**
10.3 Strategic Interventions in Urban Design Strategy **242**
10.4 Strategic Projects in Urban Design Strategy **244**
10.5 Impacts of Capital City Urban Design Plan **265**

11. Heritage Conservation Strategy **267**

11.1 Introduction **268**
11.1.1 Aims and Objective 268

11.2 Present State **271**
11.2.1 Tangible Heritages 271
11.2.2 Intangible Heritage 272

11.3 Strategic Interventions for Heritage Conservation Strategy **274**
11.4 Strategic Projects in Urban Design Strategy **276**

12. Implementation Strategy **281**

12.1 Prioritization of Strategic Project **283**
12.2 Prioritized Projects **286**

Annexures 291

List of Figures 301
List of Tables 303
List of Maps 305
Bibliography 308

Acronyms

UDA – Urban Development Authority
CMRSP – Colombo Metropolitan Regional Structure Plan
GND – Grama Niladari Division
CESMA – Western Region Megapolis Plan
SLITT – Sri Lanka Institute of Information Technology
CINEC – Colombo International Nautical and Engineering College
IT – Information Technology
DSD – Divisional Secretariat Division
SLLRDC – Sri Lanka Land Reclamation and Development Corporation FAR - Floor Area Ratio
JLL – Jones Lang LaSalle
LRT – Light Railway Transit
JICA – Japan International Corporation Agency
LA – Local Authority

01

Planning the Future of the Capital City

Chapter 01
PLANNING CAPITAL CITY'S FUTURE

The Vision

Vision Statement

Planners Perception on Capital City Development Plan

1.1 The Vision

"Diadem Sovereign Sri Lanka"

1.1.1. The Vision Statement

"Rejuvenation of the Past Glory of the Wetland City"

The vision of the capital city plan is to rejuvenate the forgone glory of the once celebrated monarch of Sri Jayawardenapura on the current administrative capital, which is not adequately manifested in its physical environment and in the order of its activities. The glory of the Sri Lanka's Administrative Capital is expected to instill the sense of pride and healthy image of the city in the dwellers and users along with strong emphasis on the unique and sensitive environmental settings which will not be compromised during the implementation.

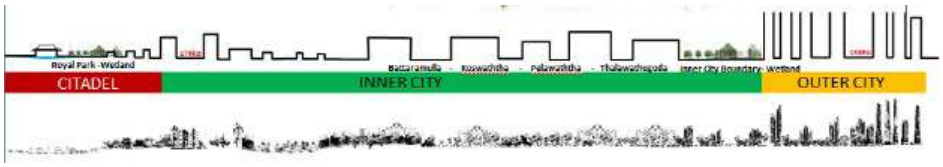


Figure 1.1 : Expecetd urban form in Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

1.1.2. Planners Perception on Capital City Development Plan

During the reign of Parakramabahu VI, Kotte kingdom was the center of power and administration for the whole island. Historical sources provide evidence to believe that this king brought the country under one rule during his reign. 'The Capital City Development Plan' emphasizes the need of creating the pride of the 'Past Glory' by rejuvenating the center of governance by means bringing in the legislature, executive, and judiciary into the capital city.

'Wetlands' are dynamic aquatic ecosystems inherent to this area and they form a unique environmental setting for the area earmarked for the capital city. The vision statement in 'The Capital City Plan' emphasizes the key environmental component through the term 'Wetland City' as the area is mainly covered with wetlands compared to other green space. Hence, the attempt is to highlight and strengthen a positive relationship with this valuable ecosystem while promoting conservation and the wise use of them to achieve sustainable development and long lasting socio-economic benefits.

1.2 Strategic Goals

To accomplish the said vision, three strategic goals are introduced. Each strategic goal addresses a specific thrust area in the vision and they in turn, are translated into 'smart' objectives.

The success of the defined goals depends on their mutual nurishment and dependence of each other. For instance, a strong, safe and healthy city relies on successful urban management, economic development, management of natural areas and awareness and resilience to natural hazards and climate change. Accordingly, 'The Capital City Development Plan' has derived three goals to achieve its vision.

Strategic Goal 1:

The Ambience of a Capital City with a unique Identity and Inherited Character

A modern day capital city of any country needs to project an image of grandeur and complexity, but with an enormous sense of safety, security and humanity. At the same time, reflections of the glory of the past amongst present day developments will retain the identity of the place. The area earmarked for the development is blessed with valuable archeological sites in the immediate surroundings such as the Kotte Raja Maha Viharaya, Kaduwela – Kothalawala Sankapitiya Viharaya, Koratota Raja Maha Vihara, Ethul Kotte Alakeshwara Ruins etc. Sri Jayawardenapura Kotte also testifies the great kingdom city which existed back in the history. Hence, it is sensible to create the 'ambience' on this land back again. 'The Capital City Plan' expects to project the image of a futuristic city that will blend well with the existing characteristics of the area. The historic reminents and modern elements are expected to harmonizely blend to create interesting dynamics that in turn helps to create a unique identity and inherited character of the city.

Strategic Goal 2:

The Experience of a City bloomed in a Chain of Wetlands

The inherent strength of 'The Capital City' lies also on its prevailing green environment. The existence of the green and blue character including Kotte Marsh, Diyatha Marsh, Kolonnawa Marsh, Thalangama Marsh, Kelani River, Diyawanna Oya give the city, the opportunity to be developed as a unique Green city. It is very important that this potential is used to the fullest. This will go a long way in helping to create a sense of place and ownership for the people to voluntarily work towards maintaining this valuable asset of the city. 'The Capital City Development Plan' has recognized a strategic approach to open up the eco systems in the area to bloom the city with green and blue feature.

Strategic Goal 3:

A Place that Prospers with Smooth and Efficient Urban Systems and Smart Urban Facilities

'The Capital City' plays an important role as the prime administrative service provider to the whole country. In future, it shall step forward to provide an efficient and user friendly systems of information, governance, transportation and service provision for those who visit the area, both to deliver services and to obtain services. It shall also be a healthy destination of choice amongst international and local investors and enterprise for business and residence. To that end the Capital City shall contain an urban environment that provides the feeling of the smooth, polished and perfect with well-designed public spaces, convenient transport modes and well-maintained, clean and safe social and physical infrastructure.

1.3 Objectives

Strategic Goal 1 – The Ambience of a Capital City with a unique Identity and Inherited Character

- *Objective 1.1 – To physically establish to sense the axis of tias Politica, Legislative, Executive and Judiciary related institutions within the Capital City*
- *Objective 1.2 – To establish a sense of strong center and a hierarchy of enclosures and provide the experience of Capital City Entrances at Strategic Locations*

Strategic Goal 2 – The experience of a city bloomed in a chain of wetlands

- *Objective 2.1 – To conserve and enhance the existing wetlands ecosystem with an extent of 3,300 hectares along with their catchments, within a total physical built up area of 16,250 hectares*
- *Objective 2.2 – To open up 80sqkm of wetlands, to the public and enhance water / wetland fronts with a length of 39kilometers for developments*

Strategic Goal 3 – A place that prospers with smooth and efficient urban systems and smart urban facilities

- *Objective 3.1 – To provide adequate space for state sector workforce of 65,000 and 135,000,000sqm of space for residential community within the reach of average 3 to 10 kilometers from their work places, along with necessary amenities, recreational facilities, economic infrastructure.*

- *Objective 3.2 – To establish an integrated system of reliable and comfortable public transport, which provides maximum 30 minutes reach between any two locations (average speed of 50 km per hour) within the capital city area with a single transit/modal switch by 2030.*

- *Objective 3.3 – To upgrade the physical infrastructure in par with international standards and the smart urban facilities in all public spaces.*

02

SWOT Analysis

Chapter 02
SWOT ANALYSIS

Strategic Goal 1

Strategic Goal 2

Strategic Goal 1

The ambience of a Capital City with a unique identity and inherited character

Strengths

S 1: Location of the parliament along with the related administrative functions within the planning area.

S 2: The planning and urban design strategies that are already in practice.

S 3: Existence of historical Kotte kingdom archeological sites

Weaknesses

W 1: Less sensitivity and low priority given in the implementation and the enforcement towards the original vision and the urban design of Kotte-Sri Jayewardenapura Capital City Development Plan.

W 2: Strategic points on axis is densified with active urban functional activities.

W 3: Underserved settlements that provide home for 1% approximately of the residential Population.

W 4: Absence of active conservation programme for the available archeological sites and remnants.

Opportunities

O 1: Government policy and the proposals to refurbish and relocate some of the major institutions from Colombo to Sri Jayawardenapura.

Strategic Goal 2

The experience of a city bloomed in a chain of wetlands

Strengths

S 1: Coverage of 20% of planning area with wetland ecosystem.

S 2: The wetland eco-system that supports the natural drainage, bio-diversity and scenic beauty of the landscape covering about 20% of the land area

S 3: Public wetland ownership and rich bio-diversity

Weaknesses

W 1: Reduction of wetlands by 47% during the period of 1956 to 2016

Opportunities

O 1: Legal conservation status of wetlands

O 2: Proposed master plan and projects for wetland conservation

O 3: Declaration of Colombo (along with its surrounding lands) as a wetland capital by RAMSA convention and the associated wetland conservation plans

Strategic Goal 3

A place that prospers with smooth and efficient urban systems and smart urban facilities

Strengths

S 1: Existence of clearly identifiable clusters of activities which can promote and Contribute to the city economy.

S 2: 73% ofearmarked Capital City planning area recognized as natural hazard free area.

S 3: Relatively higher level of connectivity among regional & local nodes.

S 4: Usage of lands in proposed administrative district for functions with national level importance. And the possibility of more than 20% of lands for public purposes.

S 5: Availability of education and health facilities to plan social infrastructure and community services for urban growth

Weaknesses

W 1: Identification of 23% of the planning area as flood inundation area

W 2: Non-reliable, poorly managed and low quality public transportation and inefficient traffic management.

W 3: Location of 75% government and semi government institutions outside the proposed administrative city area.

Opportunities

O 1: Existing proposals to improve public transportation such as the Light Rail, Rail Electrification, Bus Priority Lane and the Water Based Transport

O 2: Existing proposals for theme based development zones such as Techno city, Admin City, etc

O 3: Existing and increasing demand for land and propoerty in the area as the prefered residential and coorperate office location.

O 4: Proposed Infrastructure related projects

O 5: Climate Resilience Improvement Project (CRIP)

Threats

T 1: Competitive cluster development beyond the planning area.

S.G 1: The ambience of a Capital City with a unique identity and inherited character

Strategic Goal 1: Strengths

1. *Location of Parliament along with related administrative functions within the planning area.*

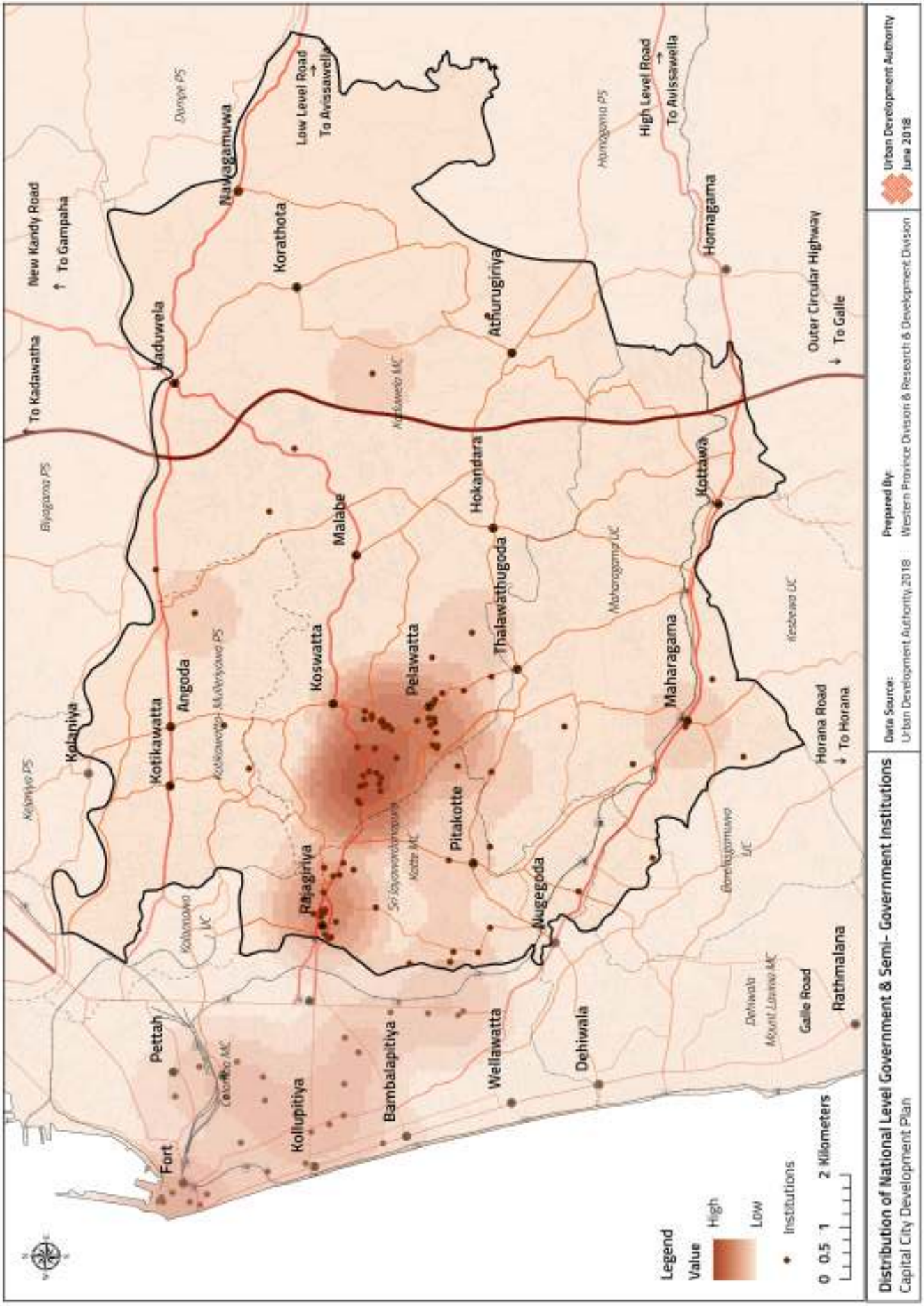
   The Parliament generates great identity to the capital city. It plays a vital role as the country's ceremonial center and preserves the country's global identity. Considerably, a strong axis is already established by the Historic and nationally important Kelaniya temple and the Parliament. Further, 57 central government institutions and 42 semi government institutions are currently established within an area of 170 hectares which is 1% of the total planning area. These institutions provide ample support to hold the 'Administrative Character' of the area.

2. *The planning and urban design strategies that are already in practice.*

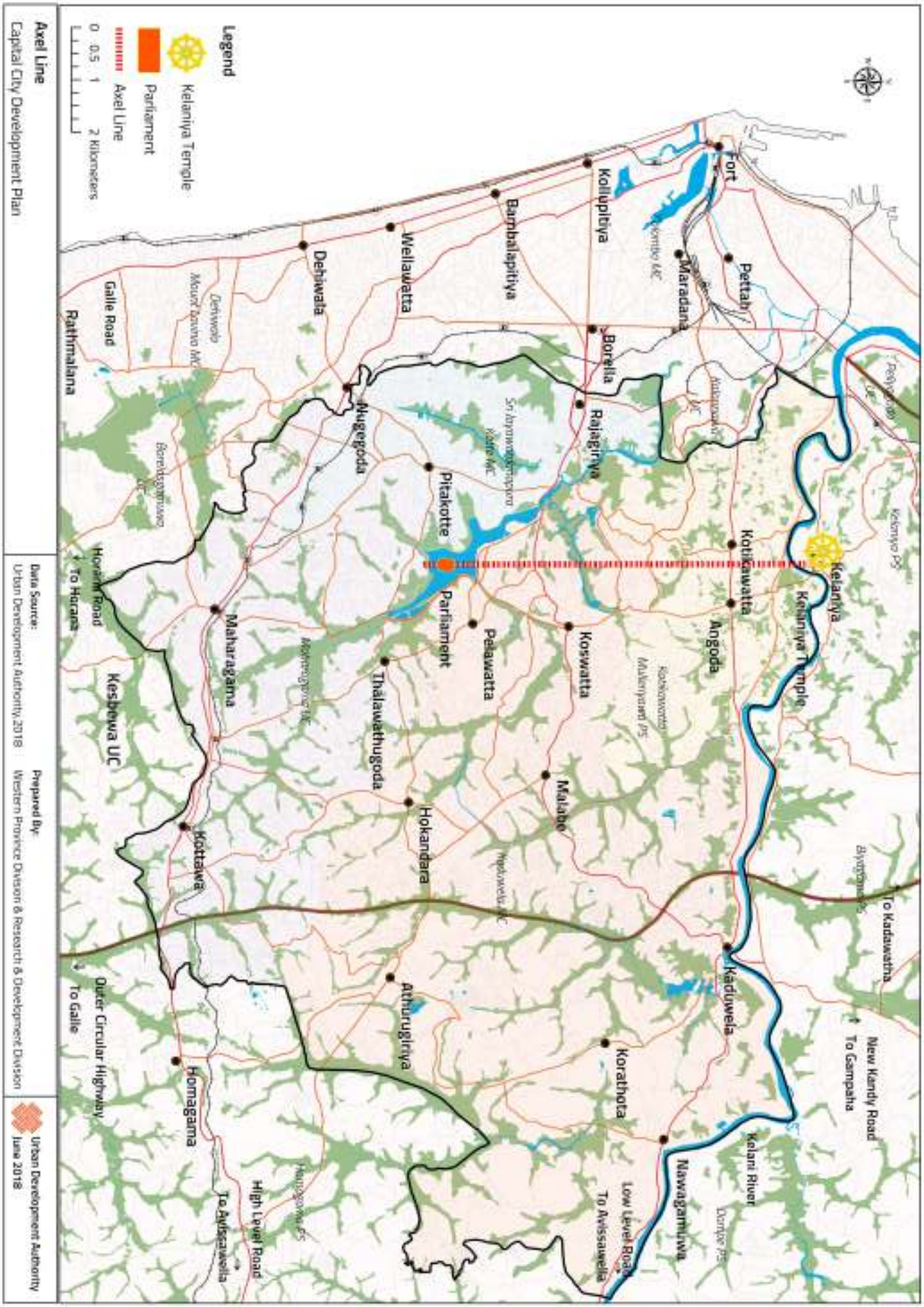
   The optimum building height regulation practice within the area helps to preserve the perceived character of the parliament area.

3. *Existence of historical Kotte Kingdom archeological sites*

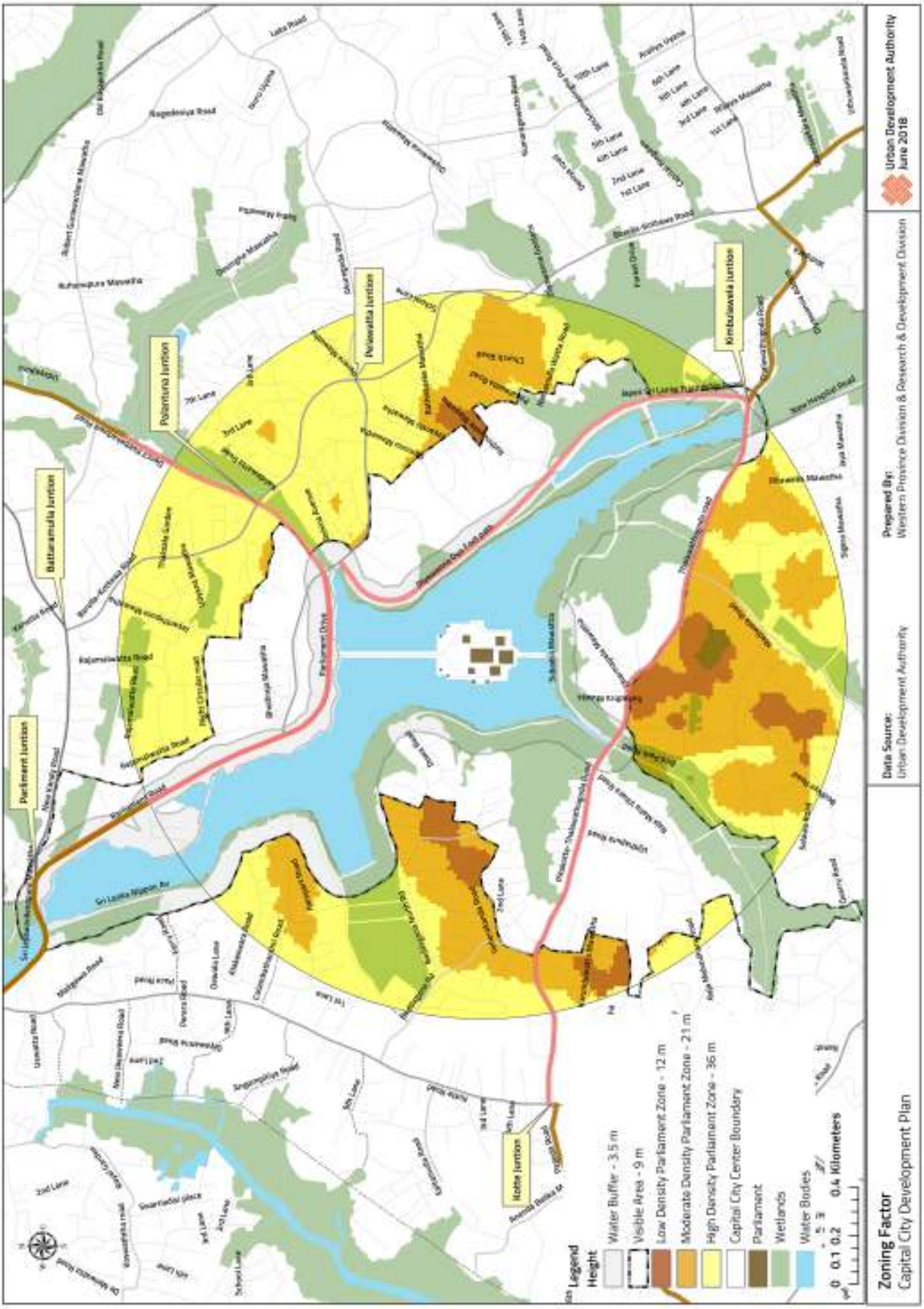
   The Capital City is well-known for the inherited historical value it holds. Especially, the proposed center which holds the ruins of the Rampart Wall, Alakeshwara Ruins, Angampitiya Ground, Wehera Kanda, Outer Canal, Ambalama and tunnel enriches the unique character of the city center.



Map 2.1 : Distribution of national level governmet, semi-government offices
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 2.2 : Axis of planning area
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 2.3 : Building heigths categorization - Parliament sourrouding area
Source : Western Province Division and Research & Development Unit, UDA - 2018

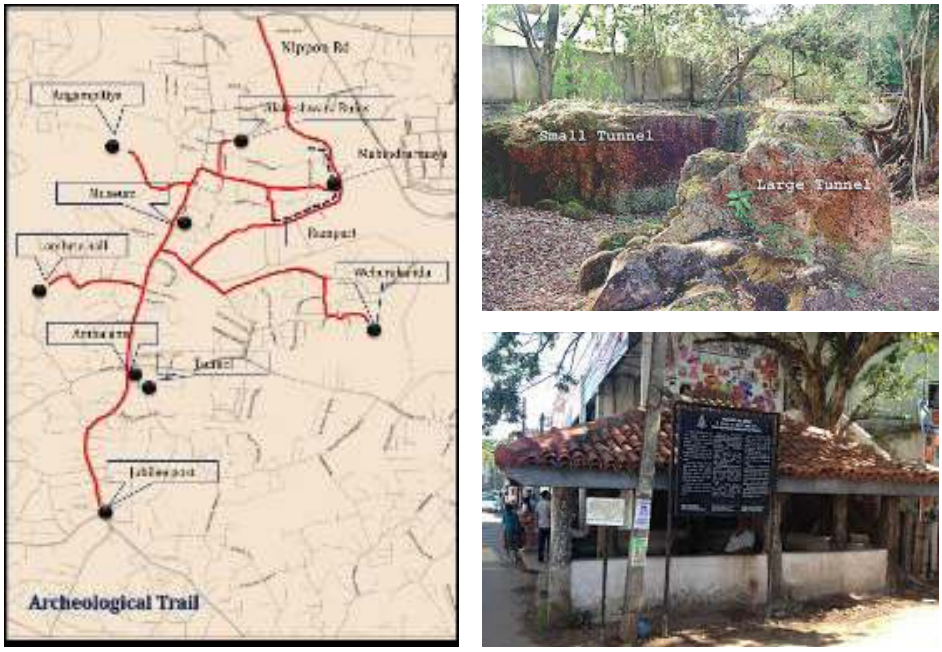


Figure 2.1 : Arceological sites in Kotte
Source : www.trips.lakdasun.org/a-tour-to-kingdom-of-kotte-2018

Strategic Goal 1 – Weaknesses

1. *Less sensitivity and low priority given in the implementation and the enforcement towards the original vision and the urban design of Kotte-Sri Jayawardenapura Capital City Development Plan*

According to survey results carried out by the Urban Development Authority, the respondents had mentioned that the Parliament building is the only iconic building which emphasizes the capital city character of Sri Jayawardenapura Kotte.

Figure 2.2 : Sense of the place in Kotte
Source : Western Province Division and Research & Development Unit, UDA - 2018

2. *Strategic points on axis is densified with active urban functional activities.*

'Axis' is one of the major design principles in urban design practices as it helps to create the uniqueness of a city. However, when the hypothetical axis from the Parliament to Kelaniya Temple is considered, it is recognized that the area is densified with commercial and administrative activities. Hence, this positioning could discourage the expected changes on the axis as it will be a complicated task to reshape the axis innovative ideas and regulations.

3. *Underserved settlements that provide home for approximately 1% of the residential population.*

Two sites of the seven underserved settlements are located within the 'Center' and 'Inner City'. This incident could right away affect the 'Character' of the Capital City.

Identified Location	Land Ownership	No. of Houses
Obesekarapura (Arunodhya Mw)	KMC Land & Private	668-700
Kinda Ela Reservation	SLLRDC Land	30 -50
Bnadaranayakepura	Private	600-700
Maligawa Road	UDA Land	60
Baddagana Road	SLLRDC Land	17
Kittampahauwa Canal Reservation (Perera Mw)	SLLRDC Land	7-10
Kelaniweli Reservation	CGR Land	144

Table 2.1 : Underserved settlement in the planning area
Source : GN office data of Sri Jayawardenapura Kotte MC, Filed Survey and Observation 2017

4. *Absence of active conservation programme for the available archeological sites and remnants.*

The remaining archeological sites in the current capital city area are given a very low consideration. As a result, some dwellers have overtaken the historical ruins for their personal use. These incidents have dimidiated the conservation of this valuable city.

Chapter 02
SWOT ANALYSIS

The Ambience of a Capital City with a unique Identity and Inherited Character

Strategic Goal 1: Weaknesses

Strategic Goal 1 : Opportunities

The experience of a city bloomed in a chain of wetlands

Strategic Goal 2 : Strengths

Figure 2.3 : Remaining arceological sites in Kotte
Image Courtesy : Thilini Niluka , Western Province Division – 2018

Strategic Goal 1 – Opportunities

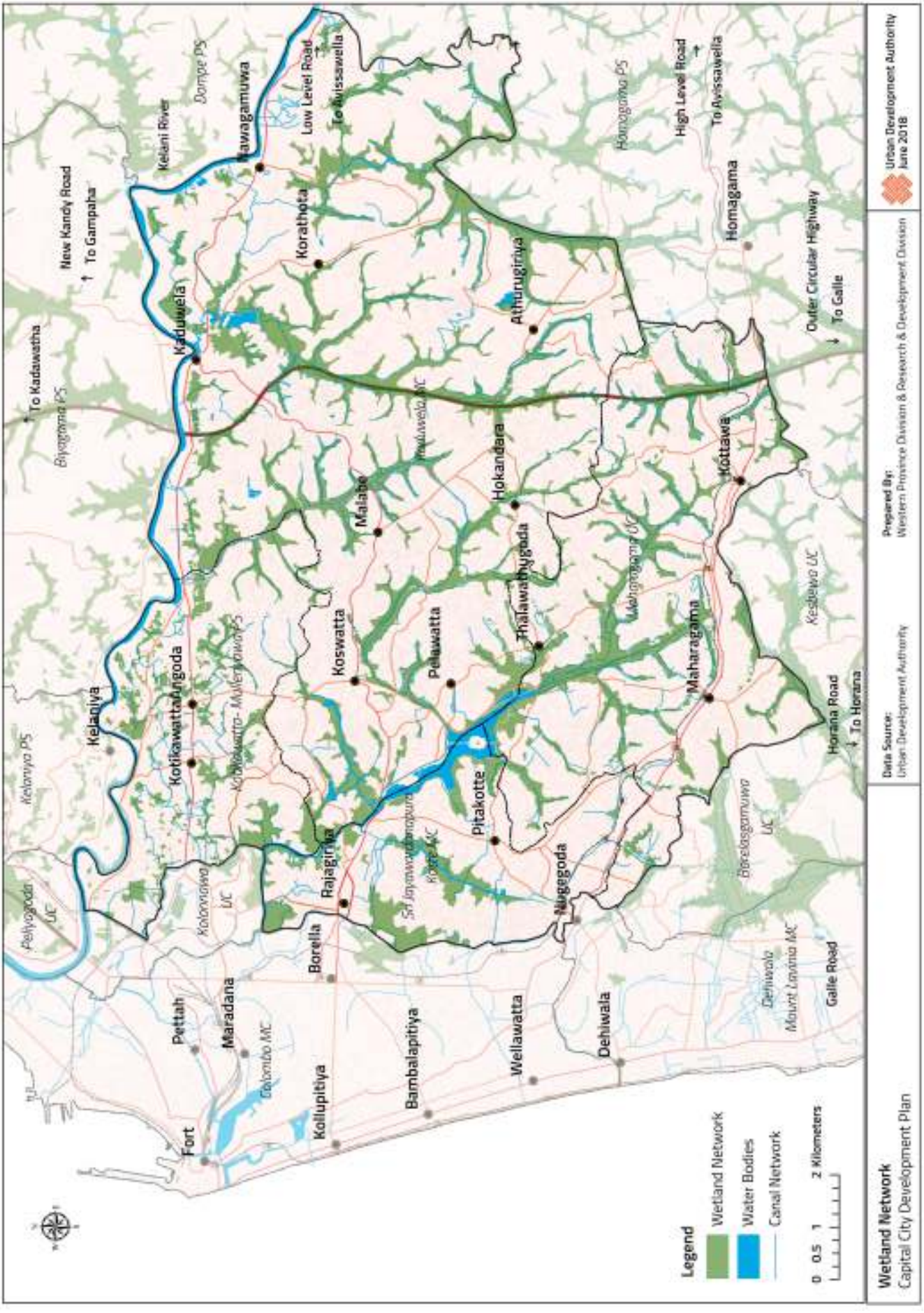
1. *Government policy and the proposals to refurbish and relocate some of the major institutions from Colombo to Sri Jayawardenapura.*

S.G.2 The experience of a city bloomed in a chain of wetlands

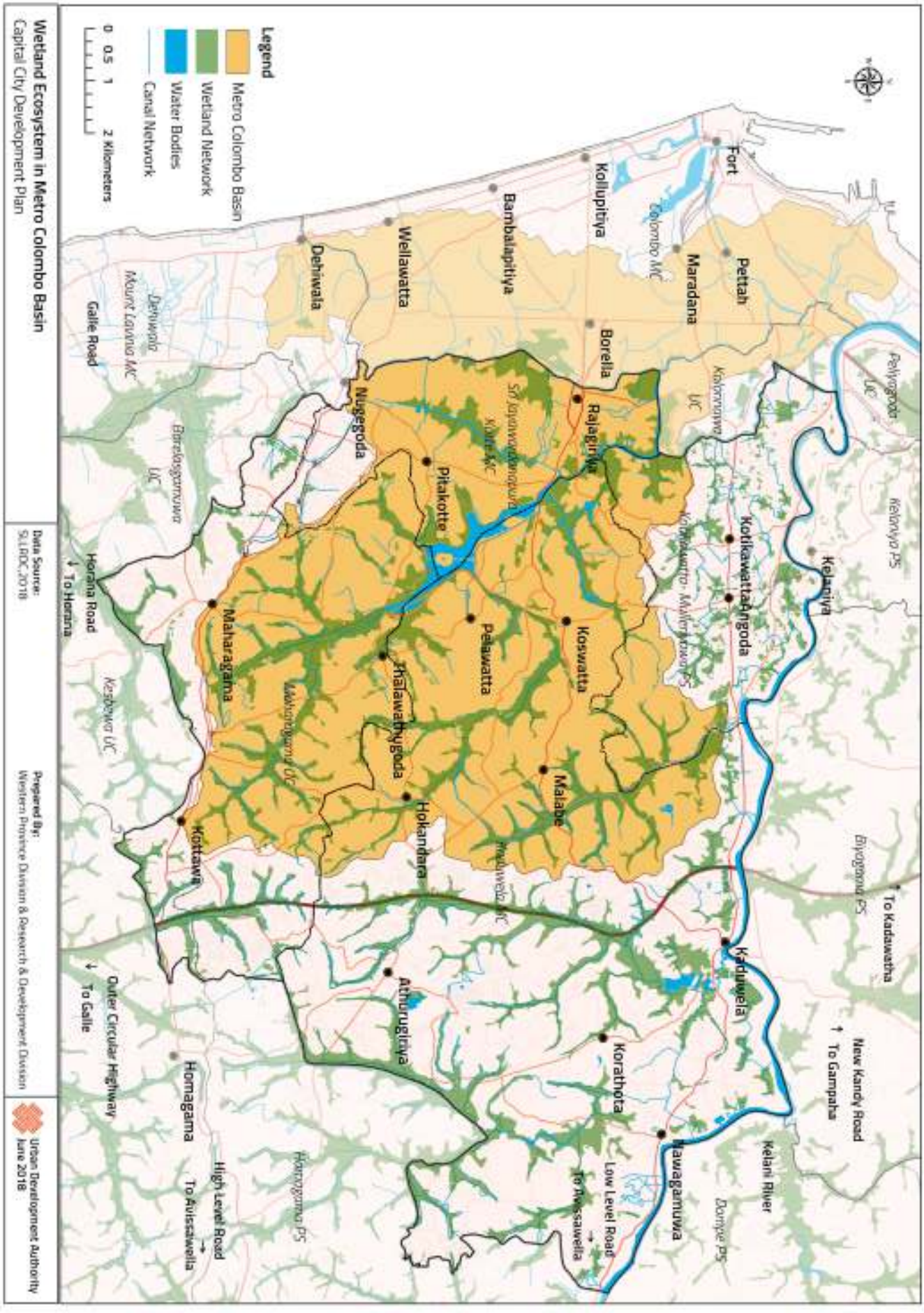
Strategic Goal 2 - Strengths

1. *Coverage of 20% of planning area with wetland ecosystem.*
2. *The wetland eco-system that supports the natural drainage, bio-diversity and scenic beauty of the landscape covering about 20% of the land area.*

The natural wetland feature is the most exceptional character of the Capital City Planning Area. It upholds the Capital City among the other capital cities in the world. It holds the main strength of the planning area. hence, 17% of the environmental sensitive area is legally protected. On the other hand, 78% of Greater Colombo Flood Retention Area is located within the Capital City Planning area.



Map 2.4 : Wetland network of the planning area
Source : Western Province Division and Research & Development Unit, UDA - 2018



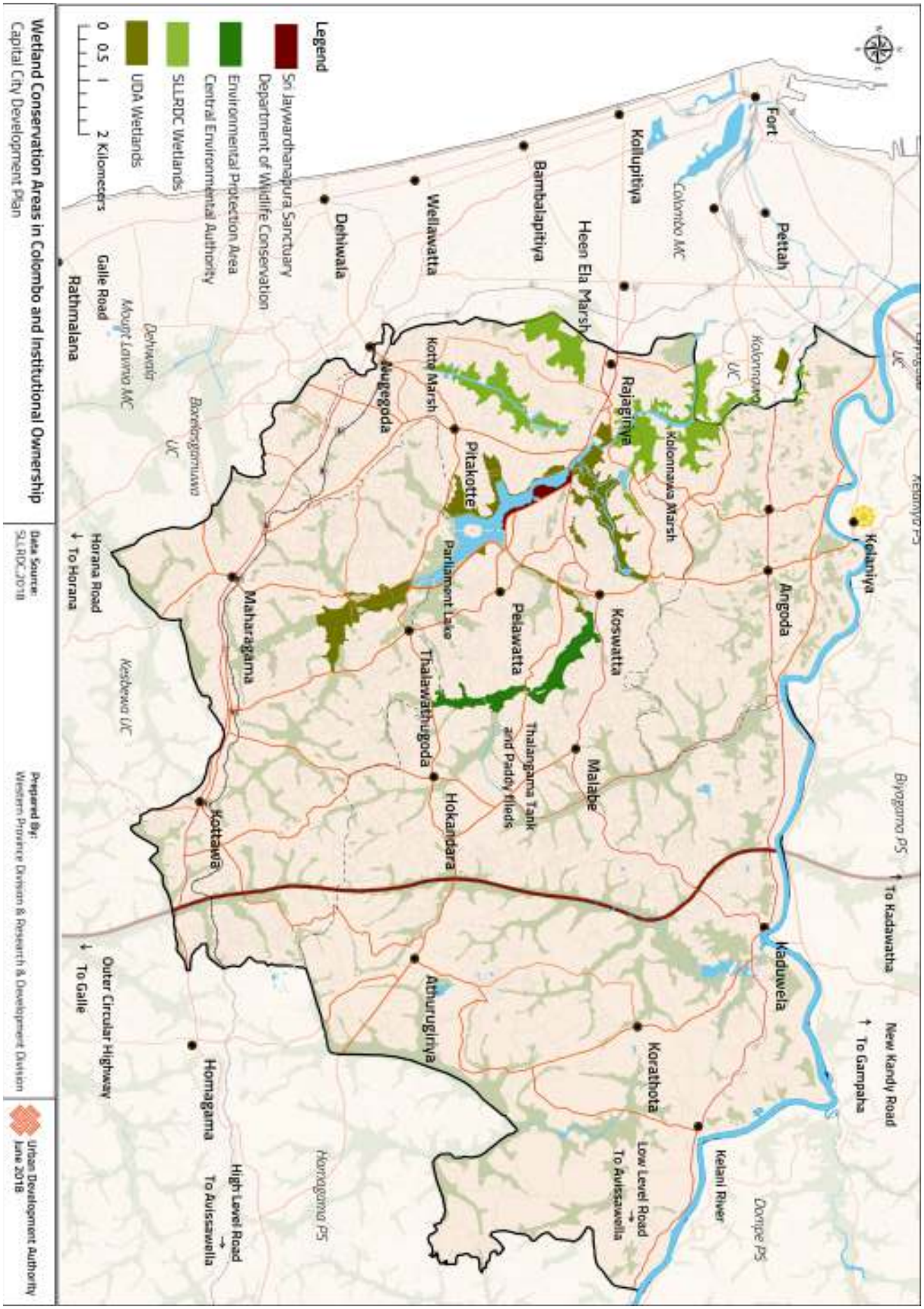
Map 2.5 : Wetland ecosystem in the Metro Colombo basin
Source : Western Province Division and Research & Development Unit, UDA - 2018

3. *Public wetland ownership and rich bio-diversity*

The public legal wetland ownership has led to preserve the bio- diversity of the area and mitigate the conversion of wetlands into developable lands. Due to this reason, the unique character of wetland has been prominently secured.

Main Sampling Unit	Species Richness	
	Flora	Fauna
Beddagana (Kotte) Marshes	141	129
Talangama Tank Marshes	110	174
Weli Park Marshes	101	121
Wetland Park	91	166
Mulleriyawa Marshes	89	97
Diyatha Uyana Marshes	89	121
Kolonnawa Marshes	85	139
Malabe Marshes	66	140
Madinnagoda Marshes	66	62
Parliament Road Marsh	62	107
Nawala (Heen ela) Marsh	59	107
Kimbulawala Marshes	45	109
Thalawathugoda Marshes	39	48
Bird Park	36	67
Polwatta Road Marshe	9	76

Table 2.2 : Wetland bio-diversity in the planning area
Source : Metro Colombo Urban Development Project



Map 2.6 : Wetland conservation areas in Capital City and institutional ownership
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Goal 2 – Weaknesses

1. *Reduction of wetlands by 47% during the period from 1956 to 2016*

The gradual decrease in wetlands around Kaduwela and Kotte areas over the past decades has threatened the eco systems.

(Gunawardena G.M.W.L, Urbanization and Wetland Ecosystems – a case study in Sri Jayawardenapura Kotte and suburbs)

Year	Area (m2)
1956	8805188
1972	8210412
1999	6339851
2007	5548696
2016	4664412

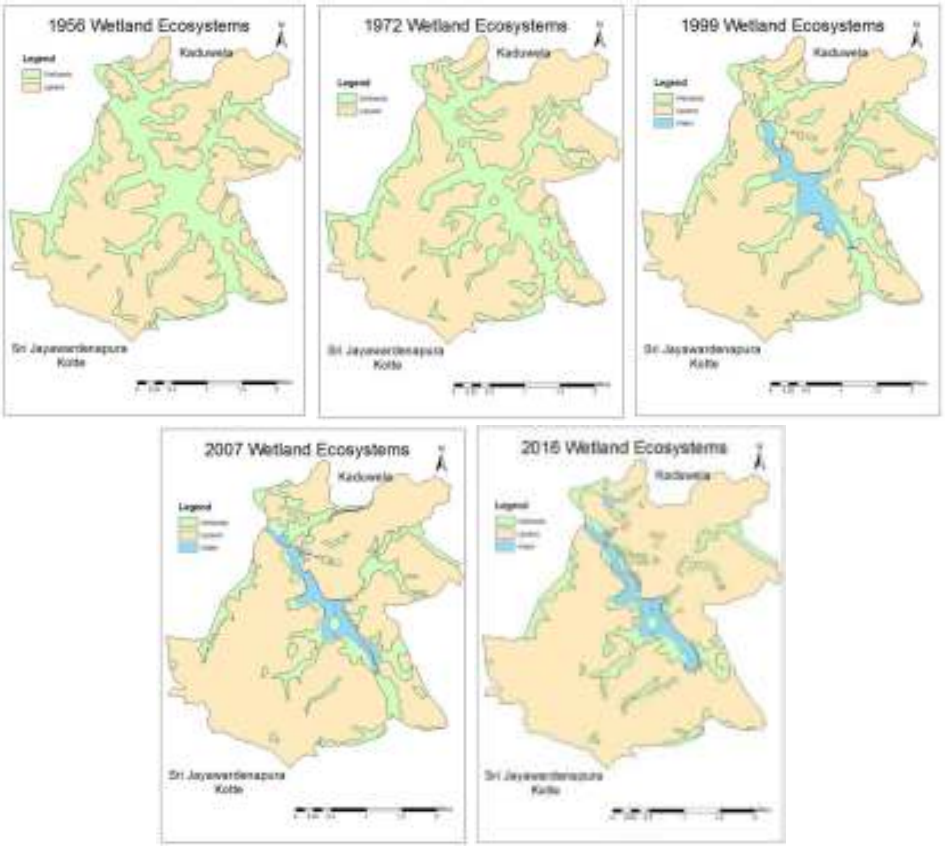


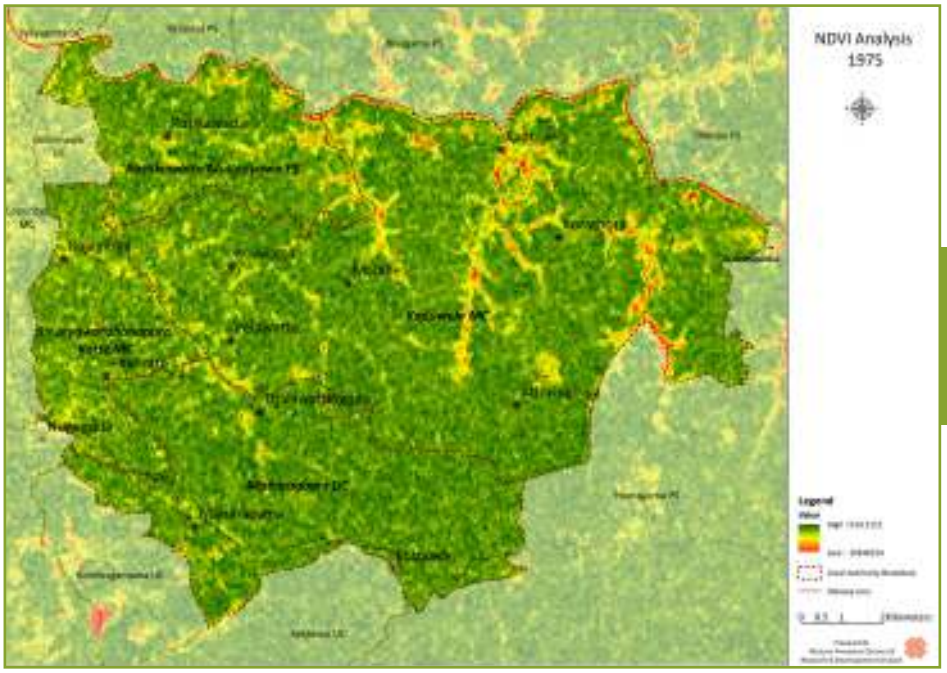
Figure 2.4 : Reduction in green coverage of the planning area
Source : Gunawardena G.M.W.L Urbanization and Wetland Ecosystems- A Case Study in Sri Jayawardenapura Kotte and Suburbs

Chapter 02
SWOT ANALYSIS

The experience of a city bloomed in a chain of wetlands

Strategic Goal 2 :
Weaknesses

Further, the NDVI analysis indicates reduction in green coverage of the capital city planning area.



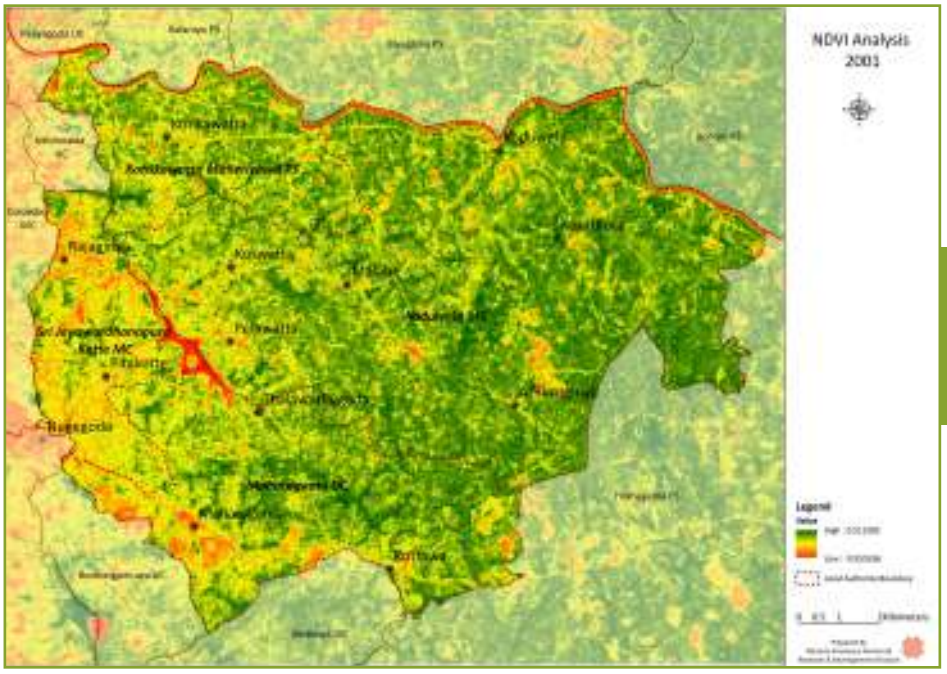


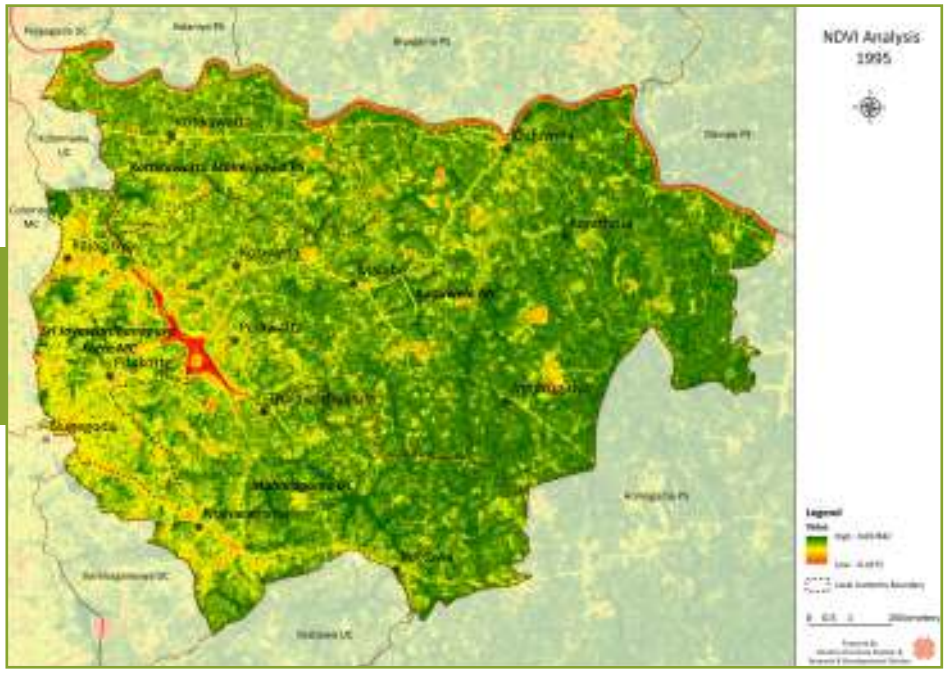
Figure 2.5 : Output results of NDVI analysis
Source : Landsat Satellite Images

Chapter 02
SWOT ANALYSIS

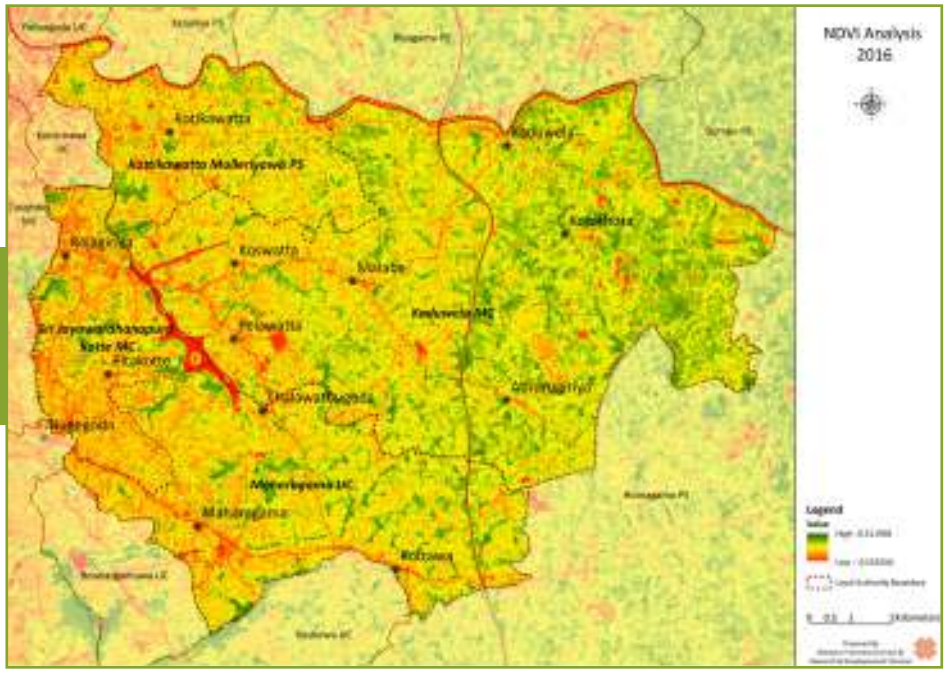
The experience of a city bloomed in a chain of wetlands

Strategic Goal 2 :
Weaknesses

1995



2016



Strategic Goal 2 – Opportunities

1. *Legal conservation status of wetlands*

    - *Parliament Lake and associated wetlands are designated as a Wildlife Sanctuary (Sri Jayawardanepura Kotte Sanctuary) by the Department of Wildlife Conservation (DWLC) under the Fauna and Flora Protection.*

    - *Thalangama Lake (CEA) protected under the National Environment Act (NEA), 1980.*

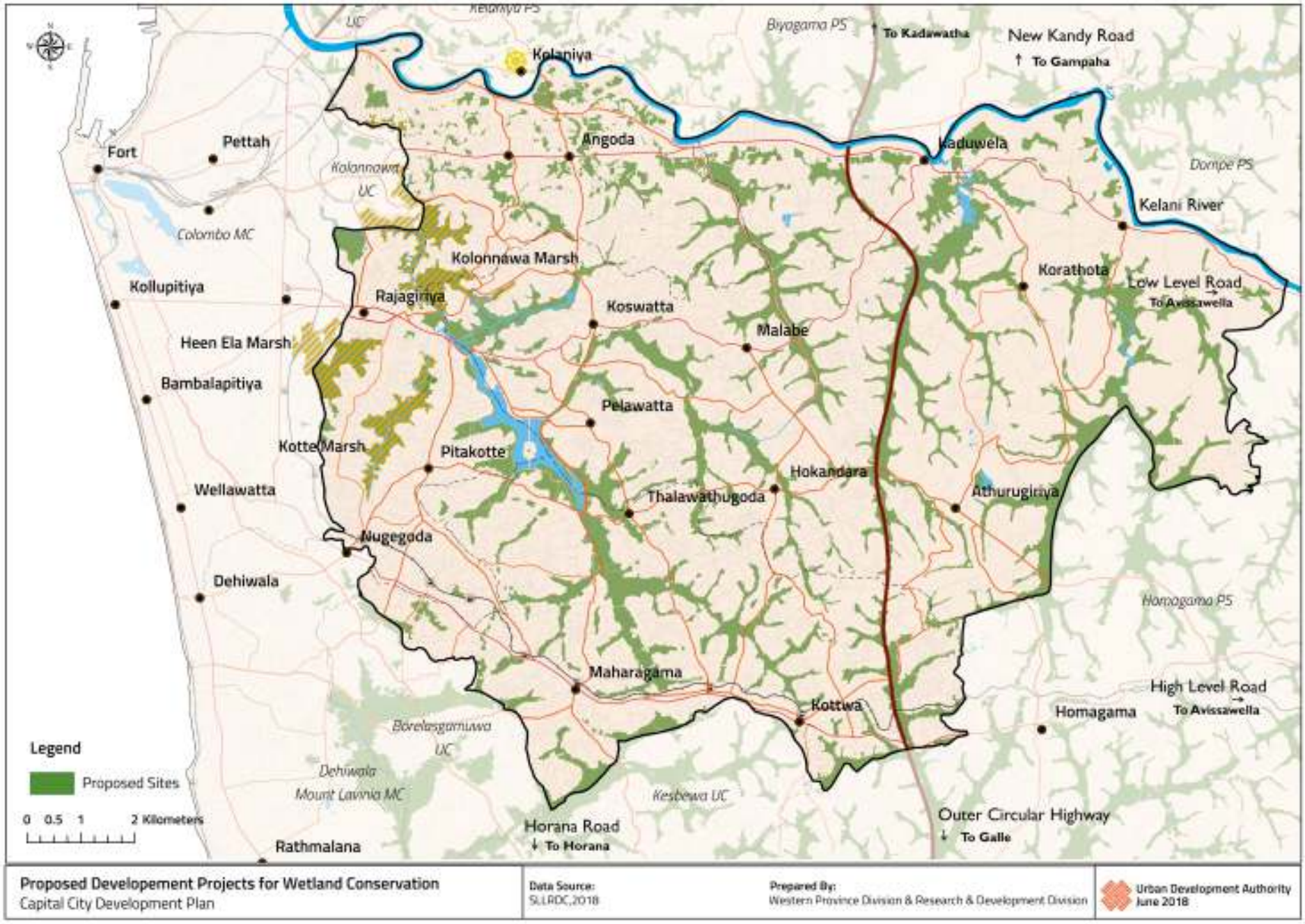
    - *Wetland zoning guidelines gazetted in 2006 by the Urban Development Authority (UDA) for the Western Province (WP) in order to facilitate environmentally & economically sustainable use of wetlands in land use planning.*

These statues support to create the blooming city feature by conserving wetlands.

2. *Proposed master plan and projects for wetland conservation*

    2.1. Master Plan proposed by SLLRDC for Wetland Conservation

Inland Water Transport, Floating Cabanas, Floating Restaurant, Canal Bank Conservation, Bird Watching Towers, Eco-friendly Tourist Bungalow, Wetland Park and Organic Paddy Field are the proposals included in this project to conserve the wetlands



Map 2.7: Proposed development projects for wetland conservation
Source : Sri Lanka Land Reclamation and Development Cooperation

2.2. Wetland Management Strategy – 2016

32 hectares of land from Thalawatugoda Wetland, 26 hectares of land from Kibulawala Wetland and 18 hectares of land from Baddagana Wetland are to be restored as wetland habitats and it is expected to uphold the city character with conservation of available wetlands.

2.3. Baddegana Bio-Diversity Park and Kotte Rampart Nature Park Project

The land with an extent of forty-six acres bounded by the Diyawanna Lake is to be developed as a bio diversity park and bird sanctuary by the Urban Development Authority.

3. *Declaration of Colombo (along with its surrounding lands) as a Wetland Capital by RAMSA Convention and the associated wetland conservation plans*

S.G 3 – A place that prospers with smooth and efficient urban systems and smart urban facilities

Strategic Goal 3 - Strengths

1. *Existence of clearly identifiable clusters of activities which can promote and contribute to the city economy.*

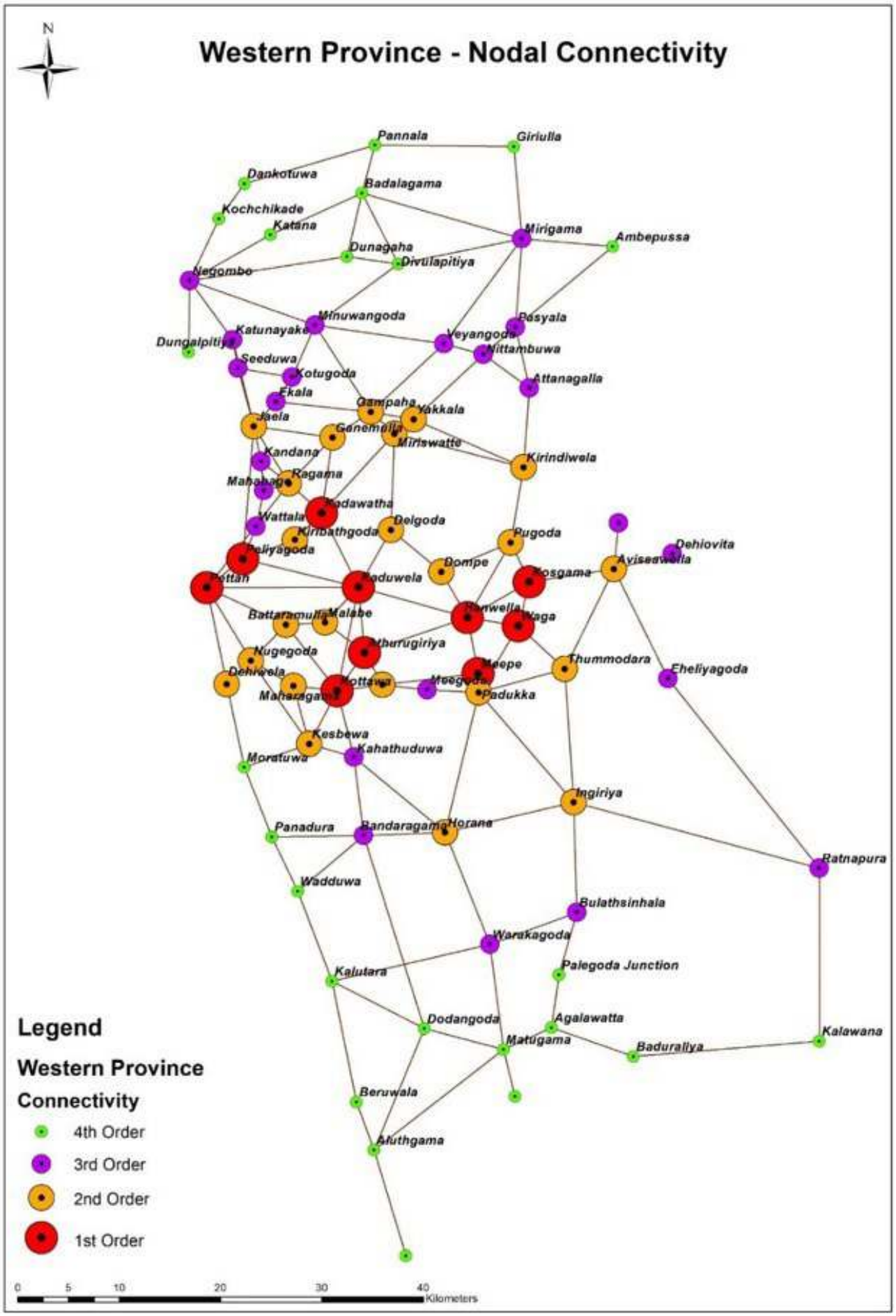
2. *72.86% of earmarked Capital City Planning Area recognized as natural hazard-free area.*

According to Hazard Index and Risk Index of the planning area, 77% of the planning area is recognized free from the natural hazards. Hence, it will support the improvement of smooth urban system.

3. *Relatively higher level of connectivity among regional & local nodes.*

When the existing distribution of the nodes of the planning area is considered, it can be identified that nodes are spread in close proximity to each other with an approximate distance of 5km. Hence, these nodes are expected to provide provisions for a smooth urban system.

Figure 2.6 : Existing node distribution within the planning boundary
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 2.8 : Western province nodal connenctivity
Source : Western Province Division and Research & Development Unit, UDA - 2018

4. *Usage of Lands in Proposed administrative district for functions with national level importance and the possibility of more than 20% of lands for public purposes.*

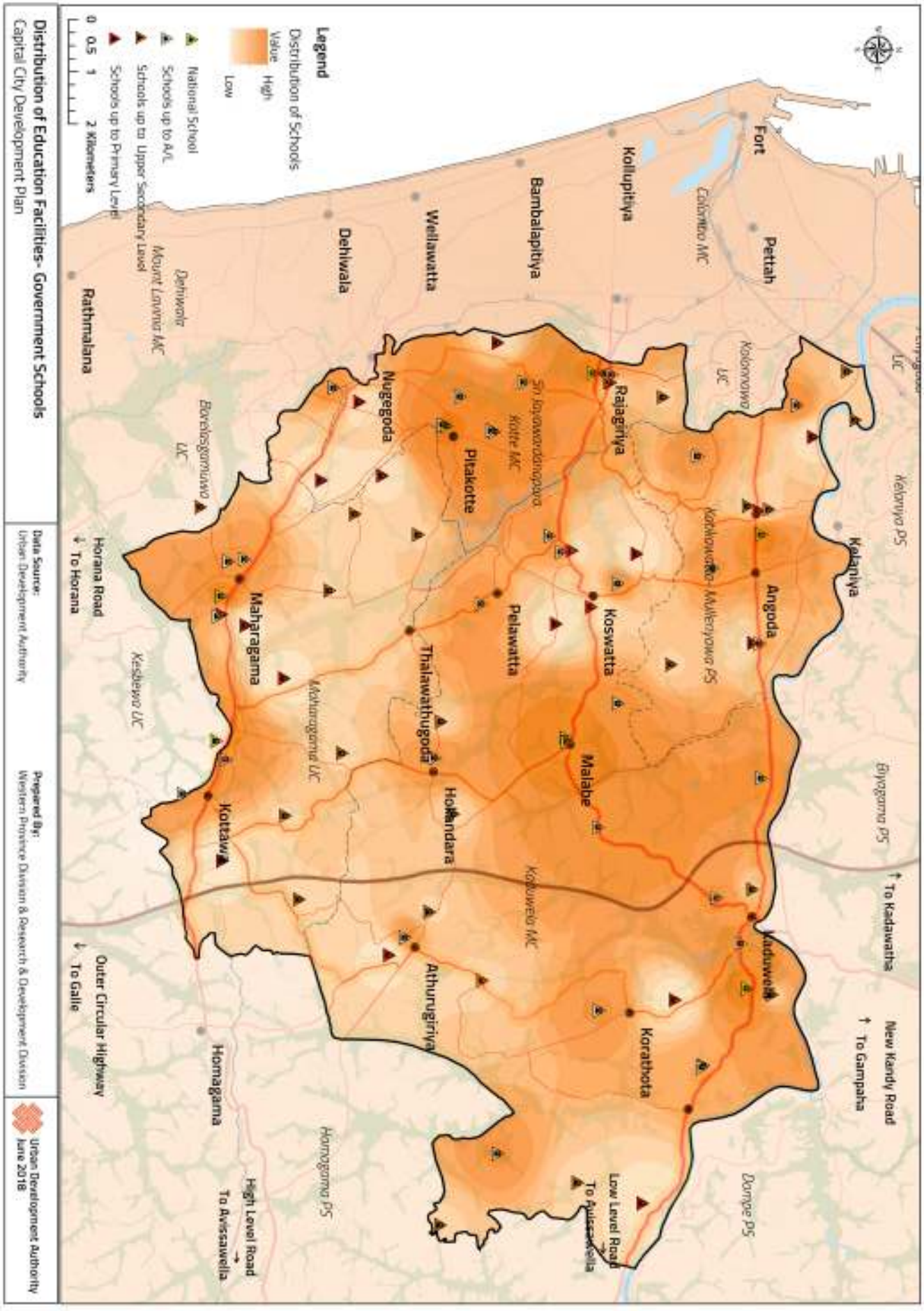
A total land area of 3% is allocated for administrative institutions within the proposed administrative district including Sethsiripaya Stage 1, Stage 2, Suhurupaya and Department of Census & Statistics. These Institutions are to provide a smooth urban system through cluster efficiency.

5. *Availability of Education and Health facilities to plan social infrastructure and community services for Urban Growth*

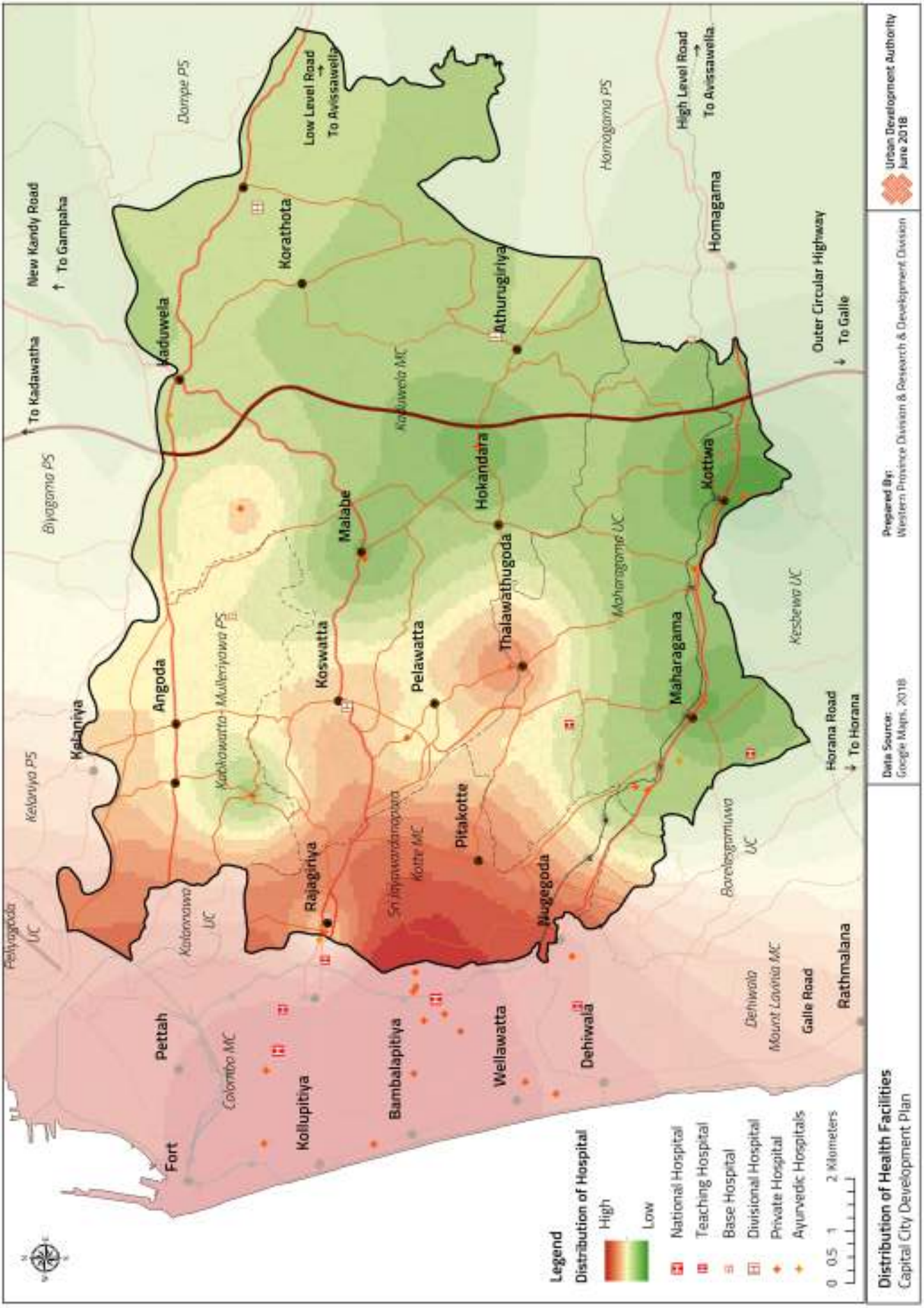
A total number of 81 schools are situated within the Capital City Planning area. The 81 schools include 19 national schools, 23 up to A/L, 30 up to O/L and 9 primary schools.

A total number of 22 government and private hospitals are located within the planning area. The 22 government hospitals include 3 teaching hospitals, 2 base hospitals, 3 divisional hospitals, 12 private hospitals and 2 ayurvedic hospitals.

Further, there are main hospitals situated with close proximity such as, Colombo General Hospital (2.9 km), Colombo South Teaching Hospital (1.4km), Ayurveda Hospital, Rajagiriya (100m), Asiri Surgical Hospital (2.9km), Ninewells Hospital (Pvt) Ltd (2.6km) and Oasis Hospital (3km).



Map 2.9 : Distribution of education facilities in planning area
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 2.10 : Distribution of health facilities in planning area
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Goal 3 - Weaknesses

1. *Identification of 23% of the planning area as flood inundation area*

An extent of 23% of the capital city planning area is unable to create developable lands due to flood inundation. Further, the development pressure of the area could adversely effect the wetlands.

2. *Non-reliable, poorly managed and low quality public transportation and inefficient traffic management.*

When the hourly capacity (pcu) of the major corridors of Capital City Planning area are considered, Malabe Corridor and Low Level Corridor exceeds the capacities.

7 Corridors	Peak Hour Road Traffic (PCU)	Hourly Capacity (PCU)
Kandy Corridor	4400	3300
Low Level Corridor	2900	2200
Malabe Corridor	5100	4400
Galle Corridor	2900	2300
Horana Corridor	2200	2300
High Level Corridor	2000	2300
Negombo Corridor	4000	4400

Table 2.3 : Hourly capacity indicator of the major corridors
Source : ComTrans Data -2017

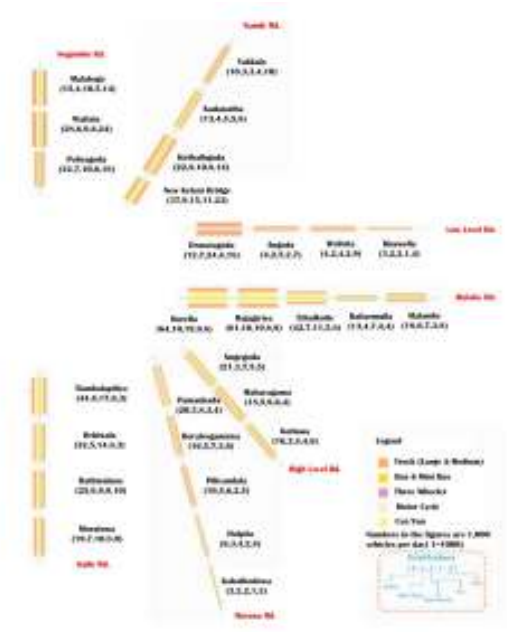
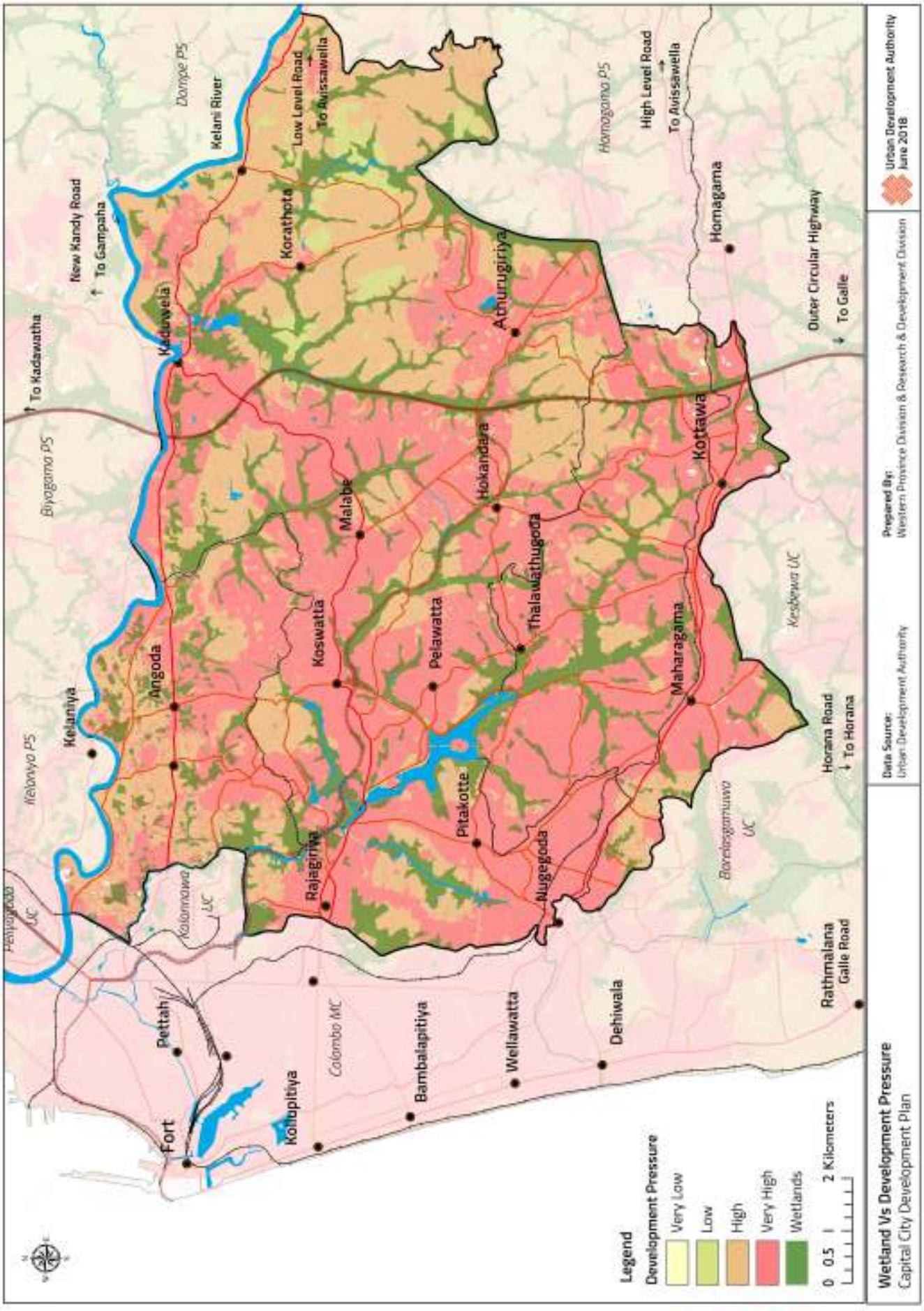
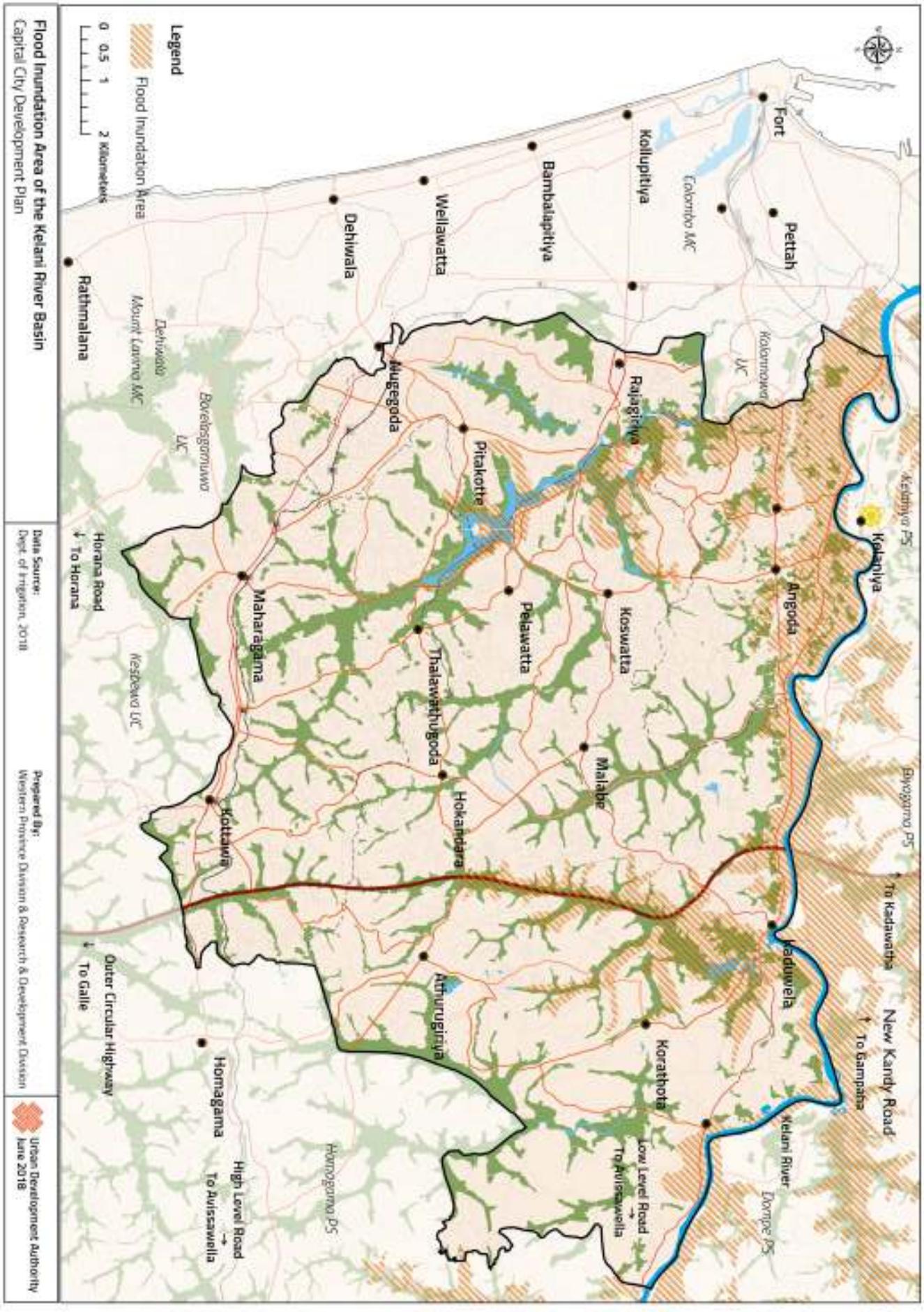


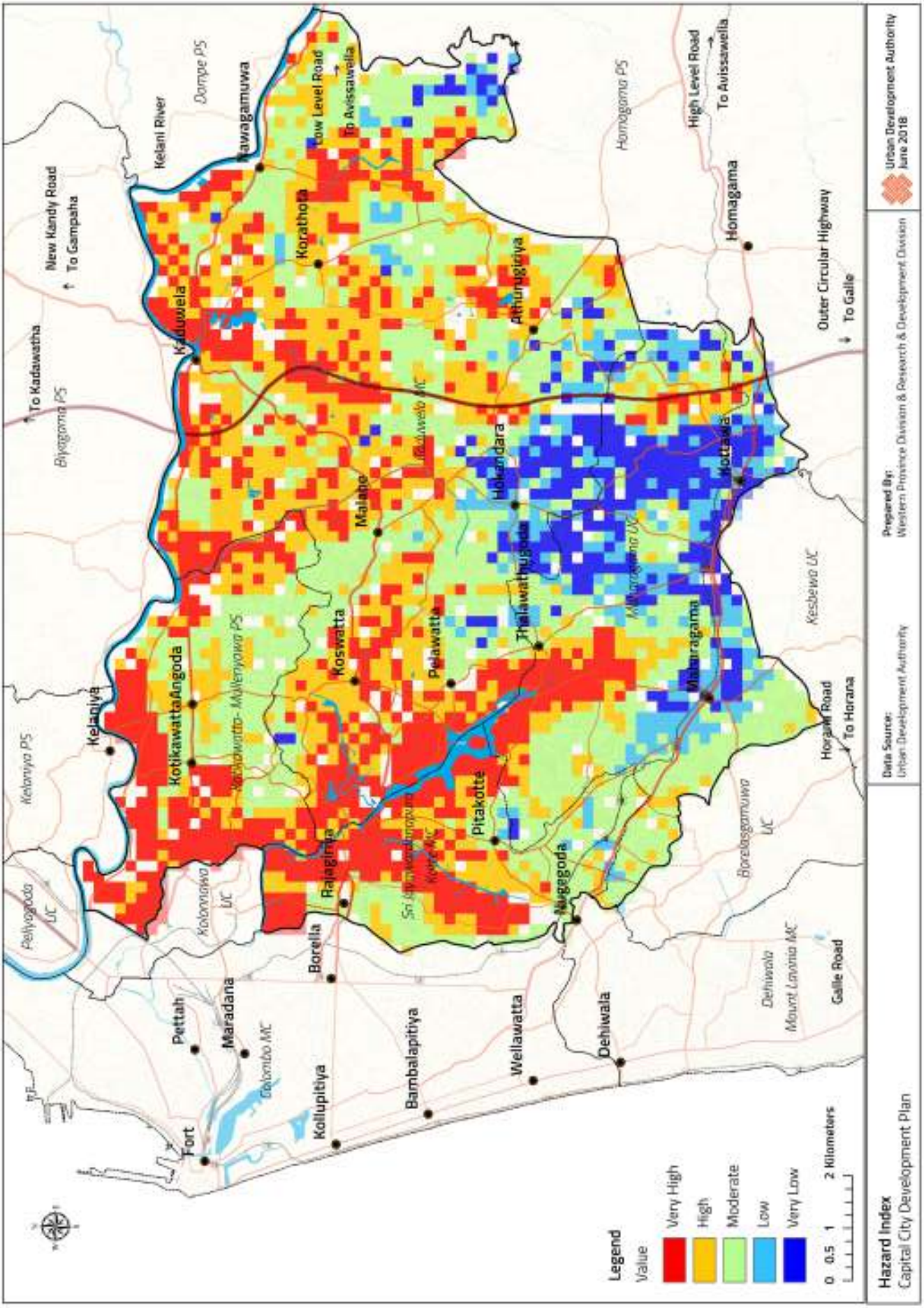
Figure 2.7 : Vehicle capacity along the major corriodors
Source : ComTrans data - 2017



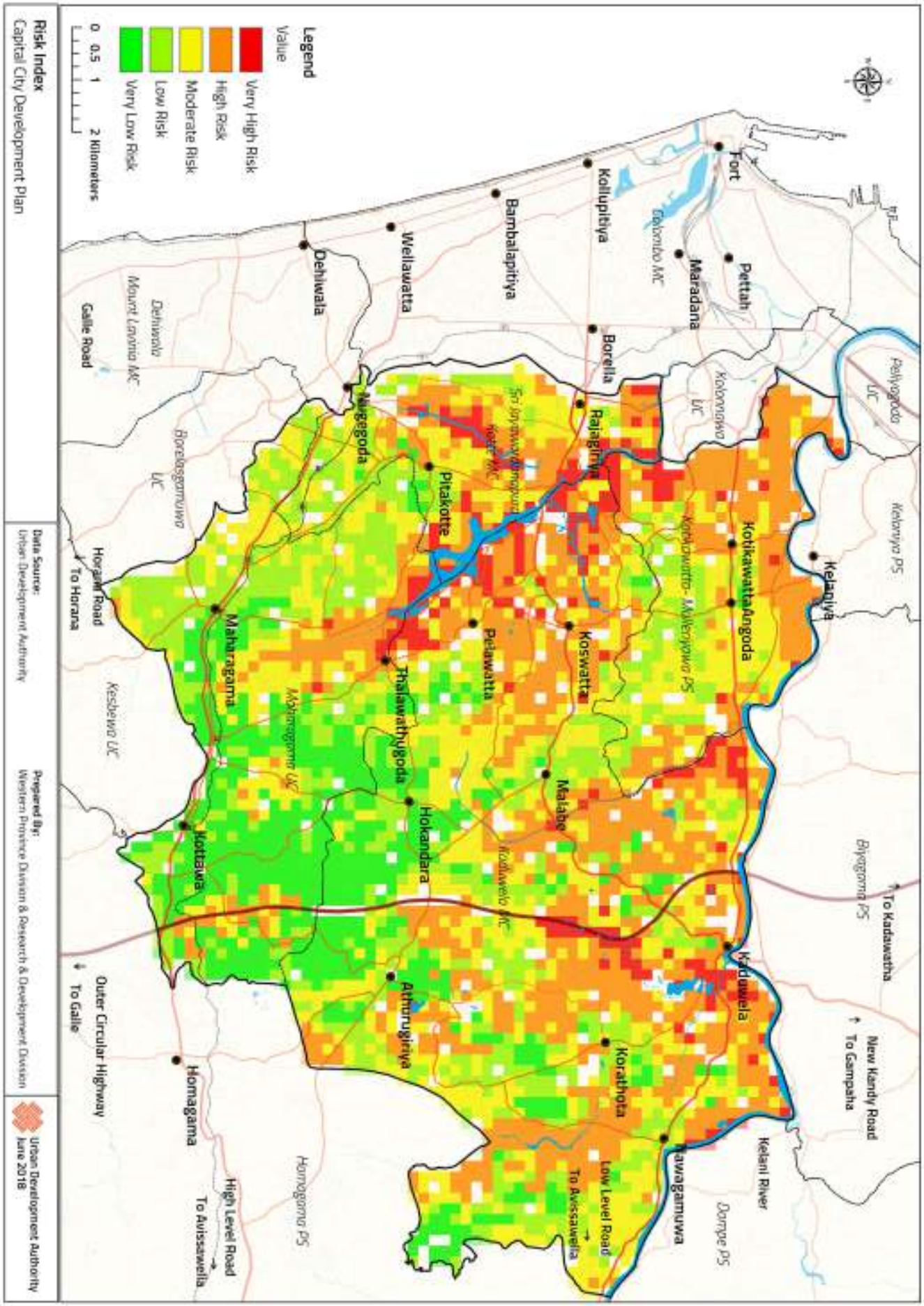
Map 2.11 : Wetland vs development pressure index in and around the boundary
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 2.12 : Flood inundation area in and around Kelani river basin
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 2.13 : Hazard Index of the planning area
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 2.14 : Risk Index of the planning area
Source : Western Province Division and Research & Development Unit, UDA - 2018

3. *Location of 75% government and semi government institutions outside the proposed administrative city area.*

Institutions are located beyond the proposed administrative city area namely, 266 Institutions in the Colombo Munipal Council, 5 institutions in Dehiwala, 5 institutions in Ratmalana, 4 institutions in Homagama and 4 institutions located in Kolonnawa Urban Council.

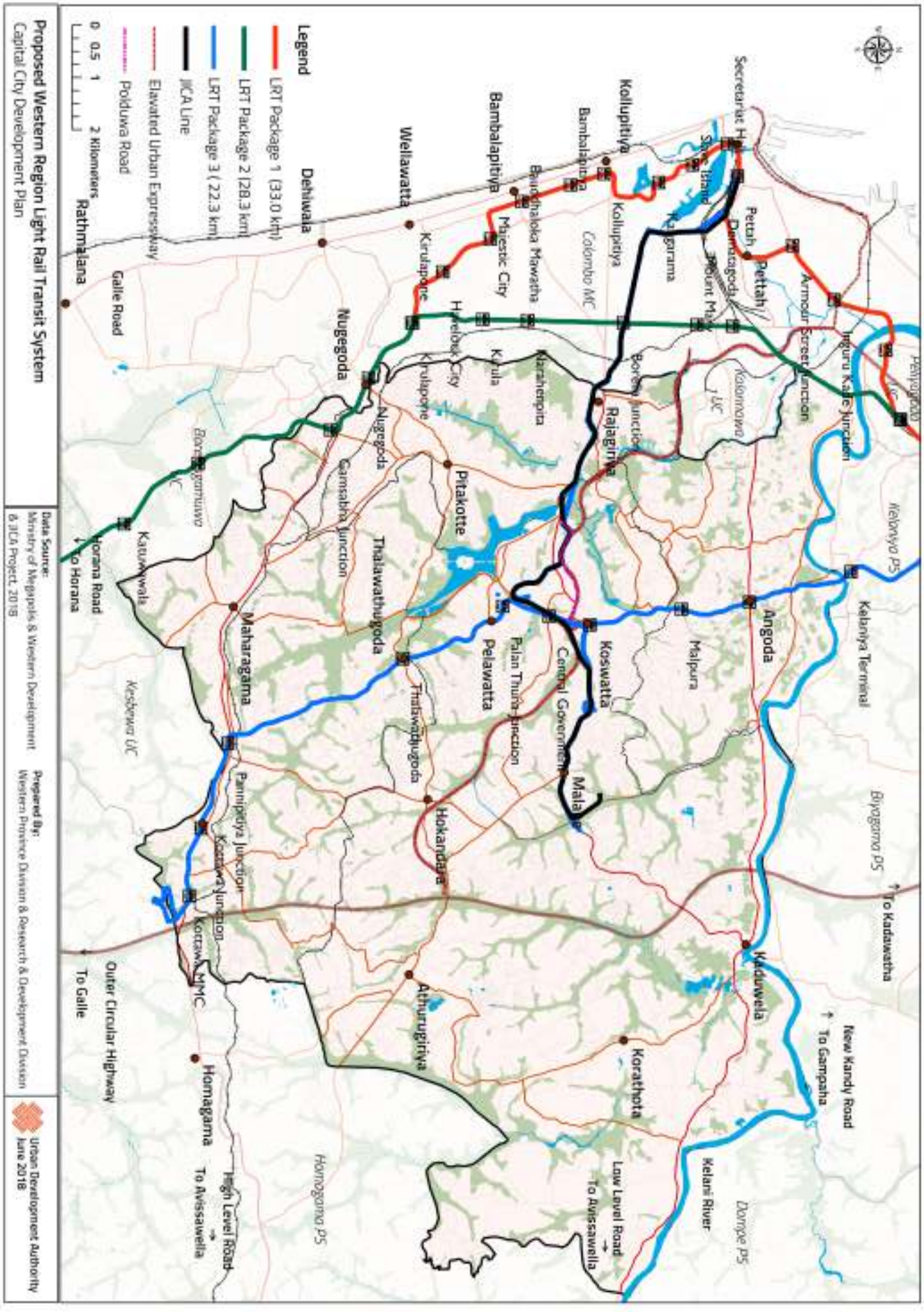
Strategic Goal 3 - Opportunities

1. *Existing proposals to improve public transportation such as the Light Rail, Rail Electrification, Bus Priority Lane and the Water Based Transport*

    1.1. Proposed Light Rail Transit Project.

The project is initiated by the Ministry of Megapolis and Japan International Corporation Agency (JICA)

The JICA Line runs from Fort to Malabe via Capital City planning area. Three packages are proposed by the Ministry of Megapolis and the package 3 line (22.3km) runs via planning area from Ragama to Kottawa. It is expected to support a smooth urban system by reducing the heavy traffic burden.



Map 2.15 : Western Region Light Rail Transit Project.
Source : Megapolis Development Plan 2030

1.2. Water Transport Projects.

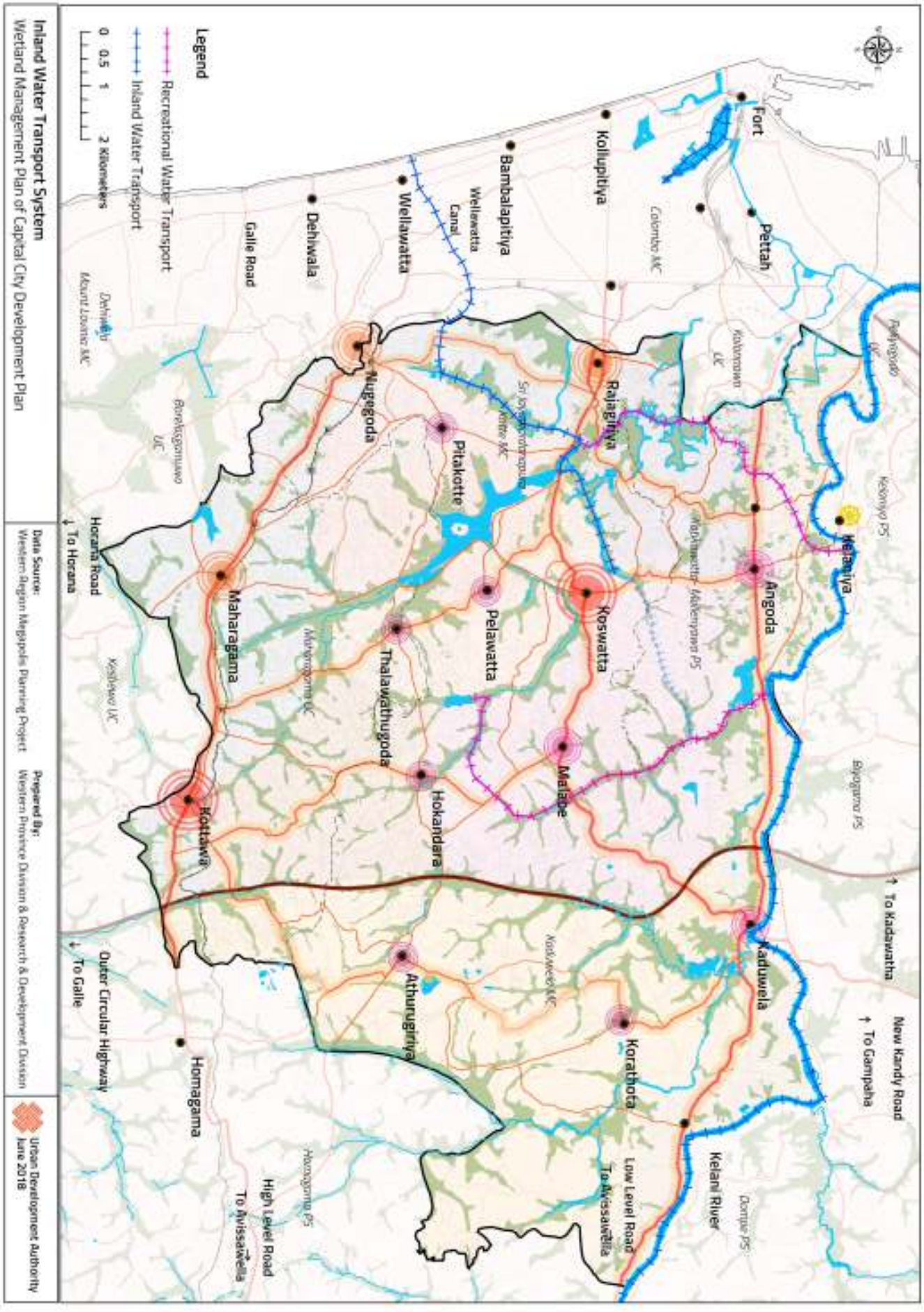
These projects are initiated by the Sri Lanka Land Reclamation and Development Corporation (SLLRDC). Two projects of the above relate to the planning area. Water Based Transport System from Diyatha Uyana to Wellawatta and from Mattakuliya to Hanwella along Kelani River are the transport related proposed projects of the area. They are also expected to support the smooth urban system by reducing the heavy traffic burden.

1.3. The Railway Electrification and Modernization Project (REMP)

Four railways are proposed for electrification and modernization from REMP. Even now the Kelani Valley line runs along the planning area. Further, the proposed electrified railway line from Kelaniya to Kosgama runs adjacent to the planning area. Hence, these projects are to support a smooth urban system by reducing the traffic congestion.

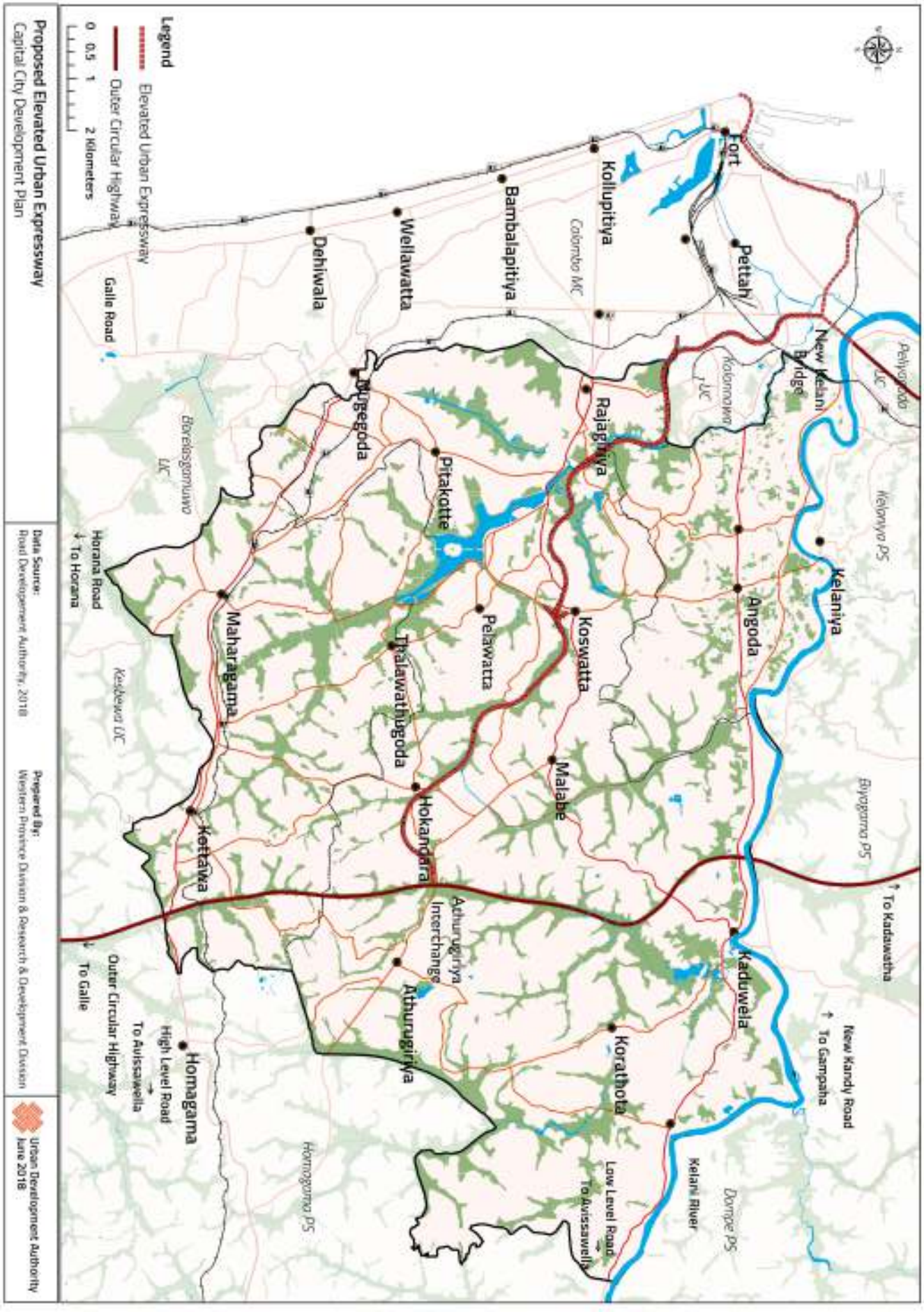
1.4. Elevated Urban Expressway

The project is proposed by the Road Development Authority in order to bypass the traffic congestion in the area.



Map 2.16 : Proposed inland water transport system
Source : Western Province Division and Research & Development Unit, UDA - 2018

Map 2.17 : Proposed railway electrification and modernization project
Source : Megapolis Development Plan 2030



Map 2.18 : Proposed elevated expressway
Source : Megapolis Development Plan 2030

2. *Existing proposals for theme based development zones such as Techno city, Admin City, etc*

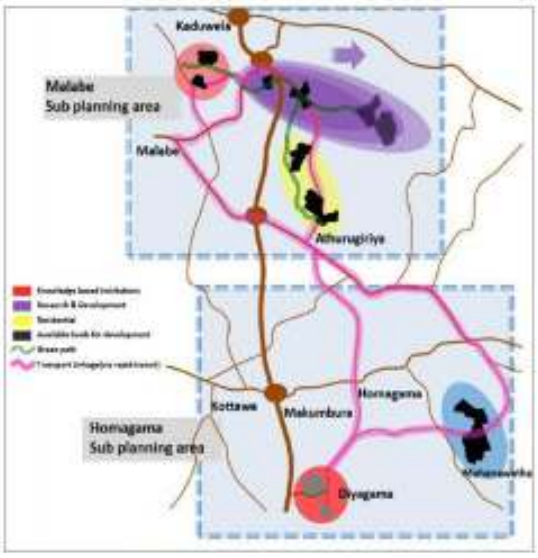


Figure 2.8 : Layout plan of Science and Technology City
Source : Megapolis Development Plan 2030

Science and Technology City

The project is initiated by the Ministry of Megapolis & Japan International Corporation Agency (JICA). It includes a Township Development with IT, High Tech and Business Development facilities. This project is to support to create a smooth urban system by enhancing the cluster system.

Administrative City Development Project

This project is initiated by the Ministry of Megapolis and Western Development. It is proposed to construct a building complex for cabinet secretariat, parliament related activities and offices for constitutional commissions with a high-rise mixed development and road development connecting Battaramulla junction & Polduwa road.

The Sethsiripaya Administrative Complex Project is also a long term project which proposes to build a series of buildings to house a large number of government ministries and administrative offices in Sethsiripaya premises, Battaramulla. Sethsiripaya stage III is another project proposed in the administrative district. It is carried out under Administrative Cities Development Project.

These projects are expected to support the enhancement of cluster efficiency in the administrative district.

Chapter 02
SWOT ANALYSIS

A place that prospers with smooth and efficient urban systems and smart urban facilities

Strategic Goal 3 :
Opportunities

Figure 2.9 : Capital City Administrative District Development
Source : Megapolis Development Plan 2030

Total floor area (m2)	123,909.2
Service area & Circulation (m2)	32,419
Parking area (m2)	18,694
Rentable area (m2)	72,792.2

Project of Waters' Edge Greenway Trail, Diyatha Uyana- Colombo

The proposed project is to be implemented within a land extend of 53 acres in the prime location of Battaramulla area bounding the Diyatha Uyana Park & Waters' Edge Hotel.

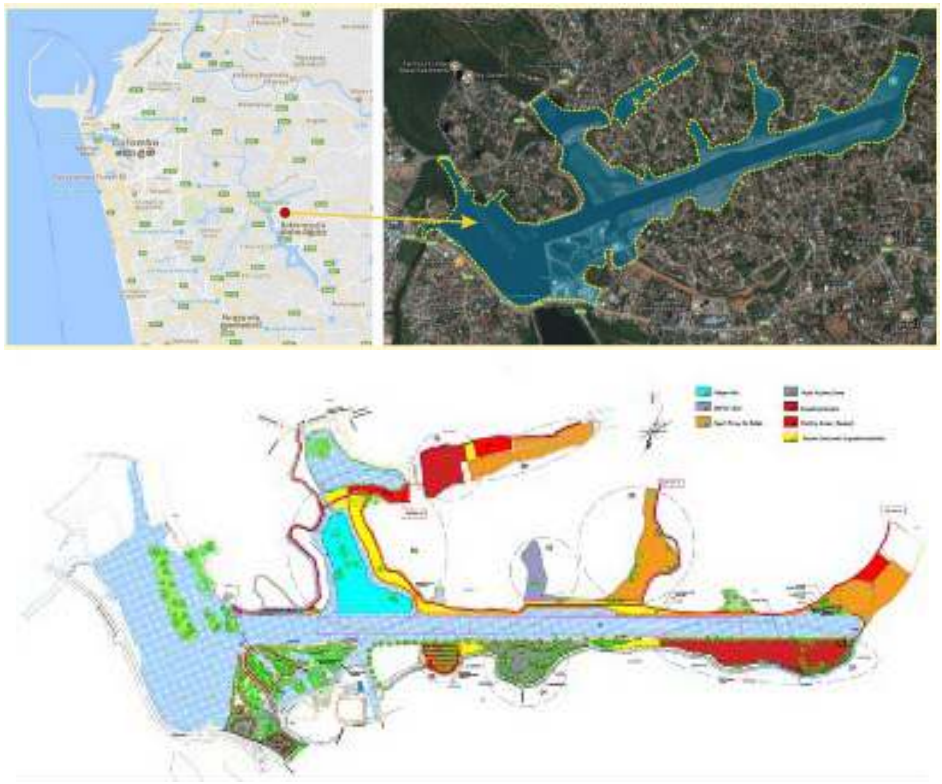


Figure 2.10 : Project of Water's Edge Greenway Trial, Diyatha Uyana Colombo
Source : Western Province Division and Research & Development Unit, UDA - 2018

3. *Existing and increasing demand for land and property in the area as a prefered residential and coorperate office location.*

Since the land value of the Capital City planning area is relatively lower than the land values of Colombo Munipal Council area, it is expected to support the future catalyst development.

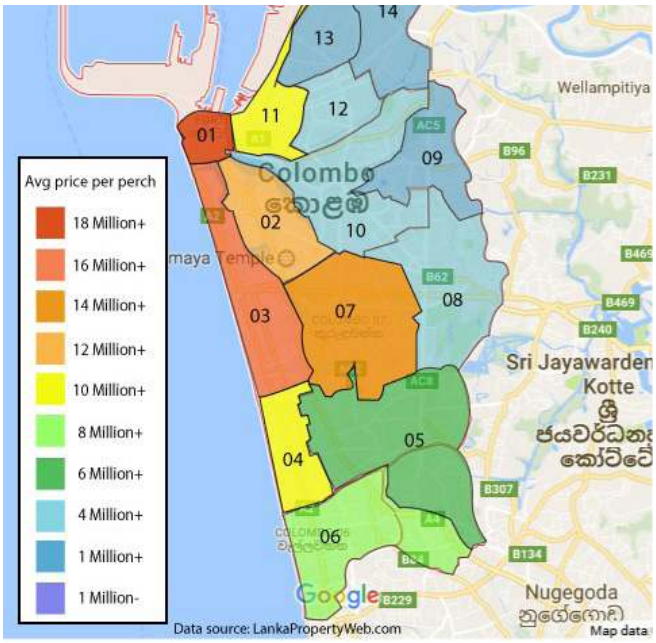


Figure 2.11 : Land value map of Colombo-2017
Source : Lankapropertyweb.com

PHYSICAL INDICATORS

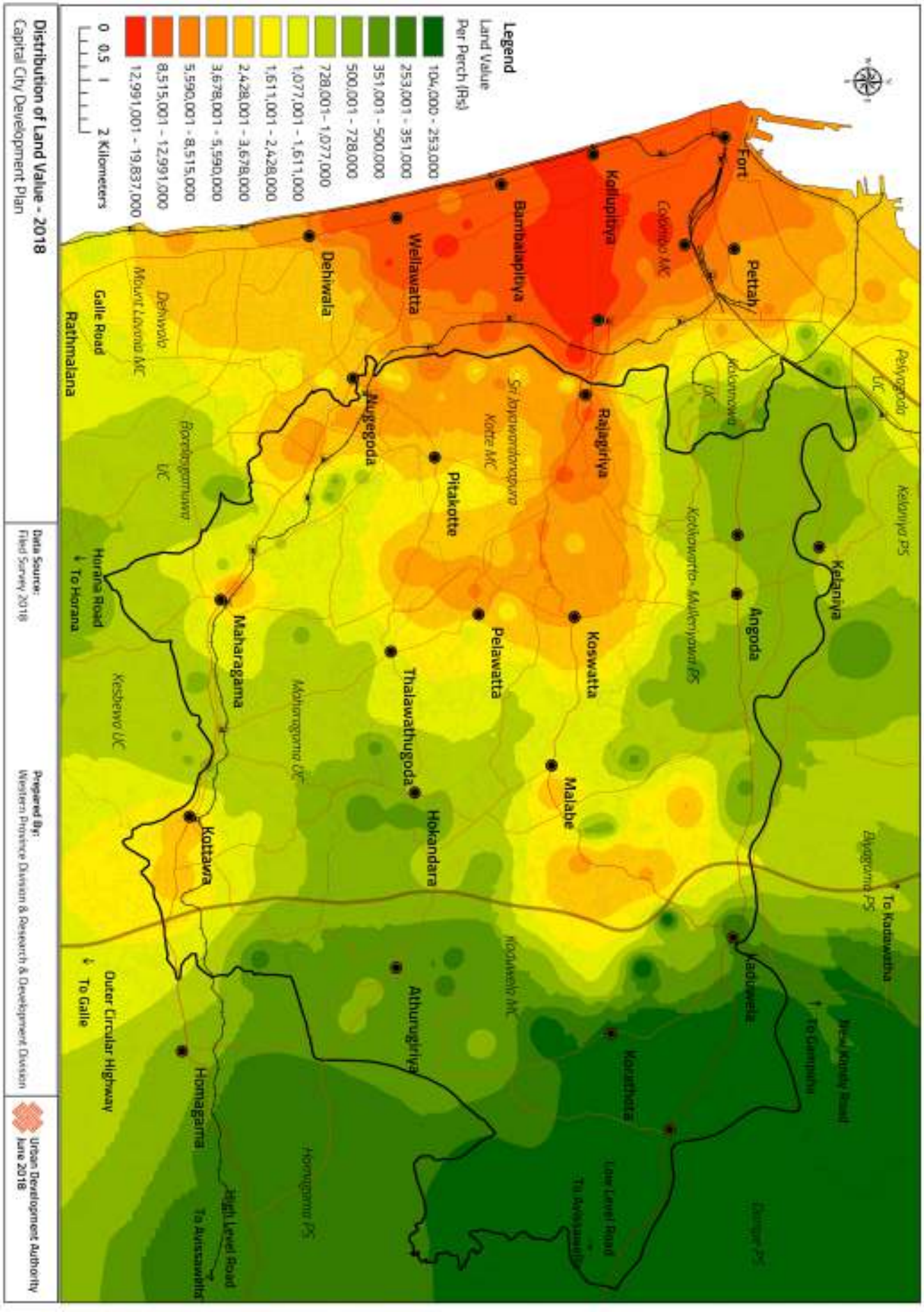
Office Stock and Rental Values

Micromarket	Stock	Rentals/sq. ft
Grade A CBD	0.9 Mn sq. ft.	LKR 250 - 375
Grade A SBD	0.1 Mn sq. ft.	LKR 290
Grade B CBD	0.6 Mn sq. ft.	LKR 180 - 225
Grade B SBD	1.2 Mn sq. ft.	LKR 165 - 250
Grade B (Peripherals)	0.2 Mn sq. ft. (Rajagiriya)	LKR 150 - 200

Note: Rentals for SBD markets appear higher or at par with CBD rentals due lack of a representative sample size

Source: JLL Research* Note* JLL Estimates

Figure 2.12 : Office stocks and rental values
Source : Jll Research Reports Sri Lanka -2015



Map 2.19 : Distribution of land value -2018
Source : Western Province Division and Research & Development Unit, UDA - 2018

4. *Proposed infrastructure related projects*

4.1. Athurugiriya New Township Development Project

The Western Province Division of Urban Development Authority has planned to acquire a land consisting 8 acres (approximately) for the Athurugiriya New Township Development Project. It is comprised with following components in order to provide present and convenient environment for general public by reducing the traffic congestion of the city center.

- *Development of new bus terminal*
- *Development of public fair*
- *Mixed commercial development.*
- *Development of public car park*
- *Cannel improvement project with retention pond.*

Source: Concept Paper of Athurugiriya New Township Development Project 2017, Western Province Division, Urban Development Authority.

4.2. Waste Water Treatment Plant Project

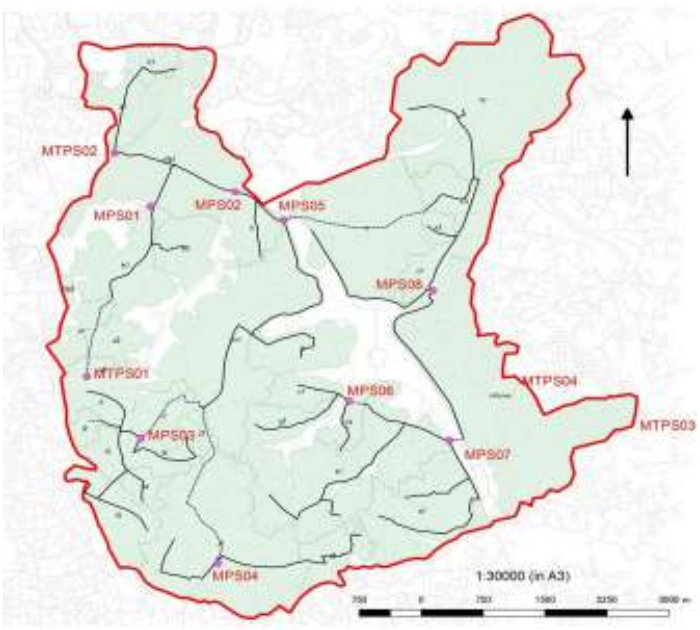


Figure 2.13 : Waste water treatment plant project
Source : Western Province Division and Research & Development Unit, UDA - 2018

The project is to provide piped sewerage facilities to serve a total area of approx. 3,400 ha to cover the major government and private institutions and a population of 222,000 in Sri Jayewardenapura Kotte and adjacent parts.

5. *Climate Resilience Improvement Project (CRIP)*

Climate Resilience Improvement Project (CRIP) was commenced in 2014 and implemented under Ministry of Irrigation and Water Resources Management with the financial facility of the World Bank. The project development objective is to reduce the vulnerability of exposed people and assets to climate risk (hydro meteorological risks: flood, drought and landslide) and to improve Government's capacity to respond effectively to disasters.

Strategic Goal 3 - Threats

1. *Competitive Cluster Development beyond the planning area.*

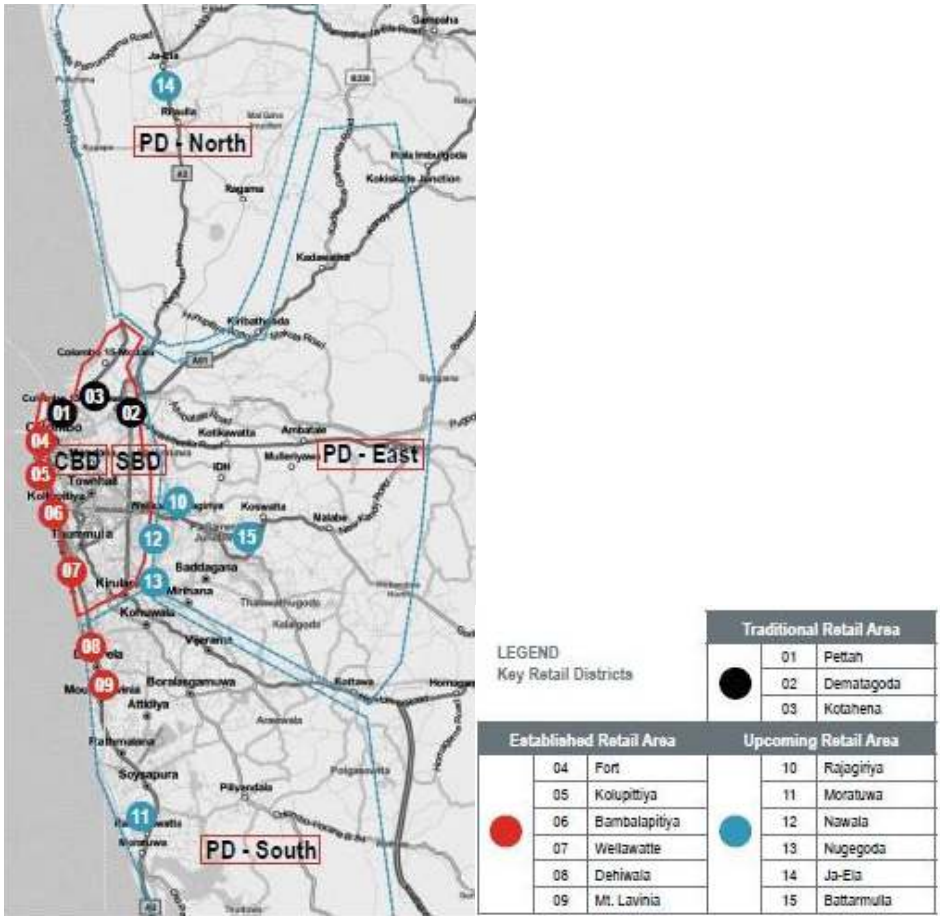


Figure 2.14 : Competitive Cluster Development in Colombo
Source : Western Province Division and Research & Development Unit, UDA - 2018

03

The Plan

3.1 Land Use Strategy

The proposed spatial form of the capital city will be achieved through the land use strategy. For this purpose3, the Concept Plan has recognized eleven major districts with distinct characteristics on the Capital City Area has identified two main types of lands namely, sensitive areas, special potential areas. The Concept Plan with the intention of maintaining, conserving and promoting harmless use provides strong planning. Thus, Capital City Development Plan is not only a guide to development but, it also is a tool for the molding of the Capital City's physical form of the city. In view of the three main criteria given above, the land use is detailed in sub-zones those overlap the eleven main zones identified in Concept Plan.

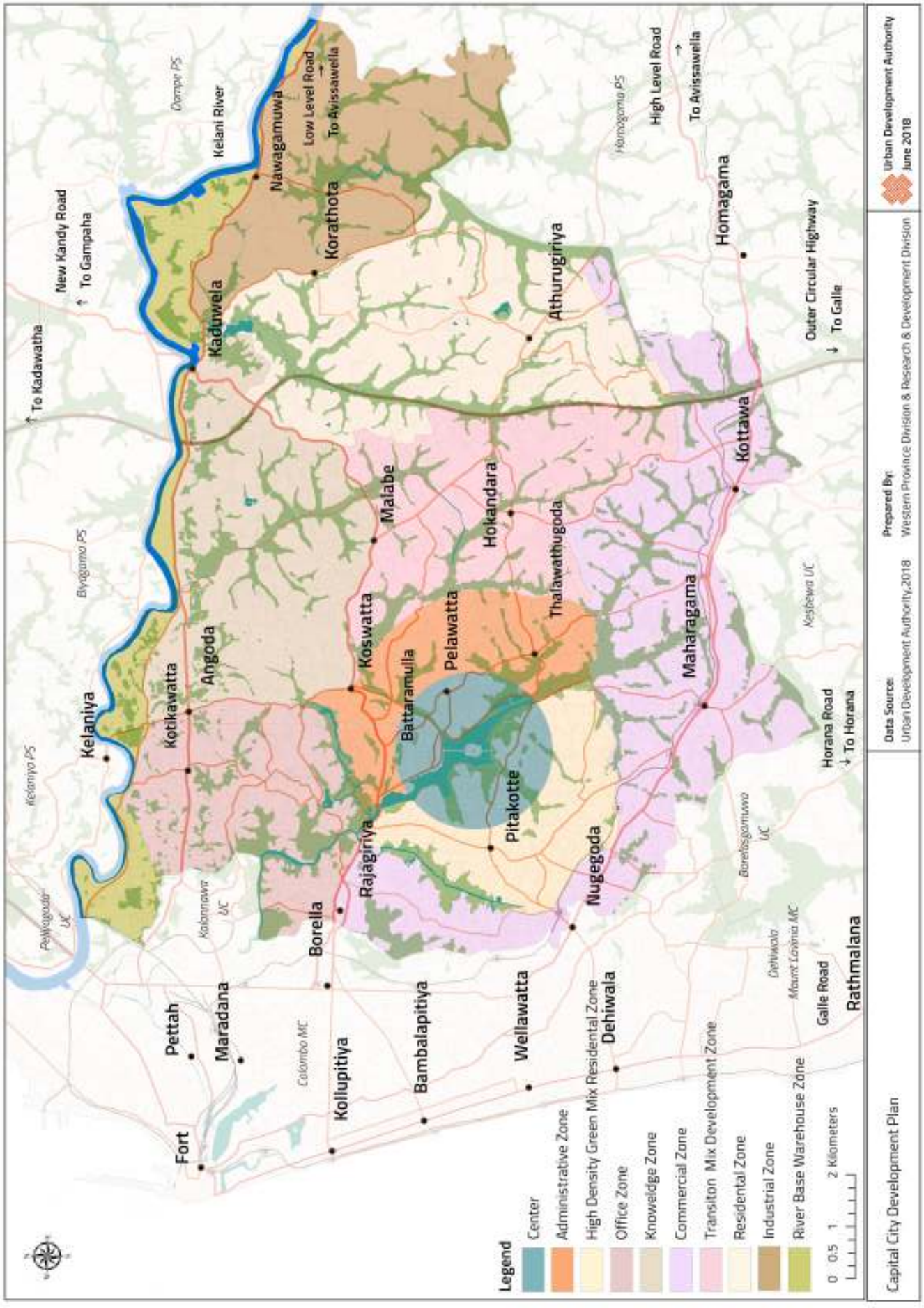
The plan proposes an urban form that comprised of a series of Nodes and Corridors to emerge in next decade. Integrated with this form, four specially designed criteria are identified namely; the Center, Axis, Caring Belt and a lace of wetlands to achieve the character of the proposed Capital City.Another reason is the majority of the public sense the area by moving along streets and parks. Hence, it is convenient to promote the identified main use of the zone along the Corridor or Node. Accordingly, the Node Place Analysis has been carried out to identify the future node development area as follow:

Determination of the Hierarchical order of Nodes – Node Place Analysis

The Weighted Criteria Metrix is used to evaluate the relative importance of nodes. The relative importance of nodes was identified based on the following criteria which includes sub-components. Value of the node is decided based on following four criteria which include sub components.

- *Node Diversity*
- *Node Intensity*
- *Place Diversity*
- *Place Intensity*

The outcome of this analysis assists in understanding the existing hierarchy of the current nodes. The result is evaluated once more with another set of criteria to understand the future priority nodes of the planning area.



Map 3.1 : Land Use composition in the planning boundary
Source : Western Province Division and Research & Development Unit, UDA-2018

Node Diversity:

The Node Diversity is based on,

- Roads to be connected to the national road network
- Railroad connections
- Regional integration
- Broadband facilities for telecommunication

The result indicates that, Kottawa, Delkanda, Maharagama, Nugegoda, Battaramulla, and Kaduwela Nodes possess the highest node diversity.

Node	Node Diversity				
	Roads to be connected to the National Road Network	Regional Integration	Railroad Connections	Broadband facilities for Telecomm-unication	Total
Ambatale	12	3	2	5	22
Angoda	12	3	2	5	22
Arangala	8	3	2	5	18
Athurugiriya	20	9	2	5	36
Battaramulla	20	15	2	5	42
Bombiriya	12	3	2	5	22
Delkanda	16	15	10	5	46
Ethulkotte	12	12	2	5	31
Gothatuwa	8	3	2	5	18
Hokandara	20	9	2	5	36
Kaduwela	20	15	2	5	42
Kohilawatta	8	3	2	5	18
Korathota	8	3	2	5	18
Koswatta	16	15	2	5	38
Kotikawatta	16	3	2	5	26
kottawa	20	15	10	5	50
Maharagama	16	12	10	5	43
Malabe	12	9	2	5	28
Nawagamuwa	8	3	2	5	18
Nawala	8	9	2	5	24
Nugegoda	16	12	10	5	43
Pagoda	8	6	2	5	21
Pannipitiya	12	6	10	5	33
Pelawatta	16	9	2	5	32
Pitakotte	8	6	2	5	21

Node	Node Diversity				
	Roads to be connected to the National Road Network	Regional Integration	Railroad Connections	Broadband facilities for Telecomm-unication	Total
Rajagiriya	20	12	2	5	39
Thalahena	8	3	2	5	18
Thalapathpitiya	8	3	2	5	18
Thalawathugoda	16	12	2	5	35
Weliwita	8	3	2	5	18

Table 3.1 : Node diversity analysis
Source : Western Province Division and Research & Development Unit, UDA-2018

Node Intensity:

Node Intensity is based on,

- Actual quantities of the flows
- Building density
- Frequency of departures of public transportation

According to the weighted value of above criteria, it is clear that Battaramulla, Rajagiriya, Nugegoda, Maharagama, Kottawa, and Koswatta Nodes hold the highest Node Intensity.

Node	Node Intensity			
	Frequency of Departures of Public Transportation	Building Density	Actual quantities of the Flows	Total
Ambatale	3	4	3	10
Angoda	6	6	3	15
Arangala	3	4	3	10
Athurugiriya	12	6	9	27
Battaramulla	15	10	15	40
Bombiriya	3	4	3	10
Delkanda	12	8	9	29
Ethulkotte	9	8	12	29
Gothatuwa	6	6	3	15
Hokandara	3	4	3	10
Kaduwela	12	6	9	27
Kohilawatta	3	6	3	12
Korathota	3	4	3	10
Koswatta	15	8	9	32

Node	Node Intensity			
	Frequency of Departures of Public Transportation	Building Density	Actual quantities of the Flows	Total
Kotikawatta	3	8	9	20
kottawa	15	6	15	36
Maharagama	15	10	12	37
Malabe	9	6	12	27
Nawagamuwa	3	4	3	10
Nawala	6	6	9	21
Nugegoda	15	10	12	37
Pagoda	3	4	3	10
Pannipitiya	6	4	3	13
Pelawatta	9	6	9	24
Pitakotte	6	6	9	21
Rajagiriya	15	8	15	38
Thalahena	3	4	3	10
Thalapathpitiya	3	4	3	10
Thalawathugoda	9	6	9	24
Weliwita	3	4	3	10

Table 3.2 : Node intensity anlaysis
Source : Western Province Division and Research & Development Unit, UDA-2018

Place Diversity:

Place diversity value is based on,

- *Land Use Diversity -*

Land Use Diversity (LUD) is measured by examining the spatial patterns and uses of land. The analysis shows that areas with a higher LUD are closer to main corridors while areas with lower LUD are located closer to residential areas.

- *Services and other functions of inhabitants or firms -*

The level and functionality of service is measured based on infrastructure availability and basic services of central functional buildings (administrative, international and unique endowment)

- *Place in its veracity -*

This is analyzed based on the particular city's dependency on other key cities.

- *Innovativeness -*

Innovativeness is measured based on future potential cities that has capacity to create new spaces and societies with proposed development activities.

- *Attractiveness as living and working environment-*

Attractiveness as a living and working environment is measured through city attractiveness to investments and tourist destinations etc. The results indicate that the highest diversity exists in Battaramulla, Maharagama, Nugegoda and Rajagiriya.

Node	Place Diversity					
	Land use	Services and other functions of inhabitants or firms.	Place in its veracity	Innova-tion	Attract as living and working environ-ment	Total
Ambatale	10	8	2	2	9	31
Angoda	10	12	4	2	9	37
Arangala	10	8	4	2	6	30
Athurugiriya	15	16	8	6	12	57
Battaramulla	25	20	8	8	12	73
Bombiriya	10	8	2	2	9	31
Delkanda	15	8	4	6	9	42
Ethulkotte	15	12	6	4	9	46
Gothatuwa	10	8	2	4	6	30
Hokandara	10	8	8	4	6	36
Kaduwela	15	12	8	6	12	53
Kohilawatta	10	8	2	4	6	30
Korathota	10	8	6	4	6	34
Koswatta	15	16	8	8	12	59
Kotikawatta	10	12	4	6	9	41
kottawa	15	16	8	8	12	59
Maharagama	20	16	8	8	12	64
Malabe	15	12	8	6	12	53
Nawagamuwa	10	8	2	4	6	30
Nawala	15	12	8	6	9	50
Nugegoda	20	16	8	8	12	64
Pagoda	10	8	6	4	6	34
Pannipitiya	10	8	6	4	6	34
Pelawatta	15	16	8	6	9	54

Node	Place Diversity					
	Land use	Services and other functions of inhabitants or firms.	Place in its veracity	Innova-tion	Attract as living and working environ-ment	Total
Pitakotte	10	12	8	6	9	45
Rajagiriya	20	16	8	8	12	64
Thalahena	5	8	6	4	6	29
Thalapathpitiya	5	8	6	4	6	29
Thalawathugoda	15	12	8	6	9	50
Weliwita	10	8	2	4	6	30

Table 3.3 : Place diversity anlaysis
Source : Western Province Division and Research & Development Unit, UDA-2018

Place Intensity:

Place Intensity value is based on,

- *Quantity of activities (No of different activities that occur in a planning space)*
- *Rates of employment (Source: Census and Statistics Data 2017 / Sampath Pathika 2017)*
- *Population density*

Accordingly, the highest place intensity is held by Koswatta, Nugegoda, Rajagiriya, Kottawa, Maharagma and Battaramulla areas.

Name	Place Intensity			
	quantity of activities	Rates of employments	Population density	Total
Ambatale	9	12	4	25
Angoda	9	12	6	27
Arangala	6	8	6	20
Athurugiriya	9	16	6	31
Battaramulla	12	20	6	38
Bombiriya	6	8	2	16
Delkanda	6	12	8	26
Ethulkotte	9	8	6	23
Gothatuwa	6	8	6	20
Hokandara	6	8	6	20
Kaduwela	12	16	6	34
Kohilawatta	9	8	6	23

Name	Place Intensity			
	quantity of activities	Rates of employments	Population density	Total
Korathota	6	8	2	16
Koswatta	12	20	8	40
Kotikawatta	9	8	8	25
kottawa	12	20	6	38
Maharagama	12	20	6	38
Malabe	9	16	6	31
Nawagamuwa	6	8	6	20
Nawala	9	16	8	33
Nugegoda	12	20	8	40
Pagoda	6	12	8	26
Pannipitiya	6	8	8	22
Pelawatta	9	16	6	31
Pitakotte	9	12	6	27
Rajagiriya	12	20	8	40
Thalahena	6	8	6	20
Thalapathpitiya	6	8	6	20
Thalawathugoda	9	16	6	31
Weliwita	3	8	2	13

Table 3.4 : Place intensity analysis
Source : Western Province Division and Research & Development Unit, UDA-2018

Finally, the separately weighted values are combined and calculated to result the level of the Node as below. As for the results, Battaramulla is the Level One Node of the planning area.

Node	Node Analysis		Place Analysis		Level of Node
Ambatale	22	10	31	25	88
Angoda	22	15	37	27	101
Arangala	18	10	30	20	78
Athurugiriya	36	27	57	31	151
Battaramulla	42	40	73	38	193
Bombiriya	22	10	31	16	79
Delkanda	46	29	42	26	143
Ethulkotte	31	29	46	23	129
Gothatuwa	18	15	30	20	83
Hokandara	36	10	36	20	102

Node	Node Analysis		Place Analysis		Level of Node
Kaduwela	42	27	53	34	156
Kohilawatta	18	12	30	23	83
Korathota	18	10	34	16	78
Koswatta	38	32	59	40	169
Kotikawatta	26	20	41	25	112
kottawa	50	36	59	38	183
Maharagama	43	37	64	38	182
Malabe	28	27	53	31	139
Nawagamuwa	18	10	30	20	78
Nawala	24	21	50	33	128
Nugegoda	43	37	64	40	184
Pagoda	21	10	34	26	91
Pannipitiya	33	13	34	22	102
Pelawatta	32	24	54	31	141
Pitakotte	21	21	45	27	114
Rajagiriya	39	38	64	40	181
Thalahena	18	10	29	20	77
Thalapathpitiya	18	10	29	20	77
Thalawathugoda	35	24	50	31	140
Weliwita	18	10	30	13	71

Table 3.5 : Summary table of node place analysis
Source : Western Province Division and Research & Development Unit, UDA-2018

As the next step, the recognized nodes were weighted considering the future scenario to understand the difference of hierarchy of nodes in the current situation.

Name	Administrative	Commercial	Residential	Development Pressure	Sensitivity Analysis	Land Value	Vertical Density	Horizontal Density	Land Availability	Land Uses Change %	Total
Ambatale	1	2	4	2	2	6	12	15	12	14	70
Angoda	2	3	4	3	4	9	16	15	18	14	88
Arangala	1	1	4	2	8	6	8	15	18	14	77
Athurugiriya	2	3	4	3	6	9	12	15	24	21	99
Battaramulla	4	4	3	4	4	12	16	10	12	21	90
Bombiriya	1	2	4	1	4	3	8	10	18	14	65
Delkanda	1	3	3	3	8	9	16	20	18	21	102
Ethulkotte	2	2	4	3	6	9	12	15	6	14	73
Gothatuwa	1	2	3	2	4	6	12	15	18	14	77
Hokandara	1	3	5	3	6	12	16	20	18	14	98
Kaduwela	1	4	4	3	4	9	16	20	18	21	100
Kohilawatta	1	4	4	1	4	6	8	10	18	14	67
Korathota	1	2	3	2	4	6	8	20	28	14	84
Koswatta	5	2	3	5	10	12	20	25	18	28	130
Kotikawatta	1	4	3	4	6	9	16	20	18	21	102
kottawa	1	3	4	5	8	15	20	25	18	28	129
Maharagama	2	5	4	3	8	12	20	20	24	14	120
Malabe	2	5	4	4	10	12	16	20	24	14	109
Nawagamuwa	1	3	4	2	4	6	8	15	24	14	79
Nawala	2	2	3	4	6	12	16	20	12	21	99
Nugegoda	1	3	3	5	8	12	20	20	18	28	121
Pagoda	1	5	4	3	8	9	16	20	12	21	88
Pannipitiya	1	2	3	3	8	9	8	20	12	21	89
Pelawatta	3	3	4	4	4	12	8	15	12	21	85
Pitakotte	2	2	3	3	8	9	12	20	12	14	85
Rajagiriya	2	4	3	4	8	15	20	25	12	28	122
Thalahena	1	3	4	3	6	9	12	15	18	7	78
Thalapathpitiya	1	1	4	2	6	12	12	20	18	7	83
Thalawathugoda	3	4	3	4	8	12	16	20	18	14	102
Weliwita	1	2	3	2	2	6	8	10	24	7	65

Table 3.6 : Future prediction for the nodes distribution
Source : Western Province Division and Research & Development Unit, UDA-2018

The final result is as below,

Proposed Nodes

1st priority nodes

- Koswatta (will merge with Battaramulla)
- Kottawa (will merge with Makubura)

2nd priority nodes

- Maharagama
- Rajagiriya
- Nugegoda

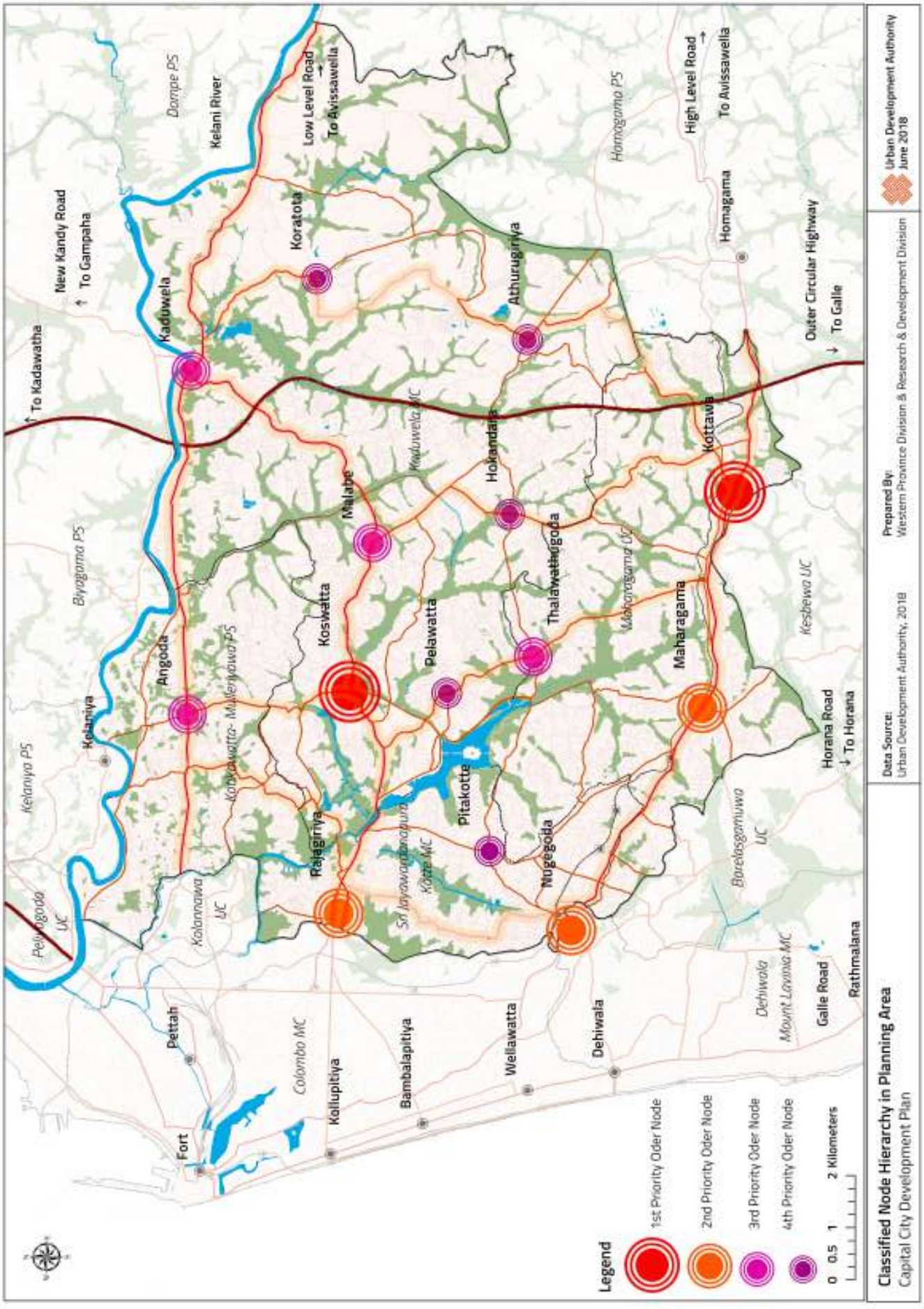
3rd priority nodes

- Kaduwela
- Malabe
- Angoda
- Thalawathugoda

4th priority nodes

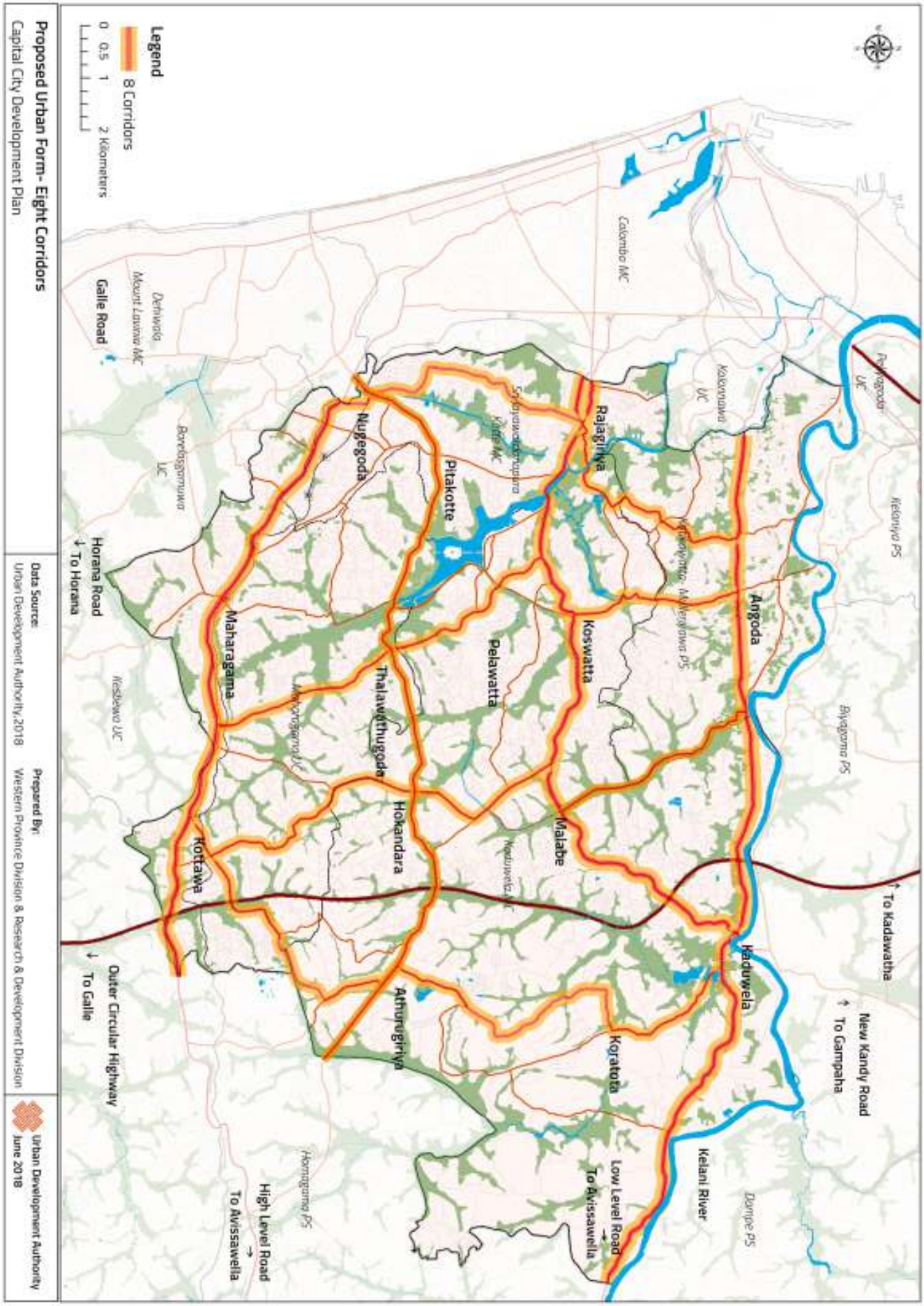
- Athurugiriya
- Hokandara
- Korathota
- Palawatta
- Pitakotte

Further, eight main corridors are identified. The above identified nodes are to release the pressure of the node along those corridors. The below map indicates the irregular shape grid network created by the mentioned strategy,



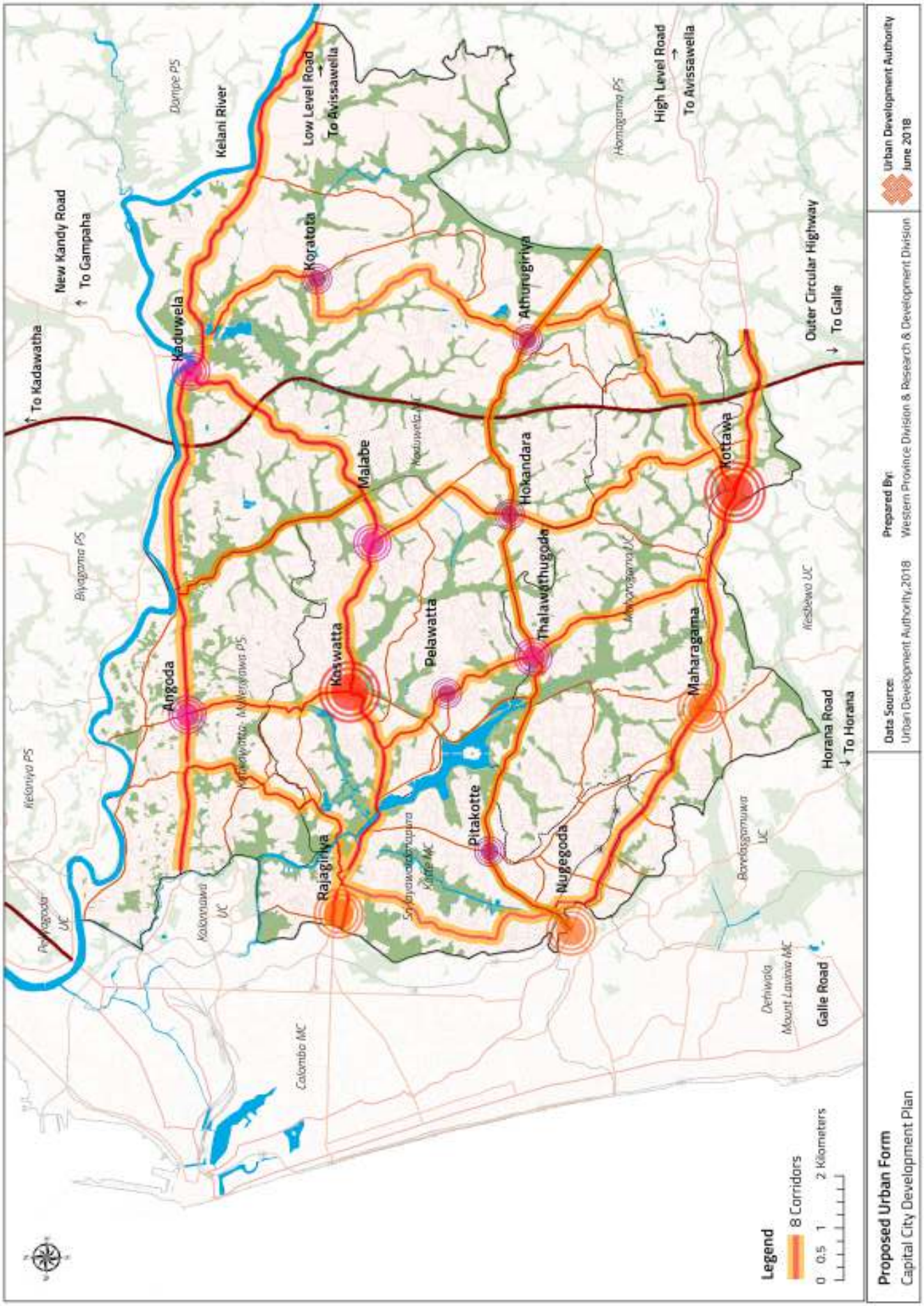
Map 3.2 : Classified node hierarchy in planning area
Source : Western Province Division and Research & Development Unit, UDA-2018

Proposed Eight Corridors



Map 3.3 : Proposed eight corridors
Source : Western Province Division and Research & Development Unit, UDA-2018

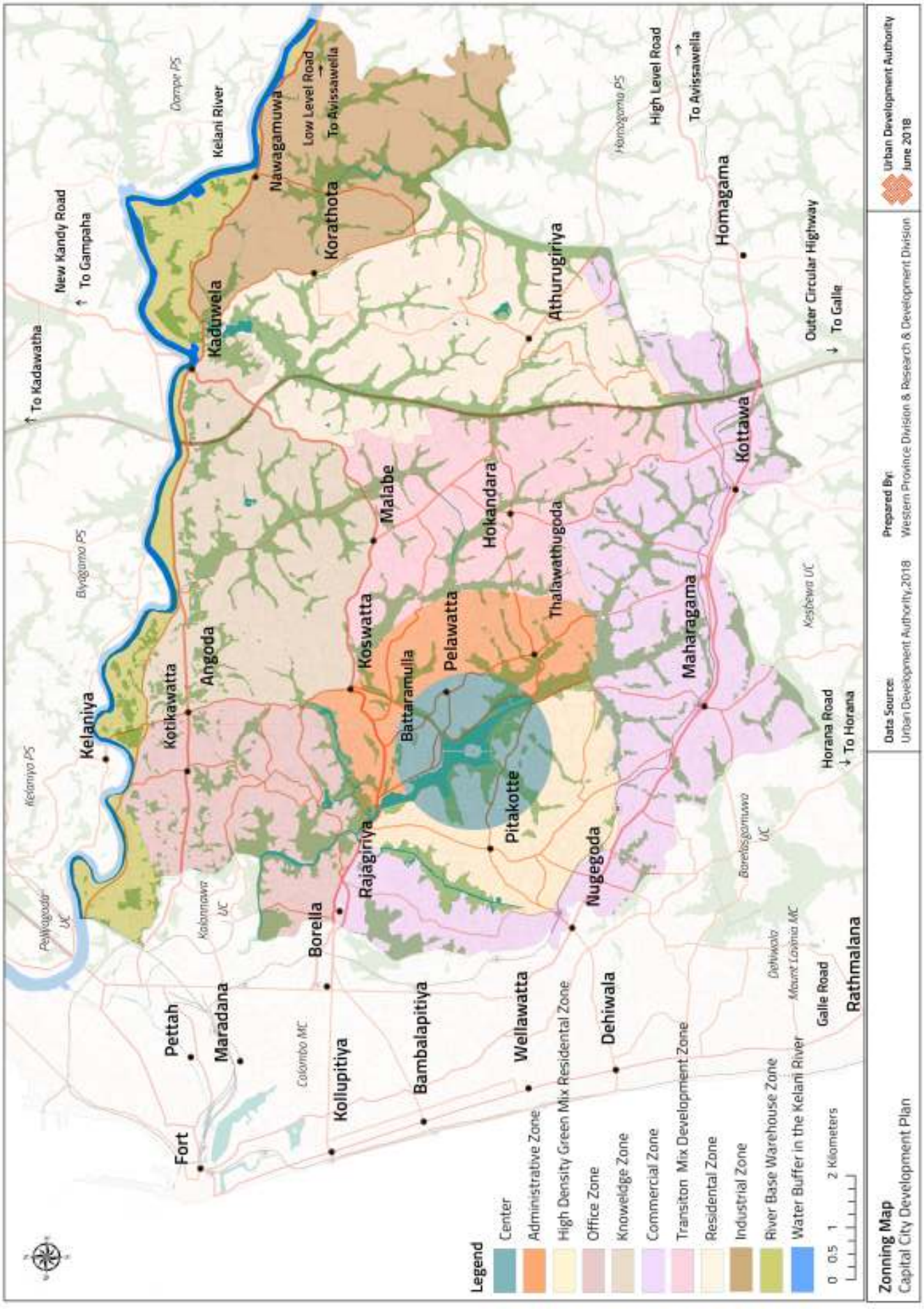
Proposed Composite Spatial Strategy for Next Ten Years



Map 3.4 : Propsed composite spatial strategy for next 10 years (2019 -2030)
Source : Western Province Division and Research & Development Unit, UDA-2018

As a result of density development in proposed nodes, it is assumed the demand for space in the remaining areas of identified zones would rise. Hence, it is proposed to direct the development through the corridors within zones. The corridor development is projected to create second wave of the densities which then would lead to remaining areas.

To achieve the below Zoning Plan, following floor spaces in different land uses and population in residential and commuter categories are expected.



Map 3.5 : Zoning Map of the Capital City plan
Source : Western Province Division and Research & Development Unit, UDA-2018

3.2 Projection of Population, Floor Space and Commuter

3.2.1 Proposed Population Projection for the Capital City

Considerations:

- *The Capital City center with low population -*
- *It is proposed to develop the center in the Capital City area with concern to accentuate 'The Sovereign Power of Sri Lanka'.*

- *Inner and Outer city area with moderate density -*
- *It is proposed to encourage economic and administrative uses within the Inner City and Outer City areas exclusive of High Density Cluster II.*

- *Periphery with quotidian density -*
- *It is proposed to encourage the residential population in the Periphery Area*

Assumptions:

- *The population growth of the Center is forecasted based on the positive growth rate (0.0219) recorded in the area. Currently, all GNDs except one GND in the Center area represent a negative growth rate.*

- *Inner and Outer city population growth rate is forecasted based on a 10% rise to the current growth rate of GNDs in the area. (Average Proposed Growth Rate is 0.0106)*

- *The High Density Cluster I is encouraged to be used for residential purposes. Therefore, the population prediction is based on the highest positive average growth rate of the Inner City (0.025). The reason behind this growth rate adoption is the positive growth rate indicated by the GNDs.*

- *Other Zones except Environmental Sensitive Zone, River Base Warehouse Zone and industrial Zone encourage residential Population in its area. Those Zones have considered a moderate growth rate of 0.046.*

- *Low Density Cluster of the Capital City discourages population to the area. Therefore, population of the area is forecast based on the lowest growth rate. (0.05)*

- *The natural growth rate in the Capital City area is calculated as 0.036. However, the expected growth rate with the proposed developments is 0.05.*

Limitations:

The proposed growth rates for different zones are based on planned developments proposed by the Capital City Development Plan. According to the Implementation Strategy of the Capital City, it is assumed an approximate period of 30 years would be taken to complete all projects proposed by the plan. Accordingly the projected population in 30 years is 1,550,000 considering a growth rate of 0.01%. Further the population for the next 10 years projected as below.

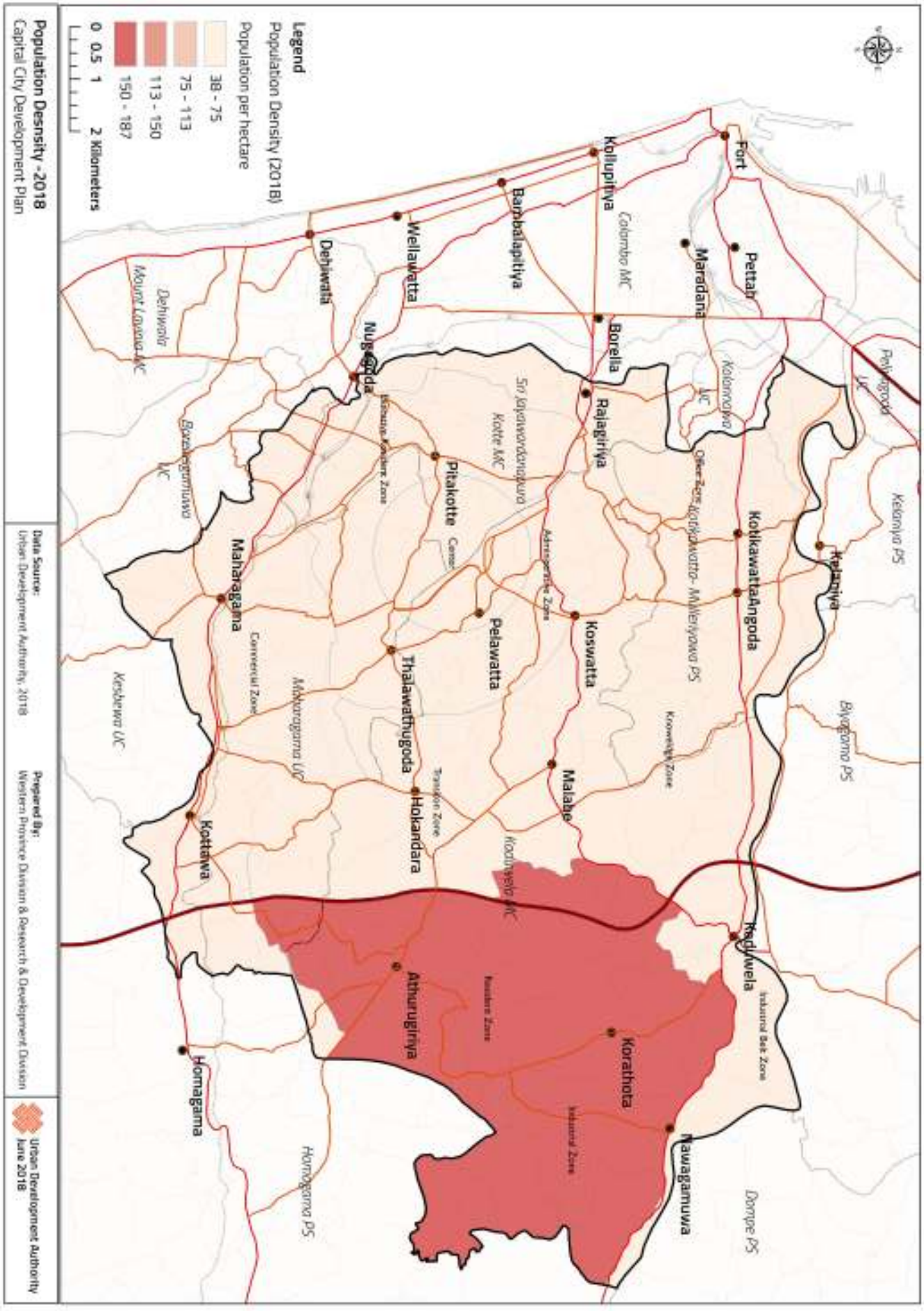
Zone	Population 2018	Population based on Business as Usual scenario	Population based on Projects Based scenario 2030	Difference between Existing and Predicted Population	Difference between Business as Usual and Proposed Growth rate
Center	31,520	29,450	43,000	-11,480	13,550
Inner and Outer City	637,000	838,270	1,081,000	444,000	242,730
Periphery	137,000	112,280	148,000	11,000	35,720
Total Area	**763,000**	**980,000**	**1,272,000**	**509,000**	**292,000**

Table 3.7 : Population projection for the Capital City - 2030
Source : Western Province Division and Research & Development Unit, UDA-2018

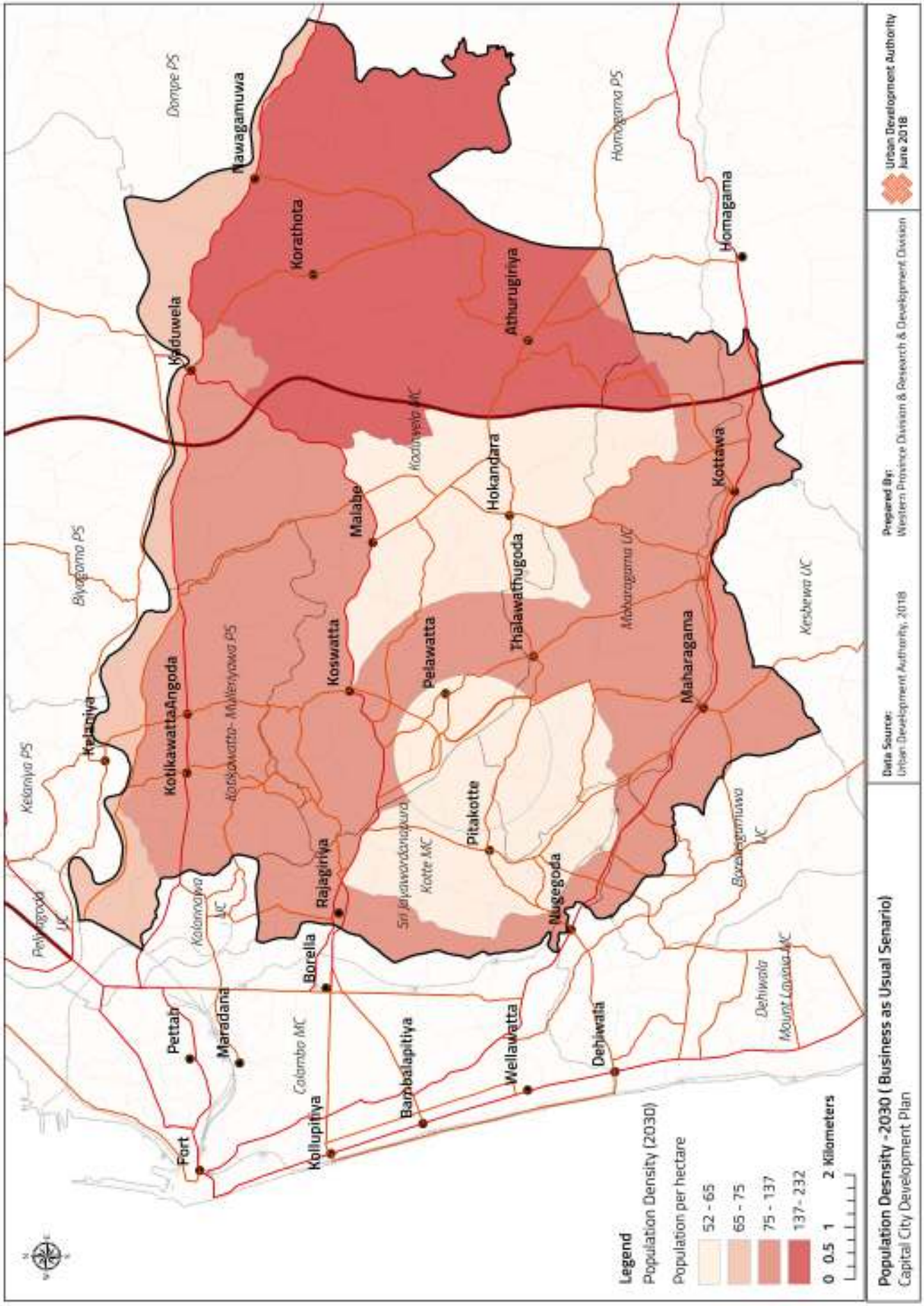
Zone	Population 2018	Population based on Business as Usual scenario	Population based on Projects Based scenario 2050	Difference between Existing and Predicted Population	Difference between Business as Usual and Proposed Growth rate
Center	39,000	37,000	44,000	5,000	7,000
Inner and Outer City	637,000	1,140,000	1,298,000	661,000	158,000
Periphery	137,000	186,000	204,000	67,000	18,500
Total Area	**774,000**	**1,362,000**	**1,546,000**	**772,000**	**184,000**

Table 3.8 : Population projection for the Capital City -2050
Source : Western Province Division and Research & Development Unit, UDA-2018

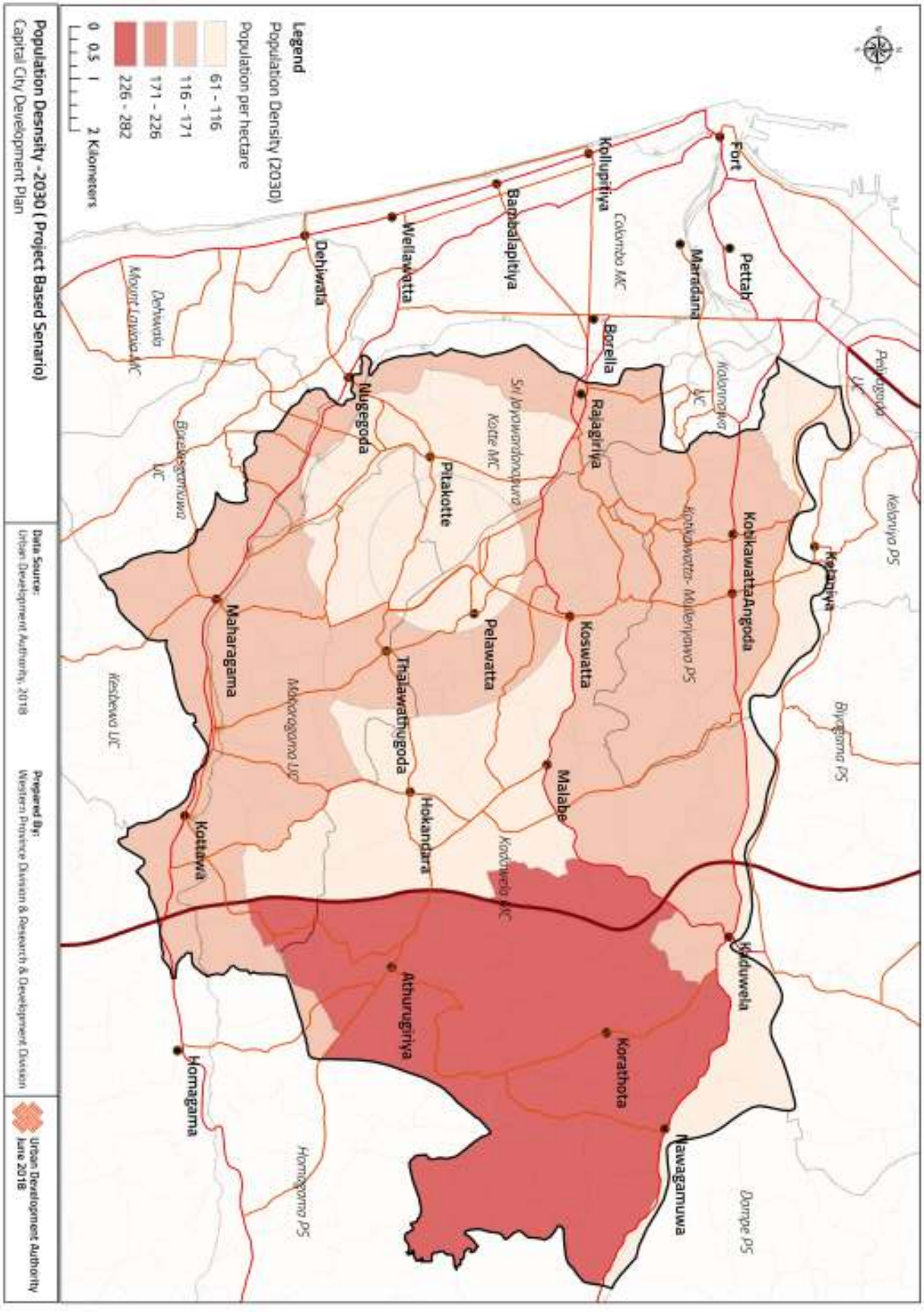
'The Existing Population Density of Capital City' map even now depicts the highest population density in the Periphery as expected in the plan, while other areas hold a low density. Further, the maps 'Business as Usual Scenario' and 'Project Based Scenario' elaborate how population density varies. Accordingly, the 'Project Based Scenario' achieves a higher population density in areas where the Capital City Development Plan promotes residential developments compared to the 'Business as Usual Scenario' and supports the overall plan and concept.



Map 3.6 : Population density in Capital City - 2018
Source : Western Province Division and Research & Development Unit, UDA-2018



Map 3.7 : Population density in Capital City (Business as usual Senario) - 2030
Source : Western Province Division and Research & Development Unit, UDA-2018



Map 3.8 : Population density in Capital City (Project based Senario) - 2030
Source : Western Province Division and Research & Development Unit, UDA-2018

3.2.2. Proposed Spatial Change for the Capital City

The proposed spatial form of the area is prepared mainly on the plan concept since it is vital to change the land use to represent the proposed use of the zone. According to the implementation strategy of the Capital City, it is assumed an approximate period of 30 years would be taken to complete all projects of the plan. Accordingly the space in 30 years is 193,968,353 sq.m (excluding center). Further the space for the next 10 years is projected as below. Most importantly, it is expected to double the office space by 2030. (The assumptions of the space calculation are detailed in the Volume III of the Capital City Development Plan)

Consideration:

- *Space Development of Capital City is proposed to achieve the proposed urban form of the Capital City Plan.*
- *Proposed space for the Capital City development plan 2030 and 2050 has been developed based on two scenarios.*

Propositions:

According to the Implementation Strategy of the Capital City, it is assumed to take 10 years to complete the given projects. Therefore, the achievement of space development will be completed by 2030.

Existing Distribution of Different Land Uses (Refer Annexure 5)

Zone	Existing Residential space (Sqm)	Existing Commercial Space (Sqm)	Existing Office Space (Sqm)	Existing Industrial Space (Sqm)	Existing Other Space (Sqm)	Total Development Area (Sqm)
Center	1,112,000	587,000	857,000	250,000	707,000	3,513,000
High Density Mix Development Zone	7,674,000	783,000	363,000	76,000	499,000	9,395,000
Administrative Zone	4,919,000	594,000	796,000	194,000	551,000	7,055,000
Commercial Zone	26,488,000	3,807,000	1,999,000	986,000	595,000	33,876,000
Office Zone	4,866,000	1,581,000	1,243,000	590,000	432,000	8,713,000
Knowledge Zone	10,678,000	1,848,000	515,000	334,000	567,000	13,943,000
Transition Zone	9,053,000	794,000	581,000	382,000	359,000	11,169,000
Industrial Belt	4,033,000	583,000	1,000	718,000	126,000	5,462,000
Industrial Zone	6,068,000	667,000	441,000	2,220,000	415,000	9,811,000
Residential Zone	10,692,000	457,000	51,000	1,182,000	312,000	12,695,000
Environmental Sensitive Zone	46,000	78,000	57,000	41,000	62,000	285,000
Total Space	84,473,000	7,586,000	2,439,000	4,754,000	2,576,000	101,829,000

Table 3.9 : Land use distribution in 2018
Source : Western Province Division and Research & Development Unit, UDA-2018

Existing Proportional Distribution of Different Land Uses

Zone	Residential space %	Commercial Space %	Office Space%	Industrial Space %	Other Space %
Executive Residential Zone	87	7	1	1	5
Administrative Zone	87	4	3	0.2	5
Commercial Zone	90	4	3	2	1
Office Zone	68	12	12	4	3
Knowledge Zone	81	11	2	2	4
Transitional Zone	90	6	0.2	3	2
Industrial Belt	73	11	0	13	2
Industrial Zone	75	3	1	19	3
Residential Zone	84	4	0	9	2
Total Area	83	7	2	5	3

Table 3.10 : Proptional distribution in different land uses - 2018
Source : Western Province Division and Research & Development Unit, UDA-2018

Proposed Distribution of Different Land Uses (2030 and 2050)

Zone	Proposed Residential Space(Sqm)	Proposed Commercial Space(Sqm)	Proposed Office Space(Sqm)	Propsed Industrial Space(Sqm)	Propsed Other Space(Sqm)	Total Developed area (Sq m)
Center	1,134,626	704,239	942,810	250,000	848,147	3,879,822
High Density Mixed Development Zone	8,441,800	1,174,031	562,414	84,127	773,549	11,035,921
Administrative Zone	5,165,054	1,010,461	1,593,210	222,817	964,040	8,955,582
Commercial Zone	27,812,519	6,472,633	2,899,165	1,085,120	713,462	38,982,899
Office Zone	5,109,424	2,214,185	1,802,349	619,747	648,657	10,394,362
Knowledge Zone	11,746,254	2,402,934	643,404	350,732	680,629	15,823,953
Transition Zone	4,436,262	1,072,003	610,462	439,777	430,642	6,989,145
Industrial Belt	6,675,194	611,997	15,000	1,005,816	151,861	8,459,868
Industrial Zone	11,761,717	901,305	550,869	3,552,362	539,007	17,305,259
Residential Zone	11,227,094	845,964	73,828	1,217,725	436,426	13,801,037
Environmental Sensitive Zone	51,062	109,238	76,958	43,414	99,200	379,872
Total Space	93,561,005	17,518,989	9,770,468	8,871,636	6,285,621	136,007,719

Table 3.11 : Propsed space distribution in different land uses -2030
Source : Western Province Division and Research & Development Unit, UDA-2018

Zone	Proposed Residential space	Proposed Commercial Space	Proposed Office Space	Proposed Industrial Space	Proposed Other Space	Total Development Area
Executive Residential Zone	8,501,098	1,165,375	137,714	46,479	798,127	10,648,793
Administrative Zone	10,988,286	2,708,084	1,086,605	13,754	621,760	15,418,489
Commercial Zone	29,962,436	18,700,920	1,289,259	466,473	510,217	50,929,305
Office Zone	12,058,396	3,526,243	3,379,047	290,235	267,303	19,521,224
Knowledge Zone	20,581,329	10,120,606	1,573,615	234,030	2,335,953	34,845,534
Transitional Zone	24,562,858	749,912	42,783	282,415	244,566	25,882,535
Industrial Belt	10,003,560	1,265,708	-	1,436,880	253,102	12,959,251
Industrial Zone	6,223,220	334,541	50,868	3,040,452	263,983	9,913,064
Residential Zone	11,496,719	685,918	101,831	1182257	383,432	13,850,158
Total Space	134,377,903	39,257,307	7,661,723	6,992,974	5,678,445	193,968,353

Table 3.12 : Propsed space distribution in different land uses -2050
Source : Western Province Division and Research & Development Unit, UDA-2018

Proposed Proportional Distribution Different Land Use (2050)

Zone	Residential space %	Commercial Space %	Office Space%	Industrial Space %	Other Space %
Executive Residential Zone	80	11	1	0.4	7
Administrative Zone	71	18	7	0.1	4
Commercial Zone	59	37	3	1	1
Office Zone	62	18	17	1	1
Knowledge Zone	59	29	5	1	7
Transitional Zone	95	3	0.2	1	1
Industrial Belt	77	10	0	11	2
Industrial Zone	63	3	1	31	3
Residential Zone	83	5	0.7	9	3
Total Area	69	20	4	4	3

Table 3.13 : Propsed propotinal distribution in different land uses - 2050
Source : Western Province Division and Research & Development Unit, UDA-2018

3.2.3. Proposed Commuter Population of the Capital City

Commuter population of the Capital City is predicted based on the proposed land use and following assumptions.

Assumptions:

Activity Type	Average Per Capita Space
Retail/Whole Sale	20
Tourism	40
Private Office	30
Industrial	60
Institutional	25
Residential	50

Table 3.14 : Average per capita space
Source : www.un.org/esa/population/pubsarchive

Propositions:

According to the Implementation Plan of Capital City, it is planned to complete all the identified projects by 2030. Hence, it requires a period of 30 years to achieve the predicted commuter population in reality.

Existing Commuter Population of the Capital City

Existing Commuter Population					
Zone (Existing Situation)	**Commuter Population for Commercial Space**	**Commuter Population for Office Space**	**Commuter Population for Industrial Space**	**Commuter Population for Other Space**	**Total Commuter Population**
Center	22,000	21,000	3,000	21,000	68,000
High Density Mixed Resi-dent Zone	29,000	9,000	1,000	15,000	54,000
Administrative Zone	22,000	20,000	2,000	17,000	61,000
Commercial Zone	142,000	50,000	12,000	17,000	223,000
Office Zone	59,000	31,000	7,000	13,000	112,000
Knowledge Zone	69,000	13,000	4,000	17,000	104,000
Transition Zone	30,000	14,000	5,000	10,000	59,000
Industrial Belt	22,000	3,000	9,000	3,000	38,000
Industrial Zone	25,000	11,000	28,000	12,000	76,000

Existing Commuter Population					
Zone (Existing Situation)	**Commuter Population for Commercial Space**	**Commuter Population for Office Space**	**Commuter Population for Industrial Space**	**Commuter Population for Other Space**	**Total Commuter Population**
Residential Zone	17,000	1,000	15,000	9,000	45,000
Environmental Sensitive Zone	3,000	1,000	1000	1,860	7,000
Total Commuter Pop for Space					850,000

Table 3.15 : Commuter population in the Capital City - 2018
Source : Western Province Division and Research & Development Unit, UDA-2018

Predicted Commuter Population of the Capital City (2030)

Predicted Commuter Pop 2030					
Zone (Predicted Situation)	**Commuter Pop for Commercial Space**	**Commuter Pop for Office Space**	**Commuter Pop for Industrial Space**	**Commuter Pop for Other Space**	**Total Com Population**
Center	26,000	23,000	3,000	25,000	78,000
High Density Mixed Resident Zone	44,000	14,000	1,000	23,000	82,000
Administrative Zone	38,000	40,000	3,000	29,000	109,000
Commercial Zone	243,000	72,000	14,000	21,000	350,000
Office Zone	83,000	45,000	7,747	19,460	155,000
Knowledge Zone	90,110	16,000	4,384	20,419	131,000
Transition Zone	40,200	15,000	5,000	13,000	74,000
Industrial Belt	23,000	6,000	12,000	4,000	45,000
Industrial Zone	34,000	14,000	44,000	16,000	108,000
Residential Zone	32,000	2,000	15,000	13,000	62,000
Environmental Sensitive Zone	4,000	2,000	600	4,000	10,000
Total Commuter Pop for Space					1,204,000

Table 3.16 : Predicted commuter population of the Capital City - 2030
Source : Western Province Division and Research & Development Unit, UDA-2018

Predicted Commuter Population of the Capital City (2050)

Projected Commuter Population					
Zone	**Commuter of Commercial Space**	**Commuter of Office Space**	**Commuter of Industrial Space**	**Commuter of Other**	**Total Commuter Population**
Executive Residential Zone	58,000	4,500	775	32,000	95,275
Administrative Zone	135,000	36,000	230	25,000	196,230
Commercial Zone	935,000	43,000	8,000	20,000	1,006,000
Office Zone	176,000	113,000	5,000	11,000	305,000
Knowledge Zone	500,000	52,000	]4,000	93,000	649,000
Transitional Zone	37,000	1,400	5,000	10,000	53,400
Industrial Belt	63,000	-	24,000	10,000	97,000
Industrial Zone	17,000	1,700	51,000	10,000	79,700
Residential Zone	34,000	3,000	20,000	15,000	72,000
Total Space	1,962,865	255,391	116,550	227,138	2,553,000

Table 3.17 : Predicted commuter population of the Capital City -2050
Source : Western Province Division and Research & Development Unit, UDA-2018

04

Utility Management Strategy

Chapter 04
UTILITY MANAGEMENT STRATEGY

Introduction

Aims and Objectives

The Approach

4.1. Introduction

4.1.1. Aims and Objectives

The Utility Management Strategy serves almost all objectives with special concern on the objectives given under Goal 03 which states a place that prospers with smooth and efficient urban syestems and smart urban facilities.

4.1.2. The Approach

The Infrastructure in the Sri Lanka's Capital City area will have to be developed both by direct intervention of the State Sector Infrastructure Development Agencies and through Public-Private Partnerships. Hence the Capital City Development Plan shall be refered as a guiding framework for such interventions.

The objective of the strategy is to upgrade the physical infrastructure in par with international standards and the smart urban facilities :

- *The Management of Utilities and Services*
  - *Electricity Supply*
  - *Water Supply*
  - *Solid Waste Management*
  - *Waste Water Treatment and Disposal System*

- *Provision of Adequate Social Infrastructure*
  - *Education Institutions*
  - *Health Institutions*

The expected population in the area earmarked for the Capital City development within the envisaged period of the plan is 1,546,000 *(2050)*. The following strategies have been formulated with this figure in view.

The overall developments in the area shall elevate Kotte-Sri Jayawardenapura and its surroundings into a state-of-the-art smart city that provides its inhabitants with efficient, affordable and comfortable living, working and entertainment facilities.

Chapter 04
UTILITY MANAGEMENT STRATEGY

Scope of the Strategy

Strategic Intervention for the Utility Management : Physical Infrastructure

Strategic Intervention – Electricity Supply

4.2. Scope of the Strategy

3.1. The planning framework covered by Utility Management Strategy includes:

a. *Tentative demands for different types of physical and social infrastructure, estimated based on the projected residential and commuter populations, urban activities and services proposed under any section of this strategy, and for specific geographic units within the planning area in different time durations.*

b. *The relevent infrastructure projects of other authorities are incorporated as for the reqirements of the plan.*

c. *Locations earmarked and the geographic entities to be served by such infrastructure developments projects.*

d. *The order of priorities, timelines and proposed process of implementation of such projects are considered.*

3.2. The strategy addresses general requirements and does not intend to address infrastructure development needs of individual entities, firms or sectors.

3.3. The strategy has taken the foreseeable conditions in the socio-economic environment, the advancement of technologies and the projected socio-demographic conditions, based on the available information. Any unexpected and unprecedented events or conditions shall be addressed with timely interventions.

3.4. All strategic projects, proposed in this section of the plan are expected to serve the planning area within the time durations specified in chapter 1 of the development plan. situations beyond these durations will have to be dealt with timely updating of the development plan.

4.3. Strategic Intervention for the Utility Management : Physical Infrastructure

Strategic Intervention 1: Electricity Supply

The Current Situation :

The purpose of electricity supply plan is to provide uninterrupted and reliable supply of grid based electricity to the Capital City area. On the existing situation of the electricity supply, both Ceylon Electricity board and Lanka Electricity Company (Pvt) Ltd are responsible to provide electricity for capital city area. Hence it is necessary to identify the existing electricity supply plans

of the Ceylon Electricity board and the Lanka Electricity Company (Pvt) Ltd. The Ceylon Electricity Board provides electricity for Kaduwela Municipal Council area, Part of the Maharagama Urban Council area and part of the Kotikawatta Pradeshiya Sabha area. The Lanka Electricity Company (Pvt) Ltd provides electricity for Kotte Municipal Council area and, part of the Maharagama Urban Council area and a part of the Kotikawatta Pradeshiya Sabha area.

The following table indicates installed capacity (in kVA) and current load (in kVA) of the CEB in Capital City Planning Area during the day & night peak.

Area	Capacity (kVA)	kVA		%kVA	
		Day	Night	Day	Night
Malabe	66680	8894	13303	13.33	19.95
Thalangama	86930	7948	9398	9.14	10.81
Weliwita	59510	7560	8185	12.7	13.75

Table 4.1 : Capacity installation and current load of the CEB
Source : Ceylon Electricity Board -2018

The following table indicates the existing capacity of the electricity of Lanka Electricity Company (Pvt) Ltd.

Substation	Capacity
Kolonnawa	2x10MVA
Ethul Kotte	2x10MVA
Nugegoda	2x10MVA
Udahamulla	2x10MVA
Boralesgamuwa	2x5MVA
Maharagama	2x10MVA
Nawala	2x10MVA
Kotikawaththa	2x5MVA
Peliyagoda-Sedawaththa Feeder	2x10MVA

Table 4.2 : Electricity capacity of LECO for Planning area
Source : Lanka electricity company (Pvt) Ltd - 2018

The Projected situations in 2030 and 2050 :

The expected electricity demand for the domestic usage is as below

Zones	population - 2030	Number of housing units- 2030	Domestic Demand (kwh) -2030
Center	42830	10982	1317846
Administrative Zone	186130	47725	5727077
High density Mixed Development Zone	85190	21843	2621231
Commercial Zone	306550	78602	9432308
Knowledge Zone	165710	42489	5098769
Office Zone	140850	36115	4333846
Transitition mix Development Zone	105730	27110	3253231
River base warehouse Zone	45480	11661	1399385
Residential Zone	143340	36753	4410462
Indsutrial Zone	42520	10902	1308308
Environmental sensitive Zone (Kelani)	10060	2579	309538
Total	1274390	326766	39212000

Table 4.3 : Domestic electricty demand of the Capital City - 2030
Source : Western Province Division and Research & Development Unit, UDA - 2018

Zones	Population - 2050	Number of housing units- 2050	Domestic Demand (kwh)-2050
Center	44,000	11282	1353846
Inner & Outer City	1,298,000	332821	39938462
Periphery	204,000	52308	6276923
Total area	1,546,000	396410	47569231

Table 4.4 : Domestic electricty demand of the Capital City - 2050
Source : Western Province Division and Research & Development Unit, UDA - 2018

Predicted space for requirement of electricity.

Zone	Proposed Residential Space(Sqm)	Proposed Commercial Space(Sqm)	Proposed Office Space(Sqm)	Propsed Industrial Space(Sqm)	Propsed Other Space(Sqm)	Total Developed area (Sqm)
Center	1,134,626	704,239	942,810	250,000	848,147	3,879,822
High Density Mixed Development Zone	8,441,800	1,174,031	562,414	84,127	773,549	11,035,921
Administrative Zone	5,165,054	1,010,461	1,593,210	222,817	964,040	8,955,582
Commercial Zone	27,812,519	6,472,633	2,899,165	1,085,120	713,462	38,982,899
Office Zone	5,109,424	2,214,185	1,802,349	619,747	648,657	10,394,362
Knowledge Zone	11,746,254	2,402,934	643,404	350,732	680,629	15,823,953
Transition Zone	4,436,262	1,072,003	610,462	439,777	430,642	6,989,145
Industrial Belt	6,675,194	611,997	15,000	1,005,816	151,861	8,459,868
Industrial Zone	11,761,717	901,305	550,869	3,552,362	539,007	17,305,259
Residential Zone	11,227,094	845,964	73,828	1,217,725	436,426	13,801,037
Environmental Sensitive Zone	51,062	109,238	76,958	43,414	99,200	379,872
Total Space	93,561,005	17,518,989	9,770,468	8,871,636	6,285,621	136,007,719

Table 4.5 : Predicted space for requirement of electricty - 2030
Source : Western Province Division and Research & Development Unit, UDA - 2018

Zone	Proposed Residential Space(Sqm)	Proposed Commercial Space(Sqm)	Proposed Office Space(Sqm)	Propsed Industrial Space(Sqm)	Propsed Other Space(Sqm)	Total Developed area (Sqm)
Executive Residential Zone	8,501,098	1,165,375	137,714	46,479	798,127	10,648,793
Administrative Zone	10,988,286	2,708,084	1,086,605	13,754	621,760	15,418,489
Commercial Zone	29,962,436	18,700,920	1,289,259	466,473	510,217	50,929,305
Office Zone	12,058,396	3,526,243	3,379,047	290,235	267,303	19,521,224
Knowledge Zone	20,581,329	10,120,606	1,573,615	234,030	2,335,953	34,845,534
Transitional Zone	24,562,858	749,912	42,783	282,415	244,566	25,882,535
Industrial Belt	10,003,560	1,265,708	-	1,436,880	253,102	12,959,251
Industrial Zone	6,223,220	334,541	50,868	3,040,452	263,983	9,913,064
Residential Zone	11,496,719	685,918	101,831	1182257	383,432	13,850,158
Total Space	134,377,903	39,257,307	7,661,723	6,992,974	5,678,445	193,968,353

Table 4.6 : Predicted space for requirement of electricty -2050
Source : Western Province Division and Research & Development Unit, UDA-2018

The standard electricity demand is predicted based on the proposed land uses over the total planning area. Hence, any electricity supply improvement project that would directly or indirectly contribute to the electricity supply of Capital City are incorporated into the Capital City Development Plan.

Strategic Intervention 2 : Water Supply

The Current Situation :

The purpose of water supply strategic intervention is to provide 100% reliable water supply to the Capital City Area. Hence, it is necessary to identify the existing water supply, future water demand and plans of National Water Supply and Drainage Board (NWSDB) of Sri Lanka. The NWSDB projections are based on the demand of local authorities and the proposed Capital City projections are based on the proposed zones of the concept. According to the data provided by NWSDB, the existing water provision for the relevent area is as follows.

Figure 4.1 : Water provison in Colombo district
Source : Western Province Division and Research & Development Unit, UDA - 2018

Water demand for the year 2011

Local Authority	Existing (2011) (m3/d)			
	Domestic Consumptions	Non Domestic Consumptions	Special Consumptions	TotalAverage Day Consumptions
Sri Jayewardene-pura Kotte MC	20690	1925	0	33754
Kaduwela MC	23466	2616	2269	41694
Maharagama UC	23440	3035	2421	42496
Kotikawatta-Mulleriyawa PS	15218	1348	2201	27598
Total Water Supply	**82814**	**8924**	**6891**	**145542**

Table 4.7 : Water demand of NWSDB for the year - 2011
Source : National Water Supply and Drianage Board

Since it is difficult to understand the present condition based on 2011 data, 2015 demand projection of NSWDB has been used to project the current demand (2018) of the Capital City considering a total population of 774,082 in the area by 2018.

Water demand for the year 2015 (Prepared by NWSDB)

Local Authority	Population of 2015	Domestic Consumptions (m^3/d)	Non Domestic Consumptions (m^3/d)	Special Consumptions (m^3/d)	TotalAverage Day Consumptions (m^3/d)	Total Maximum Day Demand (m^3/d)
Sri Jayewardene-pura Kotte MC	111048	19410	3162	1457	34326	37759
Kaduwela MC	264630	38420	4288	4168	66709	73381
Maharagama UC	208416	30658	3914	2421	52848	58132
Kotikawatta-Mulleriyawa PS	137913	18608	1644	2201	32076	35284
Total Water Supply Area based on Local Authorities	**722,007**	**107,096**	**13,008**	**10,247**	**185,959**	**204,556**

Table 4.8 : Water demand of NWSDB for the year - 2015
Source : National Water Supply and Drianage Board

Water demand for the year 2018 (Prepared by the UDA)

	Population of 2018	Domestic Consumptions	Non Domestic Consumptions	Special Consumptions	TotalAverage day Consumptions	Total Maximum Day Demand
Total Area based on Concept of Capital City	774,082	114,820	13,946	10,986	19,9371	219,310

Table 4.9 : Water demand for the year - 2018
Source : Western Province Division and Research & Development Unit, UDA - 2018

The Projected Situations in 2030 and 2050 :

Water demand for the year 2030 (Prepared by NWSDB)

Local Authority	Population of 2030	2030 Projection (m3/d)					
		Domestic Demand	Non Domestic Demand	Special Demand	Total Demand of the Area	Total Average Day Demand	TotalMaximum Day Demand
Sri Jayewardene-pura Kotte MC	130724	25622	4171	1672	31465	37910	41702
Kaduwela MC	330358	56818	6419	5059	68296	82176	90396
Maharagama UC	260181	45998	5745	2783	54526	65690	72261
Kotikawatta-Mulleriyawa PS	172677	26248	2317	2525	31090	37457	41203
Total Water Supply	**893940**	**154686**	**18652**	**12039**	**185,377**	**223233**	**245562**

Table 4.10 : Water demand of NWSDB for the year - 2030
Source : National Water Supply and Drianage Board

NWSDB has projected the water demand for a population of 893,940 for the year 2030. However, for the next 30 years of this plan proposes a population of 1,545,934. Further, it is projected that the existing non-domestic space will increase by 45% by the next 30 years. (Refer the Spacial Strategic Intervention) Based on the said criteria, this plan has projected the water demand - 2050 for the Capital City area as below,

	Population of 2018	Domestic Consumptions (m^3/d)	Non Domestic Consumptions (m^3/d)	Total Demand per Day (m^3/d)
Total Area	1,545,934	267,506	37,648	305,154

Table 4.11 : Capital City water demand - 2050
Source : Western Province Division and Research & Development Unit, UDA - 2018

According to the water demand projection for the next 30 years, there is a gap of 118281m^3 of water for the area compared with the NWSDB figures.

Projects of NWSDB for the year 2030

Existing Scheme	Future Scheme	Water Treatment Facilities	Estimated Existing Water Treatment Facility Supplied in 2011 (m3/day)	Clean Water to be Provided (m3/day)				
				2012	2015	2020	2025	2030
Kotte	Kotte	Ambathale	39768	47734	53239	36011	38007	34729
		Weliwita	0	0	0	16502	17649	24257
Battramulla	Battaramulla	Ambatale	22119	31182	37149	0	0	0
		Weliwita	0	0	0	37472	40309	43351
Kaduwela	Kaduwela	Labugama	14392	20563	22300	23246	28461	25766
		Chico	0	0	3655	4053	856	916
		Weliwita	0	0	0	0	0	4791
Maharagama	Maharagama	Kalatuwawa	4019	4567	5190	0	0	0
		Ambathale	19834	24245	26272	0	0	-
		Weliwita	0	0	0	38474	41379	44476
Kolonnawa	Kolonnawa	Labugama	1258	1522	8283	0	0	0
		Kalatuwawa	2095	2840	0	0	0	0
		Ambatale	39203	48714	49332	58160	62793	67757
		Weliwita	0	0	0	0	0	0
Total			**142688**	**181367**	**205420**	**213918**	**229454**	**246043**

Table 4.12 : Projects of NWSDB for the year 2030
Source : National Water Supply and Drianage Board

Strategic Intervetion 3 : Solid Waste Management

The Current Situation :

Solid waste management has become a national level issue in Sri Lanka. Colombo District accounts for the highest weight of solid waste in the country. Solid Waste Management Strategic Intervention is an esential component to accomplish the objectives of this plan.

The current solid waste disposal method in the DSDs of the proposed Capital City Area are as follows,

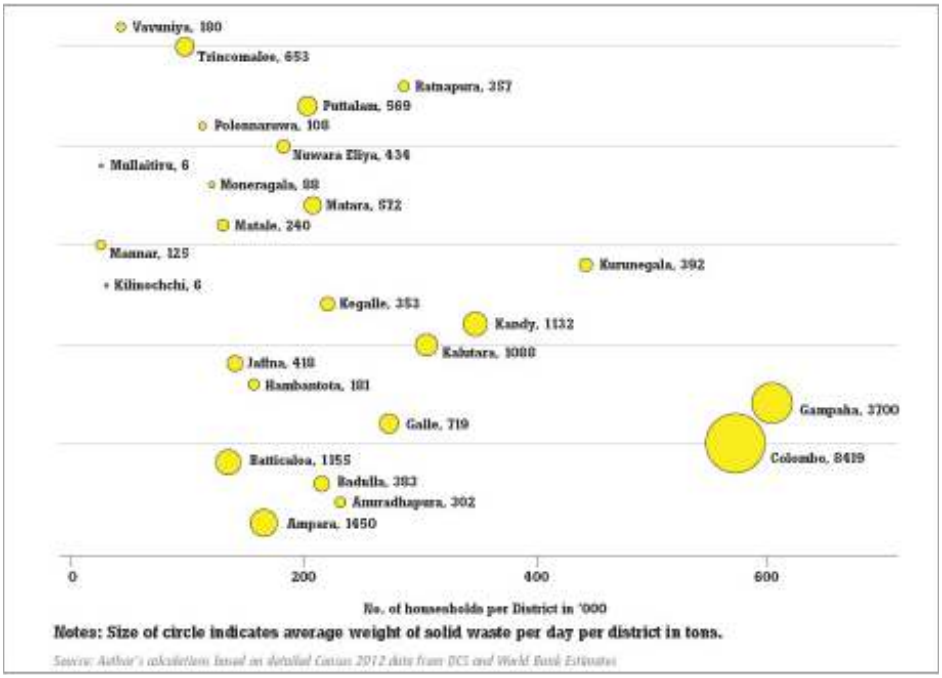


Figure 4.2 : Solid waste generation in Colombo district
Source : www.pressreader.com/sri-lanka/daily-mirror-sri-lanka

- *Kaduwela DSD - above 50 % solid waste managed by the local authority*
- *Maharagama DSD- above 60% solid waste managed by the local authority*
- *Kolonnawa (Kottikawatta) DSD- above 80% solid waste managed by the local authority*
- *Sri Jayawardanepura DSD- above 98% solid waste managed by the local authority*

Accordingly, solid waste management methods are inadequate even at present.

Chapter 04
UTILITY MANAGEMENT STRATEGY

Scope of the Strategy

Strategic Intervention for the Utility Management : Physical Infrastructure

Strategic Intervention – Solid Waste Management

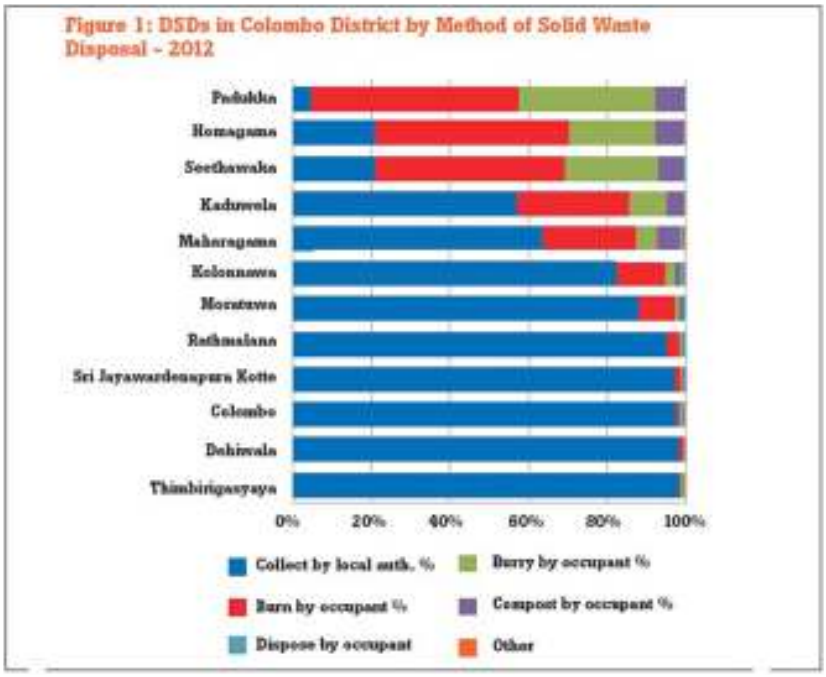


Figure 4.3 : DSD-s in Colombo district by method of solid waste disposal - 2012
Source : www.pressreader.com/sri-lanka/daily-mirror-sri-lanka

Current capacity and methods of solid waste management

Local Authority	Current Solid Waste Dumping Place	Capacity
Sri Jayawardenapura Kotte MC	Karadiyana Open Dumping Site	25 Acres of Land area Dispose 500 MT per day
Maharagama UC		
Kotikawatta PS	Open dumping site	40 MT per day
Kaduwela MC	Kaduwela Waste Energy Project	35 MT Per day

Table 4.13 : Current capacity and methods of solid waste management
Source : Relevant local authority data - 2018

Assumptions for the estimation of solid waste generation

Area	Per Capita Solid Waste generation (Residential) (MT)
Municipal Council	0.7
Urban Council	0.4
Pradeshiya Saba	0.3

Table 4.14 : Assumptions for the estimation of solid waste generation of the local authorities
Source : Solid waste management authority - 2018

Present solid waste generation based on residential population

Local Authority	Residential Population of 2018	Waste Generation 2018(MT)
Kaduwela MC	277693	194
Maharagama UC	232093	93
Sri Jayawardanapura Kotte MC	98962	69
Kottikawatta PS	165266	50
Total Area	**774013**	**406**

Table 4.15 : Solid waste generation based on residential population - 2018
Source : Western Province Division and Research & Development Unit, UDA - 2018

The Projected Situations in 2050 :

Predicted solid waste generation based on residential population

Local Authority	Residential Population of 2050	Waste Generation of 2050
Kaduwela MC	414217	290
Maharagama UC	777780	311
Sri Jayawardanapura Kotte MC	107517	75
Kottikawatta PS	246420	74
Total Area	**1545934**	**750**

Table 4.16 : Solid waste generation based on residential population - 2050
Source : Western Province Division and Research & Development Unit, UDA - 2018

Solid waste generation based on floating population

Per capita solid waste generation by floating population is estimated to be 0.15kg per day *(Source: www. Environment clearance.nic.)*

	Floating Pop	Solid Waste Generation (MT)
Floating Population of Capital City 2018	902,400	135
Floating Population of Capital City 2050	2,500,000	375

Table 4.17 : Solid waste generation based on commuter population - 2050
Source : Western Province Division and Research & Development Unit, UDA - 2018

The current capacity of solid waste dumping sites is approximately 575 metric tons and current waste generation of the area is approximately 541 metric tons. The solid waste generation of the proposed Capital City area is estimated to be 1,125 metric tons. These figures show that innovative methods and increased capacities required to manage future situations.

Chapter 04
UTILITY MANAGEMENT STRATEGY

Scope of the Strategy

Strategic Intervention for the Utility Management : Physical Infrastructure

Strategic Intervention – Solid Waste Management

Strategic Intervention – Waste Water Treatment and Disposal System

Solid Waste Management Projects

Ministry of Megapolis and Wester Development initiated a project to handle 3500 metric tons of solid waste generated in Metro Colombo Area with a facility developed in Aruwakkalu. It intends to serve Sri Jayawadenapura Kotte Municipal Council and Kotikawatte- Mulleriya area.

The future floating population in the proposed Capital City would generate approximately 400 metric tons of solid waste per day. These predicted solid waste generations by floating population are assumed as 100 metric tons and 200 metric tons for Sri Jayawardenapura and Kotikawatta local authority areas respectively. This wastes are proposed to be accommodated by the Aruwakkalu facility.

Unless the other local authorities too will not be included, a fresh solution will be needed since, Kaduwela and Maharagama local authorities will produce 400 metric tons per day in the future and the Karadiyana Waste to Energy Project has only a limited capacity of 35 metric tons per day. Hence it proposed to improve the capacity of Karadiyana waste to energy project to this strategy and any other solid waste projects will be incoporated.

Strategic Intervetion 4 :
Waste Water Treatment and Disposal System

The Current Situation :

It is generally believed that wastewater is no longer suitable for use as it is full of contaminants including bacteria, chemicals and other toxins. Hence, it is vital to treat and reduce the contaminants to acceptable levels to make the water safe to discharge into the environmental systems. However, at present there is no proper waste water treatment and disposal system for the plan area. As a result, it explicates the difficulty of maintaining the ‘city character’ deprived of proper waste water disposing network. Accordingly, this section proposes a strategic intervention to manage the waste water of the area.

The existing wastewater generation of the area is indicated as below,

Existing Waste Water Generation of the Area

Wastewater Treatment and Disposal System (Kaduwela)	
Population in the year 2018	277693
Design population considering 80% coverages	
Water Consumption (m^3/day)	222,154
Per Capita Waste Water generation	120l/d/person
Base wastewater flow(m3/day)	26,658
Taking 35% of Base wastewater flow as wastewater generation from Commercial Institutions	9,330
Average dry weather flow (m^3/day)	35,989
Infiltration 20% (m^3/day)	7,198
Total average dry weather flow on total population m^3/day	**43,187**
	45,000m^3/day

Table 4.18 : Waste water treatment and disposal system in Kaduwela - 2018
Source : Western Province Division and Research & Development Unit, UDA - 2018

Wastewater Treatment and Disposal System (Maharagama)	
Population in the year 2018	232,093
Design population considering 80% coverages	
Water Consumption (m^3/day)	185,674
Per Capita Waste Water generation	120l/d/person
Base wastewater flow(m3/day)	22,280
Taking 35% of Base wastewater flow as wastewater generation from Commercial Institutions	7,798
Average dry weather flow (m^3/day)	30,079
Infiltration 20% (m^3/day)	6,015
Total average dry weather flow on total population m^3/day	**36,095**
	36,000m^3/day

Table 4.19 : Waste water treatment and disposal system in Maharagama -2018
Source : Western Province Division and Research & Development Unit, UDA - 2018

Wastewater Treatment and Disposal System (Sri Jayawardhanpura)	
Population in the year 2018	98961.71597
Design population considering 80% coverages	
Water Consumption (m^3/day)	79,169.37277
Per Capita Waste Water generation	120l/d/person
Base wastewater flow(m3/day)	9,500.324733
Taking 35% of Base wastewater flow as wastewater generation from Commercial Institutions	3,325.113657
Average dry weather flow (m^3/day)	12,825.43839
Infiltration 20% (m^3/day)	2,565.087678
Total average dry weather flow on total population m^3/day	**15,391**
	15,000m^3/day

Table 4.20 : Waste water treatment and disposal system in Sri Jayawardenapura Kotte -2018
Source : Western Province Division and Research & Development Unit, UDA - 2018

Wastewater Treatment and Disposal System (Kotikawatta)	
Population in the year 2018	165265.885
Design population considering 80% coverages	
Water Consumption (m^3/day)	13,2212.708
Per Capita Waste Water generation	120l/d/person
Base wastewater flow(m3/day)	15,865.52496
Taking 35% of Base wastewater flow as wastewater generation from Commercial Institutions	5,552.933735
Average dry weather flow (m^3/day)	21,418.45869
Infiltration 20% (m^3/day)	4,283.691739
Total average dry weather flow on total population m^3/day	**25,702**
	325,000m^3/day

Table 4.21 : Waste water treatment and disposal system in Kotikawaththa -2018
Source : Western Province Division and Research & Development Unit, UDA - 2018

The Projected Situations in 2050

Projected Wastewater Generation of the Area by 2050

Wastewater Treatment and Disposal System (Kaduwela)	
Population in the year 2050	414,217
Design population considering 80% coverage	
Water Consumption	331,373
Waste Water generation	120l/d/person
Base wastewater flow(m3/day)	39,765
Taking 35% of BF as wastewater generation from Commercial Institutions	13,918
Waste water flow from commercial institution	
Average dry weather flow	53,682
Infiltration 20%	10,736
Total ADWF flow to the TP m3/day	64,419
	65,000m³/day

Table 4.22 : Waste water treatment and disposal system in Kaduwela - 2050
Source : Western Province Division and Research & Development Unit, UDA - 2018

Wastewater Treatment and Disposal System (Maharagama)	
Population in the year 2050	777,780
Design population considering 80% coverage	
Water Consumption	622,224
Waste Water generation	120l/d/person
Base wastewater flow(m3/day)	74,667
Taking 35% of BF as wastewater generation from Commercial Institutions	26,133
Waste water flow from commercial institution	
Average dry weather flow	100,800
Infiltration 20%	20,160
Total ADWF flow to the TP m3/day	120,960
	120,000m³/day

Table 4.23 : Waste water treatment and disposal system in Maharagama -2050
Source : Western Province Division and Research & Development Unit, UDA - 2018

Wastewater Treatment and Disposal System (Sri Jayawardhanpura)	
Population in the year 2050	107,517
DDesign population considering 80% coverages	
Water Consumption	86,014
Waste Water generation	120l/d/person
Base wastewater flow(m3/day)	10,322
Taking 35% of BF as wastewater generation from Commercial Institutions	3,613
Waste water flow from commercial institution	
Average dry weather flow	13,934
Infiltration 20%	2,787
Total ADWF flow to the TP m3/day	16,721
	17,000m³/day

Table 4.24 : Waste water treatment and disposal system in Sri Jayawardenapura Kotte -2050
Source : Western Province Division and Research & Development Unit, UDA - 2018

Wastewater Treatment and Disposal System (Kotikawatta)	
Population in the year 2050	246,420
Design population considering 80% coverage	
Water Consumption	197,136
Waste Water generation	120l/d/person
Base wastewater flow(BF)(m3/day)	23,656
Taking 35% of BF as wastewater generation from Commercial Institutions	8,280
Waste water flow from commercial institution	
Average dry weather flow	31,936
Infiltration 20%	6,387
Total ADWF flow to the TP m3/day	**38,323**
	38,000m³/day

Table 4.25 : Waste water treatment and disposal system in Kotikawaththa -2050
Source : Ministry of Eduacation -2018

The above tables imply that the existing wastewater generation would be doubled by the year 2030 with the Capital City development. For that reason, it is crucial to address the issue of wastewater along with the plan implementation.

Identified Projects for Wastewater Treatment and Disposal

National Water Supply and Drainage Board has designed a wastewater treatment (SP-I-1) and disposing project for Sri Jayawardanepura Kotte MC and surrounding areas including a part of Kaduwela MC, Dehiwala-Mt. Lavania MC, Maharagama UC and Kotikawatta-Mulleriyava PS with a total population of 218,800. Nevertheless, it covers only 21% of the total area. Hence, it requires an extended wastewater treatment and disposal project for the whole area.

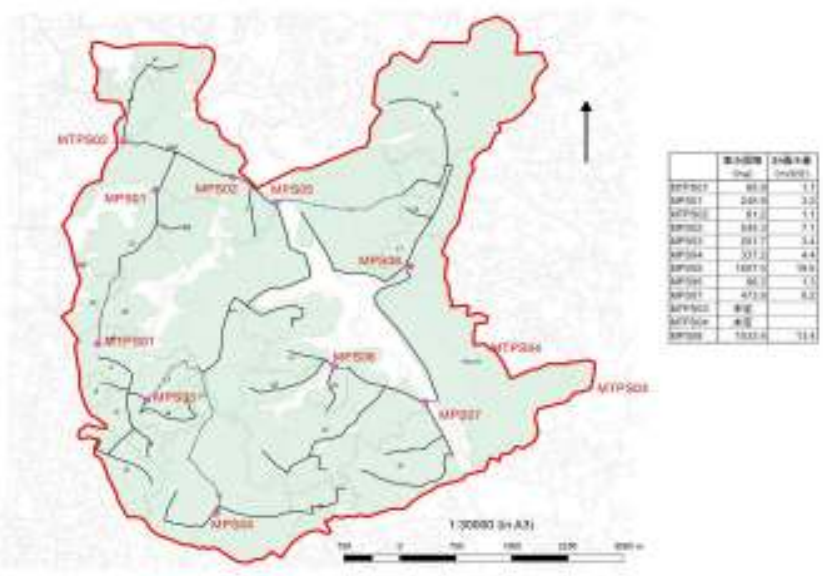


Figure 4.4 : Waste water treatmnet and disposable project proposal
Source : National Water Supply and Drainage Board- 2018

4.4. Strategic Intervention for the Utility Management : Social Infrastructure

Social infrastructure generally includes facilities to provide social services. Types of social infrastructure include health care (hospitals), education (schools and universities), public facilities (community health). They serve as the backbone of the wellbeing of the society. 'The Capital City Development Plan' mainly considers the health and education sector of the planning area. Accordingly, Educational Sector Improvement and Health Sector Improvement Strategic Intervention are proposed.

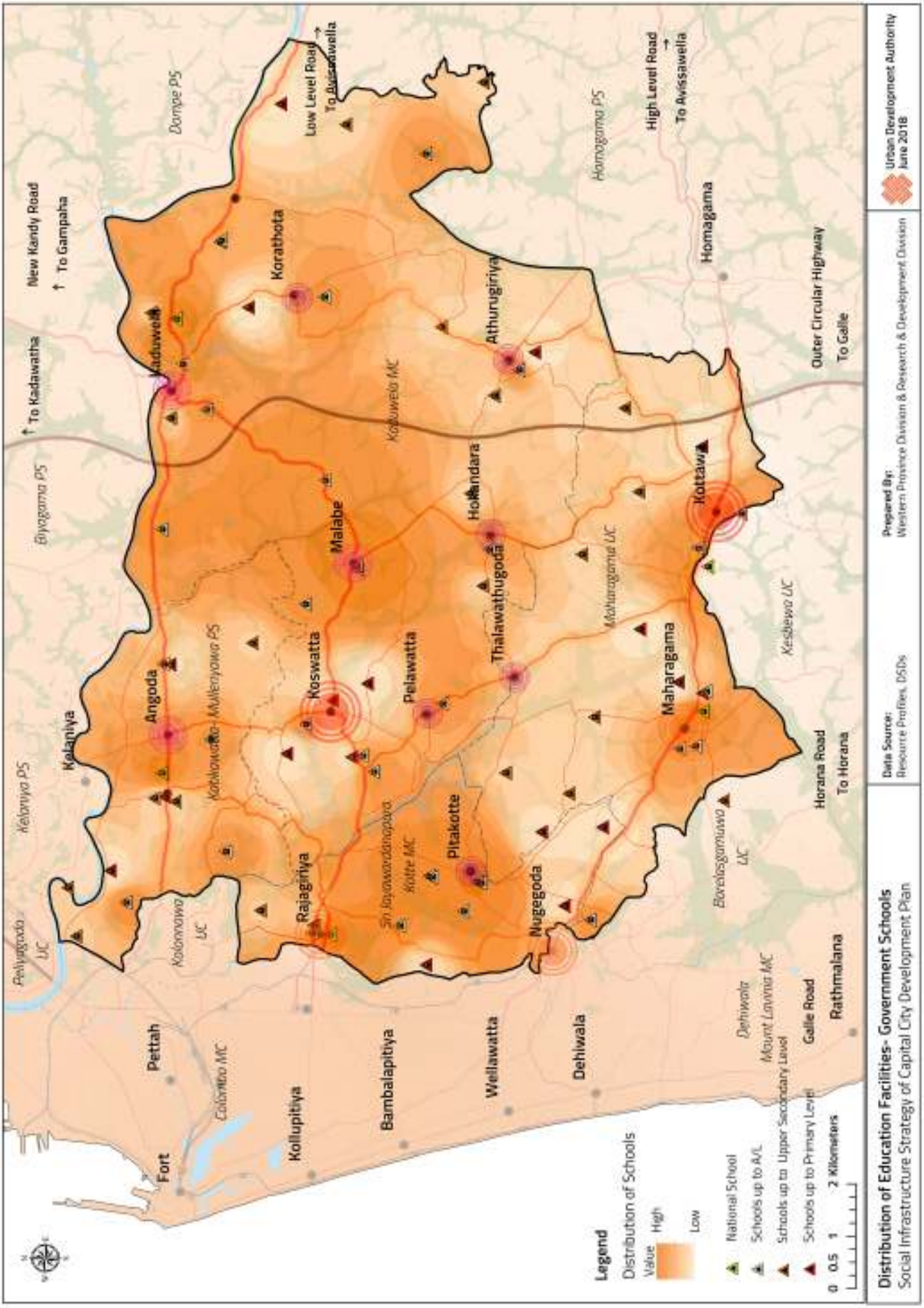
Strategic Intervetion 1 : Educationl Institutions

Current Situation

The Capital City Development Plan area consists of 81 government schools where, 19 of them belong to national level school category.

Type	Number of Government Schools
National Schools	19
Up to A/L	23
Up to O/L	30
Primary Schools	9
Total	**81**

Table 4.26 : No of school distribution within the Capital City
Source : Ministry of Education - 2018



Map 4.1 : Distribution of educational facilities - Gvt schools - 2018
Source : Western Province Division and Research & Development Unit, UDA - 2018

The Projected Situation in 2050

A student population of 145,000 was recorded in 2012 with 85,267 students studying in government schools in the planning area. It is 59% of the total student population and the remaining 41% is assumed to attend private schools (international and other). This is based on following assumptions,

1. *The population which belongs to the age group of 5 to 19 years in the planning area attends schools which are located within the planning area.*

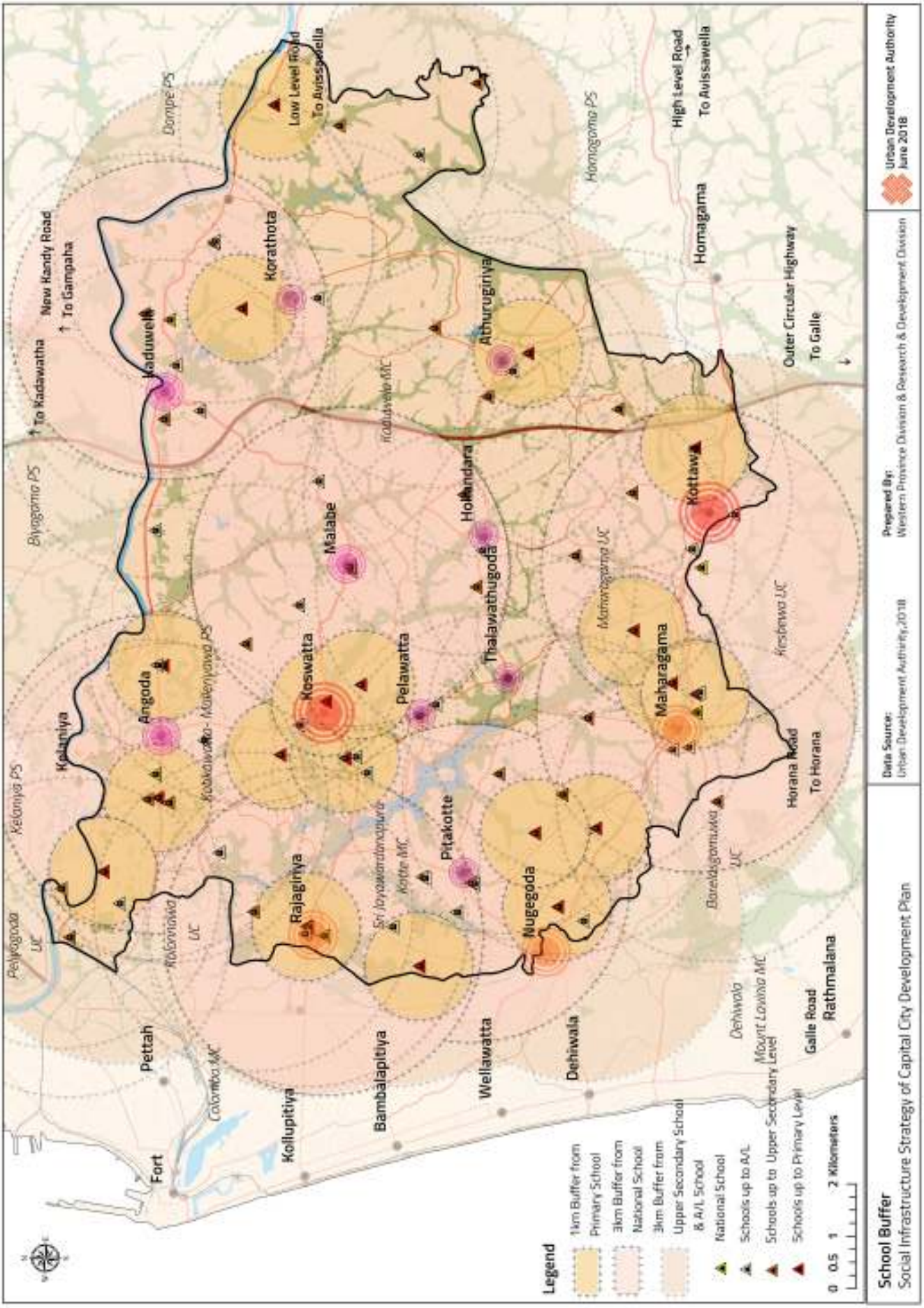
2. *The total number of students in each school is identified as the maximum capacity of the given school.*

The student population estimated for 2050 is 169,700.

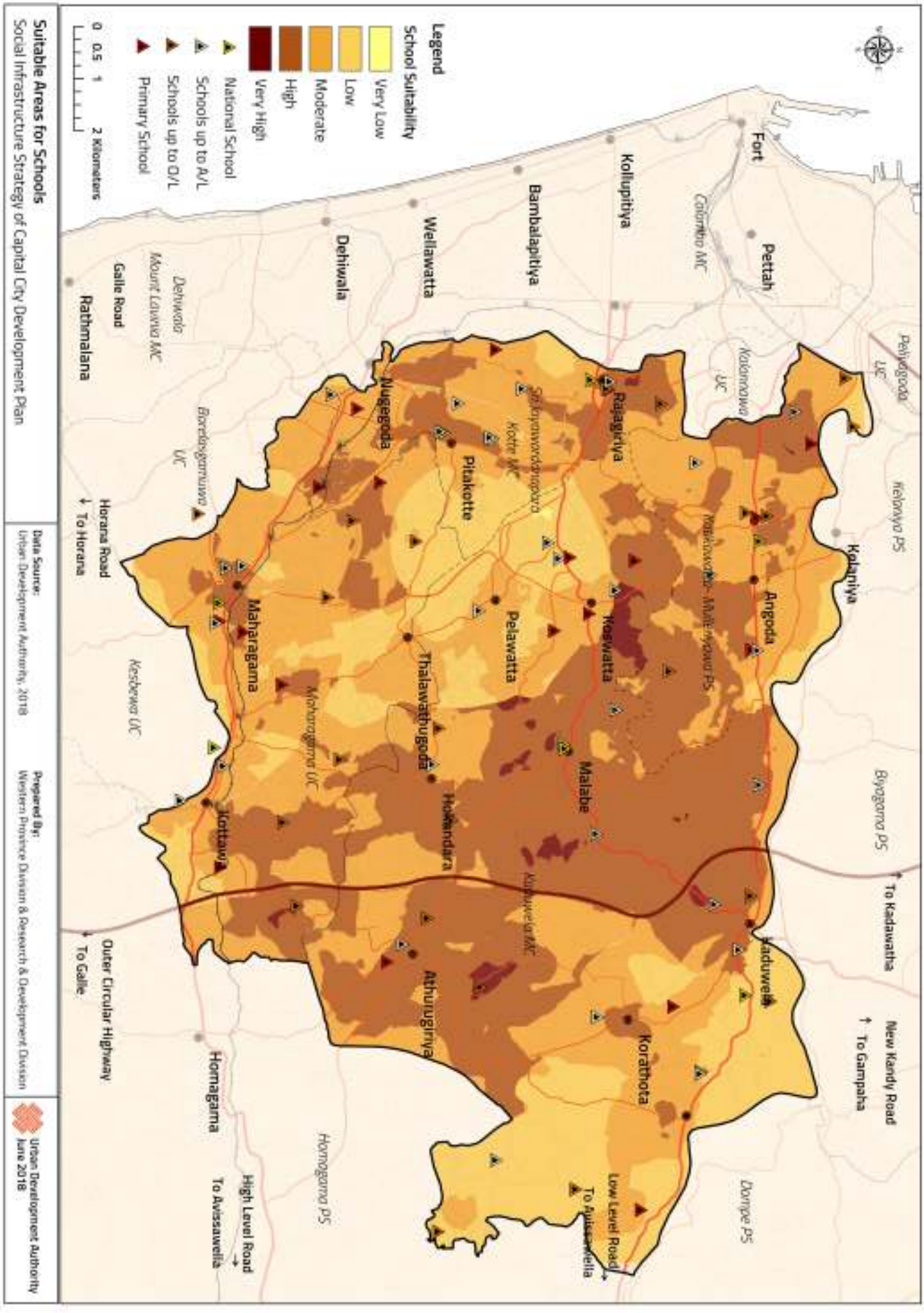
Further, the expansion of the government schools is expected by 17% by the year 2030. In order to facilitate the said growth, suitable areas are identified based on the distribution of estimated student population, proposed road network and the other aspects of the plan.

The catchment of a school is assessed to be 3km for national schools and secondary schools and 1km for primary schools. Such buffering excercise shows that there is an even distribution of schools in the area, Hence, the need is not to increase the number of schools but to enhance the available facilities and to increase their capabilities.

According to the Suitability Analysis, Knowledge City Area and a part of the Peripheral Residential area are identified as the most suitable for educational facilities.



Map 4.2 : Avaialabilty of school infrastructure in Capital City plan
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 4.3 : Suitability analaysis for schools
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Intervetion 2 : Health Institutions

The Current Situation

Currently, 22 government hospitals are located within the planning area including 3 hospitals which belong to the Teaching Hospital Category (Sri Jayawardenapura Hospital, National Institute of Mental Health and Apeksha Hospital). In addition to them, there is a large number of private hospitals in almost all major town.

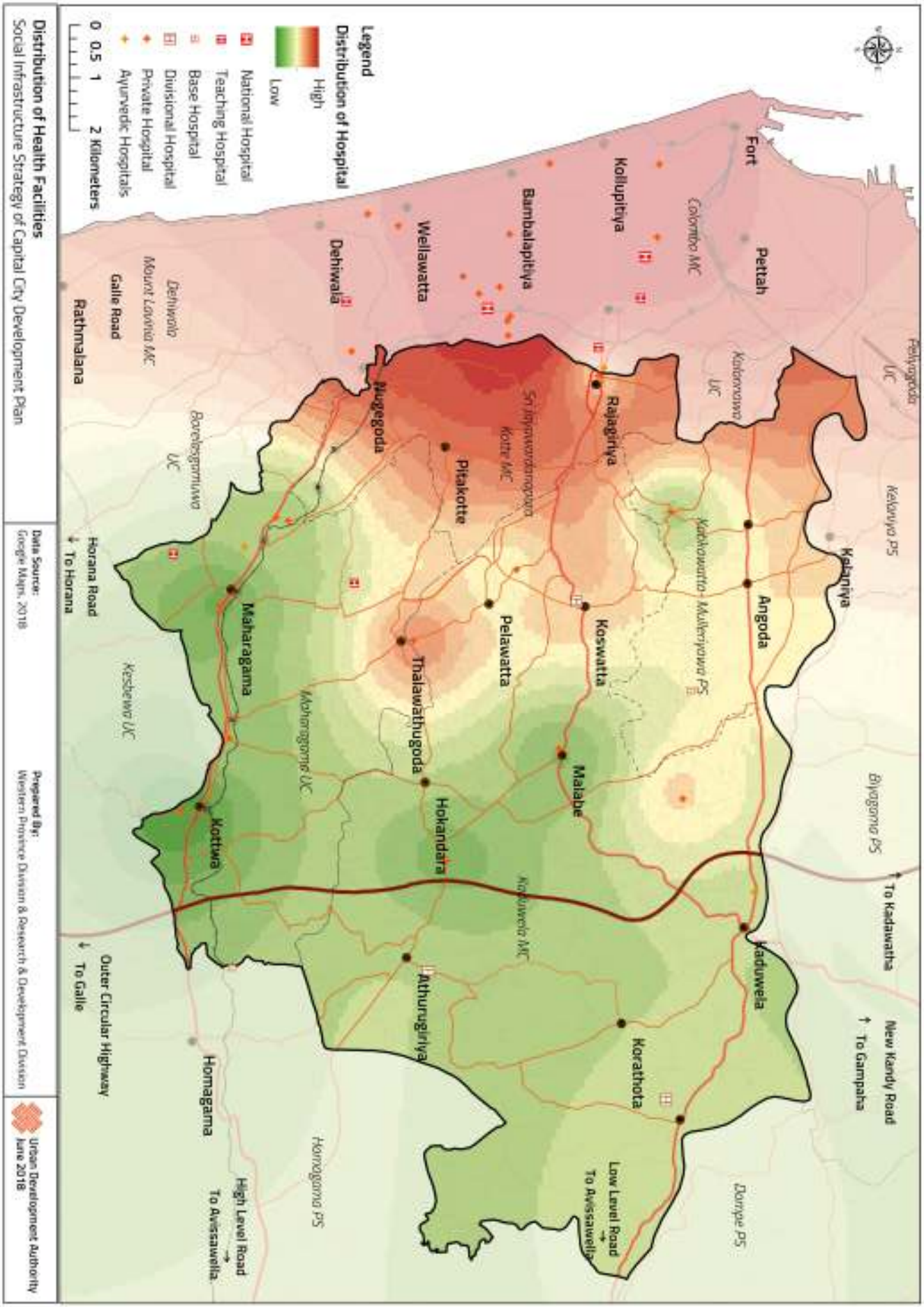
It is noticed that health facilities are well distributed over the planning area and most importantly, many government and private health facilities are located towards Colombo.

The Projected Situation in 2050

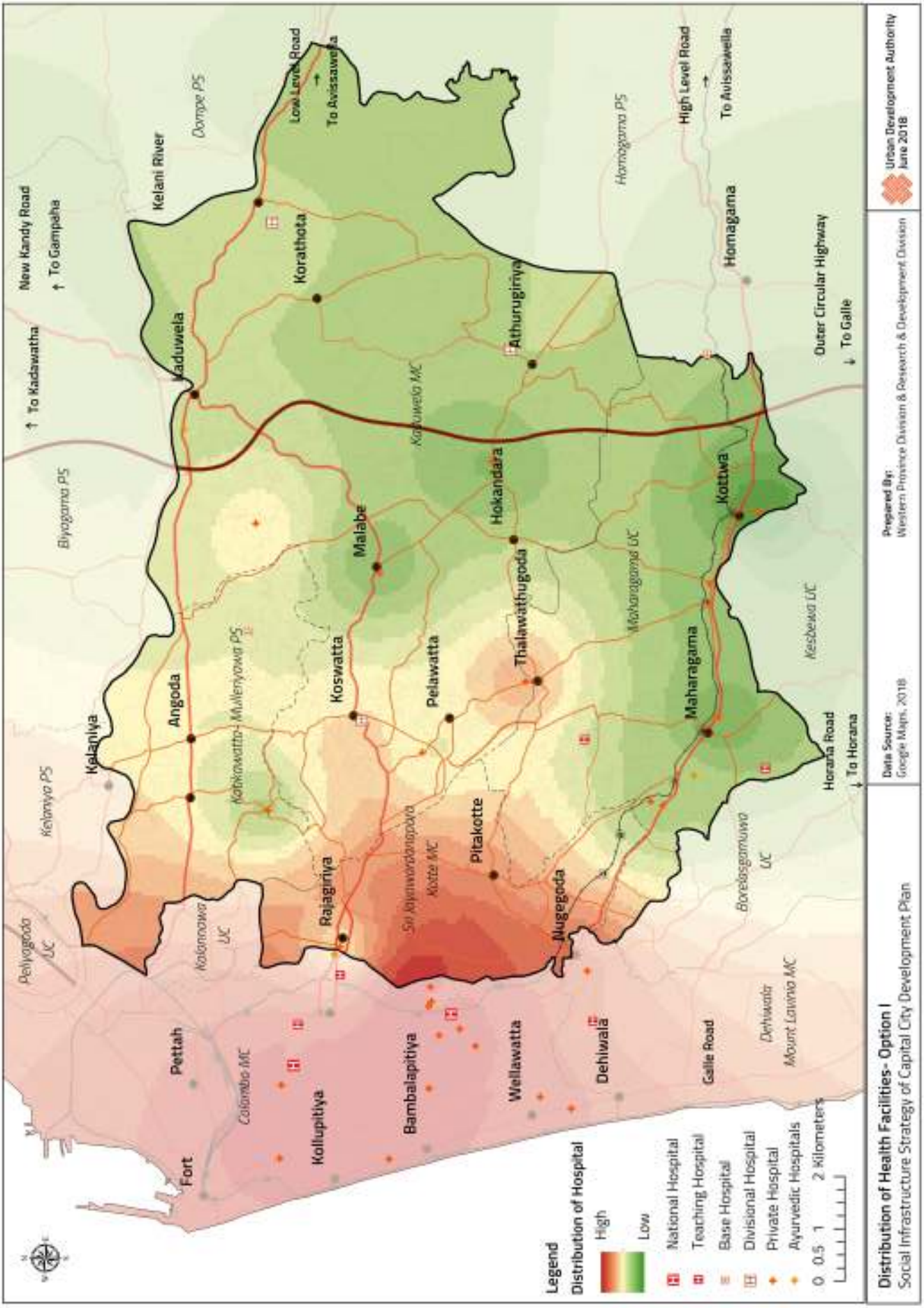
The population and hospital ratio in 2012 is recorded as 10,000:0.32. By the year 2030, it is projected to be 10,000: 0.26 with the projected population.

According to the World Health Organization - World Health Standards, the hospital bed density is 5 beds per 1000 persons. In 2012, it was recorded as 2.4 beds/ 1000 persons. The projected bed density in 2030 is 1.95 beds/1000 persons with the projected populations. This shows a need for additional health facility.

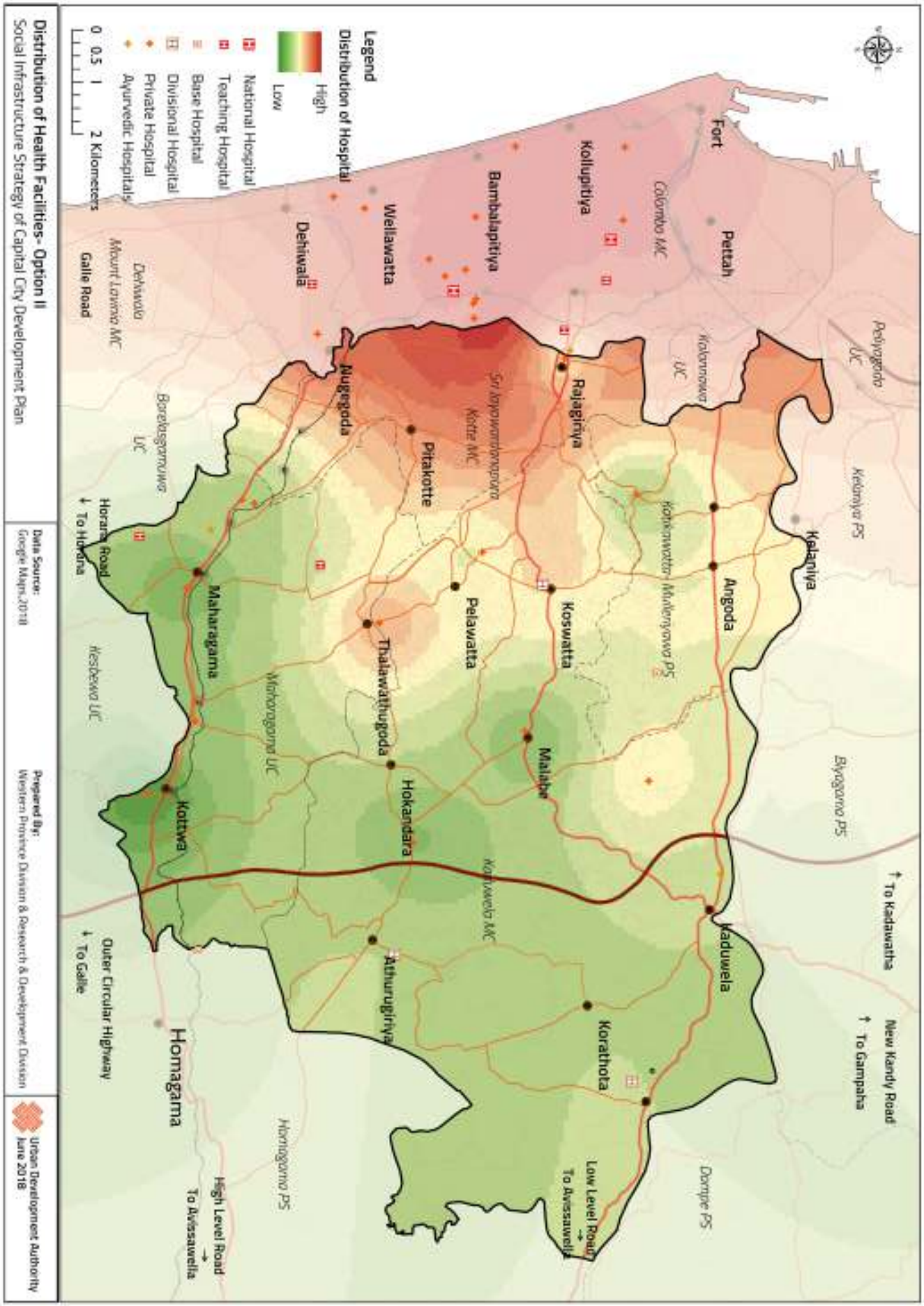
Capital City Development Plan has been identified importance of establishing judiciary related institution within the proposed axis of Capital City which will further discuss in the chapter 10. For the above establishment Capital City Plan has identified land of IDH Base Hospital as the best alternative. Hence, two sites are identified as alternatives to relocate the IDH Base Hospital with required capacities and to achieve the WHO World Health Standards.



Map 4.4 : Distribution of health facilities - 2018
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 4.5 : Distribution of health facilities - Option 1 (Ranala site)
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 4.6: Distribution of health facilities - Option 2 (Nawagamuwa site)
Source : Western Province Division and Research & Development Unit, UDA - 2018

05

Transport Development Strategy

Chapter 05
TRANSPORT DEVELOPMENT STRATEGY

Introduction

Aims and Objectives

The Approach

5.1 Introduction

5.1.1. Aims and Objectives

This strategy generally serves to accomplish almost all objectives given in Chapter 1 of this plan, but specifically the Objectives under Goal 03.

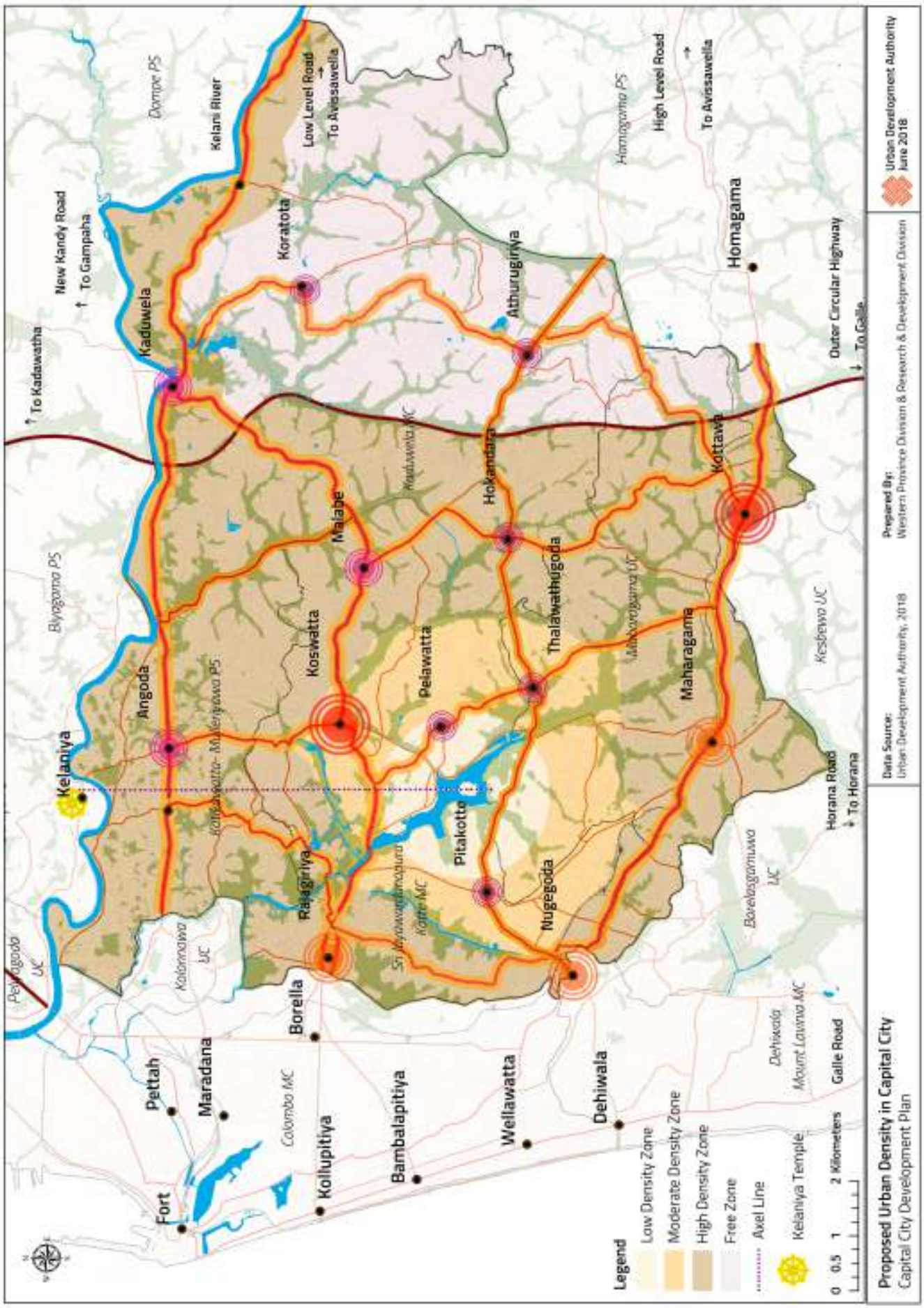
5.1.2. The Approach

In conformity with the goals and objectives of the Capital City Development Plan, the Transportation Development Strategy aims to provide the earmarked planning area with a higher level of inter and intra nodal connectivity, an efficient, economical and comfortable public transportation through appropriate modal integration, congestion free and emission free clean passenger and goods transportation, and, safe, pleasant and attractive environment throughout the area. Accordingly, the first target of the plan is to create a transport network which supports the proposed node and corridor development with identified densities as below,

First Priority Nodes	–	*Koswaththa - Battaramulla, Kottawa - Makubura, Nugegoda,*
Second Priority Nodes	–	*Maharagama, Rajagiriya*
Third Priority Nodes	–	*Kaduwela, Malabe, Kotikawaththa - Angoda, Thalawthugoda*
Fourth Priority Nodes	–	*Athurugiriya, Korathota, Hokandara, Pelawaththe, Pitakotte*

And to reduce the traffic congestion of the Capital City with a smooth transportation network which would lead to enhance the efficiency of the city.

The strategy apart from these two, the road network has also attempted to integrate the wetlands of the Capital City area with the new transportion systems.



Map 5.1: Propsed urban density in Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

5.2. Scope of the Strategy

1. *The planning framework covered by this strategy includes:*

    a. *Tentative demands for different types of transportation modes, estimates based on the projected residential and commuter populations, urban activities and services proposed under other section of this plan, and for specific geographic units within the planning area in different time durations.*

    b. *Specific projects identified to address such demands by the Urban Development Authority and the other relevant agencies.*

    c. *Locations earmarked for transport development facilities and the geographic entities that would be served by such transport developments projects.*

    d. *The order of priorities, the timelines and the proposed process of implementation of such projects considered.*

2. *However, this strategy addresses general requirements and does not intend to address infrastructure development needs of individual entities, firms.*

3. *All strategic projects, proposed in this section of the plan are expected to serve the planning area within the time durations specified in Chapter 01 of the Development Plan. Situations beyond these time durations will have to be dealt with timely updating of the Development Plan.*

5.3 Present Status

The population of the Capital City for year 2050 is expected to be 1,520,000 which seem to be twice the current population (774,000). On the other hand, the commuter population expected in the area is 2,500,000 which is approximately twice the current commuter population. For that reason, unless viable alternatives will be introduced, it is clear that the intervened traffic generation will worsen the traffic congestion in near future with the existing transport facilities.

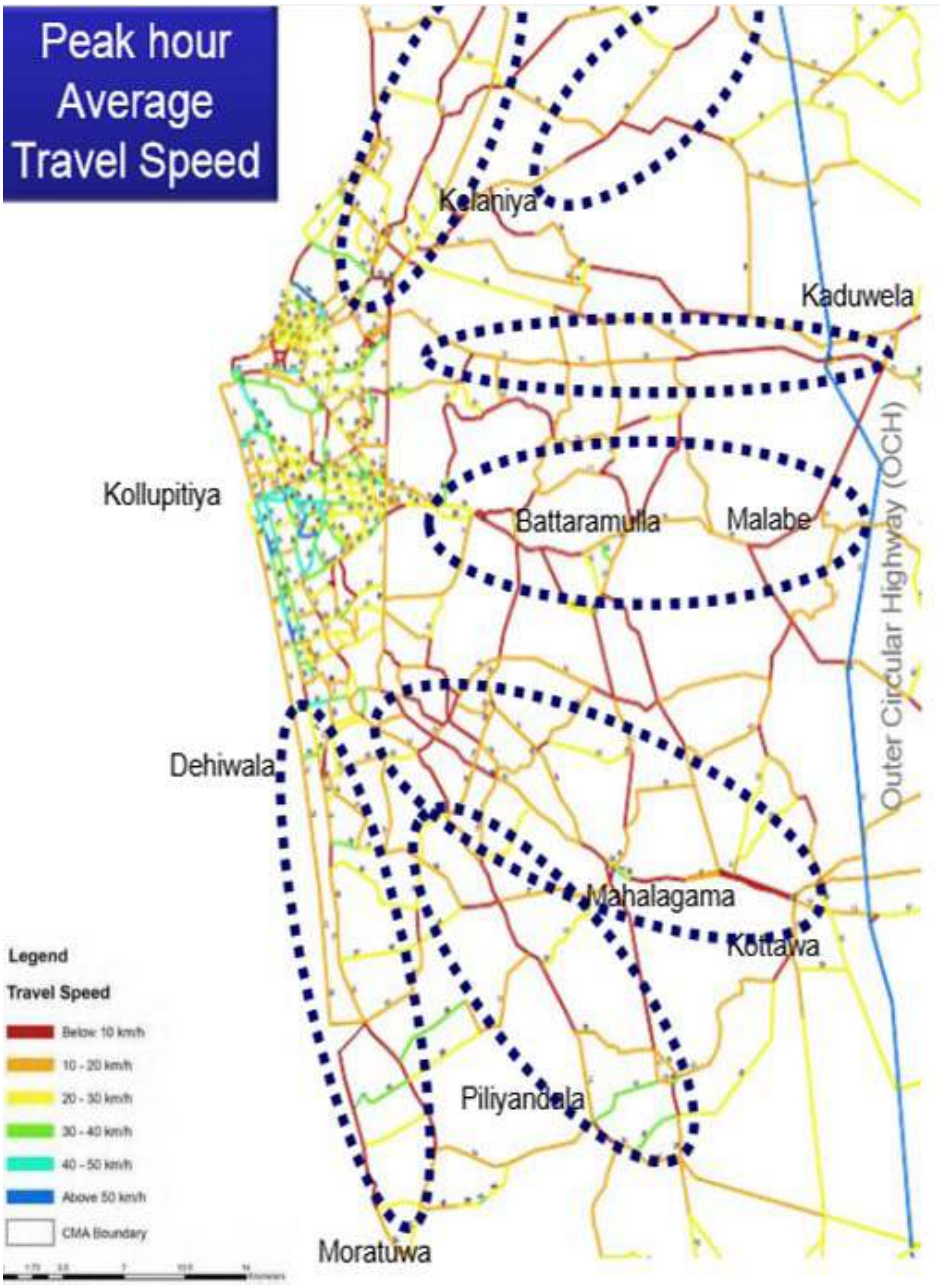


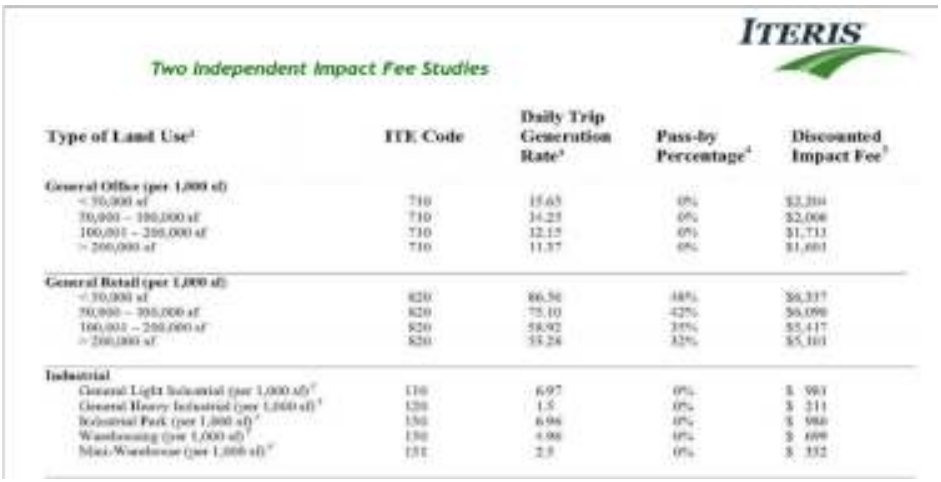
Figure 5.1: Travel speed within Colombo
Source : Western Province Division and Research & Development Unit, UDA - 2018

Chapter 05
TRANSPORT DEVELOPMENT STRATEGY

Present Status

Traffic Generated in Different Zones of the Capital City in 2030

Assumptions based on *Eric, J, 2011. Basics of ITE Trip Generation and its Role in Calculating Transportation Impact Fees*. Innovation for better mobility.


ITERIS

Two Independent Impact Fee Studies

Type of Land Use[2]	ITE Code	Daily Trip Generation Rate[3]	Pass-by Percentage[4]	Discounted Impact Fee[5]
General Office (per 1,000 sf)				
< 50,000 sf	710	15.65	0%	$2,300
50,001 – 100,000 sf	710	14.25	0%	$2,008
100,001 – 200,000 sf	710	12.15	0%	$1,713
> 200,000 sf	710	11.37	0%	$1,601
General Retail (per 1,000 sf)				
< 50,000 sf	820	86.36	48%	$6,337
50,001 – 100,000 sf	820	75.10	42%	$6,090
100,001 – 200,000 sf	820	58.92	35%	$5,417
> 200,000 sf	820	55.24	32%	$5,161
Industrial				
General Light Industrial (per 1,000 sf)[7]	110	6.97	0%	$ 983
General Heavy Industrial (per 1,000 sf)[7]	120	1.5	0%	$ 211
Industrial Park (per 1,000 sf)[7]	130	6.96	0%	$ 980
Warehousing (per 1,000 sf)[7]	150	4.96	0%	$ 699
Mini-Warehouse (per 1,000 sf)[7]	151	2.5	0%	$ 352

Existing Traffic Generation based on Land use of the Capital City

	Traffic Generation of Residential Spaces	Traffic Generation of Commercial Spaces	Traffic Generation of Office Spaces	Traffic Generation of Industrial Spaces	Traffic Generation of Other Spaces	Total Traffic Generation of Zones
Executive Residential Zone	51,162	10,022	309	465	798	62,756
Administrative Zone	32,794	4,375	560	138	622	38,489
Commercial Zone	127,136	192,725	1,008	17,588	1,418	339,874
Office Zone	32,441	30,326	482	2,902	465	66,616
Knowledge Zone	71,189	24,913	944	2,340	934	100,321
Transitional Zone	60,353	9,530	64	2,824	318	73,089
Industrial Belt	26,886	10,885	–	7,184	253	45,209
Industrial Zone	40,456	4,603	122	15,202	429	60,813
Residential Zone	71,283	7,865	3,547	509	623	83,828
Total	**513,700**	**295,244**	**7,035**	**49,153**	**5,861**	**870,994**

Table 5.1 : Traffic generation based on land use - 2018
Source : Western Province Division and Research & Development Unit, UDA - 2018

5.4. The Projected Situations in 2050

Predicted Traffic Generation based on the Land use of the Capital City

Zone	Traffic Generation of Commercial Spaces	Traffic Generation of Office Spaces	Traffic Generation of Industrial Spaces	Traffic Generation of Other Spaces	Traffic Generation of Residential Spaces	Total Traffic Generation of the Zones Per day
Executive Residential Zone	10,022	309	46	798	54,687	65,862
Administrative Zone	43,755	3,260	14	1,244	73,255	121,527
Commercial Zone	192,725	1,008	1,759	1,418	199,750	396,659
Office Zone	30,326	5,058	290	516	192,234	228,424
Knowledge Zone	124,563	1,888	234	4,672	137,209	268,566
Transitional Zone	47,651	128	282	381	89,811	138,254
Industrial Belt	21,770	–	1,437	506	21,479	45,192
Industrial Zone	5,754	153	3,040	528	135,972	145,447
Residential Zone	9,045	3,547	51	717	306,071	319,430
Total	**485,610**	**15,350**	**7,154**	**10,780**	**1,210,467**	**1,729,361**

Table 5.2 : Predicted traffic generation based on land use generation - 2050
Source : Western Province Division and Research & Development Unit, UDA - 2018

Map 5.2 : Composite map of Transport Development Strategy
Source : Western Province Division and Research & Development Unit, UDA - 2018

5.5. Strategic Interventions

To accomplish the objectives of the transport sector, three strategic interventions are proposed as given below,

Strategic Intervention 1: *Prioritization and widening of identified existing roads and introduce new inter-links associated with wetlands.*

Strategic Intervention 2: *Introduction of new modes of public transportation integrated with the existing ones.*

Strategic Intervention 3: *Develop inter-modal exchanges for convenient transit and land value capture.*

Strategic Intervention 1: Prioritization and widening of identified existing roads and introduce new inter-links associated with wetlands.

The purpose of road widening is to improve the level service of the roads in order to cater the future traffic demand of the area. Accordingly, the plan has introduced four types of priority roads as below,

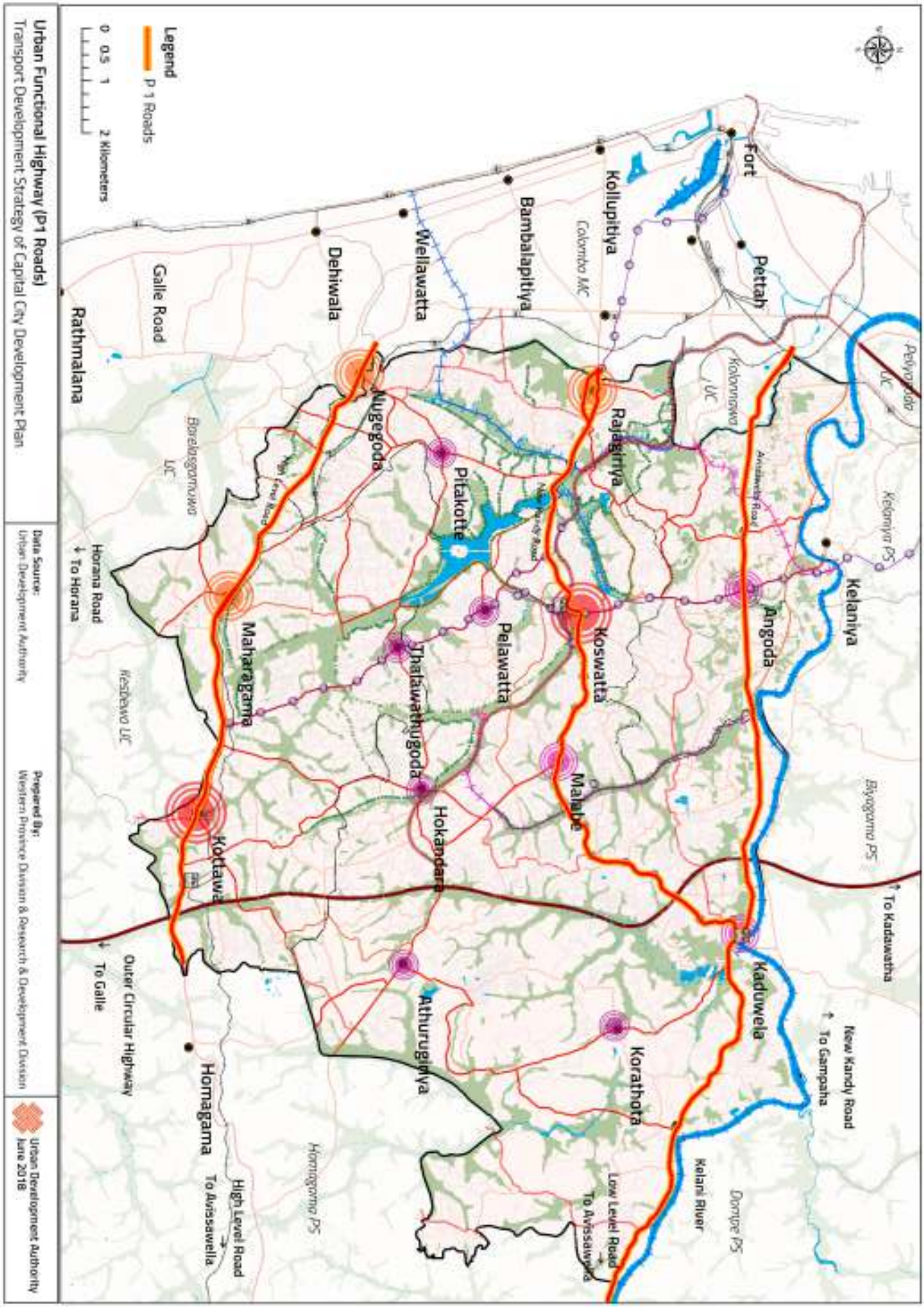
P1 – Urban Functional Highways
P2 – Arterial Roads
P3 – Sub Arterial Roads
P4 – Local Authority Roads
P5 / P6 – Wetland Roads

01). P1 – Urban Functional Highways

Three Urban Functional Highways are proposed to the Capital City with a width 30m as follow,

- *High Level Road*
- *Low Level Road*
- *New Kandy Road*

It is expected to attract the maximum investment to develop the area with a livable character. In this regard these three urban functional highways hold the highest concentration of infrastructure and therefore, within the next ten years they will attract the largest extents of the development in this area, forming the main corridors.



Map 5.3 : P1 catogery road distribution in the Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

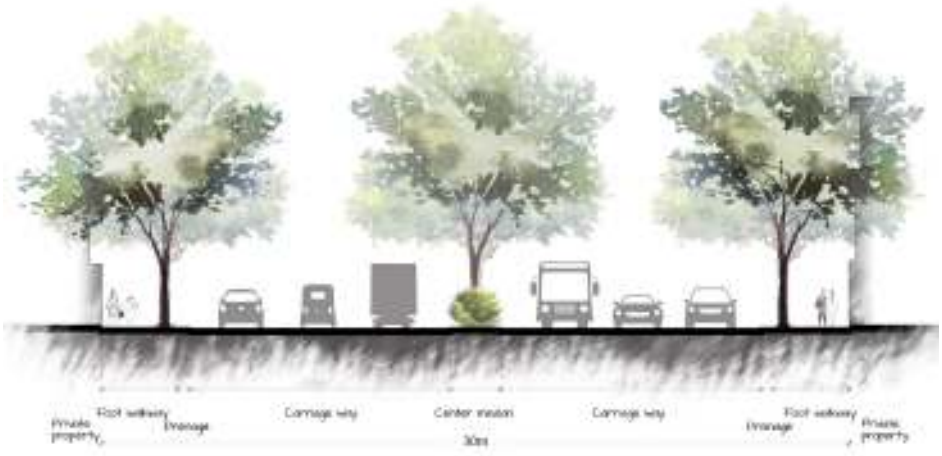


Figure 5.2: Recommended typical cross section of P1 road catogery
Source : Western Province Division and Research & Development Unit, UDA - 2018

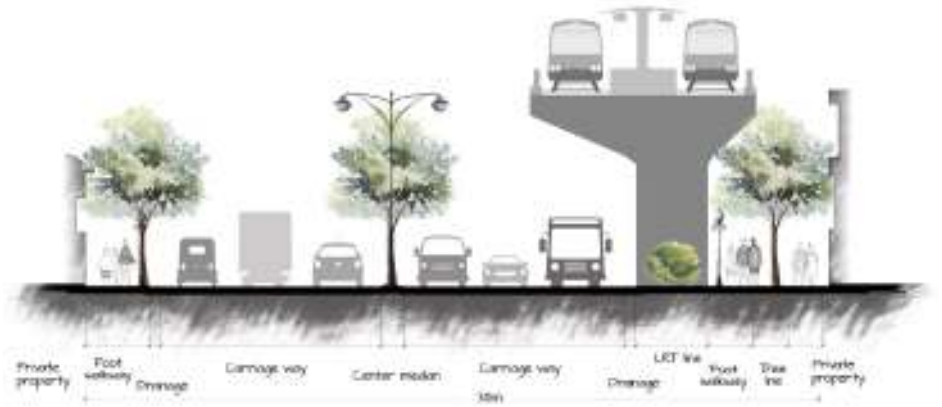


Figure 5.3: Recommended typical cross section of P1 road catogery with LRT
Source : Western Province Division and Research & Development Unit, UDA - 2018

02). P2 – Arterial Roads

An arterial network is developed to facilitate the movement between Urban Functional Highways in the Capital City i.e. Center, Commercial Strip, Knowledge District, Transition District, Administrative District, Residential District and Periphery. It is expected that; this development would create a grid patterned transport network and develop the corridors in the area

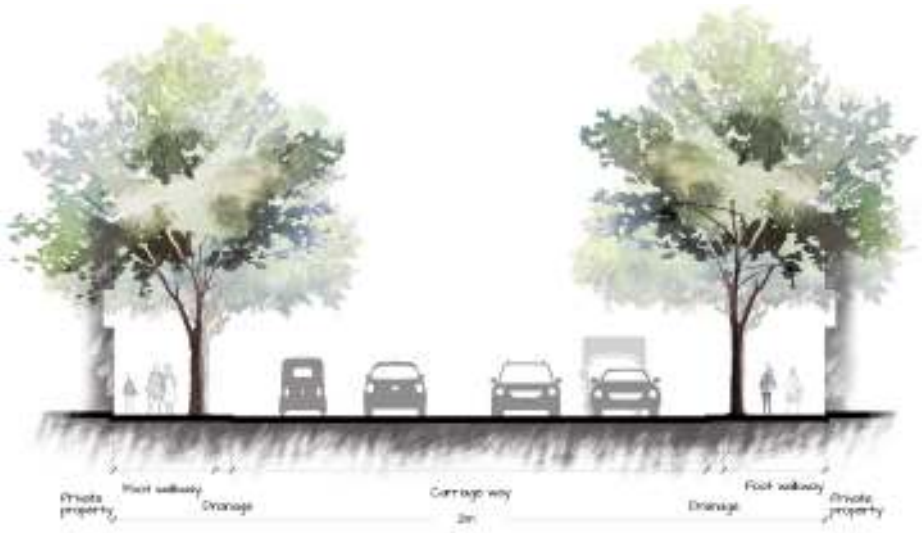
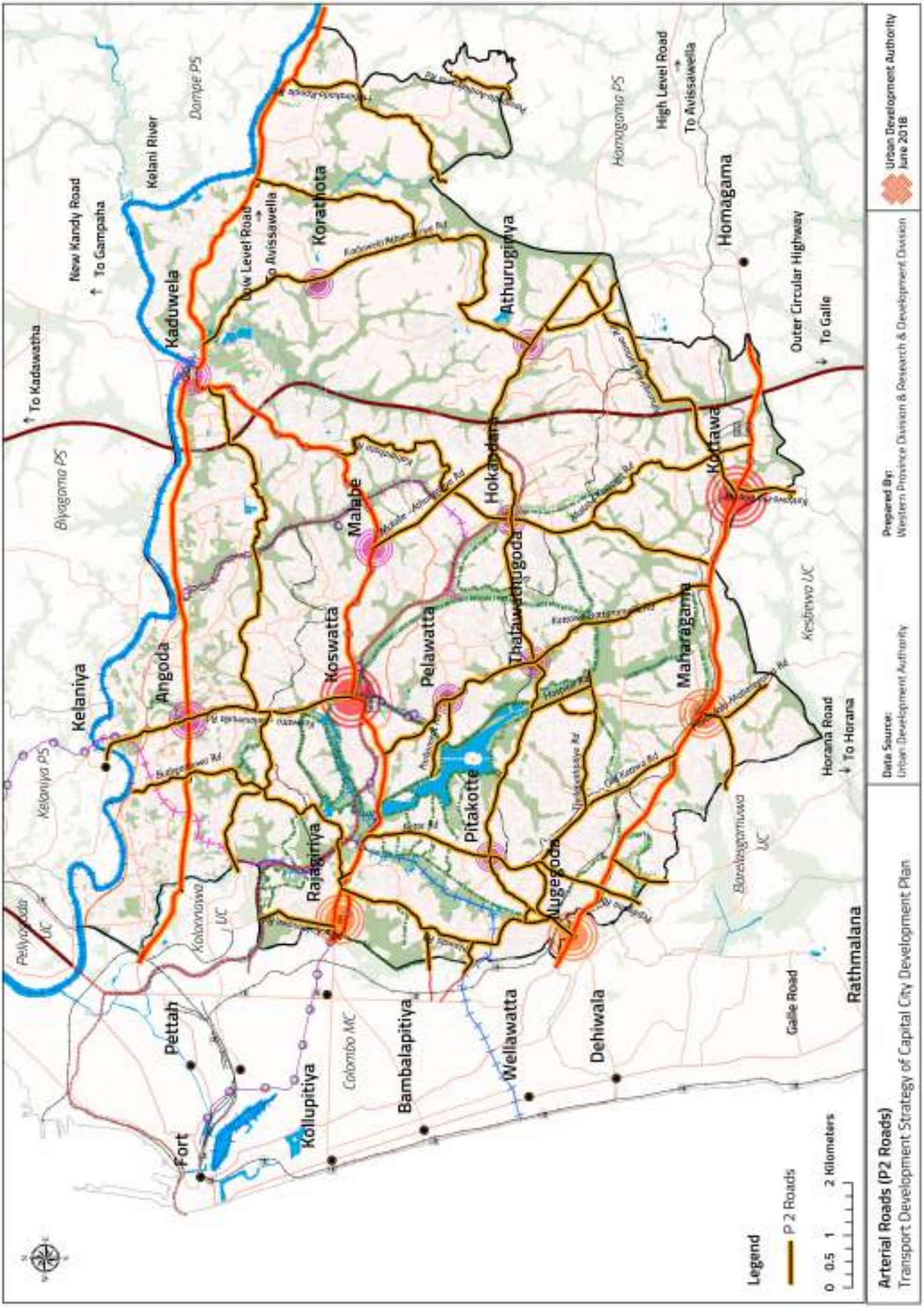


Figure 5.4: Recommended typical cross section of P2 road catogery
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 5.4 : P2 catogery road distribution in the Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

03). P3 – Sub Arterial Roads

Sub-Arterial Road network is the traffic feeder at the neighbourhood level. Further, the Sub Arterial roads are connected to the Urban Function Highways and Arterial Road Network.

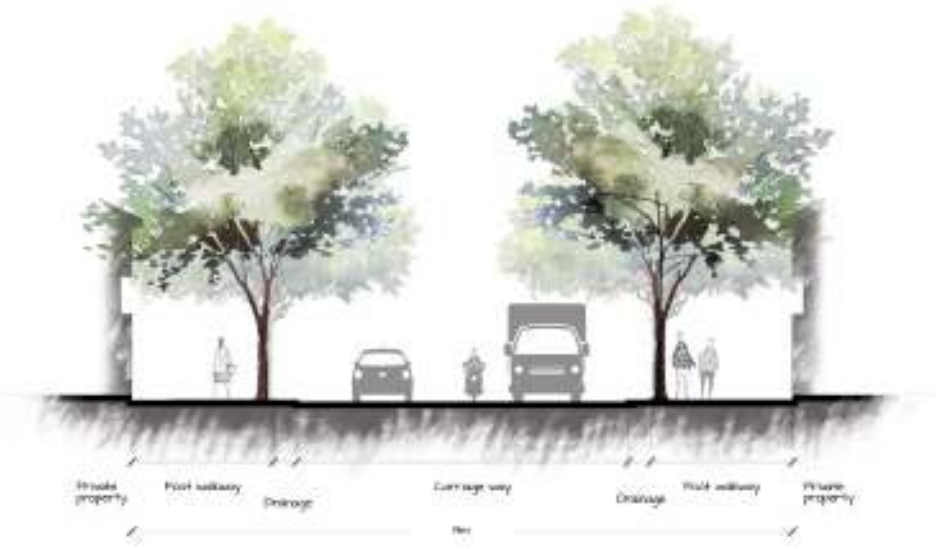


Figure 5.5: Recommended typical cross section of P3 road catogery
Source : Western Province Division and Research & Development Unit, UDA - 2018

04). P4 – Local Authority Roads

Local Authority Roads which do not fall under the categories, P1, P2, P3, P5, P6 are considered P4 roads. These roads are proposed to be developed with a width of 7m.

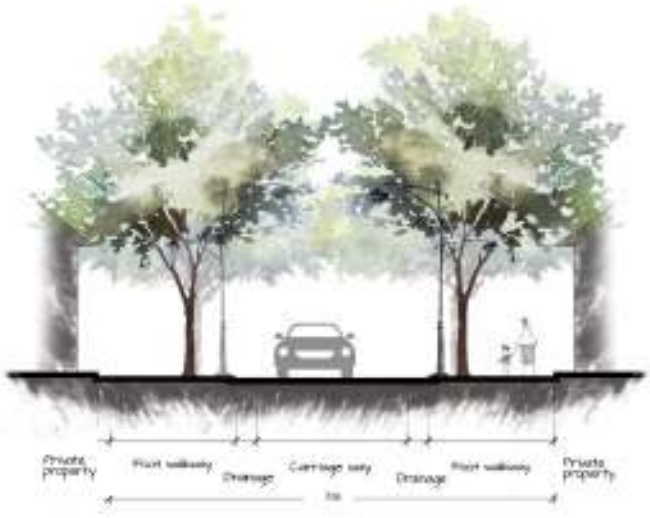


Figure 5.6: Recommended typical cross section of P4 road catogery
Source : Western Province Division and Research & Development Unit, UDA - 2018

Map 5.5 : P3 catogery road distribution in the Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

05). P5 & P6 – Wetland Roads

The main purpose of the proposed wetland roads is to expose the wetlands of the Capital City to the public. Such exposure will enable to preserve them from encroachments and will bring in a pleasant drive/walk to the users of the road. Accordingly, it is planned to open up more than 30% of the available wetlands. Two categories of Wetland Roads are proposed for the area. They are,

- *Limited Access (One lane) Wetland Road*
- *Connecting (Two lane) Wetland Roads*

Figure 5.7: Recommended typical cross section of P5 road catogery
Source : Western Province Division and Research & Development Unit, UDA - 2018

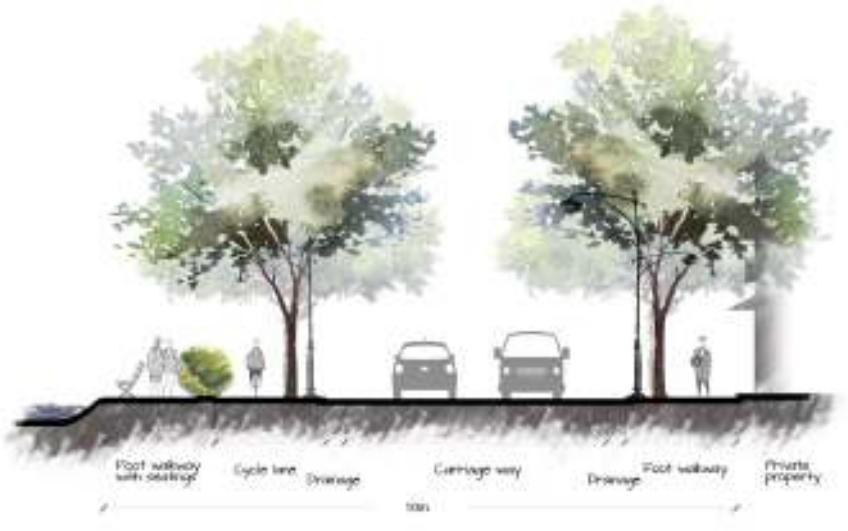
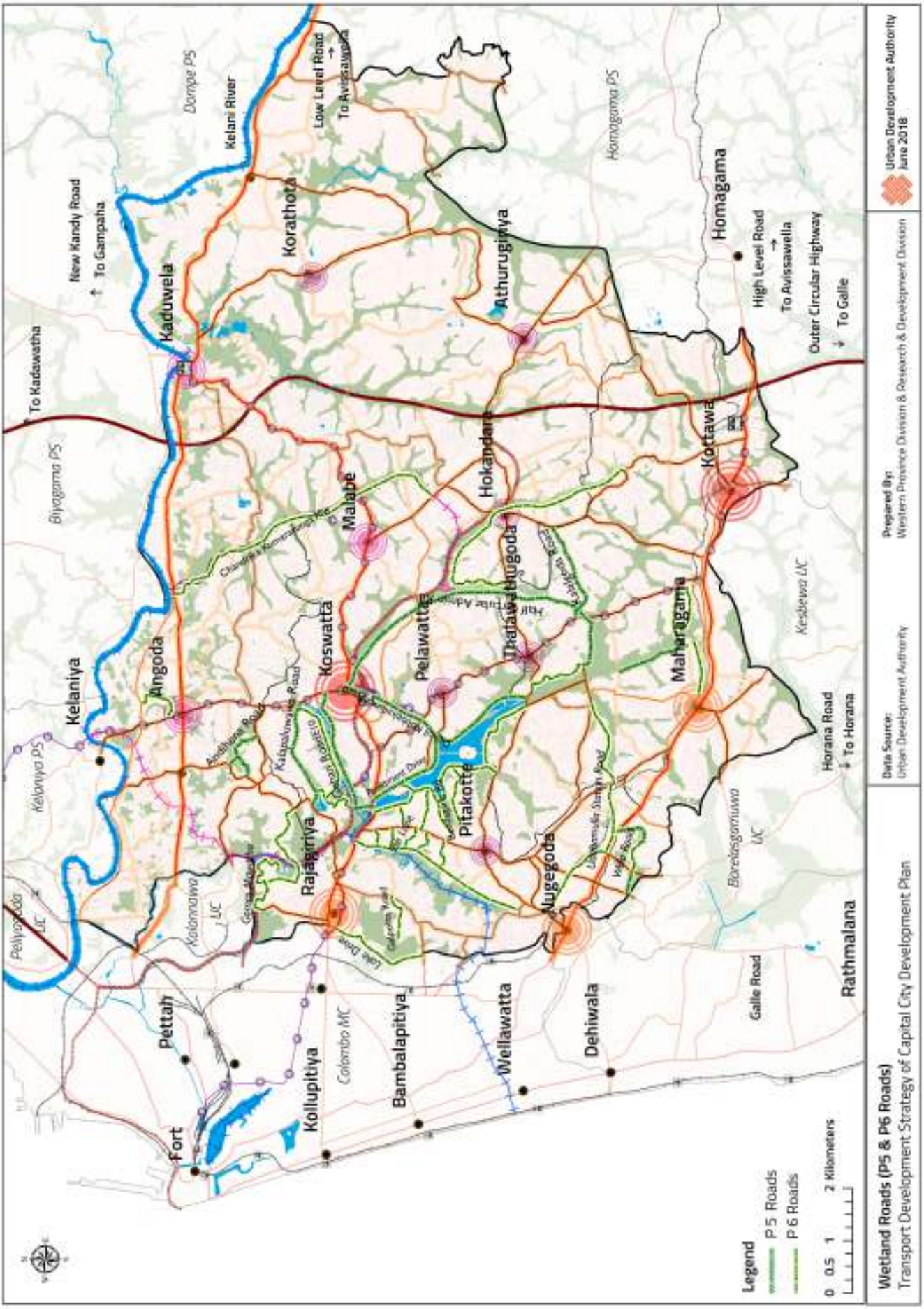


Figure 5.8: Recommended typical cross section of P6 road catogery
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 5.6 : Wetland road catogery distribution in the Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Intervention 2: Introduction of new modes of public transportation integrated with the existing ones.

The outcomes of STRDA simulation shows that, the vehicle volume of the area is not manageable only with the road improvements. Further, the changing level of integration resulted in by the new connecting roads will lead to a change in land uses and traffic patterns in the nodes and corridors. Hence, it is essential to introduce new modes of public transport to decrease the private vehicle attraction towards the critical nodes Capital City. Accordingly, following alternatives are proposed;

- *Light Rail Transit*
- *Bus Rapid Transit*
- *Water Based Transport*

Light Rail Transit:

The Japan International Corporation Agency (JICA) and Ministry of Megapolis and Western Development work on an LRT to avoid the ground level traffic congestion of the Colombo district. Accordingly, two LRT lines are proposed for this area as given below,

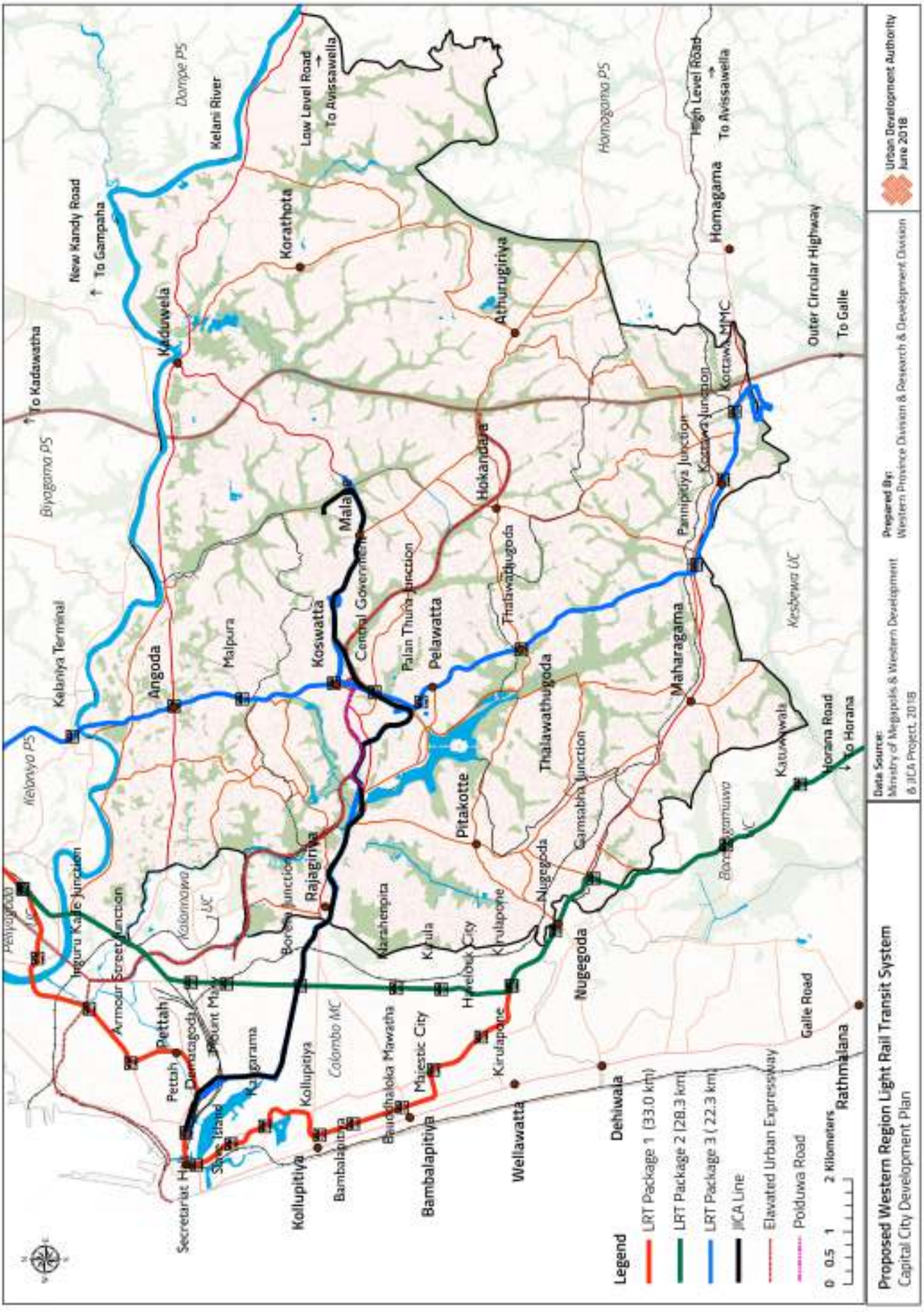
- *East – West LRT line from Malabe to Pettah and Malabe to Kaduwela (Proposed under JICA loan)*
- *North- South LRT line from Hunupitiya to Kottawa (Proposed as a PPP by Ministry of Megapolis and Weswtern Development)*

The expected delivery capacity of the proposal is as below,

Classification	Length	Daily Passengers		PPHPFD
		Passengers	Passengers/km	
Megapolis	23.2	456,262	19,666	10477
JICA	15.7	498,000	31,720	19800

Table 5.3 : Predicted daily passengers
Source : young&cecb 2018

The new transport proposals will change the ridership and result in traffic pattern. Further, it is planned to release land for development within the identified stations. However, all these are still in the preliminary stage.



Map 5.7 : Light rail transit system
Source : Western Province Division and Research & Development Unit, UDA - 2018

Bus Rapid Transit:

In case the LRT projects will not be realized, this plan strongly proposes to introduce BRT as a viable alternative to the LRT along the same routes.

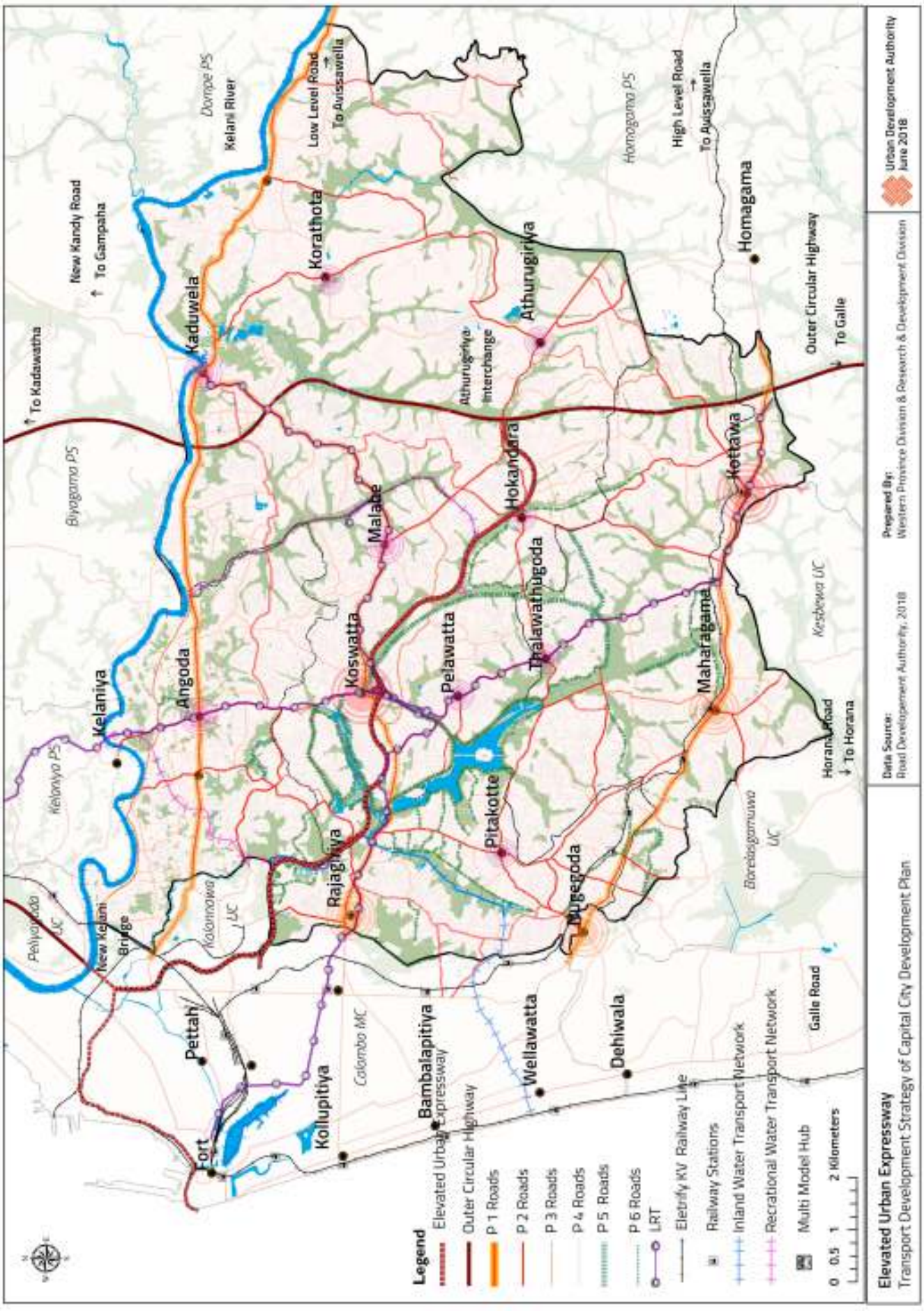
Elevated Highway:

Elevated Highway that is being developed by the RDA links the New Kelani River Bridge to Athurugirya via Rajagiriya. It will facilitate the towns between Colombo and the suburban areas. The highway provides access points at Koswatte, Malabe and Rajagiriya.

Phase I : NKB To Rajagiriya	
Total Length	6.9km
Total Ramp Length	3.6km
Nominal Width of the Carriageway	25.4m
No of Lanes	4
Lane width	3.5m

Phase II: Rajagiriya to Athurugiriya	
Total Length	10.4km
Nominal Width of the Carriageway	25.4km
No of Lanes	4
Lane Width	3.5m

Table 5.4 : . Details of elevated highway
Source : www.mohsl.gov.lk/web/images/stories/project



Map 5.8 : Elevated urban expressway
Source : Western Province Division and Research & Development Unit, UDA - 2018

Electrified Railway:

Ministry of Transport is working on a project to electrify the Kelani Vallley railway (60Km). This will enhance the rail transportation with an access at Rajagiriya.

Strategic Intervention 3: Develop inter-modal exchanges for convenient transit and land value capture.

The intention of Multi-modal Transport Hub is to achieve the maximum utility for the development through integration of different transport modes. Accordingly, three multi-modal hubs for the Capital City are identified as follows,

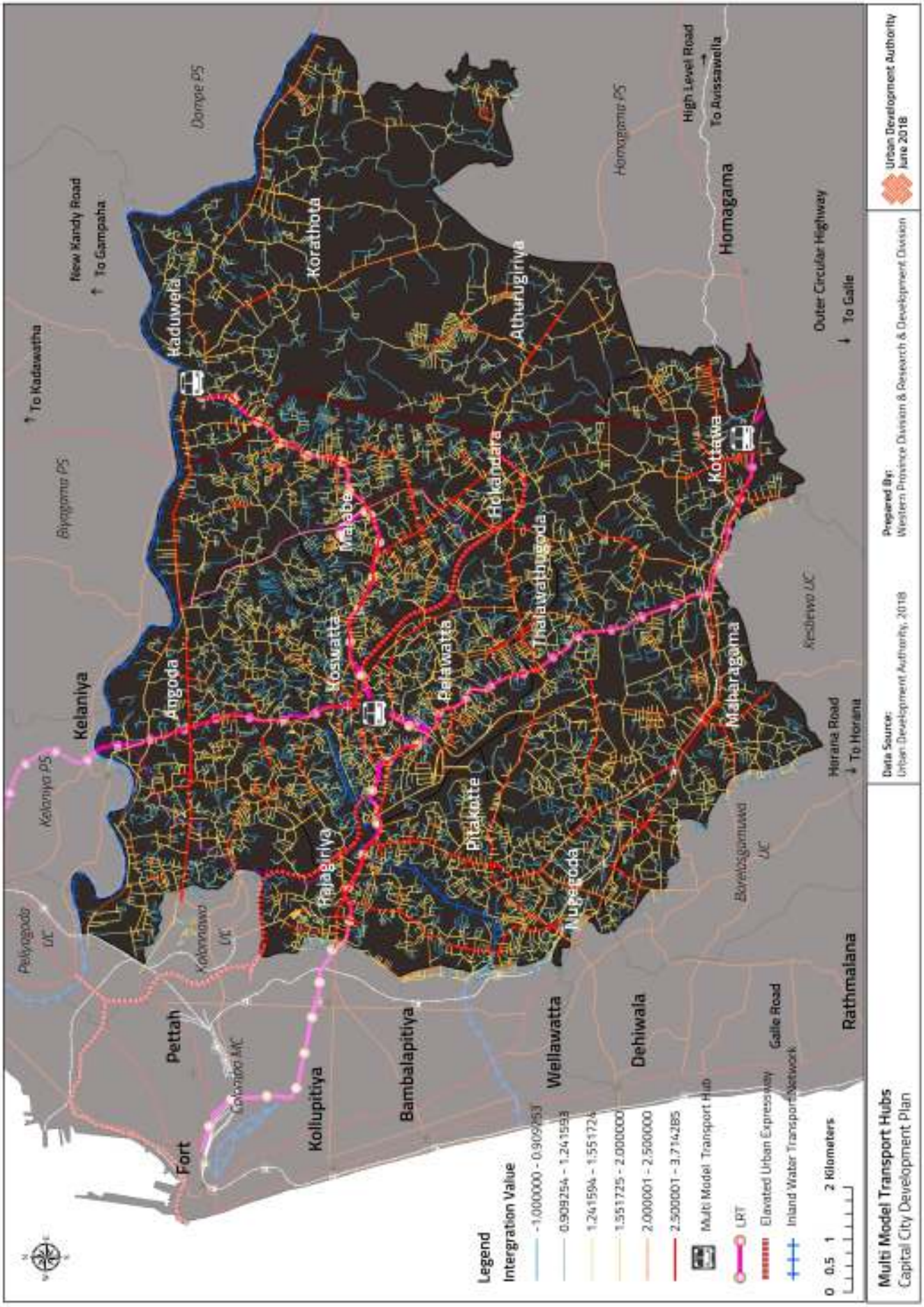
- *Kottawa*
- *Koswatta*
- *Kaduwela*

Kottawa Multi-modal Transport Hub

Kottawa Multi Model hub was initiated within a total area of 1874 perches by the Township Development Component of Greater Colombo Urban Transport Development Project. It connects busses arriving from Outer Circular Highway and Kelani Valley railway to the proposed North–South LRT. This will facilitate passengers and boost the development in the area.

No	Land use	Land Area (Perch)
1	Institutional	88.5
2	Institutional	162.6
3	Park and Ride	120.2
4	Extension of Bus Terminal	49.1
5	Bus Terminal and Public Square	168.5
6	Commercial	227.4
7	Commercial	181.6
8	Commercial	131.9
9	Leisure	57.7
10	Mix Development	232.5
11	Mix Development	420.7
12	Railway Station	34.0

Table 5.5 : Makubura trasnsit orient development landuse composition
Source : Western Province Division ,UDA-2018



Map 5.9 : Locations of multi- model transport hubs in Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

Chapter 05
TRANSPORT DEVELOPMENT STRATEGY

Strategic Interventions

Strategic Intervention : Inter-modal Exchanges for Convenient Transit

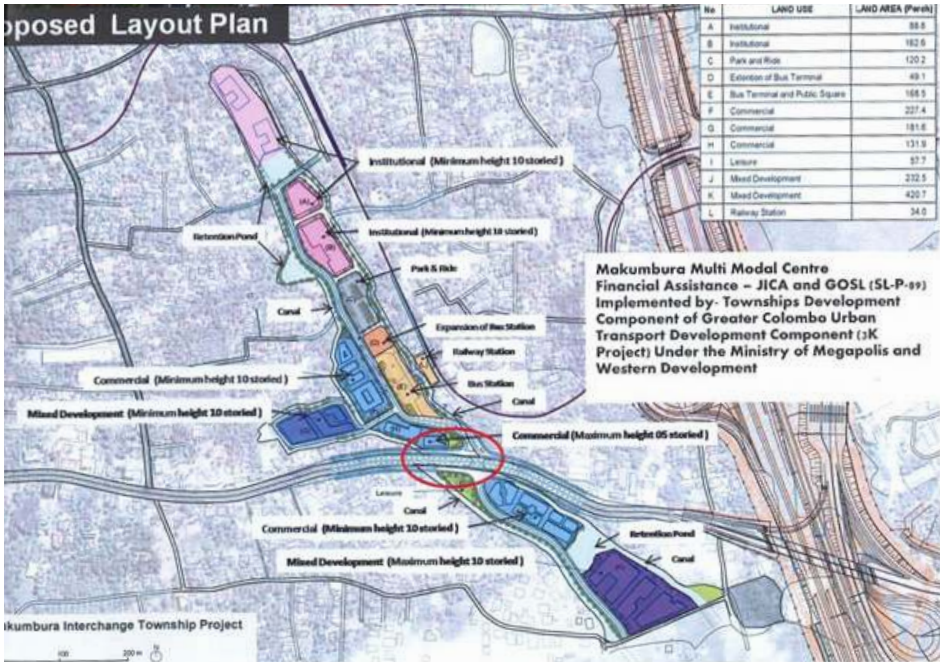


Figure 5.9: Makubura transit orient development
Source : Western Province Division , UDA - 2018

Koswatta Multi-modal Transport Hub

A land of 6 acres is proposed for the development similar to the land use of Kottawa Multi-modal Hub. This project will facilitate the bus routes from Elevated Highway and proposed North–South and East–West LRT's to interlink at the center of the Capital City areas.

Figure 5.10: Location of Kosawaththa multi-model hub
Source : Western Province Division and Research & Development Unit, UDA - 2018

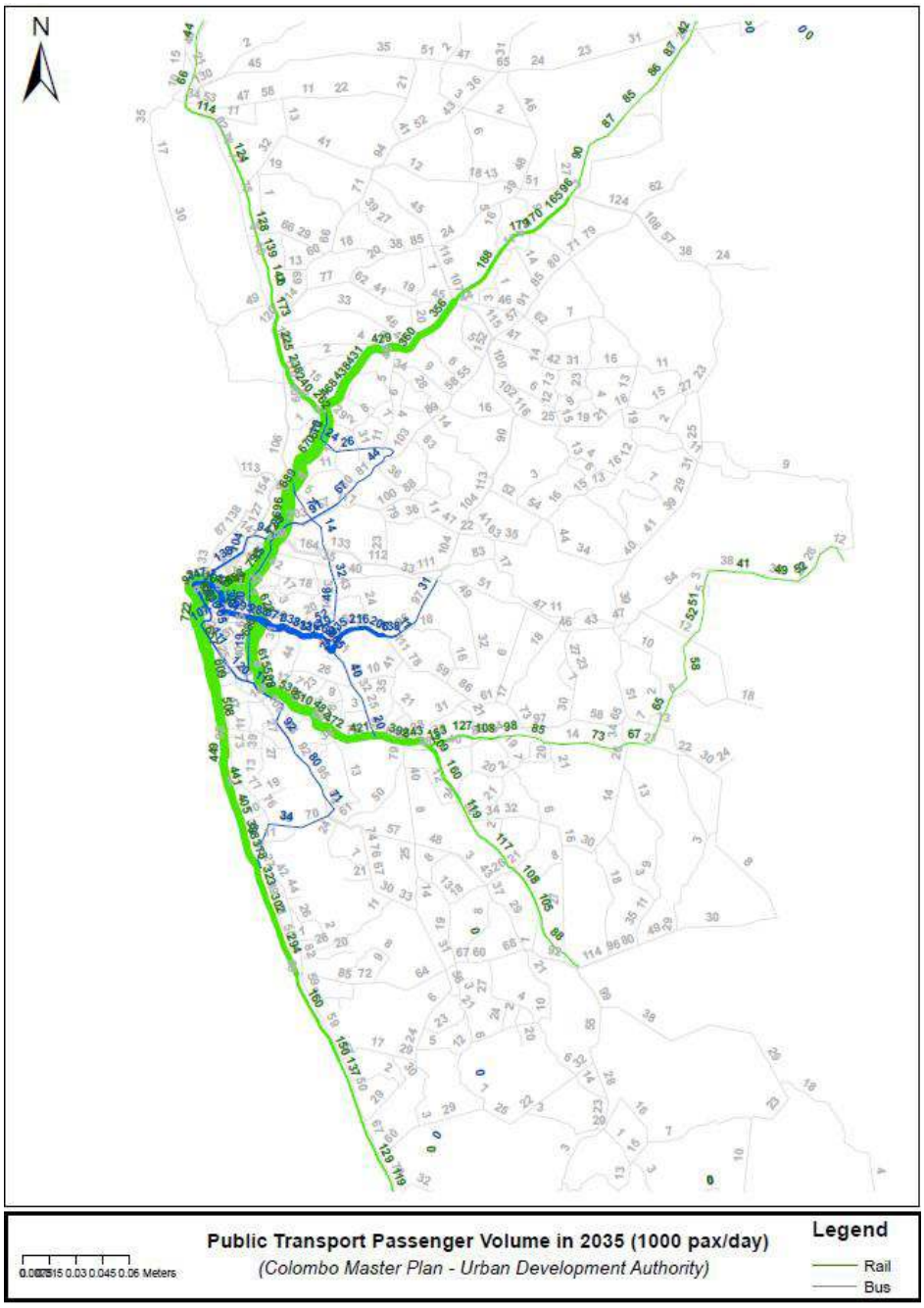
Kaduwela Multi-modal Transport Hub

Kaduwela similarly holds a prominent recognition for a Multi-modal Transport Hub as it is located within close proximity to the Outer Circular Highway and proposed extension of LRT (JAICA) from Malabe to Kaduwela.

Figure 5.11: Location of Kaduwel multi -model hub
Source : Western Province Division and Research & Development Unit, UDA - 2018

5.6 Impacts of Road Widening Proposal of Transport Strategy

1. Public Transport Passenger Volume of 2035



Map 5.10 : Public transport passenger volume in 2035
Source : Colombo Master Plan, Urban Development Authority

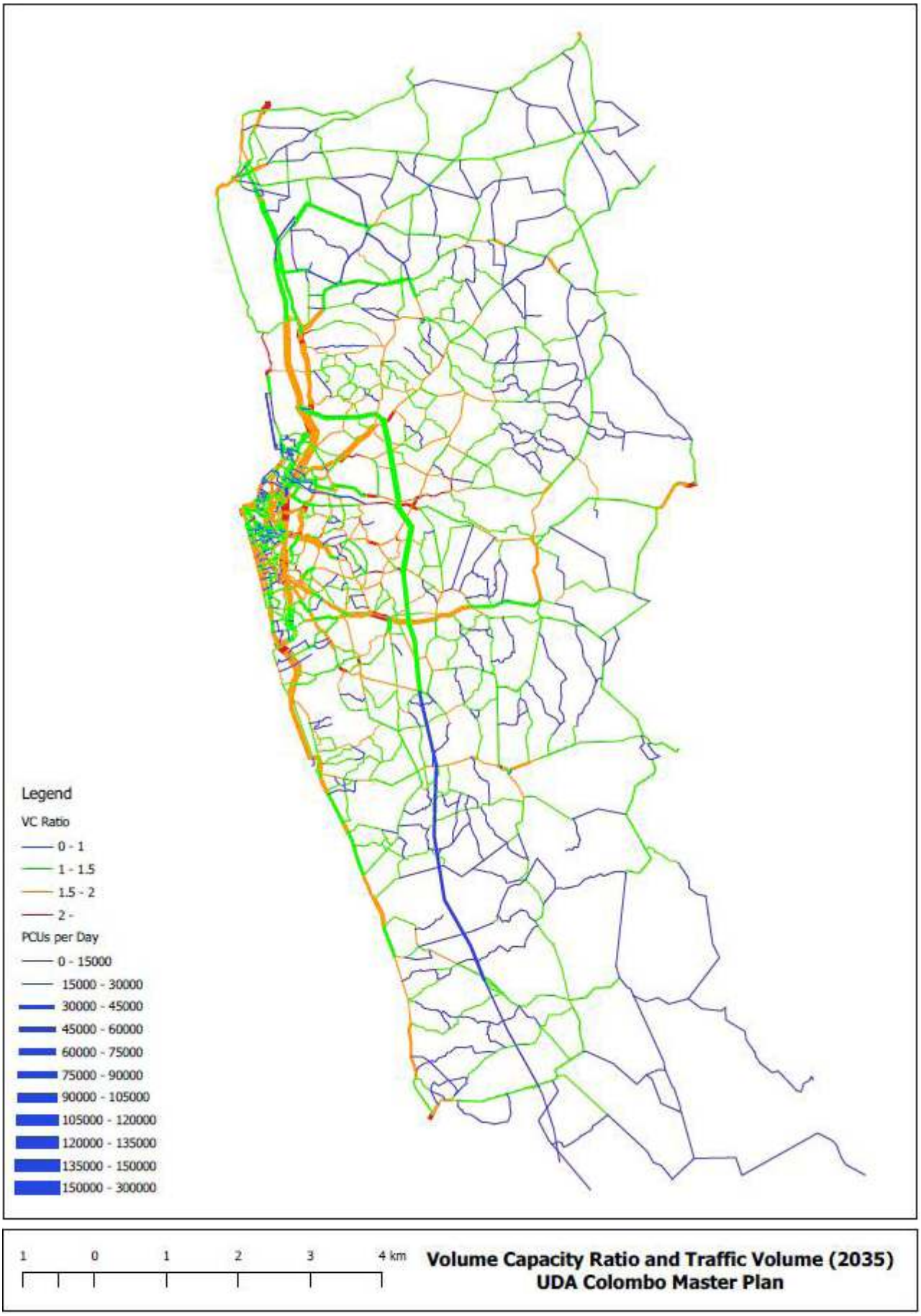
The STRDA simulation on road widening proposal suggests that the highest traffic demand generation of the area is from the High-level and New Kandy Road in the Capital City area. According to the current Com Trans Data, the highest volume of passenger flow is recorded from the New Kandy Road. However, according to this plan for the year 2035, the highest passenger flow generation is expected from the High-Level road. It is because the land use plan of Capital City proposes a high-density Commercial Strip along the High-level Road.

2. Volume Capacity Ratio and Traffic Volume of 2035

The v/c ratio, also referred to as degree of saturation, represents the sufficiency of an intersection to accommodate the vehicular demand. A v/c ratio less than 0.85 generally indicate that adequate capacity is available and vehicles are not expected to experience significant queues and delays. As the v/c ratio approaches 1.0, traffic flow may become unstable, and delay and queuing conditions may occur. Once the demand exceeds the capacity (a v/c ratio greater than 1.0), traffic flow is unstable and excessive delay and queuing is expected. Under these conditions, vehicles may require more than one signal cycle to pass through the intersection (known as a cycle failure). For design purposes, a v/c ratio between 0.85 and 0.95 generally is used for the peak hour of the horizon year (generally 20 years out). Overdesigning for an intersection should be avoided due to negative impacts to pedestrians associated with wider street crossings, the potential for speeding, land use impacts, and cost" (Transportation, 2004). According to STRDA model prediction of V/C ratio, approximately more than 90% of roads are expected to exceed capacity of roads even with the new road improvements. Hence, it is essential to improve public transport modes of the area parallel to road improvement.

No.	KPIs	2020	2020_rv	2035	2035_rv
1	Pax-km (bn. pax-kms /year)	50.8	51.0	67.8	67.5
2	Pax-hr (bn. pax-hr /year)	2.23	2.26	3.55	3.41
3	VOT (bn. Rs. /year)	496	505	825	799
4	Veh-km (bn. veh.-km /year)	15.88	15.95	19.12	19.02
5	VOC (bn. Rs. /year)	593	599	801	792
6	Speed (km/h)	22.8	22.5	19.1	19.8
7	Supply Cost (bn. Rs. /year)	1,089	1,104	1,625	1,591
8	Accessible Population to Transit (mn.)	0.73	0.73	0.73	0.73
9	CO2 Emission (mn. ton/year)	3.14	3.16	4.12	4.08
10	CO2 Loss (bn. Rs. /year)	7.7	7.8	10.1	10.0
11	Accident Loss (bn. Rs. /year)	9.2	9.3	11.1	11.0
Total Cost (bn. Rs. /year)		**1,110**	**1,125**	**1,651**	**1,617**

Table 5.6 : KPI of road widening proposals of Capital City plan
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 5.11 : Volume capacity ratio and traffic volume - 2035
Source : UDA Colombo Master Plan

3. Road widening and Integration

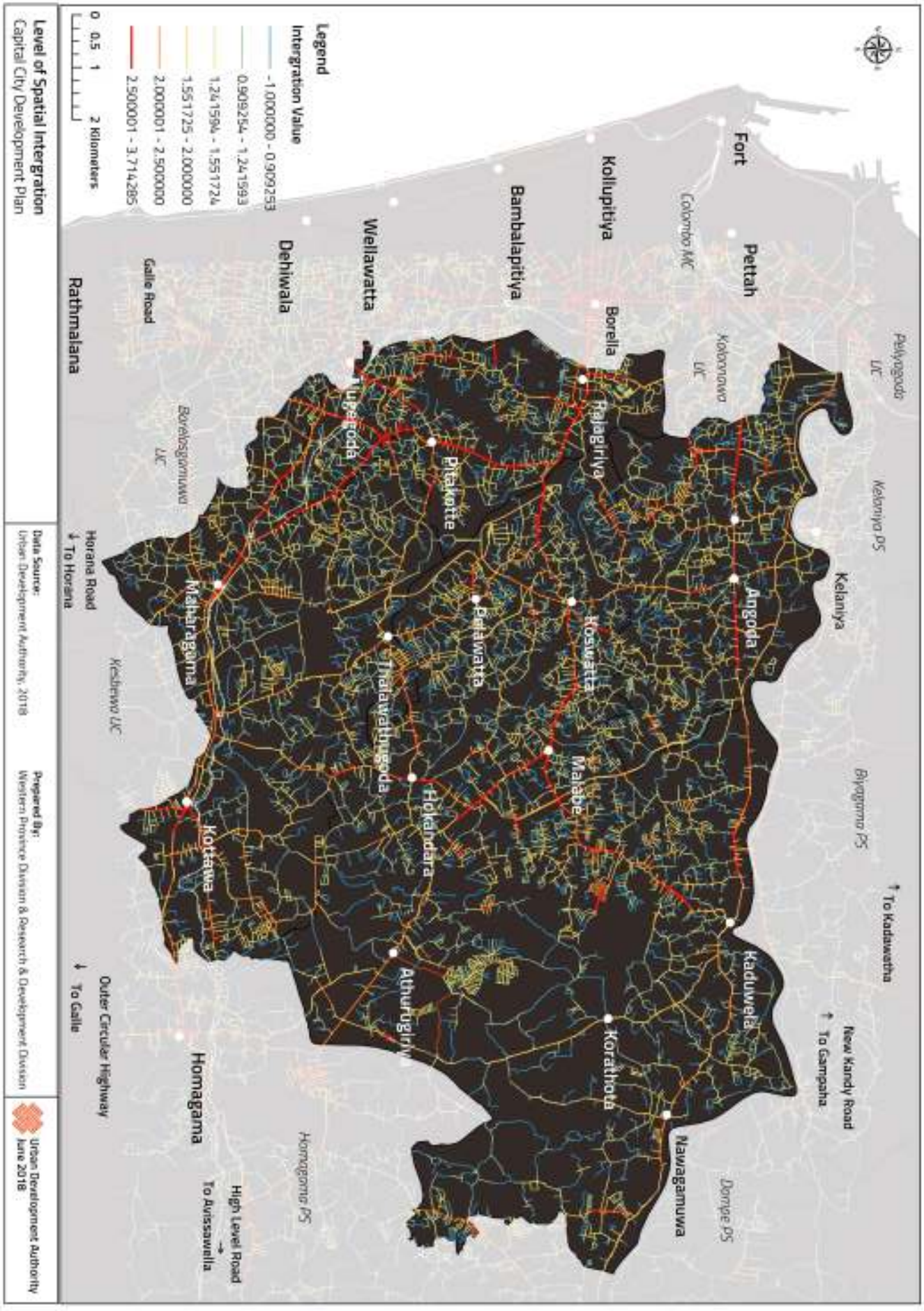
Even though it is difficult to cater the rapid generation of traffic only through the road widening proposals, it enables to achieve the proposed spatial form of the Capital City. The change in the levels of integration after the new road improvement is highly supportive to the proposed nodes and corridor development.

As a result of the road development, the level of integration of nodes are assumed to be improved as below,

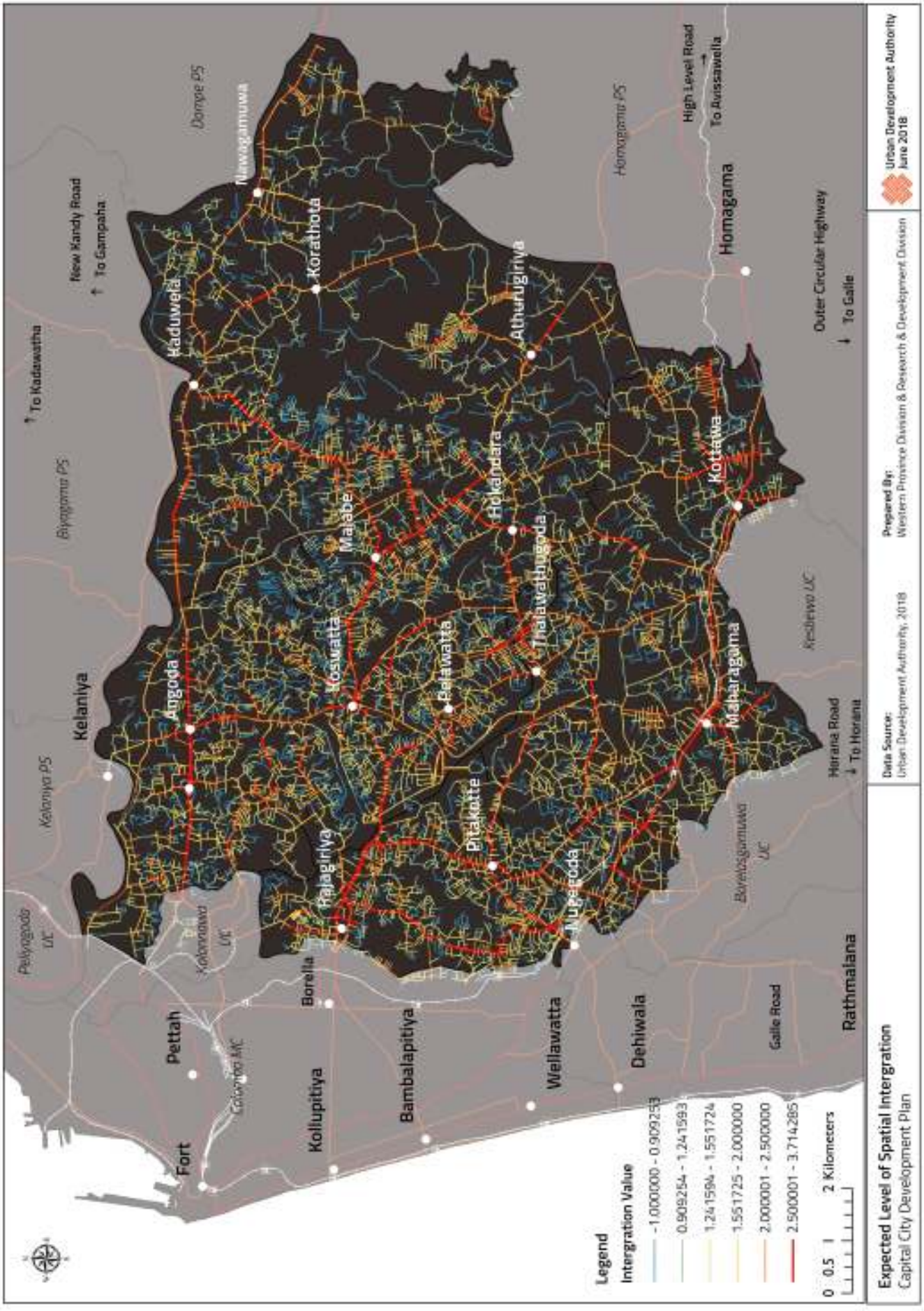
Priority levels of Node	Node	Existing Level of Integration	Future Level of Integration
First	Koswatta-Battarmulla	2 -2.5	2.5-3.7
	Kottawa- Makubura		
Second	Maharagama	2 -2.5	2.5-3.7
	Nugegoda		
	Rajagiriya		
Third	Kaduwela	1.2-1.5	2-2.5
	Malabe	2 -2.5	2.5-3.7
	Kotikawaththa-Angoda		
	Thalawthugoda	2-2.5	2-2.5
Fourth	Athurugirya	2-2.5	2.5-3.7
	Korothota	1.2-1.5	1.2-1.5

Table 5.7 : Differences between existing and expected intergration
Source : Western Province Division and Research & Development Unit, UDA - 2018

The levels of integration of the proposed development corridors are expected to increase from 2-2.5 to 2.5-3.7 while reducing the integration among the remaining area from 1.2-1.5 to -0.1-0.9, which will support the proposed node and corridor development of the area.



Map 5.12 : Level of spatial integation - 2018
Source : Western Province Division and Research & Development Unit, UDA - 2018

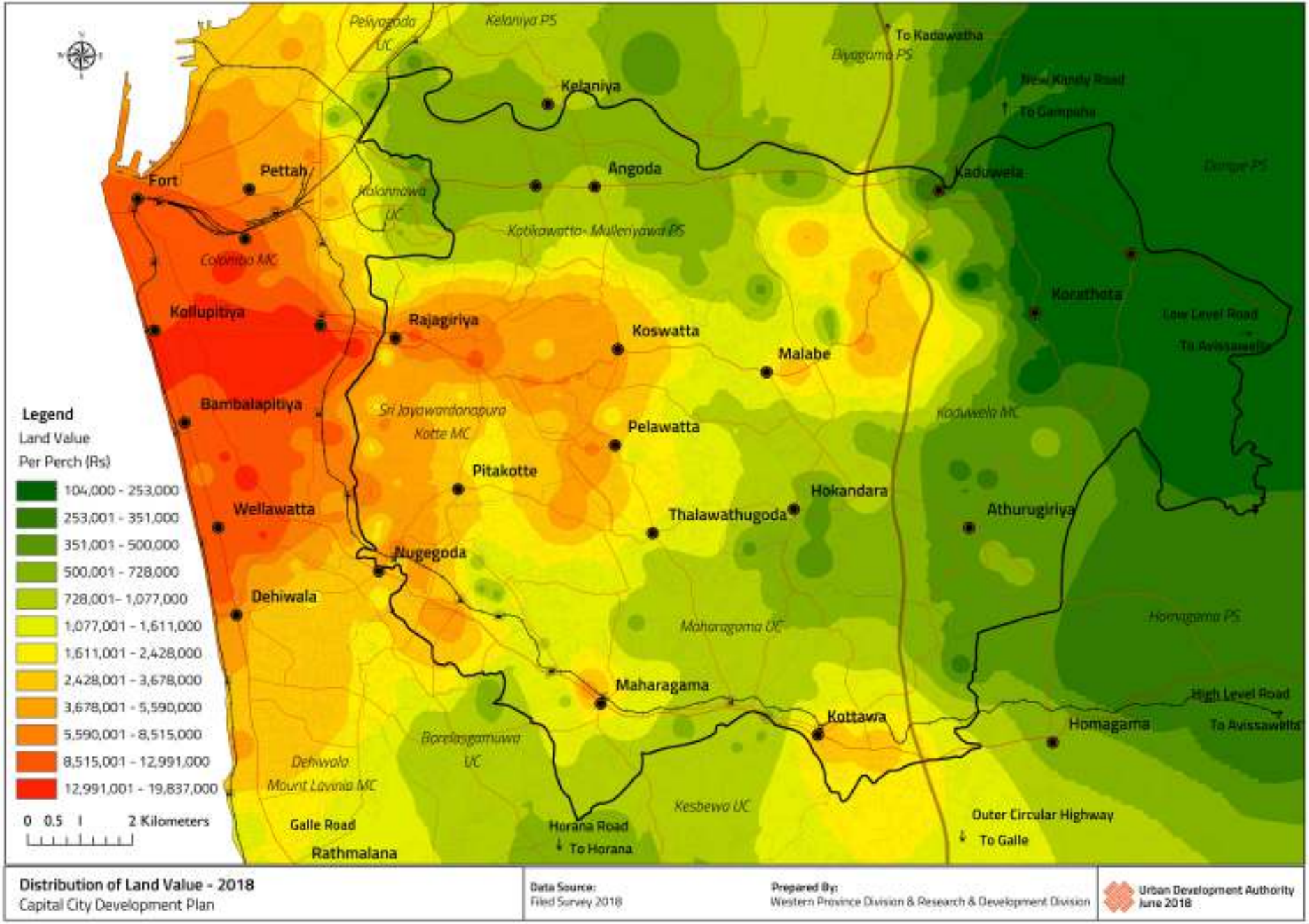


Map 5.13 : Expected level of spatial integration in Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

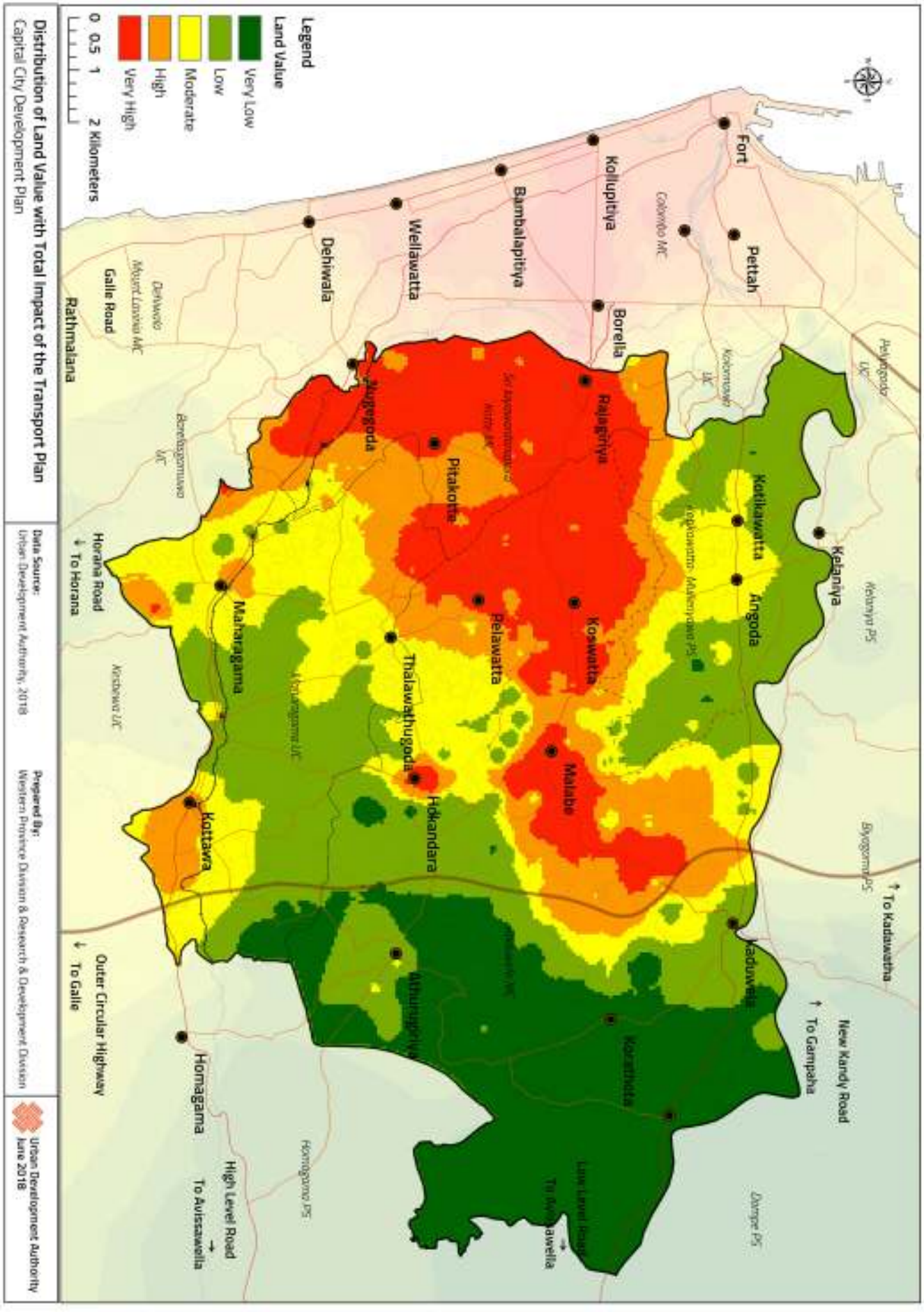
4. Road widening and Land value

The changing level of integration will influence the land value of the selected areas and support to achieve the priority level of nodes, densities and zones in the area by the year 2050. According to the existing and proposed land value maps, it is clear that land values in current low density and moderate density areas will gain a higher value. This motivation will encourage the intensified residential and commercial developments in the selected areas.

Rajagiriya and Nugegoda are planned to be developed as up-market commercial areas of the capital area. The high land values in these two centres tends to attract the high end investors. Kotikwatta- Angoda, Malabe and Kaduwela with three identified corridors are expected to be developed with a new character. The Peripheral areas such as, Athurugirya and Korothota with low land values are expected to encourage the residential space development compared to other areas of the Capital City.



Map 5.14 : Distribution of land value without impact of the transport developmnet strategy - 2018
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 5.15 : Distribution of land value with total impact of transport development strategy
Source : Western Province Division and Research & Development Unit, UDA - 2018

06

Settlement Development Strategy

Chapter 06
SETTLEMENT DEVELOPMENT STRATEGY

Introduction

Aims and Objectives

The Approach

Scope of the Settlement Strategy

6.1. Introduction

A Settlement Plan sets out directions for spatial distribution of the future growth of the residential population. It provides an outline for the planning of necessary land uses, residential developments along with provision of the physical and social infrastructure, based on the projected and estimated populations within given time durations in specific geographical areas.

6.1.1. Aims and Objectives

The aim of this Capital City Settlement strategy is to promote a prosperous Capital City with smooth, efficient and effective urban systems and smart urban facilities'

6.1.2. The Approach

The total planning area, nodes and corridors should be developed in a cluster progressive manner, with suitable currently undeveloped lands with close proximity to the nodes and corridors and public transport routes being given preference for development. This would ensure that land use zoning promote the sustainable development of compact, livable, pedestrian and cyclist-friendly settlements with contained, safe and healthy commercial/ retail spaces.

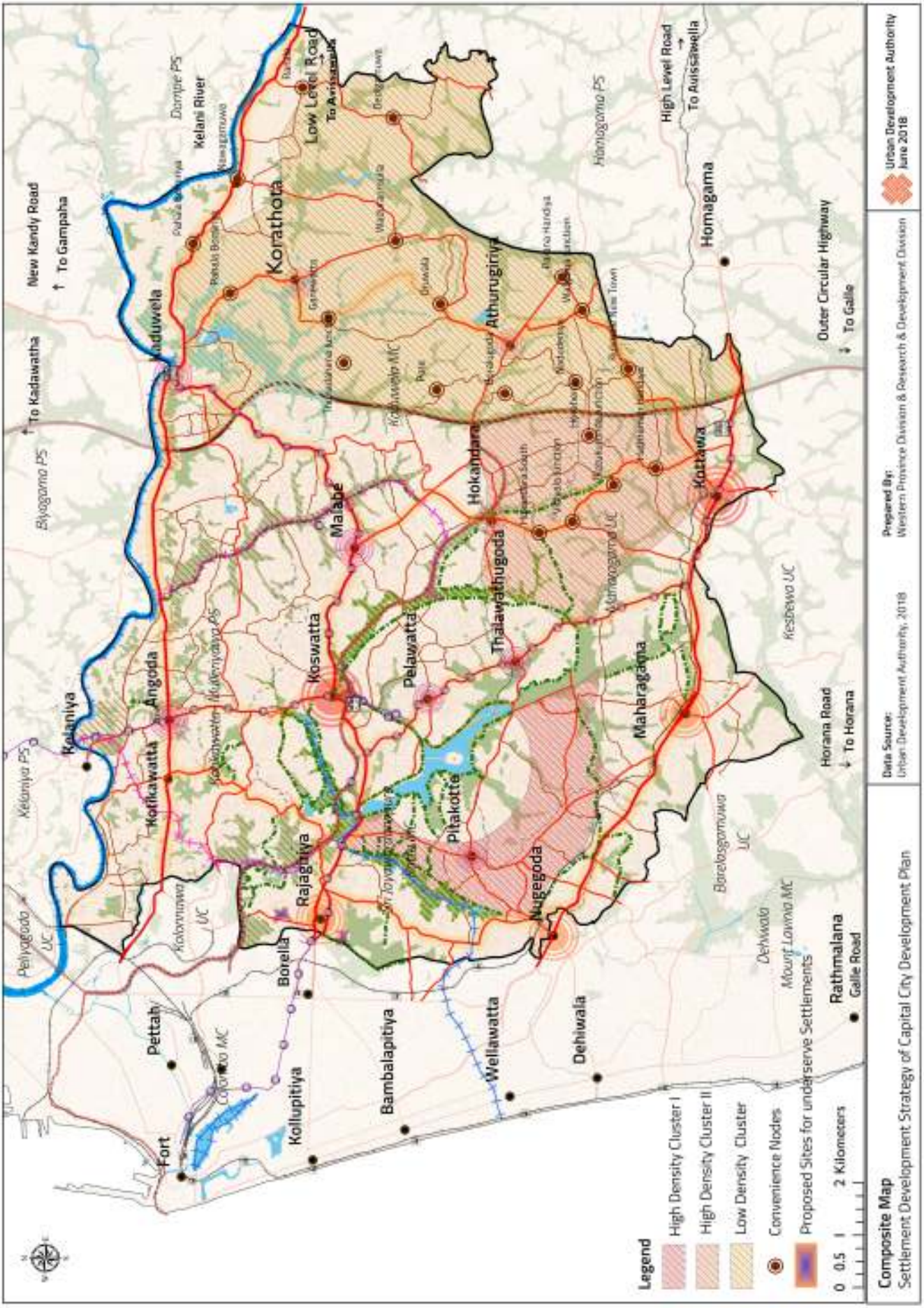
6.2. Scope of the Settlement Strategy

The planning framework covered by this strategy includes:

- *The Settlements Development Strategy of the CCDP – 2019-2030 is comprised of two broader interventions; development of Residential Cluster facilitation of the Settlement Promotion Clusters and management of Underserved Settlements. These interventions are proposed in line with the policy recommendations given in the National Housing Policy of 2017.*

- *The plan has taken the foreseeable conditions in the socio-economic environment, the advancement of technologies and the projected socio-demographic conditions, into account based on the available information. Any unexpected and unprecedented events or conditions shall be addressed with timely interventions.*

- *All strategic projects, proposed in this section of the Capital City Development Plan are expected to serve the Planning area within the time durations specified in chapter 1. Situations beyond these durations will have to be dealt with timely updating of the Capital City Development Plan.*



Map 6.1 : Composite map of settlement developmnet strategy
Source : Western Province Division and Research & Development Unit, UDA - 2018

6.3. Strategic Intervention for Settlement Development

The Settlement Development Strategy focuses upon two main interventions;

1. *Development of Residential Clusters*
2. *Management of the Underserved Settlements*

Strategic Intervention 1 : Development of Residential Clusters

In general, the entire planning area of the Capital City Development Plan is promoted for mixed-use development. Accordingly, three clusters are identified to promote predominant residential uses as follows;

A. *High Density Cluster 1*
B. *High Density Cluster 1I*
C. *Low Density Cluster*

High Density Cluster 1

Cluster 01: High Density Cluster 1

Expected Character of the Physical Environment

The area earmarked for the **High Density Cluster I** falls within the Inner City of the proposed structure of the Capital City. The main purpose is to provide required facilities to residents who are in moderately densed housing area in an attractive manner. The plan is also expected to open up the wetlands adding scenic beauty to the area.

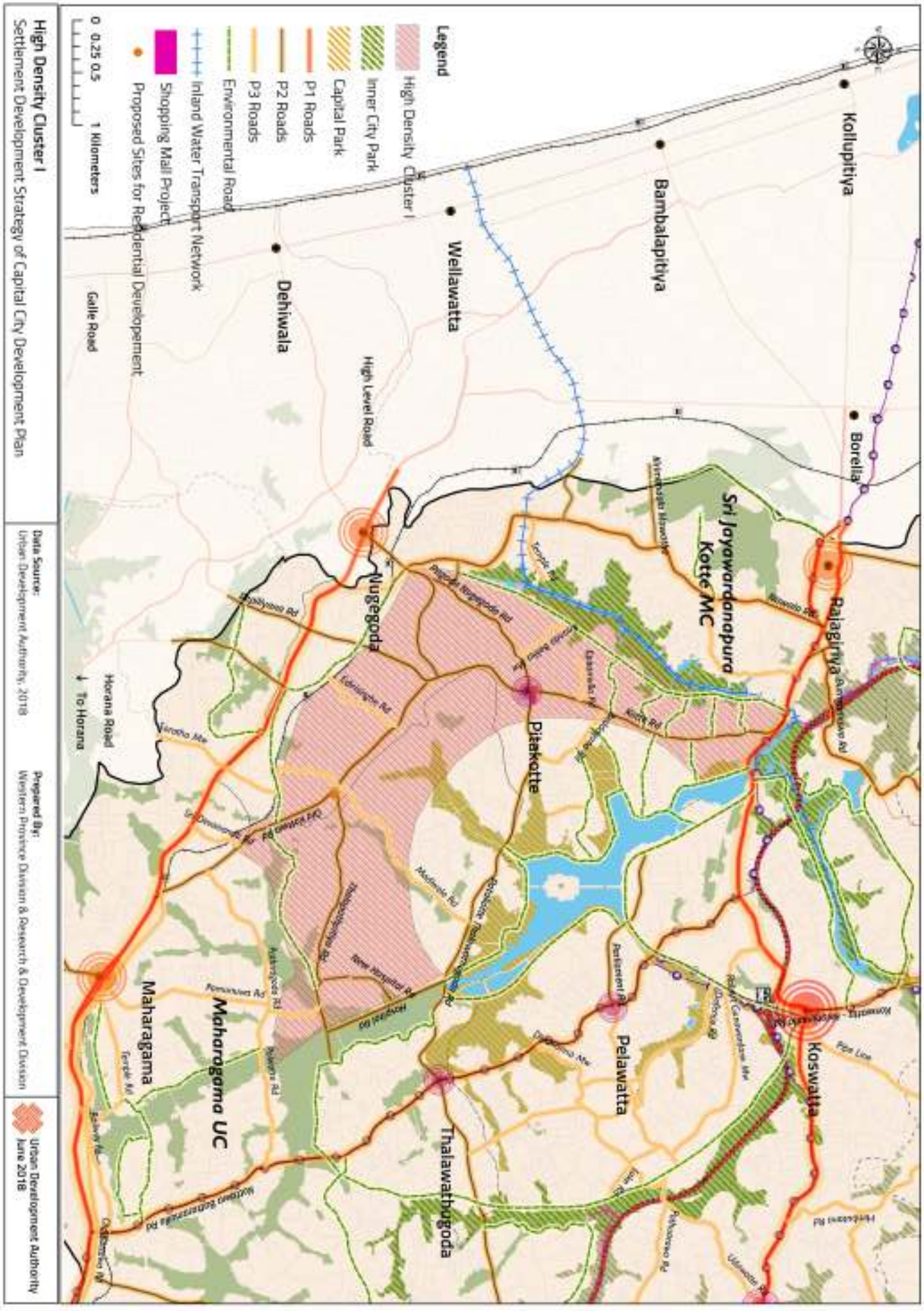
The intervention of this cluster can be classified in to three major intensions. They are, ***'Infrastructure Improvement', 'Environmental Improvement'*** and ***'A Wealthy Community'Formation'***

Physical Boundaries

Sri Jayawardenapura Kotte Road to the North
Udahamulla Station Road to the South
1.5 km radius of the Parliament to the East
Kotte Marsh to the West

Physical Parameters of the Expected Development

Housing Density : 15 house units per hectare by the year 2030
Population Density : 63 persons per hectare by the year 2030



Map 6.2 : High density cluster I -settlment development strategy
Source : Western Province Division and Research & Development Unit, UDA - 2018

Road Development

Strategic Project 1 : Forming a link between Sri Jayawardenapura Mawatha and Pannipitiya–Battaramulla Road

The objective of this project is to facilitate the Cluster I. It will be the main link between the Administrative cluster and the High Density Residential Cluster I. This linkage will be developed from Sri Jayawardenapura Mawatha to Pannipitiya–Battaramulla Road via Kotte Road (B120), Old Kottwa Road (B291) Thalapathpitiya Road (B530) and New Hospital Road. The total length of the road is 8.8 km. The identified locations will be promoted for parking facilities adhering to Road Development Authority regulations and facilities to provide pedestrian comfort. It is proposed to be implemented at the first stage of the Implementation strategy (2019-2030).

Strategic Project 2 : Improvement of existing Pagoda Road from Nugegoda to Thalawatugoda

The objective is to attract developments, into the area as well as to cater to emerging demands by means of infrastructure improvement. The total length of the road is 6.4km and it is proposed to develop P2 roads and implemented in the stage 01 (2019-2030).

Figure 6.1: Proposed new road linkage trace
Source : Google Earth, 2018

Urban Center Development :

Strategic Project 3 : Improvement of Pita-Kotte Junction

The objective is to develop Pita-Kotte and Embuldeniya as Service Centers to cater the residents of the cluster while encouraging investors. A shopping mall (0.40 acre) and façade improvement (500m length) is proposed for the Pita-Kotte Junction, and proposed at the first stage of the implementation (2019-2030). Urban Development Authority and Sri Jayawardenapura Kotte Municipal Council will be the implementation agencies of this project and the funding is expected from the Treasury.

Conservation :

Strategic Project 4 : Promoting Kotte Marsh as an Eco-Friendly Nature Park

The objective of this project is to attract more residents to the Cluster I through improving the aesthetic value while conserving the Kotte Marsh. The Eco- Floating Restaurant, Eco-Cabana, Bird Watching Towers, and Passes are proposed as components of the Kotte Marsh project. This will propose to implement by the second stage of the implementation plan (2031-2040). Urban Development Authority and Sri Lanka Land Reclamation Corporation will be the implementation agencies of this project. The Treasury fund and Public Private Partnership will propose as funding model.

Strategic Project 5 : Extension of Munchanayaka Garden Road up to Sri Jayawardenapura Mawatha

The objective of this project is to develop a new green corridor to attract more residents with the aesthetic value while conserving the Kotte Marsh. This green road is assumed to be a strategic solution for the illegal encroachments of the wetlands which was identified as an issue at the problem framing stage. (Figure 6.2 : Existing Situation of Kotte Marsh) The total length of the road is 3.4 km and it is proposed to be developed up to one lane as a strategy. This is proposed to be implemented by the second stage of the implementation strategy (2031-2040).


Figure 6.2: Existing situation of Kotte marsh
Source : Google street view -2018


Figure 6.3: Expected situation of canal road along Kotte marsh
Source : www.midlandsinbusiness.com/2017/07

Project Type	Project Code	Strategic Project
Road Development	SII-T-5	Create a main linkage from Sri Jayawardenapura Mawatha to Pannipitiya- Battaramulla Road
	SII-T-5	Improvement of existing Pagoda Road from Nugegoda to Thalawatugoda
Urban Center Development	SIII-S6	Improvement of Pita-Kotte Junction
Conservation	SII-W- 7	Promoting Kotte Marsh as an Eco-Friendly Nature Park
		Extension of Munchanayaka Garden Road up to Sri Jayawardhapura Mawatha

Table 6.1 : Settlement development high density cluster I - strategic projects
Source : Western Province Division and Research & Development Unit, UDA - 2018

High Density Cluster II

Cluster 02: High Density Cluster II

Expected Character of the Physical Environment

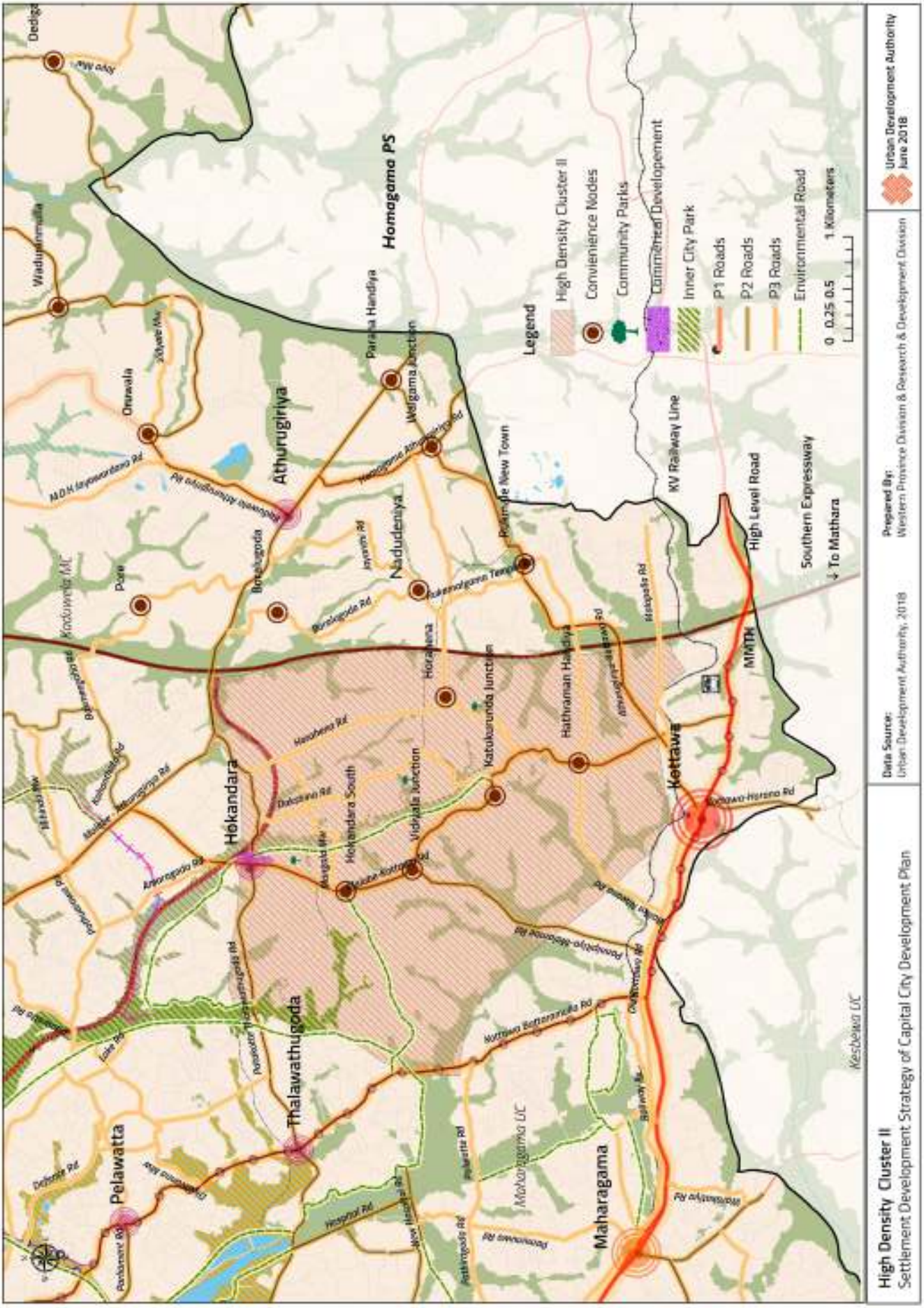
High Density Cluster II is a part of the Outer city of the Capital City concept. This Cluster expected to develop predominantly multi-storey residential developments and this cluster will assist to open up wetlands to attract condominium development by getting befit of locational advantage of the area. Further, it is expected to facilitate mainly the employees engaged in the opportunities emerging from the developments associated with the ***Administrative City*** and the proposed ***Knowledge City***.

Physical Boundaries

Hokandara Road to the North
Kelani Valley Railway Line to the South
Outer Circular Highway to the East
Wetland adjacent to Kottwa Battramulla Road and Talangama Wetland to the West

Physical Parameters of the expected Development

Housing Density : 13 house units per hectare by the year 2030
Population Density : 46 persons per hectare by the year 2030



Map 6.3 : High density cluster II - settlmnet developmnet strategy
Source : Western Province Division and Research & Development Unit, UDA - 2018

Road Developments:

Even though the existing road network supports conservation of the unique character and peaceful environment, it is clear that the existing roads do not provide strong networking opportunities with the surrounding areas. Hence, the strategic interventions identified for the improvements are as below;

Strategic Project 6 : Improvement of the existing Kottawa - Malabe Road

The objective is to attract developments, and to cater emerging demands by means of infrastructure improvement. This road will be the main connecter of the proposed Knowledge City to the Kottawa Multi-Modal Transport Hub. The total length of the road is 6.7 km. It is proposed to be implemented by the first stage of the Implementation Strategy (2019-2030).

Strategic Project 7 : Improvement of Hokandara Road up to Koskandawila Junction

The objective is to attract the residential development towards the Residential Cluster from Administrative Cluster. This road will be a part of a main corridor from the proposed eight corridors of land use strategy and connector of the Administrative Cluster and Residential Cluster. The total length of the road is 3.9 km and it is proposed to be developed up to P2 roads. It is proposed to be implemented by the first phase of the Implementation Strategy (2019-2030).

Strategic Project 8 : Improvement of Kalalgoda Road

The objective is to enhance connections between the proposed Administrative Corridor and Residential Cluster. The total length of the road is 2km and it is proposed to be developed up to 2 lanes and implemented by the first stage of the Implementation Strategy (2019-2030).

Urban Center Development:

Strategic Project 9 : Improvement of Hokandara Township

Hokandara Node is identified as a 4th priority order node of Land Use Strategy. The objective of this project is to cater the residents of the cluster while encouraging investors. The township improvement suggests a redevelopment in Hokandara (7.5 acre) with a pocket park, a restaurant and shopping area. This is proposed to be implemented by the third stage of the Implementation Strategy (2041-2050). Urban Development Authority and Maharagama Urban Council Area will be the implementation agencies of this project and the funding is expected from the Treasury.

1. Commercial Redevelopment (7.5 acre) with grocery stores, drug stores, beauty salons, restaurents, small clothing stores, fuel services and cinema halls along Hokandara - Kottawa road and Wanaguru Mw.
2. Upgrade Hokandara - Wanaguru Mw to Sub Arterial Road
3. Service Road for Commercial Area
4. Upgrade Hokandara - Kottawa road to an Arterial Road
5. Hokandara Community Park (1.1 acre)

Figure 6.4: Expected development in Hokandara junction
Source : Western Province Division and Research & Development Unit, UDA - 2018

Project Type	Project Code	Strategic Project
Road Development	SI-T-5	Improvement of the existing Kottawa - Malabe Road
	SII-T-5	Improvement of Hokandara Road up to Koskandawila Junction
	SII-T-7	Improvement of Kalalgoda Road.
Urban Center Development	SII-T-7	Improvement of Hokandara Township

Table 6.2 : Settlement development high density cluster II - strategic projects
Source : Western Province Division and Research & Development Unit, UDA - 2018

Low Density Cluster

Cluster 03: Low Density Cluster

Expected Character of the Physical Environment

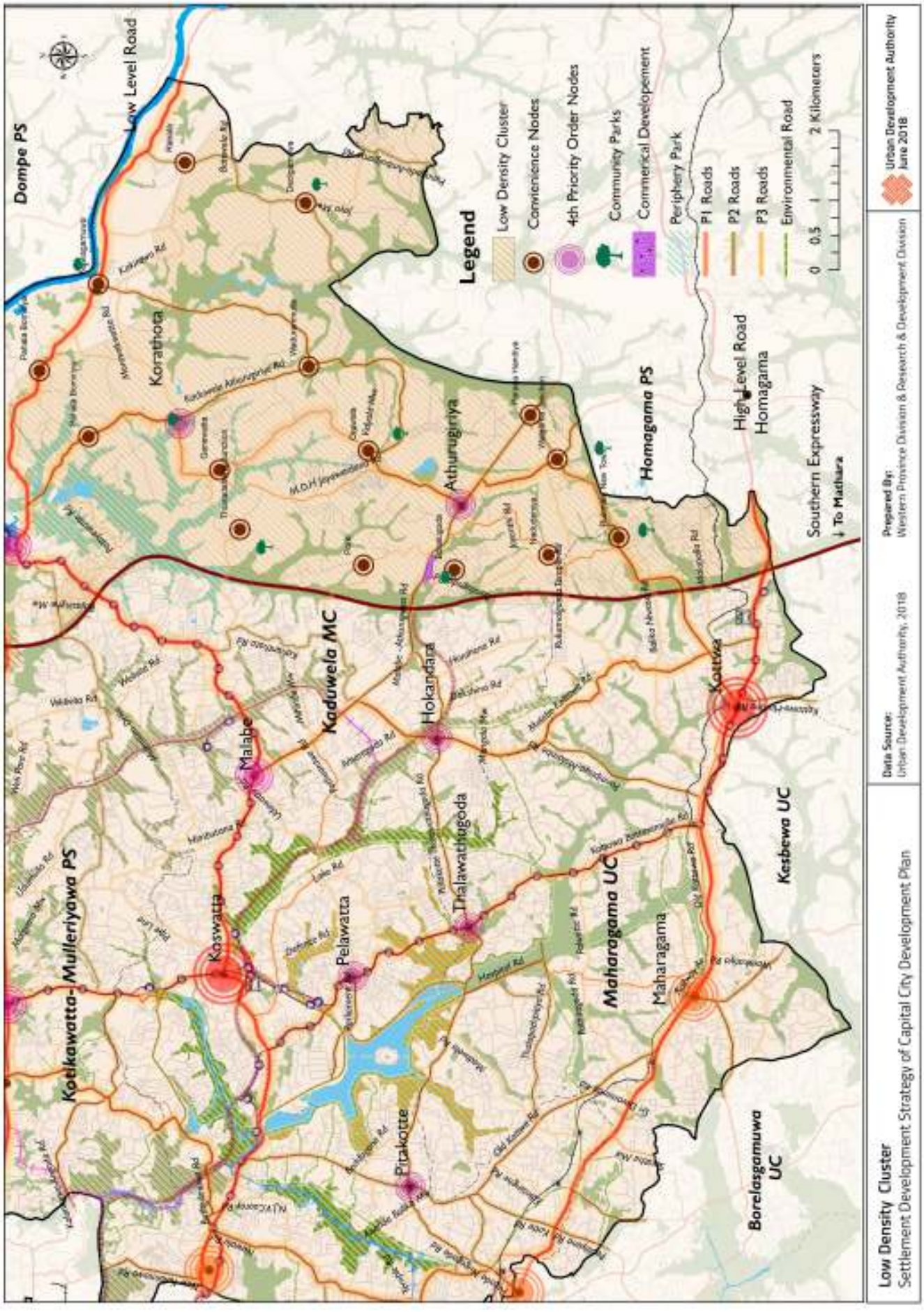
The Low Density Cluster Plan is derived from the Capital City Concept of Periphery. The Low Density Cluster Plan is designed in a manner to cater the residential population approximatly within 20 minutes of time. In other words, one node of the plan is expected to serve the population within a 5km radius. As a result, two Major Service Nodes and fifteen Convenience Nodes will be introduced.

Physical Boundaries

The cluster is bounded by the Kelani River to North
Outer Circular Highway to West
High Level Road to South

Physical Parameters of the expected Development

Housing Density : 13 house units per hectare by the year 2030
Population Density : 50 persons per hectare by the year 2030



Map 6.4: Low density cluster - settlement developmnet strategy
Source : Western Province Division and Research & Development Unit, UDA - 2018

Precinct	Node Type
Athurugiriya	Neighbourhood Node
Walgama Junction Oruwala Vidyala Junction Parana Handiya	Convenience Nodes
Rukmalagama New Town Boralugoda Rukmale East B	Convenience Nodes
Waduramulla	Convenience Node
Koratota	Neighbourhood Node
Thunadahena Junction	Convenience Nodes
Gnewatta	
Pahala Bomiriiya B	
Pahala Bomiriya	
Nawagamuwa	
Dedigamuawa	
Pore	
Ranala	

Table 6.3 : Nodes development in settlement strategy
Source : Western Province Division and Research & Development Unit, UDA - 2018

The service nodes are designed based on the eight key elements of The Great Urban Neighbourhood as follows; *(Reference: http://sf-planning.org/eight-elements-great-neighborhood)*

1. **Walk to Shop** – *A great neighbourhood has everyday stores and services within an easy walk from home.*
2. **Safe Street** – *A great neighbourhood has safe and friendly streets.*
3. **Get Around Easily** – *A great neighbourhood has many ways to get around.*
4. **Housing Choices** – *A great neighbourhood has a variety of housing types.*
5. **Gathering Places** – *A great neighbourhood has places for people to meet and talk.*
6. **City Services** – *A great neighbourhood has a full range of public services for residents.*
7. **Special Character** – *A great neighbourhood has its own character.*
8. **Parts of the whole** – *Great neighbourhoods make great cities.*

Road Improvement

Strategic Project 10 : Improvement of Kaduwela - Homagama Road from Wellehandiya to Homagama

Kaduwela- Homagama Road is the most prominent access way which runs through The Low Density Cluster Area. Hence, as the first intervention of the strategy, Kaduwela- Homagama Road from Wellehandiya to Homagama (10 km) is expected to be improved. It is expected to facilitate and attract more residential development towards this area as a result.

Improvement of Neighbourhood Nodes

Strategic Project 11 : Development of Athurugiriya Neighbourhood Node

In accordance with the Capital City Development Plan, Athurigiriya is to be developed as a Fourth Priority Order Main Service Center to The Low Density Peripheral Cluster. Hence, it is assumed to attract more residential population in and surrounding area. Moreover, as for the current situation, most of the commercial activities are been developed in linear way along the main road. This trend has created congestion in the Athurugiriya Town Center during peak hours on the existing road network. Even though the public and private sectors provide better transport services for the commuters, road side parking, narrow road network, lack of safety access for human beings, have created high congestion in the town center.

Therefore, a land of 7 acres in extent located near the Athurugiriya Interchange is identified for the Athurugiriya Township Development Project. The project is comprised with following components to provide a pleasant and convenient environment for the general public.

- *Mixed Development (1A 1R 9P)*
- *Bus Terminal (1A 2R 20P)*
- *Mini Urban Park (10 P)*
- *Pola Development(1A)*
- *Public Car Parking Area (90 P)*
- *Water Retention Area (90 P).*

The Low Density Cluster has directly incorporated the Athurugiriya Township Development Project which was planned by the Western Province Division of Urban Development Authority.

Strategic Project 12 : Development of Koratota Neighbourhood Node

Koratota is the second neighbourhood node which has been identified by The Low Density Cluster. Koratota is also identified as a fourth priority order city according to the Capital City Development Plan. In the existing situation, Koratota Area is famous for religious and industrial activities. Hence, this area is assumed to be planned as an industrial based neighborhood node by facilitating the existing trend without promoting an artificial trend.

Improvement of Convenience Nodes

Strategic Project 13 : Development of Thunadahena Convenience Node

Proposed Thunadahena Convenience Node is located in Thunadahena Koratota Road. Even though it is not situated facing the main artery, it indicates a development trend compared to other junctions. The basic components such as, a community center, ayurveda dispensary, preschool and few boutiques are available. It lacks shopping centres, gathering places and safe streets to cater the population.

Figure 6.5: Existing situation of Thunadahena
Source : Google street view, 2018

Hence, Thunadahena Node is designed as a location for relaxation. Accordingly, a land with an extent of twenty acres adjacent to the Outer Circular Highway is identified for the Thunadahena Wetland Park as the first element. Accessibility improvement is the second element of the project. The below roads are planned to be improved by considering the third element of the Great Urban Neighbourhood.

1. Upgrade Rathnayake Mawatha as Collective Road
2. Upgrade Thunadahena Road as Sub Arterial Road
3. Wetland Road
4. Thunadahena Wetland Park
5. Land subdivision for residentioal development
6. Commercial redevelopment with Grocery Stores, Mini Market, Bakery, Hardware Store, etc along Thunadahena Road

Figure 6.6: Propsed layout of Thunadahena convenience node
Source : Western Province Division and Research & Development Unit, UDA - 2018

1. *Extension of Rathnayaka Mawatha up to Thunadahena Junction (1.3km)*
2. *Improvement of Thunadahena Koratota Road (2.8 km)*
3. *Development of Wetland Roads*

The land with an extent of 3.5-acres in Thunadahena Junction is proposed to be redesigned with Grocery stores, Mini Market, Bakery, Dispensary, Community Hall, Hardware stores etc. as the third intervention of the project.

Strategic Project 14 : Development of Rukmalgama Convenience Nodes

The Proposed Rukmalgama is a Convenient Node which is located in the Athurugiriya-Kottawa Road. It is approximately 3.4 km away from the Kottawa Town Center. Currently, this location consists of a place for relaxation, a small scale bus terminal, a mini super market and a few boutiques. However, Rukmalgama lacks a place for city services to cater daily needs of the population.

According to the above images, it is clear that the available commercial and public services are not adequate for the threshold population. But, dwellers in the Rukmalgama are capable to reach the Kottawa town center within time duration of 20 minutes approximately for daily needs. As a result, the node will be designed to improve Mahabo Wewa as a public open space with city services. Accordingly, the first element is to improve the accessibility to Mahabo Wewa as a public park. Along with it, two greenways are proposed from the Athurugiriya Kottawa Road to Mahabo Wewa Public Park with city services. The land with an extent of one acre adjacent to the Rukmalagama Temple and Mahabo Wewa is identified for city services while, the community hall and the children's play area are designed to cater the daily needs of the residents.

The second element includes, the development of Rukmalgama Bus Stand (0.10 acre) as a Mini Bus Stand.

Figure 6.7: Existing situation of Rukmalgama town
Source : Google street view - 2018

1 **Green Access Road to Mahabowewa Park**

2 **Community Hall with Children Play Area**

Figure 6.8: Propsed layout of Rukmalagama node development
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 15 : Development of Nawagamuwa as a Convenience Node

Nawagamuwa is a convenience node which is situated by the side of the main artery of low level corridor. When the growing trend of Nawagamuwa is compared with other convenience nodes, it is recognized that the area has grown with a religious aspect from the past. Hence, the development functions beyond the junction level. It currently, has basic components such as, a hospital, a police station, a sub post office, a primary school and commercial facilities. However, the area lacks a place to relax for the threshold population.

Figure 6.9: Existing situtaion of Nawagamuwa
Source : Google street view - 2018

According to the existing situation, it is clear that Nawagamuwa Node has capability to act as a convenience node. Hence, through this project, it is expected to upgrade the quality of life of the dwellers by proposing a place to relax. For this purpose, a land with an extent of 3.94 acres is proposed as a meditation park. The proposed land is situated in the bank of Kelani River in close proximity to Nawgamuwa Temple and Nawagamuwa Pahala Mapitigama Road. It is to be improved as a green road from Low Level Road to Hanwella-Malwana Road in order to offer better access to the proposed meditation park.

Figure 6.10: Propsed layout of Nawagamuwa
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 16 : Development of Dedigamuwa Convenience Node

The proposed Dedigamuwa Convenience Node is located in Habarakada-Homagama Road. It is approximately 9.35 km away from the Kaduwela City Center and 2.75 km away from the Low Level Corridor. This convenience node is designed to facilitate a threshold population of 5820 persons. Currently, this node consists of a school (Dedigamuwa Vidyalaya) and a few small scale boutiques. (Figure: 6.11) On the other hand, a few number of small and medium scale industries are located in the surrounding area. Most importantly, the Dedigamuwa Forest Reserve stands as the most important natural element of this node. However, a quarry is located adjacent to the forest reserve.

Figure 6.11: Existing situation of Dadigamuwa
Source : Google street view - 2018

Adhering to the existing situation, a liner path with cycling and walking track (350 m length and 01 acre) is proposed in adjacent to the quarry and forest reserve as the first element of the Dedigamuwa Convenience Node. Four roads are identified under the second element to improve as park access roads to provide better access to the proposed linear park. The third element is to upgrade the existing Ranala Road into a sub arterial road.

Chapter 06
SETTLEMENT DEVELOPMENT STRATEGY

Strategic Intervention for Settlement Development

Strategic intervention : Development of Residential Clusters

Figure 6.12: Propsed layout of Dadigamuwa
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 17 : Development of Walgama Junction Convenience Node

Proposed Walgama Junction Convenience Node is located in Kottawa - Athurugiriya Road and Homgama- Athurugiriya Road. It is approximately 1.7 km away from the Athurugiriya Town Center and 3.2 km away from Homagama. When other convenience nodes are compared, Walgama Junction Convenience Node offers basic commercial facilities with informal shops.

Figure 6.13: Existing situation of Walgama
Source : Google street view - 2018

According to the above images, it is clear that available commercial and public services are not adequate to cater the threshold population. However, dwellers in Walgama Junction can easily access Athurugiriya Town Center within 20 minutes of time to attain daily needs. Hence, this node is designed to improve public open space to provide a better environment for the dwellers and commuters.

Figure 6.14: Propsed layout of Walgama
Source : Western Province Division and Research & Development Unit, UDA - 2018

Walgama Junction Plan is designed to create a place for relaxation. Accordingly, 0.7 acre marshy land which is located in close proximity to Walgama Junction is proposed as a rest park. A 150m road is also projected as a service road towards the proposed rest park.

Project Type	Project Code	Strategic Project
Road Improvement	SII-S4	Improve Kaduwela - Homagama Road from Wellehandiya to Homagama
Neighbourhood Nodes Improvement	SI-S1	Develop Athurugiriya Korathota Neighbourhood Nodes
	SIII-S8	Urban Service Improvement Project at Hokandara Junction (Redesign 7.5 acre of Hokandara Junction)
	SIII-S9	Open Space project at Koswatta node
	SI-S2	Shopping Mall Project at Pitakotte Junction- KMC
	SIII-S5	High End Residential Phase II- Residential Development Project at Thalapathpitiya
	SIII-S7	Community Park Development Project
	SIII-S6	High End Residential Phase II- Residential Development Project at Pitakotte Junction
Convenience Nodes Development	SII-S3	13 Convenience Nodes Development Walgama,Dadeigamuwa, Nawagamuwa, Rukmalgama Etc:

Table 6.4 : Settlement development low density cluster III - strategic projects
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Intervention 2 :
Underserved Settlement Management

The main objective of the Underserved Settlement Management Strategy is to maintain the proposed character and enhance the living quality of the Capital City by addressing the underserved settlements.

The Underserved Settlement Management Strategy proposes three approaches to address underserved settlement issues within the planning premises. They include,

1. *Redesign Approach*
2. *Relocation Approach*
3. *Special Projects Approach*

Redesign Approach

The Redesign Approach is the most flexible and innovative solution to address the underserved settlement issues in identified areas of the plan. 'The land right' is the main mechanism to identify underserved settlements in the Redesign Approach.

Relocation Approach

The Relocation Approach is a management solution to maintain the proposed character and enhance the living quality of the Capital City by removing unauthorized settlers from canal reservation and unauthorized lands.

Special Projects Approach

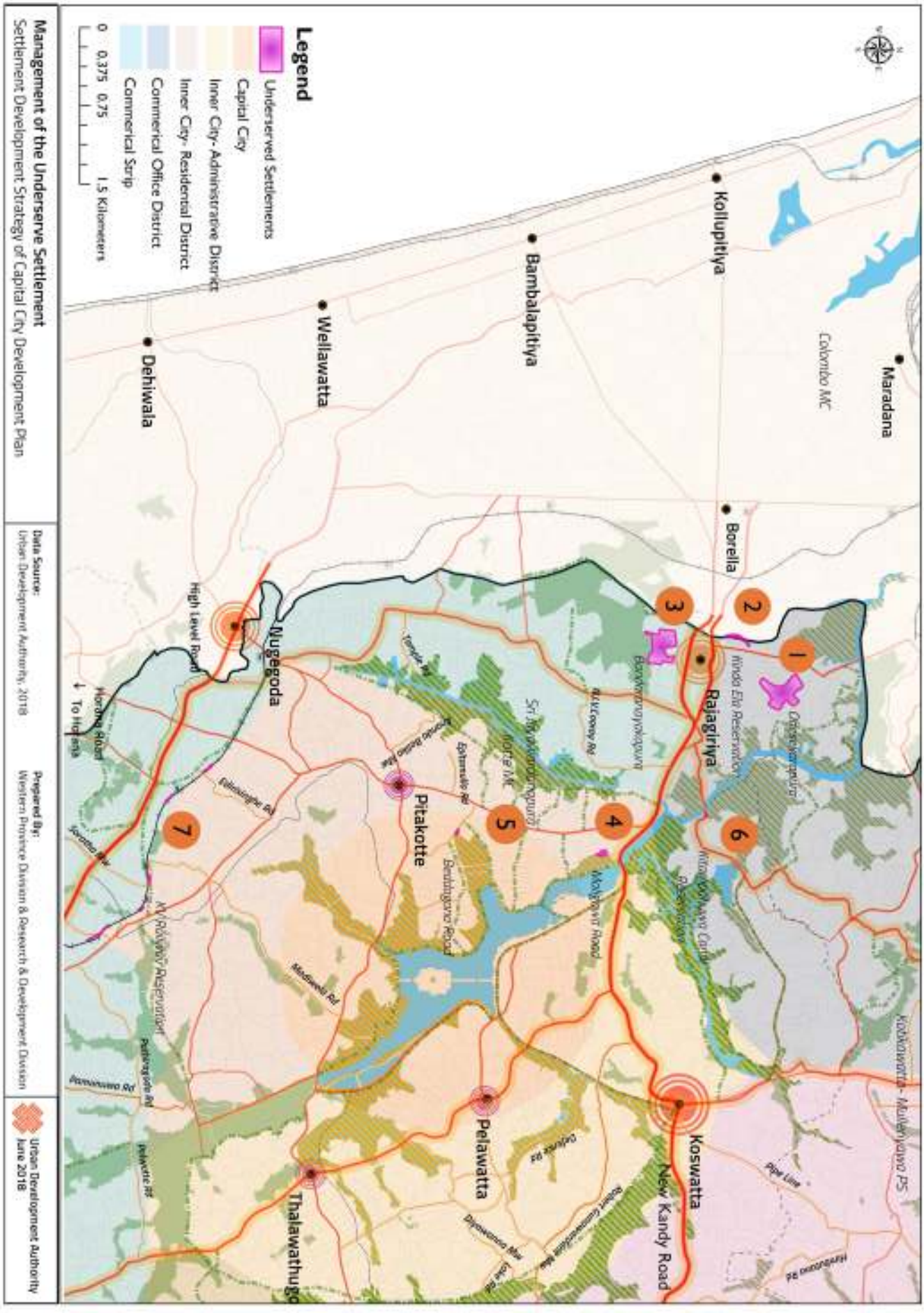
The Special Project Approach is defined with the national scale infrastructure development projects.

The identified underserved settlements in planning area proposes redesign and relocation with the concepts as follows,

	Identified Location	Land Ownership	No. of Houses	Propose Method	Proposed Site
1	Obesekarapura (Arunodhya Mw)	KMC Land & Private	668-700	Special Project (URP) & Redesign Approach	Obesekarapura (Arunodhaya Mw) On site Relocation
2	Kinda Ela Reservation	SLLRDC Land	To be Identified	Relocation Approach	Obesekarapura (Arunodhaya Mw)
3	Bnadaranayakepura	Private	To be Identified	Redesign Approach & Relocation	Bandaranayakapura (On Site Relocation)
4	Maligawa Road	UDA Land	60	Relocation Approach	Bandaranayakapura
5	Baddagana Road	SLLRDC Land	17	Relocation Approach	Bandaranayakapura
6	Kittampahauwa Canal Reservation (Perera Mw)	SLLRDC Land	7-10	Relocation Approach	Obesekarapura (Arunodhaya Mw)
7	Kelaniweli Reservation	CGR Land	144	Special Project (Kelaniweli Railway Project)	Proposed Site by Kelaniweli Railway Project

Table 6.5 : Ongoing housing projects
Source : GN office data of Sri Jayawardenapura Kotte MC, field survey and observation

The Cluster Development Strategic Intervention of the Settlement Strategy directly links with two major strategies of the Capital City Development Plan. It mainly connects with The Transport Strategy to develop Convenience Nodes by providing proper accessibility to the neighbourhoods. Therefore, most of the proposed roads are the main pillars of the Settlement Development Strategy. As an example, the development of the Low Density Peripheral Cluster is mainly based on proposed service road from Kottawa to Kaduwela by The Transport Strategy. Further, The Settlement Strategy directly incorporates The Wetland Management Strategy of the Capital City Development Plan. The proposed wetland parks of the Wetland Management Plan help to enhance the living quality of the settlement clusters and it will aid to increase the land values of the Residential Clusters.



Map 6.5 : Management of underserved settlement
Source : Western Province Division and Research & Development Unit, UDA - 2018

6.4. Impact of the Settlement Development Strategy

- *Cluster Development Strategic Intervention and Population Density*

A. **High Density Cluster —**

In 2018, the Inner City area had a population density of 58 persons per hectare and High Density Cluster 1 had 63 persons per hectare.

The plan assumes a population density of 98 persons per hectare in the Inner City area and 70 persons per hectare in the High Density Cluster 1 Area by the year 2030.

In 2018, The Outer City Planning Area had a population density of 51 persons per hectare and The High Density Cluster 2 had a population density of 46 persons per hectare.

The plan assumes a population density of 116 persons per hectare in the Outer City area and 77 persons per hectare in the High Density Cluster 2 by the year 2030.

B. **Low Density Cluster —**

In 2018, The Low Density Cluster had a population density of 33 persons per hectare. The plan assumes a population density of 49 persons per hectare in the year 2030.

The implementation of Cluster Development Strategy is expected to attract the target residential population towards planning area and develop four neighbourhood nodes and fifteen convenience nodes to facilitate the residents.

To fulfill the total required commercial space of 24% of the total area (4.98 ha) is to develop with commercial facilities through The Cluster Development Strategic Intervention.

- *Underserved Settlement Management Strategic Intervention*

The Underserved Settlement Management Plan intervention is assumed to remove 100% identified underserved settlements within the Capital City Planning Area to maintain the proposed character.

07

Economic Development Strategy

Chapter 07
ECONOMIC DEVELOPMENT STRATEGY

Introduction

Aims and Objectives

The Approach

7.1. Introduction

Spatial planning is explained as one of the vital tools for the economic development of a city. The interaction between spatial patterns and dynamics of economic activities are taken into consideration in the preparation stage of Development Plans. The Capital City Development Plan has identified the need of an Economic Development Strategy for the planning area during its problem identification stage.

7.1.1. Aims and Objectives

To address the above mentioned need, the Capital City Development Plan has introduced strategic goals as given below:

Strategic Goal — *"A place that prospers with smooth and efficient urban systems and smart urban facilities"*

7.1.2. The Approach

In recent Years **"Cluster Strategic Intervention"** has become a popular economic development approach among policy makers and economists as an effective method for ecomic development. The Capital City Development Plan has adapted this method in the making of Economic Development Strategy. Accordingly, this strategy has identified clusters with geographic concentration in order to actively develop the commercial and retail space in the area with competing and collaborating firms.

The overall developments in the area shall elevate Kotte-Sri Jayawardenapura and its surrounding areas while adding value through cluster approach to create new clusters within the planning boundary to improve the overall business Space.

7.2. Scope of the Economic Development Strategy

- *The Scope of this economic development strategy covers an assessment of current issues, prospects, priorities and proposals for development of the main Nodes and Corridors.*

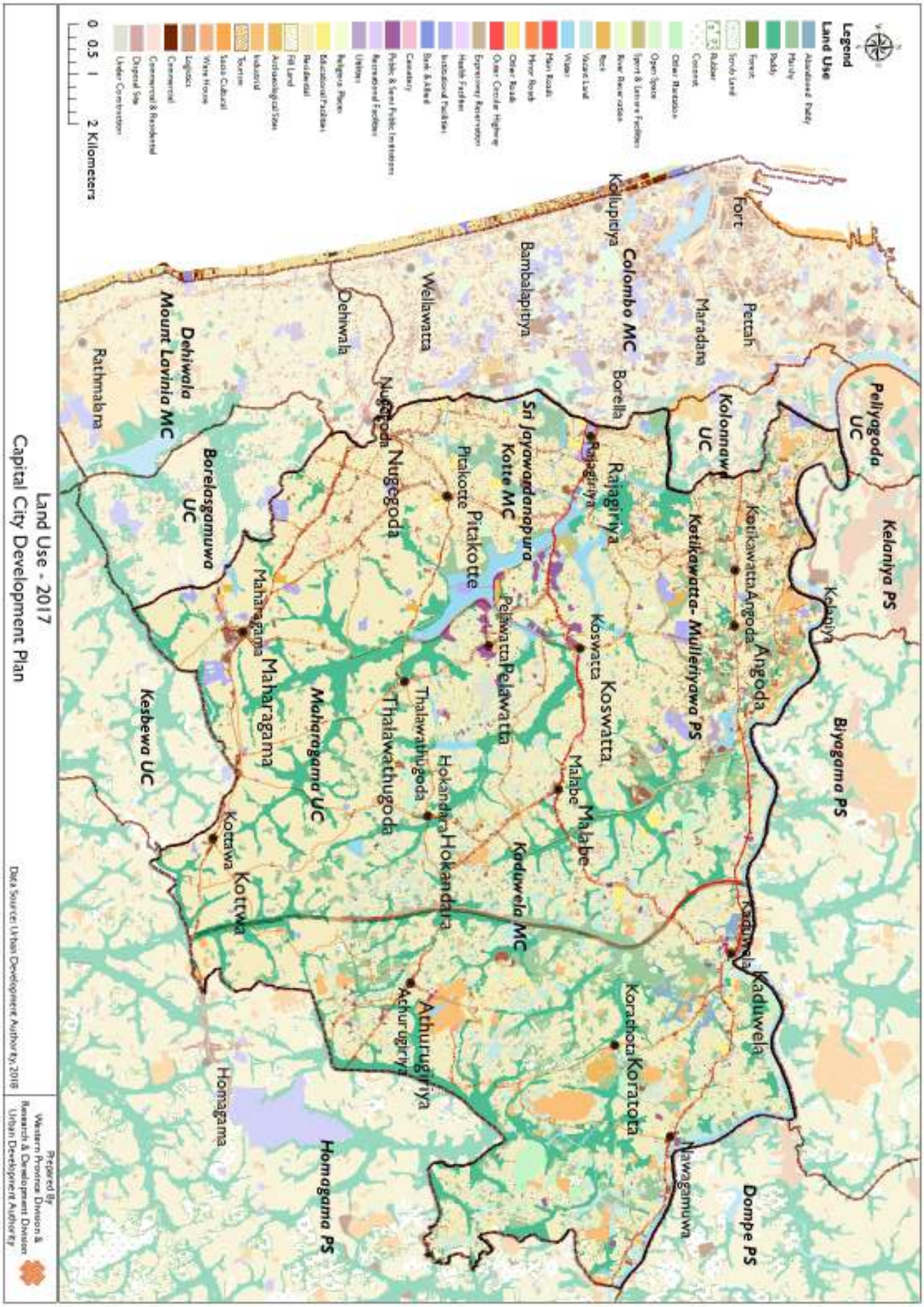
- *It Includes direct and indirect employment generation, economic base, transportation and land use and other infrastructure improvement.*

- *All strategic projects, proposed in this section are expected to serve the planning area within the time durations specified in Chapter 1 of the Development Plan. Situations beyond these time durations will have to be dealt with timely updating of the Development Plan.*

7.3. Identification of Main Economic Driving Clusters in the Area

The land extent of the ara demarcated for the Capital City is approximately 165 Sq.km. It consists of a large administrative and commercial space in the Western Province. It also included active industrial and agriculture space. The Land Use Map of Capital City Area – 2017 indicates the geographical variations of the areas that falls within the four local authorities. The key natural resources such as wetlands and water bodies are recognized not undermining the retail activities, industrial and warehousing facilities.

According to the resource profiles in the four local authorities, each local authority has identified its special economical features as below.



Map 7.1 : Land use map of planning area - 2017
Source : Western Province Division and Research & Development Unit, UDA - 2018

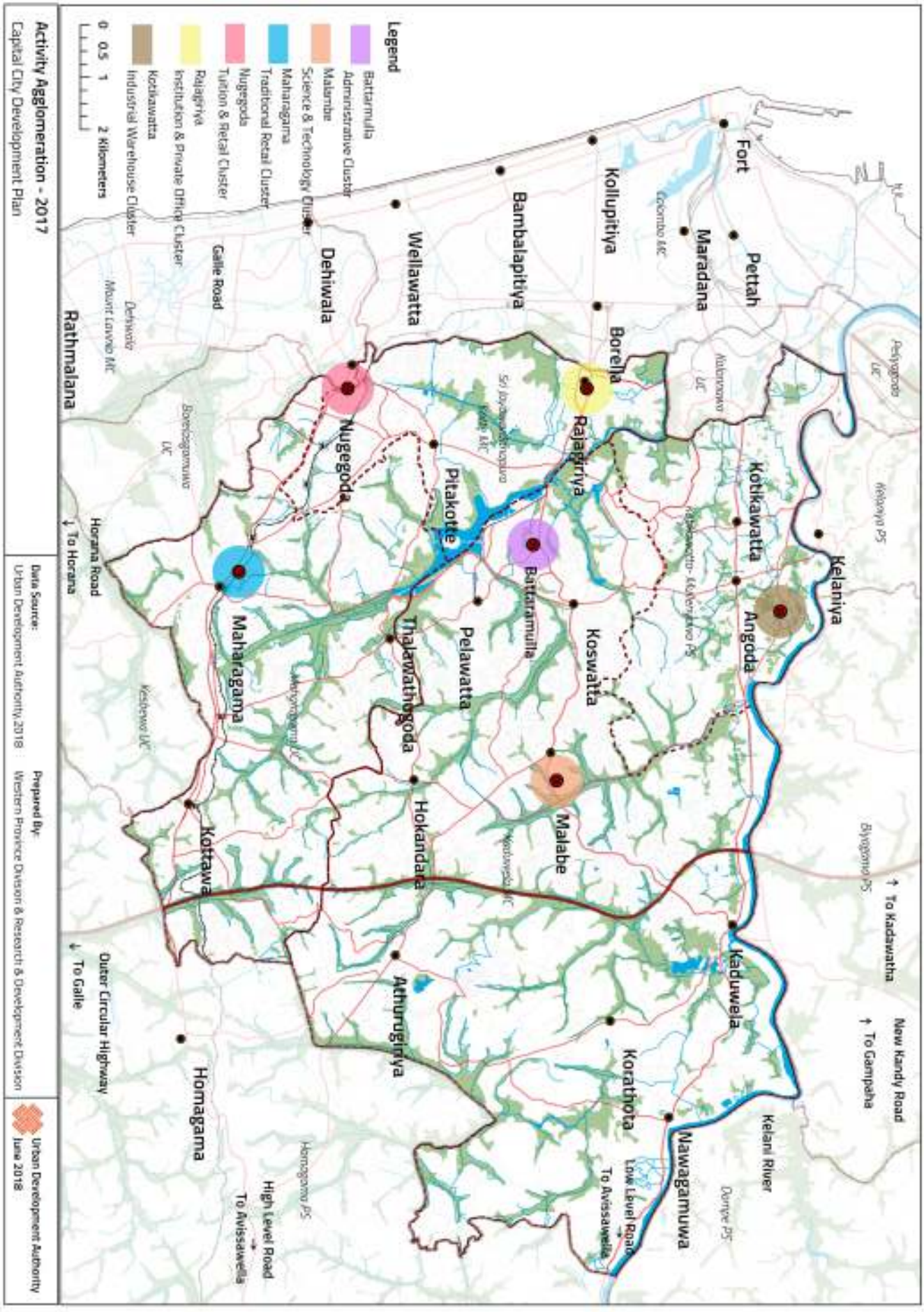
Kotikawaththa Mulleriyawa PS — Kotikawaththa is a fast developing administrative, commercial and residential area. It is known for its natural setting associated with the riverine and marshy area based geographic features. According to the given statistics, out of the total land area approximately 17% covered by wetland and water bodies.

The composition of the economic activities includes commercial and retail, institutional, industrial and agriculture activities. These Economic activities possess equal spatial cover (average 1% - 2%). However, the most dominant activities are industrial warehouses, service suppliers, retail activities and agricultural activities. *(Kolonnawa DSD, 2015)*

Mahragama UC — The economy of the Maharagama Urban Council is primarily driven by industrial and commercial activities. According to Maharagama UC Resource Profile, apparel industry in wholesale and retail performs as a major economic force of the area. When the land use composition of the area is referred, the agriculture land share contains 13.38%, commercial and retail land share contains 9.6%, established institutional office space land contains 2%-3% and large, medium and small scale industrial land allocation is 1% -2%. (Resource Profile - Maharagama, 2015)

Sri Jayawardenapura Kotte MC — The main economic drivers of the Sri Jayawardenapura Kotte MC Area are basically considered on two factors including the identification of land use composition of the area and economic activity functionality in the area. Accordingly, in land use composition 8% is shared by commercial space, 2% is shared by administrative institutional space, 1% by industrial space and small portion by agricultural space. When commercial activeness of the area is considered, the main economic drivers are service providers including administrative and retail wholesale services, industrial sector services and agricultural sector services. *(Resource Profile - Sri Jayawardanapura Kotte, 2015)*

Kaduwela MC — Based on the detailed land use map of the region, it can be recognized that Kaduwela MC is covered with 8% of commercial space, 4% of administrative institutional space, 2% of industrial space and 3% of agricultural space. According to observations and other statistics, Kaduwela MC Area's economy is driven by commercial retail services, administrative office services, agriculture and mainly macro and micro scale industries.



Map 7.2 : Identified economic agglomeration nodes in planning area
Source : Western Province Division and Research & Development Unit, UDA - 2018

A detailed assessment of the economic environment in Capital City Planning Area has highlighted urban nodes and corridors with certain characters. It further exhibits certain characters spread along the nodes and corridors of the Capital City and the economic positioning of various urban nodes in the Capital City. According to *Map 7.2*, economic dynamics of the capital region can be elaborated as follow:

These percentages show land share within the identified nodes from the total land use. *(1.5km radius from the town center)*

Administrative Cluster	*21%*
Science & Technology Institution Cluster	*6%*
Tuition & Retail Cluster	*14%*
Traditional Wholesale Retail Cluster	*17%*
Institution & Office cluster	*26%*
Industry & warehouse Cluster	*25%*

The findings of the analysis along with secondary data reveal the key economic growth drivers of the Capital City are primarily defined by the commercial retail and wholesale activities, agglomeration of administrative and office space investments, macro and micro scale industrial warehouse Investments in the area and significant investments in the science and technology education.

7.4. Projections on Economic Development

Diversified economic space expansion projection in the Capital City according to The Business as Usual Scenario is depicted as below,

Zone	Proposed Residential space	Proposed Commercial Space	Proposed Office Space	Proposed Industrial Space	Proposed Other Space	Total Development Area
Executive Residential Zone	8,501,098	1,165,375	137,714	46,479	798,127	10,648,793
Administrative Zone	10,988,286	2,708,084	1,086,605	13,754	621,760	15,418,489
Commercial Zone	29,962,436	18,700,920	1,289,259	466,473	510,217	50,929,305
Office Zone	12,058,396	3,526,243	3,379,047	290,235	267,303	19,521,224
Knowledge Zone	20,581,329	10,120,606	1,573,615	234,030	2,335,953	34,845,534
Transitional Zone	24,562,858	749,912	42,783	282,415	244,566	25,882,535
Industrial Belt	10,003,560	1,265,708	-	1,436,880	253,102	12,959,251
Industrial Zone	6,223,220	334,541	50,868	3,040,452	263,983	9,913,064
Residential Zone	11,496,719	685,918	101,831	1182257	383,432	13,850,158
Total Space	134,377,903	39,257,307	7,661,723	6,992,974	5,678,445	193,968,353

Table 7.1 : Proposed space distrubution - 2050
Source : Western Province Division and Research & Development Unit, UDA - 2018

Chapter 07
ECONOMIC DEVELOPMENT STRATEGY

Strategic Intervention for Economic Development Strategy

Major Strategic Economic Development Projects

7.5. Strategic Intervention for Economic Development Strategy

The Economic Development Strategy is driven by 'Profit enhancement through agglomeration'. It emphasizes the need of increasing the amenity value and promoting the strategic advantage of agglomeration based development. Accordingly, The Economic Strategy includes 4 strategic interventions which support the achievement of Strategic Goal 3. The strategic interventions can be explained as below:

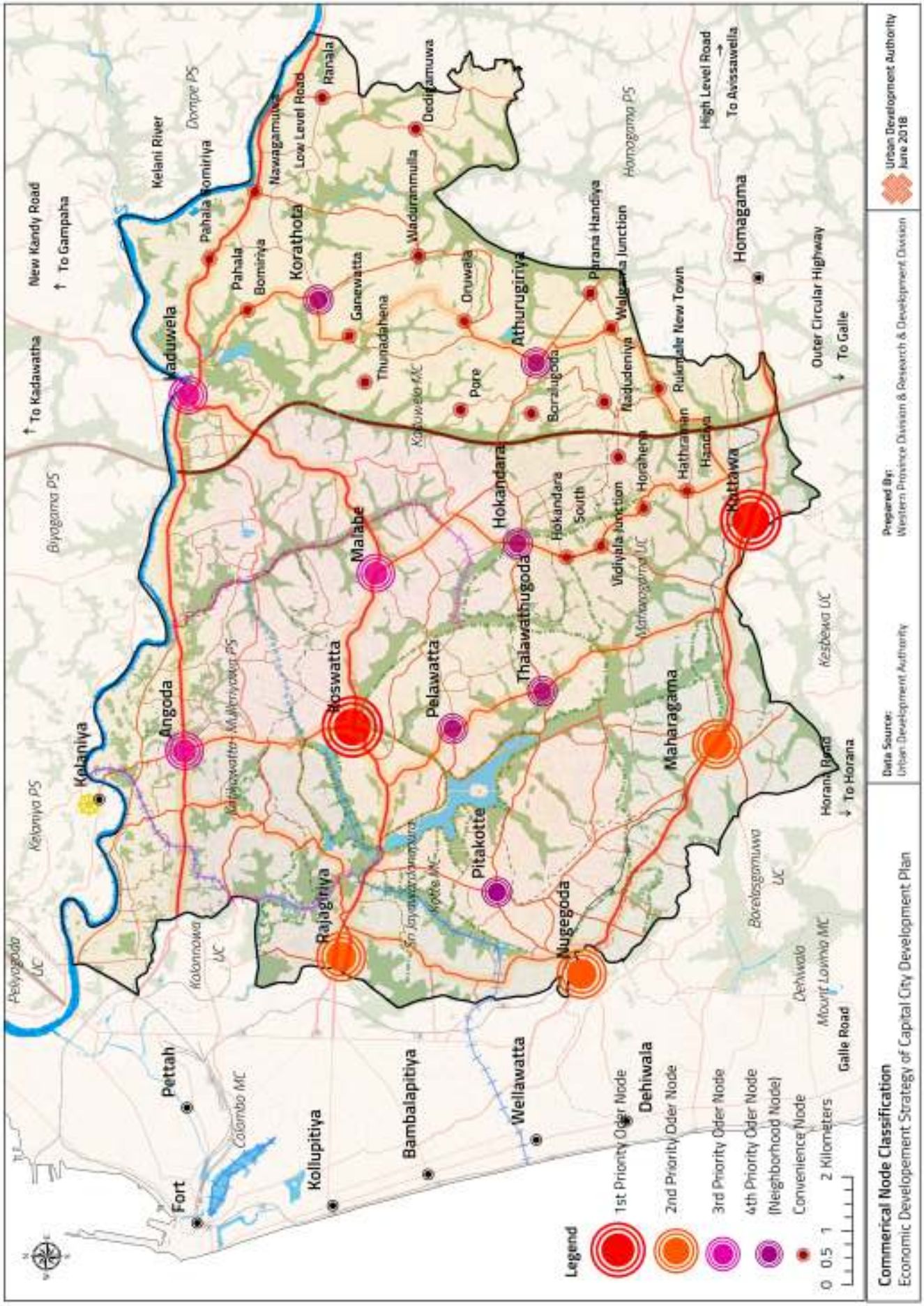
1. *Strategic Intervention 1: Nodes and Commercial Corridors Development*
2. *Strategic Intervention 2: Economic Infrastructure Development*
3. *Strategic Intervention 3: Industrial Development*
4. *Strategic Intervention 4: Cluster Space Economy Promotion through Anchoring Projects*

7.6. Major Strategic Economic Development Projects

Strategic Intervention 1:
Nodes and Commercial Corridors Development

Strategic Project 1 : Commercial Node Classification

A node is a point of intersection/connection within a network. In an environment where all devices are accessible through the network, these devices are all considered nodes. This commercial node classification is done using Node–Place Analysis. The concept of nodes works on several levels, but in concise terms, the nodes are major urban centers. These guidelines and strategies may apply to properties adjoining arterial roads in nodes, as identified in the Node Place Analysis.



Map 7.3 : Economic node classification in Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 2 : Commercial Corridor Classification

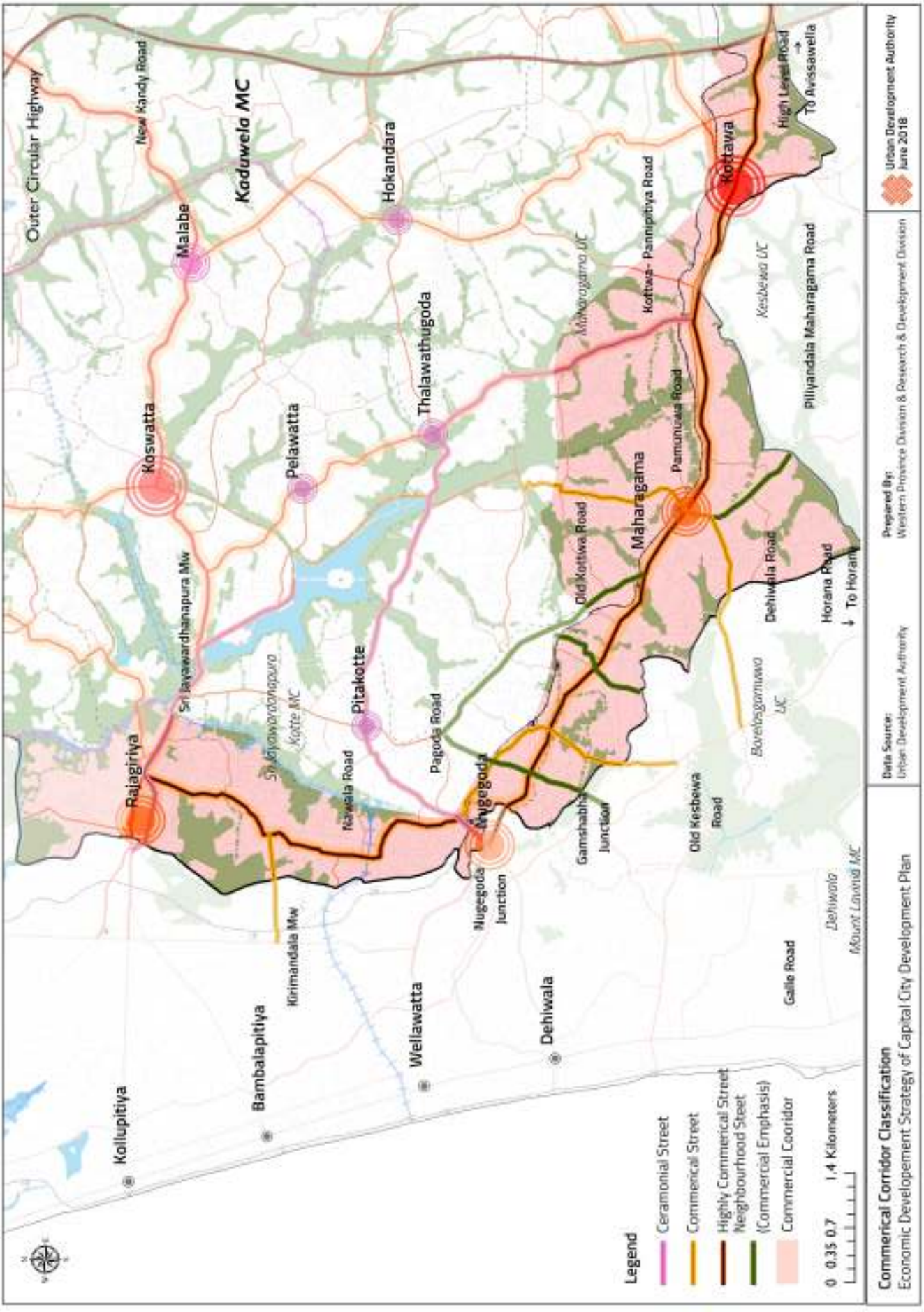
The purpose of the city wide Corridor and Node Development is to provide planning, economic and design guidelines and directions to the Corridors in Capital City. Corridors in the Capital City Development Plan are defined as areas of street oriented uses which incorporate a mix of retail, employment and residential uses, developed at overall greater densities, located along arterial roads serving as major transit routes by analyzing the integration levels of the roads with different economical activities composition. Corridors connect Nodes and other important areas of activity within the city which are intended to be key locations for intens residential developments. The planning team has identified four types of street classification considering the integration level and existing use of the corridors for the Corridor Development Strategy in Capital City Development Plan. *(Refer Annexures of classified roads under Commercial Corridors list.)*

1. *High Commercial Street (Urban Functional Highways)*
    - *Mixed used buildings, with vertical density, ground floor live work / commercial spaces / continuous retail development*
    - *Create active street frontages – sideway activity & sidewalk cafes*
    - *Good public transportation (Different Modes)*

2. *Commercial Street (Arterial Roads, Wetland Roads)*
    - *Create active street frontages – Sideway Activity & Sidewalk Cafes*
    - *Wide tree lines with pavement paths.*

3. *Neighbourhood Street (Sub Arterial Roads, Wetland Roads)*
    - *Tree lined boulevards and generous sidewalks to promote walking as the prominent mean of circulation*

4. *Convenience Street*
    - *All types of commercial activities located on this street*



Map 7.4 : Commercial street classification in Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

Chapter 07
ECONOMIC DEVELOPMENT STRATEGY

Major Strategic Economic Development Projects

Strategic Intervention 2 : Economic Infrastructure Development

Infrastructure is a basic requirement for economic development. It does not directly produce goods and services but facilitates production in primary, secondary and tertiary economic activities by creating external economies. It is an accepted fact that, the level of economic development in any country directly depends on the development of infrastructure. Through the strategy, the planning team provides different infrastructure provisions emphasizing main physical infrastructure components.

This strategy refers to strategic Projects, which comes under the previous Development strategies of CCDP. Following strategic interventions connects with other plans as emphasized below,

1. *Connected road network system*
2. *Alternative transport modes development*
3. *Multi model hub developments*
4. *Telecommunication & other infrastructure facilities*
5. *Optimum use of environmental features*
6. *IT education related Infrastructure facilitiesdevelopment*

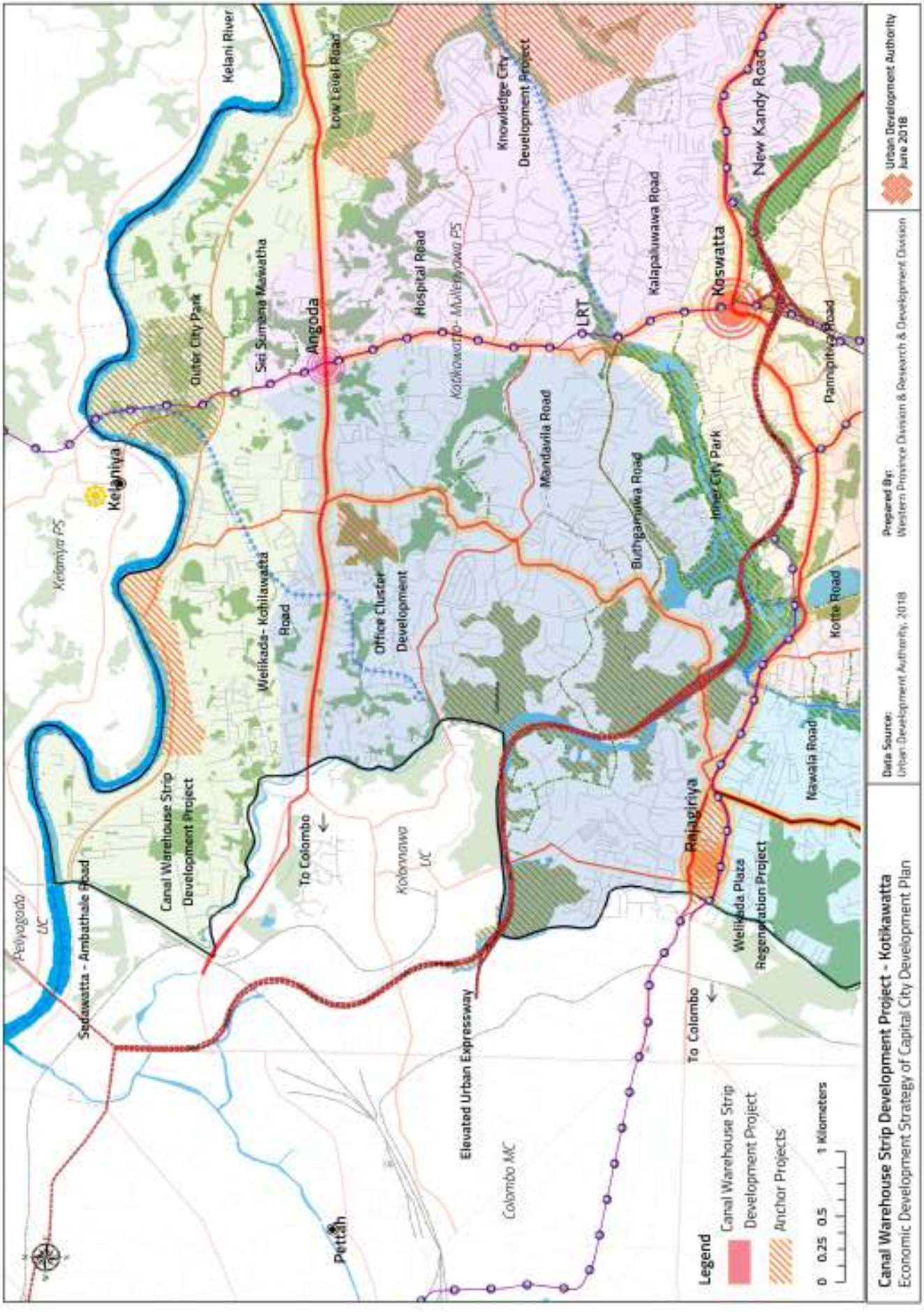
Strategy Intervention 3 : Industrial Development

Requirement of the Industrial Development Intervention necessary to identify the industrial spaces suitable within the Capital City boundary. It demarcates special industrial zones and formulates special regulations to promote and guide the industrial zones. Accordingly, Ambathale and Sedawatte are promoted for warehouse purposes while Korathota Town Area is promoted for mixed industries. In particular, special regulations are provided to regulate the home based industries. Equivalently, Projects are introduced to make an efficient industrial cluster within the planning boundary.

Strategic Project 1 :

Name of the Project & Project Code	Location	Type of Development	Expected Land Extent (Foot Print)
Outer Ring – River base Warehouse Strip Development Project SIII-E-9	Sedawaththa Ambathale Corridor Strip (1.5km)	Regenerate the existing warehouse industry spread along the area and enhance scenic beauty of the Kelani River with the continuation of the project initiative 'Water Esplanade' proposed by CCCDP.	1,263,885 sq.ft

Table 7.2 : Strategic Project 1
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 7.5 : Project 1 - River base warehouse development
Source : Western Province Division and Research & Development Unit, UDA - 2018

Chapter 07
ECONOMIC DEVELOPMENT STRATEGY

Major Strategic Economic Development Projects

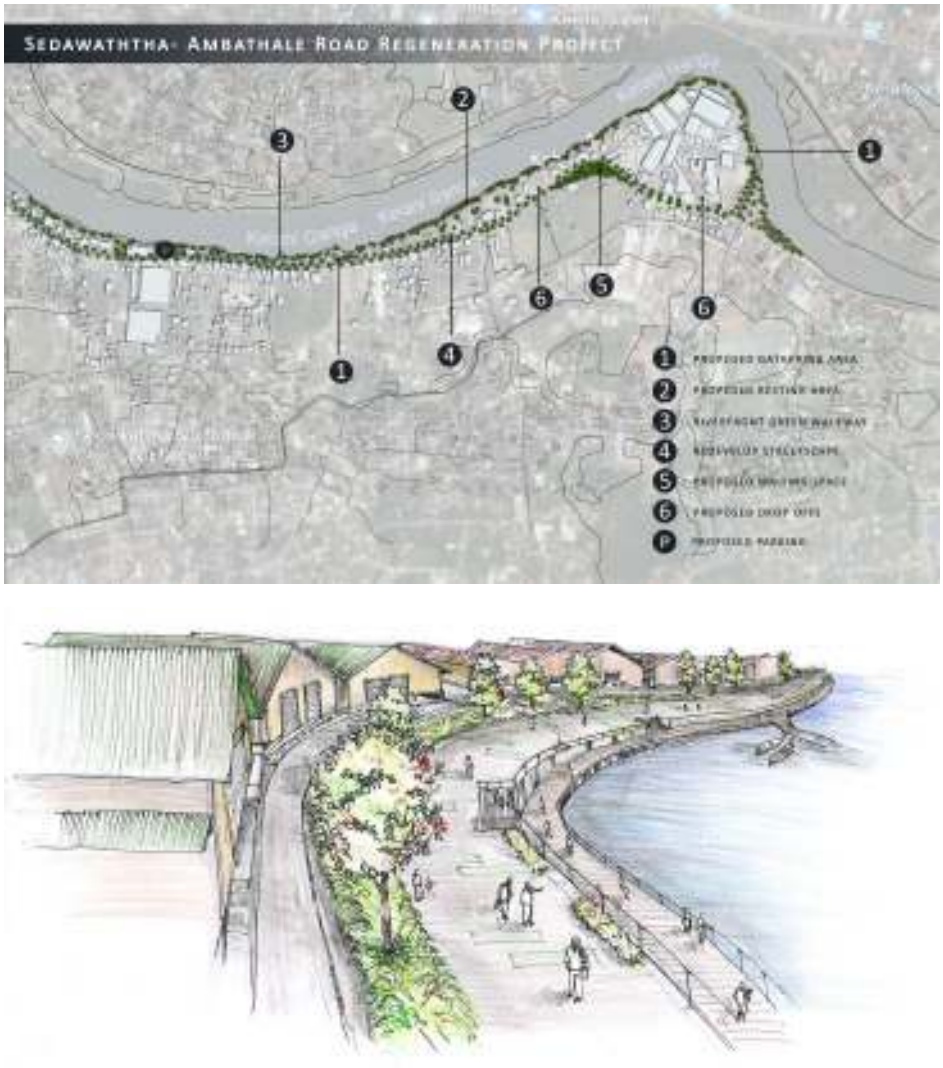
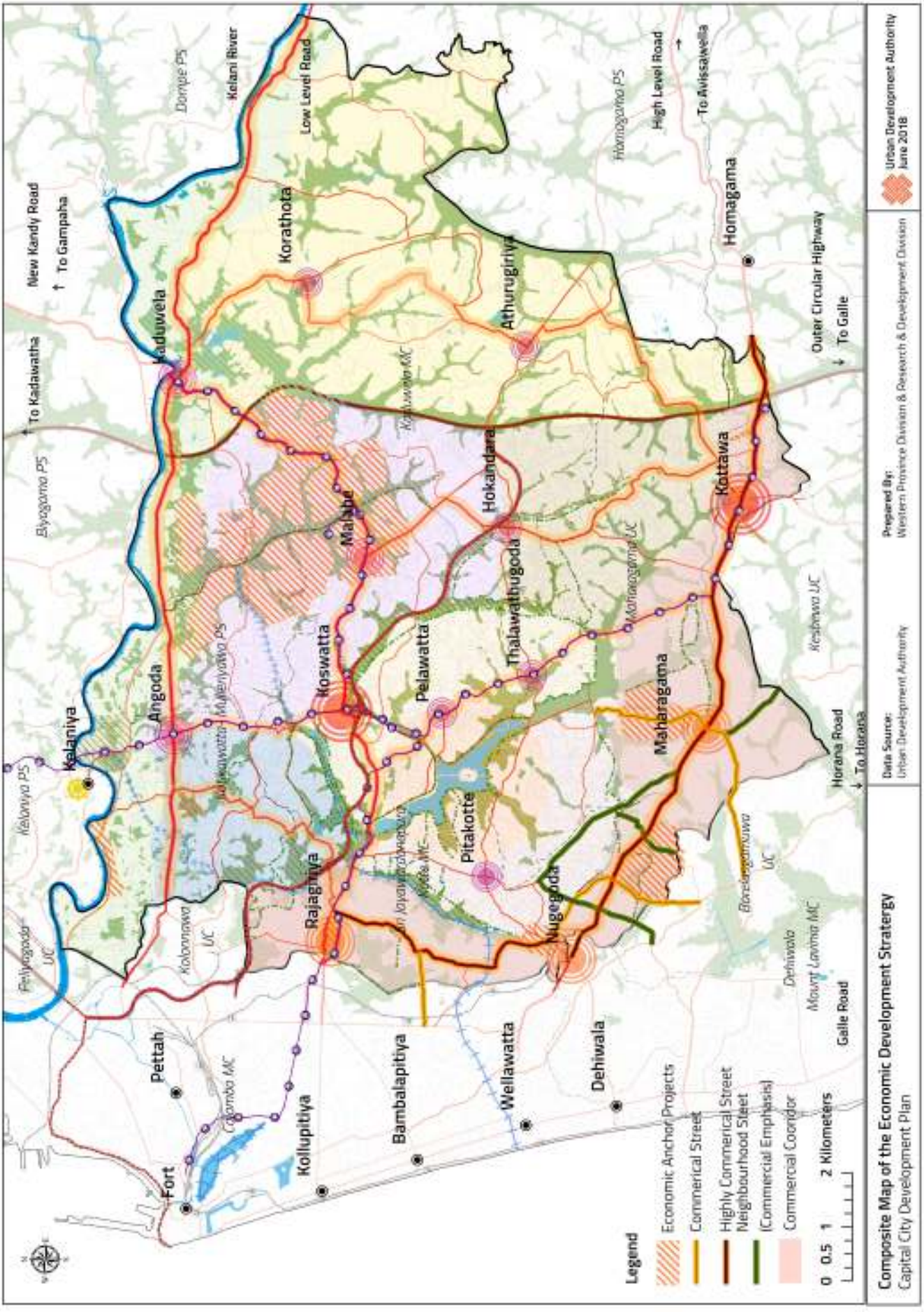


Figure 7.1 : Project 1 - River base warehouse strip design layout
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Intervention 4: Cluster Space Economy Promotion through Strategic Projects

The major economic growth drivers of economic development and the main economic clusters in the city have been analyzed to understand the pattern of economic development and clustering through the Suitability Analysis. In order to promote the recognized clusters and increase efficiency of interaction in commercial activities. The economic development strategy will initiate the projects, which will help to accelerate the existing cluster efficiency with the collaboration of other economic strategies with the infrastructure provision.



Map 7.6 : Composite map of economic development strategy with identified projects
Source : Western Province Division and Research & Development Unit, UDA - 2018

Chapter 07
ECONOMIC DEVELOPMENT STRATEGY

Major Strategic Economic Development Projects

Strategic Project 1 : Outer Ring –Office Cluster Development

Name of the Project & Project Code	Location	Type of Development	Expected Land Extent (Foot Print)
Office Cluster Development SI-E-1	Kotikawaththa	Town Center Development Project including a majority of Office Space, Institution	Office & Institution Space = 440,000 sqft. Retail Commercial Space = 190,000 sqft

Table 7.3 : Strategic Project 2
Source : Western Province Division and Research & Development Unit, UDA - 2018

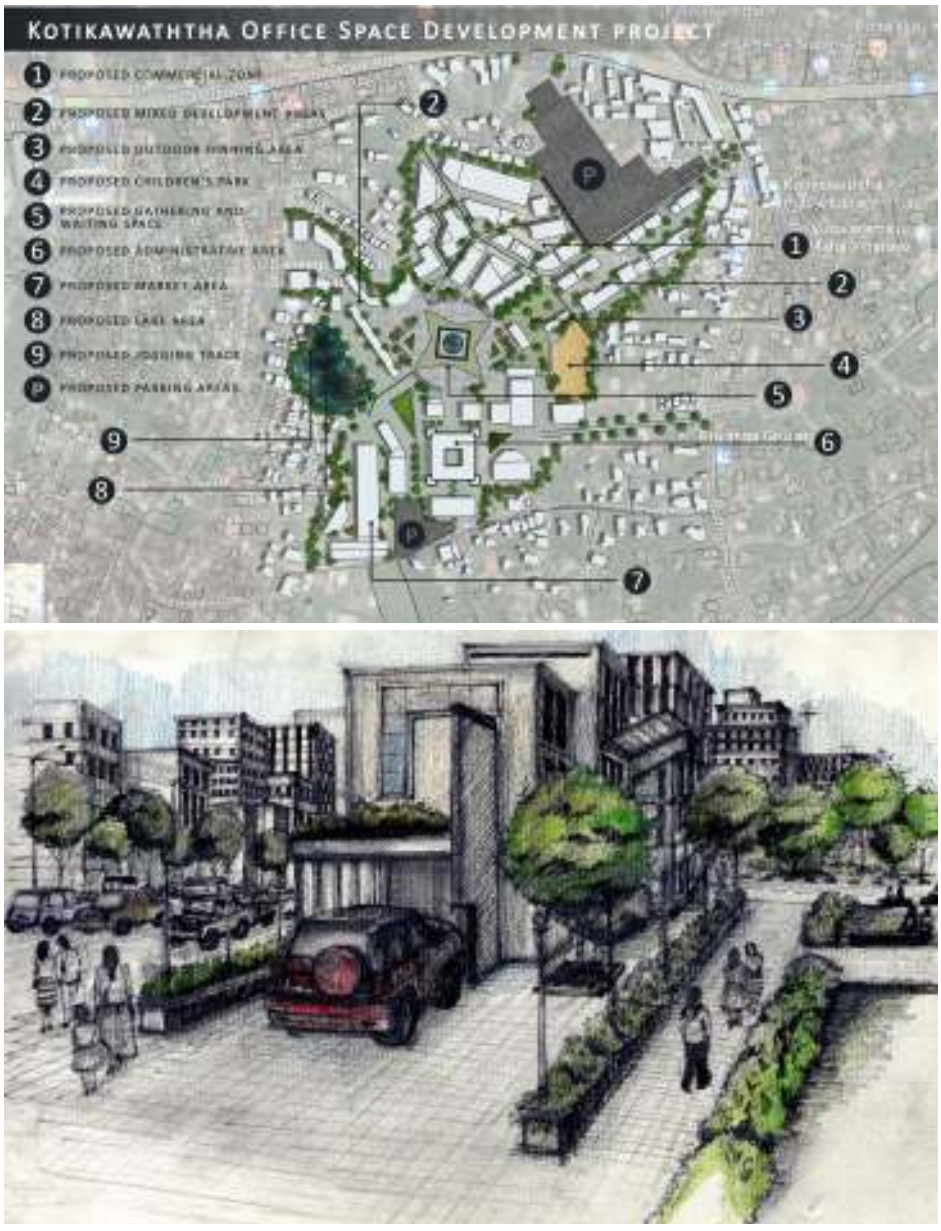
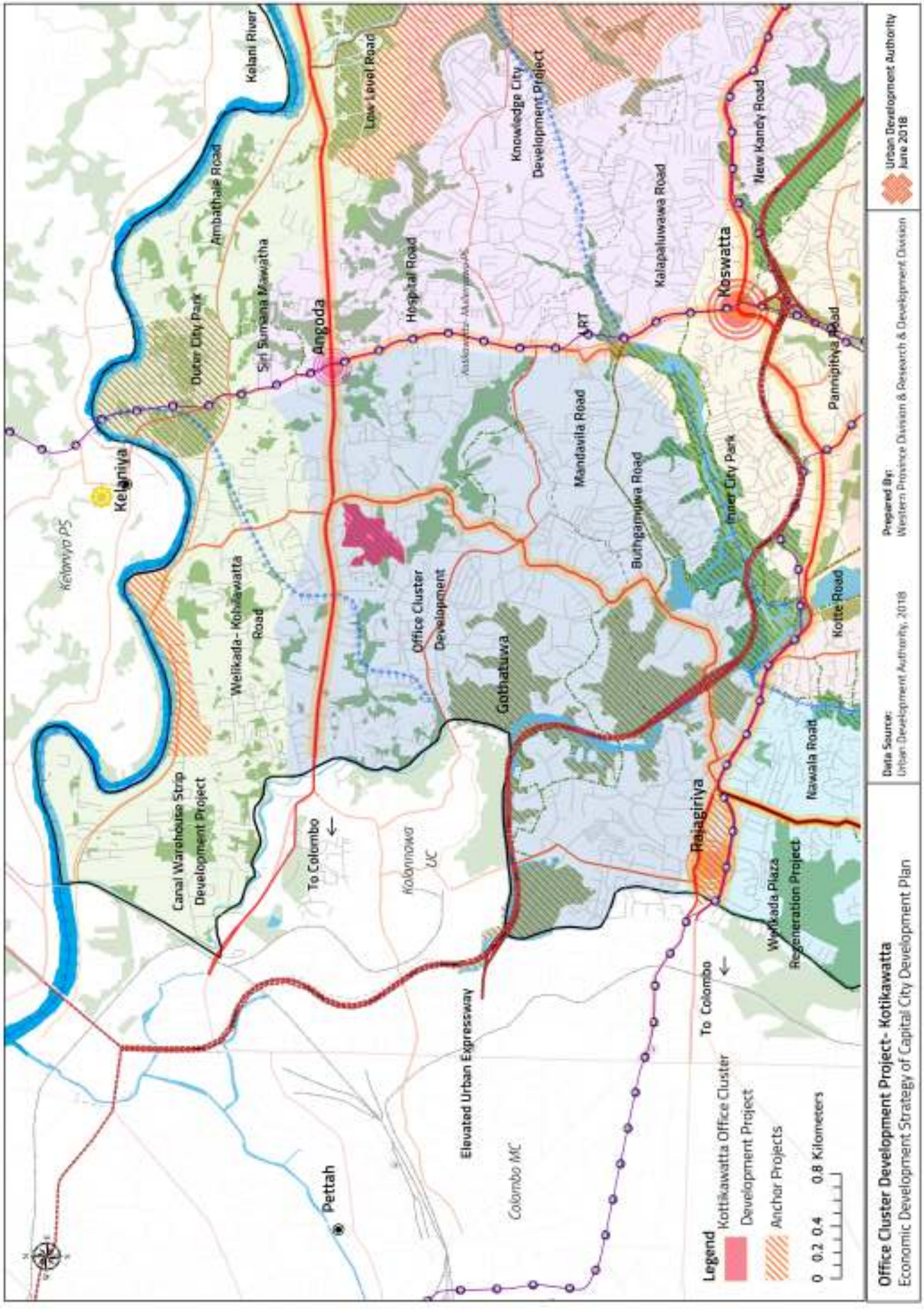


Figure 7.2 : Project 2 - Office cluster deisgn layout
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 7.7 : Project 2 - Office cluster deisgn layout
Source : Western Province Division and Research & Development Unit, UDA - 2018

Chapter 07
ECONOMIC DEVELOPMENT STRATEGY

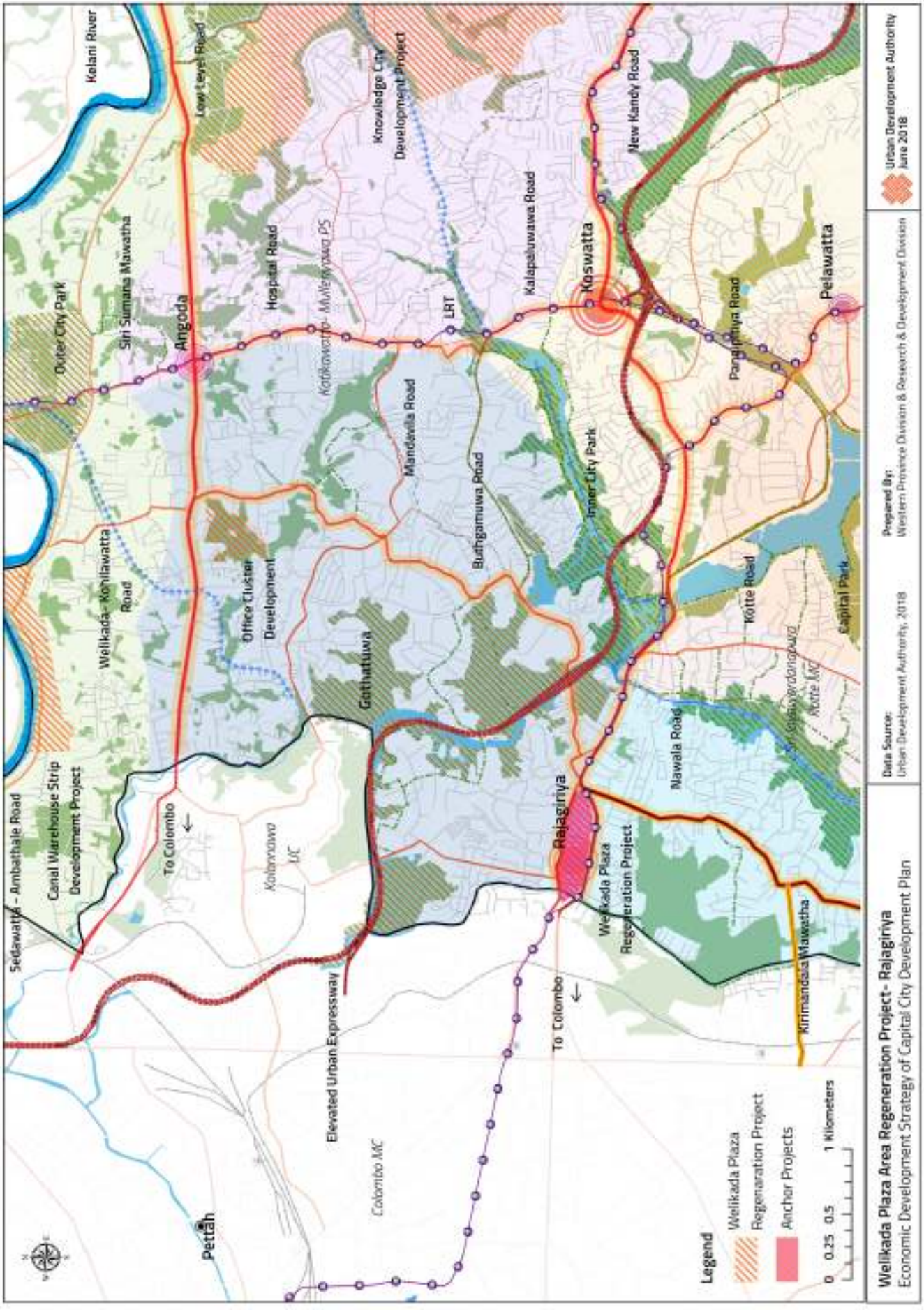
Major Strategic Economic Development Projects

Strategic Project 2 : Outer Ring – Special Mixed Development Zone

Name of the Project & Project Code	Location	Type of Development	Expected Land Extent (Foot Print)
Special Mixed Development Zone SI-E-3	Rajagiriya Community Node – Welikada plaza area	Welikada Plaza area regeneration for Mixed Development Activities.	Commercial & Retail Space Development = 800,000 sqft. Residential Space = 200,000 sqft

Table 7.4 : Strategic Project 3
Source : Western Province Division and Research & Development Unit, UDA - 2018

Figure 7.3 : Projecct 3 - Outer ring special mix development layout
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 7.8 : Projecct 3 - Outer ring special mix development layout
Source : Western Province Division and Research & Development Unit, UDA - 2018

Chapter 07
ECONOMIC DEVELOPMENT STRATEGY

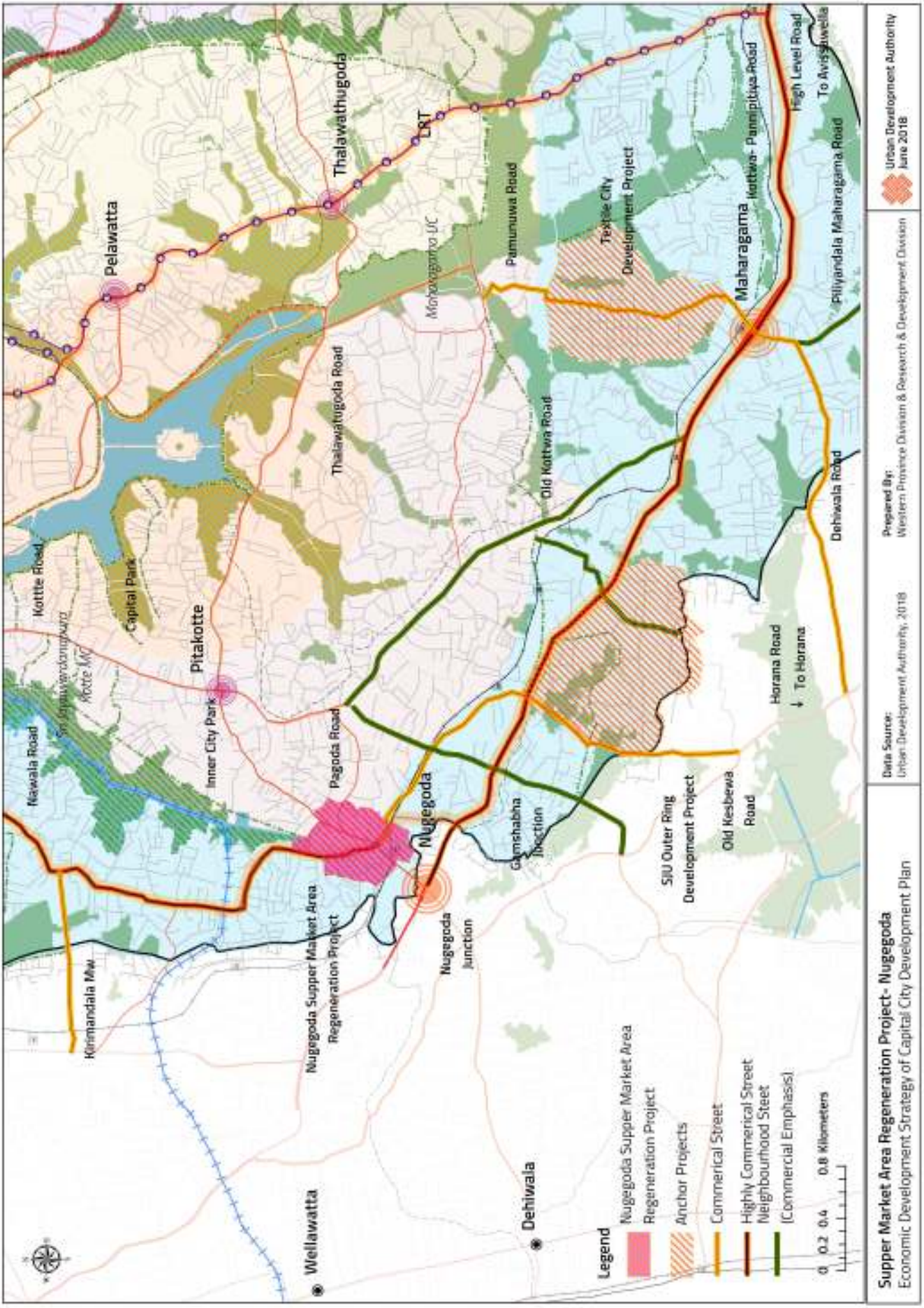
Major Strategic Economic Development Projects

Strategic Project 3 : Nugegoda Super Market Area Regeneration Project

Name of the Project & Project Code	Location	Type of Development	Expected Land Extent (Foot Print)
Nugegoda Super Market Area Regeneration Project SII-E-7	Nugegoda Super Market	Super Market area regeneration for Mixed Development Activities.	Office Space Development = 100,000 sqft. Commercial & Retail Space Development= 120,000 sqft Residential Space = 97,000 sqft

Table 7.5 : Strategic Project 4
Source : Western Province Division and Research & Development Unit, UDA - 2018

Figure 7.4 : Project 4 - Nugegoda super market area design layout
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 7.9 : Project 4 - Nugegoda super market area design layout
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 4 : University District Development Project

Name of the Project & Project Code	Location	Type of Development	Expected Land Extent (Foot Print)
University District Development Project SII -E-8	Sri Jawardenapura University buffer	Area revitalization project including 3 components, Commercial Revitalization, Accessibility Improvement and Design Framework	Commercial & Retail Space Development: 1,800,000

Table 7.6: Strategic Project 5
Source : Western Province Division and Research & Development Unit, UDA - 2018

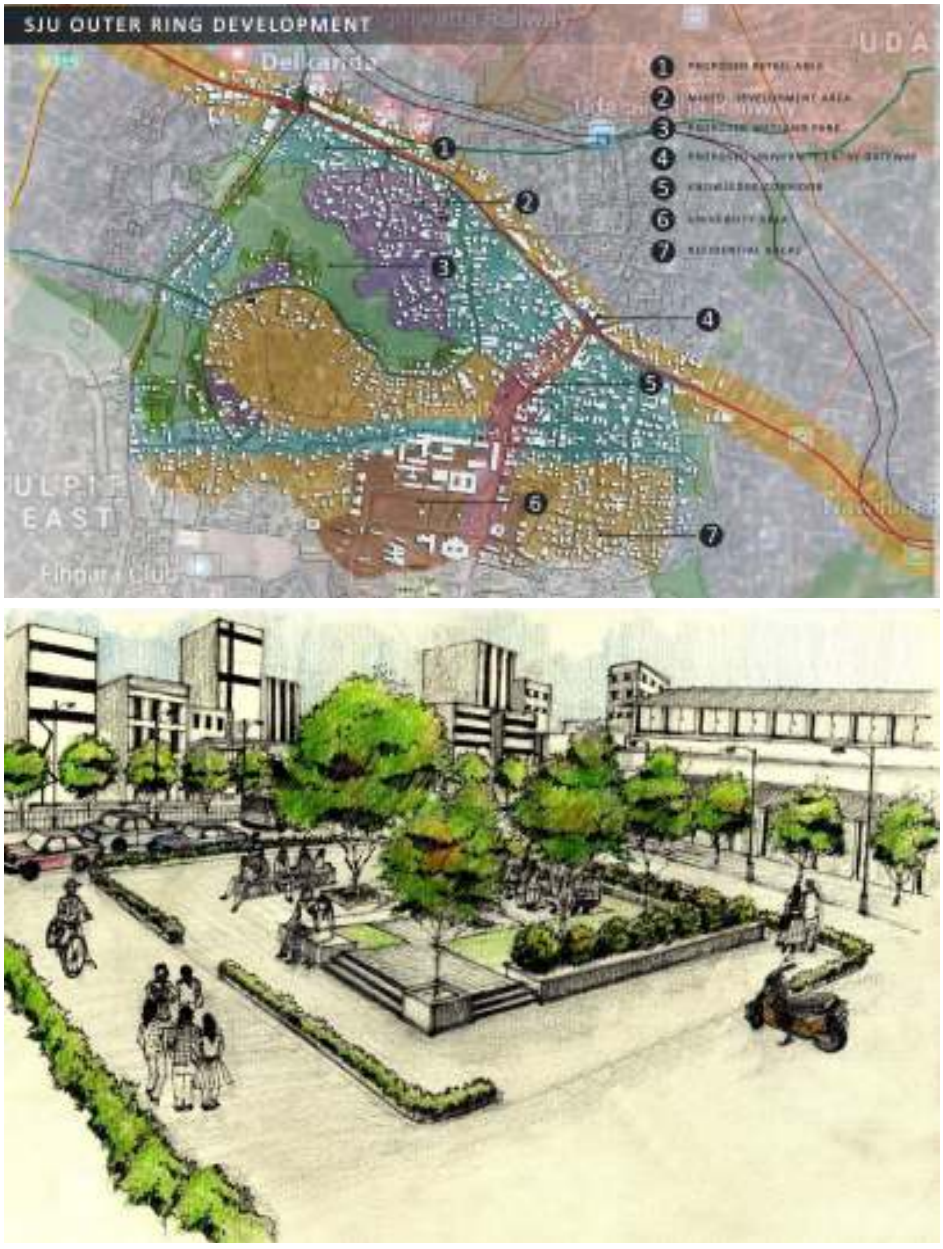
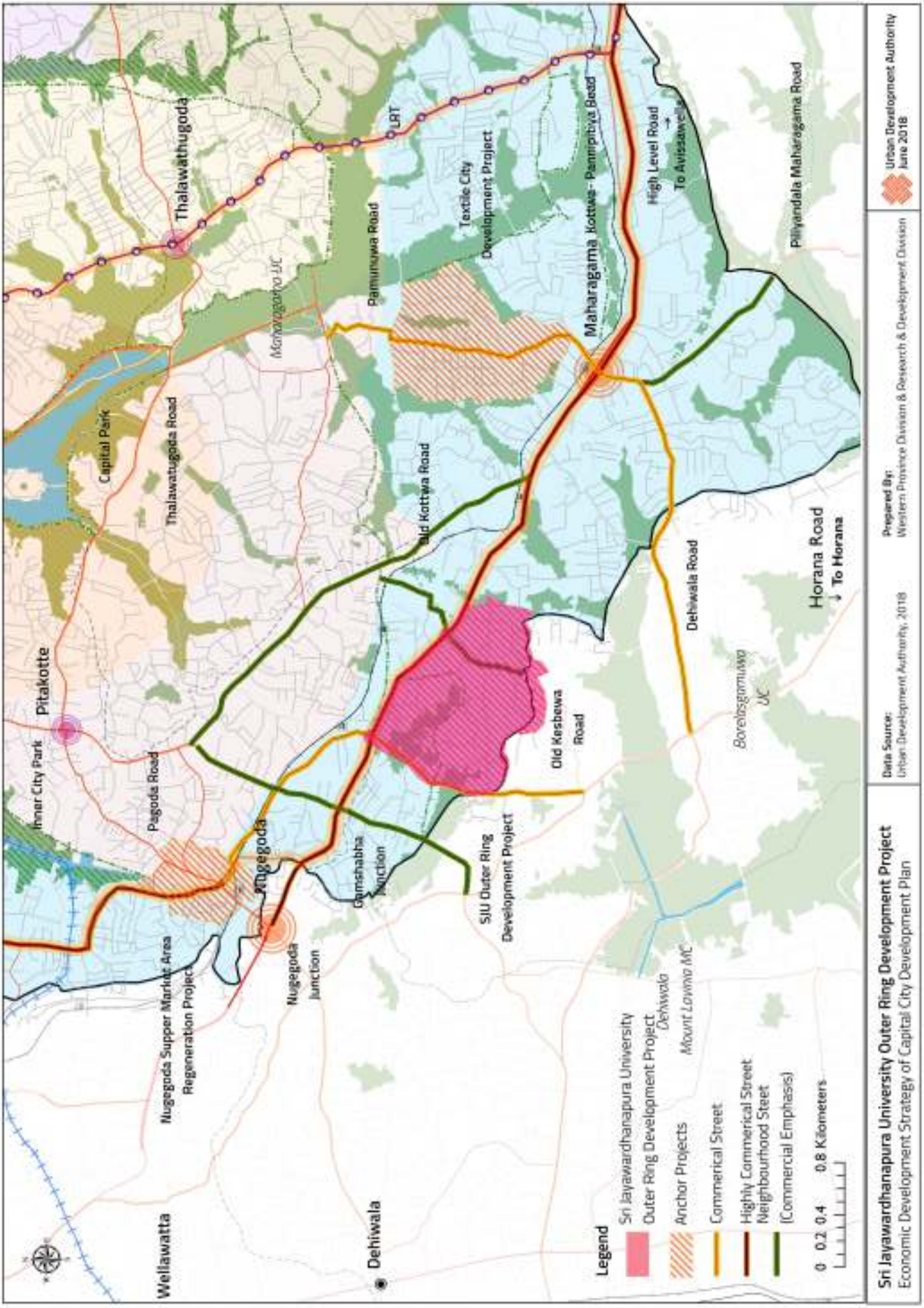


Figure 7.5 : Project 5 - University district development layout
Source : Western Province Division and Research & Development Unit, UDA - 2018



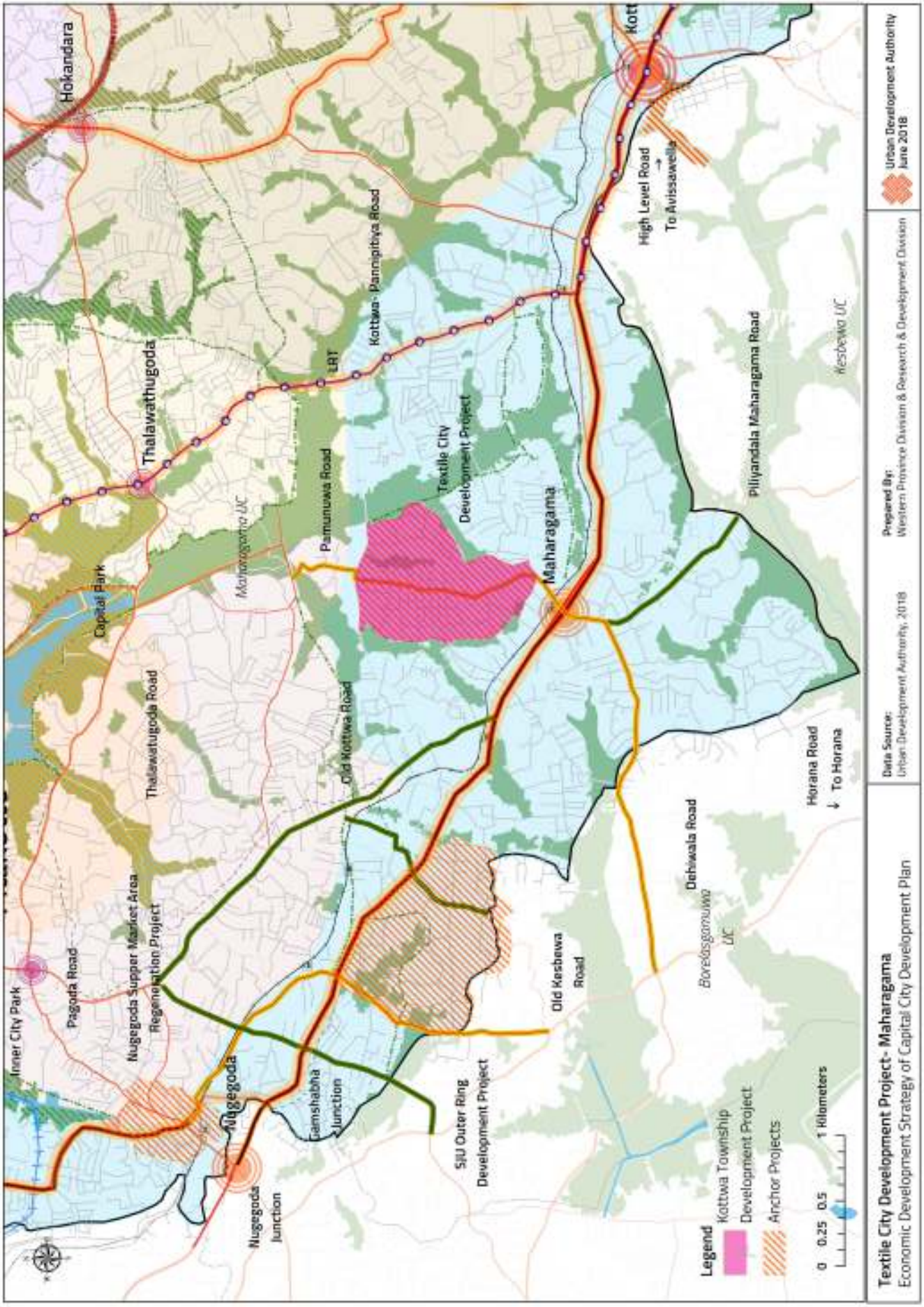
Map 7.10 : Project 5 - University district development layout
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 5 : Textile Park Development

Name of the Project & Project Code	Location	Type of Development	Expected Land Extent (Foot Print)
Textile Park Development Open Space Development Railway Station Regeneration SI-E-2 *(Project by Western Province Division - UDA)*	Pamunuwa, Mahragama Maharagama Town Center Maharagama Railway Station	Facilitate area for wholesale and retail development	Commercial & Retail Space Development: 2000 Other Service area Development (Sq.ft) : 2000

Table 7.7 : Strategic Project 6
Source : Western Province Division and Research & Development Unit, UDA - 2018

Figure 7.6 : Project 6 - Pamunuwa textile park development layout
Source : Western Province Division and Research & Development Unit, UDA - 2018



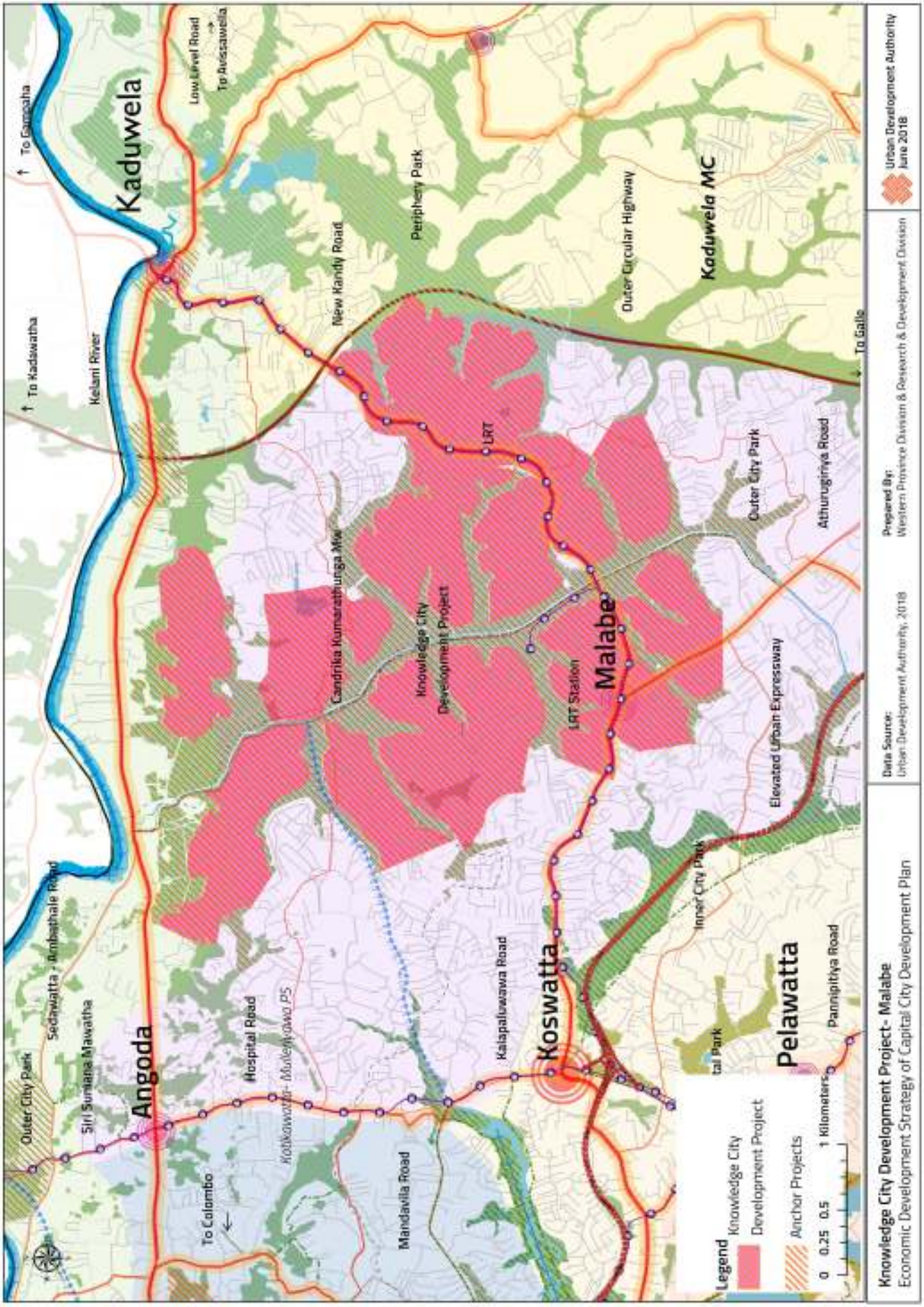
Map 7.11 : Project 6 - Pamunuwa textile park development layout
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 6 : Knowledge City Development Project

Name of the Project & Project Code	Location	Type of Development	Expected Land Extent (Foot Print)
Knowledge City Development Project SIII-E-10 Project incorporated from Megapolice Development Plan	Malabe	Make Provisions to develop as an Information Technology and Higher Educational Hub	Commercial & Retail Space Development: 1,900,000 (foot Print School & Higher Educational Space & Residential Space

Table 7.8 : Strategic Project 7
Source : Western Province Division and Research & Development Unit, UDA - 2018

Figure 7.7 : Project 7 - Knowledge city design layout
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 7.12 : Project 7 - Knowledge city design layout
Source : Western Province Division and Research & Development Unit, UDA - 2018

Chapter 07
ECONOMIC DEVELOPMENT STRATEGY

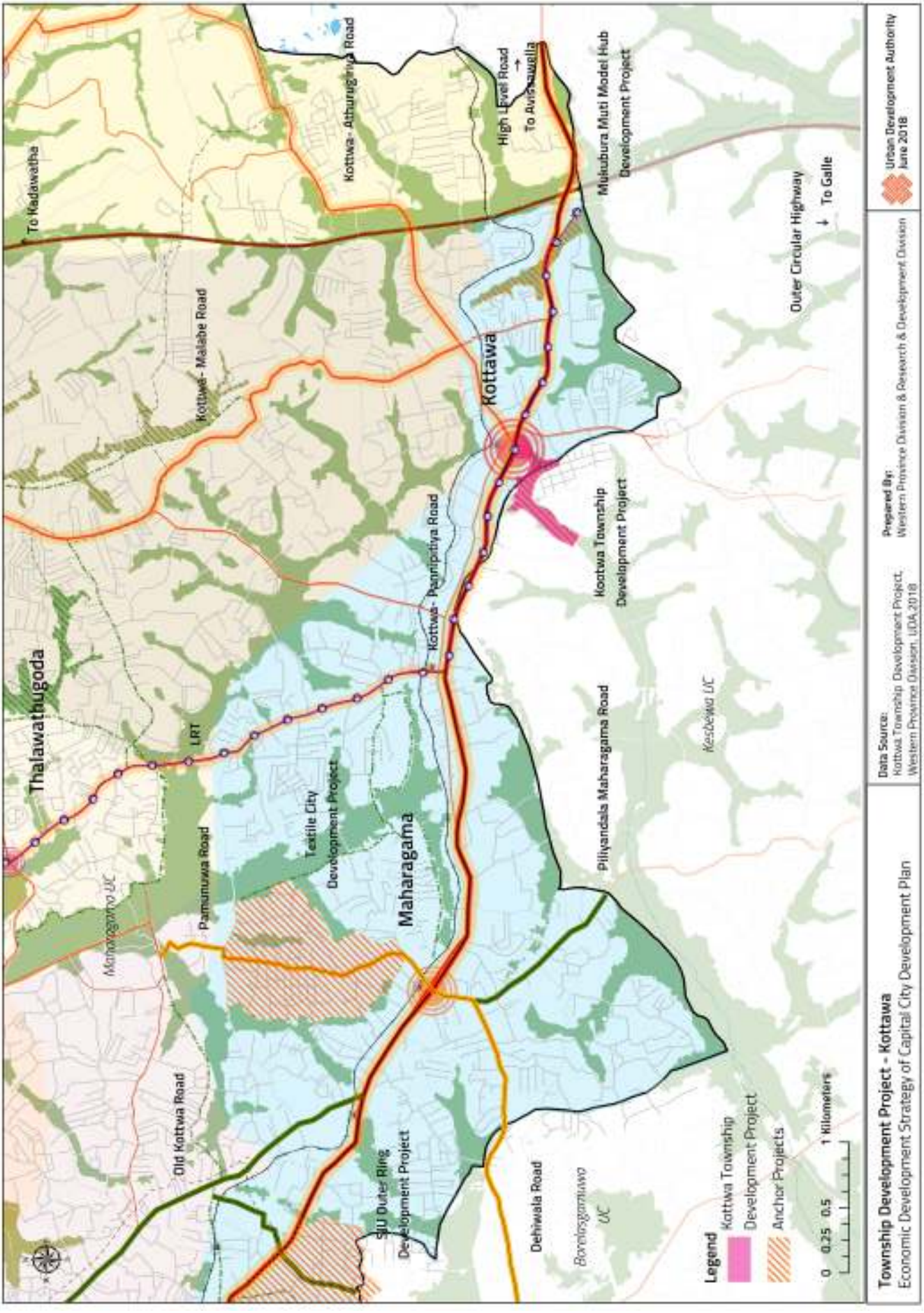
Major Strategic Economic Development Projects

Strategic Project 7 : Kottawa Township Development Project

Name of the Project & Project Code	Location	Type of Development	Expected Land Extent (Foot Print)
Township Development Project SII-E-4 SII-E-5 Project from Western Province, UDA)	Kottawa Town center, Mahragama Town center	Mixed development including Bus Stand Relocation Project with commercial and residential space development.	Space calculation includes in Makubura Development Project

Table 7.9 : Strategic Project 8
Source : Western Province Division and Research & Development Unit, UDA - 2018

Figure 7.8 : Project 8 - Kottawa township development layout
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 7.13 : Project 8 - Kottawa township development layout
Source : Western Province Division and Research & Development Unit, UDA - 2018

Chapter 07
ECONOMIC DEVELOPMENT STRATEGY

Major Strategic Economic Development Projects

Strategic Project 8 : Makubura Transit Orient Development

Name of the Project & Project Code	Location	Type of Development	Expected Land Extent (Foot Print)
Transition Orient Development SI-T-2	Makubura, Kottawa	Introduce different transport modes with Mixed Development Activities	Office Space Development (Sq.ft): 200,000 Commercial & Retail Space Development (Sq.ft): 800,000 Residential Space Development (Sq.ft): 200,000 (Foot Print)

Table 7.10 : Strategic Project 9
Source : Western Province Division and Research & Development Unit, UDA - 2018

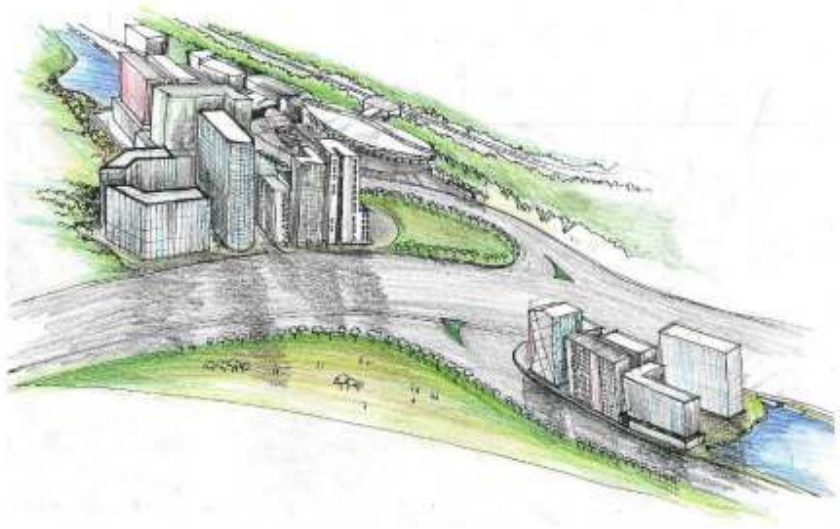
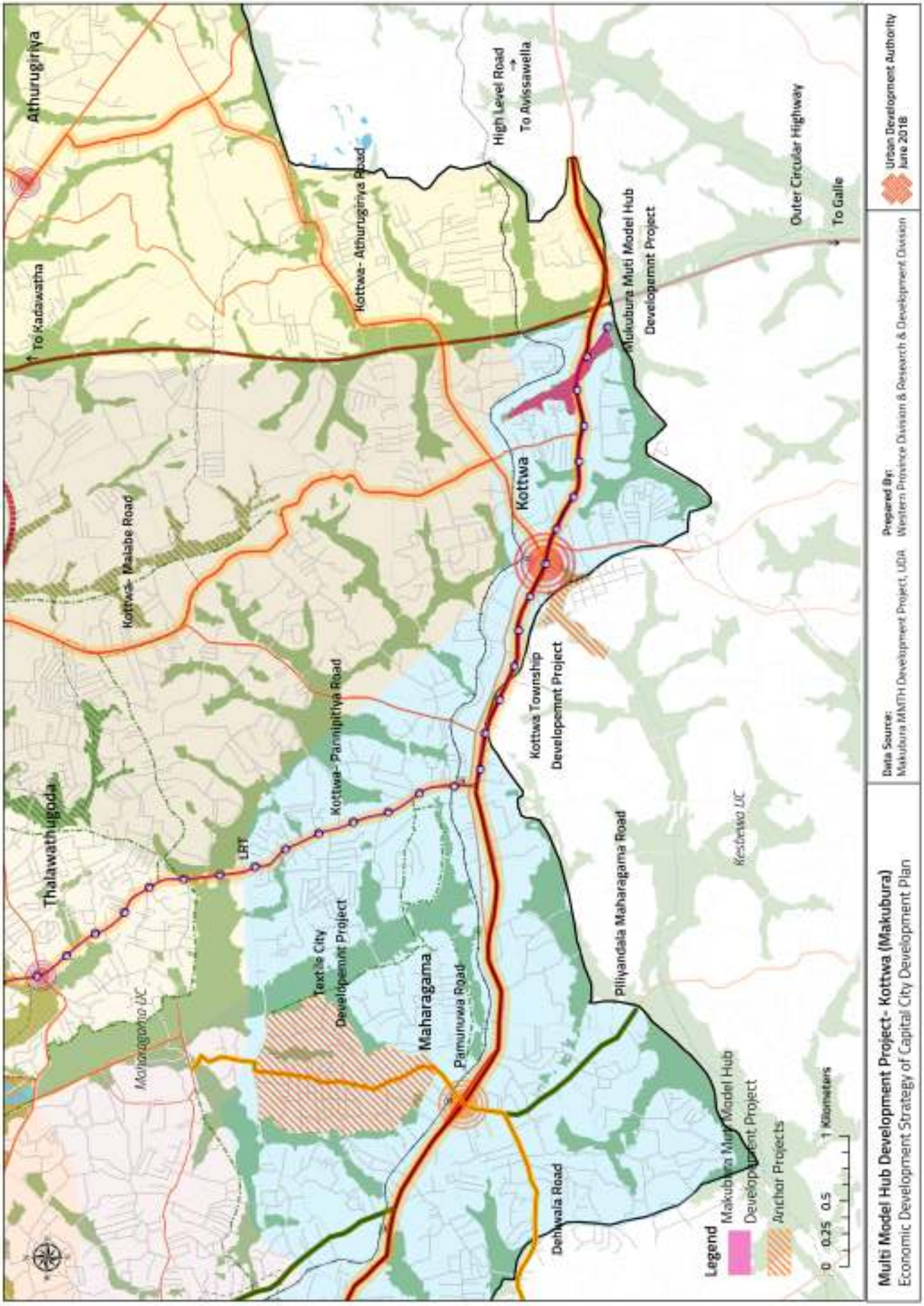


Figure 7.9 : Project 9 - Makubura TOD development
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 7.14 : Project 9 - Makubura TOD development
Source : Western Province Division and Research & Development Unit, UDA - 2018

7.7. Impacts of Strategic Economic Development Projects

The economic performance impact of the above mentioned Projects were carried out based on two criteria;

1. *Additionally, added commercial space through the Projects (This space does not denote in the space added via business as usual method)*
2. *Additional Employment generation through the government intervention.*

Total added Spaces via Projects	Total Added Space	Total Gross employment generation
Total Added Commercial & Retail sqft	27 million	50,160 (20%)
Total Added Institution sqft	4.2 million	3,901 (10%)
Total Added Private Office sqft	1 million	1,548 (50%)
Total Regenerate Industry Warehouse sqft	1.2 million	445 (20%)
Total Added Residential Sqft	1.3 million	

Table 7.11 : Added space for Capital City through projects
Source : Western Province Division and Research & Development Unit, UDA - 2018

- *Total Direct Gross Employment Generation through the Projects = 56,054*
- *Total labour force participation = 36.24% (2016)*
- *Natural Growth Rate L.F.P = 44.6% (2030)*
- *Total labour force participation expansion = 50.86% (2030) (Planning Area)*

08

Administrative Development Strategy

Chapter 08
ADMINISTRATIVE CLUSTER DEVELOPMENT STRATEGY

Introduction

Aims and Objectives

Scope of the Administrative Development Strategy

8.1. Introduction

8.1.1. Aims and Objectives

The existing situation of proposed Capital City Planning Area of Sri Lanka facilitates 99 national level institutions (Government and Semi Government Institutions) within a land area of 170 hectares and accommodates 26,000 government employees approximately.

The proposed Capital City Development Plan will attract more national level institutions to the proposed administrative district enclosed by wetlands. According to Census and Statistics data (2017), 266 government and semi government institutions are located within the area of Colombo Municipal Council out of which 214 of government and semi government institutions are identified to be relocated in the proposed Administrative area.

8.1.2. Approach

Accordingly, the main objectives of this strategy are to,

1. *Improve 'character' of the Capital City with sense of administrative functions by providing more spaces for administrative activities*
2. *Provide efficient and smooth administrative facilities by improving cluster efficiency.*

8.2. Scope of the Administrative Development Strategy

- *All strategic projects, proposed in this section of the development plan are expected to serve the planning area within the time durations specified in chapter 1 of the Development Plan. Situations beyond these durations will have to be dealt with timely updating of the development plan.*

- *This strategy aims to accommodate and facilitate national level administrative institutions to the proposed administrative district as mentioned in the concept of the Capital City Development Plan*

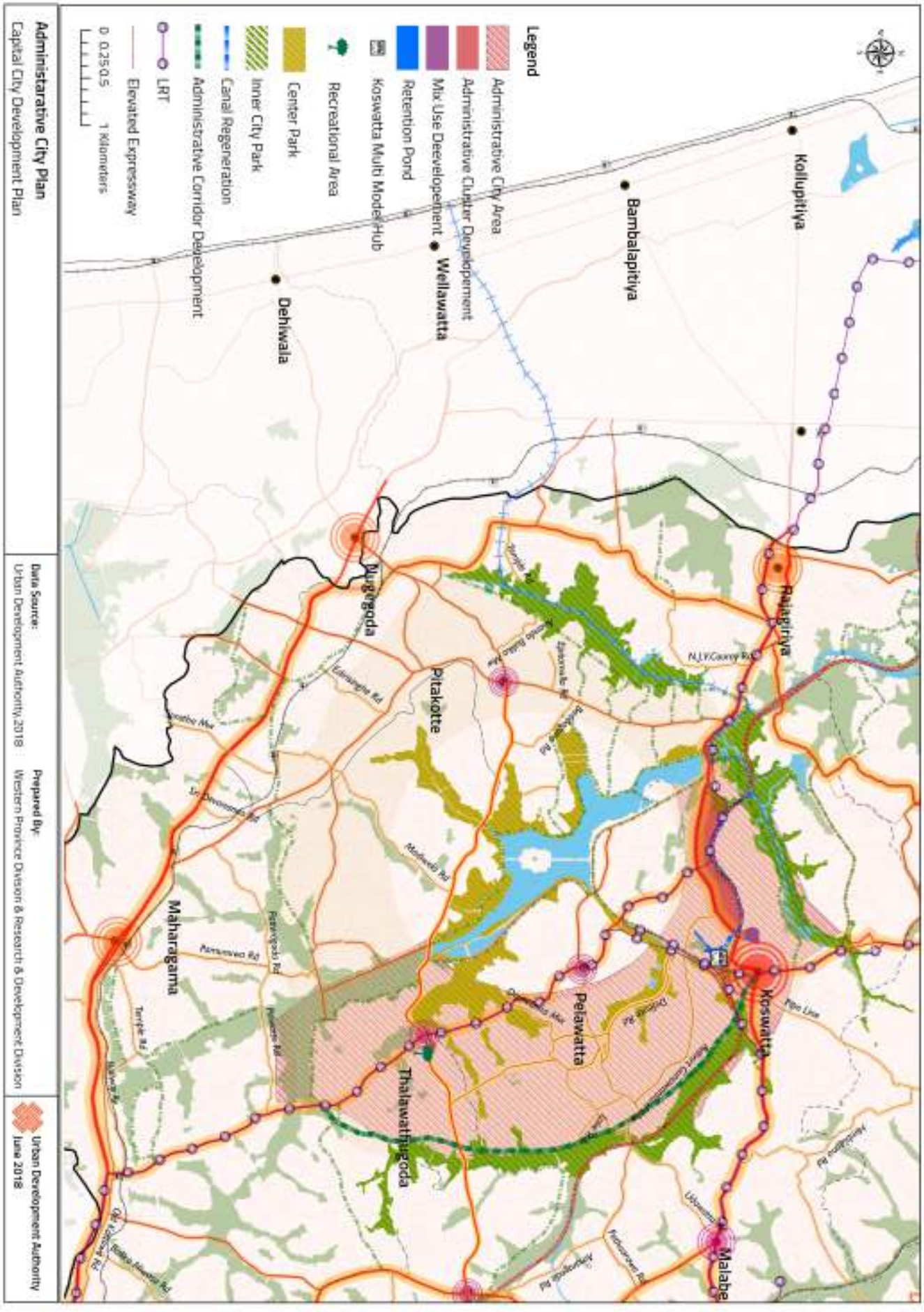
- *The plan has taken into account the foreseeable conditions in the socio-economic infrastructure facilities, the advancement of technologies and the projected socio-demographic conditions, based on the available information. Any unexpected and unprecedented events or conditions shall be addressed with timely interventions.*

8.3. Strategic Interventions for Administrative Clusters Development

This strategy consists of two interventions

1. **Intervention 01 –** *Regeneration of Administrative Area (Cluster 01)*
2. **Intervention 02 –** *Townships Development and Road Improvement (Cluster 02)*

Figure 8.1 : Concept of administrative development strategy
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 8.1 : Composite map of administartive cluster development strategy
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Intervetion 1 : *Strategic Intervention for Regeneration of Administrative Area (Cluster 01)*

The plan proposes to readjust Cluster 1 area by allocating lands to fulfill the requirement of administrative institutions with national level importance. The following criteria are considered in order to do so,

1. *Existing administrative institutions locations*
2. *Existing road network*
3. *Proposed road and transport projects (Polduwa Road Extension, Proposed LRT Network, Proposed LRT Stations and Elevated Urban Expressway)*

Administrative Cluster 01 Development proposes to develop the administrative functions within an extent of 70 acres approximately. 18 acres of the given extent is occupied by administrative activities such as Sethsiripaya Stage 1, Stage 2, Suhurupaya, Department of Census & Statistics and Proposed Sethsiripaya Stage 3 building complex. Further, it is proposed to redesign the remaining area of Cluster 1 with green space extensions by incorporating the Diyatha Park Extension Project.

Strategic Intervention 2 : *Strategic Intervention for Townships Development and Road Improvement (Cluster 02)*

Currently, administrative institutions are distributed around the Battaramulla and Pelawatta area. Further It is expected to encourage the relocations and new establishments of administrative institutions from Koswatta to Thalawathugoda.

Most prominently, this development aims to provide necessary provisions to administrative functions of Cluster 02 area. Cluster 2 mainly comprises three components as mentioned below,

1. *Koswatta Township Development*
2. *Thalawathugoda Township Development*
3. *Road improvement towards Cluster 02 area*

8.4. Strategic Projects for Administrative City Development

Strategic Intervetion 1 : Strategic Intervention for Regeneration of Administrative Area (Cluster 01)

Strategic Projects 1 : Redesign of Cluster 1 Area

Figure 8.2: Admin plan clsuter 1 development
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Projects 2 : Conversion of Land to Urban Spaces and Recreational Parks

It is proposed to readjust adjacent lands of the administrative building as urban spaces and recreational parks with green space extensions to provide recreational facilities to offices and the general public. Further, it is proposed to incorporate Diyatha Park Extension Project and regenerate the canal which flows along Diyatha Park towards Koswatta area (2 km) with admirable landscape.

Figure 8.3: Cluster I - admin area regeneration project
Source : Western Province Division and Research & Development Unit, UDA - 2018

Figure 8.4: Expected urban form in cluster I - Admin city
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Intervention 2 : Strategic Intervention for Townships Development and Road Improvement (Cluster 02)

Strategic Projects 1 : Koswatta Township Development

Koswatta Town is identified as one of the First Priority Nodes in the Capital City. Therefore, it is expected to have a massive development while achieving the proposed character of the area. Koswatta will also perform as a Transitional Node which gives the impression of entering the Administrative District of the Capital City. Hence, it is noticeable that the plan provides special consideration to Koswatta. In order to achieve the expected use of administrative space, many projects are proposed, while character improvement projects will be discussed in the Urban Design Strategy. Township development comprises sub-projects as below,

1. *Road and transport network development*
2. *Ceremonial access ways*
3. *Multi model hub*
4. *Mix development area*
5. *Canal regeneration*
6. *Retention pond*
7. *Walking path improvement*

Sub-Project 1 : Road and Transport Network Development of Koswatta Town

As this node is expected to perform as the First Priority Node with administrative uses, it is necessary to improve the connectivity and accessibility of the node. Therefore, following transport improvements are suggested for Koswatta.

The Koswatta Node currently performs an important role since, the road network links Colombo and Kaduwela through New Kandy Road and this road is identified as Urban Functional Highway (P1) by the Transport Development Strategy. Kelaniya and Kolonnawa are connected through Kalapaluwawa Road (proposed as a four lane arterial road). On the other hand, Koswatte node links Robert Gunawardhana Road, Denzil Kobbakaduwa Road and Pipeline Road.

The proposed Elevated Expressway from New Kelani Bridge (NKB) to Athurugiriya (OCH) (17.3 km) and Light Railway Transit (LRT) from Malabe to Colombo (21km) and Hunupitiya to Makumbura (25km) run along Koswatta Junction. Hence, Koswatta will perform as a major transport hub with three transit modes.

Sub-Project 2 : Ceremonial Access Ways

Koswatta is recognized as one of the transitional points of the Ceremonial Access which is expected to convey the sense of ceremonial feeling through a hierarchical change of landscaping. Accordingly, the first experience of hierarchical change is to provide from Koswatta to Malabe through New Kandy Road and the second experience from Koswatta to New Akuregoda Road through Denzil Kobbekaduwa Road.

Sub-Project 3 : Multimodal Hub

Multi Model Hub at Koswatta Node is a main component of the Cluster 2 area and it is proposed to be developed as a 'First Priority Node' and it acts as the center point of Administrative District by provisioning transport facilities with Multi Model Hub that comprise three transport modes.

Three transit modes (Roads, LRT & Elevated Expressway) are proposed to move via Koswatta Node and Koswatta Node is identified as a major transport node. Due to those reasons, Koswatta Node is identified as an ideal place to construct the Multimodal hub. This will provide provision to administrative functions of the Cluster 01 and Cluster 02, including township development with canal regeneration, landscaping and walkability improvement.

A land (6 acre) situated in close proximity to Koswatta Node will be acquired by the Elevated Expressway project to construct the multimodal hub. Therefore, extra land acquisition is not needed. On the other hand, the proposed site is not located in the core area of Koswatta Node. Hence, it will not disturb other activities of the node.

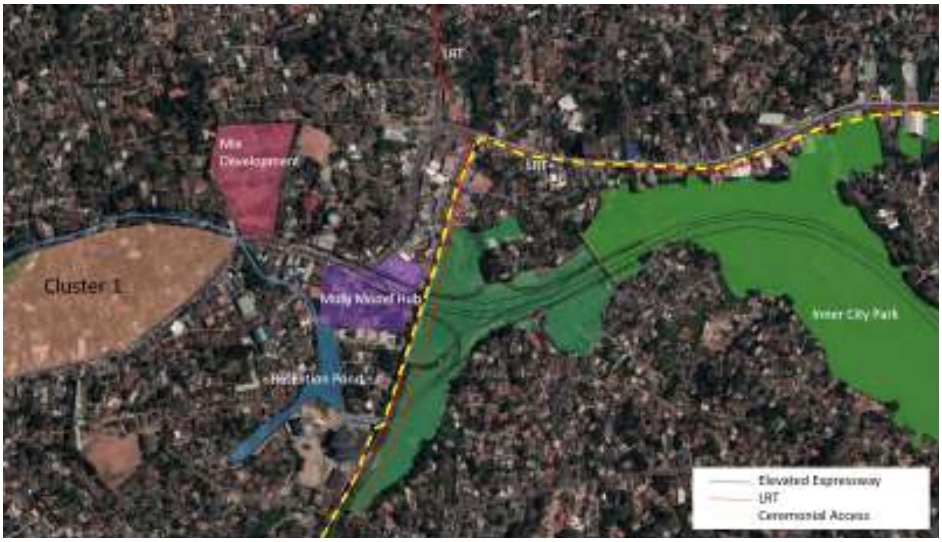


Figure 8.5: Propsed multimodel hub at Kosawaththa
Source : Western Province Division and Research & Development Unit, UDA - 2018

Sub-Project 4 : Mixed Development Area

Existing Depot land (6 acre) is proposed to be used for mixed development with land readjustment to obtain optimum value of the Koswatta Node and attract more developers to the area.

Sub-Project 5 : Canal Regeneration/ Retention Pond / Walking Path Improvement

It is needed to improve open spaces and walking paths as this is a public area with scenic view. Hence, walking paths are proposed adjacent to the proposed Retention pond and canal regeneration site.

A retention pond is proposed to be established by using fragmented wetlands which can be seen adjacent to the proposed Multimodal hub and walking paths are proposed to be developed near the retention pond.

Further, it is proposed to regenerate the canal from Diyatha Uyana to Koswatta Node (2km) and it is expected to provide scenic view to the Administrative Cluster 1, 2 and proposed Multimodal Hub. Further, walking paths are proposed to be developed along the proposed canal and Inner City Park.

Chapter 08
ADMINISTRATIVE CLUSTER DEVELOPMENT STRATEGY

Strategic Projects for Administrative City Development

Figure 8.6: Kosawaththa township development project
Source : Western Province Division and Research & Development Unit, UDA - 2018

Figure 8.7: Kosawaththa township development project layout
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Projects 2 : Thalawathugoda Township Development

Thalawathugoda Township is a proposed Third Priority Town and it is bounded to Capital City Park. It is to perform as a transitional point to enter the Inner City. It has given more concern on open spaces to convey a different feeling to the users of the area.

Thalawathugoda Township Development comprises the following sub-projects;

Sub-Project 1 : Recreational Area Development

Thalawathugoda is considered a main node of Cluster 2 area among the proposed administrative clusters and a part of the Capital City Park is located in the center of the Thalawathugoda Node. Hence, it is proposed to develop the adjacent land of 2 acres as, a recreational area with land readjustment..

Sub-Project 2 : Recreational Area Development

A part of the Capital City Park is located in the center of the Thalawathugoda Node. Hence, it is proposed to develop the adjacent land of 2 acres as, a recreational area with land readjustment.

Figure 8.8: Thalawathugoda township development project
Source : Western Province Division and Research & Development Unit, UDA - 2018

Chapter 08
ADMINISTRATIVE CLUSTER DEVELOPMENT STRATEGY

Strategic Projects for Administrative City Development

Figure 8.9: Thalwathugoda township development project layout
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Projects 3 : Road Improvement towards the Cluster 02 Area

Four roads to provide provisions to the Cluster 2 Area in order to strengthen the intervention of proposed administrative institutions

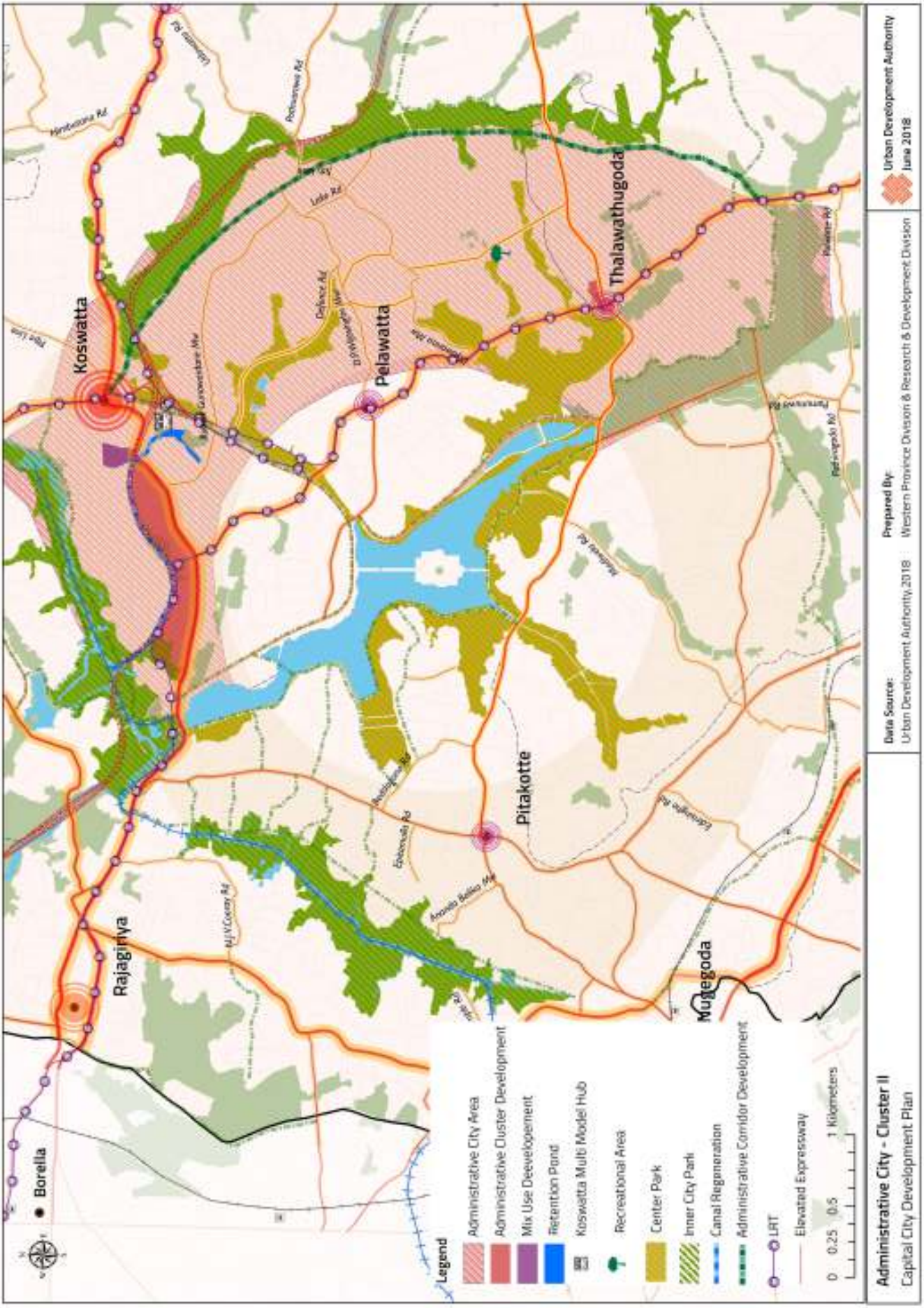
1. *Develop four lane road from Ganahena to Hokandara*

   Stage 1: *Widen Robert Gunawardhana Mawatha from Ganahena to Denzil Kobbebkaduwa Road up to 04 lanes (0.39km)*
   Stage 11: *Widen and extent Biso Manike Road from Defence Ministry Building to Hokandara up to four lanes (1.2km)*

2. *Develop Half Circular shaped 04 lane road from Koswatta to Hokandara adjacent to Thalangama Tank & marshy land (4.0 km)*

3. *Widen Hokandara Road into 04 lanes*

4. *Widen Denzil Kobbakaduwa Road up to 04 lanes*



Map 8.2 : Road improvement of administrative strategy for cluster II
Source : Western Province Division and Research & Development Unit, UDA - 2018

Cluster	Strategic Project Code	Project Name
Cluster. 1	SI-A-1	Redesign of Cluster 1 Area
	SI-A-2	Conversion of Land to Urban Spaces and Recreational Parks
Cluster 2	SII-A4	Kosawaththa Township Development Project
	SII-A-5	Thalawathugoda Township Development Project
	SI-A-6	Road Improvement Projects Towards Cluster 2 area

Table 8.1 : Strategic projects in administrative cluster development strategy
Source : Western Province Division and Research & Development Unit, UDA - 2018

8.5. Impact of Administrative City Development Strategy

- *When the existing situation of the capital city planning area, is considered, 99 government and semi government offices are located within this area and 214 of national level institutions are proposed to be relocated from Colombo MC area. Finally, this planning area will totally accommodate 165 of central government and 148 of semi government institutions.*

- *When the existing administrative institutions of land use in the proposed administrative area, is considered, 3.2% of the land use is currently covered by the administrative institutions. With the proposed public & semi public office spaces 3.4% of land will be newly added to the current land use coverage. This would result a total land use coverage of 6.6%.*

- *According to Census and Statistics data, 26,000 employees currently work in government and semi government institutions and with the proposed office space, an additional number of 37,000 employees are proposed to be attracted towards the proposed administrative area. Hence, this strategy is considered to facilitate approximately 63,000 government employees.*

- *The current floor area of selected institutions of Colombo MC are proposed to be relocated in the Capital City. It is approximately 650,000m²*

09

Wetland Management Strategy

Chapter 09
WETLAND MANAGEMENT STRATEGY

Introduction

Aims and Objectives

9.1. Introduction

9.1.1. Aims & Objectives

Urban wetlands make cities livable in many important ways. They reduce flooding, replenish drinking water, filter waste, provide urban green spaces, and are a source of livelihoods while the rich vegetation contained in them purifies the air and performs various biological functions in favour of the dwellers and users. For example, Colombo wetlands are estimated to carry 39% of the city's storm water thereby functioning as a natural barricade against flooding of the city. By sequestering carbon, it also mitigates climate change. *(Rnasinghe, 2018)*

The city of Colombo has been declared as a wetland city under the RAMSAR Wetland Accreditation Scheme. The Colombo wetlands network comprises of wetlands in Baddagana, Diyasaru, Heen Ela, Kolonnawa, Kotte, Maddinnagoda, Mulleriyawa and Thalangama Wetlands. However, currently there seems to be a minimum concern on protecting these wetlands. Hence, The Capital City Development Plan is prepared with thorough concerns on wetland conservation and wise-use. Accordingly, it introduces Wetland Management Strategy particularly to conserve the wetland character of the Capital City. Further, Wetland Management Interventions are formed as a responsible interaction with the environment to avoid deprivation of natural resources, prevent disasters and assist long-term environmental quality of the planning area.

The natural setting of the Kelani River basin in the Capital City area could be identified as one of the prominent water resources to the city. However, it is figured as a reason for flood inundation. It is also concerned that, even though the area consists of natural wetlands to retain the overflow of river during rainy seasons, the unplanned and uncontrolled developments covered wide areas across the city areas aggregate the risk of flood. The reason for these unauthorized developments in the Capital City could be the high demand for land in the area as for the low land value and close proximity to the commercial capital, Colombo. However, the low land availability in the area has encouraged the interested parties to encroach the network of wetland system reclaim canals which increases the runoff of the area gradually. As a result, the natural drainage system has been disturbed, the flood risk has risen and most importantly, investors have been discouraged to invest in the area. Hence, the intention of the Wetland Management Strategy is to create a 'Green Blue Network' in order to develop the capital city among the chain of wetlands while conserving other green and blue characters of the area.

Chapter 09
WETLAND MANAGEMENT STRATEGY

Introduction

The Approach

Scope

9.1.1. The Approach

The 'Capital City Development Plan' emphasizes the goal, 'The experience of a city bloomed in a chain of wetlands' as the inherent strength of 'The Capital City' lies on its prevailing green environment and it is important that this potential is used to the fullest. 'The Capital City Development Plan' has recognized three objectives to initiate the opening up of the eco system in the area to bloom the city with green and blue feature. They are,

- *To conserve 100% wetland ecosystem for the environmental stability by 2030*
- *To create the hierarchical enclosure, through the wetlands by 2030*
- *To open up the wetlands, to achieve 100% open space demand while increasing the real estate value by 2030*

9.2. Scope

- *The planning framework covered by this strategy includes existing green network and blue network within the planning area.*
- *The Wetland Management Strategy is specially to conserve the wetland character of the Capital City.*
- *All strategic projects, proposed in this section of the Development Plan are expected to serve the planning area within the time durations specified in Chapter 1. Situations beyond these time durations will have to be dealt with timely updating of the Development Plan.*
- *This strategy grants provisions to incorporate any proposal, plan, project or intervention that would be carried out by any relevent public or private party given that they will allign and agree with the objectives and proposals of Capital City Development Plan.*

9.3. Strategic Interventions for Wetland Management

Wetland Management Strategy has two strategic interventions as below:

1. *Strategic Intervention for Green Network Management*
2. *Strategic Intervention for Blue Network Management*

Strategic Intervention 1 : *Green Network management*

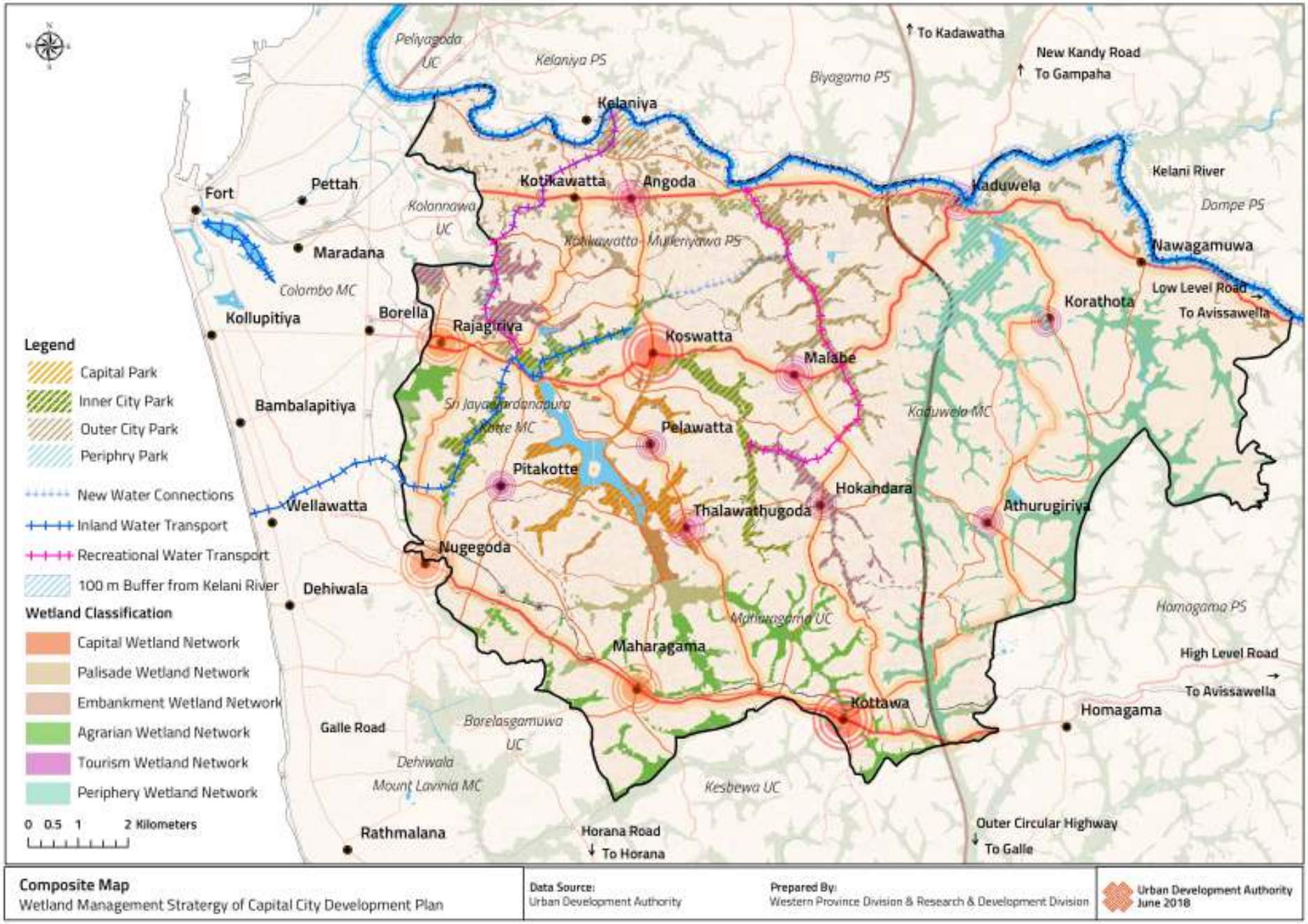
The main intention of developing Green Network Strategic Intervention is to enhance the capital city splendidly among the wetland chain. It consists of three strategies in order to mitigate flood and open up wetlands to the public while conserving them to future generations. They include,

Strategic Project 1: *Wetland Classification Strategy*
Strategic Project 2: *Park Development Strategy*
Strategic Project 3: *Green Preservation Strategy*

Strategic Intervention 2 : *Blue Network Management*

In order to mitigate the threat of flood, 'The Blue Network Strategic Intervention' is developed. Accordingly, three strategies are used. The first strategy is to maintain the buffer along Kelani River and other water bodies of the Capital City. The second is to interconnect the existing reservoirs, water bodies and green feature by connecting missing links and creating new paths to form an extensive water-networked city. Third strategy is to develop the blue infrastructure network.

Strategic Project 1: *Buffer Development*
Strategic Project 2: *Blue Network Development*
Strategic Project 3: *Water Transport Development*



Map 9.1 : Composite map of wetland management strategy
Source : Western Province Division and Research & Development Unit, UDA - 2018

9.4. Strategic Projects in Wetland Management Strategy

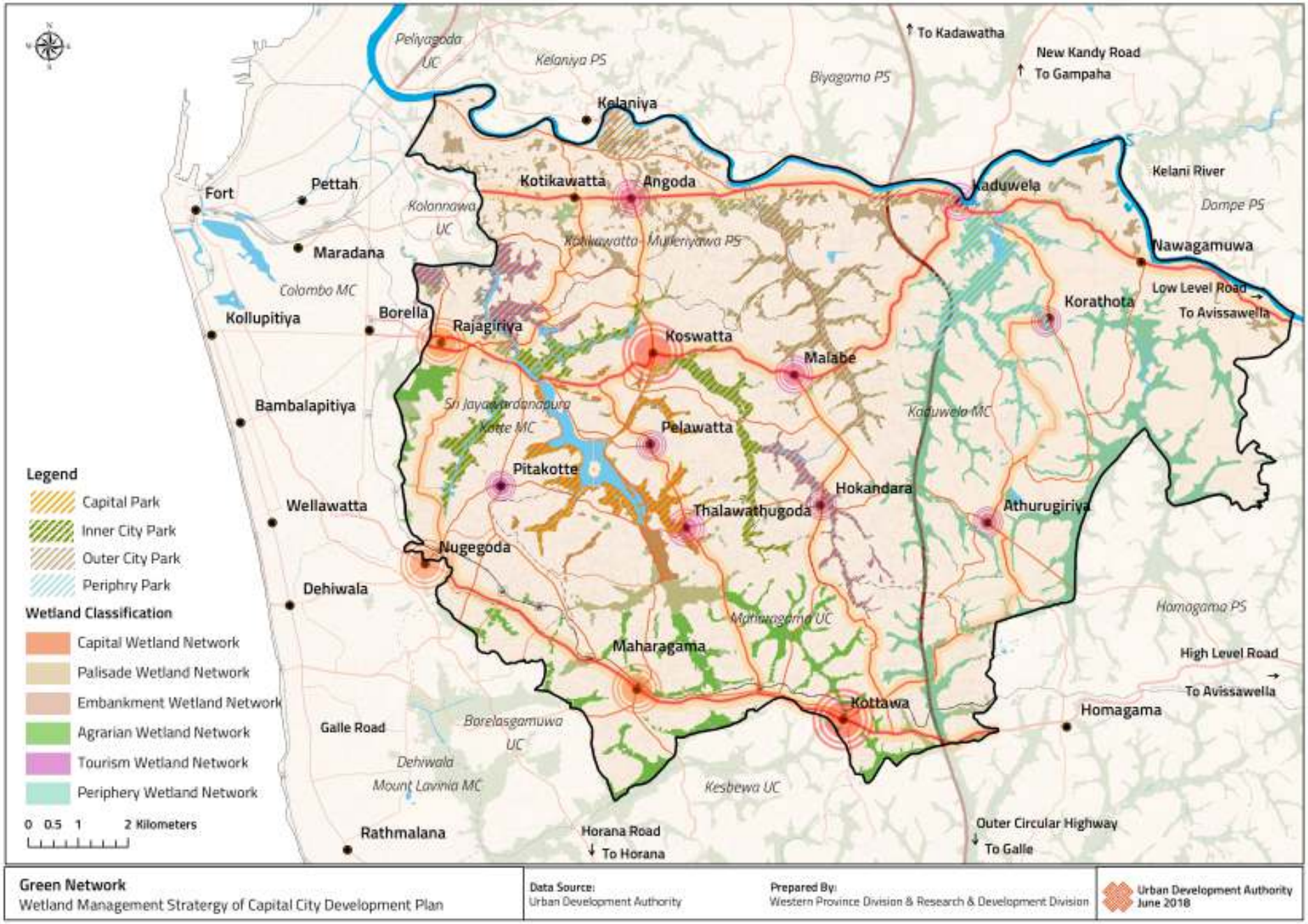
Strategic Intervention 1 : Green Network Management

Strategic Project 1 : Wetland Classification

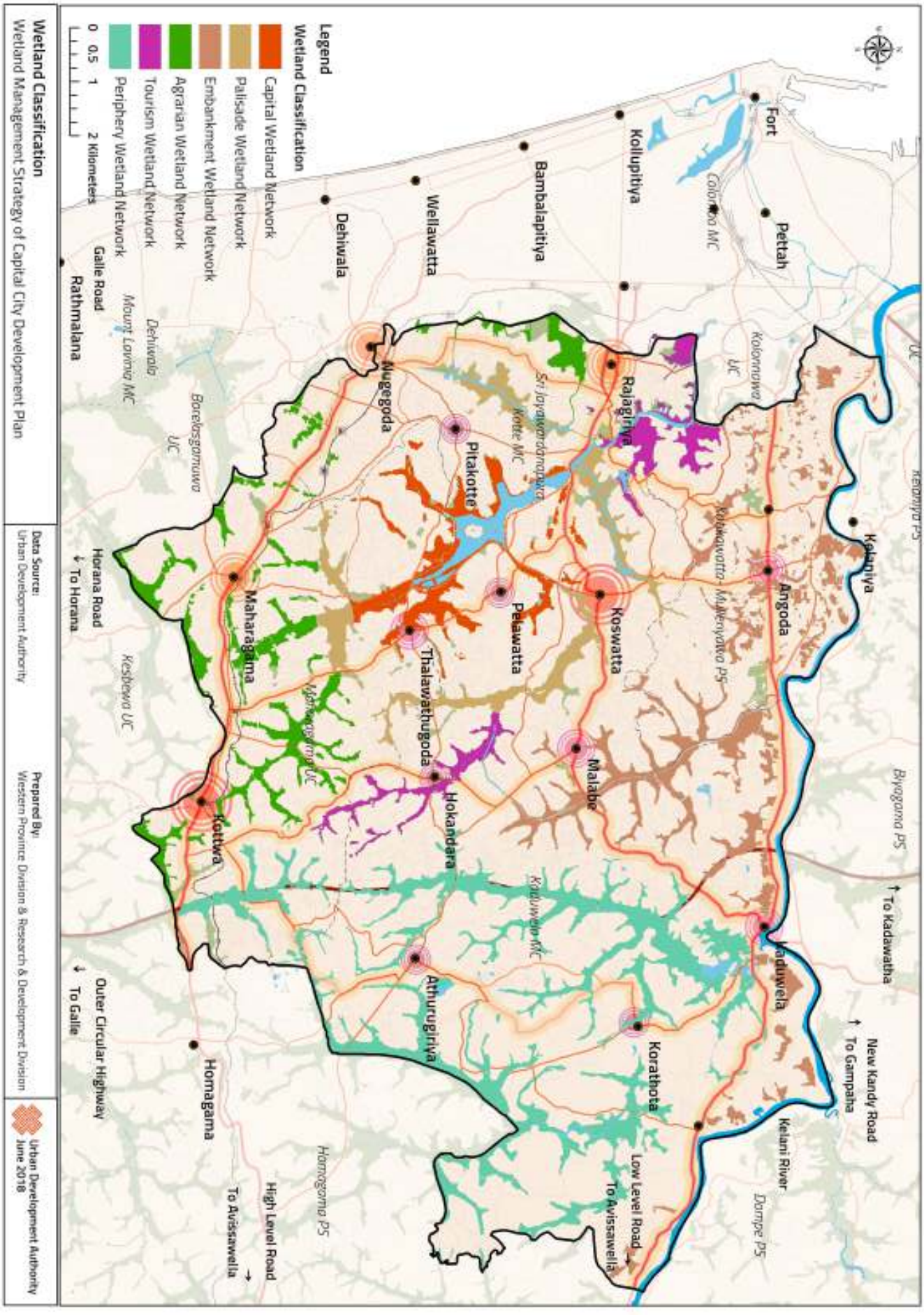
The intention of wetland classification is to guide the developers of wetlands and form a unique image and identity to each wetland. The entire wetland network which is located within the Capital City Center Area is classified as The Capital Wetland Network. Through these it is expected to mitigate the threat of flood in the Capital City Center area.

The wetland network in The Inner City is considered a Palisade Wetland Network which is to convey the feeling of entering The Center and enclose The Inner City.

The wetland in The Outer City is classified under three parts including, an embankment wetland network to maintain current retention capacity while reducing the speed of the water flow during the rainy seasons, a tourism wetland network to conserve the green feature and promote tourism related activities and an agrarian wetland network to encourage the agriculture related companies and individuals to invest on those wetlands for agriculture related activities. The wetland network spread over The Periphery Area is specially to serve The Residential Zone of the Capital City. The wetlands identified as paddy fields and the ones which do not fall under the above classifications are expected to remain unchanged.



Map 9.2 : Composite map of green network management
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 9.3 : Wetland classification in Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 2 : Wetland Parks

The second strategy of the wetland conservation is the proposal of parks development. This strategy ensures wetland conservation and fulfills the open space demand of the area. Accordingly, four types of parks are proposed with different characters based on the hierarchical level of proposed character of the Capital City.

Center Park — The Center Park is a connection of Baddagana marsh, Bird Park marsh and Parliament Road marsh with an area of 2.94km^2. Through the initiatives, it is expected to reduce the flood risk of the area, while enhancing the image of the center.

Figure 9.1 : Image of the center Park in the Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

Inner City Park — Three Inner City Parks are proposed for Thalangama Marsh, Kotte Marsh and Diyatha Uyana Marsh with A total area of 2.96km^2.

Figure 9.2 : Inner city park in Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

Outer City Park — Outer City Parks are proposed for wetlands located in Kolonnawa, Madinnagoda, Thalangama, Malabe, Mulleriyawa and Kelanimulla. Specifically, a part of Thalangama Wetland is to be developed as a tourist related park, Malabe and Mulleriyawa to be developed as an office space development park and the unclassified marsh in Kelanimulla Wetland to be developed in order to reduce high flood risk in the area while performing as a facilitator to the newly proposed third order city in Kottikawatta- Angoda Node and conveying the sense of the Capital City for the travellers who process towards the Capital City from Gampaha District.

Figure 9.3 : Outer city park in Capital City - Malabe wetland
Source : Western Province Division and Research & Development Unit, UDA - 2018

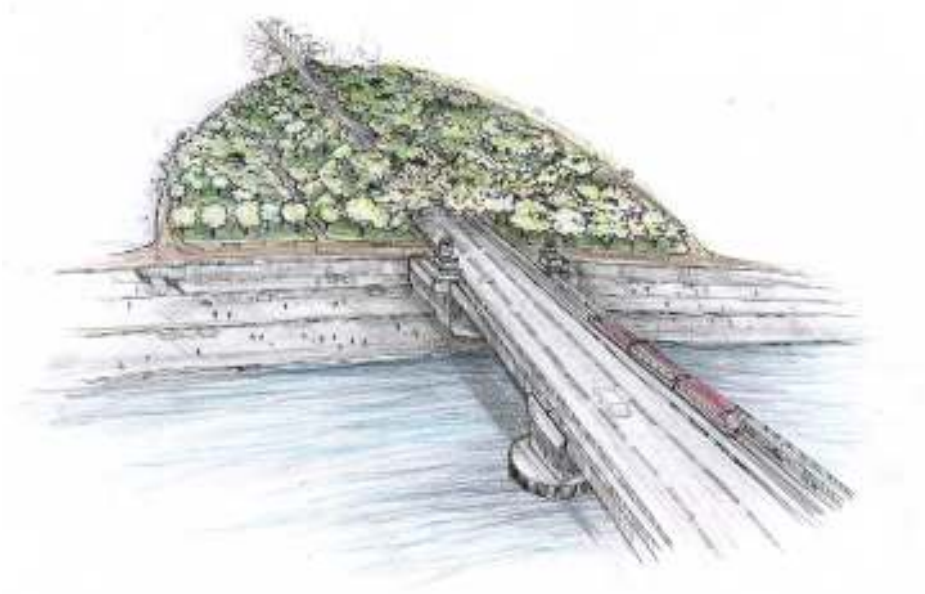
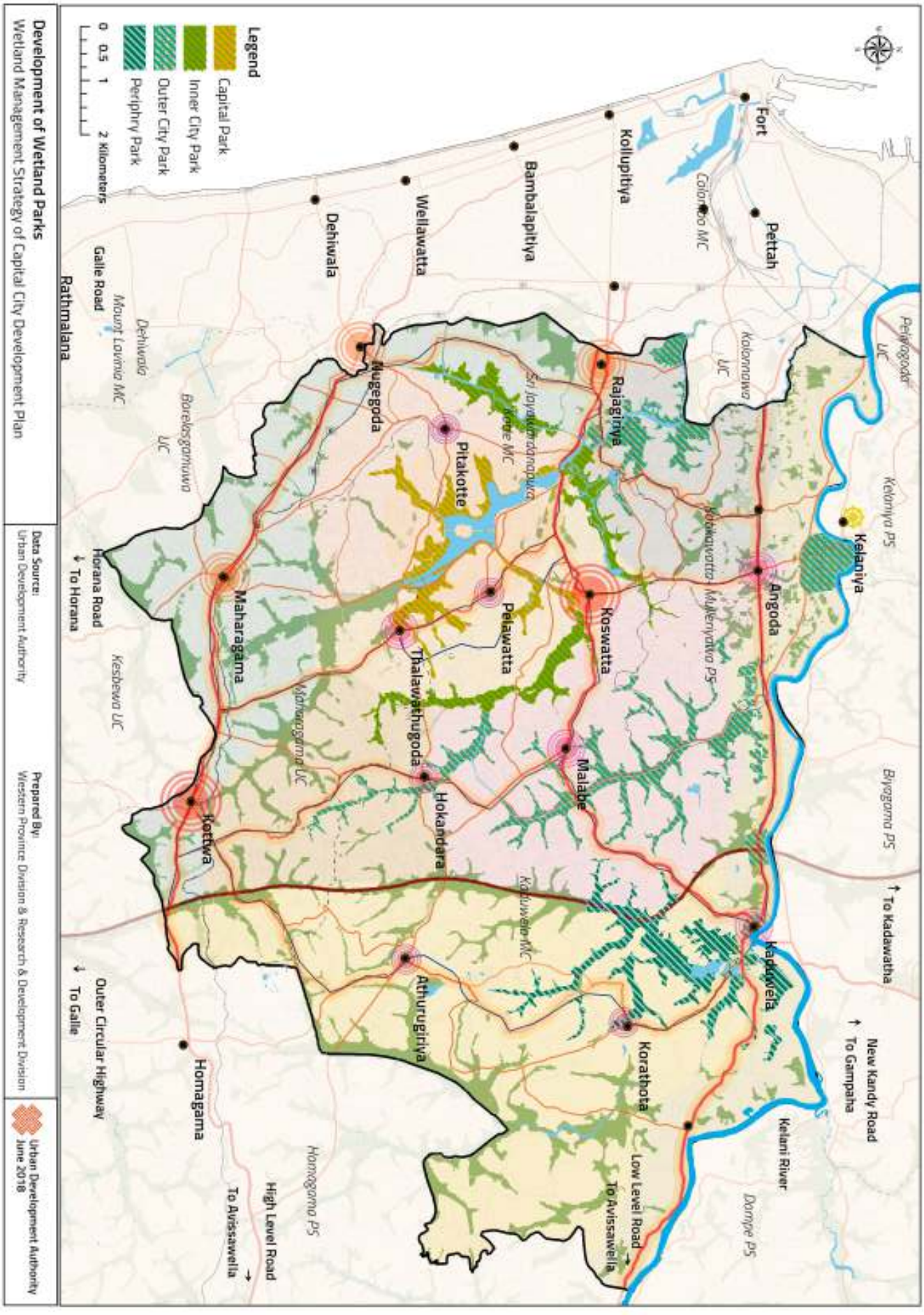


Figure 9.4 : Outer city park in Capital City - Kalanimulla
Source : Western Province Division and Research & Development Unit, UDA - 2018

Periphery Park — The Periphery Park is proposed for Kaduwela Marsh within a total area of 3.22km² to develop as an adventure park to serve the dwellers and visitors.

Figure 9.5 : Periphery park in Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 9.4 : Proposed wetland parks in Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Intervention 2 : Blue Network Management

Strategic Project 1 : Buffer Development

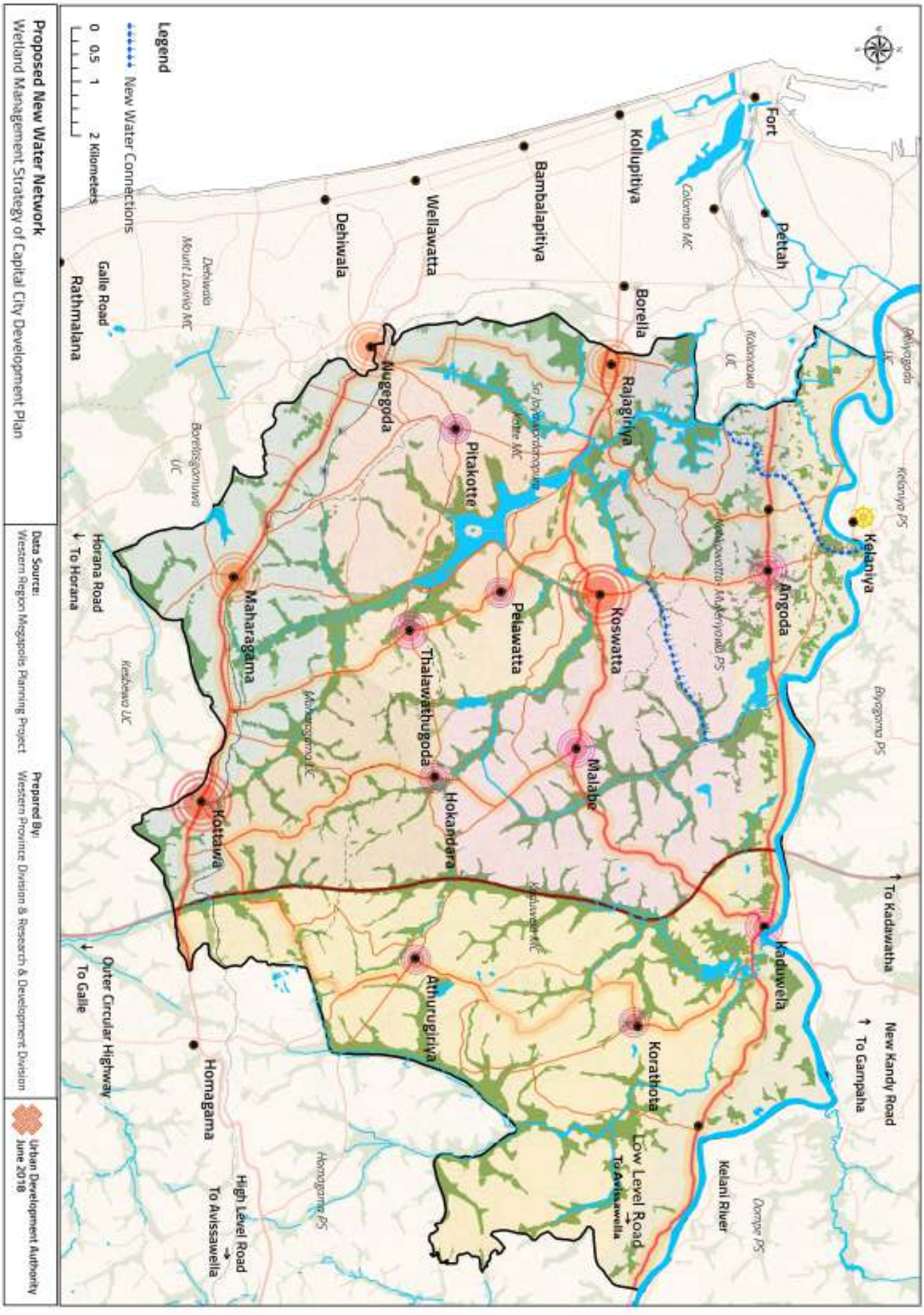
A 100m buffer zone is proposed along the Kelani River including an area of 5.41km² and a length of approximately 25km in order to reduce the disturbance on water flow. As per the Land Development Ordinance No: 19 of 1935, the following specifications are considered for water body reservation.

Water body width (m)	Width of water body reservation (m)
Less than 4.6	20 from the bank each side
4.6 – 15.2	40 from the bank each side
More than 15.2	60 from the bank each side

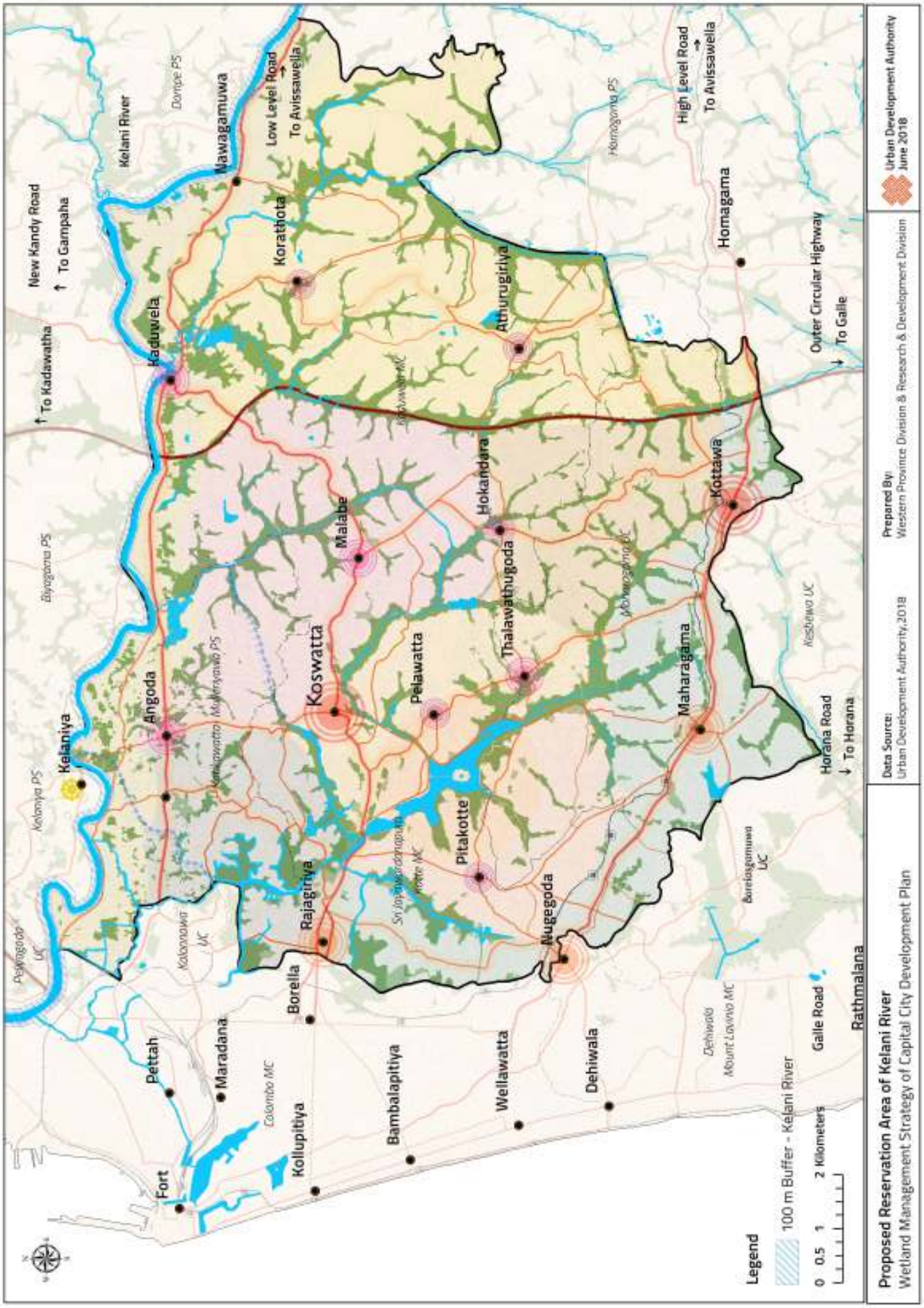
Table 9.1 : Water body width of water body reservation according to land development ordinance
Source : The land development ordinance no 19 of 1935

The width of Kelani River is more than 15.2m. Permanent structures are restricted within the buffer of 60m and remaining 40m is released for development under special regulations. The proposed landscaping project is designed to discourage encroachments and gain visual access of the river. Moreover, the Megoda Kelani River Bridge is given special attention to be re-designed to convey the sense of a capital city as it is a ceremonial access way towards the Capital City Center.

Figure 9.6 : Expected image on Kelani river reservation
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 9.5 : Propsed new waternetwork connection
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 9.6 : Propsed reservation area of Kelani river
Source : Western Province Division and Research & Development Unit, UDA - 2018

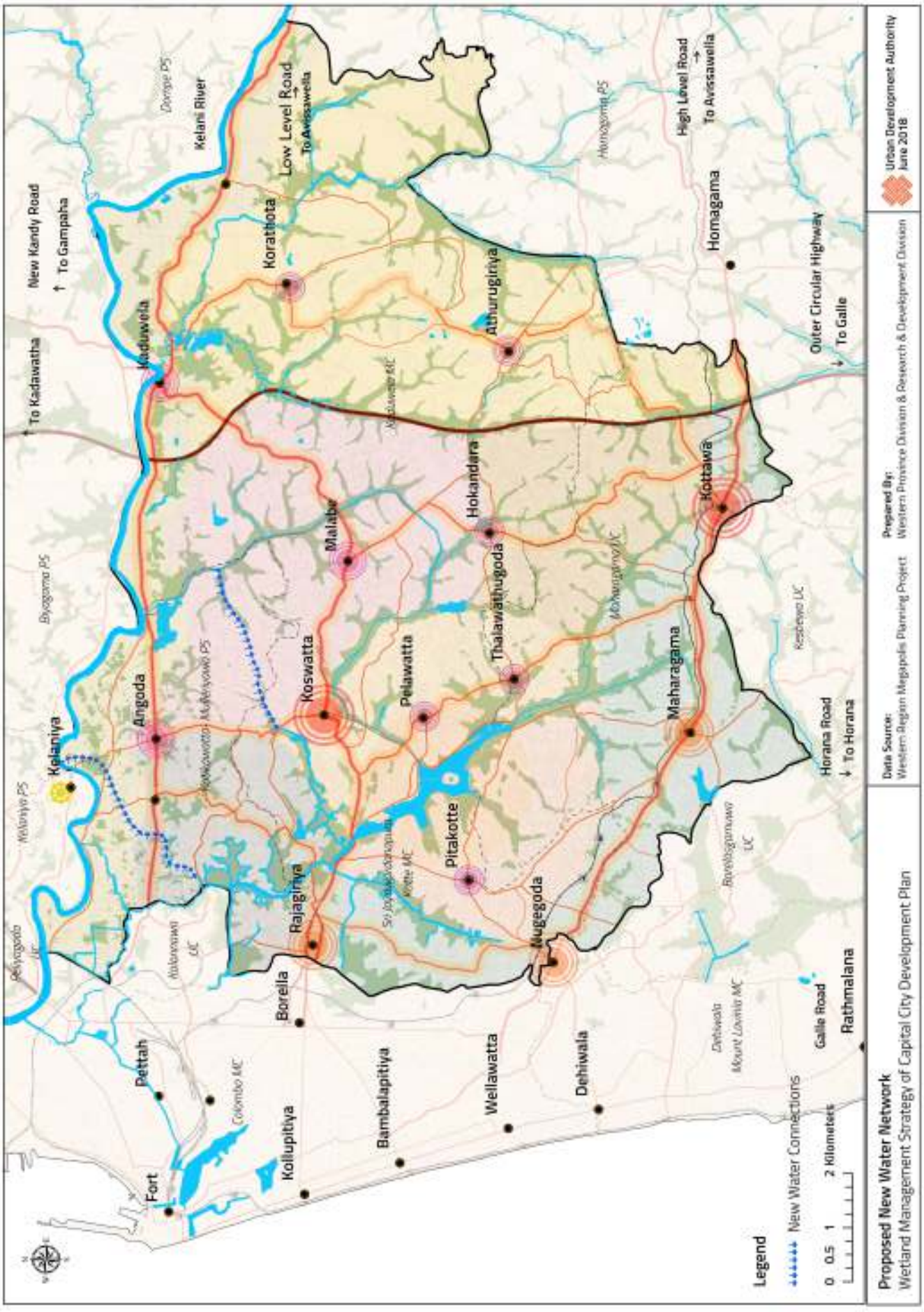
Strategic Project 2 : Blue Network Development

According to The Flow Direction Analysis, the length of missing links along the canal network is 7km. The plan proposes to develop the above mentioned missing links with the purpose of maintaining the exact green and blue network. Further, it is expected to mitigate the flood risk and create a pleasant natural environment which could enhance the image of capital city.

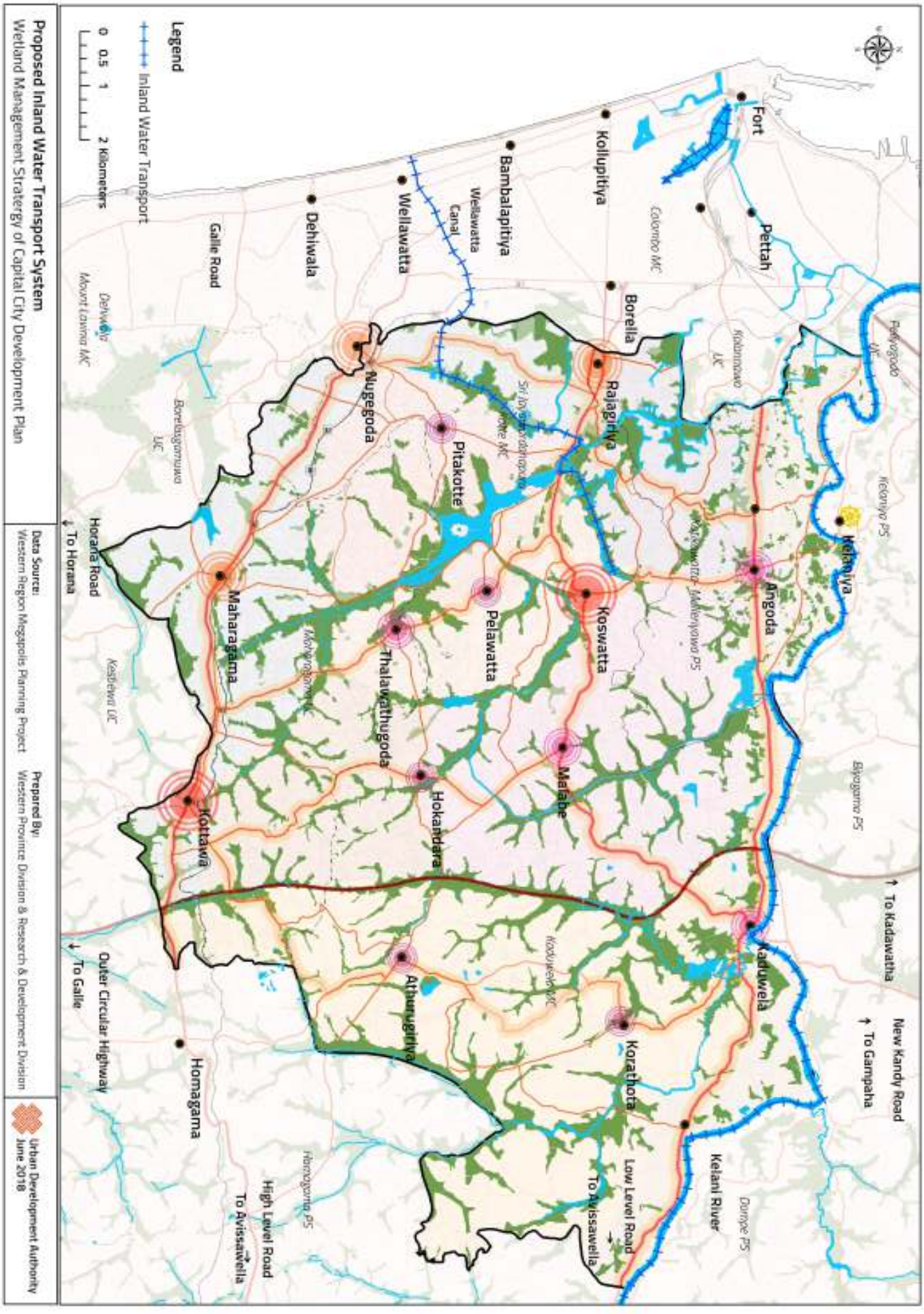
Strategic project 3 : Water Transport Development

It is expected to promote a water transport service with a total length of 14km for the area through the connection improvement. It is assumed to reduce the reclamation of canals in the area. The SLLRDC has proposed a passenger transport service connecting from Wellwatta to Battramulla via Wellawatta Canal and Diyawanna Oya. Hence, The UDA has proposed a small scale new canal connection for the purpose of passenger transport from Battaramulla to Kelani River and from Malabe to Thalangama Tank. However, the proposed canal is not suitable for large scale passenger transport due to the depth of the canal. Hence, it is expected to be used for leisure activities. Along with the canal improvement project, it is anticipated to landscape beside the canal to change the character of Kotikawatta Area in order to match the character of proposed Capital City.

Figure 9.7 : Expected improvement along the proposed canal in Kotikawaththa area
Source : www.midlandsinbusiness.com/2017/07/residents



Map 9.7 : Propsed new water network connection
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 9.8 : Proposed inland water transport system
Source : Western Province Division and Research & Development Unit, UDA - 2018

Project Type	Project Code	Project Name
Green Network Management	SI-W-1	Thalangama Marsh related Park Project
	SI-W-2	Capital City Park Project
	SI-W-3	Canal Regeneration Project
	SI-W-4	Kolonnawa Tourism Development Marsh related Park Project
	SII-W- 6	Diyatha Uyana Extension Park
	SII-W- 7	Eco-friendly Nature Park Project
	SII-W -8	Megoda Kelaniya Marsh related Park Project
	SII-W -9	Kaduwela Marsh related Park project
	SIII-W-12	Malabe Marsh related Park Project
	SIII-W-13	Green Walkway Project at Thalangama Tank
Blue Network Plan	SII-W- 5	Maintain Buffer along Kelani River
	SII-W -10	Interconnection of Missing links of water bodies
	SIII-W-14	Redesign Kelani River Bridge
	SII-W -11	Passenger Transport Development (Wellawaththa to Baththramulla) - SLLRDC

Table 9.2 : Strategic projects in wetland management stratgey
Source : Western Province Division and Research & Development Unit, UDA - 2018

9.5. Impact of the Wetland Management Strategy

The Wetland Strategy intents to conserve the green and blue components with main tasks, namely, mitigation of flood risk, protection of bio diversity, supply of open space demand and enhancement of real estate market in the area. These initiatives are used to conserve 100% of the wetland network as the area is prone to flood risk. Further, this proposal is able to maintain the identified retention capacities of the identified catchments.

Consideration :

Total Area of wetlands in Capital City: 33,467,890sqm²
Area of Metro Colombo Region wetland: 19091336sqm² (57.04%)
Area of Remaining wetlands in Capital City: 14376554sqm² (42.9%)
Metro Colombo Region Wetlands Network retain 30.42% of storm water

Chapter 09
WETLAND MANAGEMENT STRATEGY

Impacts of the wetland Management Strategy

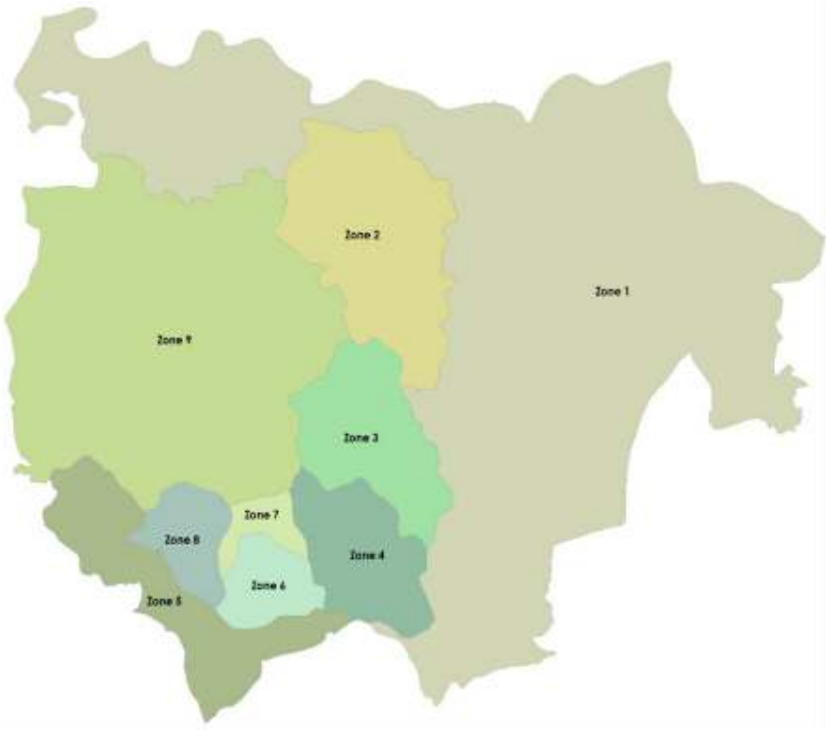


Figure 9.8 : Water catchments of the Capital City
Source : Sri Lanka Land Reclamation and Development Cooperation -2018

Catchment	Wetland Area	Retention Capacity %
Zone 1	15560000	21
Zone 2	2590000	3
Zone 3	1400000	2
Zone 4	1170000	1.5
Zone 5	1164000	1.5
Zone 6	680000	1
Zone 7	9690000	13
Zone 8	440000	1
Zone 9	8440000	11
Total	**41,134,000**	**55**

Table 9.3 : Retension capacity of water catchment of the Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

According to the Water Catchment Analysis of Sri Lanka Land Reclamation and Development Corporation, the annual GDP loss for Colombo is expected to be 1.3% as a result of the reduction of wetlands in Metro Colombo Region.

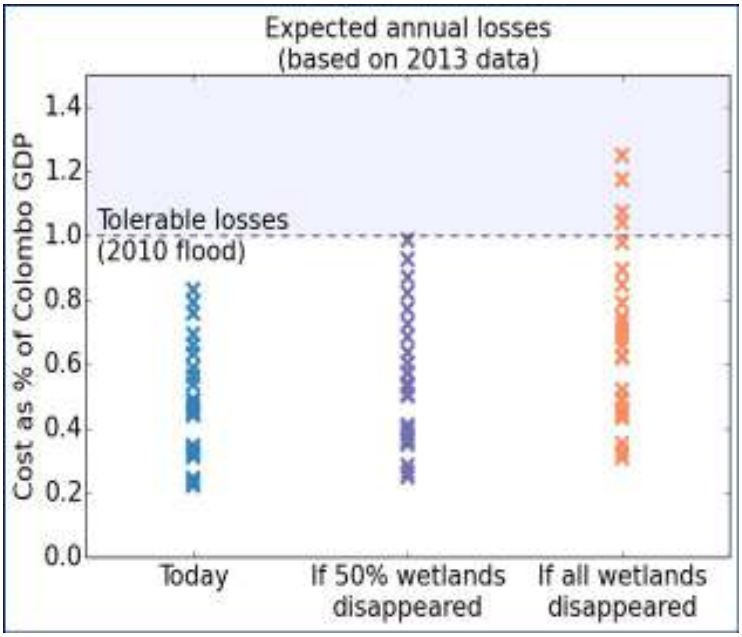


Figure 9.9 : Expected annual loss by flood
Source : Sri Lanka Land Reclamation and Development Cooperation - 2018

Then annual Colombo GDP loss of the area is assumed to be 1.94%, if the entire wetland network disappears in the Capital City Planning area. The wetland network assists to maintain the drainage system of the area as follow,

Catchment	Total land area(sq.m)	Runoff of the Area CIA	Retention Capacity%	Retention Capacity m3/h	Remaining Runoff of the Area
Zone 1	79,950,533.59	5,190,563.78	20.73	1,076,003.87	4,114,559.91
Zone 2	38,402,609.08	2,469,717.78	3.45	85,205.26	2,384,512.51
Zone 3	13,359,593.11	818,735.19	1.86	15,228.47	803,506.71
Zone 4	8,019,271.59	504,881.50	1.56	7,876.15	497,005.35
Zone 5	9,118,129.74	625,182.42	1.55	9,690.33	615,492.10
Zone 6	3,198,472.57	138,068.90	0.91	1,256.43	136,812.47
Zone 7	1,563,162.43	138,068.90	12.93	17,852.31	120,216.59
Zone 8	3,054,445.82	254,922.07	0.58	1,478.55	253,443.52
Zone 9	6,519,974.75	549,895.40	11.26	61,918.22	487,977.18
Total Area	**163,186,192.69**	**10,690,035.95**	**54.89**	**5,867,760.73**	**9,413,526.36**

Table 9.4 : Runoff of the water catchments of the Capital City with existing land use
Source : Western Province Division and Research & Development Unit, UDA - 2018

The conservation of wetland network in the area contributes to cater 100% open space demand in the Capital City area as follow.

Chapter 09
WETLAND MANAGEMENT STRATEGY

Impacts of the wetland Management Strategy

According to the Urban Development Authority standards, it is essential to provide 1.4 ha of open space for 1000 people in order to attain 100% open space demand. It can be achieved as below.

Area	Population	Required Open Spaces(Acres)	Provision of Open Spaces (Acres)
Citadel Area	46617	160	930
Inner & Outer City Area	644713	2231	5386
Periphery Area	202858	701	2311

Table 9.5 : Open space demand of the Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

According to the 'American Planning Association - 2018 Standards for Outdoor Recreational Areas.' The estimated park needs of a city for 100,000 people are as below,

Recreational Uses	Area (Acres)
Reservations	700
1 large city park	400
10 neighbourhood parks	250
50 playgrounds	100
gardens and squares	50
Total	**1500**

Table 9.6 : Strandards of the recreational uses
Source : www.planning.org/pas/reports/report194.htm

Citadel Area	Population	Required Open space (Acres)	Provision Of Open Space
Passive Open Space	46,617	350	
Active Open Spaces		400	930
Total Open Spaces		750	930
Inner City & Outer City	**Population**	**Required Open space (Acres)**	**Provision Of Open Space**
Passive Open Space	644,713	4513	236,441
Active Open Spaces		5158	68,839.75
Total Open Spaces		9671	305,280.75
Periphery	**Population**	**Required Open space (Acres)**	**Provision Of Open Space**
Passive Open Space	202,858	1430	86,352.9
Active Open Spaces		1643	32,249.37
Total Open Spaces		3043	118,602.27

Table 9.7 : Open space demand of the Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

The intervention of park development is to influence the prices of real estate market. According to the research carried out by The Department of Estate Management and Valuation, 'Real Estate Market Responses in Urban Change in Administrative Capital', 41% of land value has increased for residential use and 77% land value has increased for commercial use within the least distance of 0.5 km from Diyatha Uyana Park. Based on this scenario, it can be assumed that same result would apply for the area of 81 km² by the proposed park development of Capital City Development Plan.

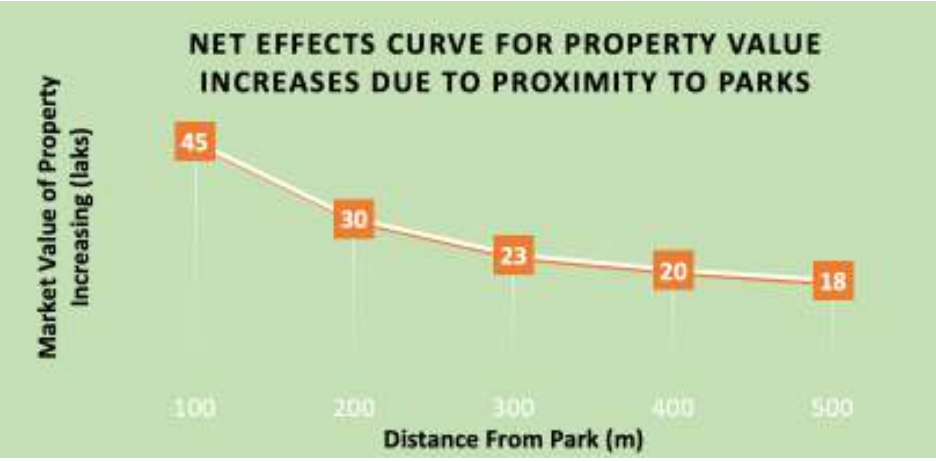
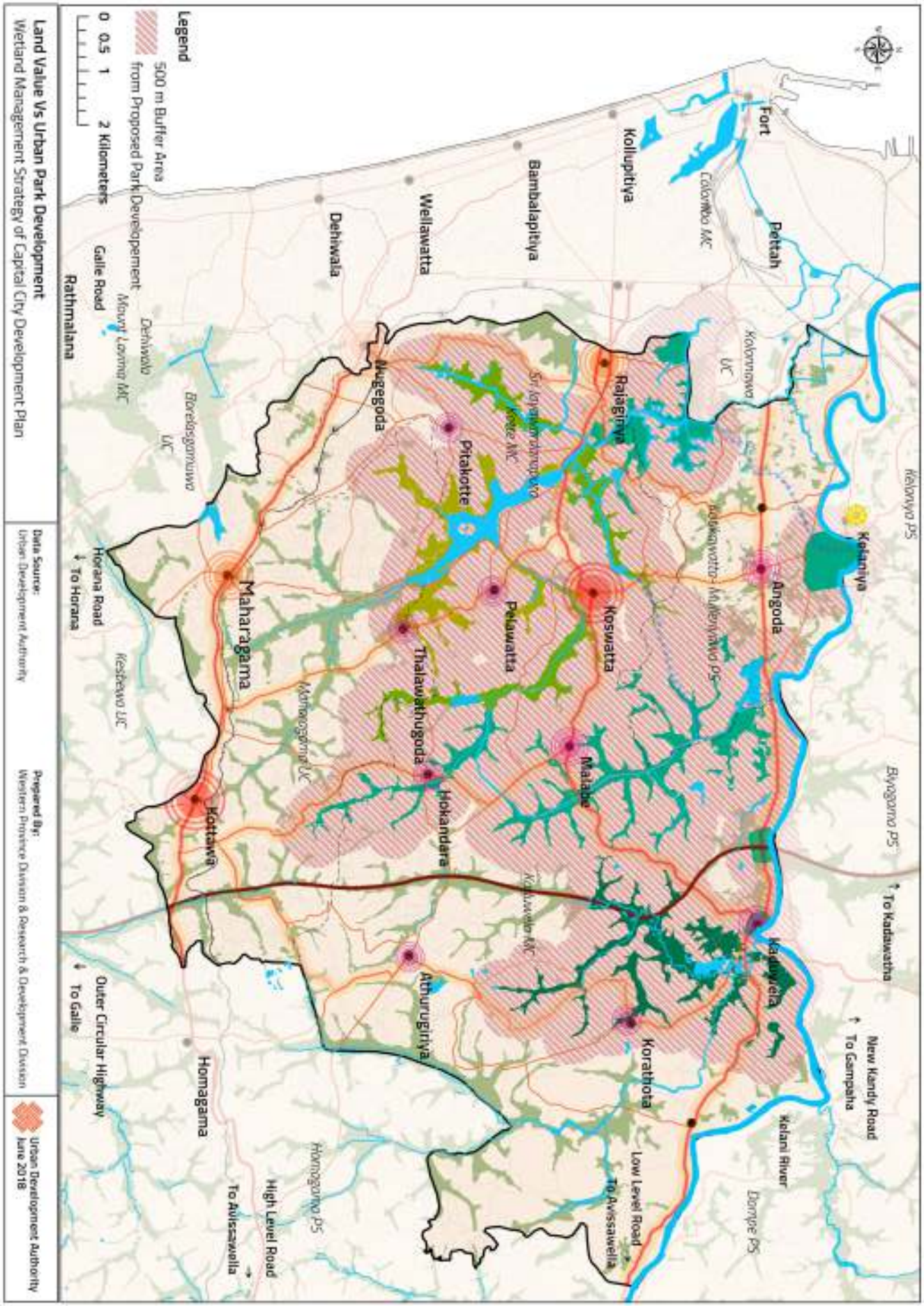


Figure 9.10 : Property value changes with the wetland impovement
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 9.9 : Impacts of the Capital City with the wetland park improvement
Source : Western Province Division and Research & Development Unit, UDA - 2018

Apart from major impacts generated through the green network conservation, it would be able to maintain the bio-diversity, maintain the ground water level and the combination of air particles of the atmosphere. Most importantly, the blue network transport service proposals would be able to reduce the traffic generation of the area.

10

Urban Design Strategy

Chapter 10
URBAN DESIGN STRATEGY

Introduction

Aims and Objectives

The Approach

10.1. Introduction

The need of a Capital City with unique identity and inherited character emerged under problem identification. Hence, the first strategic goal was recognized to initiate the requirement. Consequently, 'The Urban Design Strategy' is prepared to present the initiatives identified under the strategic goal.

10.1.1. Aims and Objectives

'The Ambience of a Capital City with a Unique Identity and Inherited Character'

In order to achieve the strategic goal, three objectives are derived. They are,

Objective 1.1 — *To physically establish the elements of trias politica principle model within the identified main axis by 2050*

Objective 1.2 — *To create a center within 1.5 km radius from the Parliament area which will be branded as "Centre" by 2030*

Objective 1.3 — *To establish transitional capital hierarchy as center, Inner City and Outer City through landscape and an Urban Design approach by 2050*

10.1.2. The Approach

To fulfill the mentioned objectives, five design principles which are most commonly practiced in the planning world are recognized. These design principles have become a norm as cities which followed them have successfully achieved their plans for capital cities. They are,

1. **Axis —**
   Orientation of prominent elements in appropriate locations
2. **Hierarchy —**
   The landmark, nodes and the pathways with clear hierarchy
3. **Enclosure —** *Naturally or physically bounded space*
4. **Transitions —** *Entrances to different zones with different characteristics from Outer City towards Capital City Center*
5. **Center/s —** *A strong and legible center*

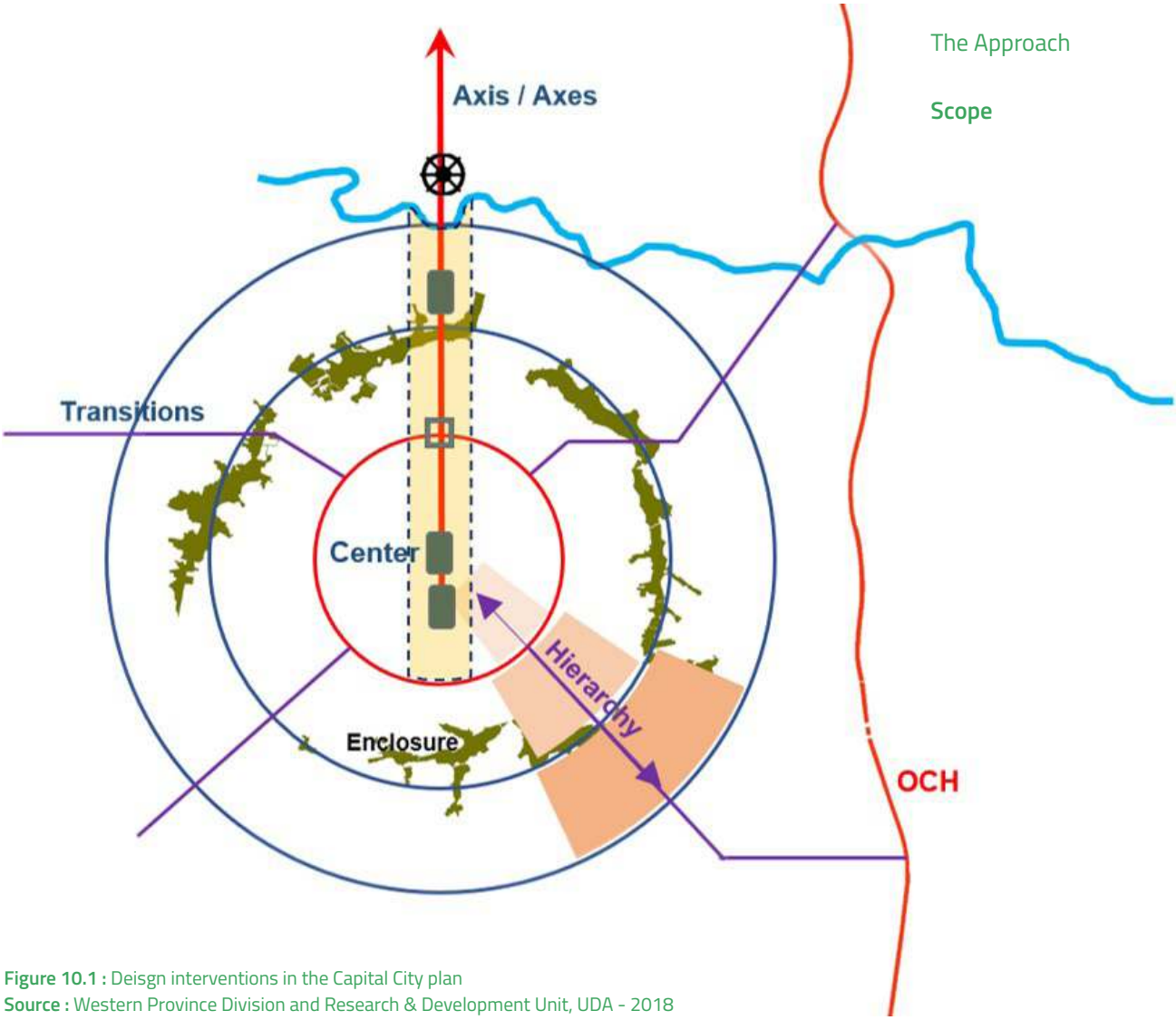


Figure 10.1 : Deisgn interventions in the Capital City plan
Source : Western Province Division and Research & Development Unit, UDA - 2018

10.2. Scope

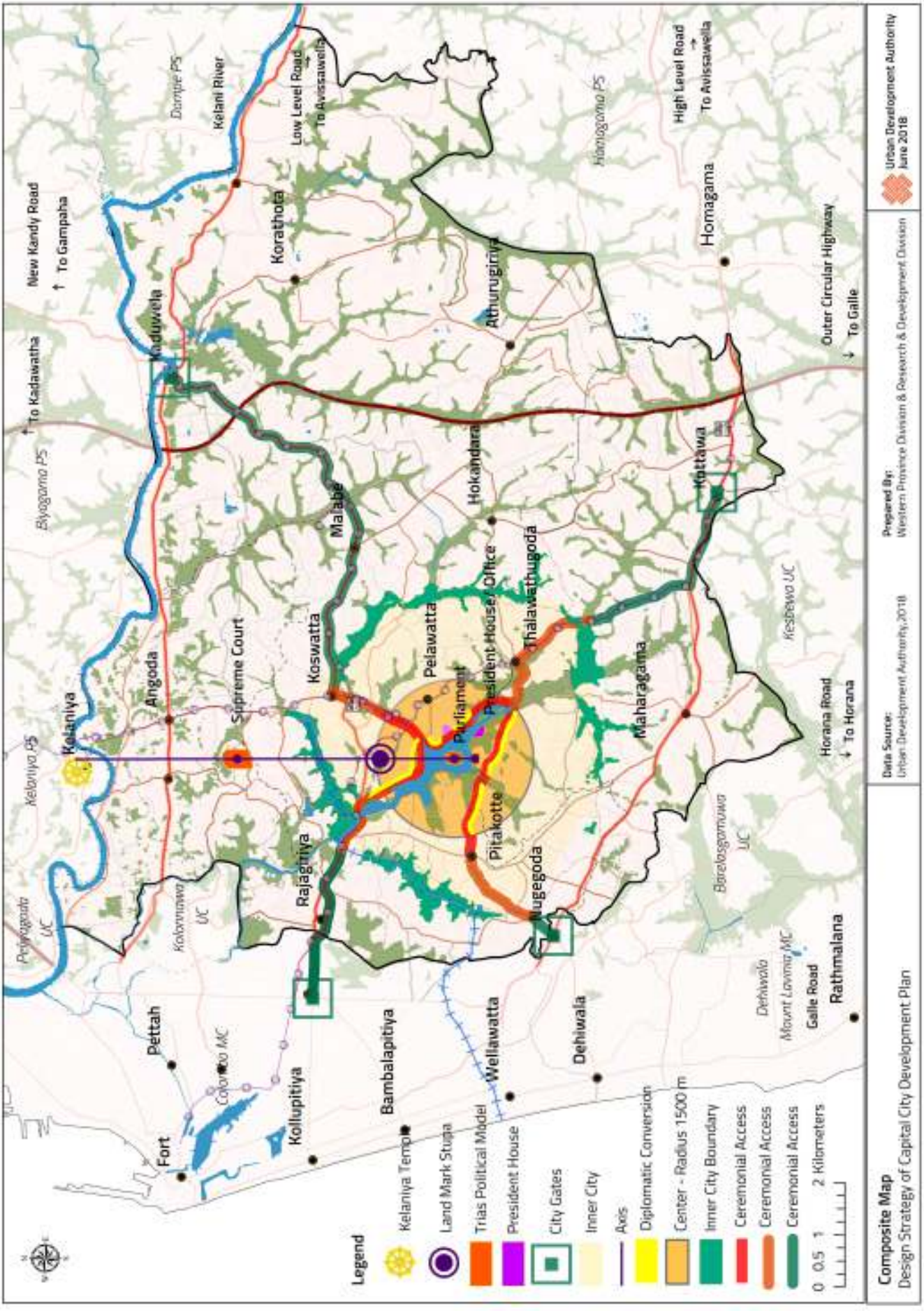
- *Rearrangement of city layout based on five urban design principles (Urban Design in City Scale)*
- *Introduce local scale design guidelines using regulation guidelines participatory approaches*

10.3. Strategic Interventions in Urban Design Strategy

Strategic Intervention 1: *Create the Axis*
Strategic Intervention 2: *Create Hierarchy/ Transition*
Strategic Intervention 3: *Create Enclosures*
Strategic Intervention 4: *Create the Center*

The revealed principles can be applied to achieve Sri Lanka's capital city design goal as the setting of the city is already equipped with many features which can guide the initiatives. For instance,

- *The principle of Center currently exists, as the location of the parliament gives the feeling of a strong and legible center to the dwellers and visitors. On the other hand, a visibility analysis done by the Urban Development Authority identified that the area of 1.5 km around the Parliament is regulated to control height. This point too provides evidence for the application of the principle of Centre.*
- *The Parliament and Kelaniya Raja Maha Vihara is located within an imaginary axis. Hence, the principle of Axis is available.*
- *The centre of the capital land is naturally enclosed with a wetland feature. It means that, the principle of Enclosure exists.*
- *For the above reasons, the mentioned forcing factors can be acknowledged to build- up the Concept of the Design Strategy*



Map 10.1 : Composite map of urban deisgn strategy
Source : Western Province Division and Research & Development Unit, UDA - 2018

10.4. Strategic Projects in Urban Design Strategy

Strategic Intervention 1 : Axis

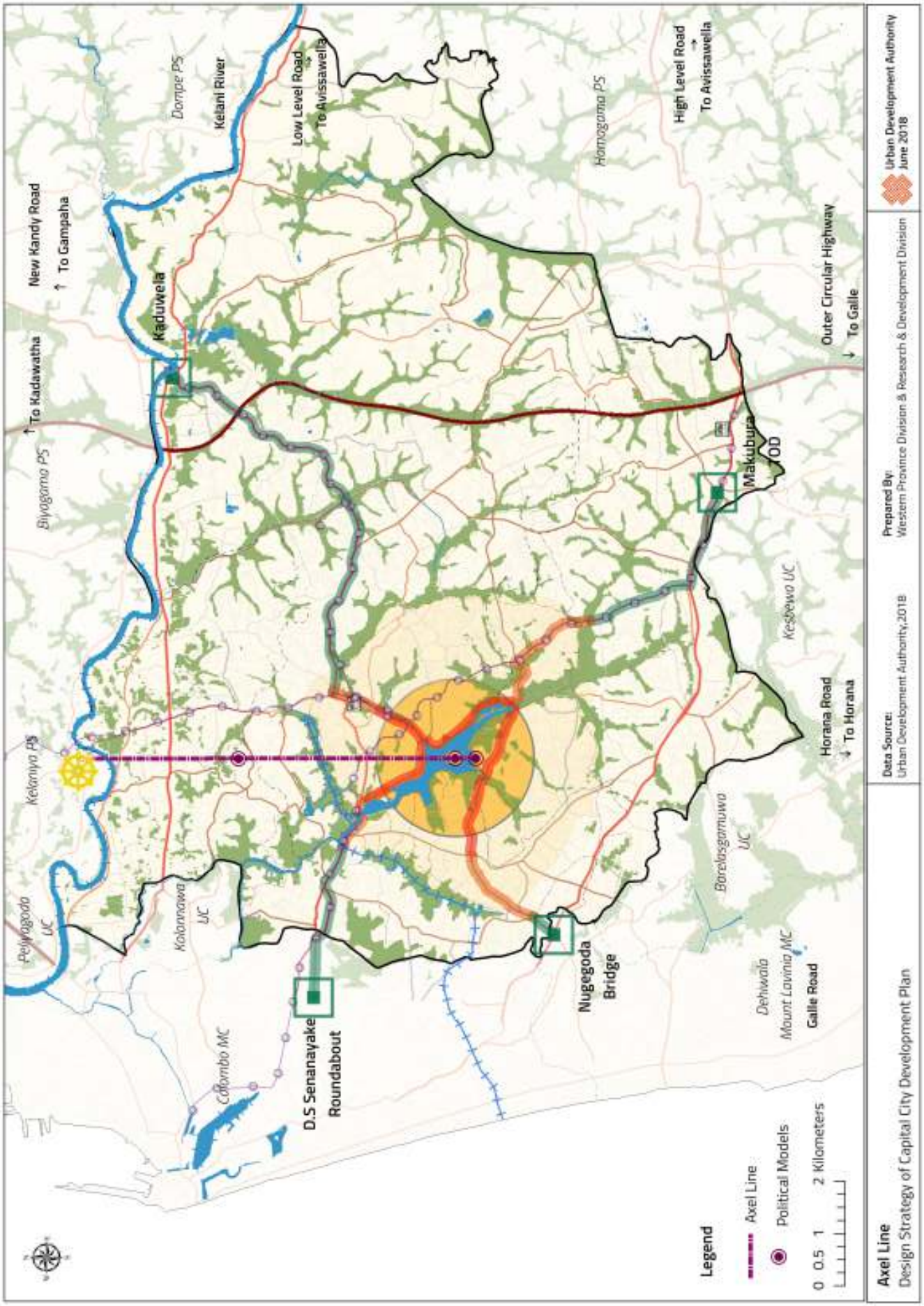
This principle explains about the orientation of features and the other elements in appropriate locations. Accordingly, the plan proposes feasible interventions as below.

- *Capital Axial Establishment*

Physically establish the Trias Political Principle Model

Taking the design concept into concern, the plan proposes to relocate the legislative, the executive and the judicial in one hypothetical line. The main objective is to brand this special feature in the center of the capital city area.

legislative	*Parliament (Existing)*
executive	*President's Office and House*
judicial	*Supreme Court*



Map 10.2 : Axis of the Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 1:
Relocate the Supreme Court to the Present IDH Land

Figure 10.2 : Strategy 1: supreme court relocation project
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 2 : Relocate the Presidents House / Office to the rear side of the Parliament

Figure 10.3 : Strategic project 2 : Relocation of the president house- office
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 3 : City Land Mark Establishment

Apart from the establishment of main power pillars, it is imperative to establish a significant landmark along the proposed capital axial to represent the main religion of the country. In order to do so, a vacant land adjacent to the Agricultural Department in Battaramulla which is located along the imaginary axis has been identified. However, the President's Secretariat Office has also recognized the particular land to be developed as a Buddhist Cultural Centre. Hence, the plan proposes to construct the Buddhist Cultural Centre under the visibility analysis requirements and establish a stupa as the iconic landmark which denotes the main religion of the country on top of it to fulfill both requirements. Further, this landmark is expected to be completed with unique architectural features and modern technology.

Figure 10.4 : Strattegic project 3: City land mark establishment
Source : Western Province Division and Research & Development Unit, UDA - 2018

Chapter 10
URBAN DESIGN STRATEGY

Strategic Projects in Urban Design Strategy

Figure 10.5 : 3D Model designs for axis map
Source : Western Province Division and Research & Development Unit, UDA - 2018

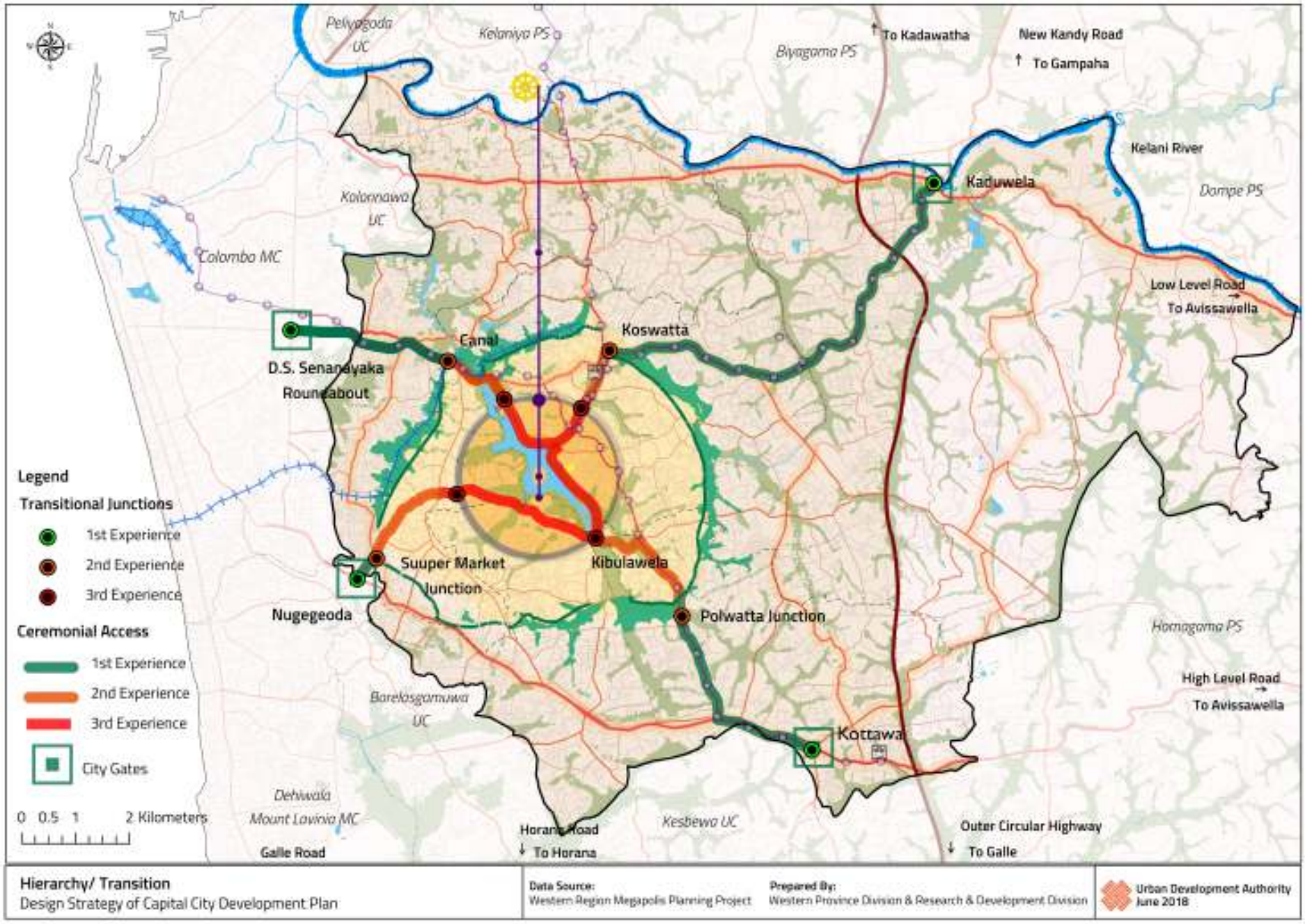
Strategic Intervention 2 : Hierarchy / Transition

The urban form should be changed in a way to offer the commuters different feelings when moving towards the Capital City. The identified main gates and routes are proposed to transform into Corridor- Ceremonial Access development in an exceptional approach. The initiative aims to improve the transition and hierarchy along the ceremonial accesses. They are as below.

Strategic Project 1 : Ceremonial Access Development

Landscape improvement along the Ceremonial Accesses

The lanscape along the ceremonial access is proposed to be improved in a manner to convey the feeling that a sightseer passes the Outer City, Inner City and Citadel. Trees with different colour codes is the best alternative to convey such impression. The tree planting should be done along the Ceremonial Access and change at Main Corridor Gates.



Map 10.3 : Hierarchy level in Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 2 : Create the Proposed Urban Form along the Ceremonial Accesses

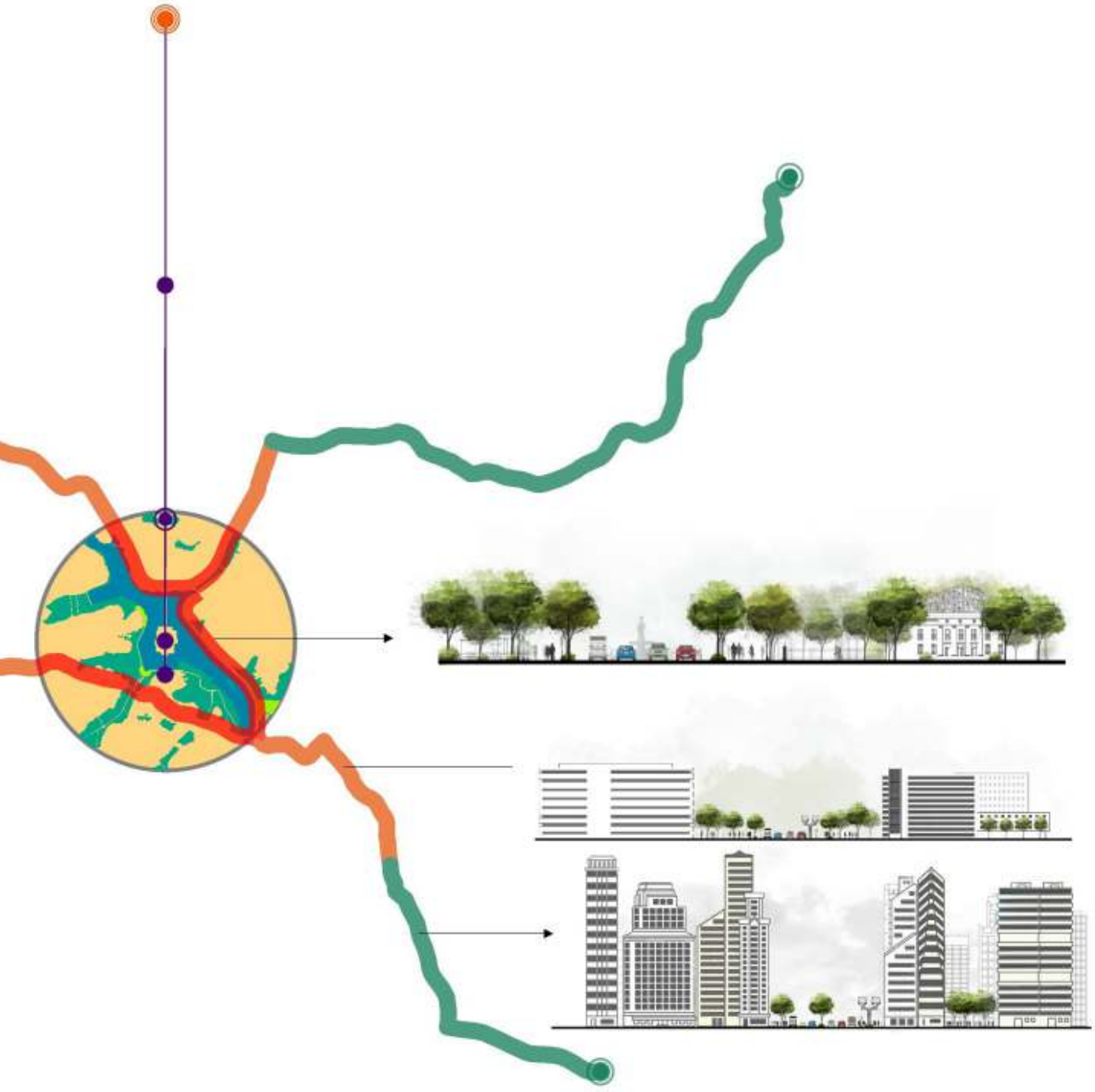


Figure 10.6 : Urban form creation along the ceromonial acess
Source : Western Province Division and Research & Development Unit, UDA - 2018

Figure 10.7 : Urban form in Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

The Outer City — This city area would consist of high-rise buildings in order to cater a high density. It will function independently in almost every way. Most importantly, it will act as the main commercial and office space provider and the employment generator. Further, the Knowledge City is also proposed to be established within the area. Accordingly, the area will represent the modern architecture and various commercial value-added structures along the below mentioned ceremonial access.

From Makumbura Multimodal Hub to Thalawathugoda Junction
From Nugegoda Fly Over Junction to Nugegoda Supermarket Junction
From D. S Senanayake Roundabout to Rajagiriya Junction
From Kaduwela to Koswaththa Junction

Figure 10.8 : The outer city junction
Source : Western Province Division and Research & Development Unit, UDA - 2018

The Inner City — This area is proposed to be set up by giant buildings with medium height and large floor areas in order to serve a medium density. Mainly, the Administrative Area and Executive Residence Area are to be established within this area.

Thalawathugoda to 1.5km buffer edge (Kimbulawala Junction)
Nugegoda Supermarket Junction to 1.5km buffer edge
Rajagiriya Junction to 1.5km buffer edge
Koswaththa Junction to 1.5km buffer edge

Figure 10.9 : The inner city
Source : Western Province Division and Research & Development Unit, UDA - 2018

The Center — Special featured buildings with a unique architectural character embossed are proposed in the Center in order to enrich the appearance. This intervention would make city streets more inviting and create more interesting places to wander. A special concern is to hold the area with low rise structures and low density (According to the Visibility Analysis done by UDA) to convey the sense of a majestic place and calmness through Sri Lankan Architecture and wetlands improvement.

Further, it is proposed to improve the façade of the buildings which could convey a better first impression and improve the marketability of the city area. The ultimate aim of the intervention is to build the expression of pride along the Ceremonial Access and attract more visitors to the area while, contributing to the quality of life of dwellers.

Strategic Project 3 : Introducing Transitional Nodes

Junctions Improvement

The proposed improvement is set to be implemented at twelve recognized nodes along the Ceremonial Access. They are,

Center Transition

- *04 bridges have been identified as entrance to the center from the inner city*
  - *Kimbulawata Bridge*
  - *Palanthuna Bridge*
  - *Battaramulla Diyatha Bridge*
  - *Special identified bridge (Rear side of the Parliament)*

Inner-City Transitional Nodes

- *Wetland close to Kalalgoda*
- *Rajagiriya Node*
- *Koswaththa Node*
- *Nugegoda Super-Market Node*

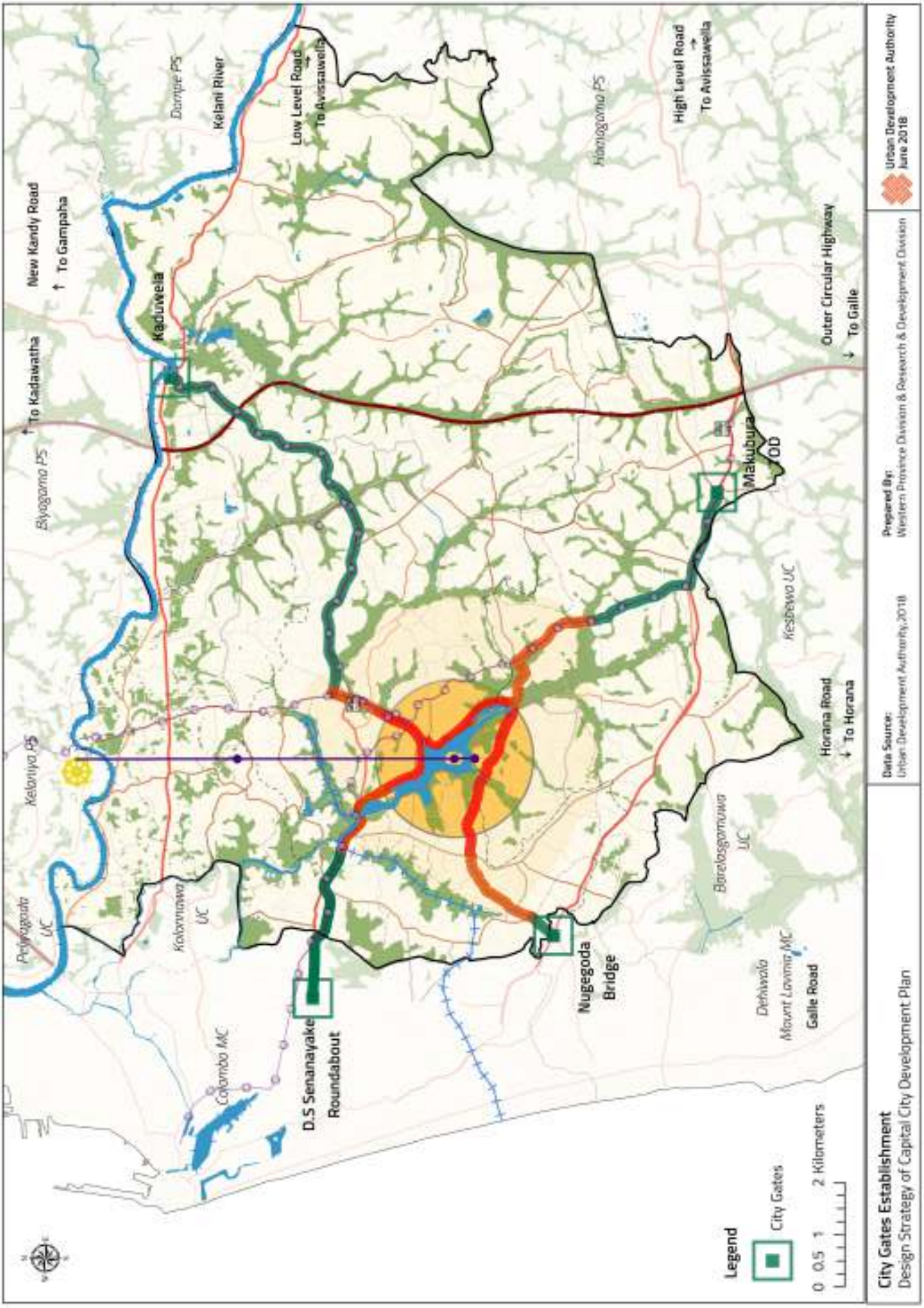
Outer-City Transitional Nodes

- *Kottawa Junction*
- *Kaduwela Junction*
- *D. S. Senanayake Roundabout*
- *Nugegoda Fly-over*

The upgrading of these nodes should enhance the aesthetic beauty of the city area while incenting the impression of gradual rise of power. These include statues, gates, sign board designs and other architectural and landscaping elements along the road.

Strategic Project 4 : City Gates Establishment

The city gates establishment is performed as a symbolic gesture in honor of the unique history. This improvement should necessarily enhance the magnificence gradually from the Outer City towards the City Center at Kaduwela, Kottawa, Nugegoda Bridge, D. S. Senanayake Roundabout and Megoda Kelaniya Bridge.



Map 10.4 : City gate establishments
Source : Western Province Division and Research & Development Unit, UDA - 2018

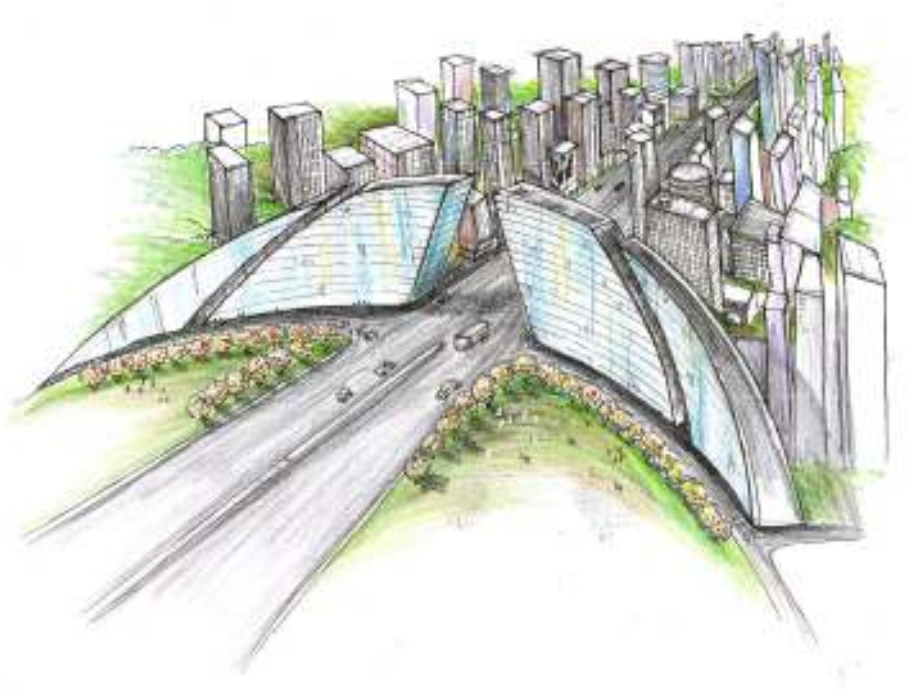


Figure 10.10 : The center in the Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

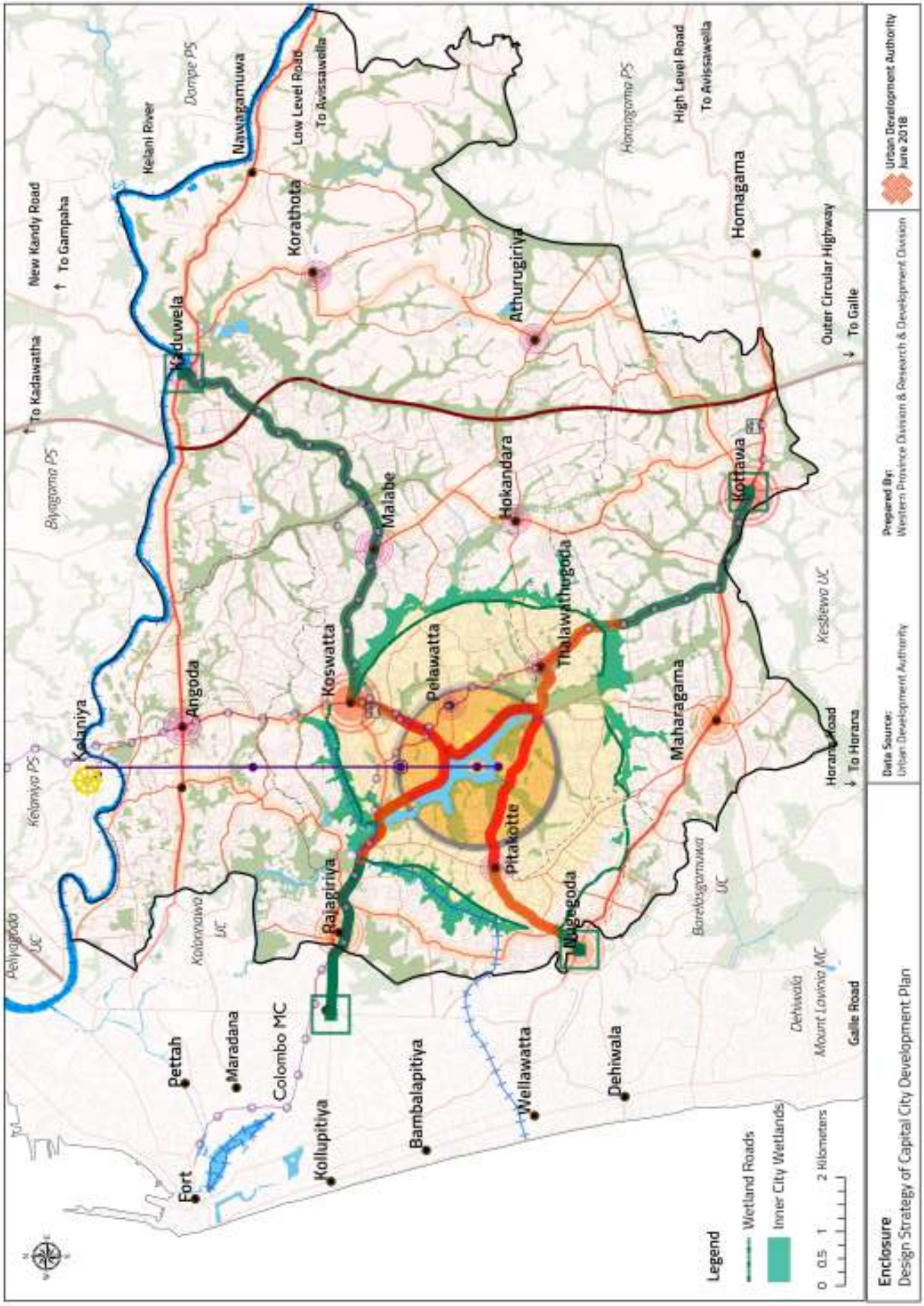
Strategic Intervention 3: Enclosure

It is highlighted that the enclosure is one of the most important features of urban spaces, particularly from an aesthetic perspective. Hence, it is aimed to enrich the sense of place through attractive spaces. In order to do so, the proposed initiatives are as below,

- *Inner City Boundary Delineation*

Strategic Project 1 :
Demarcate Inner City Boundary by connecting missing links

The Inner City boundary is demarcated by the wetland feature. However, it is challenging to demarcate the boundary completely with the wetland feature since, the link of the natural feature is missing in some points. For that reason, the plan proposes to develop the part of Kalapaluwawa Road, Udahamulla Station Road, Old Kesbewa Road which would define the inner city boundry of CCDP as a boulevard. It is expected to maintain the green character with this intervention.



Map 10.5 : Inner city boundary demarcation
Source : Western Province Division and Research & Development Unit, UDA - 2018

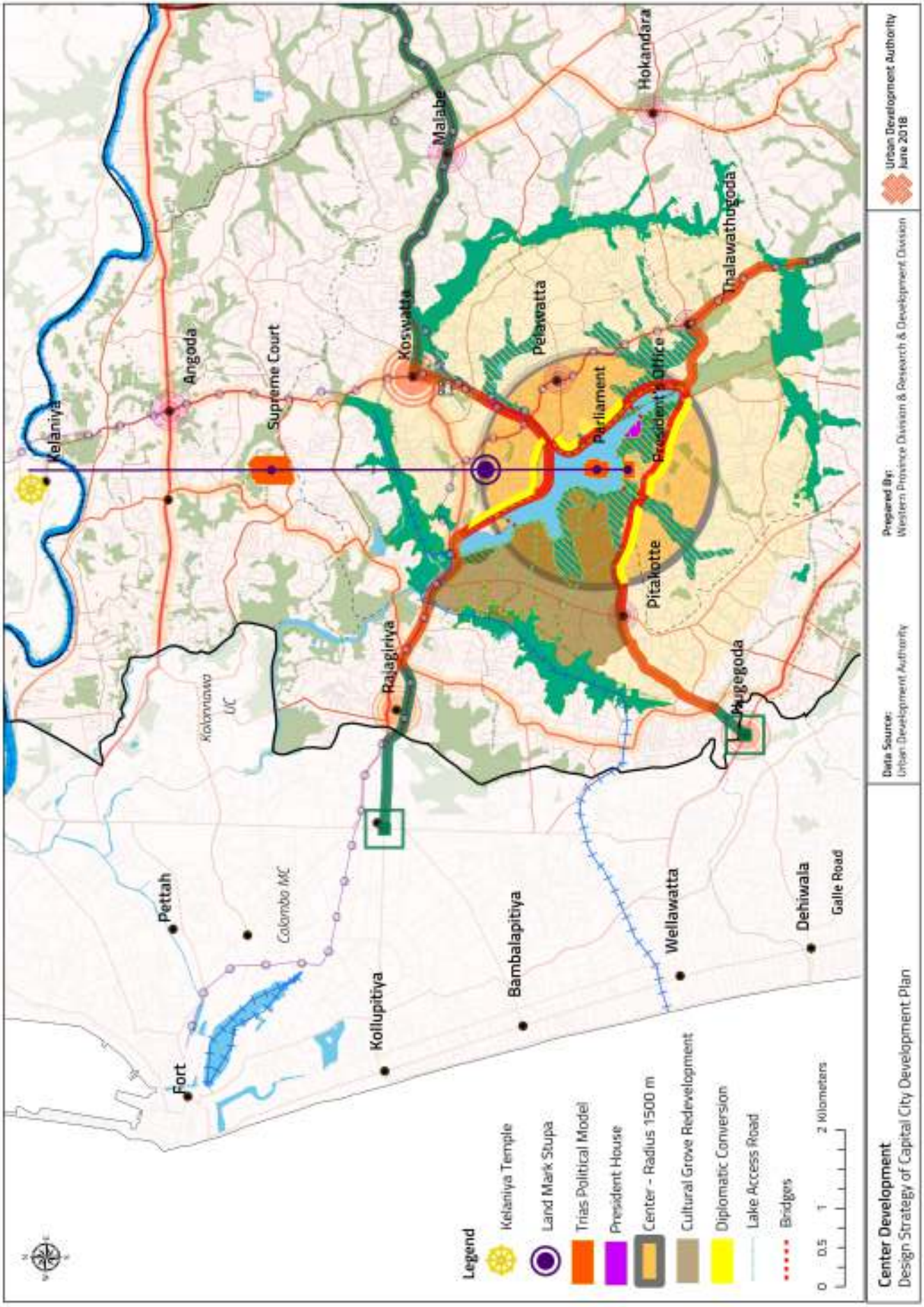
Strategic Intervention 4 : Center

This principle indicates that, it is crucial to establish a strong and legible center in the city. Accordingly, a Visibility Analysis was conducted within a radius of 1.5km around the Parliament since the issue of indistinct visibility occurred due to the high rise buildings around it. The analysis imposed regulations accordingly. This particular area is considered as the 'Center' in the Capital City Development Plan. It proposes to develop the area as a low dense and low height area with a large proportion of open space to offer a calm and majestic sense to the dwellers and visitors. Accordingly, three initiatives are offered. They are,

- *Diplomatic Conversion*
- *Royal Park Establishment*
- *Cultural Grove Redevelopment*

Strategic Project 1 :
Encourage and Facilitate lands for Diplomatic Offices

The parliament complex is the only recognised landmark which upholds the noble status of the Capital City to this date. Hence, the plan proposes to re-establish the Diplomatic Offices along the land strip from Kibulawala Junction to the Parliament Junction (Including Apegama Land) and maintain a high secured zone. Further, the president's residence and office with related activities are to be moved towards the Capital Valley Axis. The main objective of this intervention is to instill an extinguished brand to the city.



Map 10.6 : Diplomatic conversion in the Capital City
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 2 : Center Park Establishment

In order to convey the meticulous sense of the proud citadel, the city should be functional enough to cater the needs of occupants and facilitate roaming around the city and conserve the wetland 100%, located within a 1.5km buffer.

Sub-Project 1 : Pathway & Pocket Parks Development

The ultimate aim of this intervention is to enhance the aesthetic value of the area while conserving the native green feature completely. On the other hand, it is believed that this initiative could possibly yield great economic benefits to the country. Hence, the strategic intervention proposes to enhance the natural assets by opening up eco- friendly wetlands around the center and pocket parks at points A, and B as illustrated in figure 10.13. Further, park connectors are proposed to link the wetlands. These park connectors will allow the wetlands ecosystem to thrive providing green links for the pedestrians and non-motorized transport.

Figure 10.11 : Pathway, Pocket parks and bridge development
Source : Western Province Division and Research & Development Unit, UDA - 2018

Figure 10.12 : Images of Pocket parks and paths
Source : www.mtl.org/en/experience/explore-montreals-parks-and-green-spaces

Sub-Project 2 : Construction and Redesign of Bridges

The capital city of the country should contain incredible physical elements to emphasize the value of it. Bridges are a main element of such. The strategic intervention proposes to embed an architectural touch to the bridges around the citadel. Further, bridges are proposed to be constructed at points 01, 02, 03, 04, 05 and 06 as given in figure 10.13 so that the pathway around the center would be more active.

Chapter 10
URBAN DESIGN STRATEGY

Strategic Projects in Urban Design Strategy

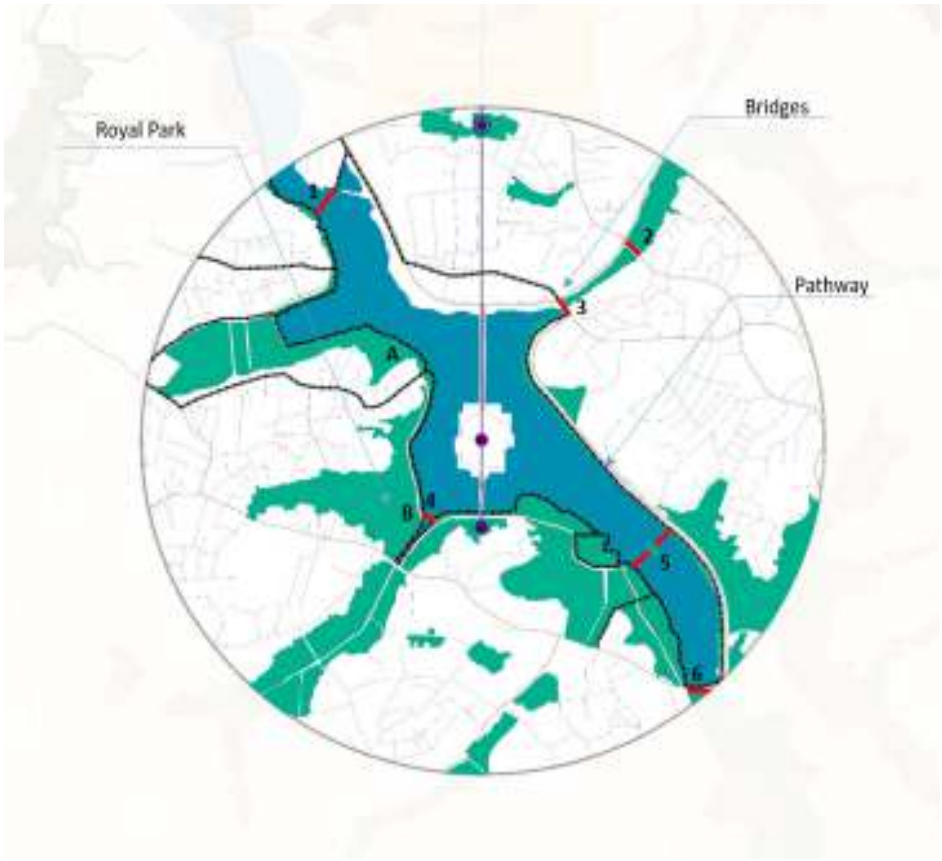


Figure 10.13 : Pathways and pocket park development
Source : Western Province Division and Research & Development Unit, UDA - 2018

Sub-Project 3 : Lake Access Roads Improvement

Currently it is noted that, wetlands are not optimally used. The main reason could be the low and irregular accessibility. For that reason, the road axes are proposed to be developed with perfect eco-friendly landscaping. This initiative will promote a great combination between the environmental sensitive areas and urban areas.

Nippon Mawatha, Mahindarama Road, Colambathanthri Road, Kotte Road, Beddagana Road,Duwa Road, along the Canel(Iyan Poruwa Rajamaha Viharaya) will be developed as lake access roads.

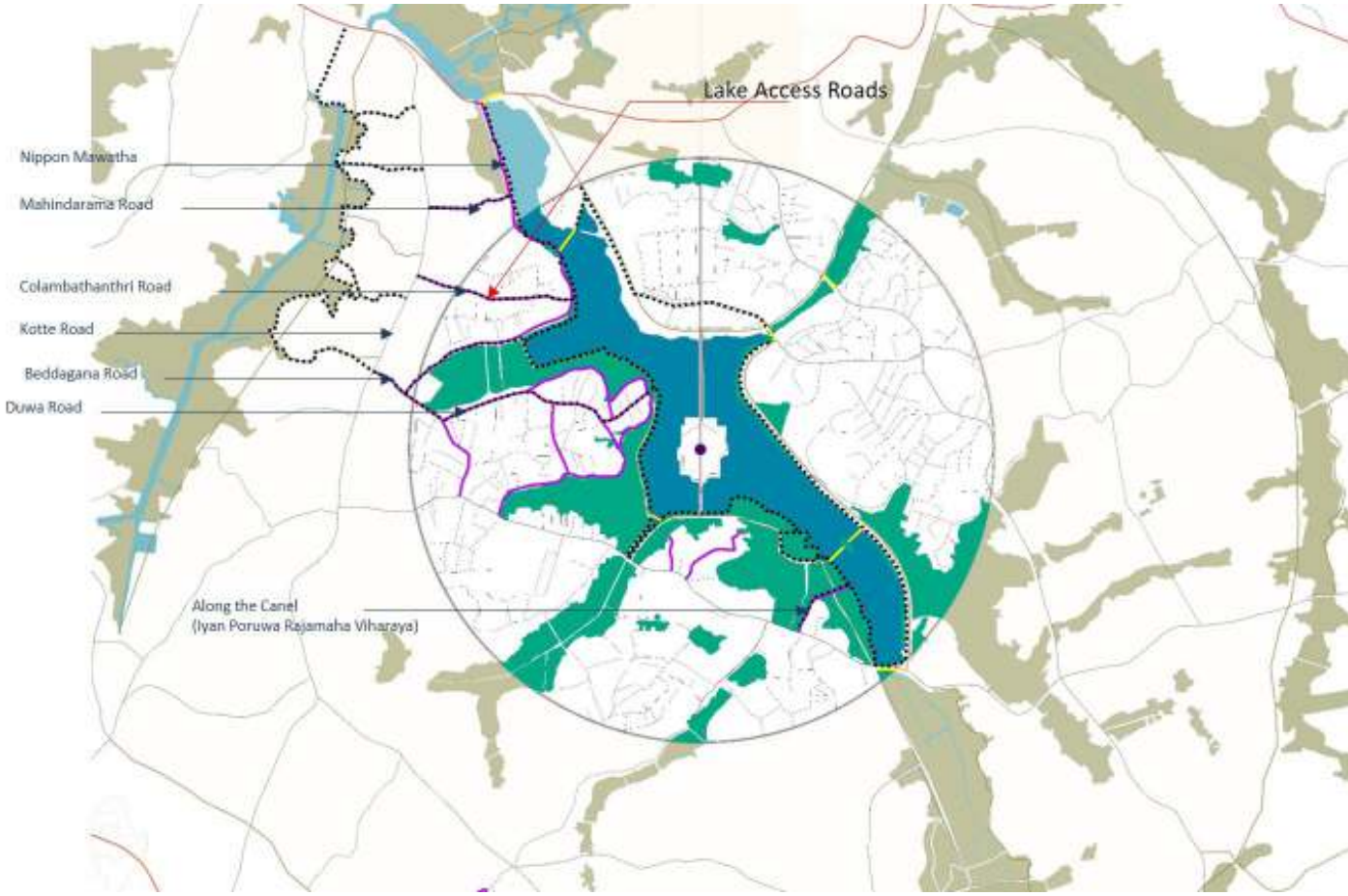


Figure 10.14 : Lake access improvement Strategy
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 3 : Cultural Grove Redevelopment

Sub-Project 1 : Design an Archeological Trail

The ruins of once a great citadel still exists in the centre of the planning area. There are critical challenges in managing this historical sight and conserving the unique architectural and cultural values associated with it. Hence, it is a proposed fact that a special guide plan should be mandatorily used to protect the area bordered with the rampart. Further, proper regulations must be applied in order to maintain a special character in the preserved area. The features with historical and cultural value such as The Museum, The Public Library, The Art Gallery, The Art and Crafts Centre and National Archives are projected to be moved to this area which will allow the financial capital of the country to function well.

The Archaeological Trail will be the destinations for

- *Sri Perakumbha Pirivena*
- *Mahindaramaya Temple*
- *Alakeshwara Tombstone*
- *Angampitiya*
- *Archaeological Musium*
- *Lambric Hall*
- *Sunethraramaya*
- *Kotte Ambalama*
- *Veherakanda Temple*
- *Ananda Shastralaya*
- *Kotte Raja Maha Viharaya*
- *Jubilee Post*

And,

- *Rampart Wall*

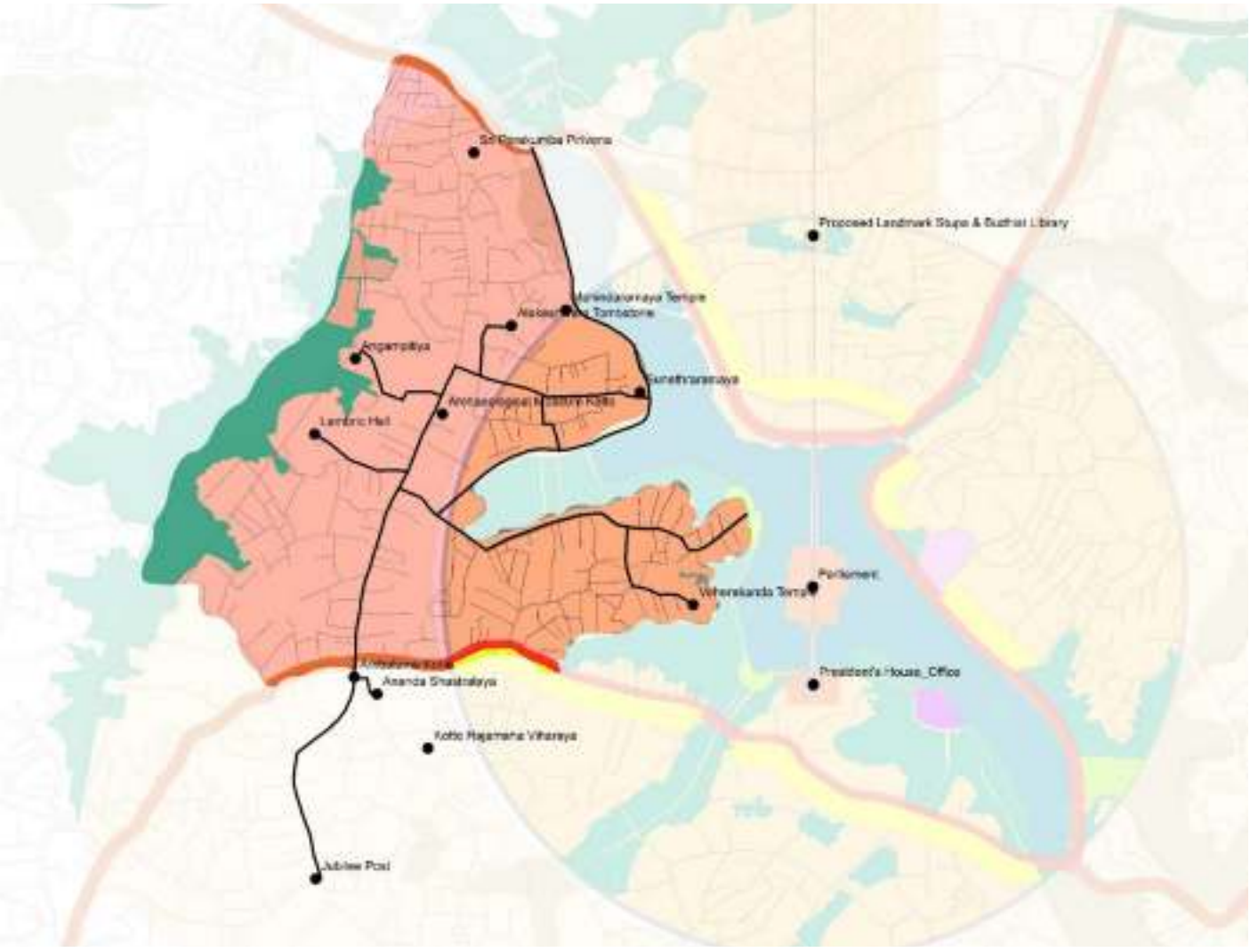


Figure 10.15 : Cultural grove redevelopment zone
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Intervention	Project Code	Strategic Project
Axial Establishment	SII-D12	Relocate the Supreme Court to the Present IDH Land
	SI-D-1	Relocate the Presidents House/Office to the rear side
	SI-D-2	City Land Mark Establishment
Creating Hierarchy / Transition	SII-D7	Project of Landscape Improvement along the Ceremonial Access
	SII-D8	Project of Facade improvement along the Ceremonial Accesses
		Introduce14 Transitional Nodes
	SI-D-3, SI-D-4, SI-D-5 and SI-D-6	City Gates Establishment
Enclosure	SIII-W-13, SI-W-1, SII-W- 6, SII-W- 7	Demarcate Inner City boundary by connecting missing links
Center	SII-D10	Encourage and facilitate lands for Diplomatic Offices
	SI-W-2	Capital City Park Establishment
	SII9-D and SII-D11	Pathway & Pocket Parks Development
		Lake Access Roads Improvement

Table 10.1 : Strategic Projects in Urban Deisgn stratgey
Source : Western Province Division and Research & Development Unit, UDA - 2018

10.5. Impact of Capital City Urban Design Strategy

The above-mentioned strategy is assumed to assist in achieving the first strategic goal by creating a unique city ambience with identity and character. The impact of the Urban Design Strategy is expected to have a pleased façade along the streetscapes and make architecturally designed remarkable town centers with city entry points. Together this strategy will create a modern Capital City. This will be the first attempt of creating the most dynamic and remarkable Capital City of Sri Lanka in this era.

11

Heritage Conservation Strategy

Chapter 11
HERITAGE CONSERVATION STRATEGY

Introduction

Aims and Objectives

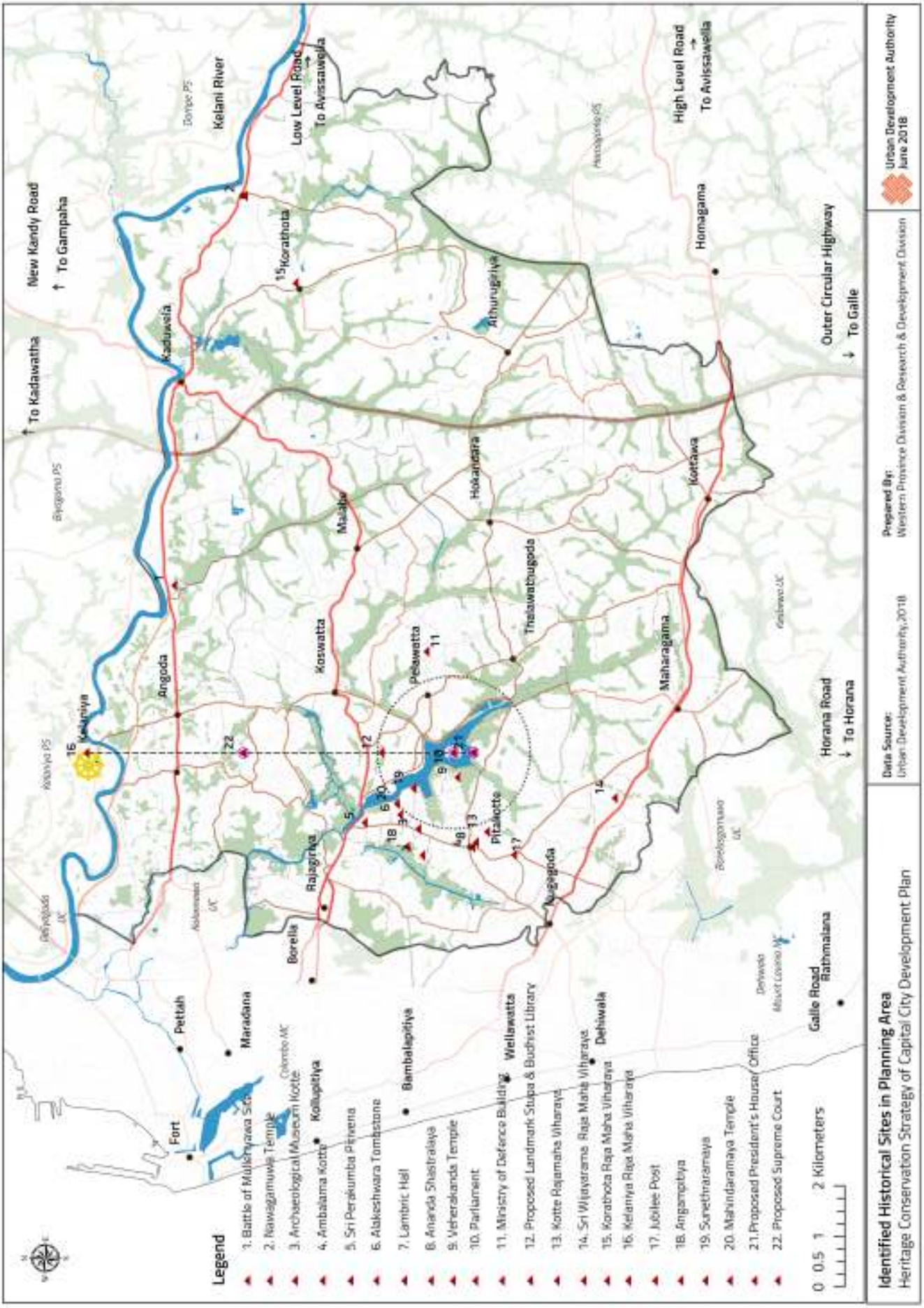
11.1. Introduction

Heritage of an urban space exist in both tangible and intangible forms. Even it is directly defined as, properties inherited; the value does not only derive from the history, but the values which create magnitude for its context in present is also an essential component to define the term urban heritage. As per the mentioned basic classification the heritage values can be distinctly categorized as tangible, which physically exist in context and intangible, which exist in a way of knowledge, norms, etiquettes. While these ideas of heritage is considered in the Capital City area, it can be noticed that there are a massive number of heritage values exist in both physical and non-physical ways.

Since the Capital City Planning Area bears a dynamic range of heritage components it is required to have a sensitive approach to implement a conservation strategy apart from the existing regulatory provisions in Archeology and Antiquities Ordinance.

11.1.1. Aims and Objective

The archaeological monuments published through the gazette should be protected according to the archaeological requirements Hence, future Projects on particular areas should adhere to the requirements of the Department of Archeology and Urban Development Authority.



Map 11.1 : Identified historical sites in the planning area
Source : Western Province Division and Research & Development Unit, UDA - 2018

Chapter 11
HERITAGE CONSERVATION STRATEGY

Introduction

Aims and Objectives

Monument / Place	Number
Battle of Mulleriyawa Site	1
Nawagamuwa Temple	2
Archaeological Museum Kotte	3
Ambalama Kotte	4
Sri Perakumba Pirivena	5
Alakeshwara Tombstone	6
Lambric Hall	7
Ananda Shastralaya	8
Veherakanda Temple	9
Parliament	10
Ministry of Defence Building	11
Proposed Landmark Stupa & Budhist Library	12
Kotte Rajamaha Viharaya	13
Sri Wijayarama Raja Maha Viharaya	14
Korathota Raja Maha Viharaya	15
Kelaniya Raja maha Viharaya	16
Jubilee Post	17
Angampitiya	18
Sunethraramaya	19
Mahindaramaya Temple	**20**
President's House/ Office	**21**
Supreme Court	22

Table 11.1 : Listed historical mounumnets and places
Source : National Archeological Department

11.2. Present State

11.2.1. Tangible Heritages

Tangible Heritages can be classified as below,

- *Religious*
- *Private*
- *Public*
- *Government owned*
- *Natural Environmental Elements*
- *Public Open spaces*
- *Streets*

	Monument / Place	Classification
1	Battle of Mulleriyawa Site	Public Open spaces
2	Nawagamuwa Temple	Religious
3	Archaeological Museum Kotte	Public
4	Ambalama Kotte	Public
5	Sri Perakumba Pirivena	Religious
6	Alakeshwara Tombstone	Public Open spaces
7	Lambric Hall	Public
8	Ananda Shastralaya	Public
9	Veherakanda Temple	Religious
10	Parliament	Government
11	Ministry of Defence Building	Government
12	Proposed Landmark Stupa & Budhist Library	Religious
13	Kotte Rajamaha Viharaya	Religious
14	Sri Wijayarama Raja Maha Viharaya	Religious
15	Korathota Raja Maha Viharaya	Religious
16	Kelaniya Raja maha Viharaya	Religious
17	Jubilee Post	Public
18	Angampitiya	Public Open spaces
19	Sunethraramaya	Religious
20	Mahindaramaya Temple	Religious
21	President's House / Office	Government
22	Supreme Court	Government

Table 11.2 : Classification of mounuments
Source : National Archeological Department

The Capital City Development Plan has only, considered public open spaces, religious, public, and government owned monuments. However, there are more unidentified private monuments in the area, (Houses and Structures) which holds archaeological value. Those should be identified under any conservation method and protected the historical features through a special guide plan for this area.

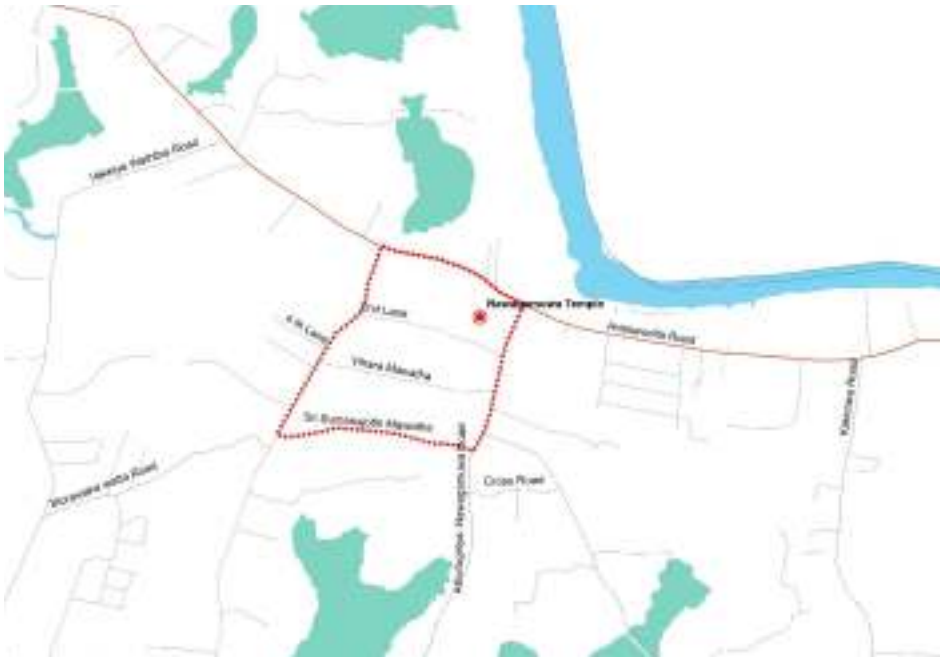
11.2.2. Intangible Heritage

Cultural festival

- *Kotte Perahara*
- *Navagamuwa Perahera*

1. Nawagamuwa Devala Perahera

Nawagamuwa Develaya is a temple located in the Kaduwela Municiple Council Area. It is located close to the Kelani river on Colombo Rathnapura Highway route.

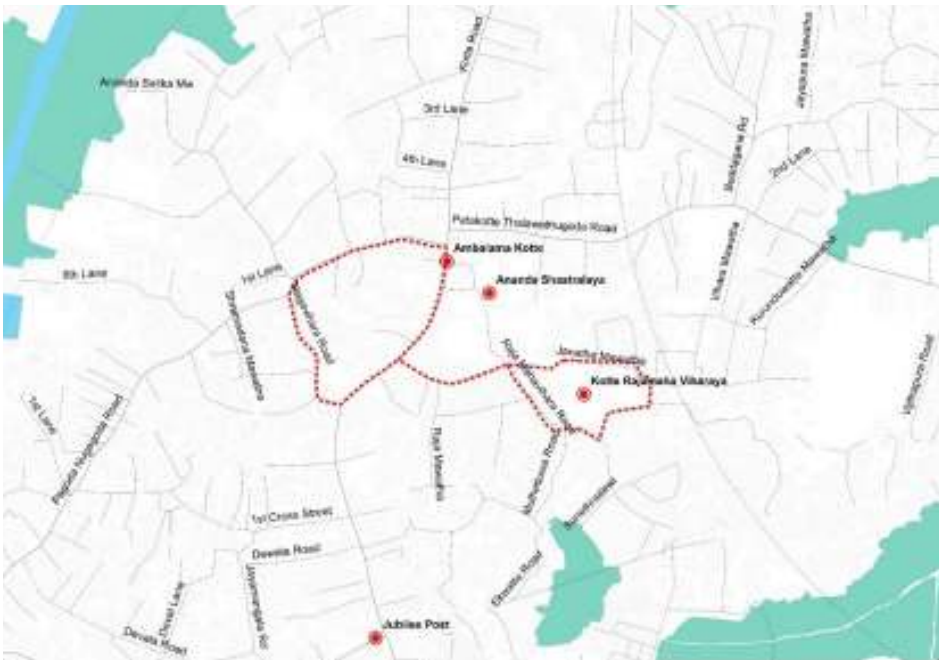


Map 11.2 : Nawagamuwa perahara route
Source : Department of Archeology

The Department of Archaeology declared the Nawagamuwa Pathini Devalaya as an archaeologically protected monument in Colombo District (22nd November 2002) for its historical, architectural and anthropological importance. According to popular legends the early establishment of Devalaya goes back to 1st century AD. Nawagamuwa also inherits archaeological sites that date back to BC period as per the archaeological researches conducted in the area. The major festival of the Nawagamuwa Pattini devalaya is the 'Gonpita Perahera' held on the month of August annually. Through this strategy, the route of perahera should be redesigned by reserving the required space and facilities.

2. Kotte Rajamaha Vihara Perahera

Kotte Raja Maha Vihara is a historic Buddhist temple situated in Sri Jayawardenapura Kotte. It is located close to the historic building, Pita Kotte Gal Ambalama. The temple has been formally recognized by the government as an archaeological site in Sri Lanka. The designation was declared on 17 May 2013 under the government Gazette number 1811.



Map 11.3 : Kotte perahara mawatha
Source : Department of Archeology

Annually, a perahera is conducted in the Kotte Vihara, in memory of and to honour the Sacred Tooth Relic of Buddha as the kingdom of Kotte once abode the Sacred Tooth Relic. Through this stratgey, the route of the perahera (Parts of Naga Vihara Road, Kotte Road, Raja Maha Vihara Road, Mhindu Mawatha, & Pagoda Road) should be redesigned and facilitated with adequate services.

11.3. Strategic Interventions for Heritage Conservation Strategy

Strategic Intervention 1 :
Heritage Management Tools

The impression behind the plan is focused on adaptive reuse and promoting the innumerable value of heritage. To accomplish this impression, the heritage management tools such as follows should be followed.

Reuse — This methodology is oriented to reuse the inherited buildings with modern or same use by keeping its original structure. It has academically justified the adoptive reuse of heritage (buildings) is a better way forward to the sustainable development. Since, it helps to preserve the physical context while transmitting the feelings of the heritage values of a site. The methodology is considered as the most influential in heritage conservation.

Redesign — This methodology is oriented to reuse the inherited buildings with modern use by keeping its original structure designed interiorly with modern architectural and engineering concerns. This methodology of heritage conservation influence to attract more economic value.

Redevelop — This methodology of heritage conservation is oriented to rebuild or recreate the inherited which does not physically exist or already dilapidated. The Redevelop concept can be used with buildings, monuments, sculpture, etc. This would lead to recreate the historical values with a new context.

As all these tools directly deal with physical monuments which are inherited, it is initially required to identify each site including its context analysis. In order to do so, the heritage site, old usage, existing usage, neighboring land's usage, accessibility, historical magnitude etc., should be analyzed.

Strategic Intervention 2 :
Marketing and Promotion (Living with Heritage Concept)

It is essential to have a proper marketing strategy to promote the concept of 'Living with Heritage'. According to the existing trend of Sri Lanka, the developers are in a belief of only modern architectural and engineering designs attract more economic benefits. But it is justified by the heritage valuers that the inherited monuments hold innumerable value besides its economic value. Therefore, if it would be able to promote the concept among the relevant stakeholders through proper marketing.

Integratory Spatial Planning Approach

Even the intangible values such as culture, etiquette, livelihood, etc. are not in a form which is able to directly address with some physical arrangements, it is true that the physical context of an area would directly keep or ruin those intangible heritages. Therefore, it is required to initially identify such intangible heritage within the area and then required to rearrange the other infrastructure plans and investment plans accordingly.

Regulatory Approach

The regulatory provisions for conservation of heritage, natural environmental components and public spaces are mandatory tool to be applied in the Heritage Conservation Strategy in Capital City Development Plan. As mentioned initially there is a dynamic range of heritage monuments spread within the planning area. Therefore, the legal provisions from various divisions are required to be incorporated such as, Antiquity Ordinance, Cost Conservation Act, UDA and local authority's Regulation etc.

11.4. Strategic Projects in Urban Design Strategy

The following methodology is to be applied to identify and produce action projects for the heritage Management Strategy.

- *Preparation of Special Heritage Plan (Guide Plan)*

The planning team has identified that this area should be a special Heritage Plan under the supervision of Department of Archeology, Urban Development Authority, local and international heritage planners, urban designers, urban planners and architects. This area is totally covered with identified and unidentified archeological monuments However, they have been destroyed by rapid development day by day. Hence, immediate requirement of preparing an Archeological Trail Design to protect and reveal the identified archeological elements to the future is crucial. Each heritage structure needs to be identified with spatial information system to support decision making process similar to Galle Fort. Further, all service line should be laid underground and all name boards, lighting facades must be developed according to the particular Special Heritage and Urban Design Guide Plan.

Strategic Project 1 : Archeological Trail

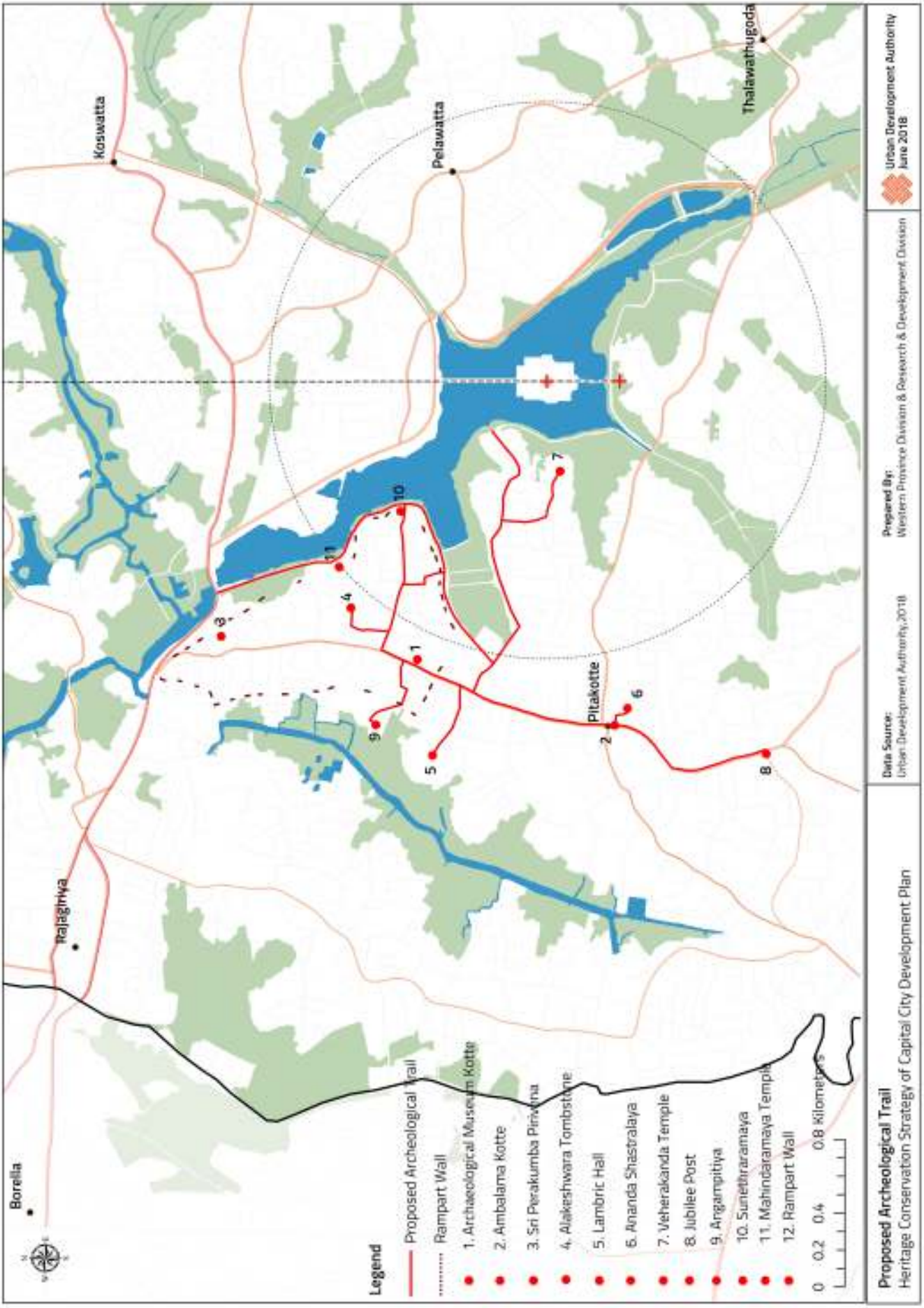
Design an Archeological Trail by protecting and revealing archeological elements within walkable distance.

1	Archaeological Museum Kotte
2	Ambalama Kotte
3	Sri Perakumba Pirivena
4	Alakeshwara Tombstone
5	Lambric Hall
6	Ananda Shastralaya
7	Veherakanda Temple
8	Jubilee Post
9	Angampitiya
10	Sunethraramaya
11	Mahindaramaya Temple
12	Rampart Wall

UDA Landscaping Division has proposed to link some gazzeted monuments through one trail with the intention to open up the monuments to general public, protect and brand the kingdom.

For this initiative Kotte Museum, Anga-mpitiya, Kotte Ambalama, Lambric Hall, Rampart, Veherakanda, Jubilee Post, Tunnels, Alakeshwara Ruins, Sunethraramaya area are been identified. These monuments connected through one trail shall enhance the attraction of the Capital City area.

Table 11.3 : Destinations of archeological trail
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 11.4 : Propsed archeological trail
Source : Western Province Division and Research & Development Unit, UDA - 2018

Strategic Project 2 : Rampart Wall Regeneration Project

The Urban Development Authority & Department of Archeology have identified the importance of regenerating of the Kotte Rampart within the last few years. Parallel to the archeological trail project, conservation of rampart wall will be a major intervention. Recently, Department of Archeology has identified the present condition of the wall and categorized the condition in to 03 categories.

Through this project, it is expected to initiate the following

- *Redevelop the damaged part of the rampart wall*
- *Conserve the remaining part of the rampart wall*
- *Amend the rampart reservation as 3m reservation towards inside and 4.5m reservation towards outside along the wall*

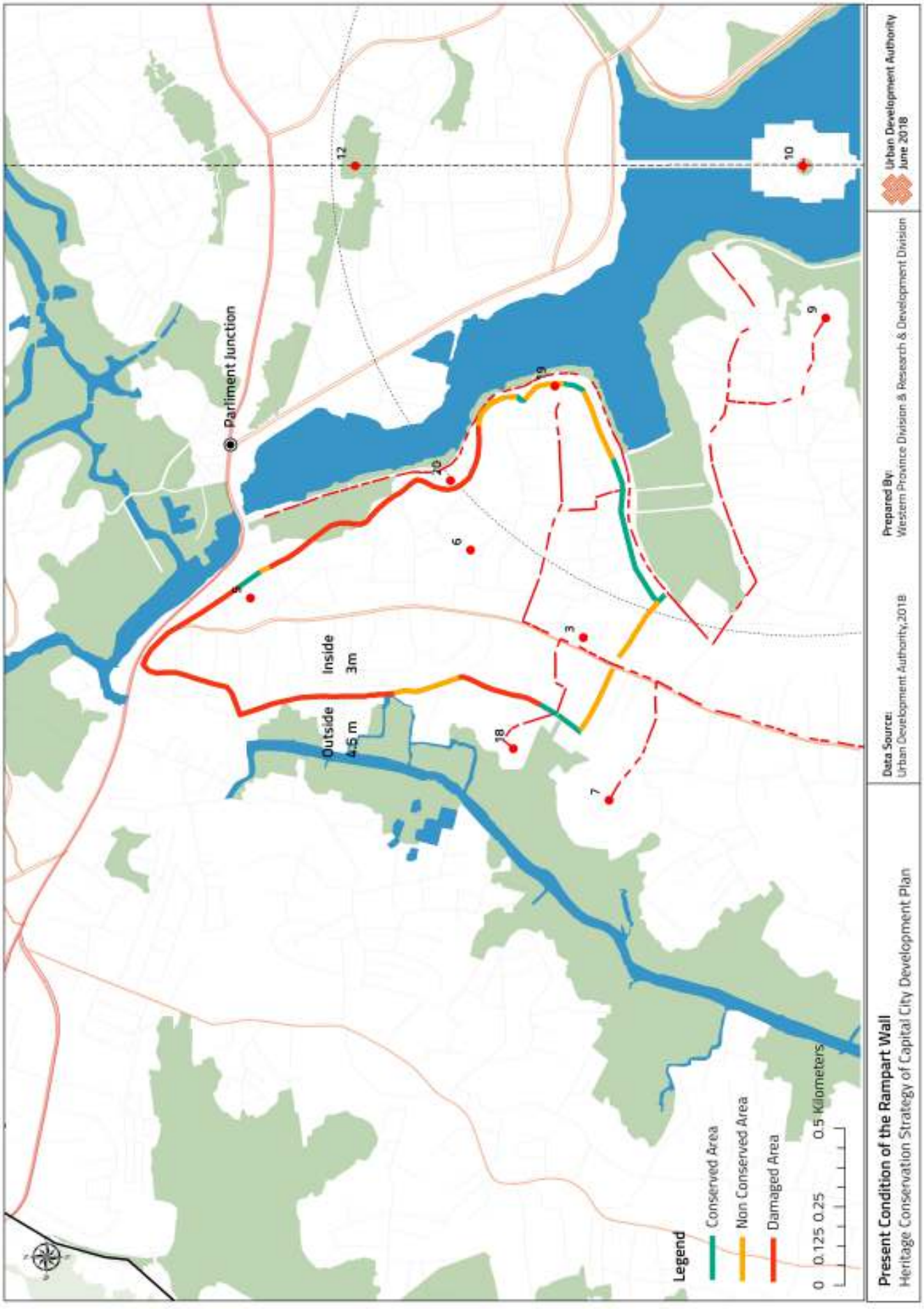
Damaged Rampart

Non Conserved Rampart

Conserved Rampart

Strategic Intervention	Project Code	Project Name
Apply Heritage Management Tools	SI-H-1	Special Heritage Guide Plan for Kotte Kingdom
	SI-H-2	Designing an Archeological Trail by protecting and revealing archeological elements within walkable distance.
	SI-H-3	Rampart wall Regeneration Project

Table 11.4 : Strategic projects in heritage conservation startegy
Source : Western Province Division and Research & Development Unit, UDA - 2018



Map 11.5 : Present condition of rampart wall
Source : Western Province Division and Research & Development Unit, UDA - 2018

12

Implementation Strategy

Chapter 12
IMPLEMENTATION STRATEGY

The vision of the Capital City Plan, 'Diadem Sovereign Sri Lanka' is expected to be achieved through three strategic goals and nine objectives. The Implementation Strategy is initiated to guide the selection of best solution and process the complicated strategic activities which come under the identified strategic approaches and objectives. In order to deliver an effective Implementation Strategy, the below structured approach is prepared;

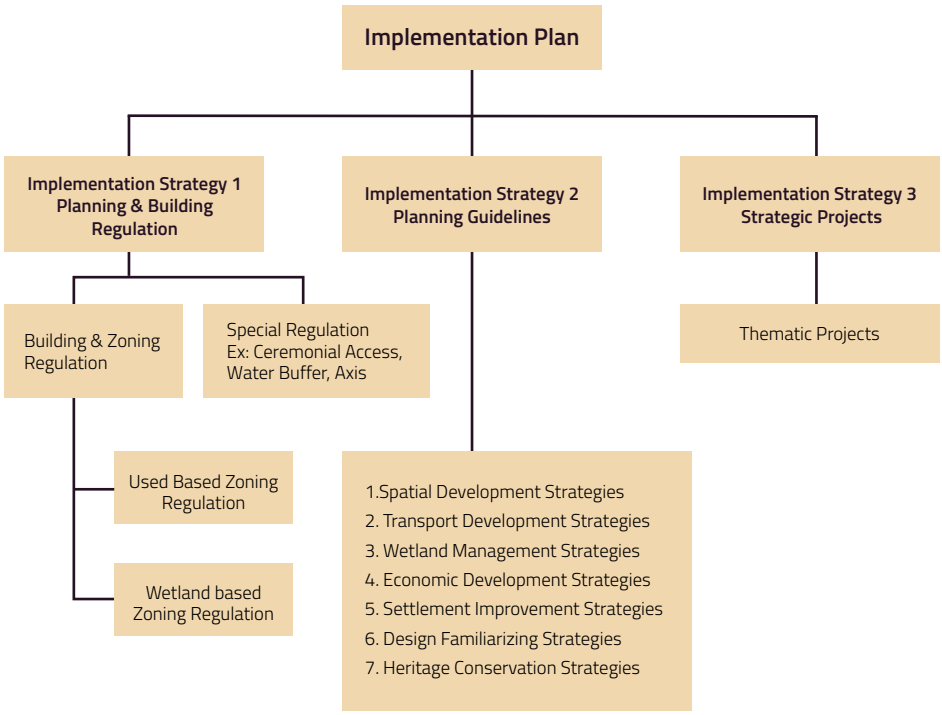


Figure 12.1: Implementation plan
Source : Western Province Division and Research & Development Unit, UDA - 2018

12.1. Prioritization of Strategic Project

The progress of the Capital City Development Plan mainly depends on strategic projects those identified under the seven development strategies. Hence, project prioritization and alignment is important to add value and implement the plan. Accordingly, project prioritization elaborates in what way each project is aligned with strategic approaches and objectives of the Capital City Development Plan. The prioritization of projects has been carried out based on four major criteria including project risk, complexity of the project, inter – dependency of projects and strategic value of the project. The Capital City Development Plan implementation process clarifies how the initiative concept and strategies are set with sufficient details to inform and enable the responsible parties to decide on further proceedings. Correspondingly, the appropriate financing mechanism is proposed to guide the relevant stakeholder in implementing the identified projects and ensure smooth realization of the vision of the Capital City.

Project Prioritization

1. *Strategic value of the project to achieve the planning concept in plan.*
2. *Inter dependency of the projects / operational benefits on other projects.*
3. *Projects which have the highest complexity in terms of inherent complexity, project uncertainty, project rigidity of sequence and number of technologies used.*
4. *Project risk identification*

1. Strategic Value of the Project to achieve the Planning Concept.

The entire list of projects is expected to enhance the value of the Capital City Development Plan. The consideration is given on the basic criteria which the projects need to enhance the strategic value of the pre designed conceptual plan, strategic approaches and objectives. The projects were initially scored within the range of 1 – 5. The value 1 is given for projects which possesses a low strategic value to achieve the concept and value 5 is given for projects which possess a high strategic value. However, the ranking and scoring is based on the planning team's perception. Hence, it can be identified as a limitation of this measurement.

2. Inter Dependency of Projects / Operational Benefits to the Other Projects

A project which is a pre-requisite for other projects automatically gains its priority in the order of implementation. Hence, a pair-wise matrix was carried out to derive the order of implementation of the identified projects. Initially, three colour codes were used to identify the dependency level of projects and then base coloured image was converted to numerical values.

Project	P1	P2	P3	P4	P5	Total	Normalized Value
P1	0						
P2		0					
P3			0				
P4				0			
P5					0		
Total							
Normalized Value							

Table 12.1: Table of project interdependency
Source : Western Province Division and Research & Development Unit, UDA - 2018

- *If left hand project is a pre-requisite for the top project – 1*
- *If left hand project is not a pre-requisite for the top project – 0*

3. Projects which have the highest Complexity in terms of Inherent Complexity, Project Uncertainty, Project Rigidity of Sequence and Number of Technologies used.

In order to identify the complexity of the projects, the Project Complexity Index was developed based on 7 components. It was developed to evaluate each project in terms of the below mentioned criteria. The value range 1 – *5* was adopted with the value 1 for projects with high complexity and the value *5* for projects with low complexity.

4. Project Risk Identification

Risk analysis is an essential tool which should be used in the planning sector since it helps to identify the potential issues that can negatively impact the projects and be used as a fact for the prioritization of identified projects. The Risk Index Analysis was developed mainly based on two criteria, probability and severity. By using these two criteria 9 risk types (cost risk, schedule risk, performance risk, governance risk, strategic risk, operational risk, market risk, and legal risk) were weighted as mentioned below. It indicates the range of risks that can occur through the projects in the Capital City Development Plan.

Project	T(P)	T(S)	R
P1			
P2			
P3			
P4			
P5			
Total			
Normalized Value			

Table 12.2: Table of project implementation matrix
Source : Western Province Division and Research & Development Unit, UDA - 2018

Project	Inherent Complexity	Uncertainty	No of Techno-logies	Rigidity of Sequence	Overlap of Phases	Organizational inherent Complexity	Total	Complexity Index
P1								
P2								
P3								
P4								
P5								
Total								
Normalized Value								

Table 12.3: Project prioritization
Source : Western Province Division and Research & Development Unit, UDA - 2018

In order to finalise the above mentioned four criteria in a single matrix, the criteria was weighted based on its importance on the implementation scenario. *(Please refer annexure 2)*

Projects	Risk	Weight	Complexity	Weight	Dependency	Weight	Strategic Value	Weight	Total
		20%		15%		30%		35%	
P1									
P2									
P3									
P4									
P5									
Total									
Normalized Value									

Table 12.4: weighted project prioritization matrix
Source : Western Province Division and Research & Development Unit, UDA - 2018

12.2. Prioritized Projects

The prioritized projects were classified into three broader categories as 1st priority, 2nd priority and 3rd priority projects. Given the implementation mechanism and the financing capabilities, it was identified that the 1st priority projects are capable to be implemented within the next 10 years of period (2019 to 2030).

Phase	Major Activities	Deliverables
Phase I (2019-2030)	Identified 32 Special Projects	1. Future land use map 2. Guide rezoning and Redevelopment decisions 3. Capital facilities planning 4. Identify Key Opportunities and Issues 5. Planned Capital City
Phase II (2030-2040)	Identified 23 Special Projects	
Phase III (2040-2050)	Identified 16 Special Projects	

Table 12.5: Summery of prioritised projects
Source : Western Province Division and Research & Development Unit, UDA - 2018

1st Priority Projects (2019-2030)

1st Priority Projects (2019 -2030)	
Category 01 - Strategic Projects identified by Capital City Development - 2030 (SI)	
Project Code	**Project Name**
SI-I	Infrastructure Improvement Startegy
SI-I-1	Waste water Treatment and Disposable Project
SI-I-2	Hospital Complex Relocation Project
SI-W	Wetland Management Startegy
SI-W-1	Thalangama marsh related park project
SI-W-2	Capital City Park
SI-W-3	Canal Regeneration in the Administrative area Project
SI-W-4	Kolonnawa tourism development marsh related park project
SII-W- 5	Maintain Buffer along Kelani River
SI-T	Transport Development Startegy
SI-T-1	Multimodal hub Establishment at Koswatta node project
SI-T-2	Makumbura Multi Model Hub Development
SI-T-3	Multimodal Transport Hub Development-kaduwela
SI-T-4	P1 Roads
SI-T-5	P2 Roads

1st Priority Projects (2019 -2030)	
Category 01 - Strategic Projects identified by Capital City Development - 2030 (SI)	
SI-T-6	P3 Roads
SI-T-7	Wetland Roads
SI-S	Settlement Development Strategy
SI-S-1	Neighbourhood Nodes Development in Residential Promotional Area's
SI-S-2	Shopping Mall Project at Pitakotte Junction- KMC
SI-E	Economic Developmet Startegy
SI-E-1	Kotikawaththa Office Space Development
SI-E-2	Pamunuwa Textile Park Development Project
SI-E-3	Rajagiriya Welikada Plaza area Regeneration Project
SII-E-4	Maharagama Town Center Development Project
SII-E-5	Kottawa Town Center Development Project
SI-A	Admin City Development Startegy
SI-A-1	Redesign of Administrtaive Cluster I Area
SI-A-2	Conversion of Land to Urban Spaces and Recreational Parks
SI-D	Urban Design improvement &
SI-D-1	President Office & Resident area Relocation Project
SI-D-2	City Land Mark (Stupa) Establishment Project
SI-D-3	Kaduwela City Gates Establishment project
SI-D-4	Kottawa City Gates Establishment project
SI-D-5	Nugegoda City Gate Establishmnet project
SI-D-6	D.S. Senanayake Roundabout City Gates Establishment project
SI-H	Heritage Conservation Startegy
SI-H-1	Special Heritage Guide Plan for Kotte Kingdom
SI-H-2	Designing an Archeological Trail by protecting and revealing archeological elements within walkable distance.
SI-H-3	Rampart wall Regeneration Project

Table 12.6: First priority projects
Source : Western Province Division and Research & Development Unit, UDA - 2018

Chapter 12
IMPLEMENTATION STRATEGY

Prioritized Project

2nd Priority Projects (2031-2040)

2nd Priority Projects (2031 -2040)	
Category 02 - Strategic Projects identified by Capital City Development - 2030 (SII)	
Project Code	**Project Name**
SII-W	Wetland Management Startegy
SII-W- 6	Diyatha Uyana Extension park - Phase 1
SII-W- 7	Eco Friendly Nature Park Project at Kotte Marsh
SII-W -8	Megoda Kelaniya marsh related park project
SII-W -9	Kaduwela marsh related park project
SII-W -10	Interconnection of missing links in water bodies
SII-W -11	Passenger Transport Route (Wellawaththa to Baththramulla)
SII-T	Transport Development Startegy
SII-T-4	P1 Roads
SII-T-5	P2 Roads
SII-T-6	P3 Roads
SII-T-7	Wetland Roads
SII-S	Settlement Development Strategy
SII-S-3	13 Conveneince Node Development Project
SII-S-4	Improving of Kaduwela - Homagama Road from Wellehandiya to Homagama
SII-E	Economic Developmet Startegy
SII-E-7	Nugegoda Super Market Area regeneration Project
SII -E-8	University District Development Project
SII-A	Admin City Development Startegy
SII-A3	Administrative Cluster 2 Development project
SII-A4	Koswaththa Township Development Project
SII-D	Urban Design improvement & Heritage Conservation Strategy
SII-D7	Project of landscape improvement Along The Ceremonial Access
SII-D8	Project of Facade improvement Along The Ceremonial Accesses
SII9-D	Pathways construction Project surrounding the Diyawanna Lake
SII-D10	Embassies Establishment Project
SII-D11	Three pocket parks Establishment project near to Diyawanna Lake
SII-D12	Supreme Court Relocation and Surrounding area Landscaping Project

Table 12.7: Second priority projects
Source : Western Province Division and Research & Development Unit, UDA - 2018

3rd Priority Projects (2041-2050)

3rd Priority Projects (2041 -2050)	
Category 03 - Strategic Projects identified by Capital City Development - 2030 (SIII)	
Project Code	**Project Name**
SIII-W	Wetland Management Startegy
SIII-W-12	Malabe marsh related park project
SIII-W-13	Green Walkway project at Thalangama Tank
SIII-W-14	Redesign Kelani River Bridge
SIII-W-15	Baththaramulla to kelaniya Water Transport
SIII-T	Transport Development Startegy
SIII-T- 12	P1 Roads
SIII-T- 13	P2 Roads
SIII-T- 14	P3 Roads
SIII-T- 15	Wetland Roads
SIII-S	Settlement Development Strategy
SIII-S5	High End Residential Phase II- Residential Development Project at Thalapathpitiya
SIII-S6	High end Residential Phase I- Residential Development Project at Pitkaotte Junction
S-T-7	Community Park Development Project
	Phase I- Community Park at Hokanadara (1.1 acre)
	Phase II- Community Park at Vidyala Junction (2.5 acre)
	Phase III- Community Park at Hatharaman Handiya (0.45 acre)
SIII-E	Economic Developmet Startegy
SIII-E-9	Industrial Warehouse Strip project
SIII-E-10	Knowledge City Development Project
SII-A	Admin City Development Startegy
SII-A-5	Thalawathugoda Township Development Project
SI-A-6	Road Improvement Projects Towards Cluster 2 area
SII-D	Urban Design improvement & Heritage Conservation Strategy
SIII-D+13	Cultural Grove Redevelopment Project

Table 12.8: third priority projects
Source : Western Province Division and Research & Development Unit, UDA - 2018

Annextures

Annexture 01

අනු අංකය	දිස්ත්‍රික්කය	උ.දි.කො / ප්‍රා. ලේ.කො.	කෝරලය	පත්තුව	ගම	ස්මාරකය	වෙනත් විස්තර	ගැසට් අංකය හා දිනය
1	කොළඹ	නුගේගොඩ	--	--	රාජගිරිය	ඔබේසේකර වලවිව	රාජගිරිය පාරේ, අංක 137 දරණ ඉඩමේ පිහිටි	1992/03/02
2	කොළඹ	--	--	--	කෝට්ටේ නගරය	පැරණි දිය අගල	කෝට්ටේ නගර මැණුමේ අංක 62 හි අංක 13 පත්‍රයේ 115, 116, 119 සිට 126, 155, 156 හා 158 සිට 160 අංක 17 පත්‍රයේ 49, 50, 52, 53, 58 සිට 60 සිට 63, 71, 72 අංක 18 පත්‍රයේ 60, 62, 63, 66 සිට 68 යන බිම් කැබලි වලට අසුවන	14970 – 1971/08/12 දැන්වීම
3	කොළඹ	--	--	--	කෝට්ටේ නගරය	පැරකුම්බා පිරිවෙන	අංක 62 දරණ නගර මිණුමේ 69 වැනි බිම් කැබැල්ල	14958 – 1971/05/14
4	කොළඹ	නුගේගොඩ	--	--	කෝට්ටේ	පැරණි උමඟ	කෝට්ටේ ආනන්ද ශාස්ත්‍රාල භූමියේ පිහිටි	10418- 1952/06/27
5	කොළඹ	නුගේගොඩ	--	--	රාජගිරිය	රාජගිරිය පාරේ	අංක 137 දරන ඉඩමේ ඇති ඔබේසේකර වලවිව	1992/11/13
6	කොළඹ	කඩුවෙල	--	--	කොරනොට	කොරනොට රජමහා විහාර භූමිය	කටාරම් කෙටූ පැරණි ගල්ලෙන් සහ ශිලා ලිපි	2002/02/22 1264
7	කොළඹ	කඩුවෙල	--	--	නවගමුව	නවගමුව දේවාලය භූමිය	පැරණි විහාර ගෙය, ගල්කණු, දේවාලය, ශ්‍රී මහා පත්තිනි දේවාලය, ශ්‍රී විශ්ණු දේවාලය, කතරගම දේවාලය, දැඩිමුණ්ඩ දේවාලය, පැරණි ආවාස ගෙය සහ පැරණි නාගස් සහිත මළුව	2002/12/22 1264
8	කොළඹ	මහරගම	--	--	වන්නේගෙදර	විපස්සාරාම විහාරය	පැරණි විහාර ගෙය	2005/07/08 1401
9	කොළඹ	නුගේගොඩ	--	--	521 ඇතුල් කෝට්ටේ	අංක 62 කෝට්ටේ නගර මැනුමේ 13 පත්‍රයේ උතුරට 89, 90, 129, 127, 126, 125, 124, 123, 122, 121, 120, 119, 116, 115 කැබලිවලට ඇතුලතින් මායිම් වූ	පැරණි කොටු බැම්ම හා කොටු බැම්මේ සිට අඩි 5 ක භූමි ප්‍රමාණය	2007/02/23 1486

අනු අංකය	දිස්ත්‍රික්කය	උ.දි.කො / ප්‍රා. ලේ.කො.	කෝරලය	පත්තුව	ගම	ස්මාරකය	වෙනත් විස්තර	ගැසට් අංකය හා දිනය
10	කොළඹ	නුගේගොඩ	--	--	521 ඇතුල් කෝට්ටේ	දකුණට 87, 88, 130, 159 කැබලිවල පිහිටි	පැරණි ඇතුල් දිය අගල	2007/02/23 1486
11	කොළඹ	නුගේගොඩ	--	--	521 ඇතුල් කෝට්ටේ	අංක 62 කෝට්ටේ නගර මැනුමේ 13 පත්‍රයේ 116, 117, 113, 112, 110, 64, 63, 62, 61, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 33, 31, 30, 29, 28, 26 කැබලිවලට ඇතුලතින් මායිම් වූ	පැරණි කොටු බැමිම සහ එම කොටු බැමිමේ සිට අඩි 5 ක භූමි භාගය	2007/02/23 1486
12	කොළඹ	--	--	--		27, 55, 56, 57, 58, 59, 60, 111, 114, 115 කැබලිවලට පිටතින් මායිම් වූ	පැරණි කොටු බැමිම සහ එම කොටු බැමිමේ සිට අඩි 10 ක භූමි ප්‍රමාණය	2007/02/23 1486
13	කොළඹ	--	--	--		අංක 62 දරණ කෝට්ටේ නගර මැනුමේ 13 පත්‍රයේ 90, 85, 84, 349 කැබලිවලට ඇතුලතින් මායිම් වූ සහ 87, 86, 350 කැබලිවලට පිටතින් මායිම් වූ	පැරණි කොටු බැමිම සහ එම කොටු බැමිමේ සිට අඩි 5 ක භූමි භාගය පැරණි කොටු බැමිම සහ එම කොටු බැමිමේ සිට අඩි 10 ක භූමි භාගය	2007/02/23 1486 2007/02/23 1486
14	කොළඹ	නුගේගොඩ	--	--	521 ඇතුල් කෝට්ටේ	අංක 62 කෝට්ටේ නගර මැණුමේ 11 පත්‍රයේ 84284 කැබැල්ල හරහා පිහිටි හා 285, 287,288,280, 279,278,277,276,191,192,185,137,138, 131,127,141 හා 40 කැබැල්ල හරහා පිහිටි 39,33, 81 යන කැබැලිවලට ඇතුලතින් මායිම් වූ සහ 286, 282,281, 277,278, 290, 189, 186 කැබැල්ල හරහා පිහිටි 136, 133, 132, කැබැල්ල හරහා පිහිටි 36, 38, 34 කැබැලිවලට ඇතුලතින් මායිම් වූ		2007/02/23 1486
15	කොළඹ	නුගේගොඩ	--	--	521 ඇතුල් කෝට්ටේ	අංක 62 කෝට්ටේ නගර මැණුමේ 11 පත්‍රයේ 349, 344, 343, 342, 94, 93, 57 කැබැල්ල හරහා පිහිටි හා 11 යන කැබලිවලට ඇතුලතින් මායිම් වූ		2007/02/23 1486
16	කොළඹ	නුගේගොඩ	--	--	521 ඇතුල් කෝට්ටේ	අංක 622 කෝට්ටේ නගර මැණුමේ 6 පත්‍රයේ 11, 54, 53,52,51,50, 49, 71, 59, 46 සහ 45, 44, 43, 42, 35, 72, 69 කැබලි හරහා පිහිටි 81 යන කැබලිවලට ඇතුලතින් මායිම් වූ සහ 93,18,48,73,74,75,80 යන කැබලිවලට පිටතින් මායිම් වූ		2007/02/23 1486
17	කොළඹ	කඩුවෙල	--	--	470 ඒ නවගමුව දකුණ	ඇළදොල කන්ද	කටාරම් කෙටුලෙන ප්‍රාග් ඓතිහාසික සාධක සහිත ලෙන් දෙක	2011/12/30 1739

Annexture 02

	P1 Roads	P2 Roads	P3 Roads	Wetland roads
1st stage 2019-2030	Highlevel Road	Angoda Hospital road	Beddagana Rd	Old Kesbawa Road
	New Kandy Road	Malabe-Kottawa Road	Madiwela Road	Madinnagoda Road
	low level Road	part of the proposed ring road	Vivekarama Mawatha	Udahamulla Station Road
		Parliament Road	Vidyala Mawatha	Proposed Road
		Thalawathugoda Road	Defence road	Proposed SJ Road Extend
		Malabe - Athurugiriya road	Robert Gunawardane Mawatha	Kalalgoda Road
		Old Kesbawa Road	Lake Road	Japan Sri Lanka Friendship Road
		Near Welikada plaza	Sri Devananda Road	Chandrika Kumarathunga Mawatha
		Himbutana Road	Welivita Road 1	Kalapaluwawa Road
		Old Kottawa Road	Udawatta Road	Duwa Road
		Welikada-Kotikawatte Road	Vihara Lane	SJ Road
		Stanley Thilakarathne Mawatha	Pamunuwa Road	Sri Lanka Nippon Av
		Kirimandala Mawatha	infront of Aurveda Hospital	Parliament Drive
			Millenium Drive	Dencil Kobbekaduwa Road
			Sedawatta-Ambatale Road	Lake Drive
			Diyawanna Mawatha	
			Balika Niwasa Road / Rukmale Road	
			Pipe Line	
			Old Kottawa Road	
			Polwatte Road	
			New Proposed Road 1	
			New Proposed Road 2	
			defence road 2	
			Vivian Gunawardana Mawatha	
			Weliwatta road	
			Thunadahena Road	
2nd Stage (2031-2040)		Hibutana Kaduwela Road	Kakirawa Road	Udyana Mawatha
		Kahanthota Road	Morawaka watta Road	Mahindarama Road
		Hokandara kottawa road	Epitamulla Road	Pathirage Road
		Athurugiriya-Kottawa Road	Batewela Road	Galpotta Road
		Athurugiriya -Nawagamuwa Road	Pothuarawa Road	Kendahenawatte Road
		Pannipitiya-Malambe Road	Boralugoda Road	Colambathanthri Road
		New Hospital Road	Welivita Road	E1 -Proposed Wetland Road

	P1 Roads	P2 Roads	P3 Roads	Wetland roads
		Kolonnawa-Angoda Road	himbutana road	Andihena Road
		Piliyandala - Kottawa Road	Temple Road	Cemetery Road
		Panagoda-Ambulgama Road	Malgama Mawatha	E4 -Proposed Wetland Road
		Thalapathpitiya Rd	Jaya mawatha	E5 -Proposed Wetland Road
		Maharagama-Dehiwala Road	N.J.V.Cooray road/Koswatta road	E6 -Proposed Wetland Road
		Kaduwela Athurugiriya Road	Rajasinghe Mawatha	Flower Road
		Habarakada-Ranala Road	Mangala Mawatah	Gomes Mawatha
		New Kolonnawa Road	Nalaka Somawardhan Mawatha	
		Kotte Road	Gothami Mawatha	
			Godallawatta Road	
			Galawila Road	
			Warakatiya Road	
			Pathiragoda Road	
			Temple Road	
			SILVA PLACE	
			Railway Avenue	
			Maligagodella Road	
			D.P.Wijesinghe Mawatha	
			Sri Sumanajothi Mawatha	
			Oruwala Road	
3rd Stage (2041-2050)		Pagoda Nugegoda Road	Soratha Mawatha	Wela Road
		Pitakotte Thalawathugoda Road	Amaragoda Road	9th Lane
		New Hospital Road	Weli Para Road	Gehan Road
		Hospital Road	Mullegama Road	New Jayaweera Road
		Nawala Road A	Ananda Balika Mw	E3 -Proposed Wetland Road
		Habarakada-Ranala Road	Pattiyawatte Road	Angampitiya Road
		Himbutana Road	Edirisinghe Road	E7 -Proposed Wetland Road
		Galauda Road	Dakshina Road	E2 -Proposed Wetland Road
		Godagama road	5th lane	9th Lane
		Piliyandala-Maharagama Road	Delgahawatte Road	E12 -Proposed Wetland Road
		Hospital Road	M.D.H Jayawardana Road	E13 -Proposed Wetland Road
		Kolonnawa Road	Horahena Road	E10 -Proposed Wetland Road
		Welipara (Chandra Silva Mawatha)	Bakmeegaha Road	E 11 -Proposed Wetland Road
		Athurugiriya -Nawagamuwa Road	Rukamalgama Temple Road	
		Kottawa-Horana Road	Udumulla road	
		Pannipitiya-Malambe Road	Jayanthi Road	

	P1 Roads	P2 Roads	P3 Roads	Wetland roads
		Homagama Athurugiriya road	Siri Nandarama Road	
		Pepiliyana Road	Kotte Bope Road	
			Sri Parakrama Mawatha	
			Bathalawaththa To Chandrika Kumarathunga Mawatha	
			Baddagana Road	
			C5	
			Vakkiya Waththa Road	
			Mihindu Mawatha	
			Rajasinghe Mawatha	
			C8	
			C9	
			C10	
			C11	
			Galwarusa road	

Annexture 03

Project List	Total App. Cost (Rs.)	Responsible Agency	Financing Mechanism
1. President office & Resident Relocation Project		Ministry of Mega Polise / UDA	Treasury Funding
2. Embassies Establishment Project		Minisrty of Mega Polise / UDA	Treasury Funding
3. Three pocket parks Establishment project near to Diyawanna Lake - Royal Park	113,312,000	UDA/SLLR&DC/CEA	Treasury Funding
7. Cultural Grove Redevelopment Project		UDA/Archeological Dep	Treasury Funding
8. Supreme Court Relocation and Surrounding area Landscaping Project		UDA/Archeological Dep	Treasury Funding
9. City Land Mark (Stupa) Establishment Project		UDA	
10. Ceremonial Access Development project			
I. Project of landscape improvement Along The Ceremonial Access		RDA/UDA	Treasury Funding
II. Project of Facade improvement Along The Ceremonial Accesses		RDA/UDA	Treasury Funding
11. Fourteen Transitional Junctions/ nodes Improvement Project			
I. Parliament Junction improvement Project		UDA/Kaduwela MC	Treasury Funding
II. New Akuregoda Rd improvement Project		UDA/Kaduwela MC	Treasury Funding
III. Thalawathugoda Junction improvement Project		UDA/Kaduwela MC	Treasury Funding
IV. Pitakotte Junction improvement Project		UDA/Kotte MC	Treasury Funding
V. Rajagiriya Node improvement Project		UDA/Kotte MC	Treasury Funding

Project List	Total App. Cost (Rs.)	Responsible Agency	Financing Mechanism
VI. Malmbe Node improvement Project		UDA/Kaduwela MC	Treasury Funding
VII. Pannipitiya Junction improvement Project		UDA/Maharagama UC	Treasury Funding
VIII. Nugegoda SuperMarket Node improvement Project		UDA/Kotte MC	Treasury Funding
IX. D. S. Senanayake Roundabout improvement Project		UDA/CMC	Treasury Funding
X. Kaduwela Interchange node improvement Project		UDA/Kaduwela MC	Treasury Funding
XI. Makumbura TOD node improvement Project		UDA/Maharagama UC	Treasury Funding
XII. Nogegoda Fly-over node improvement Project		UDA/Kotte MC	Treasury Funding
XIII. Palam thuna Junction improvement Project		UDA/Kaduwela MC	Treasury Funding
XIV. Kimbulawala junction improvement Project		UDA/Kaduwela MC	Treasury Funding
12. Four City Gates Establishment Project			
I. D.S. Senanayake Roundabout City Gates Establishment project		UDA/CMC	Treasury Funding
II. Nugegoda City Gates Establishment project		UDA/Kotte MC	Treasury Funding
III. Kottawa City Gates Establishment project		UDA/Maharagama UC	Treasury Funding
IV. Kaduwela City Gates Establishment project		UDA/Kaduwela MC	Treasury Funding
13. Inner city Boundary Delineation project		UDA/RDA	Treasury Funding
Project for Create boulevards of Kalapaluwawa Road from Ko swatta to Aggona			
ADMINISTRATIVE CLUSTER PLAN			
1. Government office Relocation Project			
I. Administrative Cluster 1 Development project		Ministry of Public Administration and Management /UDA	Treasury Funding
II. Administrative Cluster 2 Development project		Ministry of Public Administration and Management /UDA	Treasury Funding
2. Development of a Central Park in the Administrative clusters Project			
I. Open Space project at Koswatta node	551,201,447	UDA/Kaduwela MC	Treasury Funding
3. Diyatha Park Extension Project		SLLRDC	Treasury Funding
4. Canal Regeneration in the Administrative area Project		SLLRDC	Treasury Funding
7. Multimodal hub Establishment at Koswatta node project		RDA	Treasury Funding
8. Central Park Development of surrounding the Defense Ministry project	6,834,897,942	Ministry of Defence/ Kaduwela MC	Treasury Funding
9. Widening and Extention of Biso Manike Road from Defence Ministry Building to Hokandara into four lane (1.2km)	200,000,000	RDA	Treasury Funding
10. Develop Half Circular shape 02 lanes Road project from Koswatta to Hokandara adjacent to Thalangama Tank & Marshy land (4.0 km)		UDA/ CEA/ RDA	Treasury Funding
11. Hokandara Road widening project		RDA	Treasury Funding
12. Denzil Kobbakaduwa Road widening project		RDA	Treasury Funding

Project List	Total App. Cost (Rs.)	Responsible Agency	Financing Mechanism
ECONOMIC DEVELOPMENT PLAN			
1. 1.5 km strip in Sedawaththa- Ambathale Road Regenerate Project		Ministry of Industry & Commerce/ UDA ,Kotikawaththa PS	
2. Kotikawaththa Office Space Development	400,000,000	Kotikawatta PS/ UDA	Treasury Funding, ppp
3. Rajagiriya Welikada Plaza area Regeneration Project	6,834,897,942	Kotte MC	Treasury Funding, ppp
4. Nugegoda Super Market Area regeneration Project	16,293,550,000	Kotte MC / UDA	Treasury Funding, ppp
5. University District Development Project	1,102,402,894	UDA	Treasury Funding, ppp
6. Pamunuwa Textile Park Development Project	7,740,981,506	Maharagama UC/ UDA	Treasury Funding, ppp
7. Multimodal Transport Hub Development-kaduwela		UDA	Treasury Funding, ppp
8. Knowledge City and accessibility Development Project		Kaduwela MC/ UDA	Treasury Funding, ppp
9. Makuburu TOD Center Development	362,000,000	UDA	Treasury Funding, ppp
11. Kottawa new Town Center Development project	65,000,000	Maharagama UC/ UDA	Treasury Funding, ppp
12. Maharagama Town Center Development Project			
SETTLEMENT PLAN			
1. Amenity Development Project at Embldeniya Junction	686,544,861	UDA /Maharagama UC	Treasury Funding
2. Eco Friendly Nature Park Project at Kotte Marsh	372,311,000	SLLRDC	Treasury Funding
3. Water Transport Project (IW I) – SLLRDC		SLLRDC	Treasury Funding
4. Shopping Mall Project at Pitakotte Junction- KMC	94,045,615	Kotte MC	Treasury Funding
5. High-end Residential Development Project			
a. Phase I- Residential Development Project at Pitkaotte Junction		Private Consultancy	PPP
b. Phase II- Residential Development Project at Thapathpitiya		Private Consultancy	PPP
6. Green Walkway project at Thalangama Tank	93,216,943	UDA/CEA	PPP
7. Urban Service Improvement Project at Hokandara Junction (Redesign 3.6 acre of Hokandara Junction)(3.6 acre)	1,697,995,543	UDA / Maharagama UC	Treasury Funding
8. High end Commercial Development Project at Athurugiriya Interchange (400m length stretch of Left hand side of Athurugiriya Interchange)(1.7 acre)	516,000,000	UDA / Kaduwela MC	Treasury Funding
9. Community Park Development Project			
a. Phase I- Community Park at Hokanadara (1.1 acre)	75,790,199	Kaduwela MC	Treasury Funding
b. Phase II- Community Park at Vidyala Junction (2.5 acre)	1,076,565	Maharagama UC	Treasury Funding
c. Phase III- Community Park at Hatharaman Handiya (0.45 acre)	31,005,081	Maharagama UC	Treasury Funding

Project List	Total App. Cost (Rs.)	Responsible Agency	Financing Mechanism
10. Neighbourhood Nodes Improvement Project			
a. Phase I- Athurugiriya Township Development Project –UDA	2,200,000,000	UDA	Treasury Funding
b. Phase II- Koratota Township Development Project	61,301,913	Kaduwela MC	Treasury Funding
11. Convenience Nodes Improvement Project			
a) Thunadahene Junction Improvement Project	80,178,174	Kaduwela MC	Treasury Funding
b) Rukmalagama New Town Improvement Project	413,547,237	Maharagama UC	Treasury Funding
c) Walagama Junction Improvement Project	301,438	Kaduwela MC	Treasury Funding
d) Oruwla Junction Improvement Project	8,965,869	Kaduwela MC	Treasury Funding
e) Pore Node Improvement Project		Kaduwela MC	Treasury Funding
f) Dedigamuwa Junction Improvement Project	40,237,706	Kaduwela MC	Treasury Funding
g) Boralugoda Node Improvement Project		Kaduwela MC	Treasury Funding
h) Nawagamuwa Junction Improvement Project	4,087,279	Kaduwela MC	Treasury Funding
i) Parana Handiya Junction Improvement Project	735,962,105	Kaduwela MC	Treasury Funding
j) Ganewatta Node Improvement Project	15,847,042	Kaduwela MC	Treasury Funding
k) Ranala Node Improvement Project	15,984,842	Kaduwela MC	Treasury Funding
l) Bomiriya Node Improvement Project		Kaduwela MC	Treasury Funding
Only for Construction (Rehabiltaion and improvement of exsting roads)			
14. Kottwa Malambe Road Improvement Project from Kottwa MMTH to Kotte Bope Road (4 lane)(7 km)	560,000,000	RDA/PRDA	Treasury Funding
15. Hokandra Road widening and Wanaguru Mawatha widening project (4 lane) (4.31km)	344,800,000	RDA	Treasury Funding
17. Abuldeniya Avenue widening project (2 lane) (0.72km)	28,800,000	Maharagama UC	Treasury Funding
18. Pagoda Road Improvement Project from Nugegoda to Thalawatugoda (4 lane) (6.1 km) **	488,000,000	RDA	Treasury Funding
19. Create main linkage in between executive residential area and administrative area – from Sri Jayawardenapura mw to Battramulla Pannipitiya Roadvia Kotte Road, Old Kottwa Road and Thalapthpitiya Road. (4 lane) (8.9 km)	704,800,000	RDA	Treasury Funding
20. Extension of Madiwela Road up to High Level Road at Wijerama (2 lane) (3.37km)	561,670,000	RDA	Treasury Funding
INFRASTRUCTURE PLAN			
1. Waste Water treatment plant –NWS&DB		NWS&DB	Treasury Funding
2. Waste to energy project at Athuruguriya - Megapolis		Ministry of Megapolis	Treasury Funding
3. Bio Methanization facility project at Sri Jayawardanapura Kotte & kottawa - Megapolis		Ministry of Megapolis	Treasury Funding
4. Mass Scale Compost Yard project at Maharagama - Megapolis		Ministry of Megapolis	Treasury Funding

Project List	Total App. Cost (Rs.)	Responsible Agency	Financing Mechanism
ENVIRONMENT PLAN			
1. Three pocket parks Establishment project near to Diyawanna Lake (28 acres)	113,312,000	UDA /SLLRDC	Treasury Funding, PPP
2. Pathways construction Project surrounding the Diyawanna Lake (18229 m)	2,929,744,243	UDA /SLLRDC	Treasury Funding, ppp
3. Kotte marsh park development park (91.4 acres)	372,311,000	UDA /SLLRDC	Treasury Funding,ppp
4. Diyatha Uyana Extension park		SLLRDC	Treasury Funding,ppp
5. Kolonnawa tourism development marsh related park project		SLLRDC	Treasury Funding, ppp
6. Megoda Kelaniya marsh related park project (81 acres)	84,592,973	UDA /SLLRDC	Treasury Funding, ppp
7. Thalangama marsh related park project (10.75 acres)	177,733	UDA /SLLRDC/CEA	Treasury Funding, ppp
8. Malambe marsh related park project (459 acres)	7,588,800	SLLRDA/UDA	Treasury Funding, ppp
9. Kaduwela marsh related park project (88 acres)		SLLRDA/UDA	Treasury Funding, ppp
10. Canal Regeneration In the Administrative area Project		UDA	Treasury Funding, ppp
11. Kolonnawa tourism developmnent marsh Related Park Project		SLLRDA/UDA	Treasury Funding, ppp
12. Maintain Buffer along Kelani River			
4. Diyatha Uyana Extension park		SLLRDC	Treasury Funding,ppp
5. Kolonnawa tourism development marsh related park project		SLLRDC	Treasury Funding, ppp
6. Megoda Kelaniya marsh related park project (81 acres)	84,592,973	UDA /SLLRDC	Treasury Funding, ppp
7. Thalangama marsh related park project (10.75 acres)	177,733	UDA /SLLRDC/CEA	Treasury Funding, ppp
8. Malambe marsh related park project (459 acres)	7,588,800	SLLRDA/UDA	Treasury Funding, ppp
9. Kaduwela marsh related park project (88 acres)		SLLRDA/UDA	Treasury Funding, ppp
10. Canal Regeneration In the Administrative area Project		UDA	Treasury Funding, ppp
11. Kolonnawa tourism developmnent marsh Related Park Project		SLLRDA/UDA	Treasury Funding, ppp
12. Maintain Buffer along Kelani River			

List of Figures

Figure 1.1 : Expecetd urban form in Capital City 02

Figure 2.1 : Arceological sites in Kotte 14
Figure 2.2 : Sense of the place in Kotte 14
Figure 2.3 : Remaining arceological sites in Kotte 16
Figure 2.4 : Reduction in green coverage of the planning area 21
Figure 2.5 : Output results of NDVI analysis 22
Figure 2.6 : Existing node distribution within the planning boundary 27
Figure 2.7 : Vehicle capacity along the major corriodors 32
Figure 2.8 : Layout plan of Science and Technology City 43
Figure 2.9 : Capital City Administrative District Development 44
Figure 2.10 : Project of Water's Edge Greenway Trial, Diyatha Uyana Colombo 44
Figure 2.11 : Land value map of Colombo-2017 45
Figure 2.12 : Office stocks and rental values 45
Figure 2.13 : Waste water treatment plant project 47
Figure 2.14 : Competitive Cluster Development in Colombo 48

Figure 4.1 : Water provison in Colombo district 83
Figure 4.2 : Solid waste generation in Colombo district 87
Figure 4.3 : DSD-s in Colombo district by method of solid waste disposal - 2012 88
Figure 4.4 : Waste water treatmnet and disposable project proposal 95

Figure 5.1 : Travel speed within Colombo 109
Figure 5.2 : Recommended typical cross section of P1 road catogery 115
Figure 5.3 : Recommended typical cross section of P1 road catogery with LRT 115
Figure 5.4 : Recommended typical cross section of P2 road catogery 116
Figure 5.5 : Recommended typical cross section of P3 road catogery 118
Figure 5.6 : Recommended typical cross section of P4 road catogery 118
Figure 5.7 : Recommended typical cross section of P5 road catogery 120
Figure 5.8 : Recommended typical cross section of P6 road catogery 120
Figure 5.9 : Makubura transit orient development 128
Figure 5.10 : Location of Kosawaththa multi-model hub 128
Figure 5.11 : Location of Kaduwel multi-model hub 129

Figure 6.1 : Proposed new road linkage trace 145
Figure 6.2 : Existing situation of Kotte marsh 147
Figure 6.3 : Expected situation of canal road along Kotte marsh 147
Figure 6.4 : Expected development in Hokandara junction 151
Figure 6.5 : Existing situation of Thunadahena 156
Figure 6.6 : Propsed layout of Thunadahena convenience node 157
Figure 6.7 : Existing situation of Rukmalgama town 158
Figure 6.8 : Propsed layout of Rukmalagama node development 158
Figure 6.9 : Existing situtaion of Nawagamuwa 159

Figure 6.10 : Propsed layout of Nawagamuwa 159
Figure 6.11 : Existing situation of Dadigamuwa 160
Figure 6.12 : Propsed layout of Dadigamuwa 161
Figure 6.13 : Existing situation of Walgama 161
Figure 6.14 : Propsed layout of Walgama 162

Figure 7.1: Project 1 - River base warehouse strip design layout 180
Figure 7.2 : Project 2 - Office cluster deisgn layout 182
Figure 7.3 : Projecct 3 - Outer ring special mix development layout 184
Figure 7.4 : Project 4 - Nugegoda super market area design layout 186
Figure 7.5 : Project 5 - University district development layout 188
Figure 7.6 : Project 6 - Pamunuwa textile park development layout 190
Figure 7.7 : Project 7 - Knowledge city design layout 192
Figure 7.8 : Project 8 - Kottawa township development layout 194
Figure 7.9 : Project 9 - Makubura TOD development 196

Figure 8.1 : Concept of administrative development strategy 201
Figure 8.2 : Admin plan clsuter 1 development 204
Figure 8.3 : Cluster I - admin area regeneration project 204
Figure 8.4 : Expected urban form in cluster I - Admin city 205
Figure 8.5 : Propsed multimodel hub at Kosawaththa 207
Figure 8.6 : Kosawaththa township development project 208
Figure 8.7 : Kosawaththa township development project layout 208
Figure 8.8 : Thalawathugoda township development project 209
Figure 8.9 : Thalwathugoda township development project layout 210

Figure 9.1 : Image of the center Park in the Capital City 221
Figure 9.2 : Inner city park in Capital City 221
Figure 9.3 : Outer city park in Capital City - Malabe wetland 222
Figure 9.4 : Outer city park in Capital City - Kalanimulla 222
Figure 9.5 : Periphery park in Capital City 223
Figure 9.6 : Expected image on Kelani river reservation 225
Figure 9.7 : Expected improvement along the proposed canal in Kotikawaththa area 228
Figure 9.8 : Water catchments of the Capital City 232
Figure 9.9 : Expected annual loss by flood 233
Figure 9.10 : Property value changes with the wetland impovement 235

Figure 10.1 : Deisgn interventions in the Capital City plan 241
Figure 10.2 : Strategy 1: supreme court relocation project 246
Figure 10.3 : Strategic project 2 : Relocation of the president house- office 246
Figure 10.4 : Strattegic project 3: City land mark establishment 247
Figure 10.5 : 3D Model designs for axis map 248
Figure 10.6 : Urban form creation along the ceromonial acess 250
Figure 10.7 : Urban form in Capital City 251
Figure 10.8 : The outer city junction 252
Figure 10.9 : The inner city 253

Figure 10.10 : The center in the Capital City 256
Figure 10.11 : Pathway, Pocket parks and bridge development 260
Figure 10.12 : Images of Pocket parks and paths 261
Figure 10.13 : Pathways and pocket park development 262
Figure 10.14 : Lake access improvement Strategy 263
Figure 10.15 : Cultural Grove Redevelopment Zone 264

Figure 12.1 : Implementation plan 282

List of Tables

Table 2.1 : Underserved settlement in the planning area 15
Table 2.2 : Wetland bio-diversity in the planning area 19
Table 2.3 : Hourly capacity indicator of the major corridors 32

Table 3.1 : Node diversity analysis 52
Table 3.2 : Node intensity anlaysis 54
Table 3.3 : Place diversity anlaysis 55
Table 3.4 : Place intensity analysis 56
Table 3.5 : Summary table of node place analysis 57
Table 3.6 : Future prediction for the nodes distribution 59
Table 3.7 : Population projection for the Capital City - 2030 67
Table 3.8 : Population projection for the Capital City -2050 67
Table 3.9 : Land use distribution in 2018 71
Table 3.10 : Proptional distribution in different land uses - 2018 72
Table 3. 11 : Propsed space distribution in different land uses -2030 72
Table 3.12 : Propsed space distribution in different land uses -2050 73
Table 3.13 : Propsed propotinal distribution in different land uses - 2050 73
Table 3.14 : Average per capita space 74
Table 3.15 : Commuter population in the Capital City - 2018 74
Table 3.16 : Predicted commuter population of the Capital City - 2030 75
Table 3.17 : Predicted commuter population of the Capital City -2050 76

Table 4.1 : Capacity installation and current load of the CEB 80
Table 4.2 : Electricity capacity of LECO for Planning area 80
Table 4.3 : Domestic electricty demand of the Capital City - 2030 81
Table 4.4 : Domestic electricty demand of the Capital City - 2050 81
Table 4.5 : Predicted space for requirement of electricty - 2030 82
Table 4.6 : Predicted space for requirement of electricty -2050 82
Table 4.7 : Water demand of NWSDB for the year - 2011 83
Table 4.8 : Water demand of NWSDB for the year - 2015 84
Table 4.9 : Water demand for the year - 2018 84
Table 4.10 : Water demand of NWSDB for the year - 2030 85
Table 4.11 : Capital City water demand - 2050 85

Table 4.12 : Projects of NWSDB for the year 2030 86
Table 4.13 : Current capacity and methods of solid waste management 88
Table 4.14 : Assumptions for the estimation of solid waste generation of the local authorities 88
Table 4.15 : Solid waste generation based on residential population - 2018 89
Table 4.16 : Solid waste generation based on residential population - 2050 89
Table 4.17 : Solid waste generation based on commuter population - 2050 89
Table 4.18 : Waste water treatment and disposal system in Kaduwela - 2018 91
Table 4.19 : Waste water treatment and disposal system in Maharagama -2018 91
Table 4.20 : Waste water treatment and disposal system in Sri Jayawardenapura Kotte -2018 92
Table 4.21 : Waste water treatment and disposal system in Kotikawaththa -2018 92
Table 4.22 : Waste water treatment and disposal system in Kaduwela - 2050 93
Table 4.23 : Waste water treatment and disposal system in Maharagama -2050 93
Table 4.24 : Waste water treatment and disposal system in Sri Jayawardenapura Kotte -2050 94
Table 4.25 : Waste water treatment and disposal system in Kotikawaththa -2050 94
Table 4.26 : No of school distribution within the Capital City 96

Table 5.1 : Traffic generation based on land use - 2018 110
Table 5.2 : Predicted traffic generation based on land use generation - 2050 111
Table 5.3 : Predicted daily passengers 122
Table 5.4 : Details of elevated highway 124
Table 5.5 : Makubura trasnsit orient development landuse composition 126
Table 5.6 : KPI of road widening proposals of Capital City plan 131
Table 5.7 : Differences between existing and expected intergration 133

Table 6.1 : Settlement development high density cluster I - strategic projects 147
Table 6.2 : Settlement development high density cluster II - strategic projects 151
Table 6.3 : Nodes development in settlement strategy 154
Table 6.4 : Settlement development low density cluster III - strategic projects 163
Table 6.5 : Ongoing housing projects 164

Table 7.1 : Proposed space distrubution - 2050 173
Table 7.2 : Strategic Project 1 178
Table 7.3 : Strategic Project 2 182
Table 7.4 : Strategic Project 3 184
Table 7.5 : Strategic Project 4 186
Table 7.6 : Strategic Project 5 188
Table 7.7 : Strategic Project 6 190
Table 7.8 : Strategic Project 7 192
Table 7.9 : Strategic Project 8 194
Table 7.10 : Strategic Project 9 196
Table 7.11 : Added space for Capital City through projects 198

Table 8.1 : Strategic projects in administrative cluster development strategy 212

Table 9.1 : Water body width of water body reservation according to land development ordinance 225
Table 9.2 : Strategic projects in wetland management stratgey 231

Table 9.3 : Retension capacity of water catchment of the Capital City 232
Table 9.4 : Runoff of the water catchments of the Capital City with existing land use 233
Table 9.5 : Open space demand of the Capital City 234
Table 9.6 : Strandards of the recreational uses 234
Table 9.7 : Open space demand of the Capital City 235

Table 10.1 : Strategic Projects in Urban Deisgn stratgey 265

Table 11.1 : Listed historical mounumnets and places 270
Table 11.2 : Classification of mounuments 271
Table 11.3 : Destinations of archeological trail 276
Table 11.4 : Strategic projects in heritage conservation startegy 278

Table 12.1 : Table of project interdependency 284
Table 12.2 : Table of project implementation matrix 285
Table 12.3 : Project prioritization 285
Table 12.4 : Weighted project prioritization matrix 285
Table 12.5 : Summery of prioritised projects 286
Table 12.6 : First priority projects 286
Table 12.7 : Second priority projects 288
Table 12.8 : Third priority projects 289

List of Maps

Map 2.1 : Distribution of national level governmet, semi-government offices 11
Map 2.2 : Axis of planning area 12
Map 2.3 : Building heigths categorization - Parliament sourrouding area 13
Map 2.4 : Wetland network of the planning area 17
Map 2.5 : Wetland ecosystem in the Metro Colombo basin 18
Map 2.6 : Wetland conservation areas in Capital City and institutional ownership 20
Map 2.7 : Proposed development projects for wetland conservation 25
Map 2.8 : Western province nodal connenctivity 28
Map 2.9 : Distribution of education facilities in planning area 30
Map 2.10 : Distribution of health facilities in planning area 31
Map 2.11 : Wetland vs development pressure index in and around the boundary 33
Map 2.12 : Flood inunadation area in and around Kelani river basin 34
Map 2.13 : Hazard Index of the planning area 35
Map 2.14 : Risk Index of the planning area 36
Map 2.15 : Western Region Light Rail Transit Project. 38
Map 2.16 : Proposed inland water transport system 40
Map 2.17 : Proposed railway electrification and modernization project 41
Map 2.18 : Proposed elevated expressway 42
Map 2.19 : Distribution of land value -2018 46

Map 3.1 : Land use composition in the planning boundary 51
Map 3.2 : Classified node hierarchy in planning area 61
Map 3.3 : Proposed eight corridors 62
Map 3.4 : Propsed composite spatial strategy for next 10 years (2019 -2030) 63
Map 3.5 : Zoning Map of the Capital City plan 65
Map 3.6 : Population density in Capital City - 2018 68
Map 3.7 : Population density in Capital City (Business as usual Senario) - 2030 69
Map 3.8 : Population density in Capital City (Project based Senario) - 2030 70

Map 4.1 : Distribution of educational facilities - Gvt schools - 2018 97
Map 4.2 : Avaialabilty of school infrastructure in Capital City plan 99
Map 4.3 : Suitability analaysis for schools 100
Map 4.4 : Distribution of health facilities - 2018 102
Map 4.4 : Distribution of health facilities - Option 1 (Ranala site) 103
Map 4.5 : Distribution of health facilities - Option 2 (Nawagamuwa site) 104

Map 5.1 : Propsed urban density in Capital City 107
Map 5.2 : Composite map of transport developmnet strategy 112
Map 5.3 : P1 catogery road distribution in the Capital City 114
Map 5.4 : P2 catogery road distribution in the Capital City 117
Map 5.5 : P3 catogery road distribution in the Capital City 119
Map 5.6 : Wetland road catogery distribution in the Capital City 121
Map 5.7 : Light rail transit system 123
Map 5.8 : Elevated urban expressway 125
Map 5.9 : Locations of multi- model transport hubs in Capital City 127
Map 5.10 : Public transport passenger volume in 2035 130
Map 5.11 : Volume capacity ratio and traffic volume - 2035 132
Map 5.12 : Level of spatial integation - 2018 134
Map 5.13 : Expected level of spatial integration in Capital City 135
Map 5.14 : Distribution of land value without impact of the transport developmnet strategy - 2018 137
Map 5.15 : Distribution of land value with total impact of transport development strategy 138

Map 6.1 : Composite map of settlement developmnet strategy 141
Map 6.2 : High density cluster I -settlment development strategy 144
Map 6.3 : High density cluster II - settlmnet developmnet strategy 149
Map 6.4 : Low density cluster - settlement developmnet strategy 153
Map 6.5 : Management of underserved settlement 165

Map 7.1 : Land use map of planning area - 2017 170
Map 7.2 : Identified economic agglomeration nodes in planning area 172
Map 7.3 : Economic node classification in Capital City 175
Map 7.4 : Commercial street classification in Capital City 177
Map 7.5 : Project 1 - River base warehouse development 179
Map 7.6 : Composite map of economic development strategy with identified projects 181
Map 7.7 : Project 2 - Office cluster deisgn layout 183
Map 7.8 : Projecct 3 - Outer ring special mix development layout 185

Map 7.9 : Project 4 - Nugegoda super market area design layout 187
Map 7.10 : Project 5 - University district development layout 189
Map 7.11 : Project 6 - Pamunuwa textile park development layout 191
Map 7.12 : Project 7 - Knowledge city design layout 193
Map 7.13 : Project 8 - Kottawa township development layout 195
Map 7.14 : Project 9 - Makubura TOD development 197

Map 8.1 : Composite map of administartive cluster development strategy 202
Map 8.2 : Road improvement of administrative strategy for cluster II 211

Map 9.1 : Composite map of wetland management strategy 217
Map 9.2 : Composite map of green network management 219
Map 9.3 : Wetland classification in Capital City 220
Map 9.4 : Proposed wetland parks in Capital City 224
Map 9.5 : Propsed new waternetwork connection 226
Map 9.6 : Propsed reservation area of Kelani river 227
Map 9.7 : Propsed new water network connection 229
Map 9.8 : Proposed inland water transport system 230
Map 9.9 : Impacts of the Capital City with the wetland park improvement 236

Map 10.1 : Composite map of urban deisgn strategy 243
Map 10.2 : Axis of the Capital City 245
Map 10.3 : Hierarchy level in Capital City 249
Map 10.4 : City gate establishments 255
Map 10.5 : Inner city boundary demarcation 257
Map 10.6 : Diplomatic conversion in the Capital City 259

Map 11.1 : Identified historical sites in the planning area 269
Map 11.2 : Nawagamuwa perahara route 272
Map 11.3 : Kotte perahara mawatha 273
Map 11.4 : Propsed archeological trail 277
Map 11.5 : Present condition of rampart wall 279

Bibliography

(JICA), J. I. C. A., 2014. *URBAN TRANSPORT SYSTEM DEVELOPMENT PROJECT FOR COLOMBO METROPOLITAN REGION AND SUBURBS*, s.l.: s.n.

Anon., 2016. *METRO COLOMBO WETLAND MANAGEMENT STRATEGY*,Government of Sri Lanka METRO COLOMBO URBAN DEVELOPMENT PROJECT (MCUDP) No. MCUDP/PHRD/03, s.l.: s.n.

AUTHORITY, A. P. C. R. D., February 2016. *Zoning Regulations Amaravathi Capital Plan,* Andrapradesh : Andrapradesh Capital Region Development Authority.

Cooperation, M. F. c. D., December 2012. *MID -NORTH Indianpolis - Commercial Node Studies*, Mid North: Development Concepts ink.

Corporation, S. L. L. R. &. D., n.d. *FLOOD & DRAINAGE MANAGEMENT COMPONENT*, s.l.: s.n.

CORPORATION, S. L. L. R. &. D., n.d. *METRO COLOMBO URBAN DEVELOPMENT PROJECT*, Component 1. s.l.:s.n.

De Silva.Shenuka, S.Vivek, 2017. *Sri Lanka - Land of Real Estate Opportunities*, Colombo: Jones Lang Lasalle Propoerty Consultant pvt, limited.

Division, P., 2015. *Resource Profile , Sri Jayawardhanapura Kotte*: Kotte District Secretary Office.

Division, R. a. I. R., 2012. *Annual Statistical Report* , Colombo: Sri Lanka Tourism Devlopment Authority.

G.M.W.L., G., n.d. *URBANIZATION AND WETLAND ECOSYSTEMS – A CASE STUDY AT SRI JAYAWARDENAPURA KOTTE AND SUBURBS*, s.l.: Department of Town and Country Planning, University of Moratuwa, Katubedda, Moratuwa, Sri Lanka .

Heike Mayor, Fritz sager , David Kaufman , and Martin Warland , 2016-2017. *The Political Economy of Capital Cities* , United States of America : Northeastern University .

Lanka, C. B. o. S., 2017. *Economic and Socila Statistics of Sri Lanka*, Colombo: Central Bank of Sri Lanka.

Mayank.Himadri, Robin S, 2011. O*n point, Real estate in Sri Lanka, Prospects and Potential, Translating Economic Growth into REal Developments in Colomb*o, Colombo: Johnes Lang Lasalle.

Planning Division, D. S. O., 2015. *Sampath Pathikada, Mahragama*: Divisional Secretary Office.

PROJECT, M. C. U. D., 2017. *CONSULTANCY SERVICES FOR CONDUCTING A DETAILED FLOOD RISK ASSESSMENT FOR COLOMBO METROPOLITAN REGIO*N, s.l.: s.n.

Project, W. R. M. P., 2000. *Western Region Megapolis Master Plan - From Island to Continent*, Colombo: Ministry of Megapolis and Western Development.

Project, W. R. M. P., 2012. *Projects Identification Project - Westren Region Megapolis Plan*, Colombo: Ministry of Megapolis and western Development .

Ranawera, D., 2016. *Changing Pattern of Land Use in Kaduwela Municipal Council*. s.l.:Faculty of Graduate Studies, University of Sri Jayewardenepura .

Rozenberg, J. et al., 2015. *Wetlands Conservation and Management: a New Model for Urban Resilience in Colombo* , s.l.: The World Bank .

Siong, H. C., 16 November 2006. *Putrajaya –Administrative Centre of Malaysia - Planning Concept and Implementation*. Seoul, SungKyunKwan University,Seoul.

Staff, S. J. P., 1970;s. *The New Capital of Sri Lanka - Sri Jayawardhanapura Kotte (Salalihiniya Plan)*. Colombo, Urban Development Authority - Ministry of Local Government, Housing and Construction.

Team, C. a. S., 2012. *Census of Population and Housing* , Colombo: Department of Census and Statistics .

mooniak
මූනියැක්
மூநியக்

Art direction, layout and design by:
Mooniak <*mooniak.com*>