Colombo Commercial City Development Plan – 2030

Aquarina – The City in Water

Volume I – Part B

(Aquarina logo)

Urban Development Authority – Sri Lanka (UDA logo)

December, 2018

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Colombo Commercial City Development Plan – 2030 is delivered through a series of publications; Volume I – Part A, Volume I – Part B & Volume II. Volume I – Part A contains the situational analysis and the explanations on the need of a plan. Volume I – Part B 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 and general Planning & Building Regulations applicable to Colombo Commercial City within the period of 2019 – 2030.

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

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Preparation of Colombo Commercial City Development Plan (CCCDP) 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 CCCDP in numerous ways.

Our sincere gratitude is extended to the Minister of Megapolis & Western Development, Honorable Dinesh Gunewardena 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 at this point.

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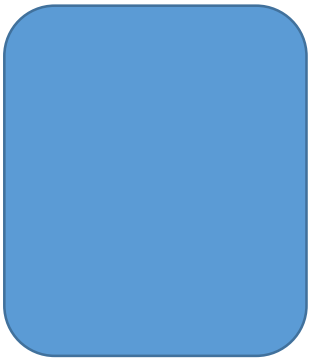
Honorable Minister's Forward



Having established under the Act No. 41 of 1978, Urban Development Authority has completed 40 years of excellence service contributing for the urban development in Sri Lanka. It is at this moment, UDA remarks another milestone which is the completion of Colombo Commercial City Development Plan – 2030. Following to a comprehensive process which was carried out for nearly one and half years by the Colombo Commercial City Planning Team of Urban Development Authority, Colombo Commercial City Development Plan is now ready to be gazetted and implemented in order to direct the future of Colombo in a planned manner.

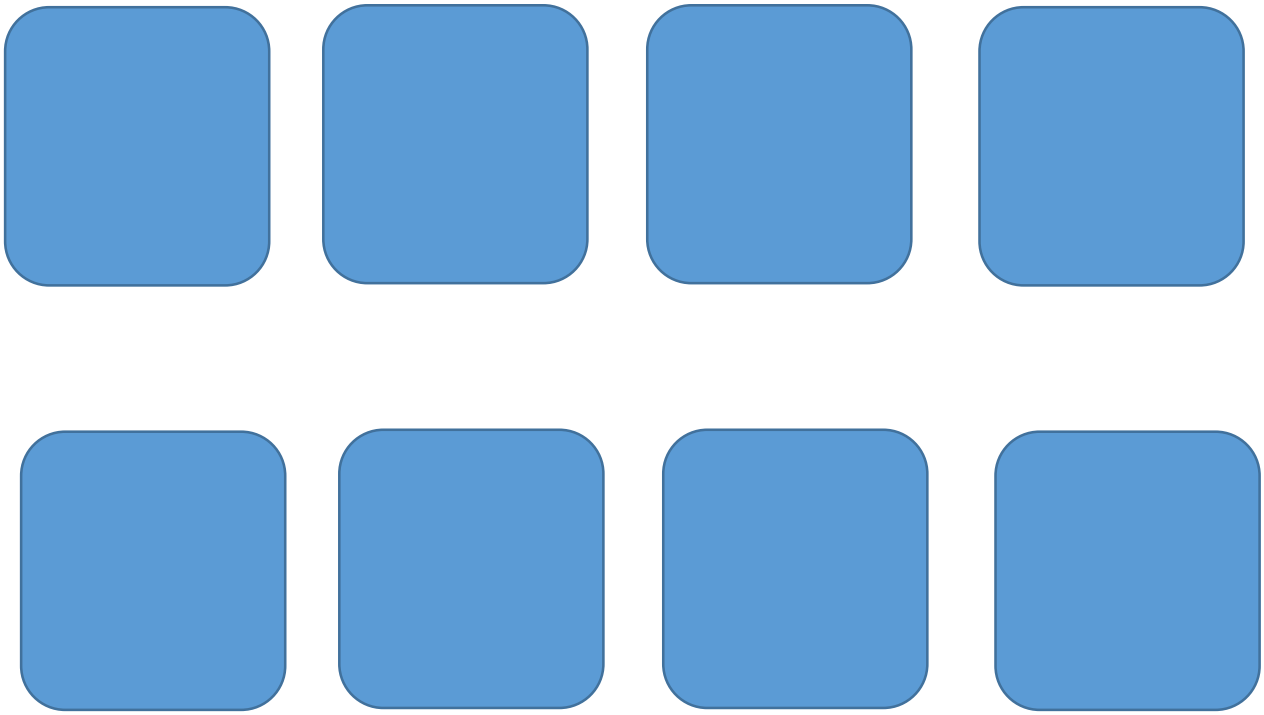
Colombo is the national commercial capital of Sri Lanka and also it has gained a considerable position in the international context as a vibrant South Asian Business Hub. The role of Colombo is very significant for the economy and the overall development of the whole country, thus the Colombo Commercial City Development Plan should be viewed in the perspective of a plan with both national and international scope and interests.

Our effort is to support Colombo's role as an international business hub 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 limits to solving of present prevailing issues but attempts to envisage a broader vision for the city while harnessing its untapped potentials so far.

As per my knowledge, this plan has been prepared with the application of numerous innovative contemporary city planning approaches, techniques and tools thus it can be recognized as milestone product of Urban Development Authority. In this regard, I appreciate the extraordinary efforts of the Chairman, Director General, Planning Team and all staff of Urban Development Authority who have contributed in numerous ways to successfully complete this assignment. Also, I appreciate the contribution given by relevant local authorities, state and private stakeholder agencies and general public by working equally on a same platform to make Colombo Commercial City Development Plan a success.

I expect that the Colombo Commercial City Development Plan will be successfully implemented during the coming decade and all stakeholders will jointly work together to ensure its successful implementation.

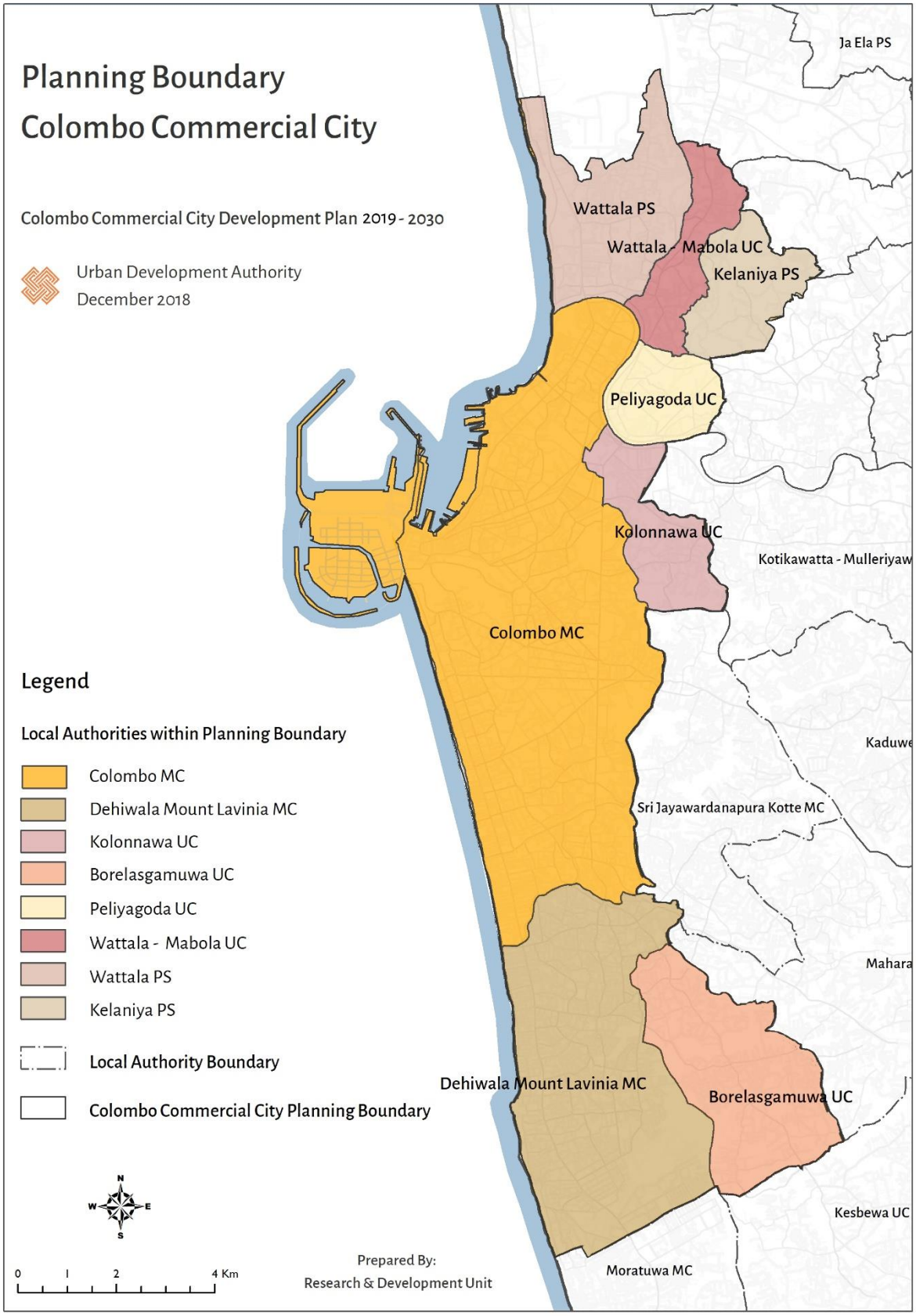
Message from Mayors and Chairmen of Local Authorities



We extend our gratitude towards Urban Development Authority for the initiative taken to prepare a common plan amalgamating our 08 Local Authority Areas into an integrated planning area as Colombo Commercial 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 overspill of Colombo's urbanization. Hence, we believe, by adopting a single plan, we will be able to develop all 08 Local Authority Areas in an equal way following a shared vision.

We appreciate UDA's attempt to make Colombo Commercial 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 Colombo Commercial City Development Plan within the next eleven years. Also, we request all citizens and stakeholders of Colombo Commercial City to act at individual and corporate levels to lead the city towards the shared vision as envisaged by the Colombo Commercial City Development Plan - 2030

Table of Content



Map A: Planning Boundary – Colombo Commercial City Development Plan - 2030

A Quick Recap on Volume I – Part A

Colombo Commercial City

Capturing the overspill of Colombo Urbanization, Urban Development Authority has prepared an integrated plan merging 08 Local Authority Areas; *Colombo Municipal Council, Dehiwala Mt-Lavinia Municipal Council, Boralesgamuwa Urban Council, Kolonnawa Urban Council, Peliyagoda Urban Council, Wattala Urban Council, parts of Kelaniya Pradeshiya Sabha and Wattala Pradeshiya Sabha into a single planning area named* '***Colombo Commercial City***'.

Total Extent of Planning Area – 102.3km²

No. of DSDs – 08
No. of GNDs – 149

Total Residential Population – 1.1 Mn
Total Commuter Population – 1.2 Mn

Avg. Population Density – 11,000 pop/km²

Planning Process

The preparation of 'Colombo Commercial City Development Plan – 2030' is a collaborative exercise undertaken by UDA in consultation of relevant stakeholders and general public based on the 'Strategic Planning' principles.

Planning Context

Colombo Commercial City as a competing International City in the South Asian context as;

- One of the busiest Maritime Hubs
- A blooming Business Hub
- A highly sought-after Tourism Nest

Colombo Commercial City as the country's Commercial Capital that acts as the focal point of national economy.

The Need of a Plan

As a result of the comprehensive context analysis, it was identified that the Colombo Commercial City has a variety of potentials attributed to environment and economic sectors which can be viewed as solutions for many prevailing issues of city.

The fact that the Colombo Commercial City is having a variety of water fronts, was perceived as its most significant potential, which can be harnessed to induce a positive transformation of the city while addressing many of its prevailing issues.

Chapter 01 – The Planning Framework

1.1) Vision

Colombo Commercial City in 2030

Colombo to be experienced as the Smart, Vibrant and Tropical Water Garden City of South Asia

1.2) Vision Statement

The future vision for Colombo Commercial City is that it will have its waterfronts transformed into city front-yards, enabling to be experienced as an '**Aquarina**'. Internationally, Colombo Commercial City will have its unique image as '**The City in Water**', and will tend to be an Investments Magnet in South Asia with enhanced living environments and realty space of high quality.

It is anticipated that Colombo will be experienced as a **Smart City** with upgraded services and utility facilities. The city utility networks will effectively cover every corner of Colombo Commercial City upgrading the efficiency of city economic and social functions. Further, Colombo Commercial City will offer convenient modes of transport and enable fast mobility within the city.

Colombo will be a **Vibrant City** with overlapping activity spaces which reflect various dimensions of life of both residents and commuters belonging to numerous cultures. Colombo will be an inclusive home for all, irrespective of different social strata and will bear a unique image composed of rhythmic skyline and lifestyle.

Having its waterfronts transformed into city front yards and with conserved green pastures and shady boulevards within the city, Colombo will be branded as the **Tropical Water Garden City of South Asia**.

1.3) Goals

The following three main goals will be aligned towards the vision 'Aquarina – The City in Water'.

G 1 - The most sought Water-front Business Environment Experience in the World

G 2 - The revived internationally renowned Green Garden City of South Asia

G3 - The Smart, Smooth and Sensed Urban Space for all inhabitants

Each goal was evaluated with SWOT Analysis to derive specific objectives that utilize existing strengths and opportunities while overcoming weaknesses and threats in order to define a path towards each goal and ultimately the anticipated vision for the city.

1.4) Objectives

G 1 - The most sought Water-front Business Environment Experience in the World

Objective 01:
To open up 125 km length of various water and wetland fronts of Colombo Commercial City and its surroundings to the public by 2030.

Objective 02:

To open up 3000 ha of lands in waterfronts for business activities, residences and recreation purposes by 2030.

Objective 03:

To have well connecting water transportation system in Colombo Commercial City by 2030**.**

Objective 04:

To strengthen continuous network of water bodies and wetlands within Colombo Commercial City throughout, in the physical developments from 2019.

Objective 05:

To have a well-managed Flood Mitigation System in flood risk areas of Colombo Commercial City by 2030.

G 2 - The revived internationally renowned Green Garden City of South Asia

Objective 01:

To create a network of parks and green spaces of 520 ha linked with water and wetland networks in Colombo Commercial City by 2030.

Objective 02:

To ensure that every citizen of Colombo Commercial City has access to public open spaces within 500m walking distance by 2030.

Objective 03:

To have an average of 35% green cover and the enhanced green experience in Colombo Commercial City by 2030.

Objective 04:

To maintain 20% of the total area as special garden zones by 2030.

Objective 05:

To assure 'Green Developments' in Colombo Commercial City with energy conscious, conserving and environmental friendly designs and practices.

G3 - The Smart, Smooth and Sensed Urban Space for all inhabitants

Objective 01:

To have a legible, manageable and sustainable urban form for Colombo Commercial City by 2030.

Objective 02:

To have an integrated multimodal, reliable, affordable and comfortable Public Transport System with 2030.

Objective 03:

To have 04 Major TODs at strategic locations enabling easy mobility within Colombo Commercial City by 2030.

Objective 04:

To have optimum utility of the existing & proposed infrastructure systems by 2025.

Objective 05:

To assure improved quality of lives of all communities, and above minimum standards in physical quality of living environments of all citizens in Colombo Commercial City by 2030.

Objective 06:

To have an urban environment with state of-the-art utilities and smart facilities enjoyable by all residents and commuters of Colombo Commercial City by 2030.

Chapter 02 – The SWOT Analysis & Detailed Analysis (A Summary)

Chapter 03 – The Plan

3.1) Concept Plan

Determination of the right approach to trigger the anticipated city transformation in order to lead the city towards its vision 'Aquarina – The City in Water', was initiated with the development of a 'Concept Plan' for Colombo Commercial City. The basic principle behind the Concept Plan is the harnessing of city's most significant potential; which is the existence of variety of waterfronts. Hence, the Concept Plan for Colombo Commercial City was developed based on Seven Aqua Regions which are associated with various waterfronts and green areas. The overall concept is that Colombo Commercial City will have six aqua regions encircling the special aqua region named 'The Garden'.

All seven aqua regions were selected such that it includes all waterbodies and green areas of Colombo Commercial City including sea-front, Kelani River, canal network, wetlands, sanctuaries, paddy lands, boulevards, parks and green neighborhoods with garden houses.

Aqua Region 01	Kelani River Based Special Regeneration Area
Aqua Region 02	The Marina Corridor
Aqua Region 03	Beira Lake and Port City Based Exclusive Development Area
Aqua Region 04	Canal Based Transformation Area
Aqua Region 05	Canal Based Development Area
Aqua Region 06	The GARDEN
Aqua Region 07	Bolgoda River Based

Table 3.1: Seven Aqua Regions

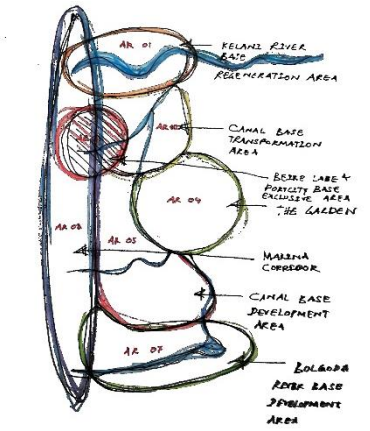
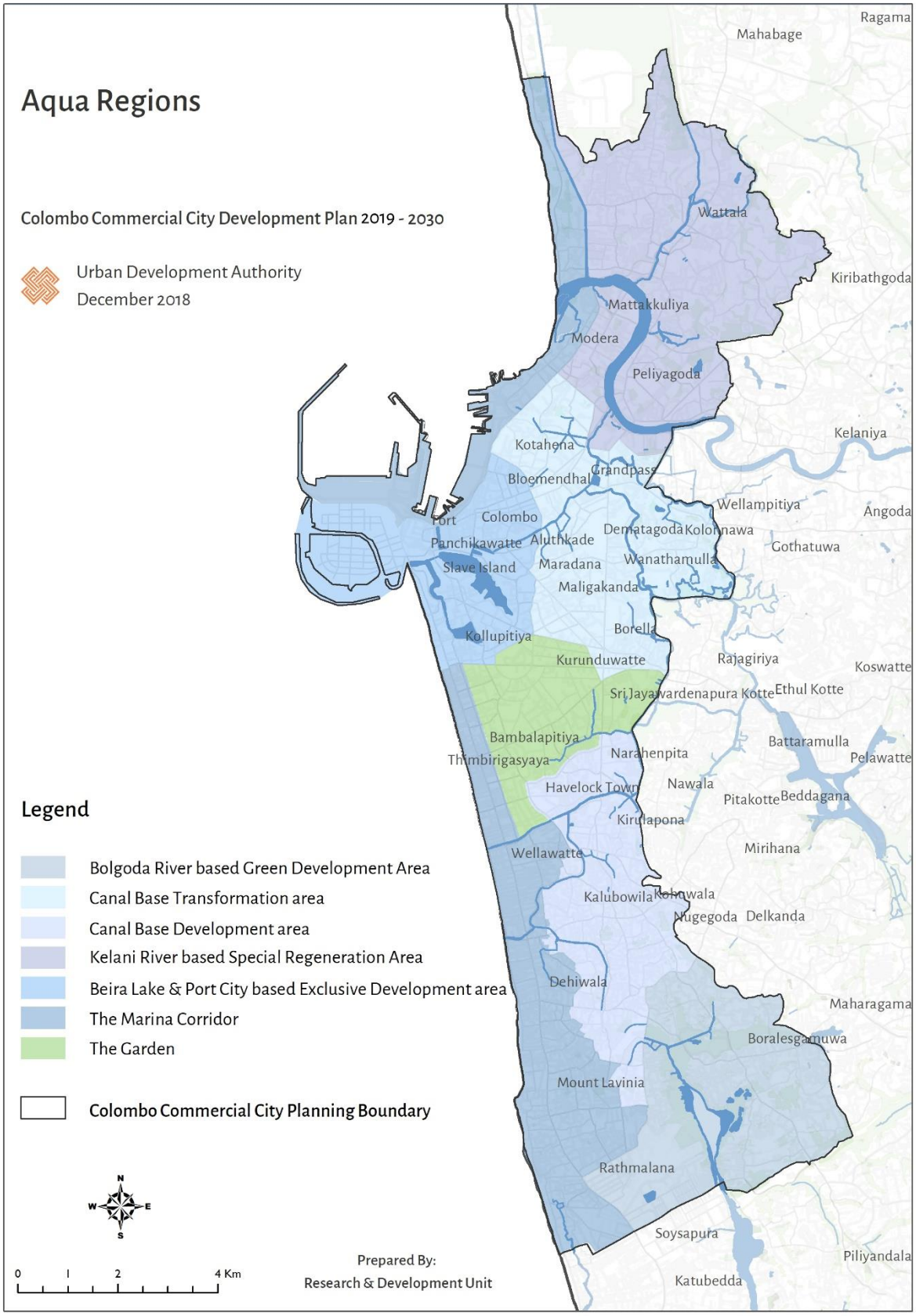


Figure 3.1: Concept Plan – The Sketch

3.1.1) Delineation of the Boundaries of Aqua Regions

The delineation of seven aqua regions, determination of their hierarchical importance and special characters were based on following criteria.

(1) Seasonal water availability of considered water bodies
(2) The significance and the magnitude of expected impact on neighboring land uses due to scale of waterbodies in terms of extent and distribution
(3) Location of waterbodies in relatively higher integrated and connected points terms of origin – destination matrices and road & other transport networks
(4) Existing and proposed interventions to transform the considered waterfronts



Map 3.1: Concept Plan – The Seven Aqua Regions

3.1.2) Characteristics of Seven Aqua Regions

3.1.2.1) Aqua Region 01 - Kelani River based Special Regeneration area

There are two main water bodies fallen within the boundary of Aqua Region 01 including Kelani River; the main inland water body within the planning area and Mudun Ela; which runs from north to south via Wattala and connects with Kelani River at Peliyagoda. Approximately, 18km length of water network runs within the Aqua Region 01 counting for …km length of total waterfronts.

It is anticipated that this region will be a special regeneration area that will transform its physical environments from its current status to cater high dense developments and enhanced economic activities such as hotels, condominiums, shopping malls, private offices, recreational and entertainment activities parallel to mega scale waterfront developments in the valley of Kelani River.

Justification – In the context where the existence of variety of waterbodies is considered as the biggest potential of the city and the core principal of City Development Plan is to enhance that potential, Kelani River should receive its due prominence as it is the main and the largest inland water potential within the Colombo Commercial City. 15km length of waterfronts are available considering the either sides of approximately 7km long stretch of Kelani River falling within the planning area.

Even though, the origin of Colombo was based on Kelani River valley in accordance with the principles of early historical settlements, gradually Fort, Pettah and Beira Lake area became the Central Business District in association of the development of Colombo Port at its current location. With time, Kelani River Front turned into a backyard of the city with the utilization of its surrounding lands for uses such as warehouses and industries and especially the encroachment of river reservation by underserved settlements.

In the context analysis, it was identified that there is a huge disparity between the existing land values of North of Colombo including the Kelani River surrounding area with the land values of Central Business District and South of Colombo. The reason behind this significantly lower land values of Kelani River surrounding area can be explained with regard to its surrounding land uses which can be identified as incompatible and under-utilized that have not yet harnessed the real potential of the Kelani River waterfront.

In addition, Kelani River based surrounding area gains further prominence as it is considered as the north gate of Colombo as identified by number of previous plans, that it is the main point which links Colombo with the East- West corridor proposed by National Physical Plan – 2050 and due to the physical integration of number of transport proposals within this area.

In this context, this plan intends to view Kelani River and surrounding area as a focal point of Colombo Commercial City which will undergo a significant physical transformation to cater high-dense developments along with special regeneration interventions.

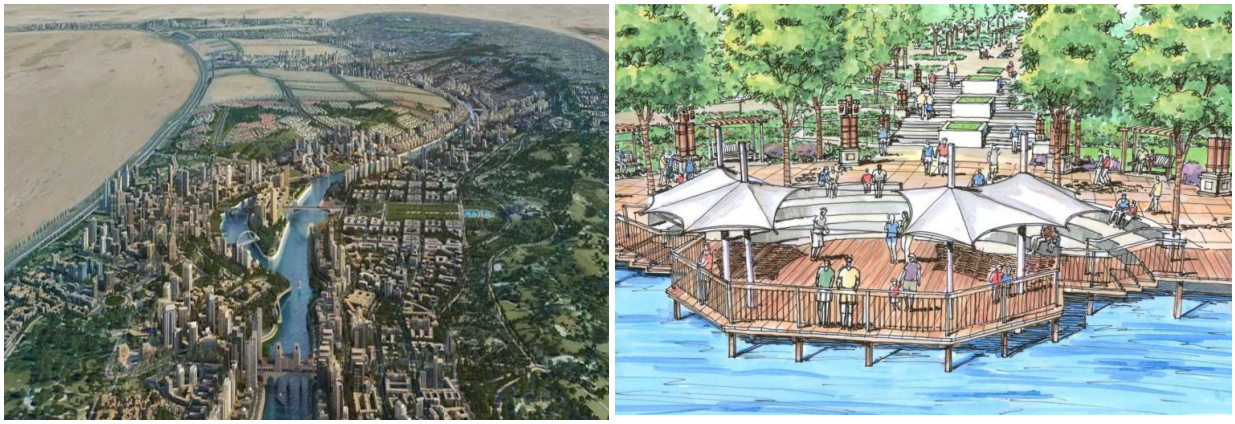


Figure 3.2: Conceptual Images of Aqua Region 01 – Kelani River Based Special Regeneration Area

3.1.2.2. Aqua Region 02 – The Marina Corridor

Coastal belt which runs for more than 31km within the Colombo Commercial City, is the largest linear waterfront of the whole city. The corridor's special scenic beauty composed of sea-view and unique ambiance blended with sea-breeze makes it the most attractive sphere of entire Colombo Commercial City. Its attractiveness is proved with already established and ongoing developments such as Port City Development, Maritime City Development, Star range International Hotels, Retail, Condominium and private office space developments.

In favor of the adopted concept plan developed based on the principle of enhancing variety of water experiences within the city, the corridor having the extent of 2268 ha including the coastal belt stretching from Wattala to Ratmalana along with coastal towns such as Hendala/ Hekitta at north, Kollupitiya, Bambalapitiya, Wellawatta, Dehiwala, Mt- Lavinia and Ratmalana is designated as 'The Marina Corridor' that will be developed harnessing the potential of sea-front. It is envisaged that 'The Marina Corridor' will be a horizon of high-dense and high-end developments in the scope of tourism, retailing, private office, universities and condominiums blended with vibrant entertainment and recreational activities of human scale. It is envisaged that 'The Marina Corridor' will act as the largest city front-yard and the interaction space of Colombo Commercial City Community.

Justification – Certain parts falling under 'The Marina Corridor' are already attractive investment areas that have significantly high land values. However, still there are some parts especially in northern stretch including Modara, Mattakkuliya, Hendala and Hekita and in southern stretch including some parts of Dehiwala, Mt-Lavinia and Ratmalana which can be considered under-utilized in terms of planning point of view. Hence, by including all above areas in the coastal line within a single aqua region named 'The Marina Corridor', it is expected to derive a similar level of high-dense and high-end development throughout the corridor. Further, special consideration will be given to preserve the wind corridors and ensure visual and physical accessibility of sea-front to maximize its benefits and to ensure that they are reachable for a larger community.

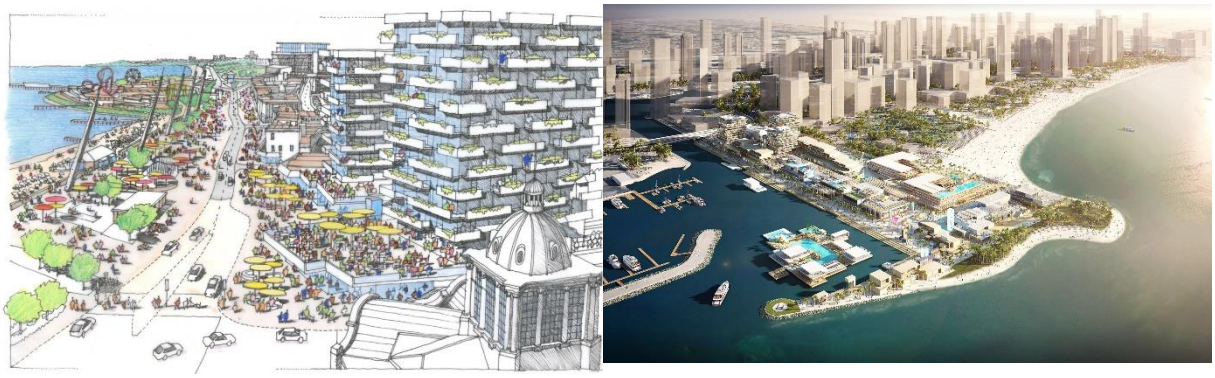


Figure 3.3: Conceptual Images of Aqua Region 02 – The Marina Corridor

3.1.2.3. Aqua Region 03 - Beira Lake and Port City Based Exclusive Development Area

It is envisaged that Beira Lake Circle in alliance with the Port City, will be an Exclusive Development area catering both high-dense and high-end developments leading to be the Financial Core Centre of Colombo Commercial City. It will provide enhanced economic spaces to cater both local and foreign investments in the scope of financial institutions, branches of multi-national organizations, international hotel establishments, condominiums, shopping malls and office spaces etc. blended within an exclusive ambiance composed of Beira Lake waterfront, boulevards, pocket gardens, public squares, shopping streets and recreational spaces.

The Aqua Region 03 which will be in the extent of 1150 ha have 78 ha of Lake Area counting for total of 7 km waterfront. It will be ensured that Beira Lake will be the special element of this Aqua Region by enabling both physical and visual accessibility to the Lake leading it to be the shared feature of this exclusive development zone.

Justification – Beira Lake surrounding area including Fort, Pettah, Gangarama and Maradana is an already established high-end and high-dense development area hosting many landmark high-rise buildings such as Lotus Tower, Altair Building, Hilton Residencies, Grand Hyatt Colombo, Colombo City Center, World Trade Center, Shangri-la Hotel, Empire North Tower and On Three 20 towers etc. With the up-coming Colombo Port City development and many other similar high-rise developments, this area will own unique skyline and a lifestyle of its own in near future. In order to capture and facilitate this on-going market trend and to enhance Colombo's role as an international business hub in South Asia, this particular aqua region based on Beira Lake is dedicated to proceed with its present trend of exclusive development in future as well. In doing that, special consideration will be given to regulate the trending high-dense developments to preserve above mentioned green spaces, wind corridors, visual prominence of landmark buildings, visual and physical accessibility of Beira Lake and anticipated exclusive ambiance within streets and public spaces within the region.

Figure 3.4: Conceptual Images of Aqua Region 03 – Beira Lake & Port City Based Exclusive Development Area

3.1.2.4. Aqua Region 04 - Canal Based Transformation Area

Aqua Region 04 which is in the extent of 1463 ha is formed based on a series of canals including St. Sebestian Canal, Dematagoda Canal and Kinda Canal which will stretch for approximate length of 14 km. It is envisaged that these canal fronts will act as investment space to cater retailing, shopping, dining, condominiums, private office and recreational and entertainment activities and will be vibrant interaction space full of people walking along canal fronts. The anticipated scale of development within this canal-based transformation area will be intermediate compared to the high-scale development expected in the Aqua Regions 01, 02 and 03. St. Sebestian Canal will be a major development corridor connecting Aqua Regions 01 and 02; Kelani River based Special Regeneration Area and the Marina Corridor which will be major development areas of future Colombo Commercial City.

Justification – The importance of having a Canal Based Transformation area including the above-mentioned canals is mainly justified considering the present underutilized status of surrounding lands which has resulted in relatively low land values. It was highlighted during the problem identification that most of these canal fronts are encroached by underserved settlements resulting in water pollution and degradation of canal eco-systems. Hence, it is expected to expose and transform these canal fronts and surrounding areas to attract more developments to the area.

Figure 3.5: Conceptual Images of Aqua Region 04 – Canal Based Transformation Area

t **Area** a Canals having a total length of 4.3 km is designated as the Aqua Region 05 as a Canal Based Development Area. It is expected that this region will have intermediate scale of developments such as commercial, residential and mixed development with upgraded investments space especially in canal front areas. It is envisaged that these canal fronts will have retailing, shopping, recreational and tourism spaces and will act as vibrant streets and public places which will act as special green corridors amidst high dense developments.

Justification – Surrounding areas of Wellawatta and Dehiwala Canals are identified to be in a relatively better state and have comparatively higher land values than the canals of North Colombo. Thus, it is expected to make necessary interventions to induce above mentioned proposed developments within these areas and ensure visual and physical accessibility to water fronts.

Figure 3.6: Conceptual Images of Aqua Region 05 – Canal Based Development Area

3.1.2.6. Aqua Region 06 – The Garden

As it was mentioned in the overall development concept of Colombo Commercial City, the central garden of 'Aquarina – The City in Water' will be the existing Colombo 07 area which has been declared as the Special Primary Residential Zone as per the City of Colombo Development Plan (Amendment) – 2008. This area will

have a total extent of approx. 740 ha. Even though it doesn't have a particular water front located within the region, it has the huge garden area which is the Viharamahadevi Park. In addition, this area will have a special garden character reflected in its built fabric in the means of garden houses, boulevard streets, pocket parks and public open spaces, pedestrian paths and cycling paths etc. The area will have relatively low dense development both vertically and horizontally and will maintain an average green coverage of 50%.

Justification – The area comes under Aqua Region 06 is a special region, which is considered as a part of Colombo's heritage. The history of the area runs back to Dutch and Portuguese period, when it was occupied by the city elites as their residential area. During the British Period, the area was planned in accordance with the Garden City Concept where radial boulevards were linked with Viharamaha Devi Park which was considered as the central garden. The reminiscence of these classic radial boulevards still exist within this area, and it is considered important to preserved this historic character. Hence, it is proposed to preserve this already evident Garden Character even in future by designating the whole area as 'The Garden' of the Aquarina.

Figure 3.7: A Conceptual Image of Aqua Region 06 – The Garden

3.1.2.7. Aqua Region 07 – Bolgoda River Based Development Area

07th Aqua Region which is the Bolgoda River Based Development Area will be a special low densified area having a total extent of approx.1540 ha. The main water potential of this area is the Bolgoda Lake and associated canal network which runs for around 5.2 km length throughout the region. In addition, this area is featured with a special environmental asset which is the Attidiya Marsh and Sanctuary. It is envisaged that this area will be a special residential and recreational region having comparatively low vertical and horizontal development. However, it is expected that this area will attract more high-end investments such as nature bases tourism ventures, exclusive residential and commercial activities.

Justification – Bolgoda River Based Development Area is a special sensitive area featured with many important natural assets such as Bolgoda Lake, Bolgoda Canal Network, Attidiya Marsh & Sanctuary and mand wetlands and paddylands in Ratmalana, Attidiya and Boralesgamuwa Area. Hence, it is important to take necessary measures to protect these valuable natural assets and to enhance them to induce eco-friendly yet high-end investments to the area. In order to address the above need, the area is designated as a low dense green development area. Another reason why the area is demoted in terms of vertical developments is that the prevailing height restrictions due to the existence of Ratmalana Airport.

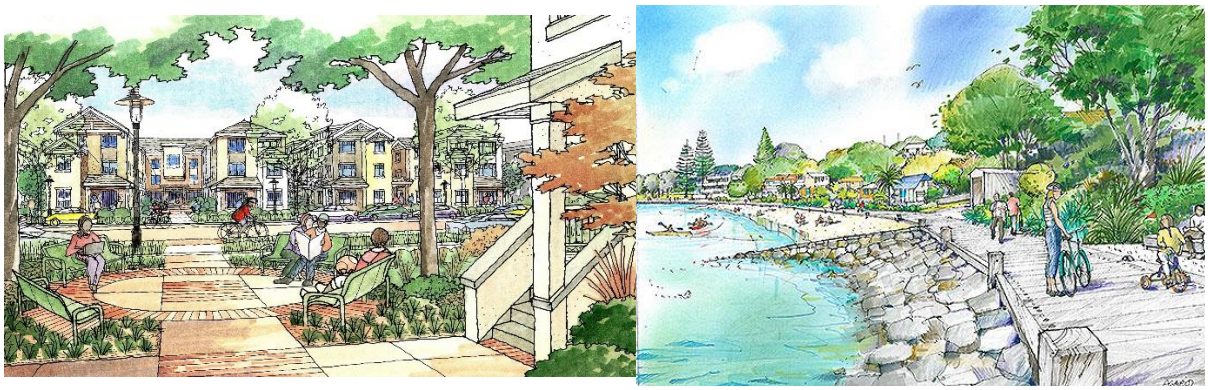


Figure 3.8: Conceptual Images of Aqua Region 07 – Bolgoda River Based Development Area

3.1.3) Translation of the Conceptual Plan into an Implementable Strategic Plan

As per the Concept Plan, the anticipated vision for the Colombo Commercial City; Aquarina – The City in Water will be achieved on ground in terms of 07 Aqua Regions. Therefore, transformation of the city into an Aquarina will be taken place parallel to the activation of each Aqua Region.

(a) Activation Plan

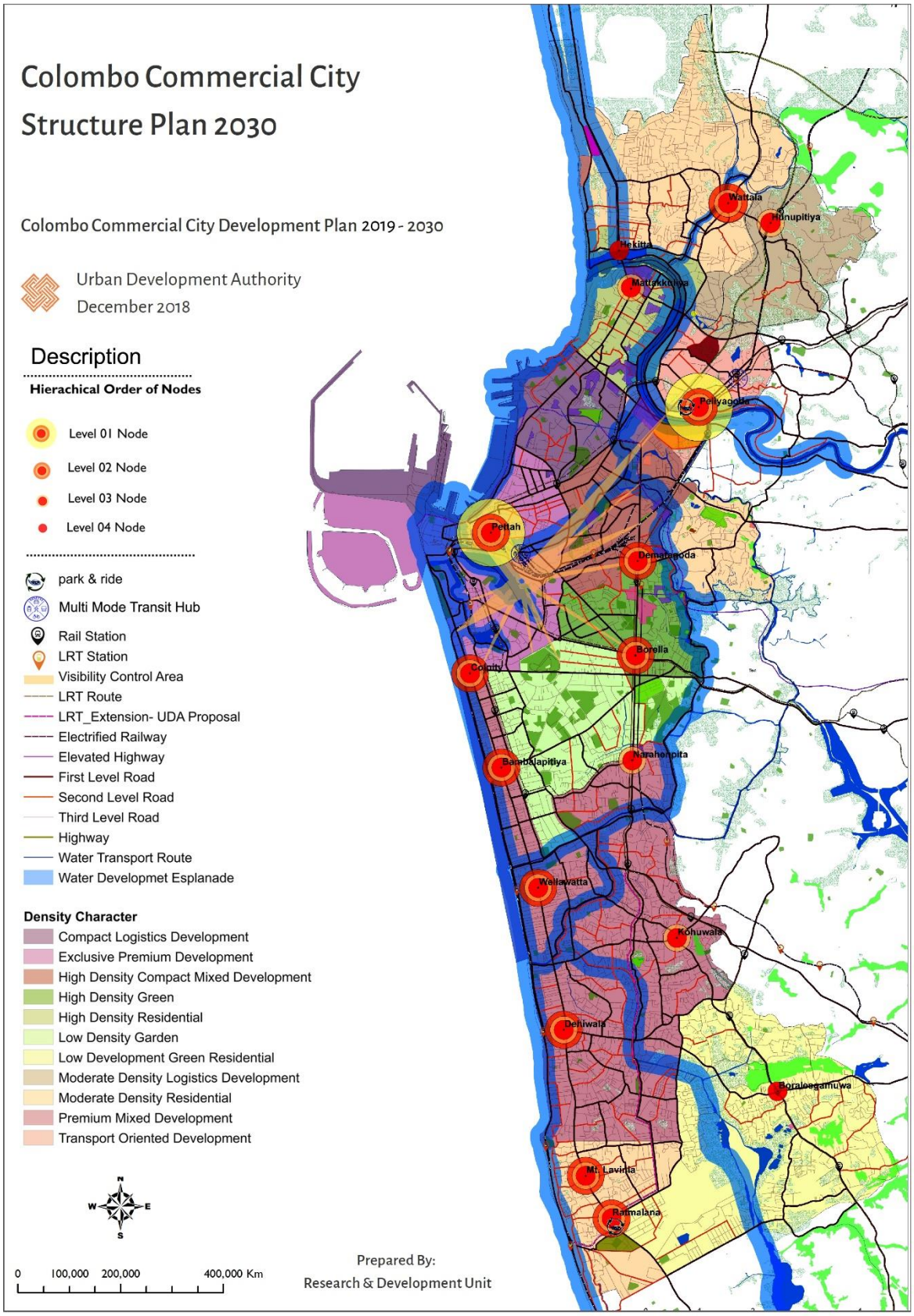
There are four broader strategies which are deigned to activate each aqua region which will lead to the ultimate of activating Aquarina. These broader strategies are the direct interventions on ground, which will induce the city's transformation towards its future vision, and together they will be called as the Activation Plan. The Activation Plan consists of Water Esplanades Development Strategy, Spatial Development Strategy, Transport Development Strategy and City Economics Development Strategy.

(b) Facilitation Plan

The Facilitation Plan includes three broader strategies; Settlement Development Strategy, Utilities Management Strategy and Public Open Recreational Space (PORS) Management Strategy. The three strategies of Facilitation Plan are designed to address the impacts of the Activation Plan. As a result of the ground interventions to activate the Aquarina, the population dynamics of city will vary largely, changing demand pattern of housing, utilities, public open spaces and other amenities. Hence, the three broader strategies under Facilitation Plan aim at capturing those dynamics and managing above aspects to cater the predicted demands.

Figure 3.9: Broader Strategies to Activate 'Aquarina'

3.2) Colombo Commercial City Development Plan – 2030



Map 3.2: Overall Spatial Plan – Colombo Commercial City Development Plan - 2030

Composition of Overall Spatial Plan

The Overall Spatial Plan of Colombo Commercial City Development Plan is the combination of all spatial interventions of seven broader strategies as mentioned below.

(a) Water Esplanades Development

Eight Water Esplanades will be developed in association with different types of water bodies to activate and transform Seven Aqua Regions to be attractive investment spaces within the Colombo Commercial City.

- Marina Investment Esplanade
    - Recreational Stretch
    - Cultural Investment Stretch
    - Premium Investment Stretch
- Kelani River Investment Esplanade
- Beira Lake Investment Circle
- Dematagoda, Kinda Canal & Kirulapana Canal Investment Esplanade
- Wellawatta & Dehiwala Canal Investment Esplanade
- St. Sebestian Canal Investment Esplanade
- Mudun Ela Investment Esplanade
- Bolgoda Lake Investment Esplanade

(b) Spatial Development

Colombo Commercial City will be developed based on three broader densification zones; High, Moderate & Low, thirteen-character zones and 57 sub-densification zones. Within these densification zones, nodes will be emerged in a hierarchical order based on the connectivity of different modes of transport.

In addition, some areas will have special height regulations to preserve visual corridors and to adhere with the technical height regulation requirements of special elements such as Airport and Kolonnawa Oil Refinery.

(c) Transport Development

Colombo Commercial City will have hierarchical order of roads developed in three levels. Each road will have a defined character such as transit prominent, functional, water experiencing, intermediate and neighborhood. The rail transportation will be upgraded by electrification of identified railway links and introducing Light Rail Transit System. There will be two Multi-modal Transport Hubs and two Transit Oriented Development Nodes which provide easy transfer between modes and that links inter-city transport system with intra-city transport system.

(d) City Economics Development

Two zones within the identified National Logistics Corridor will be dedicated for logistics-based activities associated with Colombo Port. Colombo Central Business District will be further facilitated to support its role as the main financial district linked with up-coming Colombo Financial City (Port City).

In addition, many property development projects will be carried out under Colombo Commercial City Development Plan to ensure adequate supply of realty space; commercial, residential, office and tourism to meet the induced growing demands. Tourism development will be carried out in concurrence with water esplanades development while incorporating ongoing and proposed mega-scale tourism attraction projects.

(e) Settlement Development

There will be 06 residential promotion zones; one of high density that accommodates high-rise apartments of low-income communities, three moderate density zones that accommodate large portion of middle-income housing and two low density zones that will host a large portion of garden houses. The remaining underserved settlements within Colombo Commercial City will be managed with both relocation and on-site re-design approaches depending on the ownership, physical status and social factors.

(f) Utilities Management

Water & electricity supply, storm water, waste water & solid-waste management and supply of social infrastructure and other public amenities will be carried out in order to meet the increased demands which will result due to induced development.

(g) Public Open Recreational Space Management

Open spaces will be created in terms of parks of different themes such as water based, wetland based, attraction parks and linear parks while preserving natural open spaces. In addition, green and blue spaces will be linked with three types of boulevards; Ceremonial, Gateway and Transit.

Water Esplanades Development Strategy

‘Transforming Waterfronts into City Front-yards’

08 Water Esplanades to activate Aquarina

3.3) Water Esplanades Development Strategy

Intriduction - Story of Waterfronts

Historical cities were mostly located in association with inland water bodies or sea-ports which provided the advantage of continuous water supply and easy transportation of people and goods. In the 18th, 19th and early 20th centuries, as the industrial revolution began to take shape the cities and shipping and manufacturing began to become powerful sectors in economic growth, waterfronts too moved forward. The bulk transport of cargo required that manufacturing be done near the port, reducing further transportation costs. This resulted in the building of massive industrial buildings and warehouses along all types of waterfronts, from inland river towns to massive ocean ports.

Urban waterfronts, however, lacked one main type of land use, residential in the beginning of their development. While sailors and some traders may have lived near the waterfront, the land was typically devoid of the upper class, the rising middle class, and even the lower class. Waterfronts were bustling commerce centers, but often dirty and smelly due to manufacturing and waterfront industrial uses, and people tended to avoid them in order to live in more peaceful areas. The lack of residential living may be one of the causes of the earlier demise of waterfront property.

In the early and mid-20th century, waterfronts began to change. Transportation on water began to switch from bulk to container shipping, allowing massive waterfront transfer stations to be bypassed and left for other uses. However, the new ease by which parts and materials could be transferred by container or on rails and roads did permit manufacturing to move further and further from ports. As shipyards, bulk transfer facilities, warehouses and manufacturing facilities became vacant, urban waterfronts were left with large tracts of under-used, misused, and empty property. These properties often went into decay and became the eyesores of the community.

In the second half of the 20th century there has been an intense effort to redesign abandoned waterfronts. Urban waterfront revitalization has been steadily extending in many cities worldwide. Nowadays, waterfront redevelopment is a global trend and thousands of schemes are being carried out in large metropoles, medium-sized cities, and even small towns all over the world. Due to their advantageous location at the interface between built environment and water, near the city centers, waterfronts provide highly exploitable urban spaces for new uses like large-scale office, leisure and residential projects

As Colombo having a greater potential of water-based development consisting with 34km sea fronts, 10km length of Kelani River waterfront and 62km of other Canal fronts The Colombo Development Plan envisions to develop the urban water fronts to yield the above-mentioned advantages.

3.3.1) Water Esplanades (Major water features based intervention areas)

Definition

Water Esplanades – The term 'Water Esplanades' referred to a defined area of intervention; a corridor which is based on a one or more water features.

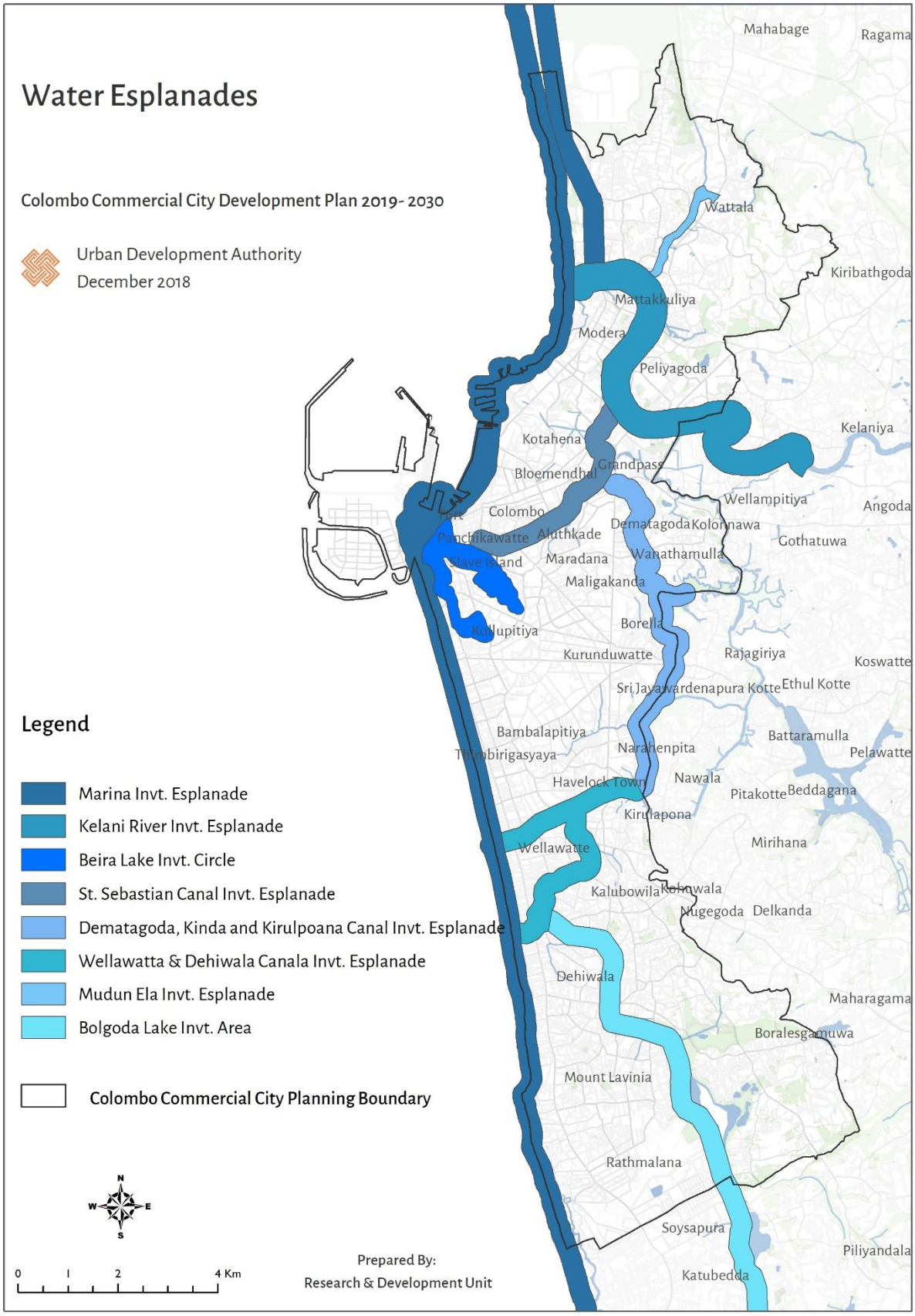
3.3.1.1) 08 Water Esplanades

Water esplanades will be developed at three levels based on the scale of available water features and the scale of envisaged development. The water esplanades developed at three levels are as follows.

(1) Major Water Esplanades (Eminent Water Esplanades)
   i. Marina Investment Esplanade
   ii. Kelani River Investment Esplanade
   iii. Beira Lake Investment Circle

(2) Secondary Water Esplanades (Classic Water Esplanades)
   iv. St. Sebestian Canal Investment Esplanade
   v. Dematagoda, Kinda Canal & Kirulapana Canal Investment Esplanade
   vi. Wellawatta & Dehiwala Canal Investment Esplanade

(3) Tertiary Water Esplanades (Trivial Water Esplanades St. Sebestian Canal Investment Esplanade)
   vii. Mudun Ela Investment Esplanade
   viii. Bolgoda Lake Investment Area



Map 3.3: 08 Water Esplanades

3.3.1.2) Envisaged Characters of each Water Esplanade

Category	Water Esplanade	Character	Justification
Major (Eminent)	**Marina Investment Esplanade**	Recreational, cultural & beach tourism and premium investment corridor	Marina Investment Esplanade will be the main strategic intervention to activate the Aqua Region 02; The Marina Corridor
	(1) Marina Investment Esplanade - Recreational Stretch (Coastal Stretch extending from Kelani River Mouth to Wattala including Hamilton Canal Environs)	Water based recreational and tourism area	This area has the potential of two main water features; Sea and Hamilton Canal. As the right bank of Kelani River mouth falls within this stretch, this area provides three different water experiences and has the potential for water-based recreational and tourism activities.
	(2) Marina Investment Esplanade - Cultural Stretch (Coastal stretch extending from Pettah Bazaar to Kelani River Mouth)	A special zone consisting of conserved various archeologically important features such as Pettah Bazaar, Kovils, Dutch Buildings and Churches	Nearly half length of this stretch is bounded by the Port wall which disturbs the view of Sea and Port. Even though, there are archeologically important buildings and sites located within this stretch, they are mostly hidden among the warehouses and industries. Pettah Bazaar has a unique character with its day-to-day functioning pattern which needs to be conserved along with its many archeologically important buildings. Given, the existence of historical Kovils and churches, importance of Pettah Bazaar which is a living heritage and the potential sea and port view, this stretch can be exposed for more investments in terms of cultural, recreational and heritage tourism and commercial developments.
	(3) Marina Investment Esplanade - Premium Investment	Premium investment area attracting high end commercial, luxury residential	This stretch has the potential to be the city front-yard considering the long beach stretch. North section from Fort to Wellawatta are already occupied by high-end investments such as luxury

	Stretch (Coastal stretch extending southwards from Port City to Ratmalana)	and tourism developments. The city front-yard providing beach-side recreational and premium retailing experience.	hotels, residential apartments, shopping malls etc. However, the southern section is not yet optimized and there are many ways the potential of sea-front can be harnessed exposing it for more recreational and tourism activities and for many high-end investments.
	Kelani River Investment Esplanade	A special regeneration zone that will be transformed into a river-front recreational, tourism and investment space.	The purpose of this water esplanade is to activate the Aqua Region 01; Kelani River Based Special Regeneration Area. Kelani River has been neglected for a long time and its true potential as the largest riverfront of the area has not been harnessed yet. The development of Colombo has occurred being concentrated to Colombo Fort, even though its origin was based on Kelani River valley. Hence, it is expected to give Kelani River its due value while optimizing its true potential.
	Beira Lake Investment Circle	The exclusive premium investment space of Colombo Commercial City	With the interventions made during last decade to clean and expose Beira Lake, now it has become the most valued and highly sought investment space of Colombo Commercial City. Hence, the purpose of Beira Lake Investment Circle is to further enhance potential of Beira Lake Waterfront and strengthen the role of Colombo CBD as the Financial Center of the country while exposing more high quality investment space.
Secondary (Classic)	**St. Sebestian Canal Investment Esplanade**	A Canal-front investment corridor consisting of casual retailing, recreational, tourism, office and high-rise residential space connecting Pettah & Peliyagoda, the Uptown &	St. Sebestian is a landmark city feature that had been there since Dutch Period. However, at present it has become a backyard and underutilized with many incompatible uses. Since, the canal links Pettah and Peliyagoda, which are very strategic locations in terms of connectivity, it has the potential to act as a major link with high development potential.

		Downtown of Colombo.	
	Deamatagoda, Kinda Canal & Kirulapana Canal Investment Esplanade	A Canal-front investment corridor consisting of casual retailing, recreational, tourism, office and high-rise residential space.	The purpose of this water esplanade is to activate the Aqua Region 04; Canal based Transformation Area. Currently, more than 90% of these canals are polluted, hidden and acts as backyards of the city leading to many issues. And the surrounding area has many incompatible uses which do not harness the true potential of close proximity to Colombo CBD and existence of canal-fronts.
	Wellawatta & Dehiwala Canal Investment Esplanade	A Canal-front investment corridor consisting of casual and high-end retailing, recreational, tourism, office and high-rise residential space.	The purpose of this water esplanade is to activate the Aqua Region 05; Canal Based Development Area. This region is already a trending premium development area. However, the canal-fronts still remain underutilized and act as backyards. If these are exposed and linked with valued lands, it will further enhance the land values and attract more investments to the area.
Tertiary (Trivial)	**Mudun Ela Investment Esplanade**	A Canal-front exposed for recreational purposes, casual retailing and high-quality residential space	Falling within the Aqua Region 01; this water esplanade will be a local attraction corridor which acts as a public open recreational space for the neighboring residential areas. Also, its canal-front will be opened up for casual retailing and high-quality residential space such as garden housing.
	Bolgoda Lake Investment Area	A special recreational tourism and high-quality residential area	Bolgoda Lake is one of the largest water potentials of Colombo Commercial City. Having located considerable distanced from Colombo CBD, this area is less congested and peaceful and has a high demand and reputation for high-quality residential neighborhoods and garden houses. The purpose of this water esplanade is to expose hidden waterfronts and further enhance the value of the area.

Table 3.2: 08 Water Esplanades – Characters & Justifications

3.3.2) Strategic Interventions to activate Water Esplanades

The following strategic actions are proposed for the overall activation of identified Water Esplanades.

3.3.2.1) Cleaning & improving of the existing water network

The canal network of Colombo Commercial City is nearly 53km in length and plays an important role in maintaining the overall stream order of the entire network of water bodies. It was identified during the situation analysis, that more than 90% of water network of Colombo Commercial City is polluted. The present status of water network is contrasting to the future expectation; hence, cleaning of all polluted canals is considered as a first priority action in the implementation of Colombo Commercial City Development Plan.

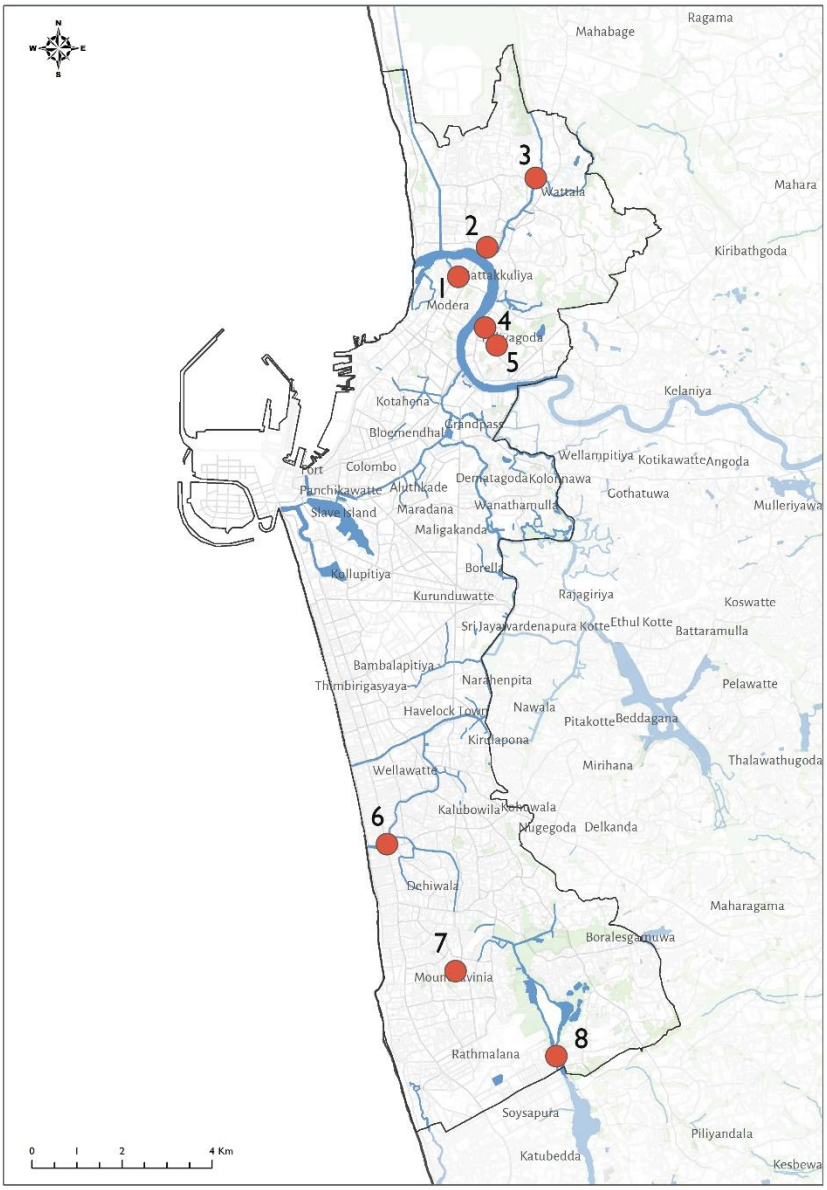


Figure 3.10: Improvements in the Existing Canal Network

The continuity of waterbodies is considered as an important aspect in ecological terms and also for the natural flood management. Even though, the stream order is maintained there are some missing links within the existing canal network as mentioned in the Figure 3.10 and Table 3.3 due to encroachments. Hence, it is proposed to remove the unauthorized developments on canal reservations and dredge the filled portions of canals to ensure the existence of natural widths.

No.	Natural Width (m)	Existing Width (m)	Encroached Length (m)
01	15	5-10	400
02	25	15	80

03	15	14	200
04	24	2-10	220
05	26	11	70
06	26	10	250
07	33	8	18
08	17	8	220

Table 3.3: Identified Encroachments in Existing the Canal Network (Encroached lengths and widths)

Derived Projects – Water Esplanade Development Strategy – Action Projects Type 01 – (W-1)

Project Code	Project Name
W-1	Cleaning & connecting of missing links of the existing water network
W-1-1	Cleaning of all water bodies of Colombo Commercial City
W-1-2	Improvement of existing canal network of Colombo Commercial City by reclaiming encroached parts

Table 3.4: Derived Projects – Water Esplanade Development Strategy – Action Project – (W1)

3.3.2.2) Maintaining the reservations of all water bodies of Colombo Commercial City

Maintenance of reservations of all water bodies including Kelani River, Beira Lake, coast and all canals is considered as a mandatory action in order to achieve the anticipated vision; Aquarina – The City in Water.

In the existing situation, the regulatory guidelines for maintenance of canal reservations which have been introduced by the Sri Lanka Land Reclamation & Development Corporation are enacted by the Gazette Notification No. 1662/17 dated 14th July 2010. As per the Gazette Notification, the specified reservations based on canal surface widths are as follows.

Surface Width of the Canal (m)	Reservation to be kept from the edge of the Canal Bank	
	For open canals (m)	For canals with covered surfaces
1.0 to 1.2	1.0	0.3
1.3 to 3.0	2.0	1.0
3.1 to 4.5	2.75	1.0
4.6 to 6.0	3.5	1.5
6.1 to 9.0	4.5	1.5
Above 9.0	6.5	2.0

Table 3.5: Specified Canal Reservations applicable for all canals in Colombo Commercial City

The declared reservation of Kelani River is 60 ft from river banks as per the Irrigation Ordinance (1924) and Irrigation Act (1951) and Flood Protection Ordinance (1971). The reservation of Beira Lake is 6.5m from the Lake Banks as declared by the Sri Lanka Land Reclamation & Development Corporation.

As the per the Act No. 57 of 1987, the Coastal Zone is declared as 'the area lying within a limit of 300m landward of the mean high-water level and a limit of 2 km seaward of the mean low water level. In the case of rivers, streams, lagoons or any other body of water connected to the sea either permanently or periodically the landward boundary extends to a limit of 2km measured perpendicular to the straight base line drawn between the natural entrance points.' The developments coming within this zone should obtain the development clearances and permits from the Coast Conservation Department.

3.3.2.3) Exposing the existing water network by introducing water drives, linear parks and gateway boulevards

The right exposure of water bodies is a mandatory pre-requisite to induce waterfront developments. Hence, three major interventions will be carried out to expose and connect the waterbodies with major roads, nodes and other public spaces.

a) Water Drives along Coast, Rivers and Canals

There will be three types of Water Drives such as eminent, classic and trivial depending on the type of water esplanade they fall into. A Water Drive refers to a road which runs parallel to a water body such as sea-front, rivers, canals or lakes.

- The Eminent Water Drives

The eminent water drives are proposed at either side of Kelani River, Marine Drive and at the Beira Lake surroundings.

- The Classic Water Drives

The water drives proposed along canals will belong to classic water esplanades thus will be known as Classic Water Drives. The Lake Drive which currently runs along Kirulapana Canal will be continued southwards up to Wellawatta and Dehiwala Canals and northwards upto Wattala via Kinda, Dematagoda and Kolonnawa Canals. Another Classic Water Drive is proposed along St. Sebestian Canal and this will be a major link which connects Pettah and Peliyagoda, the Uptown and Downtown of Colombo.

- The Trivial Water Drives

The road proposed along Mudun Ela at Wattala will be a trivial water drive as per the category of water esplanade it belongs to.

All water drives are fallen under the Level 01 Road category as per the proposed road hierarchy. The road widths will depend on the type of waterbody and the configuration of the road in relation to the waterbody. The total length of water drives within Colombo Commercial City will

be 86 km. All water drive projects will be aligned under Water Esplanade Development & Transport Development Strategies – Combined Action Projects with the project code (WT-1).

Figure 3.11: A Conceptual Image of Proposed Water Drives

Type of Water Drive	Name of Water Drive	Locations/ Routes	Length of Water Drive	Width of Water Drive (Carriage Way)	Type of Road as per the Road Hierarchy	Project Code
Eminent Water Drives	Kelani River Right Bank Water Drive	Right Bank of Kelani River	8.4 km	7 m	01 - b	WT-2-1
	Kelani River Left Bank Water Drive	Left Bank of Kelani River	4.8 km	7 m	01 - a	WT-1-1
	Hamilton Canal Drive	Along Hamilton Canal from Mattakkuliya to Wattala	4.4 km	7 m	01 - b	WT-2-2
	Sea Street	Pettah to Crow Island	4.7 km	7 m	01 - b	WT-2-3
	Marine Drive	Colombo Plan Road - Along Sea-front from Fort to Ratmalana	15.5 km	14 m	01 - b	WT-2-4
	Beira Lake Drive	Along the Perimeter of the Beira Lake	8.9 km	14 m	01 - a	WT-1-2

Classic Water Drives	St. Sebestian Canal Drive	Along the St. Sebestian Canal from Pettah to Peliyagoda	4.4 km	7 m	01 - b	WT-2-5
	Extended Lake Drive	Connecting Wellawatta and Wattala via Narahenpita, Kolonnawa and Peliyagoda along Wellawatta Canal, Kirulapana Canal, Kinda Canal, Heen Ela, and Kittampahuwa Canal (Kolonnawa Canal)	22.0 km	7 m	01 - a	WT-1-3
	Dematagoda Canal Drive	Along Dematagoda Canal	3.6 km	7 m	01 - a	WT-1-4
	Dehiwala Canal Drive	Along Dehiwala Canal	3.8 km	7 m	01 - a	WT-1-5
	Bolgoda Canal Drive	From Dehiwala to Attidiya along Bolgoda Canal	3.0 km	7 m	01 - a	WT-1-6
Trivial Water Drives	Mudun Ela Water Drive	Along Mulun Ela in Wattala	2.5 km	7 m	01 - a	WT-1-7

**NOTE - 01 – a: Level 01 – General Roads, 01 – b & Level 01 – Functional Roads

Table 3.6: The list of proposed Water Drives

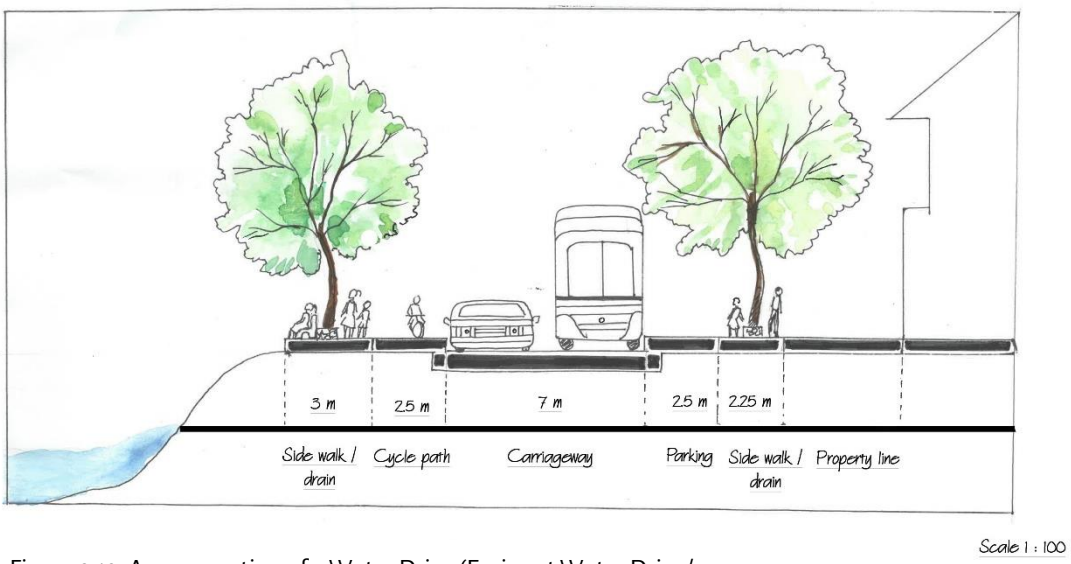


Figure 3.12: A cross-section of a Water Drive (Eminent Water Drive/ Level 01 – Water Experiencing Road)

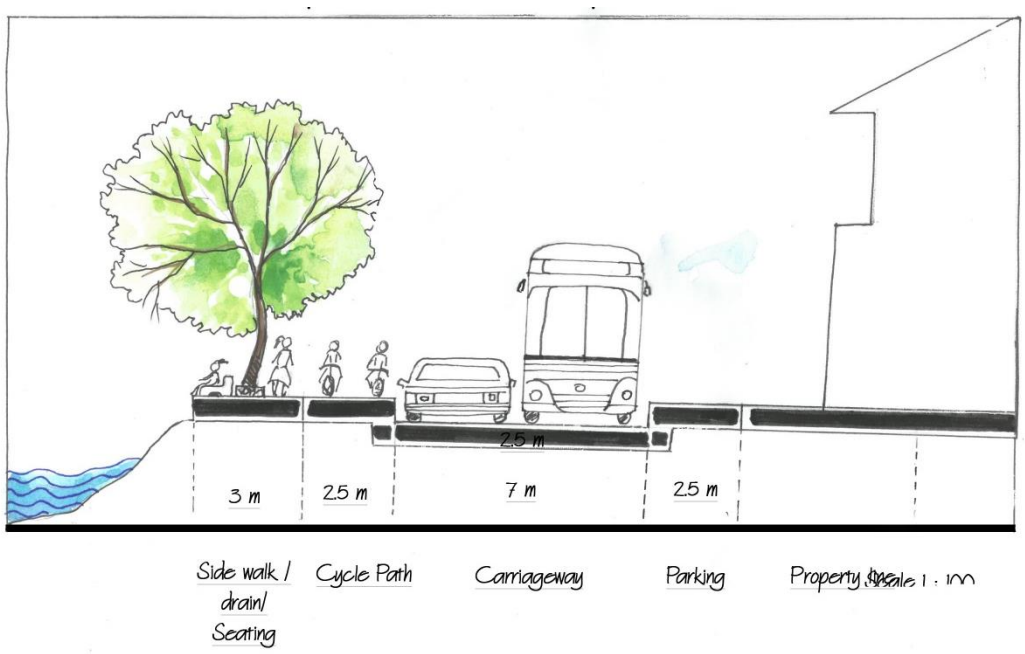
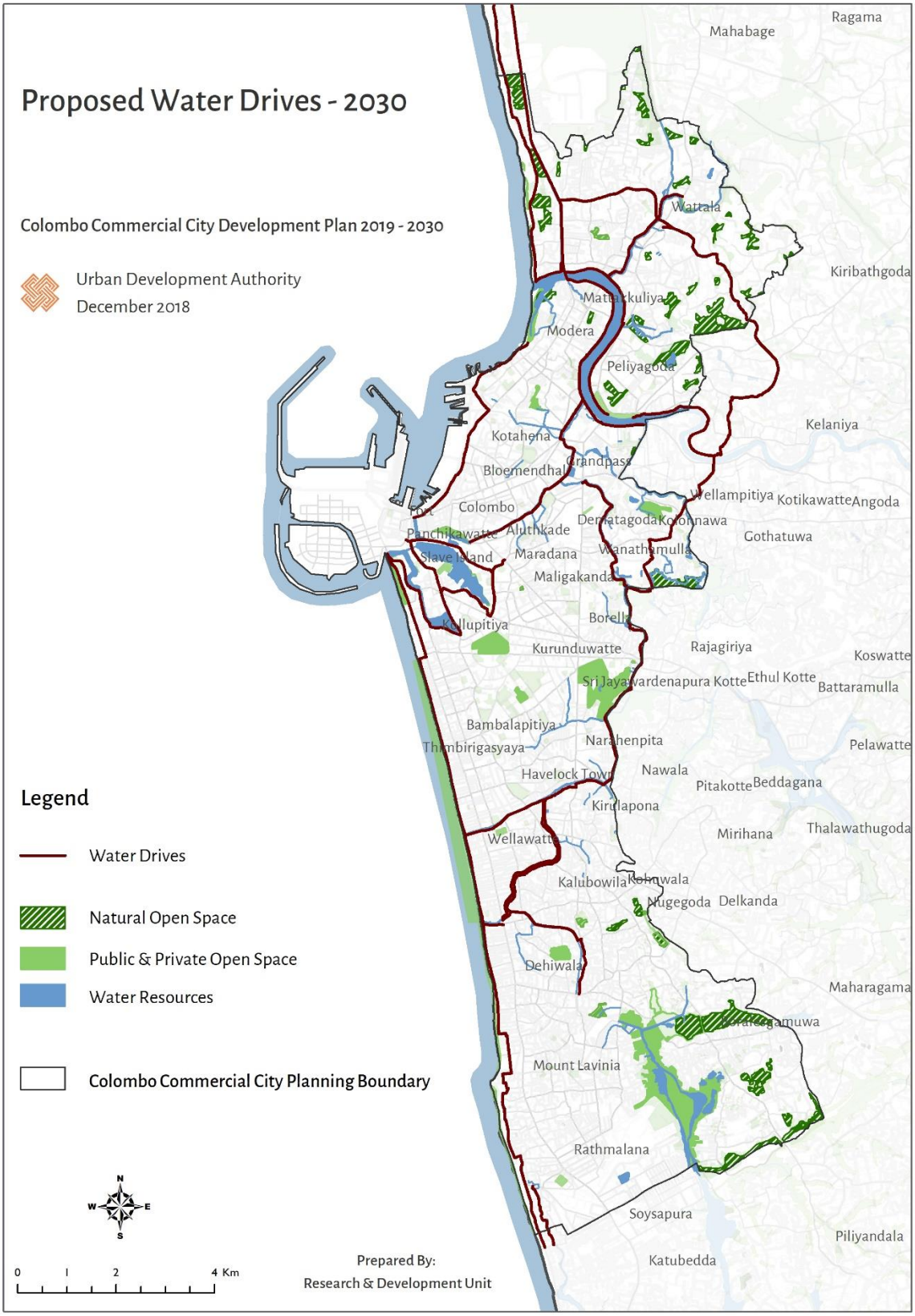


Figure 3.13: A cross-section of a Water Drive (Classic Water Drive/ Level 02 Water Experiencing Road)



Map 3.4: Proposed Water Drives - 2030

(b) Linear Parks

Another major intervention to expose waterbodies is the development of linear parks parallel to rivers, canals and at the perimeter of lake. The purpose of linear parks is to provide more public access to waterfronts, avoid possible encroachments of river and canal reservations and to transform the waterfronts into front-yards of the city. On the other hand, linear parks will contribute to increase the total public open recreational space within the city. Approximately, 57.7 km length of linear parks are proposed along various waterfronts of different categories.

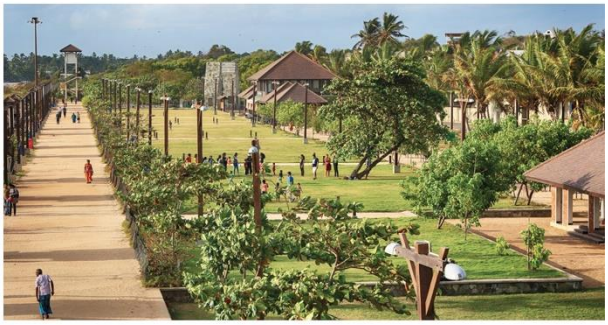


Figure 3.14: Conceptual Images of Proposed Linear Parks

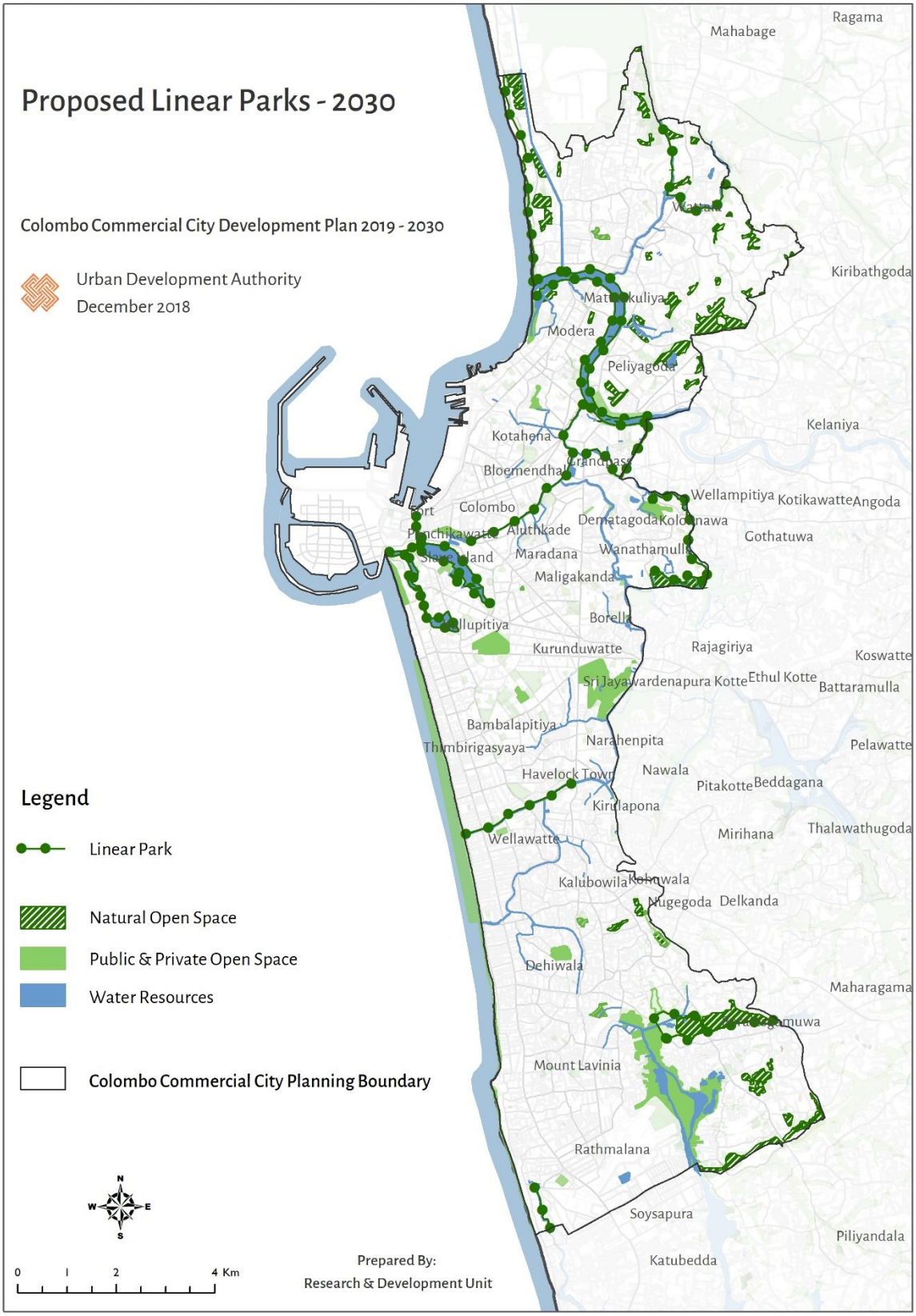
The derived projects under this strategic action will be implemented parallel to the strategies identified under Public Open Recreational Space Management Strategy. Hence, the project codes of linear park constriction projects will be aligned under Water Esplanade Development & PORS Management Strategies – Combined Action Projects Type 01 with the project code WO–1.

Water Esplanade	**Name of the Linear Park**	**Respective Water Body/ wetland**	**Length of Linear Park**	**Project Code**
Eminent – Marina Investment Esplanade	Preethipura Linear Park parallel to sea-front	Sea-front	4.5 km	WO–1-1
	Ratmalana Canal Linear Park	Sea-front & Ratmalana Canal	1.0 km	WO–1-2
Eminent – Kelani River Investment Esplanade	Kelani River Left & Right Bank Linear Parks	Kelani River	20.0 km	WO–1-3
Eminent – Beira Lake Investment Circle	Linear Parks along the perimeter of Beira Lake	Beira Lake	10.2 km	WO–1-4
Classic – St. Sebestian Canal Investment Esplanade	St. Sebestian Canal Linear Park	St. Sebestian Canal	4.4 km	WO–1-5
Classic – Dematagoda, Kinda Canal & Kirulapana Canal	Kittampahuwa Canal Linear Park	Kittampahuwa (Kolonnawa) Canal	5.3 km	WO–1-6

Investment Esplanade				
	Kirulapana Canal Linear Park	Kirulapana Canal (Wellawatta Canal)	2.5 km	WO–1-7
Trivial – Mudun Ela Investment Esplanade	Hunupitiya – Wattala Kalu Ela Linear Park	Kalu Ela	3.3 km	WO–1-8
	Mudun Ela Linear Park	Mudun Ela	2.1 km	WO–1-9
Trivial – Bolgoda Lake Investment Esplanade	Boralesgamuwa Linear Park	Boralesgamuwa Paddy Lands	4.4 km	WO–1-10

Table 3.7: The list of proposed Linear Parks

**NOTE – WO-1 refers to Water Esplanade Development & PORS Management Strategies – Combined Action Projects Type - 01



Map 3.5: Proposed Linear Parks - 2030

(C) Gateway Boulevards

Promotion of Gateway Boulevards is another strategic intervention to expose water bodies and to provide direct access between main roads and water bodies. Gateway Boulevard is a road having trees at either side that connects a waterfront with a main road, node or a public place. The purpose of Gateway Boulevards is to maintain the continuity of walkways or drives towards waterfronts. In the meantime, Gateway Boulevards also contribute to the city green coverage, improve walkability of streets, enhances the livability standards and city image and contribute to improve air quality. Construction and promotion of Gateway Boulevards will be undertaken under Water Esplanade Development & PORS Management Strategies – Combined Action Projects Type - 02 with the base project code WO – 2.

Gateway Boulevard	**Water Body/ Location**	**Length**	**Project Code**
Kollupitiya Station Road	Seafront	0.14 km	WO-2-1
Bambalapitiya Station road	Seafront	0.23 km	WO-2-2
5th Lane, Bambalapitiya	Seafront	0.76 km	WO-2-3
Lester James Peries Mawatha	Seafront	0.75 km	WO-2-4
Vajira Road	Seafront	0.69 km	WO-2-5
St. Peter's Lane	Seafront	0.34 km	WO-2-6
Wellawatta Station Road	Seafront	0.37 km	WO-2-7
Wasala Road	Seafront	0.42 km	WO-2-8
Dehiwala Station Road	Seafront	0.41 km	WO-2-9
Hotel Road – Mount Lavinia	Seafront	1.16 km	WO-2-10
Mount Lavinia Station Road	Seafront	0.82	WO-2-11
Ratmalana Station Road	Seafront	1.33 km	WO-2-12
Sea Road – Crow Island	Seafront	2.20 km	WO-2-13
Justice Akbar Mawatha	Beira Lake	0.77 km	WO-2-14
Mattakkuliya Church Road	Kelani River	1.36 km	WO-2-15
Madampitiya Road	Kelani River	1.44 km	WO-2-16
Fransewatta Lane	Kelani River	0.52 km	WO-2-17
Pamankada Road	Dehiwala Canal	1.44 km	WO-2-18
Stratford Avenue	Dehiwala Canal	0.58 km	WO-2-19

	Hamilton canal		
Hekitta Road	Hamilton Canal	1.53 km	WO-2-22
Gongale Goda Banda Raja Mawatha	Kelani River	1.16 km	WO-2-23
Meegahawatta Road	Peliyagoda Water Fountain	0.55 km	WO-2-24
Dutugemunu Mawatha	Peliyagoda Water Fountain	0.87 km	WO-2-25
Parakrama Lane	Peliyagoda Water Fountain	0.18 km	WO-2-26
4th Cross Lane	Peliyagoda Water Fountain	0.35 km	WO-2-27
Ananda Rajakaruna Mawatha	Demtagoda Canal	0.72 km	WO-2-28
Sri Nigrodharama Road	Demtagoda Canal	0.67 km	WO-2-29
Vijaya Road	Kolonnawa Marsh, Kittampahuwa Canal	1.30 km	WO-2-30

**NOTE – WO-2 refers to Water Esplanade Development & PORS Management Strategies – Combined Action Projects Type - 02

Table 3.8: The list of proposed Gateway Boulevards

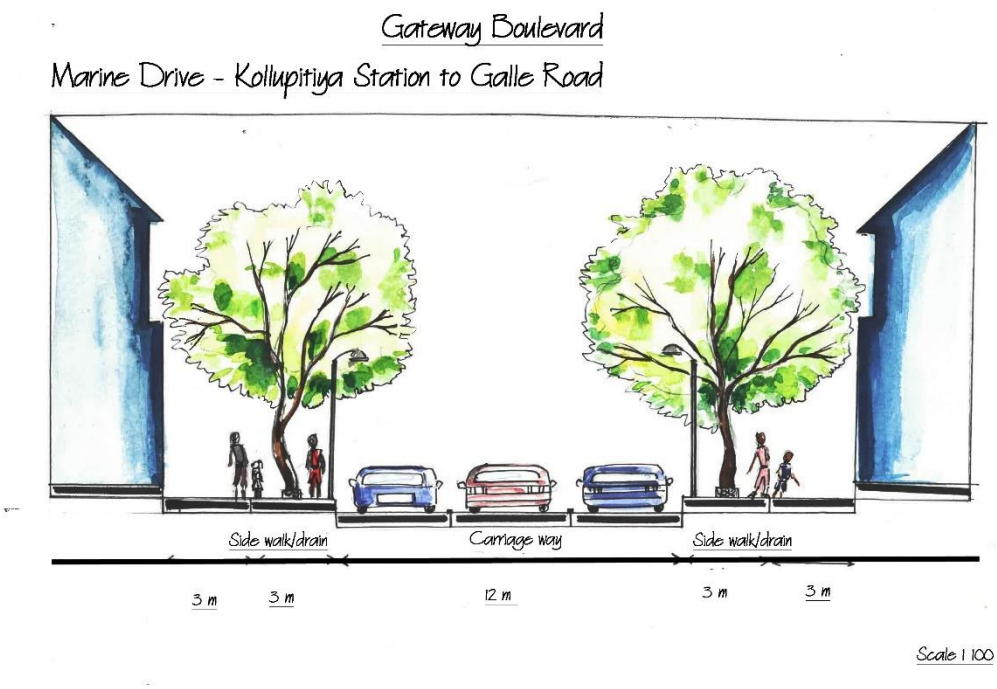
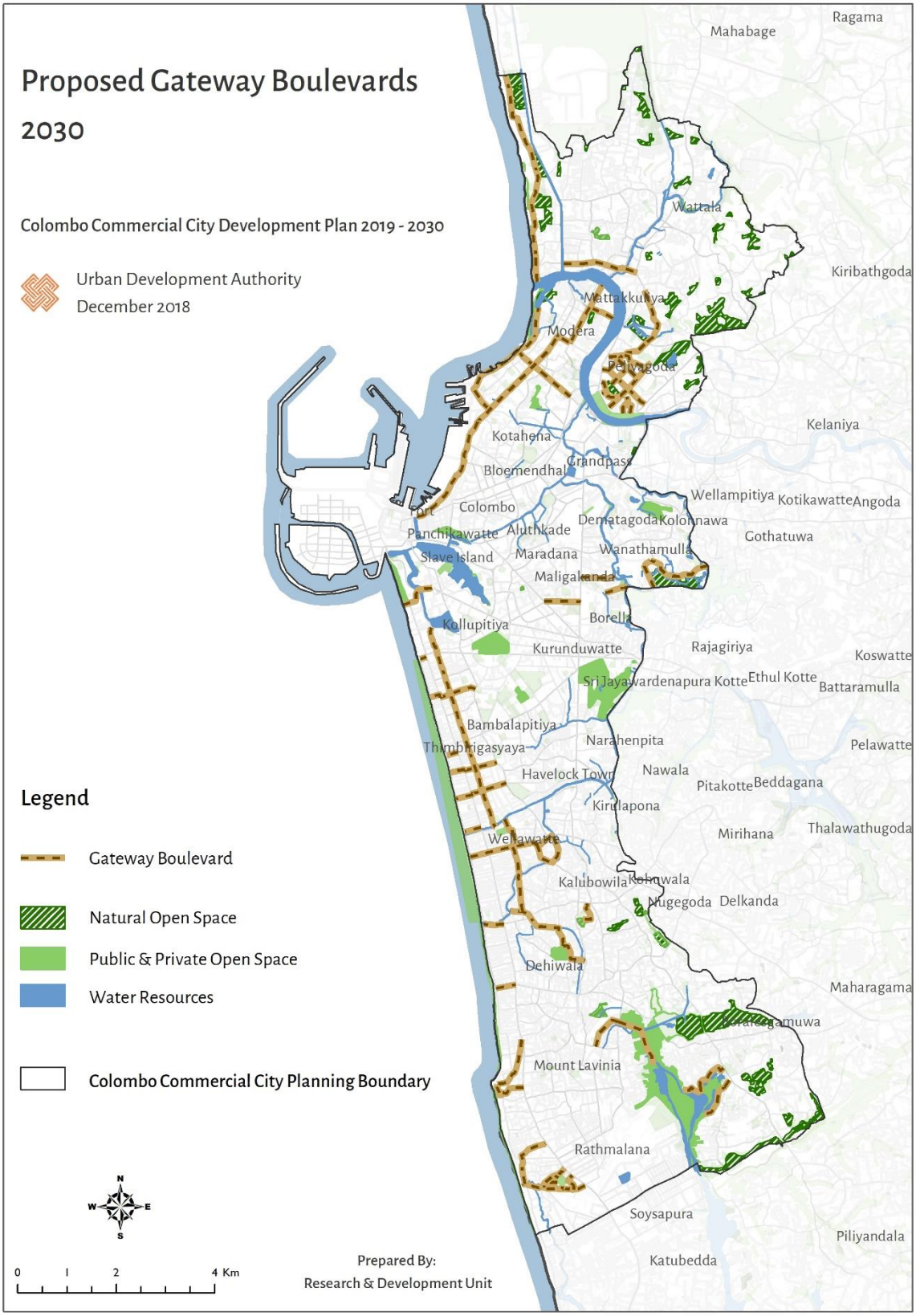


Figure 3.15: A Cross-section of Proposed Gateway Boulevard connecting Kollupitiya Station and Galle Road

Figure 3.16: Conceptual Images of Proposed Gateway Boulevards


Proposed Gateway Boulevards
2030
Colombo Commercial City Development Plan 2019 - 2030
Urban Development Authority
December 2018
Legend
Gateway Boulevard
Natural Open Space
Public & Private Open Space
Water Resources
Colombo Commercial City Planning Boundary
N
W
E
S
0
1
2
4 Km
Prepared By:
Research & Development Unit
Ragama
Mahabage
Wattala
Kiribathgoda
Mattakkuliya
Modera
Peliyagoda
Kelaniya
Kotahena
Grandpass
Bloemendhal
Wellampitiya
Kotikawatte
Angoda
Colombo
Port
Dematagoda
Kolonnawa
Gothatuwa
Panchikawatte
Aluthkade
Maradana
Wanathamulla
Slave Island
Maligakanda
Borella
Kollupitiya
Kurunduwatte
Rajagiriya
Koswatte
Sri Jayawardenapura Kotte
Ethul Kotte
Battaramulla
Bambalapitiya
Narahenpita
Thimbirigasyaya
Pelawatte
Havelock Town
Nawala
Pitakotte
Beddagana
Kirulapona
Mirihana
Thalawathugoda
Wellawatte
Kalubowila
Kohuwala
Nugegoda
Delkanda
Dehiwala
Maharagama
Mount Lavinia
Rathmalana
Soysapura
Piliyandala
Katubedda

3.3.2.3.) Incorporating storm water management projects conducted by relevant stakeholder consultancies

In the situational analysis, it was identified that flash floods is one of the burdening issues of Colombo Commercial City with a considerable significance where an average rainfall with the intensity of 50mm to 100mm per day results in flash flood that lasts for about 1 to 2 hours. As identified by the Risk Analysis conducted by relevant stakeholder agencies, the flood risk is relatively higher in Kelani River banks and canal surrounding areas. The floods in Colombo Commercial City occur mainly due to two reasons; overflow of Kelani River and flash floods due to deficiencies of existing storm water drainage network.

When leading the city towards its future vision 'Aquarina – The City in Water', it is important to make certain that Colombo Commercial City is free of flood risks. It is important to follow necessary flood mitigation methods and adopt a sound storm water management strategy parallel to the proposed waterfront developments. Hence, the compatible flood mitigation and storm water management projects proposed by relevant stakeholder agencies are incorporated in to the Colombo Commercial City Development Plan – 2030 under the project code W-2.

(a) Incorporating ongoing & proposed interventions for Macro Drainage Network by SLLRDC

The following projects proposed by Sri Lanka Land Reclamation & Development Corporation (SLLRDC) are incorporated into the Colombo Commercial City Development Plan – 2030 under the project code W-2-1.

No.	SLLRDC Sub-project No.	Sub-project
Completed		
1	W/01	Dehiwala Canal
2	W/02	Main Drain, Aluth Mw Culvert, Mutwal Outfall
3	W/03/A	St. Sebastian South Canal
4		Dredging of Thalangama Tank
5	W/07/A	Wellawatte Canal
Ongoing		
6	W/05	Improvements to Madiwela East Diversion Scheme – Stage I
7	W/11	Improvements to Madiwela East Diversion Scheme – Stage II
8	W/19	Improvements to Madiwela East Diversion Scheme – Stage III
9	W/09	St. Sebastian North Canal

10	W/12	St. Sebastian North Lock Gates & Pumping Station
Procurement Stage		
11	W/14	New Mutwal Tunnel & Torrington Tunnel
12	W/16/B	Kolonnawa Canal Diversion Scheme – Stage II
13	W/13	St. Sebastian South Pumping Station
14	W/24	Ambathale Pumping Station
Finalizing / Detailed Design Stage		
15	W/16/A	Kolonnawa Canal Diversion Scheme – Stage I
16	W/16/C	Kolonnawa Canal Diversion Scheme – Stage III
17	W/16/D	Kolonnawa Canal Diversion Scheme – Stage IV
18	W/18	Real Time Control System
19	W/20	Flushing Gates

Table 3.9: Proposed Interventions for Macro Drainage Network of Colombo by SLLRDC

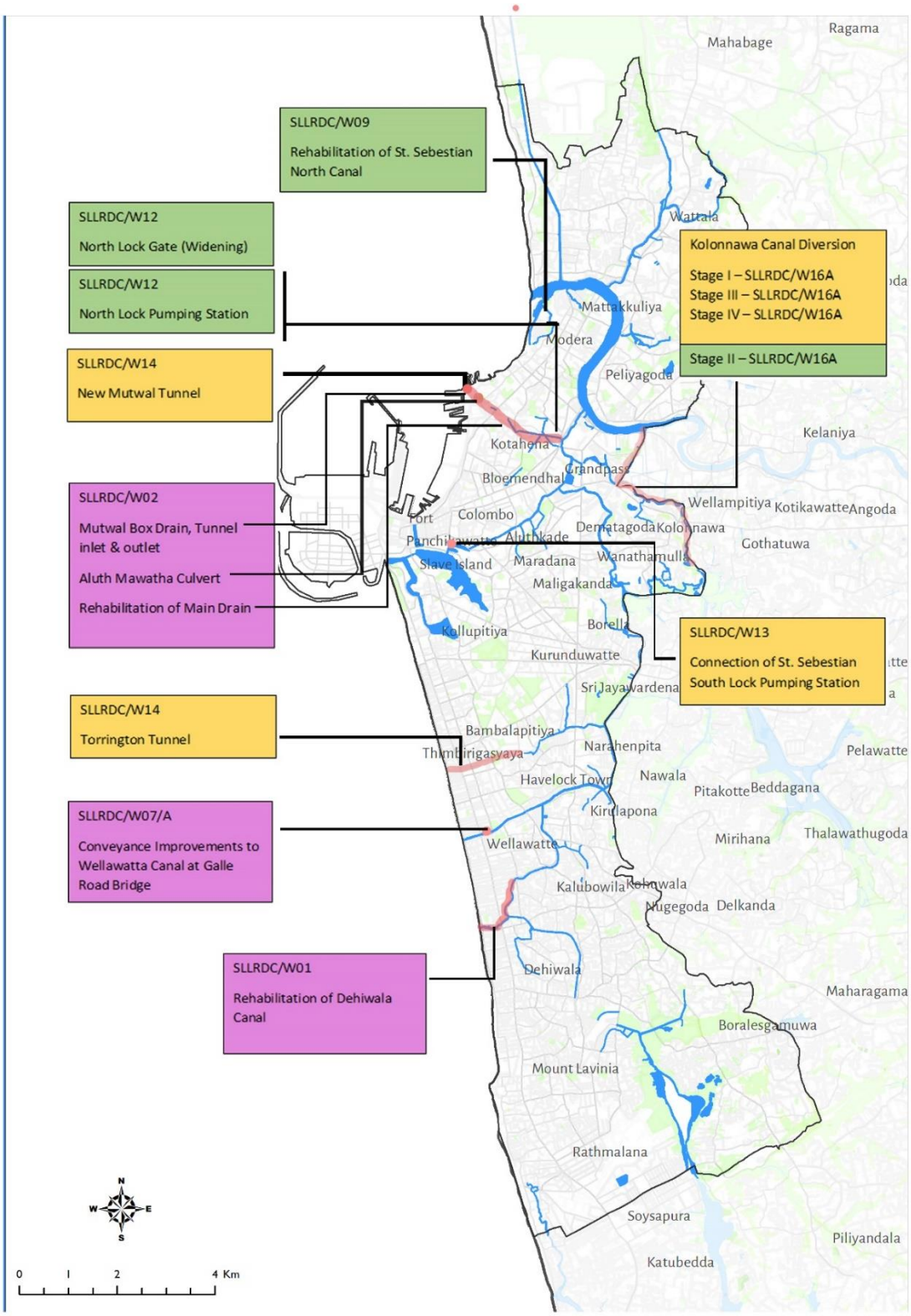


Figure 3.17: Proposed Interventions for Macro Drainage Network of Colombo by SLLRDC

(b) Incorporating proposed interventions for storm water drainage network by CMC

Following proposals of Colombo Municipal Council proposed with the intention of mitigating flash flood risk within City of Colombo are incorporated into the Colombo Commercial City Development Plan – 2030 under the Project Code W-2-2.

I. Prevention of flooding at Garden No. 175 and No. 211 Nagalagam Street and Garden No. 75 Ferguson Road
II. Prevention of flooding along K. Cyril C. Perera Mw from George R. De Silva Mw up to Arthur De Silva Mw. Junction
III. Prevention of flooding at Kimbula Ela Housing Scheme
IV. Prevention of flooding at Sangaraja Mawatha, Prince of Wales Avenue; opposite to Diesel and Motor Engineering (PLC)
V. Prevention of flooding at Green Lane, George R de Silva Mawatha and Rathnam Play Ground Area
VI. Prevention of flooding at Saunders Place
VII. Prevention of flooding at Maligawatta Housing Scheme
VIII. Prevention of flooding at Norris Canal
IX. Storm Water improvements of Siridhamma Mawatha and surrounding area
X. Prevention of flooding at High level road, Kirullapone Junction and Robert Gunewardhana Mawatha
XI. Prevention of flooding at Poorvarama Road and Kandewaththa Road
XII. Prevention of flooding at Park Road
XIII. Periperal drains arount Thummulla Junction
XIV. Balance part of Marine Drive development from Dehiwala Bridge up to Bambalapitiya Station Road

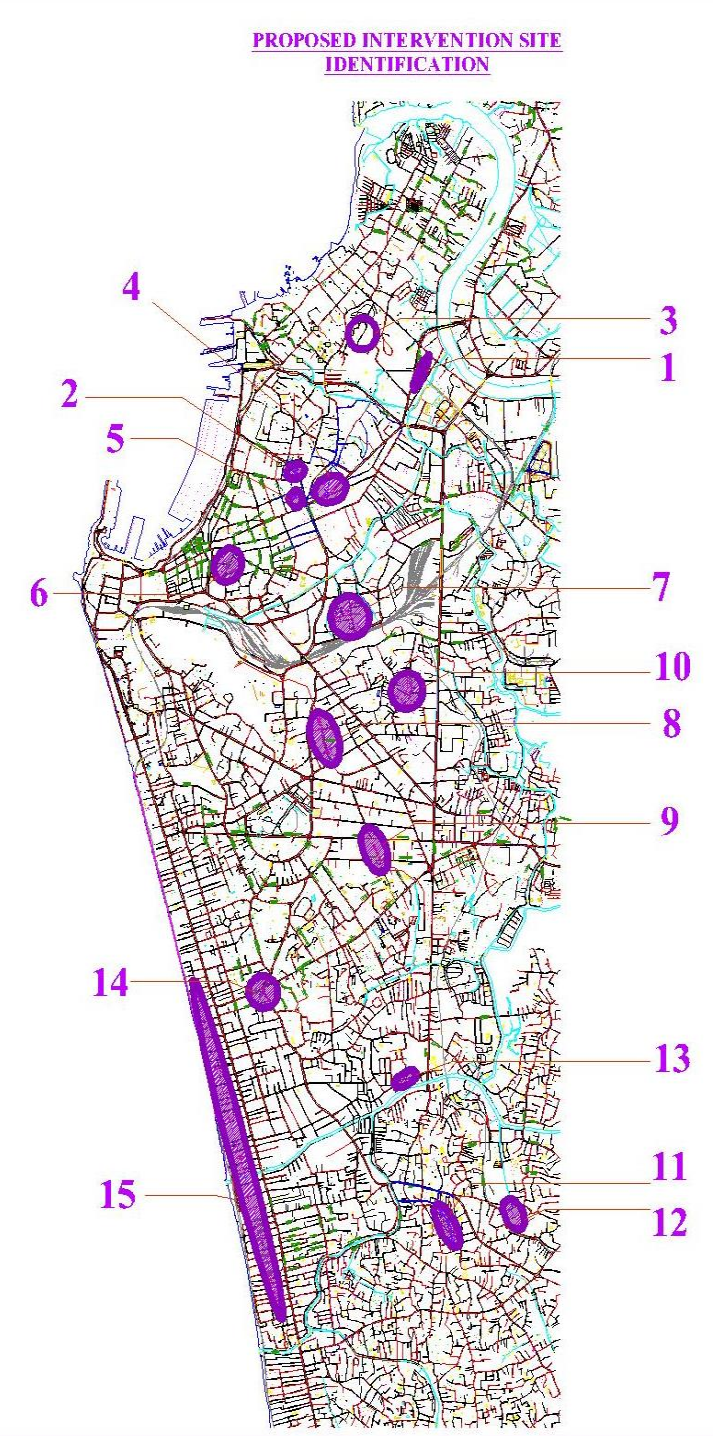


Figure 3.18: Proposed Interventions for Storm Water Drainage Network by Colombo Municipal Council

(c) Incorporating Lower Kelani Flood Mitigation Proposals of Climate Resilience Project (CRIP)

Even though Kelani River is proposed to be promoted as a major water esplanade that attracts investments to the area, there is a considerable flood risk due to the overflow of river during high rainfall events. If these flood risks are not controlled, the anticipated development at the Kelani river Investment Esplanade would not be achieved. Hence, mitigation of floods at Kelani River surroundings is considered as a mandatory requirement.

As per the Lower Kelani Flood Mitigation Proposals by CRIP, it is proposed to construct retaining walls at the left and right banks of Kelani River. It is proposed to incorporate these proposals into the Colombo Commercial City Development Plan – 2030 under the project code W-2-3, given the condition that these are well aligned and integrated with the proposals of CCCDP.

3.3.2.4) Maintaining adequate surface water level of all inland water bodies of Colombo Commercial City

In order to achieve the city vision 'Aquarina – The City in Water', it is important to ensure that all water bodies have sufficient surface water level during all seasons without being dried. In order to fulfill this requirement, it is proposed to draw required engineering solutions in consultation with relevant stakeholder agencies and incorporate them in to the Colombo Commercial City Development Plan – 2030 under the project code W-3.

3.3.2.5) Conducting Catalyst Projects to induce developments in the proposed Water Esplanades

Various catalyst projects will be conducted at each water esplanade to induce envisaged developments and the expected physical and social transformation. These catalyst projects will fall under different categories such as road improvements, linear parks, visibility enhancements, landscaping, walkability improvements, public and open space development and property developments etc.

All identified Catalyst Projects of each Water Esplanade will be aligned under Water Esplanade Development Strategy – Action Projects Type - 02 with the project code W-4.

Major Level (Eminent) Water Esplanades

a) Catalyst Projects at Marina Investment Esplanade (Project Code: W-4-1)

- **Recreational Stretch (Project Code: W-4-1-1)**

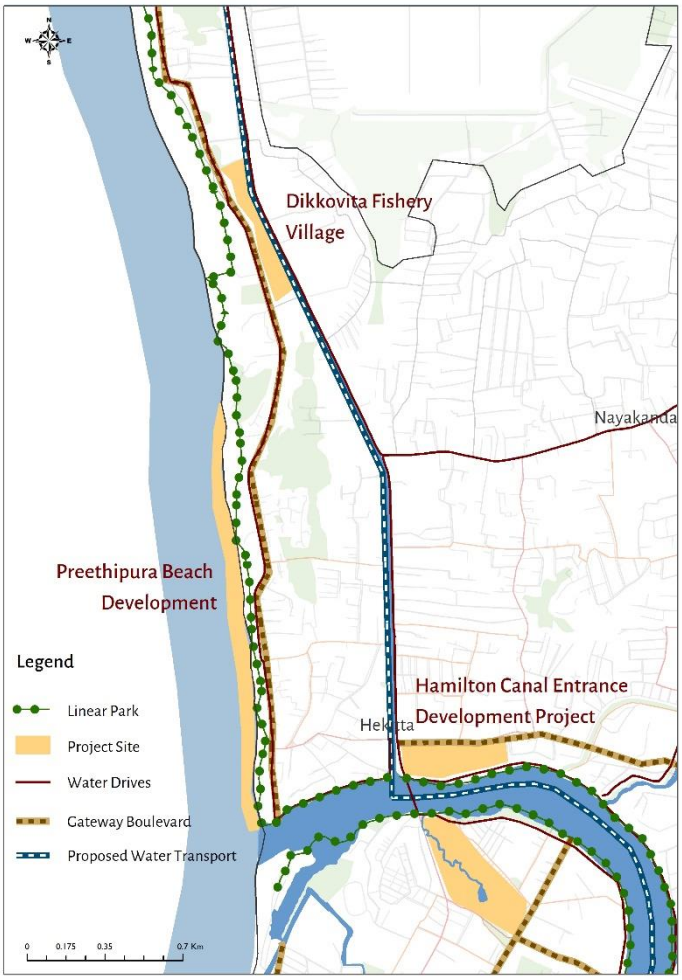


Figure 3.19: Proposed Catalyst Projects at the Recreational Stretch of Marina Investment Esplanade

No.	Project Name	Project Code
01	Incorporating the proposals of Tourism & Livelihood Development Plan: Hamilton Canal and Its Environs (2011) by the Ministry of Economic Development.	W-4-1-1-1
01-a	Promoting a tourism fishery village at Dikkovita	W-4-1-1-1-a
01-b	Developing a linear park along the beach from Kerawalapitiya to Kelani River Mouth at Mattakkuliya	W-4-1-1-1-b
01-c	Promoting Preethipiura Beach for Recreational Activities	W-4-1-1-1-c
01-d	Hamilton Canal Entrance Development Project	W-4-1-1-1-d
02	Promoting water recreational and pleasure activities at Kelani River Mouth, Sea-front and Hamilton Canal Entrance Area	W-4-1-1-2

Table 3.10: Proposed Catalyst Projects at the Recreational Stretch of Marina Investment Esplanade

- **Cultural Stretch (Project Code: W-4-1-2)**

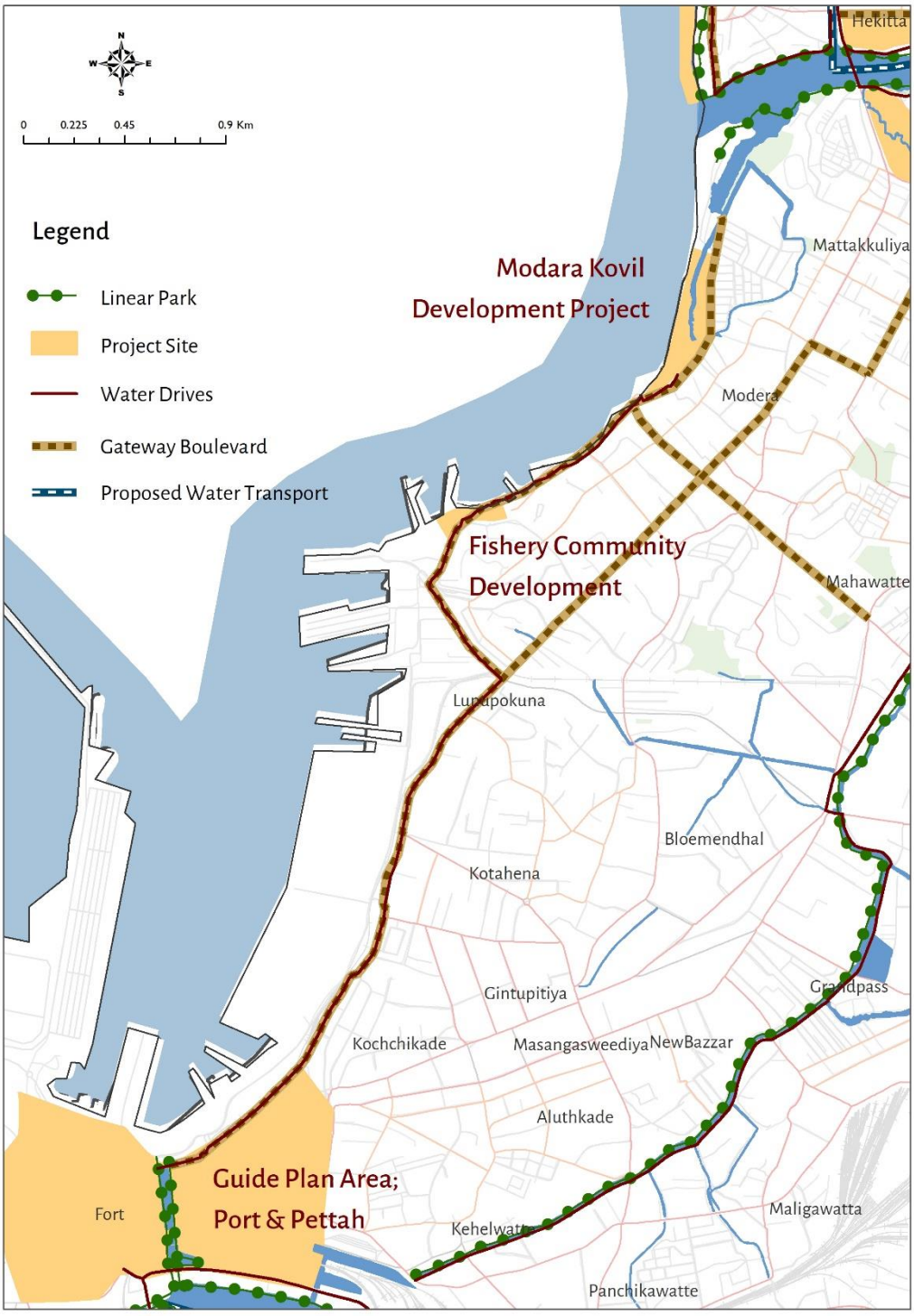


Figure 3.20: Proposed Catalyst Projects at the Cultural Stretch of Marina Investment Esplanade

No.	Project Name	Project Code
01	Enhancing the view of Colombo Port and Seafront along the edge of Colombo Port at Sea Street for an approximate length of 2.6 km.	W-4-1-2-1
02	Implementing a special Guide Plan for the Pettah Bazaar Area in order to conserve the archeologically important buildings and the special character associated with its daily functioning pattern.	W-4-1-2-2
03	Upgrading fishery community settlements along the coast with the application of 'Slum Architecture' design approach. (Approx. 1 ha area of intervention)	W-4-1-2-3
04	Incorporating the Crow Island Beach Park Project conducted by Metro Colombo Urban development Project in collaboration with Colombo Municipal Council.	W-4-1-2-4
05	Construction of a continuous walkable path (approx. 4.7 km) connecting Crow Island and Pettah Bazaar.	W-4-1-2-5
06	Incorporating ongoing Modara Kovil Sacred Area Development Project proposed by Urban Development Authority.	W-4-1-2-6
07	Promoting Sea Street as an Eminent Water Drive which extends for an approx. length of 4.7 km.	W-4-1-2-7

Table 3.11: Proposed Catalyst Projects at the Cultural Stretch of Marina Investment Esplanade

- **Premium Investment Stretch (Project Code: W-4-1-3)**

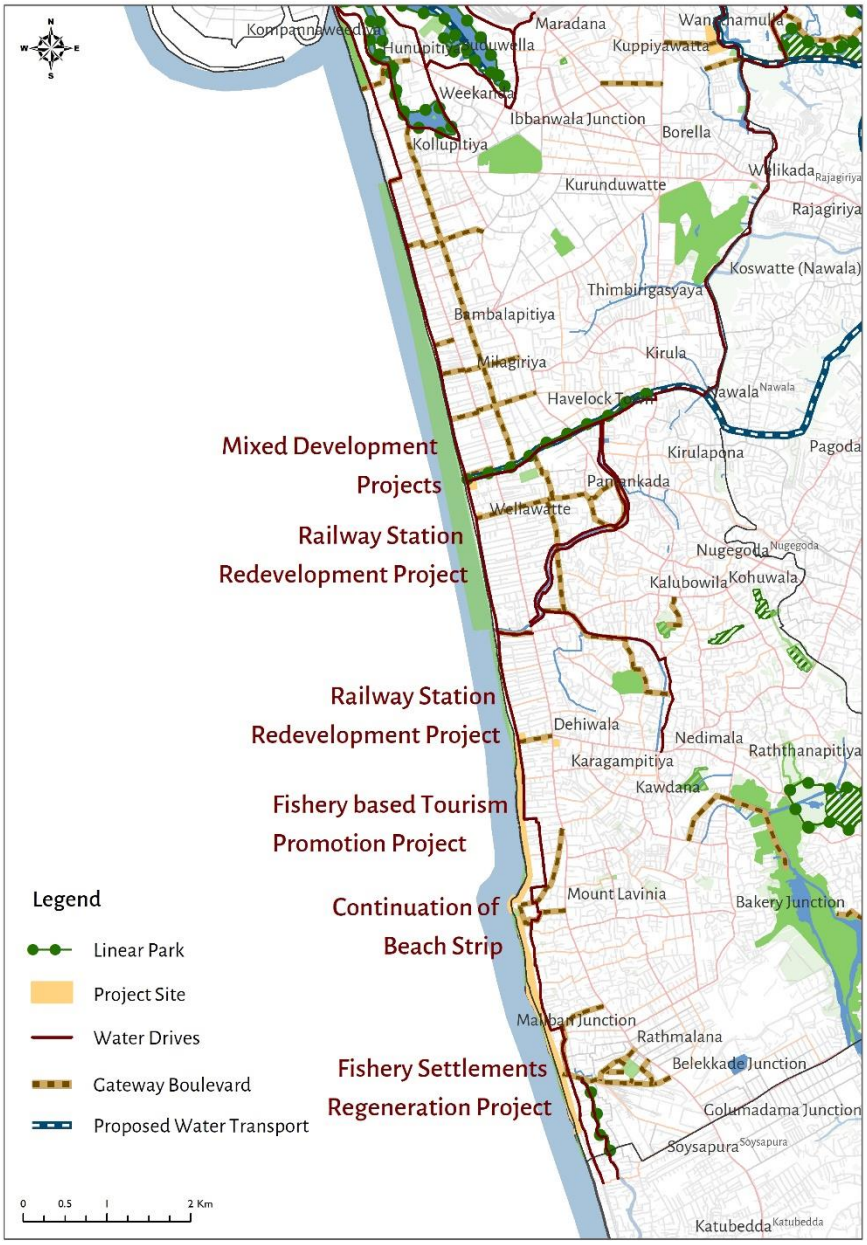


Figure 3.21: Proposed Catalyst Projects at the Premium Investments Stretch of Marina Investment Esplanade

No.	Project Name	Project Code
01	Promoting Colombo Plan Road (Marine Drive) as a Functional Street	W-4-1-3-1
01-a	Extension of Colombo Plan Road up to Dehiwala Railway Station (approx. 1.2 km of new road link)	WT-2-4 *(Previous reference – WT projects – Table: 3.5)
01-b	Construction of a physical barrier at the either side of southern railway line to ensure safety of public	W-4-1-3-1-b

01-c	Incorporating the proposal by Colombo Port City Project to connect Colombo Plan Road and Port City with an underground road link	W-4-1-3-1-c
02	Incorporating Maritime City Development Project proposed by Ministry of Megapolis & Western Development which includes; Beach nourishment from Galle Face Green to Dehiwala & Construction of Multistoried Mixed Development Buildings at each Railway Station at Southern Railway Line	W-4-1-3-2
03	Promoting the beach strip from Dehiwala Railway Station to Mount-lavinia including the section of underserved settlements (fishery industry based community settlement) for fisheries based tourism activities with application of the design concept of 'slum architecture'	W-4-1-3-3
04	Ensuring the continuity of beach allowing public access across the Mount Lavinia Beach Hotel. (Connecting the either sides of Beach discontinued by the Mount Lavinia Beach Hotel)	W-4-1-3-4
05	Upgrading the lives and settlements of Fishery Based Communities living in underserved settlements at the beach strip from Mount-lavinia to Ratmalana (Application of the design approach 'Slum Architecture and interlinking with tourism activities)	W-4-1-3-5

Table 3.12: Proposed Catalyst Projects at the Premium Investments Stretch of Marina Investment Esplanade

(b) Catalyst Projects at Kelani River Investment Esplanade (Project Code: W-4-2)

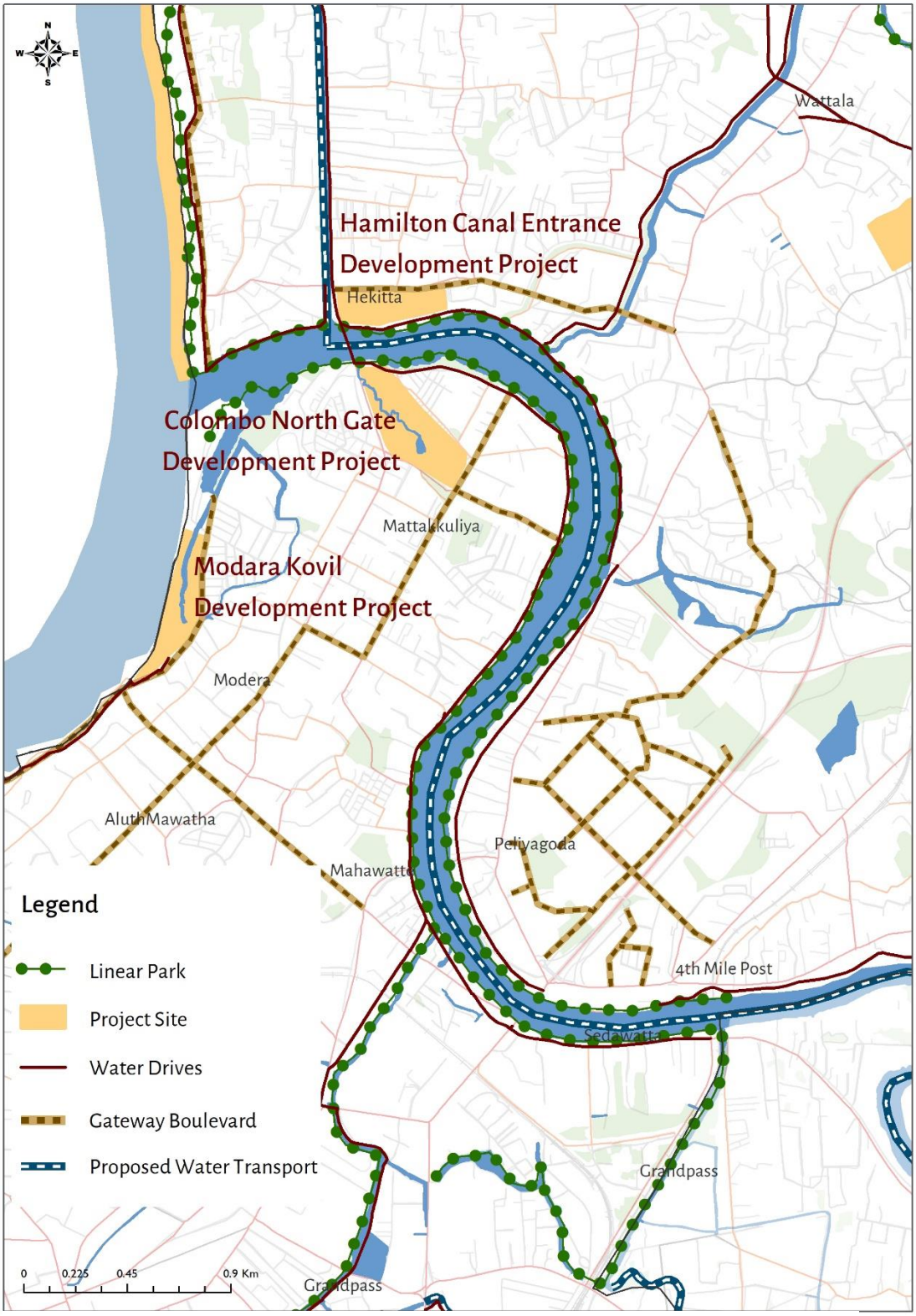


Figure 3.22: Proposed Catalyst Projects at the Kelani River Investment Esplanade

No.	Project Name	Project Code
01	Construction of two roads at left & right banks of Kelani River (road type 01 – a & 01 – b consequently) and promoting them as Eminent Water Drives	Left Bank Road - WT-1-1 Right Bank Road - WT-2-1 *(Previous reference – WT projects – Table: 3.5)
02	Develop two linear parks at left & right banks of Kelani River from Mattakkuliya to Peliyagoda	WO–1-3 *(Previous reference – WO projects – Table: 3.6)
03	Colombo North Gate Development Project	W-4-2-1
04	Incorporating the proposals of Tourism & Livelihood Development Plan: Hamilton Canal and its Environs (2011) proposed by the Ministry of Economic Development	W-4-2-2
05	Peliyagoda Multi Modal Transport Hub Development	*(Following reference – T projects – Table:)
06	Promoting Water Transportation links along Kelani River as Tourism Recreational Activities (Cruise Service) and Passenger Transportation	W-4-2-3

Table 3.13: Proposed Catalyst Projects at the Kelani River Investment Esplanade

(c) Catalyst Projects at Beira Lake Investment Circle (Project Code: W-4-3)

No.	Project Name	Project Code
01	Incorporating Beira Lake Intervention Area Development Plan proposed & implemented by Urban Development Authority	W-4-3-1
02	Continuation of the Linear Park encircling entire Beira Lake Area	W-4-3-2

Table 3.14: Proposed Catalyst Projects at the Beira Lake Investment Circle

(d) Catalyst Projects at St. Sebestian Canal Investment Esplanade (Project Code: W-4-4)

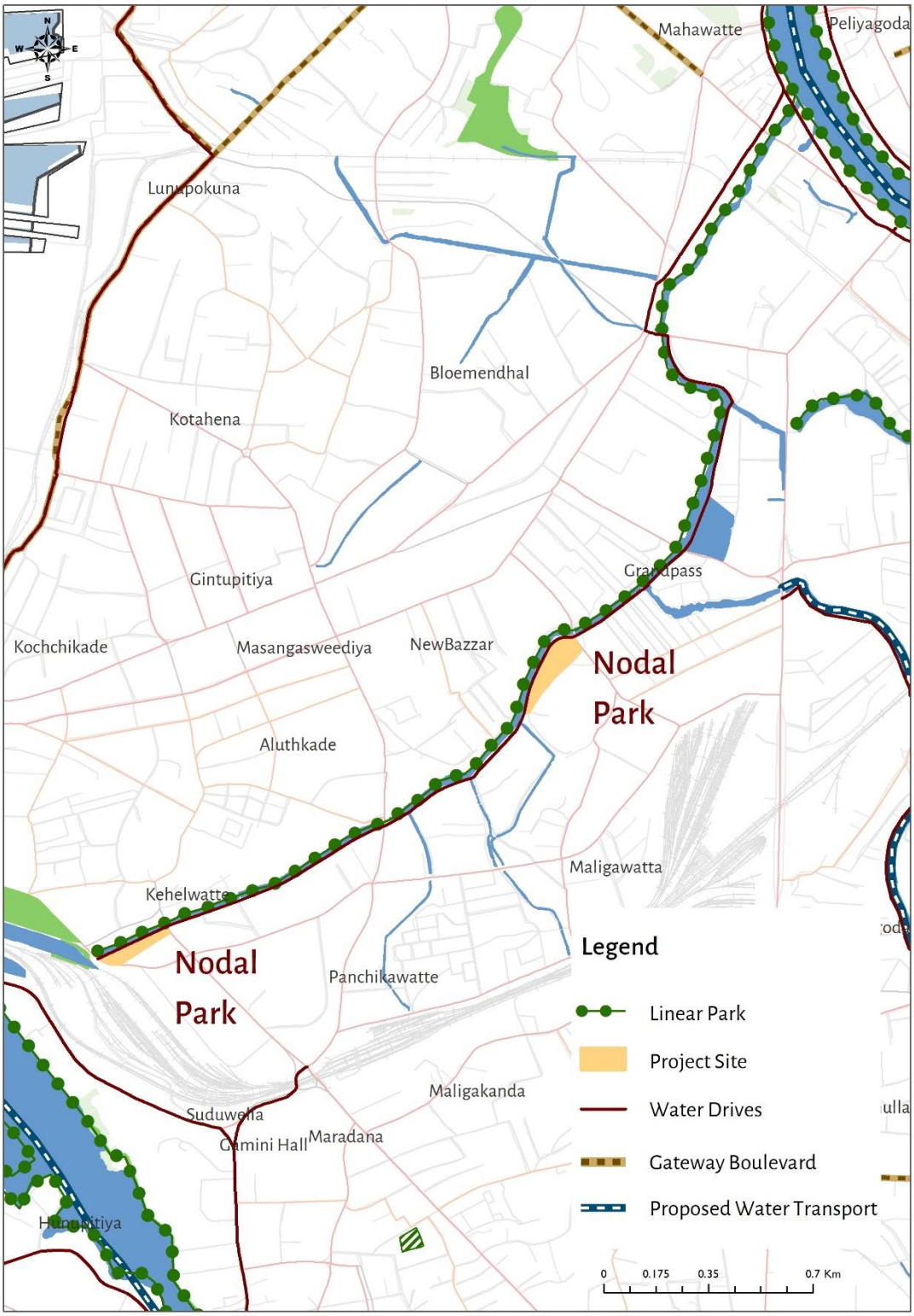


Figure 3.23: Proposed Catalyst Projects at the St. Sebestian Canal Investment Esplanade

No.	Project Name	Project Code
01	Development of a Linear Park along the left bank of St. Sebestian Canal from Pettah to Peliyagoda (approx. length of 3.6 km)	WO–1-5 *(Previous reference – WO projects – Table: 3.6)
02	Construction of a Level 01-b road along St. Sebestian Road and promote it as a Classic Water Drive	WT-2-5 *(Previous reference – WT projects – Table: 3.5)
03	Development of two Nodal Parks at St. Sebestian Canal Investment Esplanade	W-4-4-1 *(Following reference – O projects – Table:)
03-a	Development of Nodal Park in between Sanchiarachchi Garden Road and St. Sebestian Canal (approx. area of 0.7 ha)	W-4-4-1-a
03-b	Development of Nodal Park next to Kettaramaya Maha Viharaya Temple (approx. area of 1.35 ha)	W-4-4-1-b
04	Implementing a special Guide Plan for Judiciary Square	W-4-4-2
05	Clearing of existing Underserved Settlements in the Reservation and surroundings of St. Sebestian Canal and open up them for Mixed Developments	W-4-4-3
06	Upgrading the surroundings of R. Premadasa International Cricket Stadium	W-4-4-4
07	Promotion of a Cruise Service linking Beira Lake and Kelani River	W-4-4-5
08	Reconstruction of cross bridges along the St. Sebestian Canal as to facilitate boat and cruise transportation	W-4-4-6

Table 3.15: Proposed Catalyst Projects at the St. Sebestian Canal Investment Esplanade

(e) Catalyst Projects at Dematagoda, Kinda Canal & Kirulapana Canal Investment Esplanade (Project Code: W-4-5)

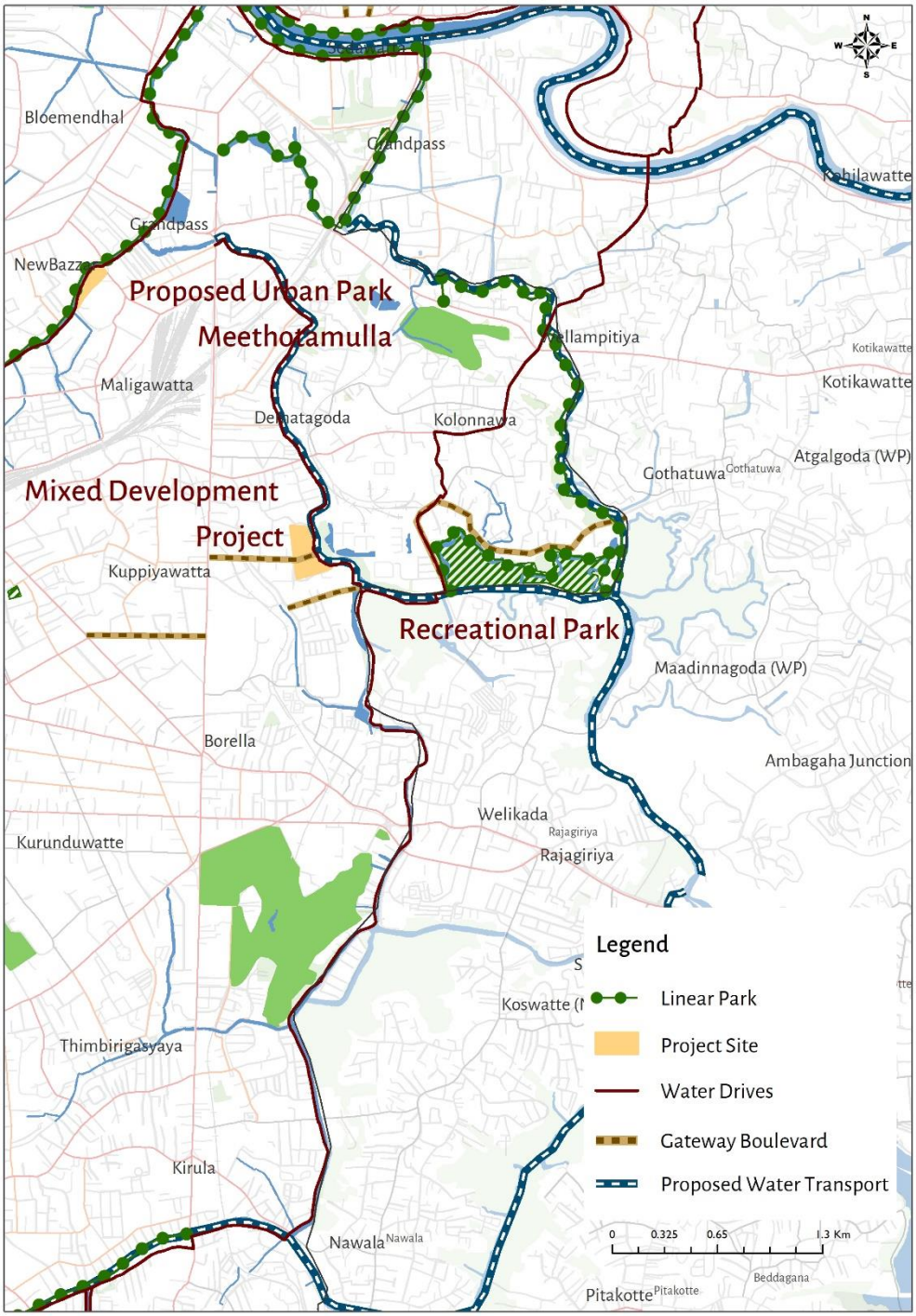


Figure 3.24: Proposed Catalyst Projects at the Dematagoda, Kinda Canal & Kirulapana Canal Investment Esplanade

No.	Project Name	Project Code
01	Extension of Lake Drive (Level 01 –a road type) along Kinda, Heen Ela, and Kittampahuwa Canal (Kolonnawa Canal)	WT-1-3 *(Previous reference – WT Projects – Table: 3.5)
02	Construction of Level 01 – a type road along Dematagoda Canal and promoting it as a Classic Water Drive	WT-1-4 *(Previous reference – WT Projects – Table: 3.5)
03	Development of an Urban Park at the existing Meethotamulla Waste Dumping Site (approx. extent of 7.1 ha)	W-4-5-1 *(Following reference – O projects – Table:)
04	Development of a Recreational Park at Kolonnawa Marsh (approx. extent of 18.5 ha)	W-4-5-2 *(Following reference – O projects – Table:)
05	Constructing a Linear Park along Kittampahuwa Canal to connect Kolonnawa Marsh Recreational Park and Meethotamulla Urban Park (approx. length of 3.2 km)	WO–1-6 *(Previous reference – WO projects – Table: 3.7)
06	Conducting a Mixed Development Project at Sri Nigrodharama Mawatha Slums Area (approx. extent of 3 ha)	W-4-5-2
07	Promotion of Gate way boulevard at Ananda Rajakaruna Mawatha & Sri Negraodarama Mawatha connecting Hospital Square and Dematagoda Canal	WO-2-28 & WO-2-29
08	Promotion of Gate way boulevard at Vijaya Road along the Kolonnawa Marsh connecting Extended Lake Drive and Kittampahuwa Linear Park	WO-2-30

Table 3.16: Proposed Catalyst Projects at the Dematagoda, Kinda Canal & Kirulapana Canal Investment Esplanade

(f) Catalyst Projects at Wellawatta & Dehiwala Canal Investment Esplanade (Project Code: W-4-6)

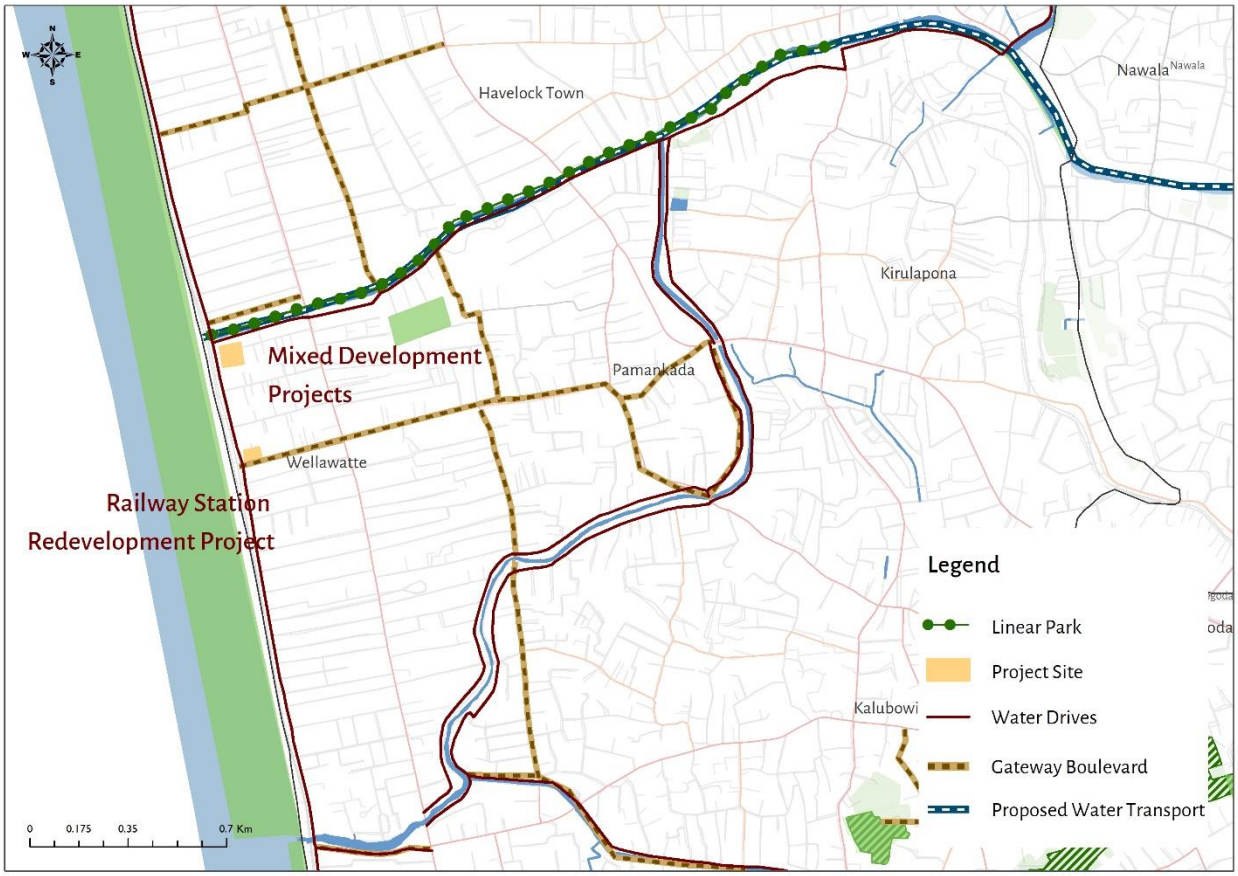


Figure 3.25: Proposed Catalyst Projects at the Wellawatta & Dehiwala Canal Investment Esplanade

No.	Project Name	Project Code
01	Construction of Level 01 –a road along Wellwatta Canal and promote it as a Classic Water Drive	WT-1-3 *(Previous reference – WT Projects – Table: 3.5 & 3.15)
02	Connecting missing links of the existing road along the either side of Dehiwala Canal (approx. length of missing links is 1.3 km and average width is 12 m)	WT-1-5 *(Previous reference – WT Projects – Table: 3.5)
03	Development of a Linear Park along Wellawatta Canal (approx. length of 3 km)	WO–1-7 **(Previous reference – WO Projects – Table: 3.7)
04	Development of an Open Public Space adjacent to Open University of Sri Lanka at Nawala managed by the University. (approx. length of 1 km)	W-4-6-1

05	Incorporating the existing proposal to initiate water transportation from Wellawatta to Battaramulla via Wellawatta, Kirulapana & Kinda Canals.	W-4-6-2
06	Promotion of a Mixed-Use Development along with the proposed Water Transportation Hub at Wellawatta adjoining Wellawatta Canal and Marine Drive	W-4-6-3

Table 3.17: Proposed Catalyst Projects at the Wellawatta & Dehiwala Canal Investment Esplanade

(g) Catalyst Projects at Mudun Ela Investment Esplanade (Project Code: W-4-7)

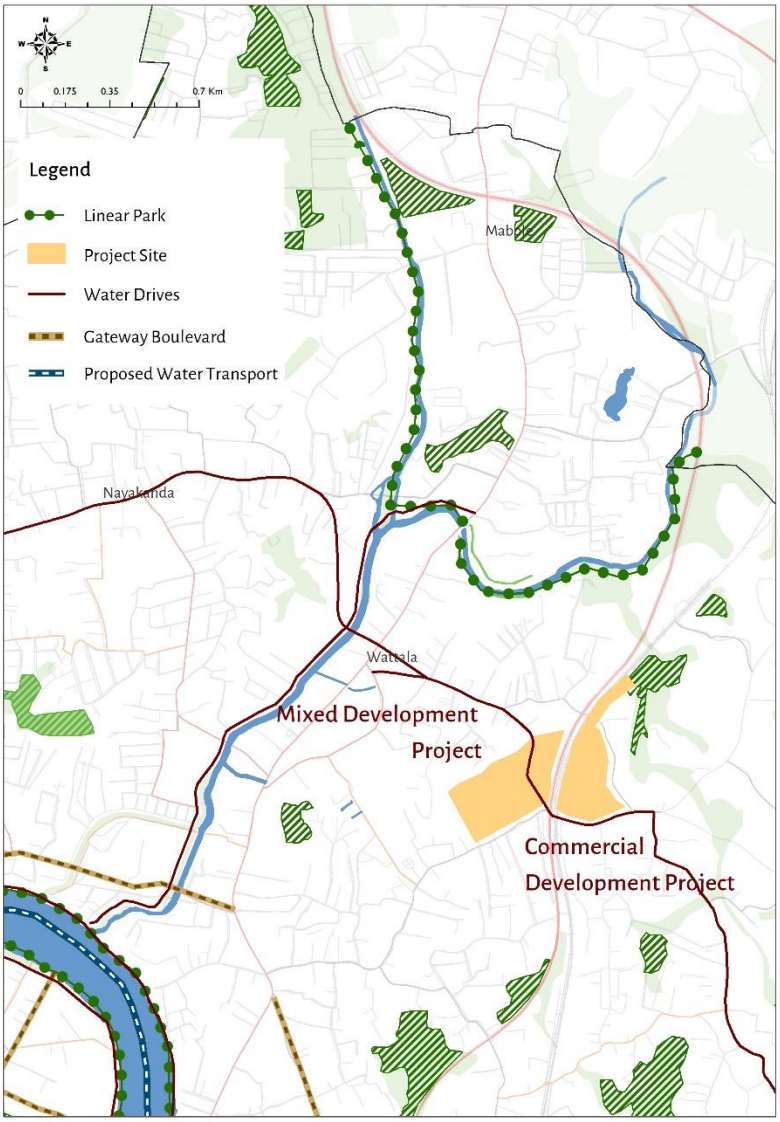


Figure 3.26: Proposed Catalyst Projects at the Mudun Ela Investment Esplanade

No.	Project Name	Project Code
01	Construction of Level 01 – a road along Mudun Ela and promoting it as a Classic Water Drive (approx. length of 2.2 km)	WT-1-7 *(Previous reference – WT Projects – Table: 3.5)
02	Construction of two Linear Paths at the either sides of Mudun Ela by continuing the existing walking path. (approx. length of 3.3 km)	WO-1-8 *(Previous reference – WO Projects – Table: 3.7)
03	Construction of three pedestrian bridges to link either sides of Mudun Ela	W-4-7-1

Table 3.18: Proposed Catalyst Projects at the Mudun Ela Investment Esplanade

(h) Catalyst Projects at Bolgoda Lake Investment Esplanade (Project Code: W-4-8)

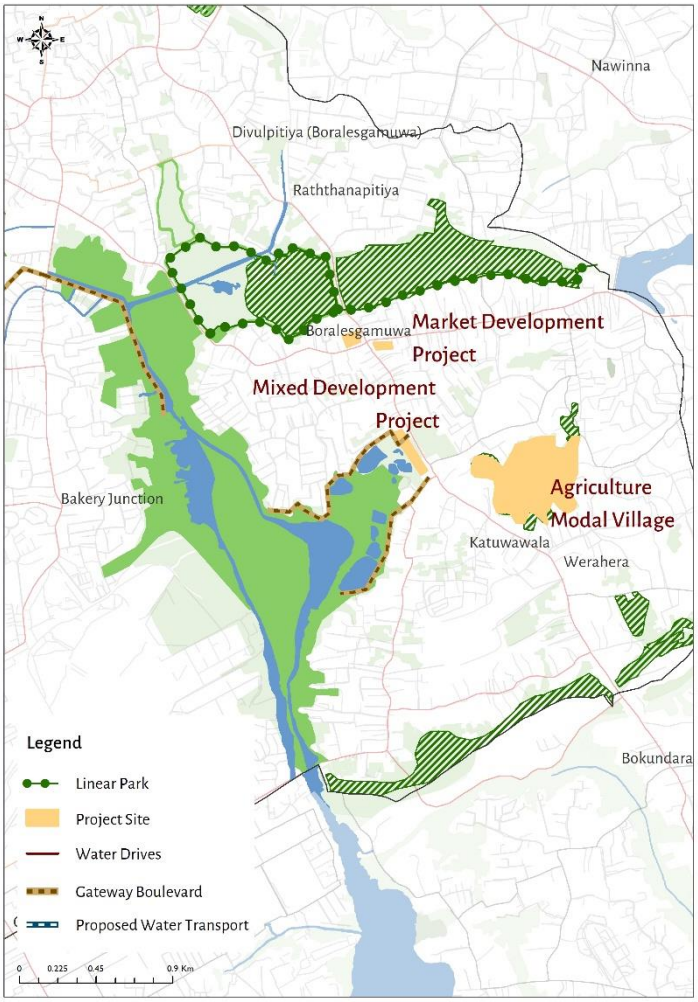
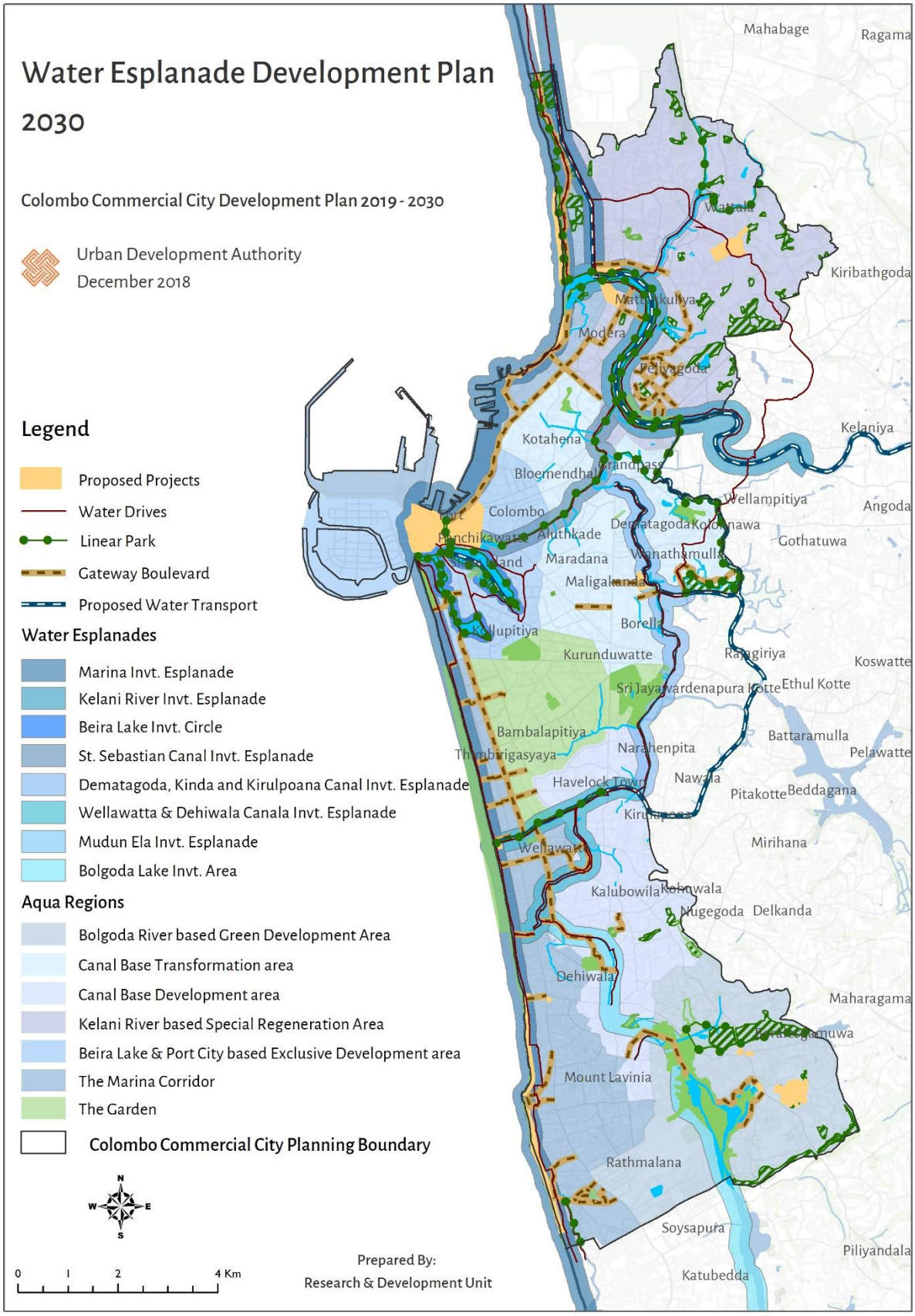


Figure 3.27: Proposed Catalyst Projects at the Bolgoda Lake Investment Esplanade

No.	Project Name	Project Code
01	Constructing a Linear Park connecting Weras Ganga Recreational Park and Borelesgamuwa Lake Recreational Area (approx. length of 1.6 km)	WO-1-10
02	Promoting a Wetland Recreational Area at the Attidiya Bird Sanctuary area and Nedimala Canal Area	W-4-8-1 *(Following reference – O projects – Table:)

Table 3.19: Proposed Catalyst Projects at the Bolgoda Lake Investment Esplanade



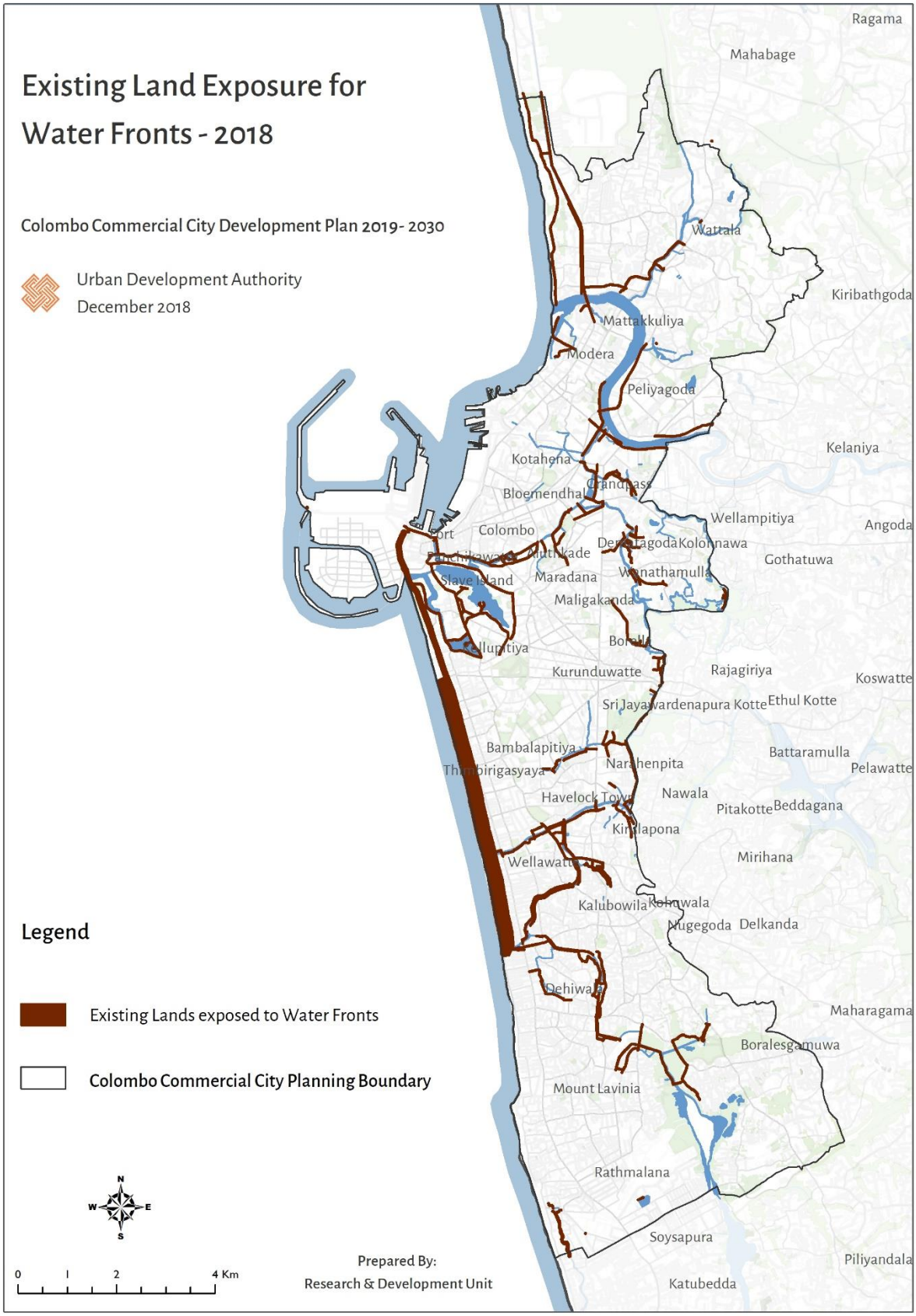
Map 3.7: Water Esplanade Development Strategy – Composite Map

3. ategies

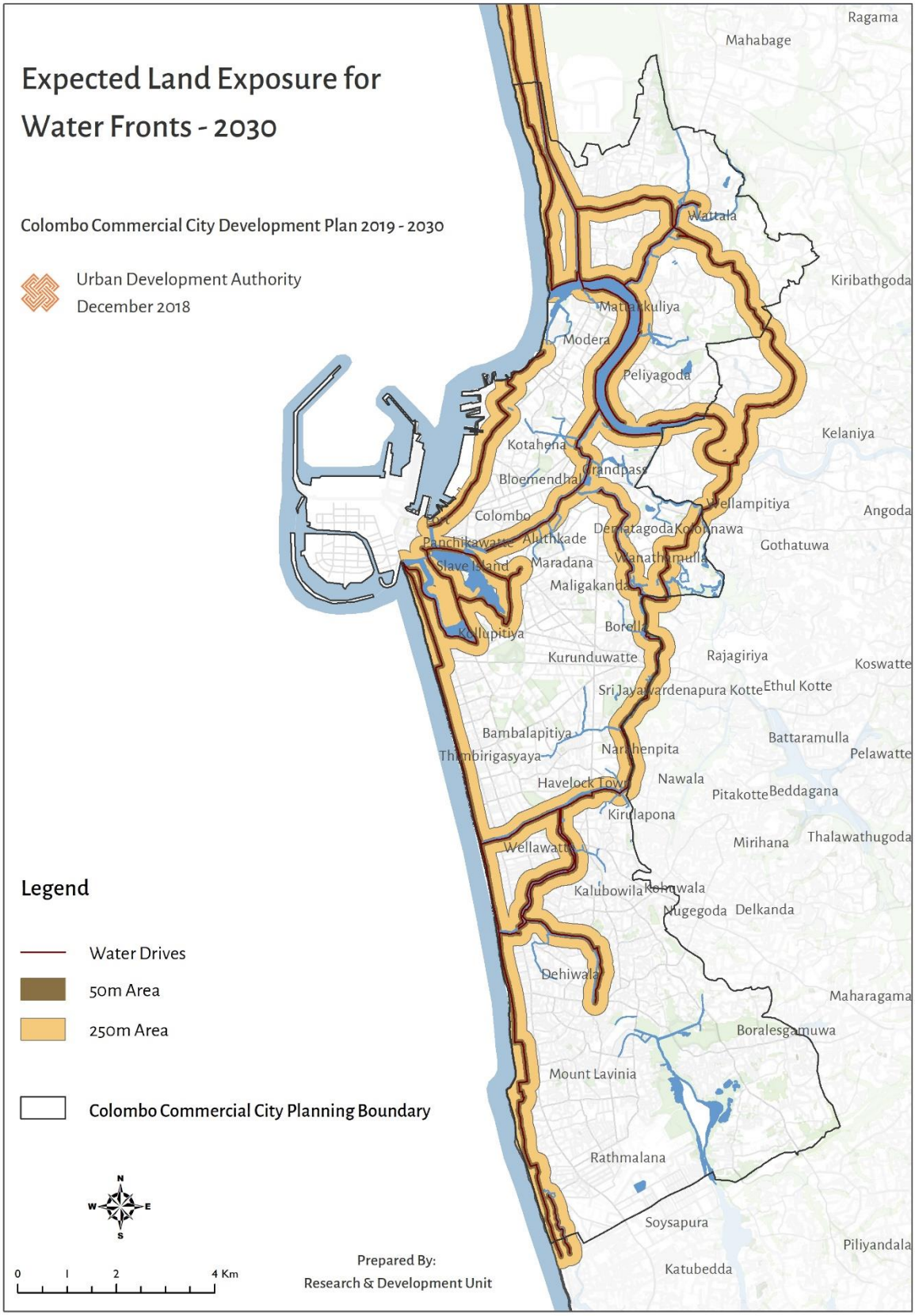
3.3.3.1) Exposure of Lands due to Proposed Waterfront Developments

As a result of the above strategic interventions, it was estimated that around 123.57 km of various waterfronts will be exposed in the means of 86km of water drives, 57km of linear parks and 23.15km of Gateway Boulevards. Around 51km of waterfronts will be exposed linked with Public Open Spaces such as linear parks, pocket parks and other wetland and waterfront parks. Altogether, the total extent of waterfront based lands that will be exposed due to above strategic actions will be approx. 3330 ha. Currently, only around 7% of total lands (approx. 470 ha) of Colombo Commercial City are exposed with waterfront developments. However, estimations revealed that this 7% will be increased up to 47% resulting a 40% of total land area having new exposure with proposed waterfront developments.

As per the estimations, it was further revealed that approximately 750 ha of lands located in 50 m buffer zone of exposed waterfronts will have direct impacts while around 2600 ha of lands located in 250 m buffer will have neighbouring impacts.



Map 3.8: Existing lands exposed to waterfronts - 2018



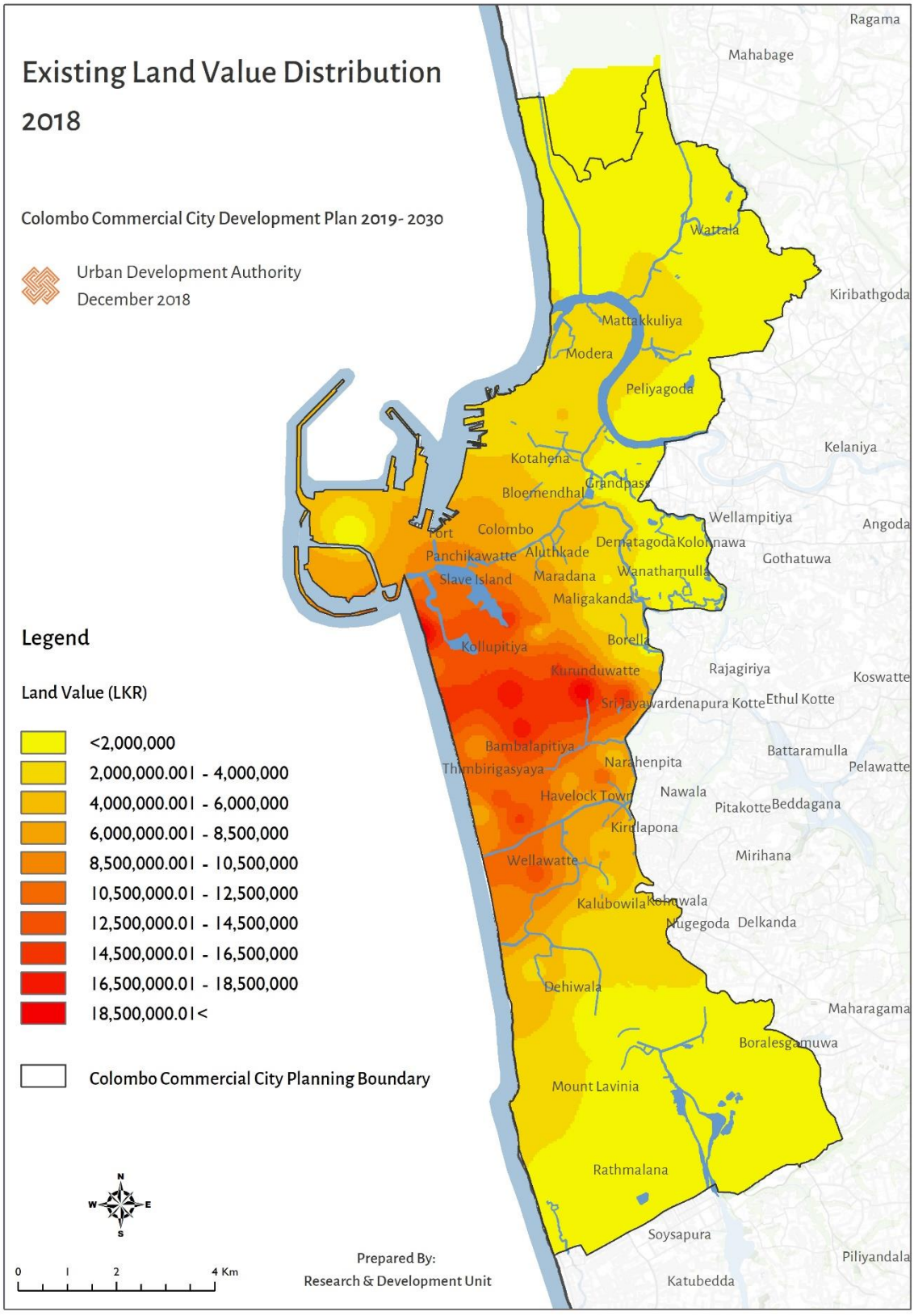
Map 3.9: Future Lands that will be exposed to Water fronts - 2030

3.3.3.2) Expected Increase of Land Values due to Waterfront Developments

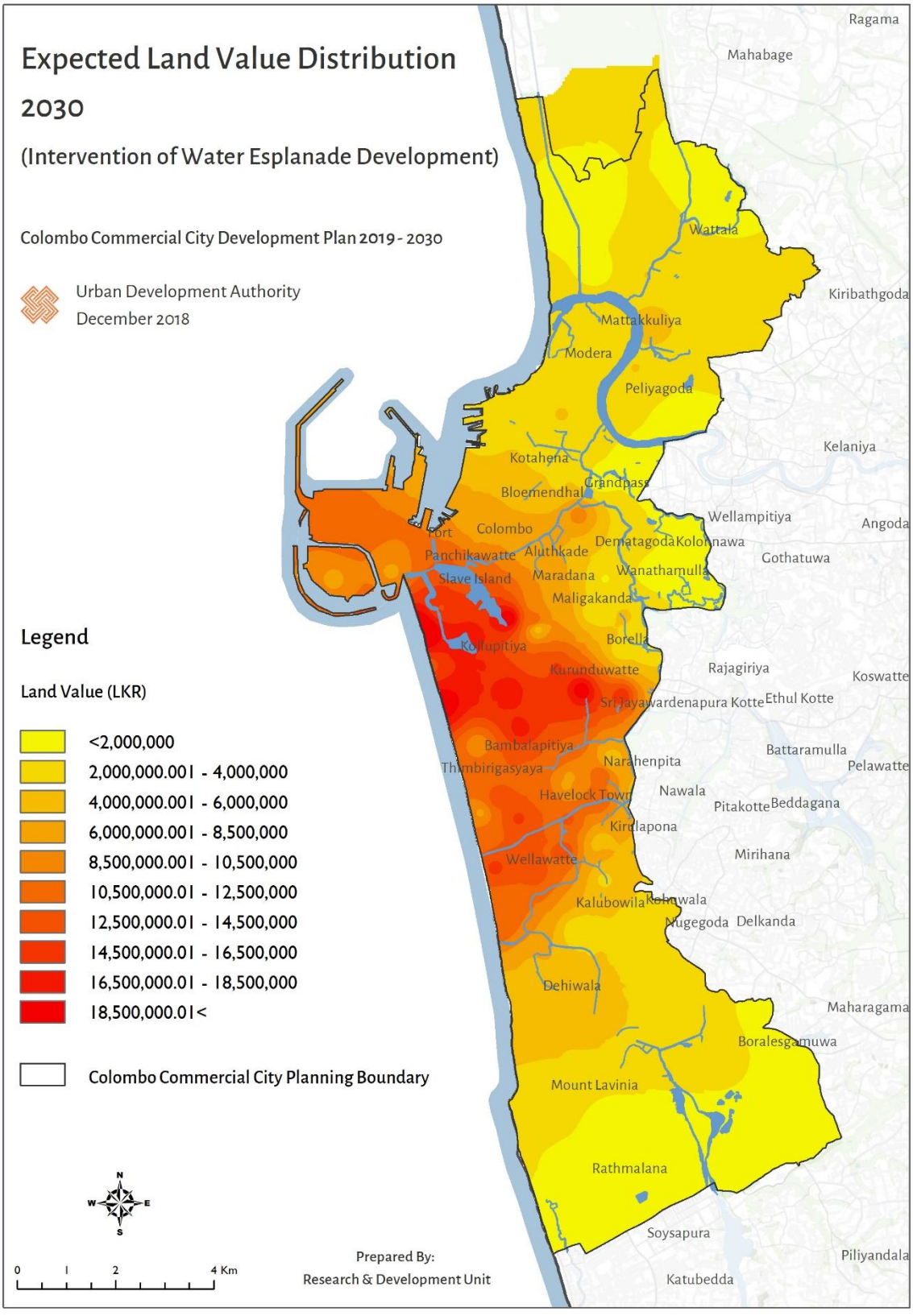
The future possible increase in land values due to waterfront developments and enhanced exposure of lands was estimated based on an international research article 'Price Variation in Waterfront Properties Over the Economic Cycle' authored by Randy E. Dumm & William T. Hold of Florida State University. As per the research article, the approximate increases in land values that can be expected as a result of waterfront developments related to different types of water bodies are as follows.

Riverfronts – 62%
Canal fronts – 61%
Lake fronts – 15%
Ponds – 3.1%
Sea front – 21% to 28%

Accordingly, the future land values of Colombo Commercial City were forecasted based on above theoretical factors and compared with the existing land values. (Map 3.10 and 3.11)



Map 3.10: Land Value Distribution of Colombo Commercial City - 2018

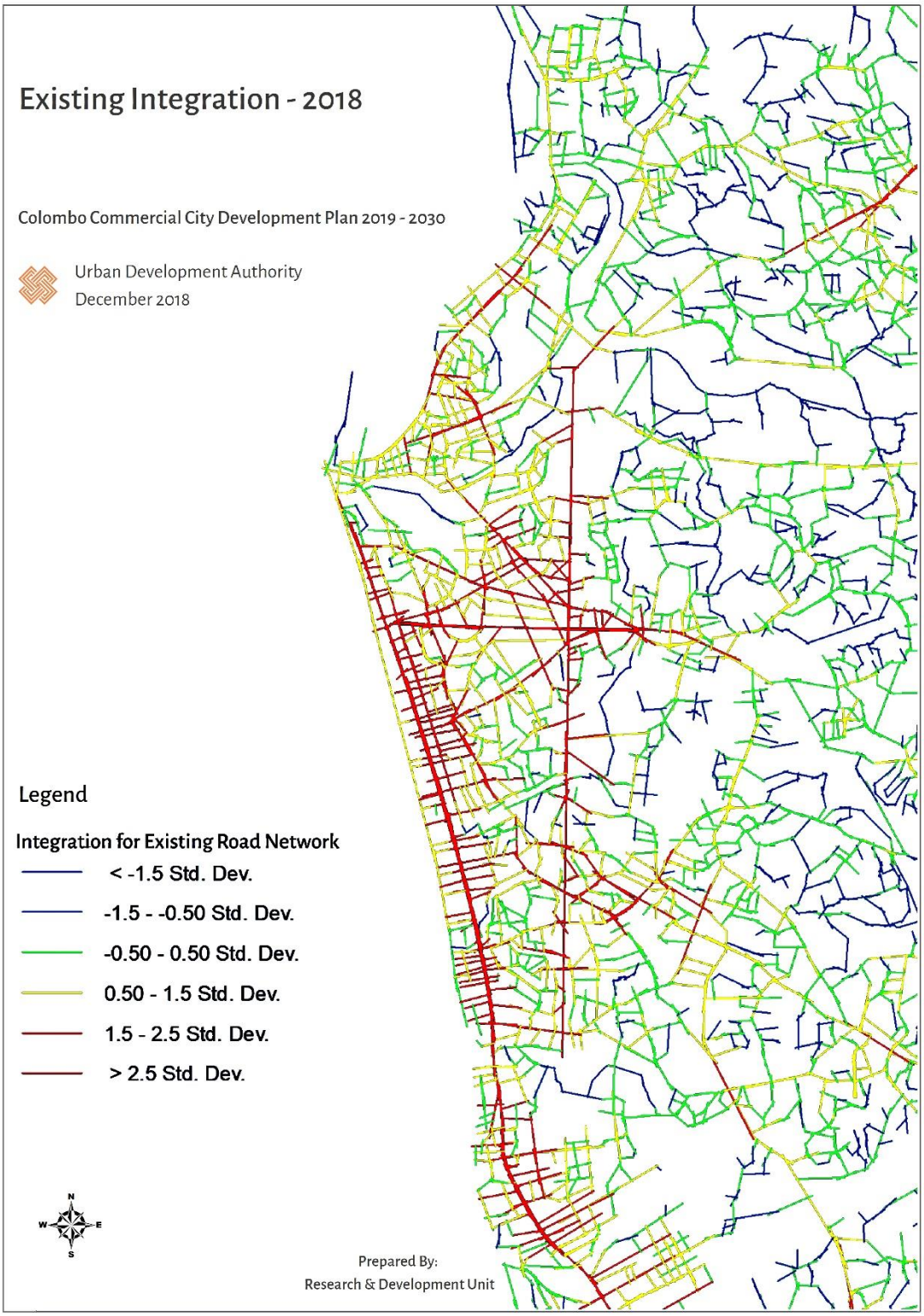


Map 3.11: Land Value Distribution of Colombo Commercial City - 2030

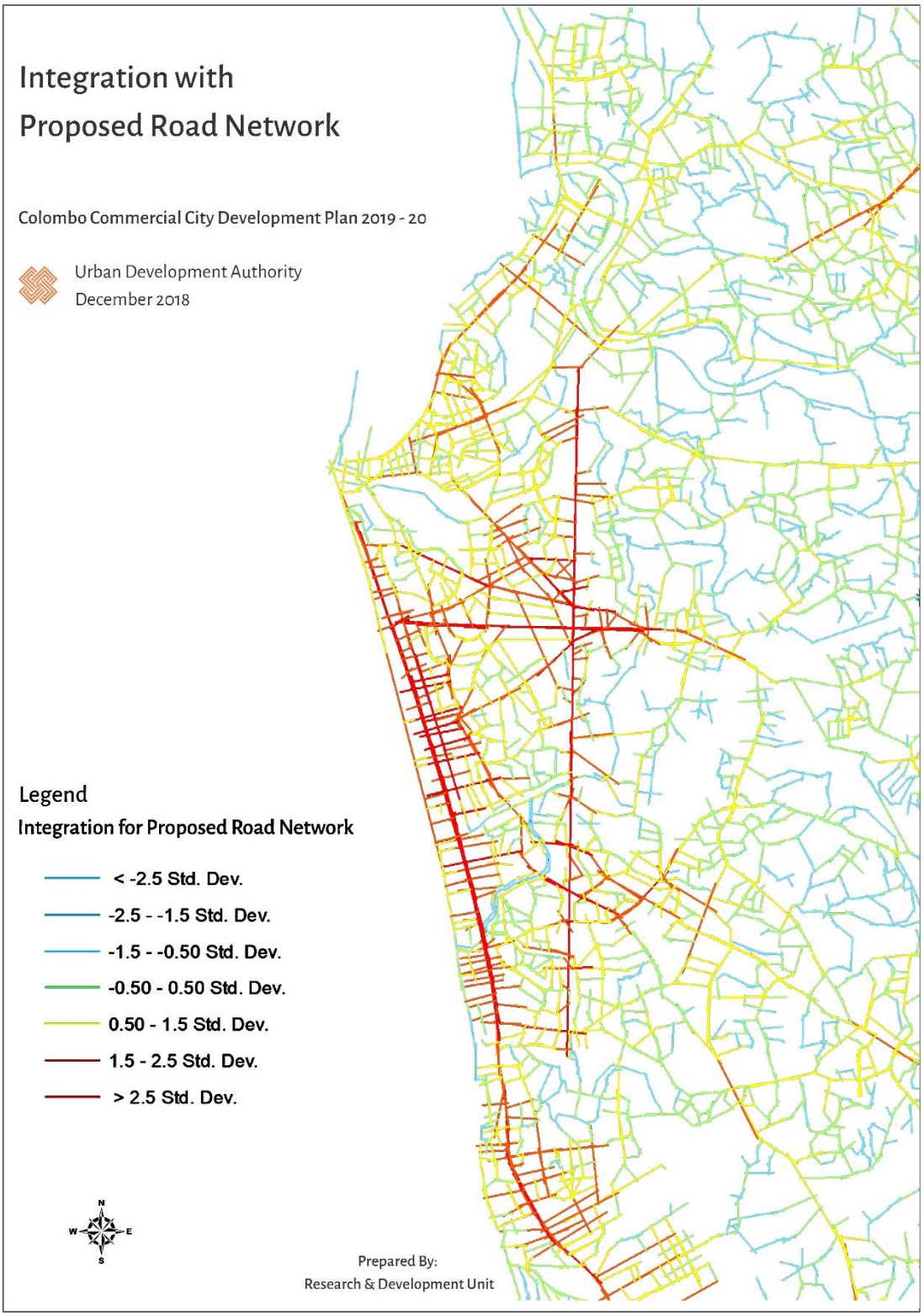
3.3.3.2) Expected Changes of Integration Pattern due to Proposed Water Drives

As per the theoretical explanations, roads with higher integration values attract more developments to the road-based corridors. One of the major intentions of introducing water drives was to expose abandoned waterfronts for developments. Hence, the impact of the proposed actions was evaluated with the Space Syntax Analysis by comparing the change of integration values before and after introducing water drives to the existing road network.

As per the analysis, it was identified that the integration levels would relatively increase in areas such as Peliyagoda, Mattakkuliya, Kolonnawa and Attidiya due to the impact of newly introduced water drives. Hence, these areas which can be considered as underutilized in terms of planning point of view, would get the opportunity to attract more developments to the area with enhance integration levels. On the other hand, the proposed Extended Lake Drive indicates a relatively lower integration value, meaning less attraction for developments. This situation will make Extended Lake Drive an ideal traffic bypass road being an alternative to divert excessive traffic in Baseline Road and other major arterials.



Map 3.12: Integration Levels of Roads - 2018



Map 3.13: Integration Levels of Roads after introducing Water Drives

Spatial Development Strategy

Creating a Unique City Image composed of Rhythmic Skyline & Lifestyle

03 Density Zones with 13 Characters

3.4) Spatial Development Strategy

Introduction

The key of any city development plan is its spatial development strategy, which lays the foundation layout of the city. Determination of most appropriate city spatial structure and conducting necessary strategic actions to derive it on the ground are the key functions of Spatial Development Strategy. Determination of most appropriate city spatial structure is an analytical process, where various analysis are undertaken to evaluate existing development trends, market forces, city potentials, significance and impacts of prevailing city issues and to build-up alternative scenarios to identify the most appropriate alternative solution. The same process was followed for the Colombo City Development Plan to identify the most appropriate city spatial structure that would minimize negative environmental impacts and social impacts while enhancing economic and social benefits.

Given the current stand of Colombo as a booming business hub in the South Asian context, it was made certain that Colombo's future spatial structure would contribute to enhance its role as a competing international business hub. The other major criteria considered was the harnessing of Colombo's biggest potential, which is the existence of variety of water bodies consisting of different experiences in order to transform city's current underutilized areas (or backyards) into city front yards. Hence, the spatial development strategy of Colombo Commercial City Development Plan was developed based on the Water Esplanade Development Strategy which can be considered as the key strategy to activate the identified Aqua Regions in order to lead the city towards its future vision - 'Aquarina – The City in Water'.

Adhering to the above mentioned broader criteria, the envisaged city built form was determined in terms of most appropriate densification pattern, prominent uses and characters. The densification was determined in terms of both horizontal and vertical density, while the characters of different local areas were determined in terms of prominent uses, green coverage and landscaping and design characteristics. The maintenance of good city form and a unique city image was one of the main intentions of Spatial Development Strategy, thus a special focus was given to preservation of city land marks and inclusion of urban design elements such as more public open spaces, functional streets and public buildings etc.

One of the main initiatives of Spatial Development Strategy of CCCDP is the adoption of Densification Based Zoning instead of conventional Land Use Zoning. Hence, instead of regulating the uses, the plan will regulate the densification of identified zones based on their carrying capacities, potentials for development and market demands for different economic activities.

3.4.1) Proposed Broader Densification Zones of Colombo Commercial City

Colombo Commercial City will have three main densification zones namely high density, moderate density and low density as mentioned in the Map: …..

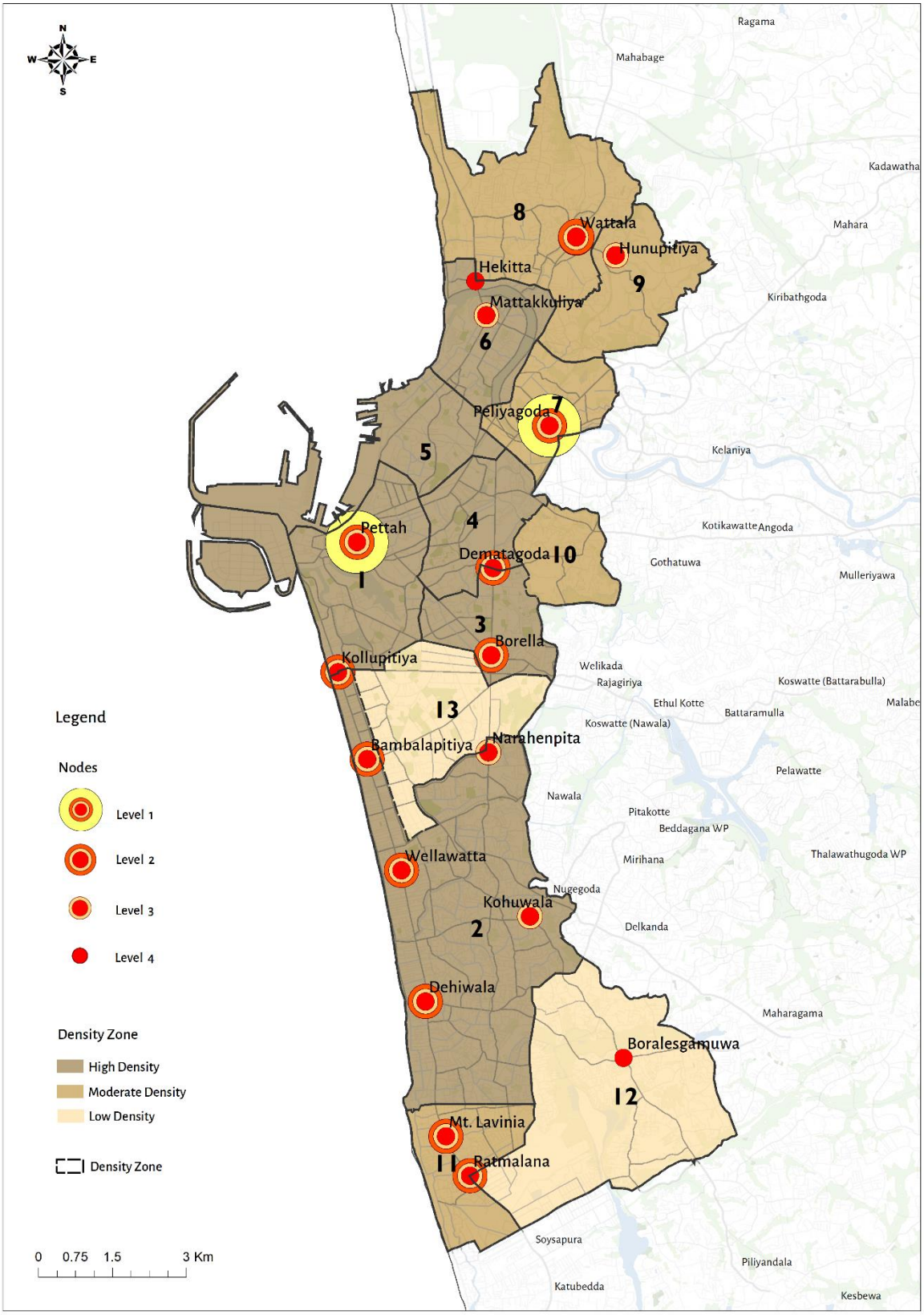
3.4.1.1) Three Broader Densification Zones

The expected development densities of three broader densification zones and the areas falling within each zone will be as follows.

Broader densification zone	**Expected development density**	**Areas falling within each zone**
High Density Zone	***Vertical Density*** – More than 15% of total buildings falling in the height categories of intermediate or high rise buildings ***Horizontal Density*** – Average 70% to 75% of plot coverage	Colombo CBD, Kollupitiya, Bambalapitiya, Wellawatta, Dehiwala, Mt-lavinia, Kirulapana, Kalubowila, Borella, Maradana, Dematagoda, Maradana, Kotahena, Maligawatta, Bloemandhal & Mattakkuliya
Moderate Density Zone	***Vertical Density*** – 5% to 15% of total buildings falling within the height categories of intermediate or high rise buildings ***Horizontal Density*** – Average 65% of plot coverage	Wattala, Kolonnawa, Peliyagoda, Kelaniya and Ratmalana
Low Density Zone	***Vertical Density*** – More than 95% of total buildings falling within the category of low rise buildings ***Horizontal Density*** – Average 50% of plot coverage	Kurunduwatta & Thimbirigasyaya (Colombo 07 area) and Boralesgamuwa

**NOTE – High –rise: 10 stories or above, Intermediate-rise: 05 to 10 stories & Low-rise: Below 05 stories

Table 3.5: The development densities of broader densification zones and areas falling within them



3.4.1.2) Demarcation of Broader Densification Zones – Justification

The above mentioned three broader densification zones; high, moderate and low were derived based on following criteria.

- Carrying Capacities - (Supply capacity of Infrastructure, Bearing Capacity of Environment, Human Space Demand)

The reason for inclusion of this criteria was to make certain that high densities will be allowed only within the areas which have relatively high carrying capacities in terms of supply capacities of infrastructure, bearing capacity of environment and space capacities to meet average human space demands. One of the main issues identified during the context analysis was the increasing trend of high-dense developments taking place in areas which do not have adequate infrastructure facilities to meet the growing demands. Hence, it was attempted to address this issue by identifying the areas which have relatively high infrastructure capacities towards which the high-dense developments can be promoted. Also, based on environmental sensitivity analysis, it was ensured that high-dense developments would not be promoted within the areas with high environmental sensitivity.

- Population & Urbanization Trends

Existing population growth and urbanization trends are good indicators which help to identify existing development trends. Hence, these trends were analyzed to identify the areas towards which the natural development is trending as a result of market forces, state interventions and other environmental, social and economic factors. The main idea was to lead the future high-dense developments towards the areas where the development is naturally trending.

- Land Use & Existing Floor Area Ratios (FAR)

Existing land use pattern and the utilization of allowed FAR were also considered as main criteria to determine the proposed broader densification zones. The areas in which the high-dense developments and related uses are already evident as per the existing land use pattern and areas which have achieved the permissible FAR were given high priority in promoting as high-dense development zones.

- Land Values

The land values are also an effective indicator in the identification of areas with high-dense development trends. Usually the lands with higher values are occupied for high-dense developments, thus it gives a clue on areas towards which the high-dense developments should be lead in future as well.

- Ongoing & Proposed Projects

The ongoing and proposed projects were considered as another major criteria when determining the areas to be promoted with high-dense developments. Any area that was supposed to be served with on-going or proposed infrastructure developments were considered priority areas that could be

promoted for high-dense developments without encountering problems due to deficiencies in infrastructure such as pipe-borne water supply, electricity supply, waste water management, solid-waste management etc. Also, the inclusion of this criteria enabled to identify the areas which are underutilized in terms of availability of enough capacities, thus which can be immediately densified.

The composite map derived as a result of the weighted overlaying of all above input maps was considered as the base to demarcate the boundaries of three broad densification zones as shown in Map: …

3.4.2) Proposed Character Zones of Colombo Commercial City

Colombo Commercial City will have thirteen character zones within identified three broader densification zones as described below. The reason for demarcation of different character zones within the identified broader densification zones, is to maintain the vibrancy of city enabling variety of experiences though-out without resulting in homogeneous zones.

3.4.2.1) Thirteen Character Zones

Colombo Commercial City will have thirteen character zones; six of them falling within high density zone, five in moderate density zone and two in low density zones. When considering the six character zones falling within high density zone, each zone will have unique characters differing from each other even though they all indicate a similar density. The character is defined in terms of prominent use and sensible characteristics such as exclusiveness, compactness and eco-friendliness etc. The character zones falling under three broader densification zones are indicated in the Table:…

Broader Densification Zones	**Character Zones**
High Density Zone	Exclusive Premium Mixed Development
	Premium Mixed Development
	High Density Green Mixed Development
	High Density Compact Mixed Development
	Compact Logistics Development
	High Density Residential
Moderate Density	Central Transit Based Development
	Moderate Density Residential Zone 01 - Wattala
	Moderate Density Logistics Development
	Moderate Density Residential Zone 02 - Kolonnawa

	Moderate Density Residential Zone 03 - Ratmalana
Low Density	Low Density Green Residential
	Low Density Garden

Table 3.5: Character Zones within Broader Densification Zones

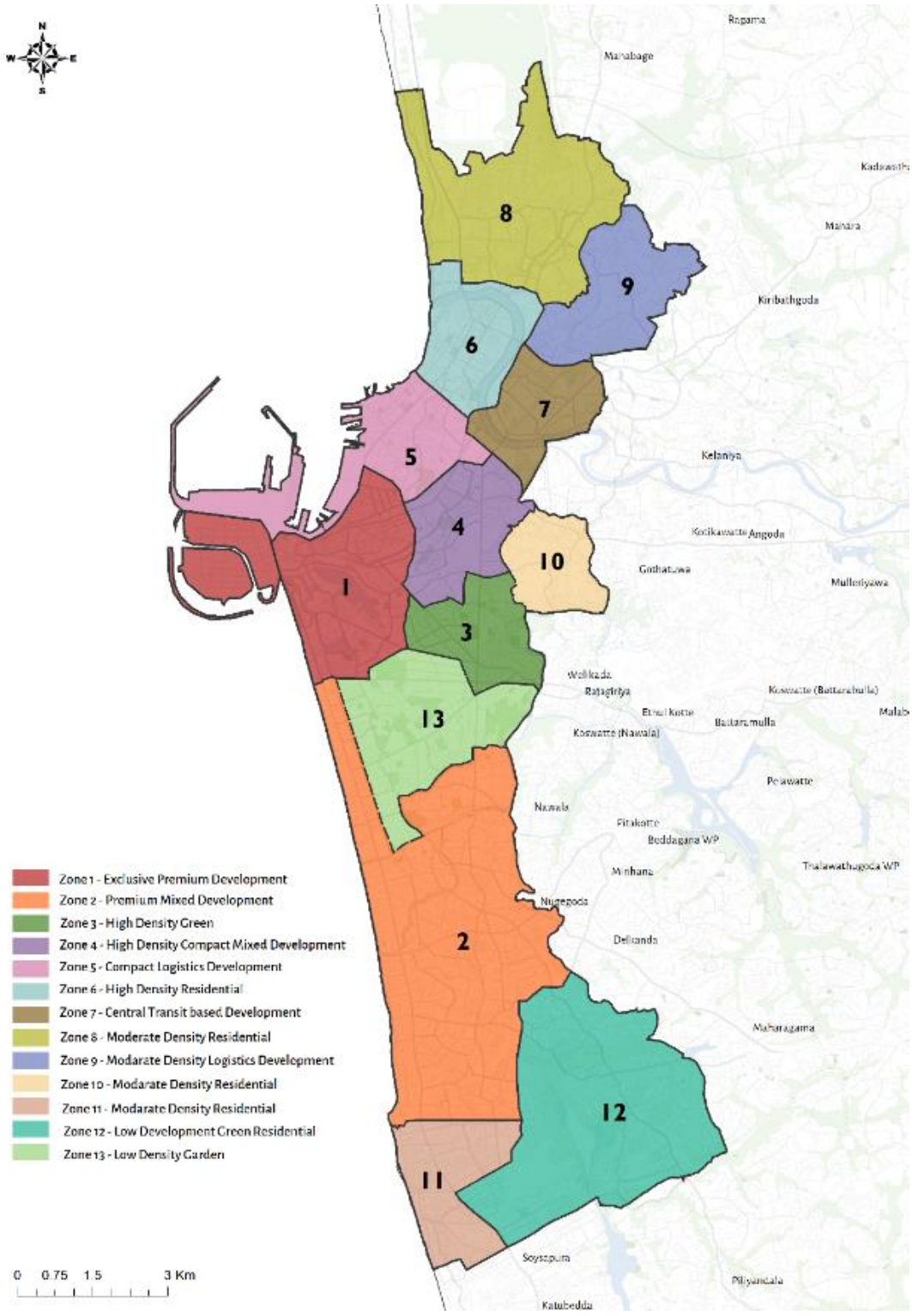
The envisaged characters of each zone and the local areas falling within them are as follows.

Character Zone	Envisaged Characteristics	Local Areas falling within the Zones
High Density Zones		
Exclusive Premium Mixed Development	• Maintenance of average 65% plot coverage • Nearly 50% of intermediate to high rise buildings • Preserved land marks, more public open spaces, busy boulevard streets and well-maintained facades • Exclusive category activities and land uses • Attractive high-end investment area including international chained star hotels, multi-national companies, super luxury condominiums, head-offices of financial institutions, IT related organizations etc. • Beira Lake surroundings and sea-front as the main attraction point	Colombo Fort, Pettah, Slave Island, Wekanda, Jinthupitiya, Part of Kollupitiya, Part of Panchikawatta, Gangaramaya
Premium Mixed Development	• Maintenance of average 70% plot coverage • Nearly more than 25% intermediate to high rise buildings • Generally affordable but high-end activities such as star hotels, branded shopping outlets and luxury apartments • Well-maintained facades, boulevard streets and landscaped streets	Part of Kollupitiya, Bambalapitiya, Wellawatta, Dehiwala, Mt-lavinia, Kirulapana, Kalubowila, Kawdana, Karagampitiya, Nedimala, Kohuwala, Pamankada
High Density Green Mixed Development	• Maintenance of average 65% plot coverage • Well-maintained facades • Boulevard streets • High-end investments attractive area with prominent uses such as Luxury condominiums, star hotels, shopping complexes • Approximately 35% of green coverage of total zone	Borella Junction, Mount Mary, Cota Road

High Density Compact Mixed Development	• Maintenance of average 75% plot coverage • Compact retail and wholesale market area • Private office complexes	Dematagoda, Maradana, Maligawatta, Part of Panchikawatta, Orugodawatta, Grandpass South, Kiriwaththuduwa
Compact Logistics Development	• Maintenance of average 70% plot coverage • Prominent uses - Port related industrial activities, logistics-based activities, warehouses etc.	Port Area, Sea Avenue, Kotahena, Bloemandhal, Mahawatta, Aluthmawatha
High Density Residential	• Maintenance of average plot coverage of 70% • Predominant residential area having high-rise apartment complexes built for low-income families of City of Colombo	Mattakkuliya, Modara, Madampitiya
Moderate Density Zones		
Central Transit Based Development	• Maintenance of average plot coverage of 70% • Central Transit Based activities linked with proposed Multi-modal Transport Hub at Peliyagoda (The Main Regional Transport Hub of Colombo) • Water recreational areas and public gathering places linked with Kelani River Water Front	Part of Peliyagoda & Sedawatta
Moderate Density Residential Zone 01 - Wattala	• Maintenance of 65% average plot coverage • Predominant use – Residential including garden houses, high-rise apartments and condominiums • Tourism and recreational activities along coastal stretch • High retailing area along major roads and	Hekitta, Kerawalapitiya, Dikovita and Part of Mabola
Moderate Density Logistics Development	• Maintenance of 65% average plot coverage • Prominent uses - Port related industrial activities, logistics-based activities, warehouses etc.	Part of Peliyagoda, Wanawasala, Dippitigoda and Hunupitiya
Moderate Density Residential Zone 02 - Kolonnawa	• Maintenance of 65% average plot coverage • Predominant use – Residential including garden houses, high-rise apartments and condominiums	Kolonnawa and Wellampitiya
Moderate Density Residential Zone 03 - Ratmalana	• Maintenance of 65% average plot coverage	Parts of Ratmalana and Mt-lavinia, Kaldemulla

	• Predominant use – Residential including garden houses, high-rise apartments and condominiums	
Low Density Zones		
Low Density Green Residential	• Maintenance of 50% average plot coverage considering the total area • More public open spaces linked with green pastures and waterfronts • Relatively less congested area • Prominent use – residential (garden houses and low-rise houses)	Part of Ratmalana, Belekkade Junction, Bakery Junction and Boralesgamuwa
Low Density Garden	• Maintenance of 50% average plot coverage at each and every plot • Boulevard streets and more public open recreational spaces • Predominant use – residential (garden houses and low-rise houses) • High-end investments area prominent for branded retailing, tourism, private office and leisure & entertainment activities	Colombo 07 including Cinnamon Garden, Thimbirigasyaya

Table 3.5: The heterogeneous characters of each character zone and areas falling within them


Ragama
Malwana
Kadawatha
Mahara
Kiribathgoda
Kelaniya
Kotikawatte
Angoda
Gothatuwa
Mulleriyawa
Wellkada
Ratagiriya
Kosswatte (Battaramulla)
Etul Kotte
Battaramulla
Malab
Koswatte (Nawala)
Pelawatte
Nawala
Pitakotte
Boddagana WP
Thalawathugoda WP
Mirihana
Nugegoda
Dehiwala
Maharagama
Soysapura
Piliyandala
Kotubedda
1
2
3
4
5
6
7
8
9
10
11
12
13
Zone 1 - Exclusive Premium Development
Zone 2 - Premium Mixed Development
Zone 3 - High Density Green
Zone 4 - High Density Compact Mixed Development
Zone 5 - Compact Logistics Development
Zone 6 - High Density Residential
Zone 7 - Central Transit based Development
Zone 8 - Moderate Density Residential
Zone 9 - Modarate Density Logistics Development
Zone 10 - Modarate Density Residential
Zone 11 - Modarate Density Residential
Zone 12 - Low Development Green Residential
Zone 13 - Low Density Garden
0 0.75 1.5 3 Km

3.4.2.2) Demarcation of Zoning Boundaries based on Characters – Justification

As explained above the within an identified broader densification zone, there can be local areas with different characters. It was determined to identify these possible heterogeneous characteristics of different local areas and demarcate character zones in order to ensure that variety of experiences is maintained in future Colombo as well. The demarcation of character zones was also based on Weighted Overlay Analysis where below mentioned criteria were considered. The existing characters and trends as well as the anticipated characters which should be there to be aligned with the proposed city vision were both considered as major criteria in demarcating the character boundaries.

- Space Analysis of Activities identified by the Market Base Analysis. (Changes of Retail, Office and Residential Spaces)

Existing market trends is one of the key indicatives of emerging special characters of local areas (different parts of Colombo Commercial City). Based on market trends, the areas which have high demand for certain activities can be identified and the same can be used to determine the most appropriate characters of each local area. Accordingly, the market studies which have been conducted by relevant agencies of both public and private sectors were used to identify the spatial distribution of different market demands. The most appropriate prominent uses and characters of each zone were determined considering the trending activities due to market forces.

- Suitability Analysis

Prominent use is one of the influential factors of zone character thus determination of most appropriate prominent use should be conducted based on analysis. Suitability analysis was conducted to evaluate the suitability of different local areas of Colombo Commercial City for potential uses.

- Existing Zoning Classifications and its Drawback

Existing characters of local areas are mostly derived based on the existing zoning classifications. Hence, existing zoning classification was considered as a base to demarcate proposed character zones. One of the major implications of this criteria is the demarcation of present Special Primary Residential Zone as Garden Zone with the intention of conserving its special garden and residential character.

- Concept of the Plan – Future Development Direction

The other major criteria considered was the proposed city vision and the concept plan designed to achieve it. The idea behind is the demarcation of character zones as it contributes to lead the city towards its anticipated future vision. Therefore, the character zones were demarcated as they are in aligned with the previously determined characters of seven aqua regions and 08 water esplanades.

3.4.3) Proposed Hierarchical Nodes of Colombo Commercial City

16 number of hierarchical nodes belonging to 4 major priority levels are proposed within Colombo Commercial City. These hierarchical nodes will be emerged within the identified character zones and

will act as development concentration points which are enabled to cater relatively higher magnitude of developments within the zones with higher supply intensities of infrastructure and other urban services.

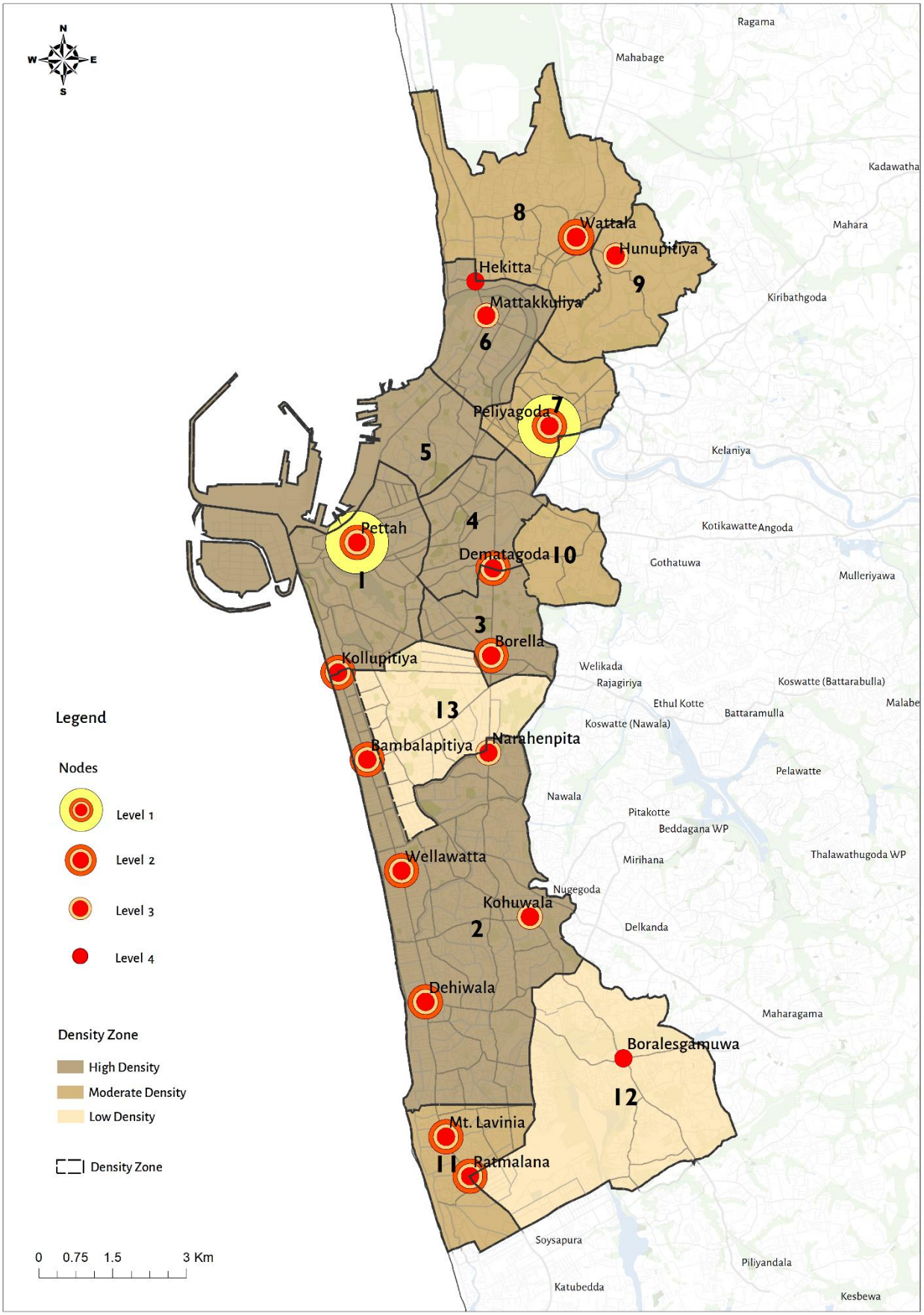
3.4.3.1) Proposed hierarchical order of nodes

The proposed hierarchical order of nodes in Colombo Commercial City are as follows.

Hierarchical Level	Node	The proposed type of development and anticipated character
1st Priority	Pettah	• Based on Multi-modal Transport Hub Development • Acting as the main center of intra-city transport network of Colombo Commercial City • Catering mega scale commercial development
	Peliyagoda	• Based on Multi-modal Transport Hub Development (Regional Transport Hub) • Acting as one of the main centers of inter-city transport network of the western region and island • Catering mega scale commercial development
2nd Priority	Dematagoda	• Based on Transport Oriented Development (TOD) • Acting as the main hub to collect and re-distribute east traffic to Colombo • Catering mega scale mixed development
	Ratmalana	• Based on Transport Oriented Development (TOD) • Acting as the main hub to collect and re-distribute south traffic to Colombo • Catering mixed-developments in the immediate surroundings and residential developments in the neighboring area
	Kollupitiya	• Major nodes (town centers) in the coastal belt of Colombo Commercial City • Based on Transport Oriented Developments of local scale associated with Railway Stations and Mini-bus Stands • Catering large scale mixed development
	Bambalapitiya	
	Wellawatta	
	Dehiwala	
	Mount Lavinia	
	Borella	• A Major node (town center) • Based on Transport Oriented Development of local scale associated with Railway Station and Mini-bus Stand • Catering large scale mixed development
	Wattala	• A Major node (town center)
3rd Priority	Narahenpita	
	Kohuwala	
	Hunupitiya	
4th Priority	Boralesgamuwa	
	Hekitta	

Table 3.5: The proposed hierarchical order of nodes in Colombo Commercial City - 2030

The strategic projects to activate above identified hierarchical nodes will be elaborated under the Transport Development Strategy (Page:...) under the project code/(s) .....


N
W
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Mahabage
Kadawatha
Mahara
Kiribathgoda
Kelaniya
Kotikawatte
Angoda
Gothatuwa
Mulleriyawa
Welikada
Rajagiriya
Koswatte (Battarabulla)
Ethul Kotte
Battaramulla
Malabe
Koswatte (Nawala)
Pelawatte
Nawala
Pitakotte
Beddagana WP
Thalawathugoda WP
Mirihana
Nugegoda
Delkanda
Maharagama
Soysapura
Piliyandala
Katubedda
Kesbewa
8
Wattala
Hunupitiya
9
Hekitta
Mattakkuliya
6
7
Peliyagoda
5
4
Pettah
1
Dematagoda
10
3
Borella
Kollupitiya
13
Bambalapitiya
Narahenpita
Wellawatta
Kohuwala
2
Dehiwala
Boralesgamuwa
12
Mt. Lavinia
11
Ratmalana
Legend
Nodes
Level 1
Level 2
Level 3
Level 4
Density Zone
High Density
Moderate Density
Low Density
Density Zone
0
0.75
1.5
3 Km

3.4.3.2) Determination of the hierarchical order of nodes – Justification

The proposed nodal hierarchy was determined considering the relative importance of nodes in terms of connectivity and their potential contribution to achieve the envisaged densities and characters as explained in the previous sections. The relative importance of nodes in terms of connectivity was identified based on the connectivity analysis which was conducted including following criteria.

I. Connectivity in terms of roads
II. Connectivity in terms of railway & electrified railway
III. Connectivity with expressway network
IV. Possible future connectivity with proposed Lake Drives
V. Possible future connectivity with proposed water transportation routes
VI. Possible future connectivity with proposed Light Rail Transit network

In addition to the above mentioned criteria on connectivity, the following two factors were also considered when determining the hierarchical order of nodes and assigning the priority levels.

- Ongoing and proposed development projects undertaken within Colombo Commercial City by both government and private parties
- The significance of each node in achieving the proposed concept of aqua regions and ultimate city vision; 'Aquarina – the City in Water'.

3.4.4) Proposed Hierarchical Road Network of Colombo Commercial City

Hierarchically arranged road network consisting of three levels; 1st priority, 2nd priority and 3rd priority is proposed for Colombo Commercial City for the following purposes.

- To connect above explained hierarchical nodes while maintaining their relative prominence based on priority levels
- To induce the anticipated developments in each character zone (Since roads are a mandatory infrastructure to induce developments, more 1st priority roads are proposed in high density zones to facilitate more developments)
- To manage traffic in Colombo Commercial City (Will be elaborated under the Transport Development Strategy)

As explained in the above second factor, the widened and improved roads induce more developments to the area and at the same time. On the other hand, a place with relatively high road density has the capacity to cater more developments in terms of traffic handling and generating more

convenient spaces with good accessibility. Hence, there is a significant impact of the proposed road structure to the city spatial development. Considering the impacts of proposed road network and its direct and neighboring impact of development, it was identified that the road based development corridors can be emerged as mentioned in Figure:..

Figure 3.10: Road Based Development Corridors

3.4.5) Proposed Sub-densification Zones of Colombo Commercial City

57 Sub-densification zones are proposed within Colombo Commercial City for regulating the developments at a detailed scale. The advantage of having detailed sub-densification zones rather than broader densification zones is that it enables imposing of unique sets of regulations for each zone to manage developments based on;

- Special characters of each zone
- Carrying capacities in terms of roads and other infrastructure
- Impacts of water esplanade developments, nodal developments and other ongoing and proposed projects

The derivation of sub-densification zone boundaries was based on following key layers.

(1) Three Broader Densification Zones

(2) Thirteen Character Zones

(3) Proposed Hierarchical Nodes

(4) Development corridors based on hierarchically arranged road network

In addition to above, existing special characters, environmental concerns and impacts of water esplanade developments and other ongoing and proposed projects were also considered in demarcating sub-densification zone boundaries.

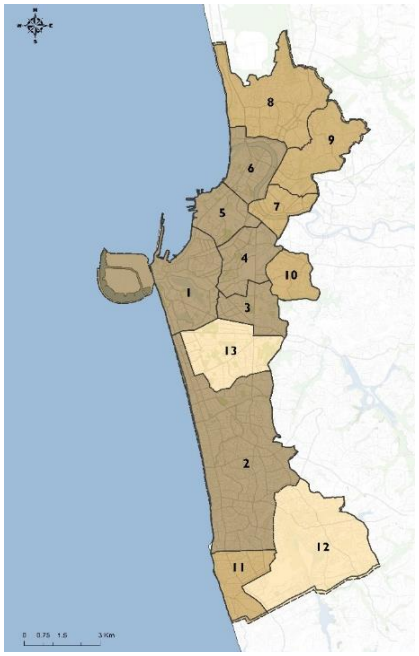


Figure 3.10: Three Broader Densification Zones

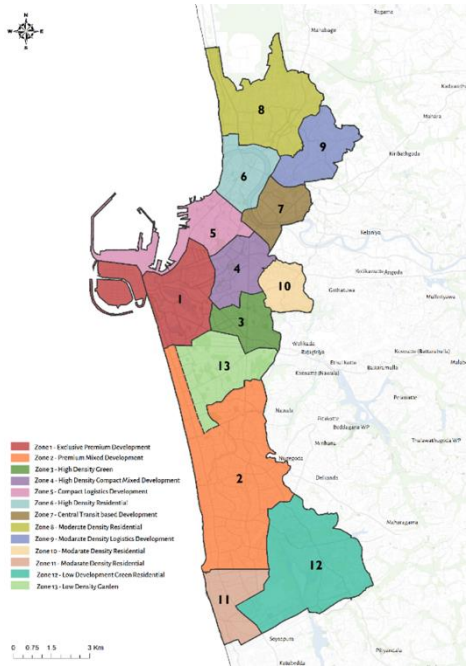


Figure 3.10: Thirteen Character Zones

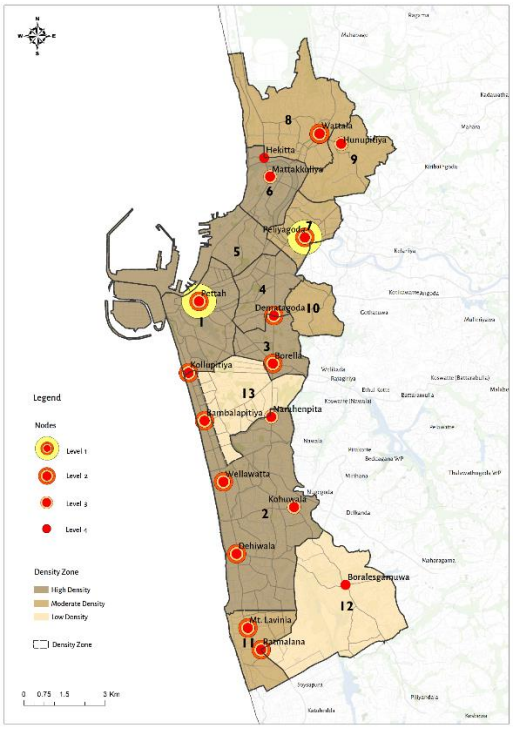
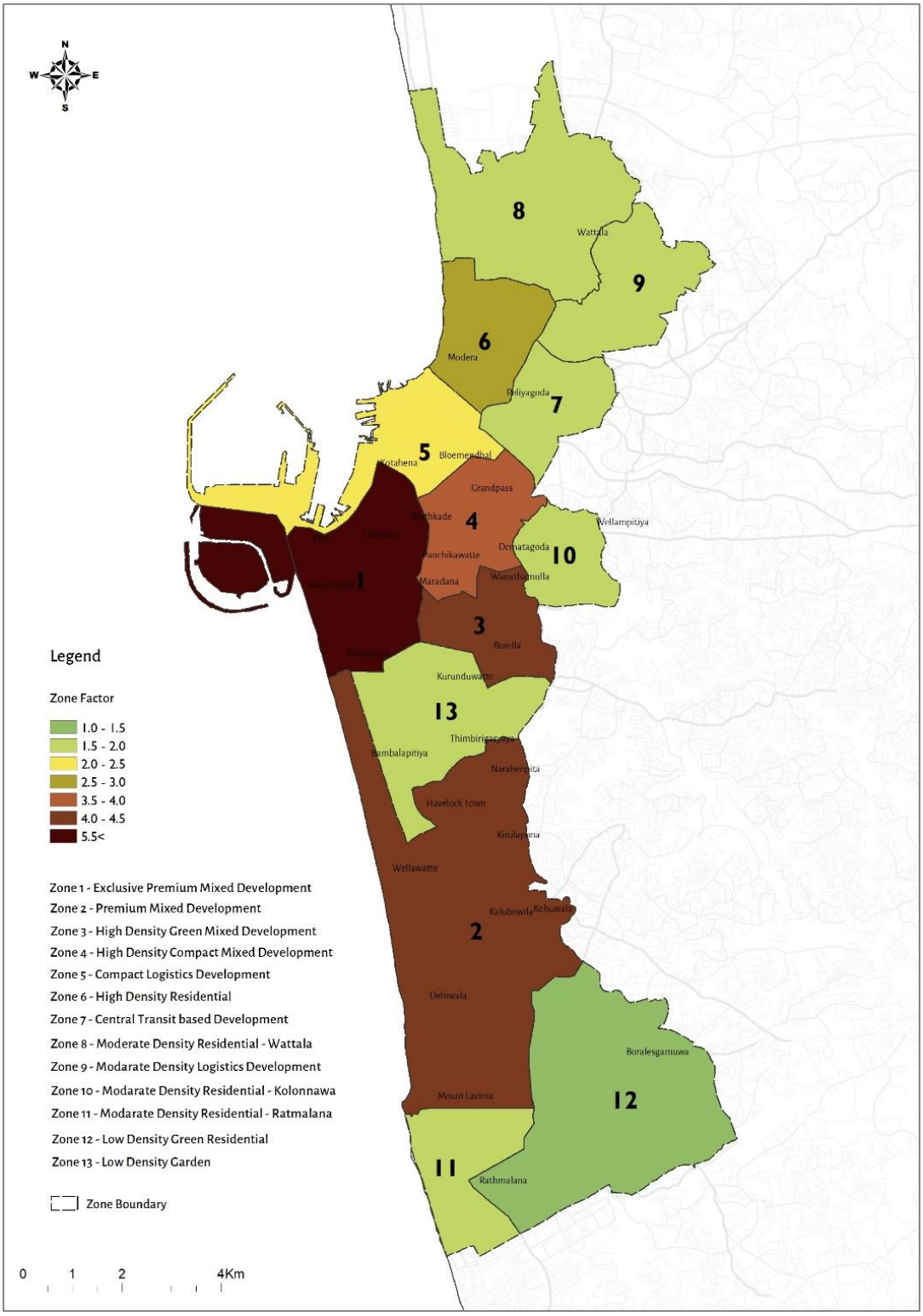


Figure 3.10: Proposed Hierarchical Nodes

Figure 3.10: Road Based Development Corridors

The sub-densification zones derived based on above criteria are indicated in the Map:… The zoning regulations applied for each sub-densification zone is elaborated in the Volume III of Colombo Commercial City Development Plan – 2030



3.4.6) Preservation of City Landmarks

Landmarks are essential features of a city as they have a strong influence in making a city more legible and imageable while preserving its identity and enhancing visual quality. Landmarks are point

references and their key physical characteristic is singularity which can be derived by maintaining back-ground contrast. Thus when using landmarks to enhance visual quality of an environment, it is important to manage both the characteristics of the landmark itself and the surrounding elements. At the same time there is a huge impact made by a certain landmark to its surrounding environment as it adds value and character to the surrounding lands in the vicinity.

"***The Lotus Tower"*** is considered as a major Land Mark of City of Colombo. The tower is 350 m tall and claims to be the tallest self-supported structure in South Asia. Considering, its monumental significance, it is proposed to preserve its visual prominence by ensuring its visibility through selected visual corridors. The identification of visual corridors and maximum allowable heights was conducted based on GIS Based Visibility Analysis considering following criteria.

- 2/3 of Lotus Tower is visible in the range of 0.5km to 2.0km
- 1/3 of Lotus Tower is visible in the range of 2.0km to 5.0km
- Lotus Tower is visible from main public gathering places and corridors

Accordingly, the identified visual corridors and their maximum allowable heights are mentioned in the Map No. . The identification of visual corridors and maximum allowable heights based on GIS Based Visibility Analysis is elaborated in the Annexure ….. The regulatory guidelines applicable for each visual corridor are elaborated in Volume III in terms of boundaries of proposed visual corridors and the maximum building heights allowable from Mean Sea Level throughout the corridors.

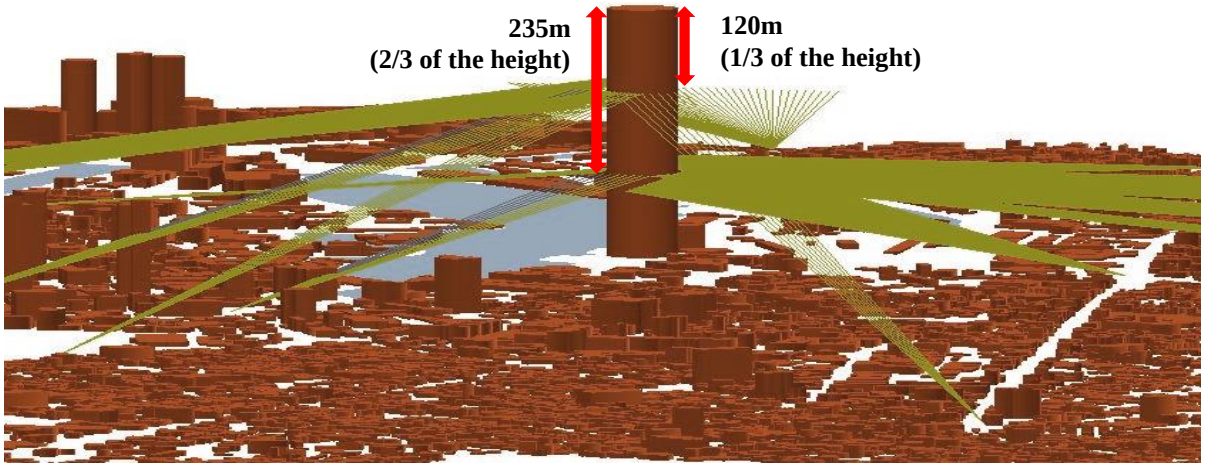
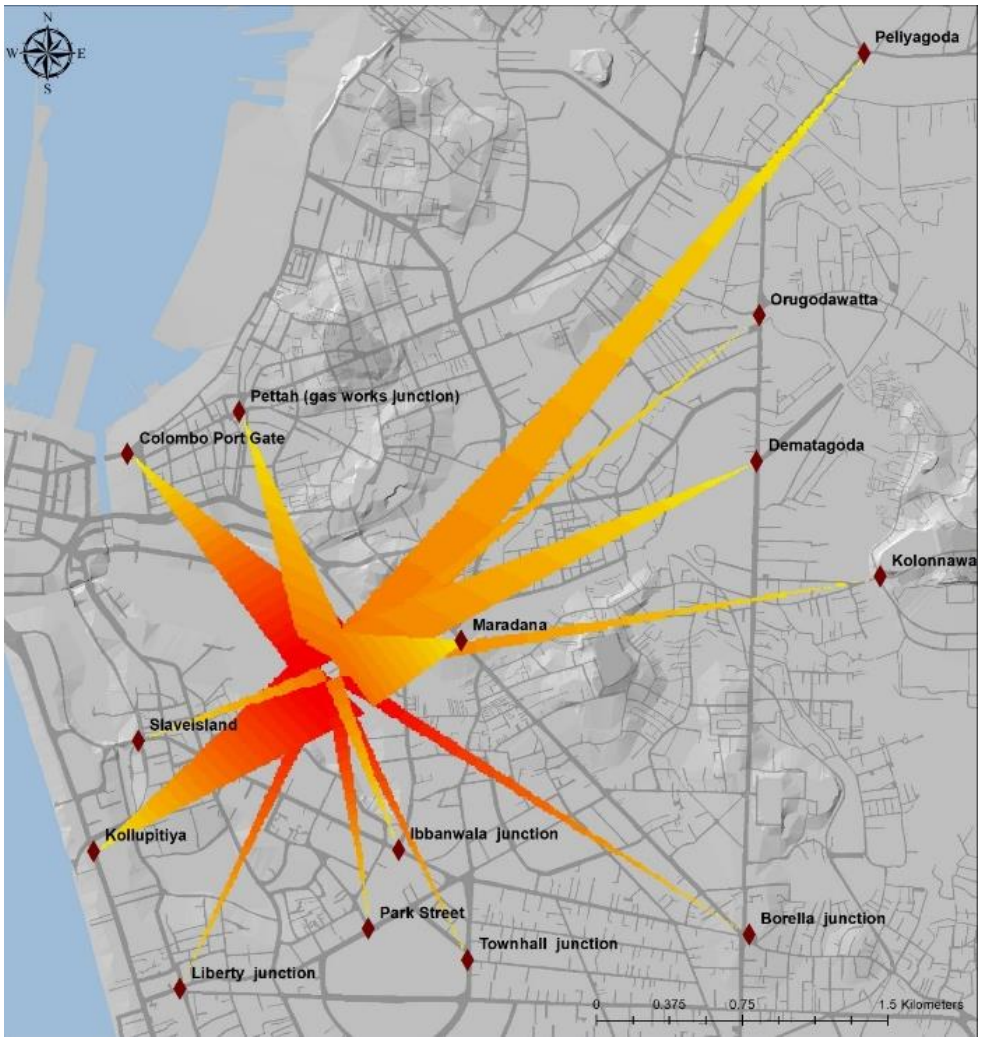


Figure 3.10: Identification of Maximum allowable building heights in selected visual corridors



3.4.7) Special Height Control Zones

As per the proposed Colombo Commercial City Development Plan – 2030, construction heights are controlled only with regard to following cases. The special height regulations imposed for following special height control zones are elaborated in Volume III of Colombo Commercial City Development Plan – 2030.

(a) Height Controlling within the High Security Zone of Kolonnawa Petroleum Storage Terminal – As per the Gazette Notification No. 1499/24 – 2007 dated 30th May 2007

(b) Kerawalapitiya

(c) Kelanitissa Power Plant

(d) Ratmalana Airport

(e) Height controlling within identified visual corridors of Lotus Tower – Colombo (as explained in the section 3.4.6)

3.4.8) Overall Densification Pattern of Colombo Commercial City – 2030

The overall densification pattern of Colombo Commercial City will be governed based on zoning regulations applied for identified 57 sub-densification zones based on their respective character zone and broader densification zone and special regulations applied for above mentioned 05 special height control zones. Accordingly, the future envisaged overall built-form and skyline variations are illustrated as follows.

3.4.8.1) Envisaged overall built-form of Colombo Commercial City - 2030

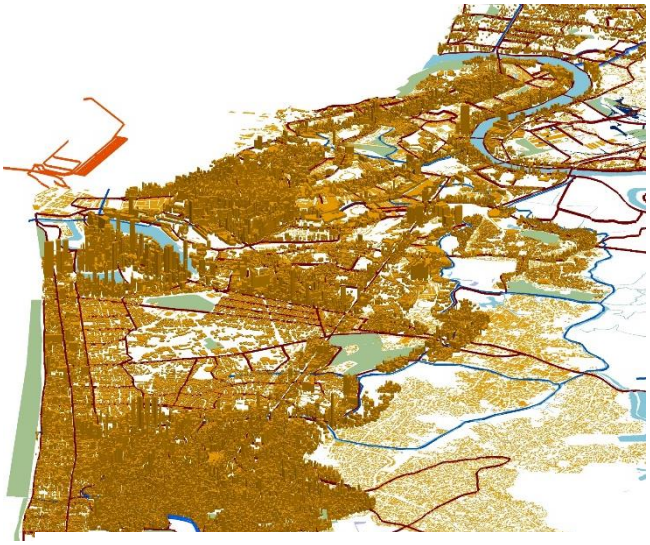


Figure 3.10: 3D – visualization of overall built-form of Colombo Commercial City

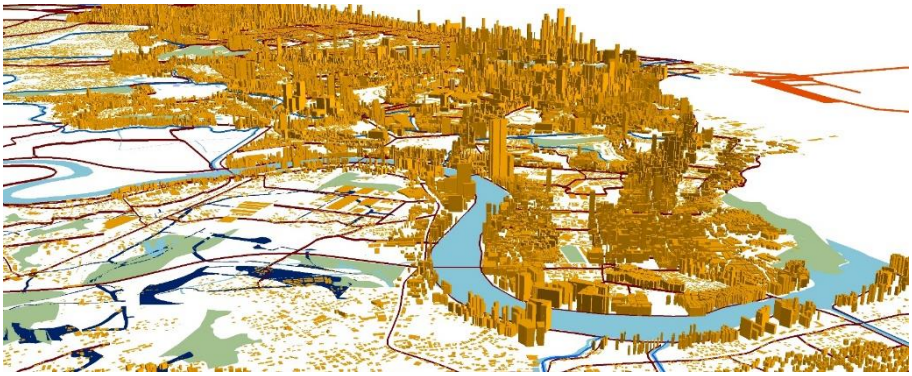


Figure 3.10: 3D – visualization of built-form in north of Colombo Commercial City

Figure 3.10: 3D – visualization of built-form in proposed Garden and Exclusive Premium Zones

3.4.8.2) Envisaged Sky-line Variation in Colombo Commercial City - 2030

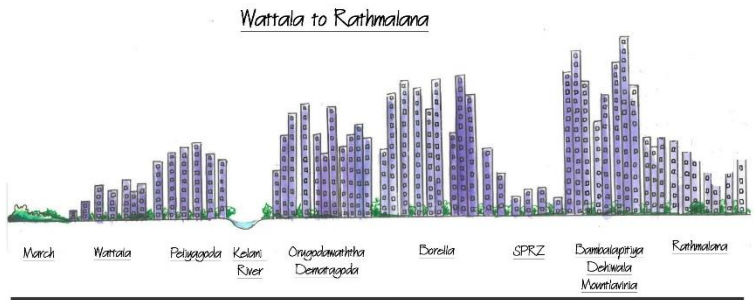


Figure 3.10: Variation of Skyline from Wattala to Ratmalana

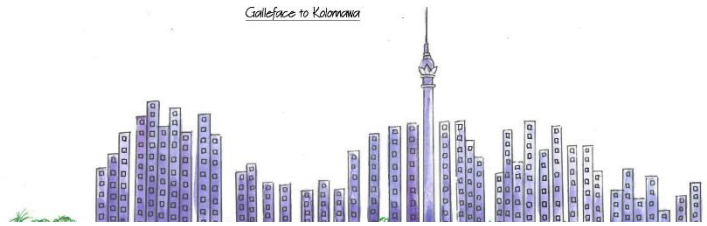


Figure 3.10: Variation of Skyline from Galle Face Green to Kolonnawa

Figure 3.10: Variation of Skyline along Sea-front (Provisions for wind & visual corridors)

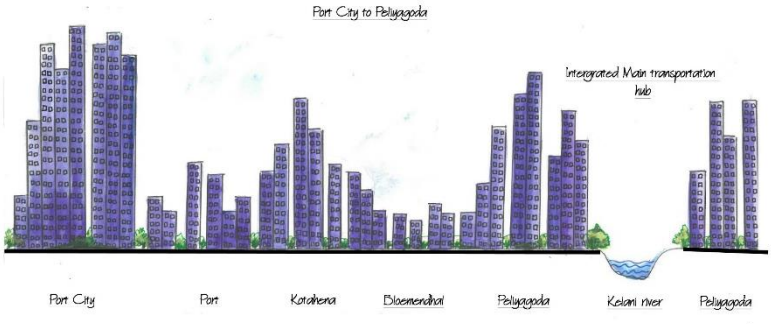


Figure 3.10: Variation of Skyline from Colombo Port City to Peliyagoda

Figure 3.10: The overall Skyline Variation throughout a cross section of Colombo Commercial City (From … to ….)

Transport Development Strategy

Enabling Convenient & Fast Mobility

04 Major TODs, New Modes of Public Transport & 03 Hierarchical Levels of Roads

3.6) Transport Development Strategy

Introduction

A city's live functionality is enabled with its transport network which is overlaid on its spatial structure. A key component of the built environment is the transport system that serves the land uses contained within the urban fabric, whether they be residential, commercial, educational or other. The convenient and efficient mobility within the city depends on the configuration and functional effectiveness of the city's transportation network. Configuration of overall transport network is a function of several criteria such as spatial distribution of different transport networks and their points of concurrence resulting in transport hubs. Hence, the determination of most appropriate transport network layouts and strategic locations for transport hubs is one of the main components of a transport development strategy. Determination of appropriate network arrangements and strategic locations for transport hubs should be conducted in accordance with the proposed spatial structure, as to match with the proposed densities, characters and proposed development activities.

Following the planning norm 'Higher the accessibility, greater the potential for development', the road network of Colombo Commercial City is proposed as to induce the anticipated developments in the identified densification zones. The routes of other transport modes such as bus, railway, proposed light rail transit and water transport are determined as to facilitate each zone as per the proposed densities and to connect hierarchical nodes as per their priority levels.

The proposed improvements to existing transport network and introducing of new modes of transport are carried out to accommodate the estimated …. Mn of Residents, ….. Mn of Daily Commuters and …Mn of total per day circulation population who will be attracted to Colombo Commercial City, given its role as the Commercial Capital of the country. Traffic Management is a major focus that was thoroughly considered when determining all components of Overall Transport Plan of Colombo Commercial City.

The other major components of the Transport Development Strategy is the development of Multi-modal Transport Hubs and Transit Oriented Developments as strategic locations and conducting nodal developments as selected nodes to enable convenient transfer between different modes of transports and to induce concentrated developments based on transit oriented development zones. The transport planning tools such as STRADA Modelling, space syntax, connectivity analysis and SDN (Space Diagram Network) Analysis were adopted in developing the Transport Development Strategy.

3.6.1) Proposed Improvements to Road Transportation System in Colombo Commercial City

Introducing of a hierarchically arranged road network is one of the key components of proposed Transport Development Strategy of Colombo Commercial City. A hierarchically arranged road network can be used as a tool in planning the interface between land use and the road system and maintaining appropriate linkage of roadways in the road system. Also it plays a major role in achieving the anticipated development of a city.

The key objective of a development of road hierarchy is to ensure the orderly grouping of roadways in a framework around which state and local governments can plan and implement various construction, maintenance, and management schemes and projects. It also assists local and state agencies with the adoption of appropriate standards for roadway construction.

Accordingly, a road hierarchy consisting of three major levels has been proposed for Colombo Commercial City. The determination of road hierarchy was based on following criteria.

- Existing capacities of roads (Level of Service)
- The overall concept plan and vision
- Expected Densities and characters of each broader densification zones and character zones

3.6.1.1) Proposed Road Hierarchy

According to the proposed road hierarchy, there will be three major categories of roads namely Level 01, Level 02 and Level 03 roads. The sub categories of three levels are determined based on different characters and functions of roads.

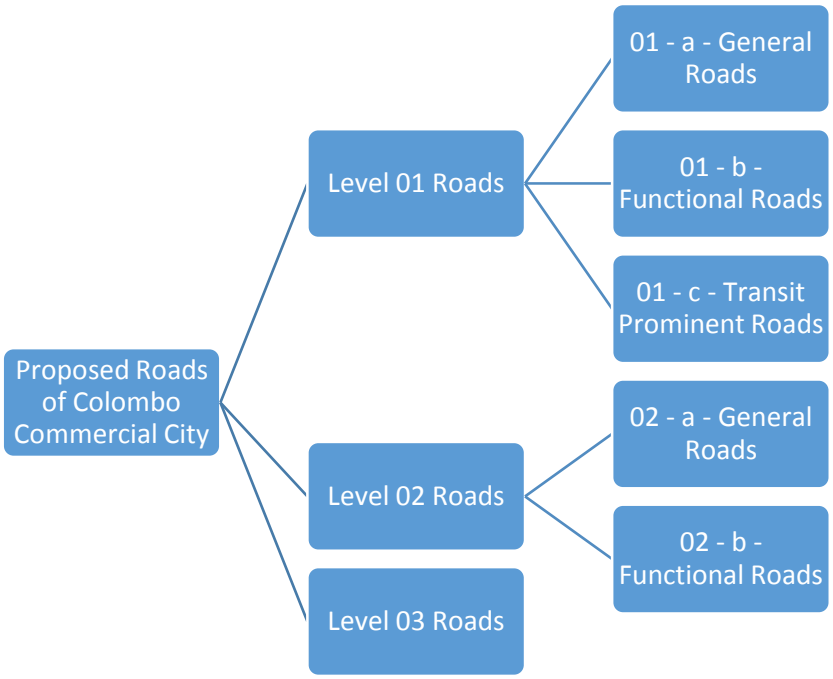


Figure 3.10: The Proposed Road Hierarchy in Colombo Commercial City

Road Category Code	Road Category Name	Defined Function/ Character
Level 01 Roads		
01 - a	Level 01 – General Roads	• Should have minimum carriage width of four lanes • Water Drives falling under this road category may have minimum carriage width of two lanes • Roads that cater both vehicular and pedestrian traffic equally • Composed of mixed characters of both Functional Roads and Transit Prominent Roads
01 - b	Level 01 – Functional Roads	• Should have minimum carriage width of four lanes • Water Drives falling under this category may have minimum carriage width of two lanes • Pedestrian prominent streets • Roads which act as functional streets daily, during certain hours of day, special days of week, seasonally or on special days • More pedestrian friendly and convenient road designs • Well-maintained streetscapes with attractive street furniture, façade designs and tree lines • Promoting small scale retail and shopping activities along the roads
01 - c	Level 01 – Transit Prominent Roads	• Should have minimum carriage width of four lanes • The major arterial roads that are mainly reserved for the purpose of easing city traffic • Adoption of Road designs that discourage on-street parking & frequent pedestrian crossings • Use of overhead/ underground bridges for pedestrian crossings and laying of on-street zebra crossings at considerable distances • Discouraging small scale retail activities and on-street shopping
Level 02 Roads		
02 - a	Level 02 – General Roads	• Should have minimum carriage width of two lanes • Roads that cater both vehicular and pedestrian traffic equally

		• Composed of mixed characters of both Functional Roads and Transit Prominent Roads
02 - b	Level 02 – Functional Roads	• Should have minimum carriage width of two lanes • Pedestrian prominent streets • Roads which act as functional streets daily, during certain hours of day, special days of week, seasonally or on special days • More pedestrian friendly and convenient road designs • Well-maintained streetscapes with attractive street furniture, façade designs and tree lines • Promoting small scale retail and shopping activities along the roads
Level 03 Roads		
03	Level 03 Roads	• All Local Authority roads and Private Roads are considered under this category • All Local Authority roads under this category should have minimum road width of 07 meters • All Private Roads under this category should have minimum road width of 03 meters

Table 3.2: Characters and functions of proposed hierarchical road categories of Colombo Commercial City

3.6.1.2) Cross sections of proposed roads

(a) Level 01 Roads

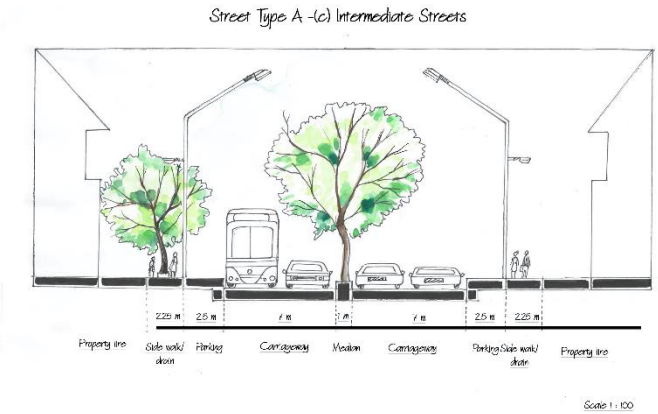


Figure 3.10: Cross section of Level 01 – General Roads (Road Type - Level 01 – a)

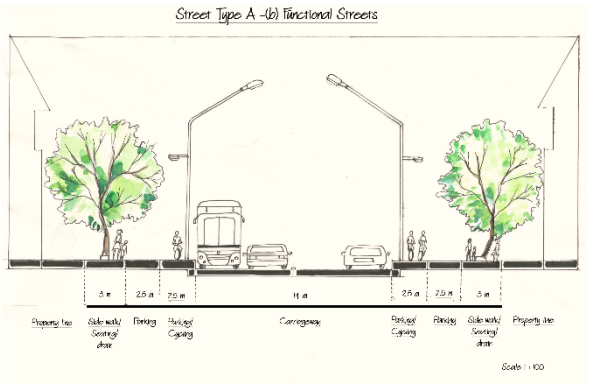


Figure 3.10: Cross section of Level 01 – Functional Roads (Road Type - Level 01 – b)

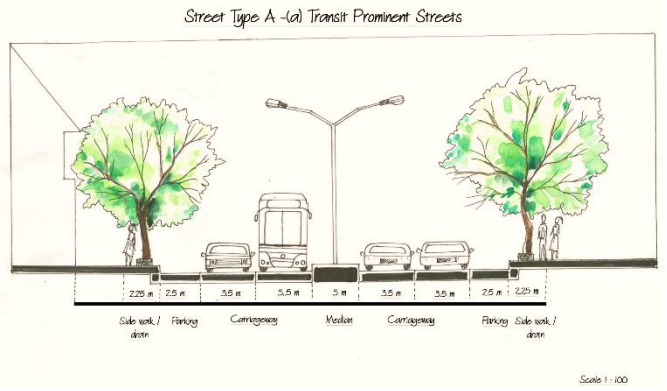


Figure 3.10: Cross section of Level 01 – Transit Prominent Roads (Road Type - Level 01 – c)

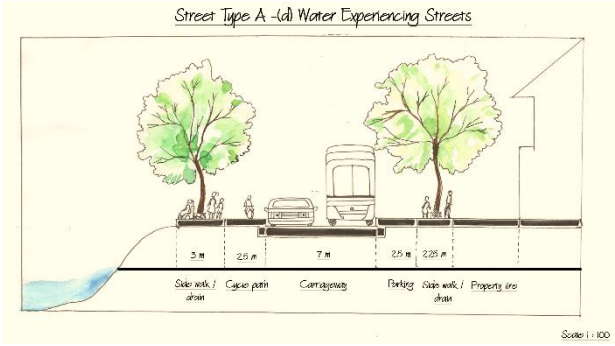


Figure 3.10: Cross section of Water Drives of Road Type Level 01 - b

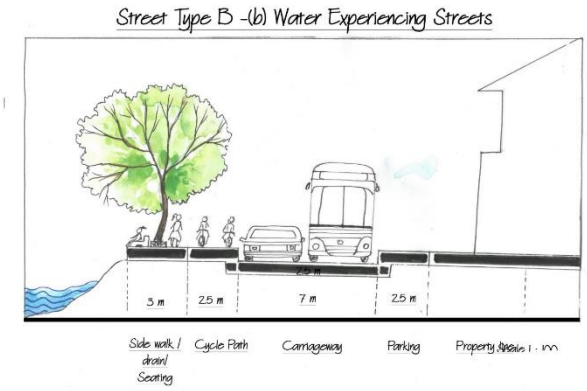


Figure 3.10: Cross section of Water Drives of Road Type Level 01 - a

(b) Level 02 Roads

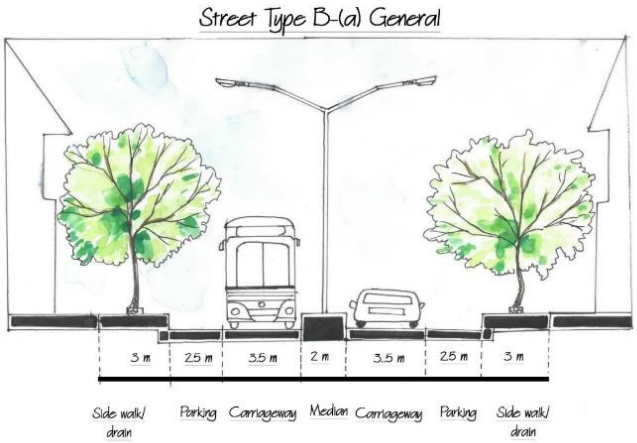


Figure 3.10: Cross section of Level 02 – General Roads (Road Type – Level 01 - a

(c) Level 03 Roads

Figure 3.10: Cross section of Level 03 Cross Sections

3.6.1.3) Level 01 Roads – New Road Links and Proposed Widening of Existing Roads (Project Code – T-1)

All road construction and improvement projects identified in Colombo Commercial City Development Plan – 2030 will be aligned under Transport Development Strategy – Action Projects Type - 01 with the project code T-1.

The proposed new road constructions and road widening projects falling under the category of Level 01 Roads are aligned under the project code T-1-1. New Road Construction Projects falling under Level 01 roads are aligned under Project Code T-1-1-1 while the road widening projects of same road category are aligned under Project Code – T-1-1-2.

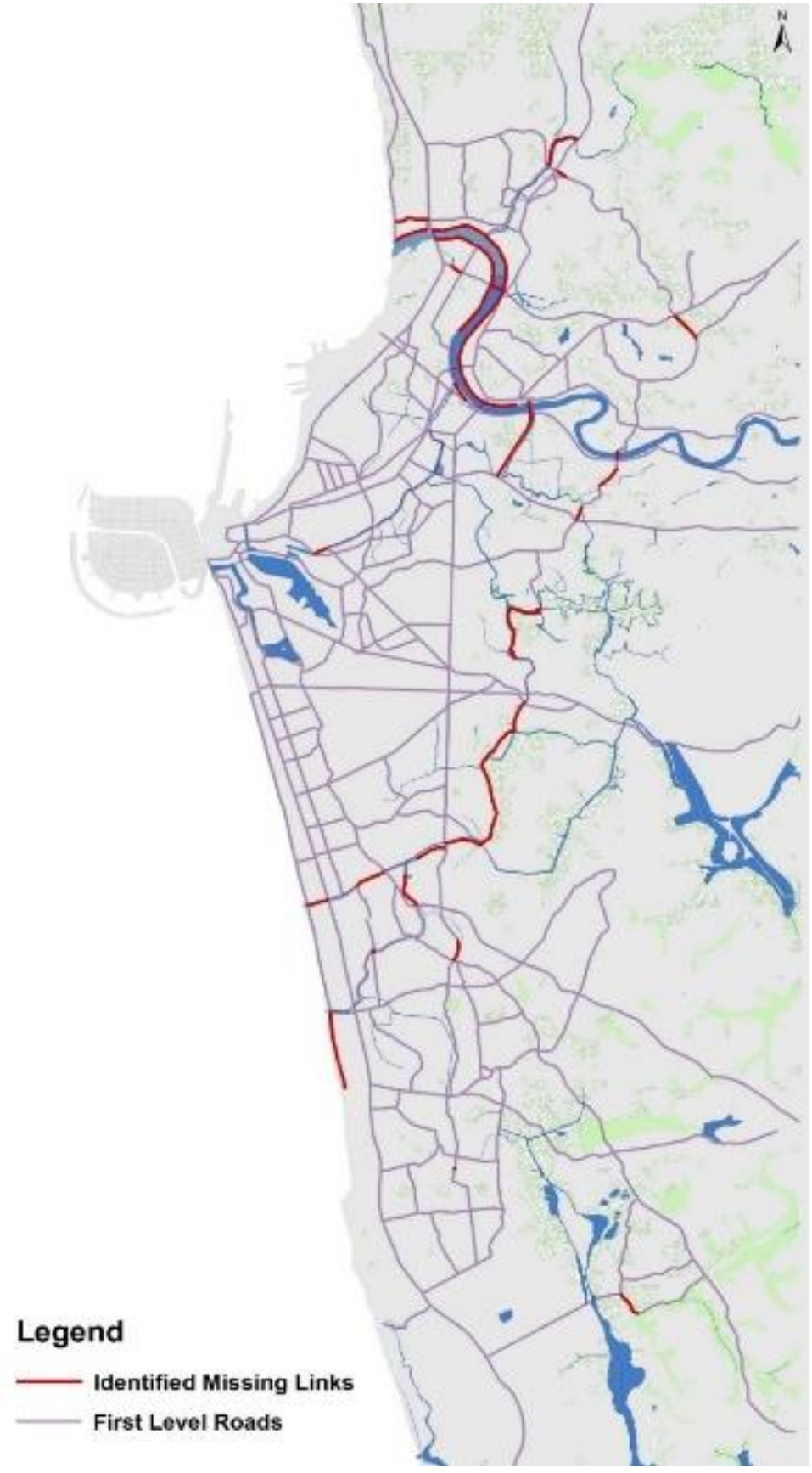
Map 3.10: Proposed Level 01 Roads of Colombo Commercia City

(a) New road constructions under Level 01 Roads (Project Code – T-1-1-1)

Though the plan has identified the level one roads as depicted in map no. ….. there are some missing links within the identified Level 01 Road Network, which need to be connected with new links in order to have a complete network of Level 01 roads. The Table No. .. indicates the identified new road links which and their design guidelines.

No.	Name of the Road	Proposed Length of Carriageway (m)	Other Specifications (Pedestrian/ Tree line/ Bicycle Lane)	Road Length (m)
1	Kelani Right Bank Road	8	5.5	5003
2	WaterDrive_Dematagoda Cannel_Part4	8	5.5	3403
3	Marine Drive Extension	22	5	3095
4	Furgason Road Extension	22		2437
5	Water Drive (Sebesthian Cannel)	8		2277
6	Water Drive_Dematagoda Cannel_part1	8		1509
7	Kolonnawa Water Drive	8		1223
8	Water Drive (Sebesthian Cannel)	8		1051
9	Kelani Estuary Connection	22		725
10	Hekitta Rd Extension_2	22		576
11	Vivian Gunawardena Mw Extension	22		555
12	WaterDrive_Dematagoda Cannel_Part3	8		543
13	WaterDrive_Dematagoda Cannel	8		521
14	Weerasinghe Mw Extension	22		457
15	New Road_Baseline Extension	22		388
16	Kelani Left Bank Road_part 2	22		376
17	WaterDrive_Dematagoda Cannel_Part2	8		354
18	Bridge (mattakkuliya - Peliyagoda)			259
19	Hendala Rd Extension	22		230
20	Bridge at Kolonnawa water drive			209
21	Bridge (at Vivian Gunawardena Mw Extension)			171
22	New Kolonnawa Road extension part 1	22		113
23	Bridge at Hampden lane			73
24	New Kolonnawa Road extension part 2	87		69
25	Bridge at New Kolonnawa Rd extension	87		46

Table 3.10: Proposed new road links under Level 01 Roads (Project Code – T-1-1)



Map 3.10: Proposed new road links under Level 01 Roads (Project Code – T-1-1-1)

(b) Road widening projects under proposed Level 01 Roads (Project Code – T-1-1-2)

In the existing situation, some of the roads coming under the identified Level 01 Road Network, do not have the minimum road width specified for Level 01 Roads where the carriage width is required to be minimum of four lanes. Hence, the following set of roads falling under the Level 01 Road category are proposed to be widened up under the project code T-1-1-2.

Map 3.10: Identified roads for widening under Level 01 Road category (Project Code – T-1-2)

3.6.1.2) Level 02 Roads – New Road Links and Proposed Widening of Existing Roads (Project Code – T-1-2)

Identified road improvements including both new road constructions and road widening projects falling under Level 02 Road category are aligned under the project code T-1-2.

Map 3.10: Proposed Level 02 Roads in Colombo Commercial City

3.6.2) Proposed Improvements to Rail Transportation System in Colombo Commercial City

Railway transportation is the mass transportation system currently operating in Sri Lanka. Parallel to the increasing population and urbanization, the travel demand in Colombo Commercial City has increased during past years and will continue to upsurge in the future years to come. Population growth, formalized housing, high density housing along the major roads and employment creation will generate more trips and have a potential to create congestion in the horizons. However, in response to the rapidly increasing passenger demand, the state has taken further steps to improve the mass (rail) transportation system with new technological advances. Many of the rail improvement projects, which are in line with the future vision and anticipated developments of Colombo Commercial City are incorporated into the CCCDP – 2030 as elaborated below. The all proposed mass transport (rail) projects are aligned under the Transport Development Strategy – Action Project Type – 02 with the project code T-2.

3.6.2.1) Improvements to Railway Network within Colombo Commercial City (Project Code – T-2-1)

Colombo Fort Railway Station is the main railway station of Sri Lanka where all railway lines spreading throughout the island coincide. According to the existing configuration of railway network, passengers travelling from north to south need to transit via either Colombo Fort or Maradana Stations. This results in an unnecessary flow of passengers to Colombo Fort creating huge congestion and waste of time and resources of all passengers. Considering, these weaknesses in existing configuration of railway network of Colombo Commercial City, few of following changes have been proposed. The improvements to the existing railway network of Colombo Commercial City are aligned under the project code T-2-1.

No.	Project Name	Project Code
01	Construction of a Railway Station with mega service capacity at Peliyagoda interlinked with proposed regional bus terminal	T-2-1-1 *Following Reference: Peliyagoda TOD
02	Shift of Dematagoda Railway Station towards west to serve both Main line and Kelani Valley line	T-2-1-2
03	Rerouting of Kelani Valley line as to go parallel to Baseline via Borella Junction	T-2-1-3

04	Construction of a new Railway Station at Borella Junction	T-2-1-4
05	Capacity improvement of Ratmalana Railway Station as a part of proposed Ratmalana TOD development	T-2-1-5 *Following Reference: Peliyagoda TOD

Table 3.10: Proposed improvements to existing Railway Network (Project Code – T-2-1)

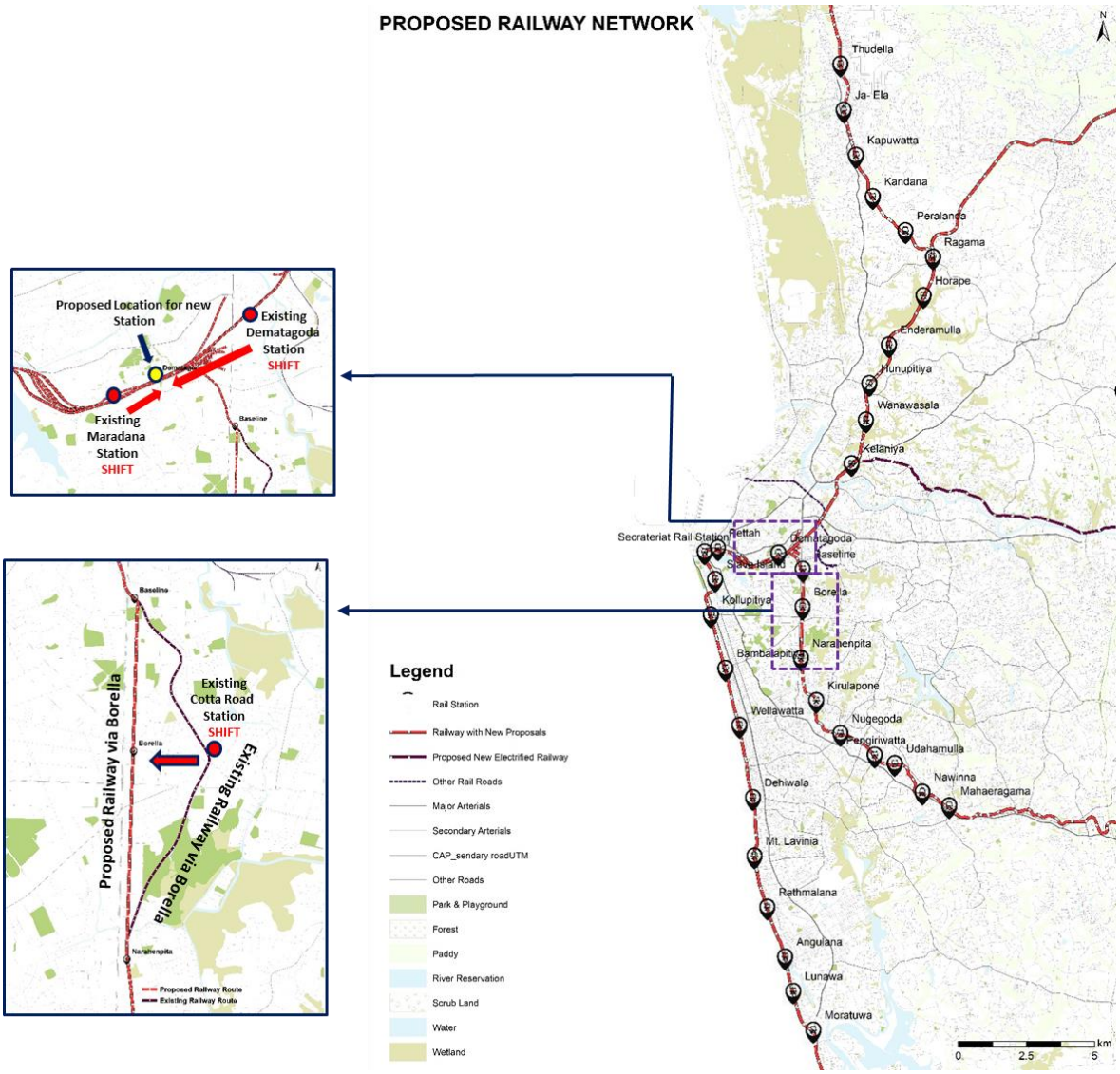


Figure 3.10: Proposed alterations to existing railway routes and stations (Project Codes – T-2-1-2/ T-2-1-3/ T-2-1-4)

3.6.2.2) Electrified Railway Proposals (Project Code - T-2-2)

The proposals of Railway Electrification and Modernization Project (REMP), undertaken by the Western Region Megapolis Planning Project under the Ministry of Megapolis & Western Development in collaboration with Sri Lanka Railways are incorporated into the Colombo Commercial City Development Plan under the project code – T-2-2.

As per the proposals, initially Panadura-Colombo-Veyangoda railway section is proposed to be upgraded and modernized to run electric trains. The aims of this project are to save time of people, money and fuel while avoiding the financial loss to individual and an economic loss to country by saving each minute wasted on the road or rail. Furthermore, with modern, fast suburban rail services, passengers carried can be doubled, and more fuel and man-hours saved. Accordingly, the following lines have been proposed to be electrified by 2025.

No.	Project Name	Project Code
01	Electrification and modernization of Coastal line (Pettah to Panadura)	T-2-2-1
02	Electrification and modernization of Main Line (Pettah to Veyangoda)	T-2-2-2
03	Construction of Dompe Line (Newly introducing an electrified rail facility)	T-2-2-3
04	Kelani valley line development	T-2-2-4

Table 3.10: Proposed railway electrification and modernization projects (Project Code – T-2-2)

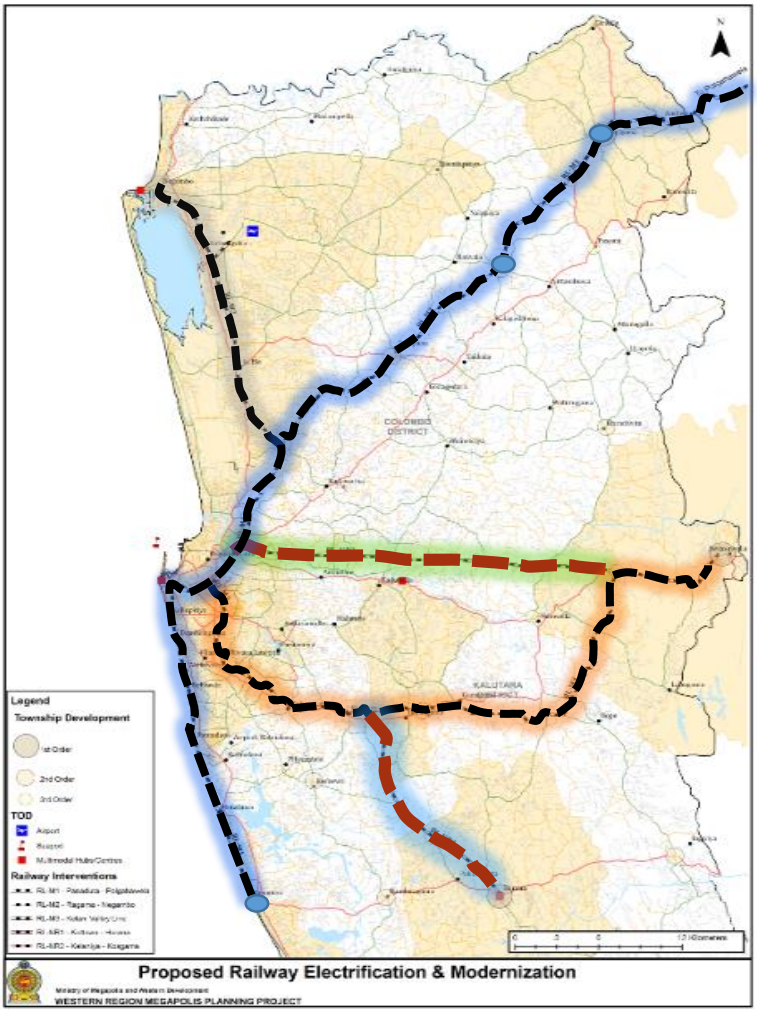


Figure 3.10: Proposed railway electrification and modernization projects (Project Code – T-2-2)

3.6.2.3) Proposed Light Rail Transit (LRT) Projects (Project Code – T-2-3)

One of the key public transport improvements identified in the Megapolis Transport Master Plan is the introduction of a LRT system as a new mode of public transport in the Colombo CBD and the outer region. The proposed LRT system consists of 07 major lines (07 packages) as indicated in the Figure:..

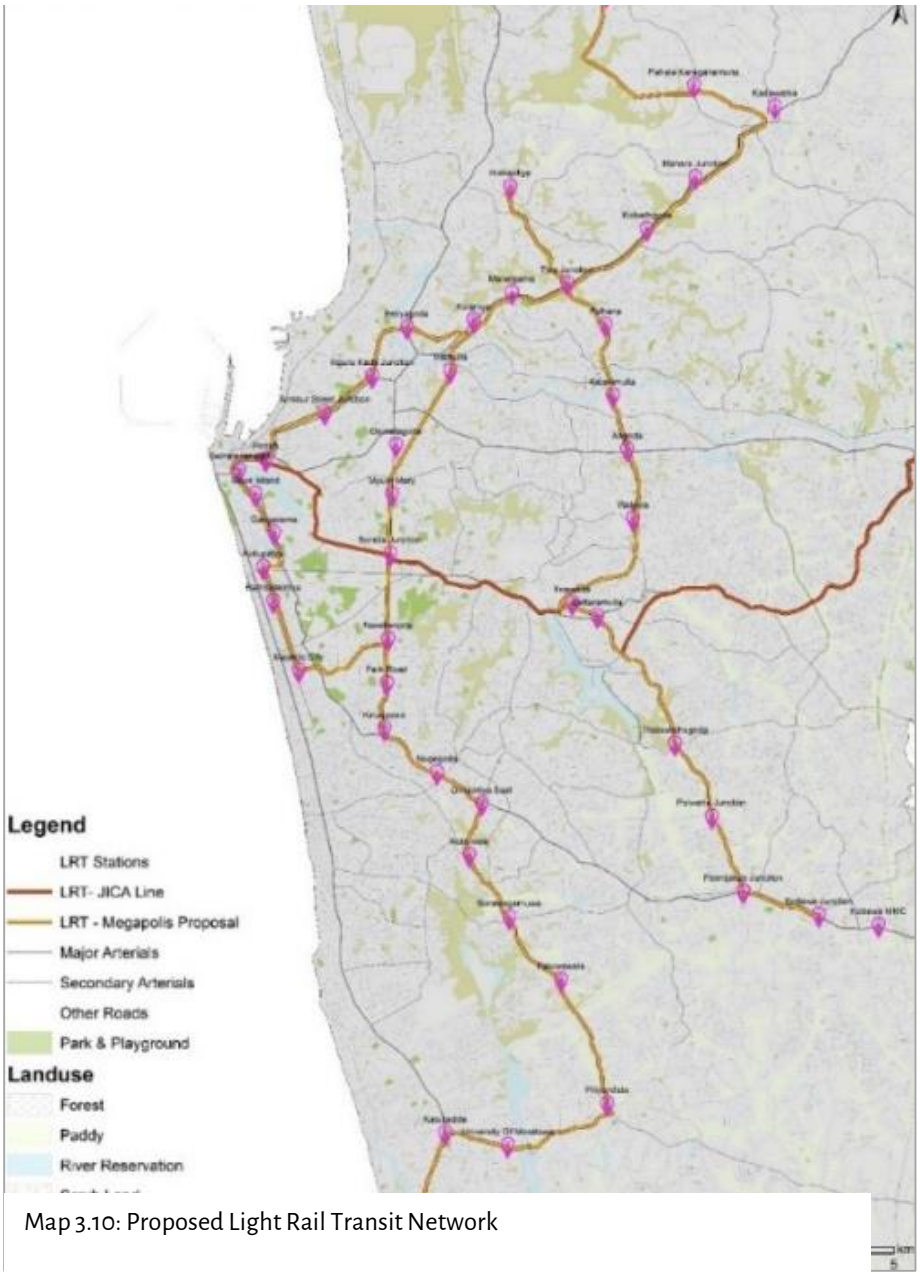
The works of first line (Yellow Line) which connects Malambe and Kollupitiya via Rajagiriya, Kota Road, Borella, Town Hall, Fort and Galle Face has already been started with the endowments of Japan International Cooperating Agency (JICA). The rest of the lines are proposed to be constructed with the endowments of KORIAN Consultancy and the feasibility studies are being conducted at the existing situation. In addition to the 07 packages proposed by the Megapolis Transport Master Plan, the Colombo Commercial City Development Plan recommends an alternative route for LRT to be continued from Colombo to Ratmalana along proposed Baseline Extension (Kirulapana to Ratmalana), considering the anticipated future densification pattern.

All projects proposed related to LRT Network of Colombo will be incorporated into the Colombo Commercial City Development Plan – 2030 under the project code T-2-3. The Table:... indicates the

project codes designated for already identified proposals of LRT Network. However, these project codes may vary depending on the future amendments of the proposals of LRT Network.

No	Package Name	Proposed Route	Project Code in CCCDP – 2030

Table 3.10: Proposed projects under Colombo LRT Network (Project Code – T-2-3)



Map 3.10: Proposed Light Rail Transit Network

3.6.3) Proposed Improvements to Bus Transportation System in Colombo Commercial City

As it was identified in the context analysis, around 7,400 intra-provincial buses and 3,300 inter-provincial buses depart and arrive at Pettah. It has been estimated that number of passengers departing from Pettah bus terminal is around 38,000 per day for inter-city bus services while 14,000 passengers per day for intra-city bus services. It is important to note that all these passengers and both inter and intra provincial buses circulate through Colombo Commercial City. Thus, the bus transportation within Colombo Commercial City is a major aspect of its overall transport system. All projects proposed under improvements to Bus Transportation System in Colombo Commercial City are aligned under Transport Development Strategy – Action Project Type – 03 with the project code T-3.

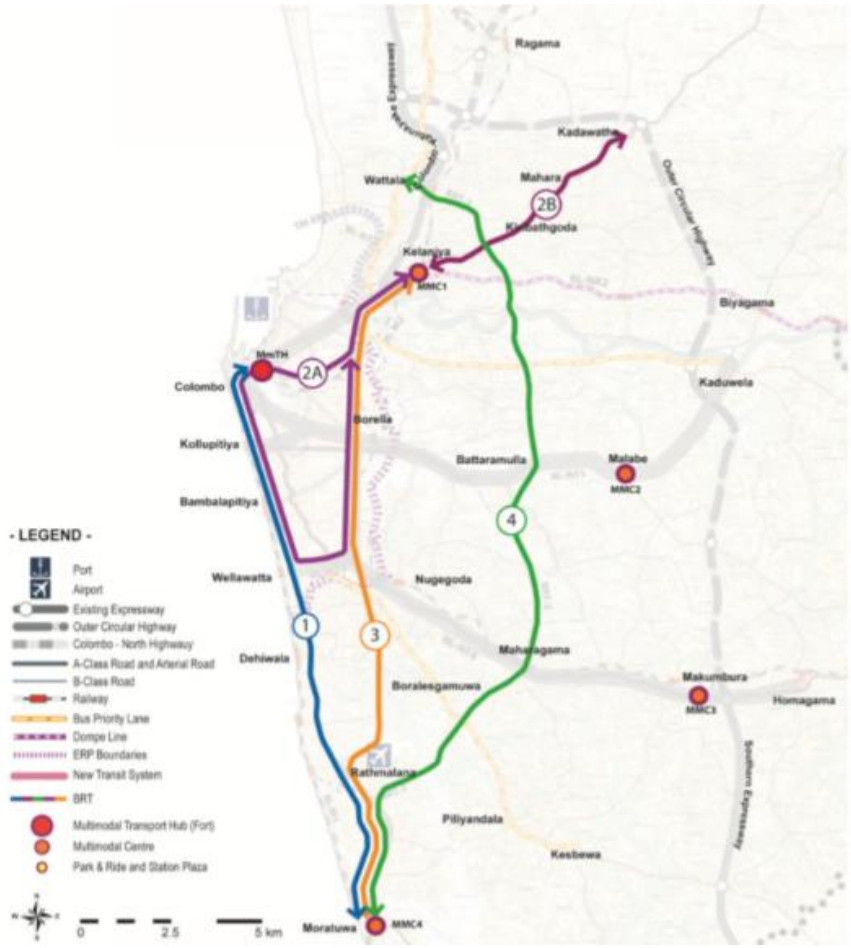
Proposed Bus Priority Lane System in Colombo Commercial City (T-3-1)

The major arterials of Colombo Commercial City become severely congested during peak hours as high vehicle volumes exceed the existing road capacities. The major reason for the exceeding capacities is the drastic increase in number of private vehicles which are used by approximately …% of passengers. However, approximately …% of passengers who use public transport, especially bus transport also suffer severely due to traffic congestion, even though the share of buses in vehicle share is only 6% of total vehicles. Hence, it is important to provide due priority to bus transportation in the overall city transport system.

In order to fulfill the above identified need and to speed up vehicle traffic while maintaining ordered flows, Bus Priority Lane System has been proposed for selected roads within Colombo Commercial City. All projects streamlining under Bus Priority Lane System are aligned under the project code T-3-1.

No	Identified Road to introduce bus priority lane	Road sections	Project Code in CCCDP – 2030

Table 3.10: Proposed Bus Priority Lanes (Project Code – T-3-1)



Map 3.10: Proposed Bus Priority Lanes

3.6.4) Proposed Nodal Developments (Project Code – T-4)

A selected set of priority nodes identified under the proposed hierarchy of nodes as a part of the Spatial Development Strategy are proposed to be developed with strategic interventions especially in the scope of transport development. These nodal developments will be aligned under the Transport Development Strategy – Action Project Type – 04 with the project code T-4. The following nodes which need immediate interventions were selected mainly based on their priority level, special role in the overall transport network and existing situation including present land use and functioning pattern.

No.	Name of the Nodal Development	Priority level based on proposed nodal hierarchy	Type of Transport Development Intervention
01	Pettah	1st Priority	Regional level Multi Modal Transport Hub (MMTH)
02	Peliyagoda	1st Priority	National/ Regional level Multi Modal Transport Hub (MMTH)

03	Dematagoda	2nd Priority	Transit Oriented Development (TOD) based – Level 01
04	Ratmalana	2nd Priority	Transit Oriented Development (TOD) based – Level 01
05	Wellawatta	2nd Priority	Transit Oriented Development (TOD) based – Level 02
06	Dehiwala	2nd Priority	Transit Oriented Development (TOD) based – Level 02
07	Hunupitiya	3rd Priority	Transit Oriented Development (TOD) based – Level 02
08	Boralesgamuwa	4th Priority	Regular Nodal Development

Table 3.10: Selected priority nodes to be developed combined with transport based developments

3.6.4.1) Proposed 1st Priority Nodal Developments (Project Code – T-4-1)

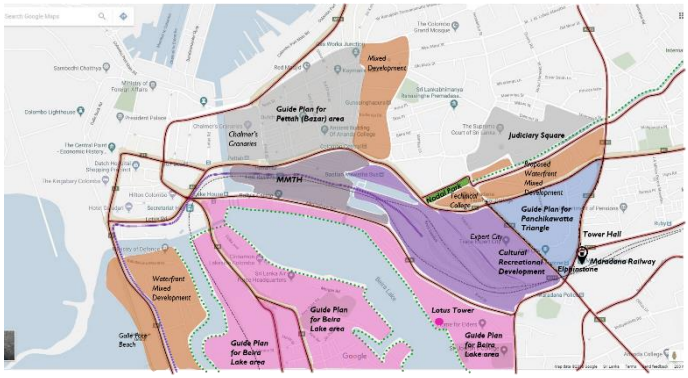
As per the CCCDP – 2030, Pettah and Peliyagoda are proposed to be developed as the two first priority nodes of Colombo Commercial City. It is envisioned that Pettah and Colombo will function as Downtown and Uptown of Colombo with the proposed planning interventions. The 1st priority nodal developments proposed under CCCDP – 2030 will be aligned under Transport Development Strategy – Action Project Type – 04 with the project code T-4.

As per the CCCDP – 2030, two major scale Multi Modal Transport Hub Developments will be carried out at Pettah and Peliyagoda, which are proposed to be developed as the two first priority nodes of Colombo Commercial City. It is envisioned that Pettah and Colombo will function as Downtown and Uptown of Colombo with the proposed planning interventions. The 1st priority nodal developments proposed under CCCDP – 2030 are be aligned under the project code T-4-1.

(a) Pettah Nodal Development (Project Code – T-4-1-1)

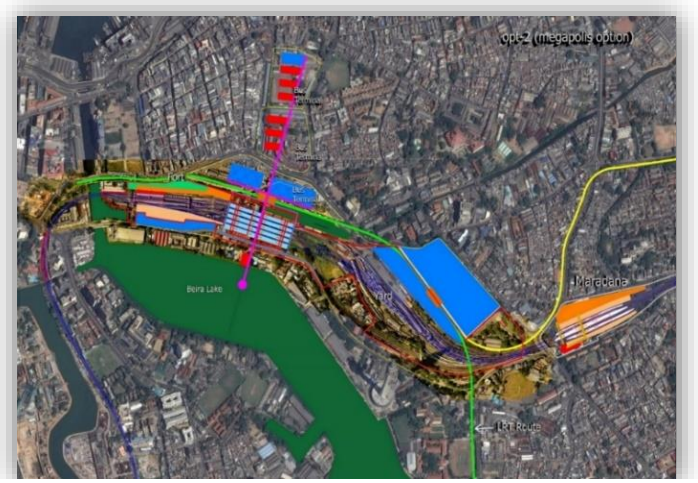
Pettah Nodal Development consists of several planning interventions in the Pettah area and also with the Pettah multimodal Transport Development Hub (MMTH) which is a proposed project under the Ministry of Megapolis and Western Region Development at Pettah. Pettah MMTH Project combines the Railway improvement, LRT development, and Road & Bus Transportation developments. The proposed MMTH development at Pettah consists of a parallel regeneration program where it intends to shift some of the incompatible activities to the outer region of Colombo CBD while releasing key sites fir MMTH and other economically beneficial developments. However, it is proposed to change its present role of Pettah as a national transport hub to avoid the unnecessary traffic flows it attracts to the city. It is proposed to promote proposed Peliyagoda MMTH as the national and regional level transport hub and utilize Pettah MMTH as the center of intra-city transport network.

The sub-projects of Pettah Nodal Development project including Pettah MMTD Development will be aligned in CCCDP – 2030 under the project code T-4-1-1.



Map 3.10: Proposed Pettah Nodal Development

No.	Project Name	Project Code
01	Pettah Multi Modal Transport Hub Development	T-4-1-1-1
		T-4-1-1-1-a
02	Special Guide Plan for Pettah Bazaar	T-4-1-1-2
03		



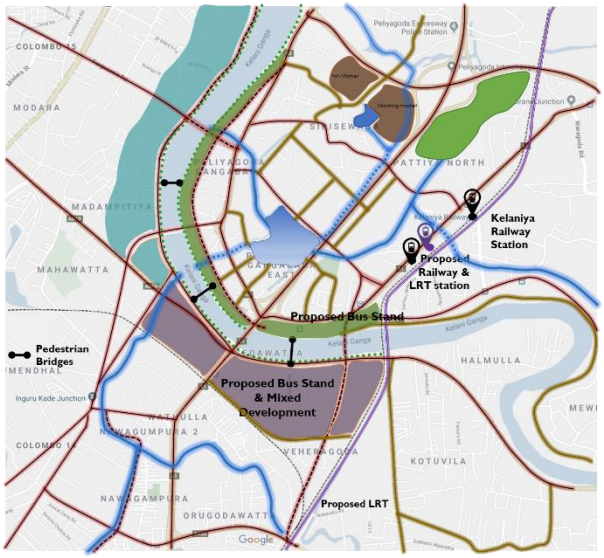
Map 3.10: Proposed MMTH Development at Pettah

(b) Peliyagoda Nodal Development (Project Code – T-4-1-2)

Peliyagoda Nodal Development is one of the major interventions to regenerate the Kelani River surroundings and to activate Kelani River Water Esplanade. As explained in the previous section, Peliyagoda is proposed to be one of the two 1st priority nodes of Colombo Commercial City and as the Uptown of Colombo. Therefore, Peliyagoda Nodal Development can be identified as one of the most important projects of CCCDP - 2030.

As per the connectivity analysis, it was identified that Peliyagoda is the most connected node within Colombo Commercial City in terms of all means of transportation networks. Therefore, it has the potential to act as a national and regional level transport hub which can be harnessed to transform the area and also to divert the unnecessary traffic flows entering City of Colombo. All projects proposed under Peliyagoda Nodal Development will be aligned under the project code T-4-1-2.

No.	Project Name	Project Code
01	Peliyagoda Multi Modal Transport Hub Development	T-4-1-2-1
		T-4-1-1-1-a
02		
03		



Map 3.10: Proposed Peliyagoda Nodal Development

3.6.4.2) Proposed 2nd Priority Nodal Developments (Project Code – T-4-2)

The development of 2nd Priority Nodes will be conducted in two levels such as Transit Oriented Based Development (TODs) level 01 and 02. Dematagoda and Ratmalana nodes will be developed as Level 01 TODs with the intention of improving their capacities to serve as regional transport hubs diverting traffic flows to Colombo Commercial City from east and south directions respectively.

Action Project 02: Promote Nodal Developments in Identified Centers

Sub Action 2.1- Promote Nodal Development in Wellawatta

Sub Action 2.2- Promote Nodal Development in Dehiwala

Sub Action 2.3- Promote Nodal Development in Hunupitiya

Sub Action 2.4- Promote Nodal Development in Boralesgamuwa

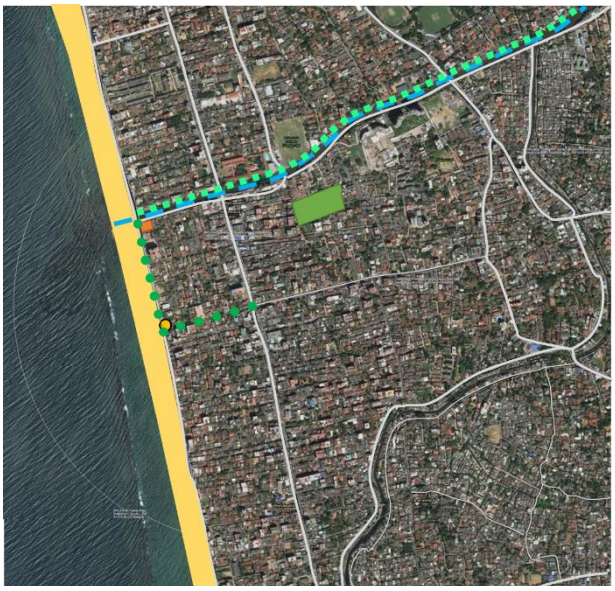


Figure 4: Proposed Nodal Development in Wellawatta

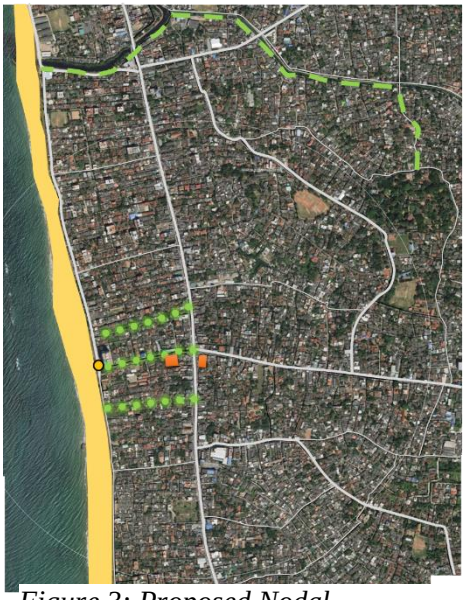


Figure 3: Proposed Nodal Development in Wellawatta

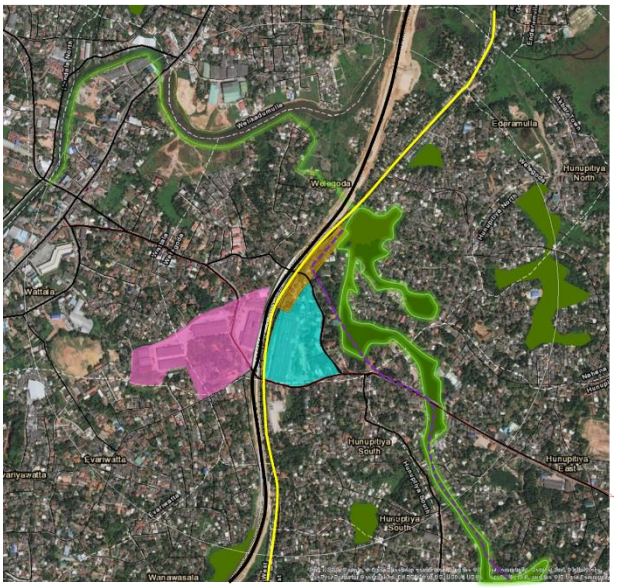


Figure 2: Proposed Nodal Development in Hunupitiya

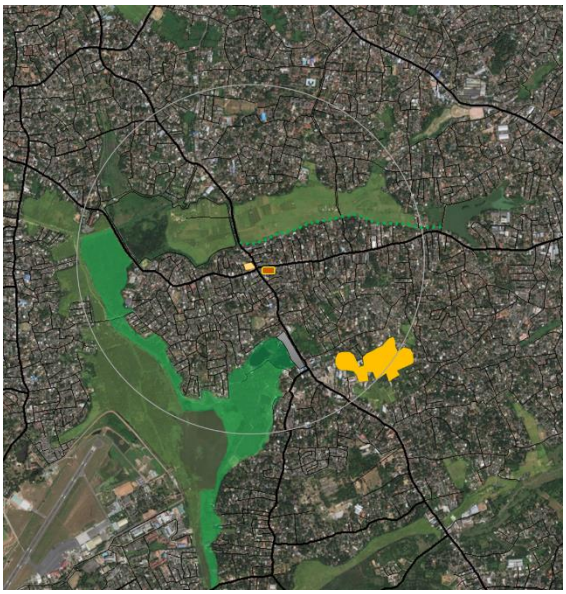


Figure 1: Proposed Nodal Development in Boralesgamuwa

3.6.5) Predictions related to Road Network Development and TOD

a) Integration Value Changes

After implementing the introduced road structure the changes in integration values and the road densities of the road structure could be observed as follows. The extended base line will be stronger as the spine of the road structure while the north of the area attracting a higher integration compare to present structure.

Figure 6: Integration for Proposed Road

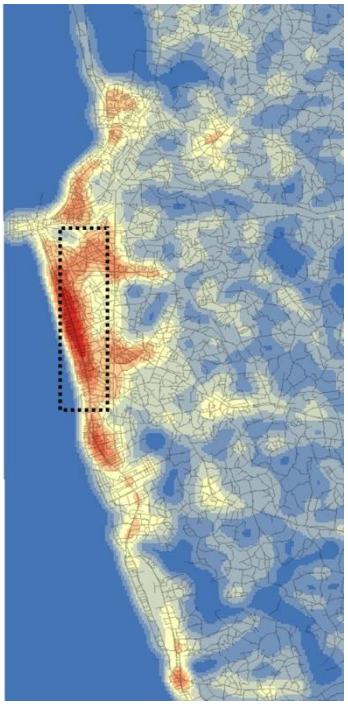


Figure 7: Existing Road Density

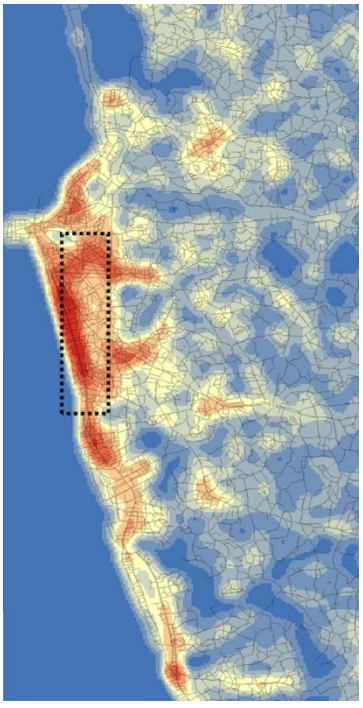


Figure 8: Proposed Road Density

b) STRADA modeling

As the major expectation of this strategic interventions is to reduce the traffic conjunction in the city, the above discussed major interventions are leads to that and it has been shown in the following analysis which is STRADA modeling predicted for the proposed roads structure and the population. It has clearly shown that the capacities of the existing roads are exceeded and due to the proposed interventions concentrated over capacities are dispersed and roads capacities will get in to moderate level.

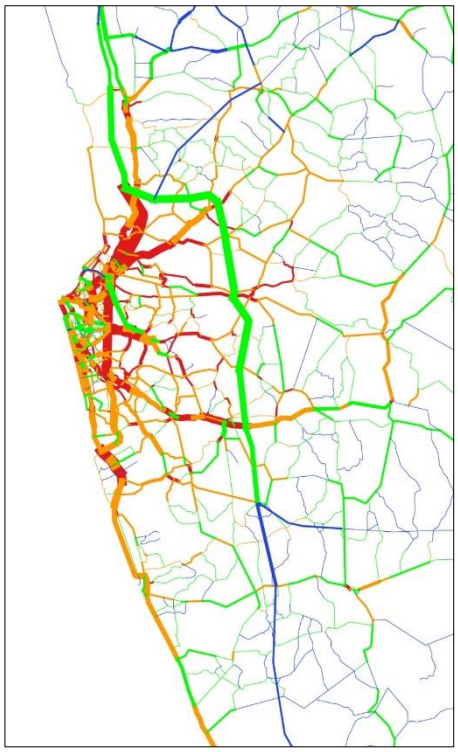


Figure 9: STRADA modelling (Volume Capacity Ratio and Traffic Volume – Existing Scenario)

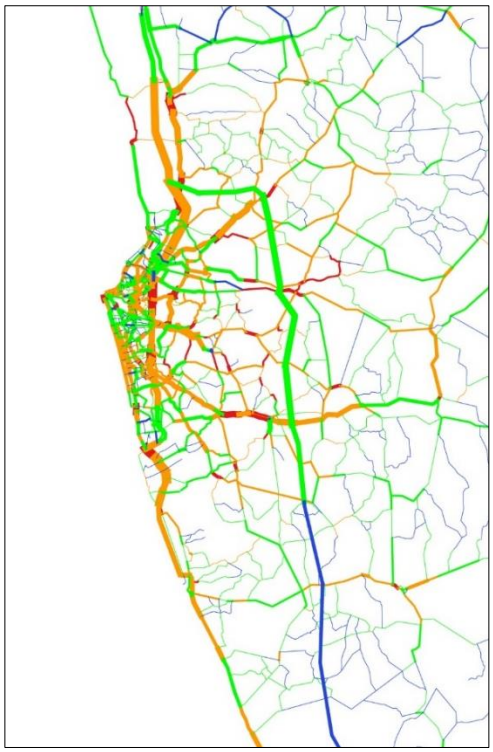


Figure 10: STRADA modelling (Volume Capacity Ratio and Traffic Volume with Proposed Projects)

Since, there are major public transport developments covering entire planning area, it has huge impact to distribute the rail and road based public transportation passenger volume capacities with the other proposed public transport modes. It has predicted with the STRADA modeling for year 2035. Because, the implementation of these projects will take more than 05 years and its impact could be observed after onwards.

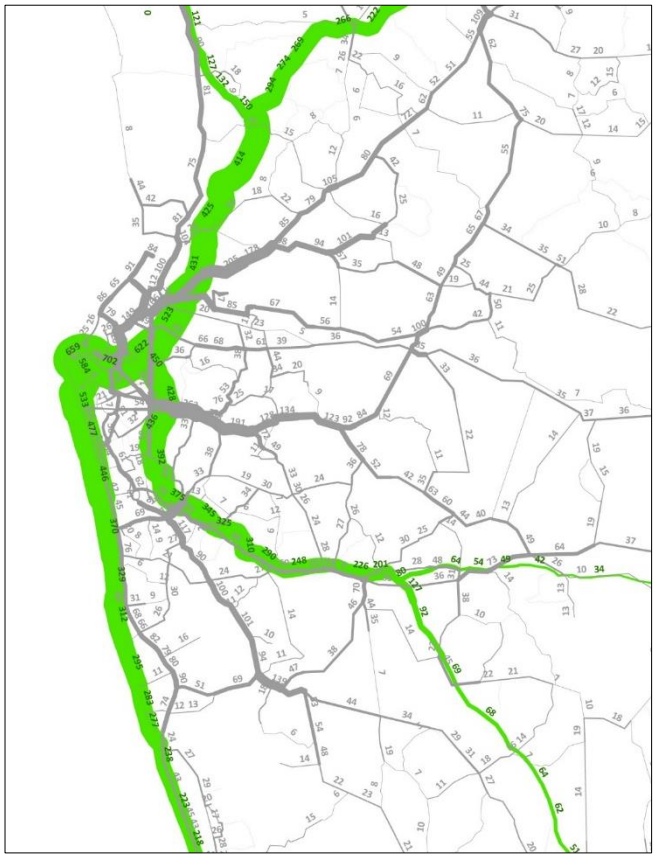


Figure 12: Public Transport Impacts

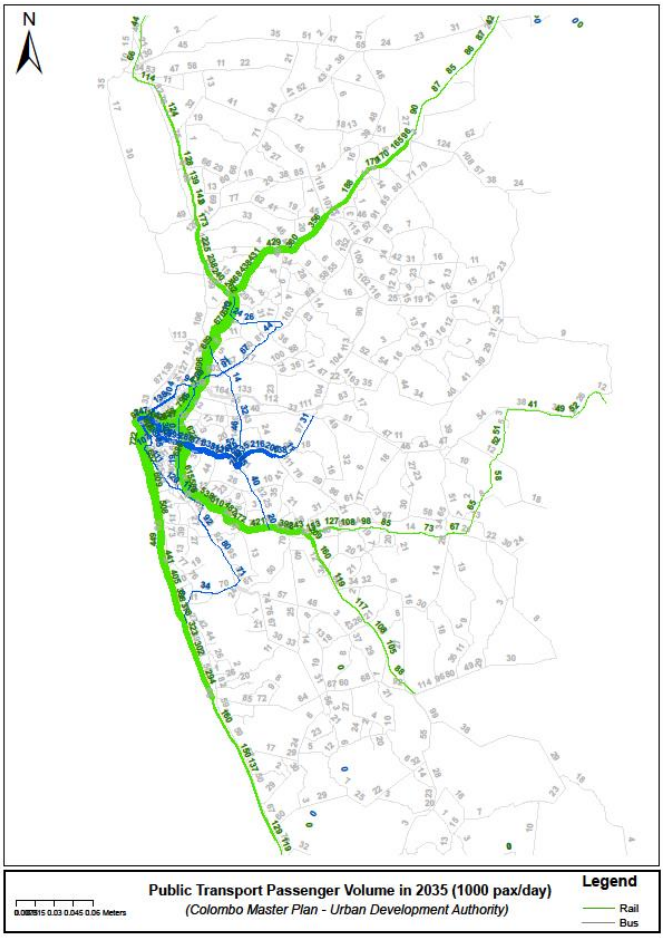


Figure 11: 2035 Public Transportation improvements LRT/ Rail Electrification and other public Transport Interventions

c) Land Value Changes

Apart from the water front development road development and transit orient development will influence to change in land values as follows. The land value changes are expected based on the real estate market studies.

Assumptions

Overall land-value premium of 6 kilometer radius of TOD area is about 28%.

Property values fell by 7% for every 10% increase in distance from a Metrorail station, up to a radius of 2,500 feet

Source: Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects, The National Academies Press

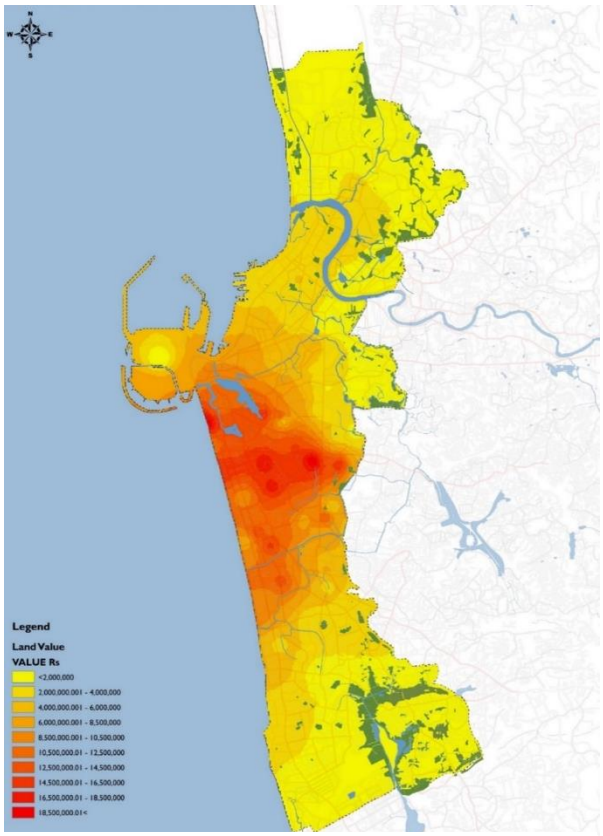


Figure 14: Existing Land Values

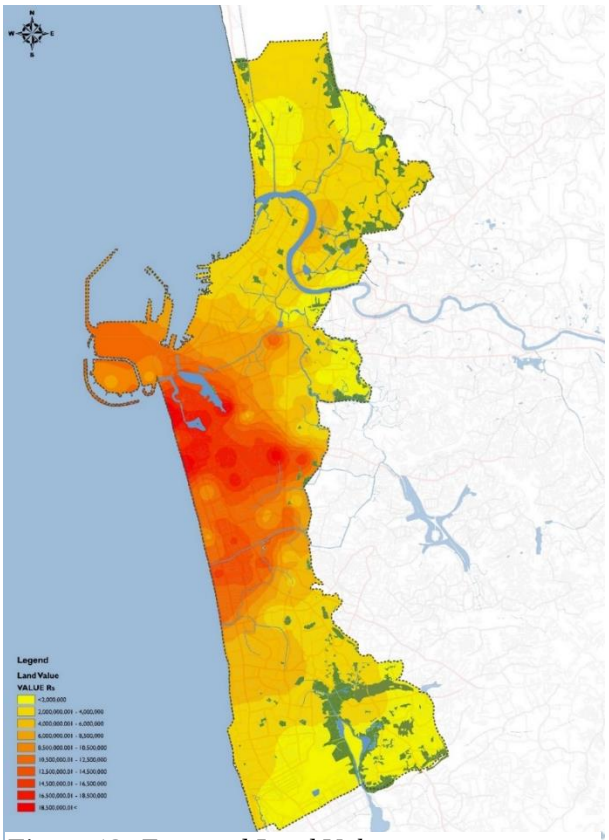


Figure 13: Expected Land Values

Also Transit oriented developments will directly impact to 5.3 sq. km of area from total area as Peliyagoda 1,186,226 sq. Meters, Pettah 1,181,640 sq. Meters , Dematagoda 1,492,286 sq. Meters, Rathmalana 1,462,450 sq. Meters. Neighboring impact is expecting for 19.2 sq. km. And the total impact area is 24% from the total developable area.

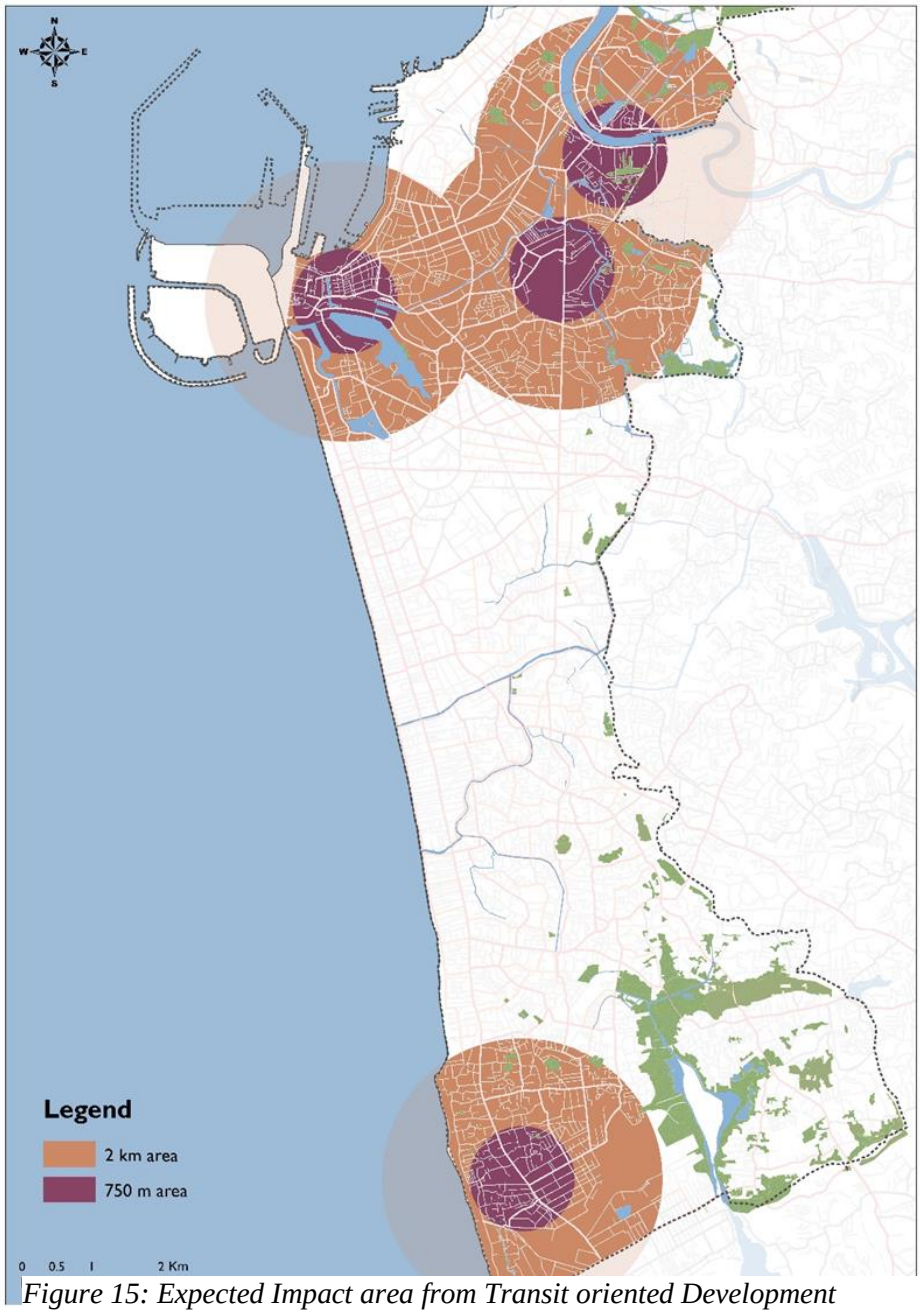


Figure 15: Expected Impact area from Transit oriented Development

City Economics Development Strategy

‘Leading to be an Investments Magnet in South Asia’

Enhanced Economic Space of High Quality for Retail, Tourism & Real-estate Markets

3.7) City Economics Development Strategy

Introduction

City Economics Plan is a mandatory component of any City Development Plan as it provides a guide how the city economics activities should be aligned with its overall spatial development contributing to achieve the anticipated city vision. The envisaged physical development of the city cannot be achieved without public and private sector investments. Hence, there should be a sound plan to ensure that city economics activities are organized in such a way that it leads towards the anticipated physical development. All physical development strategies such as water esplanades, nodal, transport, settlement and infrastructure developments and public open recreational space management should be coupled with city economics development strategies to derive catalysts projects which will ensure that city would have the right market exposures and would attract required investments to drive the city towards its planned transformations and achieve anticipated spatial form and city vision.

One of the main potentials of Colombo Commercial City is the booming economic sectors such as retail, private office in the fields of IT, Financial and Services fields, real estate, high-rise condominiums, logistics related industries and tourism etc. Exposing property market to cater above booming economic sectors is one of the main objectives of the City Economics Development Strategy of CCCDP – 2030. As per the context analysis, it was identified that Colombo is booming as an international business hub given its rankings in the international and regional market indices. Therefore, the other main objective of the City Economics Strategy is to enhance Colombo Commercial City's role as an international business hub, enabling to achieve its goal; the most sought waterfront business environment in the world.

The City Economics Development Strategy of CCCDP – 2030 has its focus on three major sectors such as port related logistics activity development, property development and tourism development. The property development may be undertaken in the means of direct property development interventions as catalyst projects to induce anticipated spatial development and releasing of potential real estate properties for development. More real estate properties will be exposed to the land market by releasing underutilized lands which are currently being occupied by underserved settlements, government office establishments, industries and warehouses which can be regarded as less optimum uses compared to the actual land values of those properties. The overall intention of all interventions that will be made under the City Economics Development Strategy is to supply realty space of high quality to the market in order to cater the increasing real estate demand created by various growing economic sectors of the city.

3.7.1) Port related Logistics Activity Development (Project Code – E-1)

Port is one of the most important elements of Colombo Commercial City based on which the city developed and gained its importance as a booming business hub both internationally and nationally. Colombo Port's strategic location in the international sea route is its most important potential that has enabled it to become one of the busiest maritime hubs of South Asia and to be ranked among the 'world's best 25 harbors in accordance with the Alphaliner rankings in 2017'. Port of Colombo handled over 6 million TEUs in the year of 2017, with its increased capacities due to the construction of Colombo International Container Terminal in 2015. As per the Economics Statistics of 2017, the performance enhancement of Colombo Port is as follows.

Indicator	2014	2015	2016
No. of vessels arrived	3,742	4,197	4,405
Total cargo handled (MT '000)	74,794	73,718	81,879

Table 3.2: Performance Indicators of Port of Colombo (2014 – 2016)

Source: Economics Statistics of 2017, Department of Census & Statistics Sri Lanka

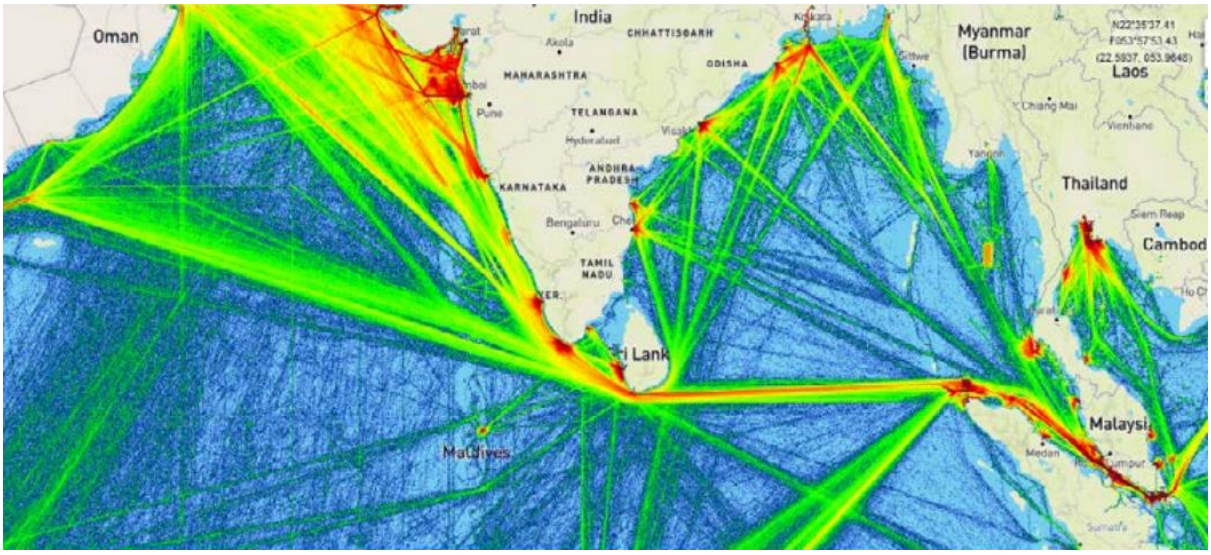


Figure 3.2: Marine Traffic Density Map, 2017

Source: National Export Strategy of Sri Lanka: Logistics Strategy 2018 – 2022/ Marine Traffic Density Maps; www.marinetraffic.com

With the growing performance of Colombo Port, occurs the need of physical expansion of port and related infrastructure and enhancement of port and logistics related services systems. It is one of the key objectives of the City Economics Development Strategy of CCCDP – 2019-2030, to address this need with the provision of adequate ground facilities to accommodate the port related logistics activities, fulfilling space requirements and incorporating port and logistics related projects proposed by relevant stakeholders.

All projects proposed by CCCDP – 2019-2030 and other relevant stakeholder agencies in the scope of Port related Logistics Development are aligned under City Economics Development Strategic Action Type 01 with the project code E-1.

3.7.1.1) Incorporating Colombo Port Expansion Project proposed by Sri Lanka Ports Authority (Project Code – E-1-1)

All proposals of ongoing Colombo Port Expansion Project conducted by Sri Lanka Ports Authority are incorporated into the Colombo Commercial City Development Plan under project code E-1-1.

The Colombo Port Expansion Project has been proposed with the objective of catering increasing demand of services in the international shipping industry. As per the master plan of Colombo Port Expansion Project, it is proposed to develop a new harbor having 3 terminals each having 1,200m length and facilities to accommodate 3 berths alongside. The Port of Colombo which had a capacity about 4.5 million TEUs is proposed to be increased with another 7.2 million TEUs capacity per annum in two separate phases under this development.

Harbor infrastructure works which consisted of a Main Breakwater of 5.14km length, Secondary Breakwater of 1.65km length, Access Channel of 9km length and basic infrastructures were completed as the first phase of the project in 2012. Construction of South Container Terminal (SCT) which is now known as Colombo International Container Terminal (CICT) which consists of a 1200m long quay wall, 18m depth basin and a yard capacity of 2.4 million TEUs was completed and commenced operation in 2013.

As per the master plan of Colombo Port Expansion Project, the East Container Terminal (ECT) consists of 1200m long Quay wall alongside of water depth of 18m and a yard capacity of 2.4 million TEUs per annum. However, as the first phase of ECT development construction of 440m quay wall alongside water depth of 18m has been successfully completed in 2015. Therefore, the remaining works of ECT Development and all projects proposed under the master plan of Colombo Port Expansion Project are incorporated into the CCCDP – 2019-2030 given its importance in achieving the Goal, Colombo as the most sought Waterfront Business Environment Experience in the World. The main projects proposed under the master plan of Colombo Port Expansion Project are indicated in the Table No. …

No.	Project Name	Proposed year of completion	Remarks
01	Harbor Infrastructure Works	2012	Completed
02	South Container Terminal/ Colombo International Container Terminal (CICT)	2013	Completed
03	East Container Terminal (ECT)	2020	Partly completed/ Ongoing
04	Jaya Container Terminal III & IV Extension	2018	
05	West Container Terminal (WCT)	2023	-
06	WCT Extension	2028	-
07	Colombo Port Expansion Project – Phase II	2026	-
08	ECT – SAGT (South Asia Gateway Terminal) Back to Back Terminal	2033	-
09	North Port Breakwater	2030	-
10	North Port Terminals	2040	-

Table 3.2: Proposals under Master Plan of Colombo Port Expansion Project

- *Source: Sri Lanka Ports Authority, 2018*

Figure 3.2: Proposals under Master Plan of Colombo Port Expansion Project

Source: Sri Lanka Ports Authority, 2018

3.7.1.2) Promoting logistics zones and corridors

Sri Lanka has a unique selling proposition to develop a world-class logistics hub and enter the global supply chain industry, which is rapidly digitalizing and creating a new generation of consumers. According to the Government, logistics services contribute 2.5% of gross domestic product, which represents around US$ 2 billion. *(National Export Strategy of Sri Lanka: Logistics Strategy 2018 – 2022)*

***Logistics** refers to a series of services and activities – such as transportation, warehousing and brokerage– that help to move goods and establish supply chains across and within borders. In Sri Lanka there is a wide range of facilities and services involving logistics: shipping, freight forwarding and logistics operations, ports and inland container depots/ dry ports, bonded zones and warehousing, domestic transportation, free zones and commercial hub activities.*

- **Logistics Strategy of Sri Lanka – 2018 - 2022**

The Logistics Strategy under National Export Strategy of Sri Lanka (2018 – 2022) adopts the vision 'Sri Lanka: the Indian Ocean maritime, logistics and distribution hub providing all services and facilities for integrated connectivity'. One of the strategic objectives following the above vision is to ensure adequate facilities and availability of a qualified labor force. Provision of adequate facilities refers to creating conditions such as land and logistics zones for the private sector to lead development of cold storage solutions and multi-user facilities across the country and attracting skilled labor will allow industry capacity to expand. This is one of the aspects which requires integrated logistics development and urban planning interventions as provision of suitable lands for the purpose of logistics development comes under the purview of city planning.

- **Incorporating Logistics Corridor Development proposed by Western Region Megapolis Planning Project – 2030 (Project Code – E-1-2)**

In conformity to the policy guideline on provision of adequate facilities as given by the Logistics Strategy of Sri Lanka (2018 – 2022), Western Region Megapolis Planning Project – 2030 aims to establish a logistics corridor connecting Port of Colombo and Bandaranaike International Airport at Katunayake. It is planned to connect the city through expressways and a railway network for freight handling and transportation and to include distribution centre, warehousing, cold storage, dry port, cargo distribution and trans-shipment facilities.

Figure 3.2: Concept Plan of Logistics Corridor proposed by Western Region Megapolis Master Plan Project - 2030

Source: Ministry of Megapolis & Western Development, 2018

All projects which have been proposed under the Logistics Corridor Development by Western Region Megapolis Master Plan Project and which are falling within the boundary limits of Colombo Commercial City are incorporated into the CCCDP – 2019-2030 under the project code – E-1-2 given the condition that they shall be in conformity with the overall concept and proposals of CCCDP – 2019-2030.

- **Promoting two dedicated zones for Logistics Activity Development within Colombo Commercial City**

Around 80% of the logistics companies are located within Western Province, and among them the majority are located in close proximity to Colombo Port; areas such as Bloemandhal, Kotahena, Modara, Mattakkuliya, Dematagoda and Peliyagoda and in the corridors connecting Port of Colombo and BIA at Katunayake and Port with nearest Export Processing Zones at Katunayake & Biyagama; areas such as Wattala, Ja-ela, Kolonnawa, Kotikawatta and Kelaniya. It is important to note that all these areas are located in the proposed Logistics Corridor by the Western Region Megapolis Master Plan – 2030.

In order to strengthen the proposed Logistics Corridor and to accommodate the trending space demand for logistics related activities in the immediate surroundings of Port of Colombo and the above mentioned corridors, it has been proposed to allocate two special zones out of 13 character zones of Colombo Commercial City – 2030 for Logistics Activity Development as mentioned in the Table No. …..

It is envisaged that these zones will provide the advantages of agglomeration of economies and will effectively facilitates all logistics related activities such as warehouses, logistics centers, customs inspection sites, cold storage facilities, export oriented industries and intermediate product processing industries etc.

Zone No.	Name of the Zone	Areas falling within the zone	Envisaged Character
05	Compact Logistics Development Zone	Port Area, Sea Avenue, Kotahena, Bloemandhal, Mahawatta, Aluthmawatha	- Port related industrial activities, logistics-based activities, warehouses etc. as prominent uses - Relatively high built-up density with 70% of average plot coverage
09	Moderate Density Logistics Development Zone	Part of Peliyagoda, Wanawasala, Dippitigoda and Hunupitiya	- Port related industrial activities, logistics-based activities, warehouses etc. as prominent uses - Relatively moderate built-up density with 65% of average plot coverage

Table 3.2: Proposed two dedicated zones for Logistics Activity Development

**NOTE: Previous Reference – Table No. …. The heterogeneous characteristics of 13 character zones of Colombo

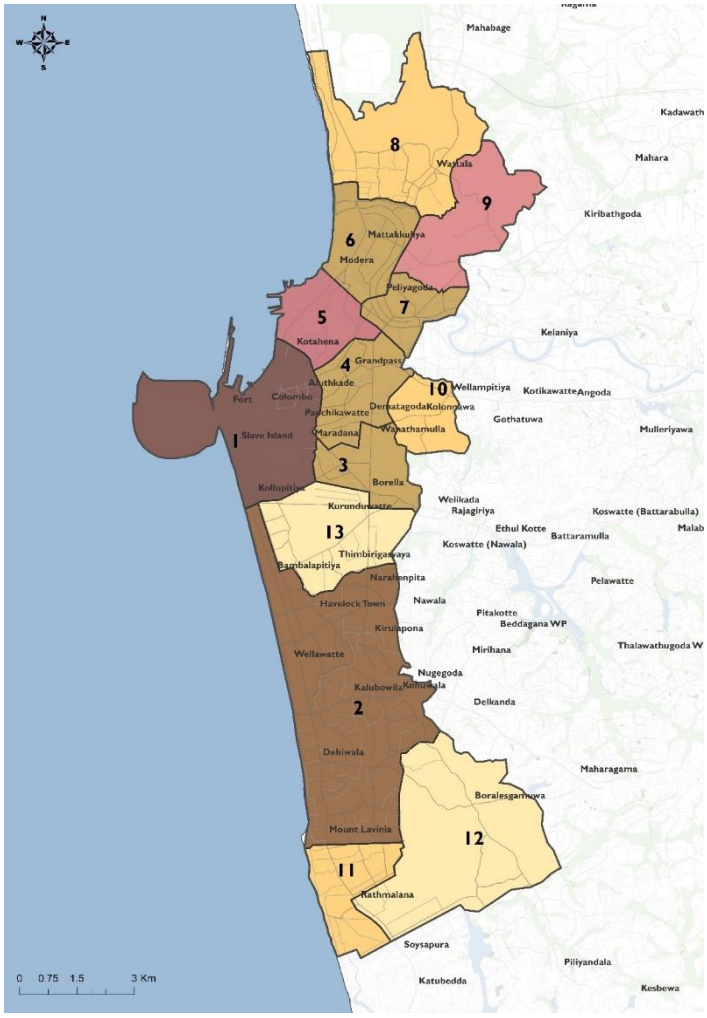


Figure 3.2: Proposed two dedicated zones for Logistics Activity Development in Colombo Commercial City

The special regulations and development guidelines pertaining to above two Logistics related development zones will be elaborated in Volume III of CCCDP – 2019-2030 under the zoning regulations.

3.7.1.3) Special Transport Development Interventions to facilitate Freight Transportation

To attract multimodal transport and logistics operators and maximize the potential of air and sea links to entice more goods to flow through Sri Lanka, rail, air and sea connectivity around the country must be improved in order to expand logistics services. *(National Export Strategy of Sri Lanka: Logistics Strategy 2018 – 2022)* In order to address this requirement, two special road and rail transport developments proposed by Ministry of Megapolis & Western Development and Sri Lanka Railways have been incorporated into CCCDP – 2019-2030 under the project code – E-1-3.

(a) Incorporating proposed Port Access Elevated Highway Project (Project Code – T-…)

In order to enhance the accessibility to Port and to provide a dedicated access way for freight transportation while keeping the freight traffic away from regular city traffic, an Elevated Highway has been proposed connecting Ingurukade Junction and Colombo Port City and proposed Multi

Modal Transport Hub at Pettah via Port of Colombo. The need of a separate Port Access Road has been initially identified and recommended by the CoMTrans Urban Transport Master Plan.

Port Access Elevated Highway Project conducted by Road Development Authority in collaboration with Ministry of Megapolis & Western Development is incorporated into the CCCDP – 2019-2030 under the project code – ….. as mentioned under the Transport Development Strategy, Table No. ….

Figure 3.2: Proposed trace of Port Access Elevated Highway

Source: Road Development Authority, 2018

(b) Incorporating New Electrified Railway Line (Dompe Line) Project (Project Code – T-2-2-3)

The need of a special Railway Line to support Freight Transportation has been highlighted in the CoMTrans Urban Transport Master Plan. It has stated that a Railway Line connecting Kelaniya Railway Station and Kosgama via Sapugaskanda, Biyagama and Dompe would enable the private sector stakeholders in the logistics related industry to transport bulk products including oil and containers. It has been emphasized that the promotion of this proposed railway line for freight transportation would alleviate traffic congestion in northern part of Colombo where many trucks carry cargo on the roads. Since the trace of the proposed railway line intersect Biyagama Export Processing Zone and other major industrial areas, it would definitely be an effective freight transport mode in future.

Hence, considering the importance of this new railway link, Construction of New Electrified Railway Line (Dompe Line) Project has been incorporated into CCCDP – 2019-2030 under the project code – T-2-2-3 as mentioned in the Table … under the Transport Development Strategy.

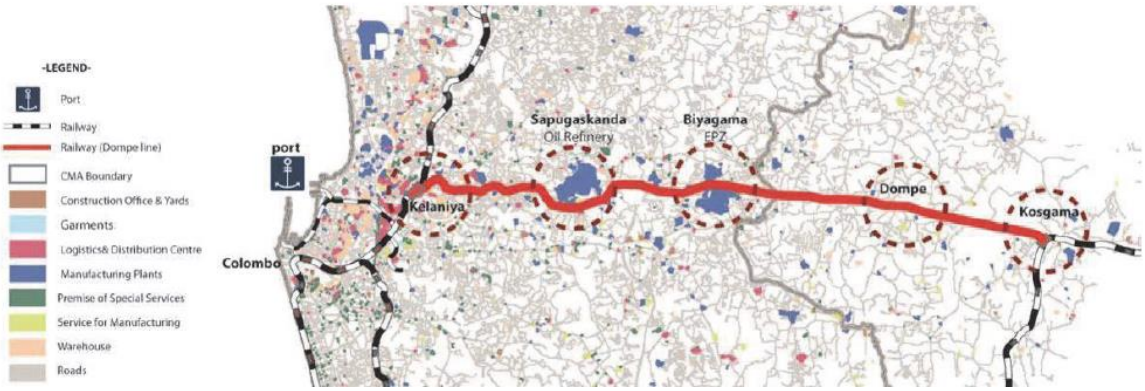


Figure 3.2: Proposed trace of New Electrified Railway Line (Dompe Line)

Source: CoMTrans Urban Transport Plan - 2014

3.7.1.4) Incorporating Bloemandhal Logistics Park Project (Project Code – E-1-4)

Bloemendhal Logistics Park Project has been proposed by the Ministry of Megapolis & Western Development in collaboration with the Sri Lanka Ports Authority, Sri Lanka Customs, Sri Lanka Railways and Urban Development Authority. The project includes clearing of solid waste dumping yard at Bloemendhal and development of a Logistics Centre, Customs Scanning Facility and an Urban Recreational Park in the Bloemendhal Area.

One of the main objectives of this development is to clear existing four warehouses with conventional cargo at Bandaranaike Quay at Colombo Port to provide space for its intended development into a fully-fledged 'Passenger Ship Terminal'. It is expected to relocate the functions of these warehouses to the proposed Logistics Centre at Bloemendhal. The overall expectation of this development is to regularize and speed up the logistics handling process and to increase the efficiency of cargo handling in Colombo Port ensuring higher contribution to the national income. The positioning of logistics centre and customs scanning facility in close proximity to the Port of Colombo will reduce the cost of cargo handling and boost up the import/ export industry through fast track operations.

Considering the importance of Bloemendhal Logistics Park Project as elaborate above, it has been proposed to incorporate it into CCCDP – 2019-2030 under the project code – E-1-4. The components Bloemendhal Logistics Park Project are as follows.

Figure 3.2: Proposed Bloemendhal Logistics Park Project – Project Components

Source: Ministry of Megapolis & Western Development, 2017

(1) Proposed Logistics Center (SLPA/ UDA)

(2) Proposed Logistics Center (SLPA/ UDA)

(3) Custom Scanning Facility/ Green Park

(4) Custom Scanning Facility/ Green Park

(5) Reserved Area for Railway Development

(6) SLPA Stage II Development

(7) SLPA Land for Future Accommodation

(8) Kimbula Ela Wetland Park

(9) SLPA Stage III Development

(10) Proposed Housing Complex/ Logistics

(11) Proposed Housing Complex/ UDA

(12) SLPA Land for Future Accommodation

3.7.1.5) Promoting Port related Recreational and Pleasure Activities (Project Code – E-1-5)

The spatial and functional separation of commercial ports and urban activities has become a controversial issue in many of the world's major ports. Hoyle (2000) has suggested that ports typically evolve through a five stage cycle: (i) primitive city port, (ii) expanding city port, (iii) modern industrial city port, (iv) retreat of the city from the waterfront, and (v) redevelopment of the waterfront. Around the world, many commercial ports are either in or moving towards the fifth stage in Hoyle's port evolution model. In many countries, public ports have gained increased autonomy through various commercialization and privatization reforms. As a result, many of these ports are seeking additional, alternative sources of revenues, which may be provided by waterfront redevelopment projects. ***(Michael C. Ircha, 2002)***

In the present context, Port of Colombo operates as a modern industrial port and acts separated from the city both spatially and functionally. The Port of Colombo is both visually and physically barricaded due to security reasons, thus is spatially separated from the city fabric. Even though, it is accessible for public for educational and occasional visits with special permission most of the time it acts as an industrial monster with whom the city has no relationship in its daily functions.

However, it can be identified that the Port of Colombo has the potential to promote a part of it for pleasure and recreational activities combined with waterfront development, aqua-based recreational activities, cruising and boat rides etc. especially parallel to ongoing Colombo Port Expansion Project. Hence, the project; Promotion of port related pleasure and recreational activities linked with Port of Colombo is proposed as a strategic project by CCCDP – 2019-2030 under the project – E-1-5.

3.7.2) Property Development (Project Code – E-2)

The main objective of intervening in the property market of Colombo Commercial City is to steer up the property market and induce modern developments especially in present underutilized areas which indicate relatively low land values due to deteriorating built environments, non-exposure and incompatible uses. On the other hand it is expected to ensure adequate supply of high quality investment space for trending economic sectors such as real estate, tourism, retail, private office and condominiums etc.

Two main strategic interventions made for property development of Colombo Commercial City include direct engagements in property development through catalyst projects, state housing projects and special property development projects and exposing of realty properties (land and built spaces) for development through releasing of lands from their existing incompatible uses. All property development projects proposed under CCCDP – 2019-2030 are aligned under the City Economics Development Strategic Action Type 02 with the Project Code – E-2.

3.7.2.1) Direct Engagements in Property Developments (Project Code – E-2-1)

(a) Catalyst Projects proposed by CCCDP – 2019-2030 under Water Esplanade and Nodal Developments (Project Code – E-2-1-1)

The catalyst projects proposed for Water Esplanade Developments and Nodal Developments under Water Esplanades Development Strategy and Transport Development Strategy respectively are one of the direct engagements in property development made by CCCDP – 2019-2030.

- **Property Development Catalyst Projects proposed under Water Esplanade Developments**

No.	Project Name	Project Code	Previous Reference
01	Hamilton Canal Entrance Development Project	W-4-1-1-1-d	Table 3.10: Proposed Catalyst Projects at the Recreational Stretch of Marina Investment Esplanade
02	Incorporating the Construction of Multistoried Mixed Development Buildings at each Railway Station at Southern Railway Line proposed under Maritime City Development Project proposed by Ministry of Megapolis & Western	W-4-1-3-2	Table 3.12: Proposed Catalyst Projects at the Premium Investments Stretch of Marina Investment Esplanade
03	Incorporating the property development projects of Colombo North Gate Development Project proposed by Urban Development Authority which includes ……	W-4-2-1	Table 3.13: Proposed Catalyst Projects at the Kelani River Investment Esplanade
04	Incorporating property development projects proposed under Beira Lake Intervention Area Development Plan - … proposed & implemented by Urban Development Authority	W-4-3-1	Table 3.14: Proposed Catalyst Projects at the Beira Lake Investment Circle
05	Conducting a Mixed Development Project at Sri Nigrodharama Mawatha Slums Area (approx. extent of 3 ha)	W-4-5-2	Table 3.16: Proposed Catalyst Projects at the Dematagoda, Kinda Canal & Kirulapana Canal Investment Esplanade

Table 3.2: Property Development Catalyst Projects proposed under Water Esplanade Developments

- **Property Development Catalyst Projects proposed under Nodal Developments**

No.	Project Name	Project Code	Previous Reference
01			
02			
03			
04			

Table 3.2: Property Development Catalyst Projects proposed under Nodal Developments

(b) Property Developments conducted under Urban Regeneration Project of UDA (Project Code – E-2-1-2)

Property development in the scope of housing is carried out under the Urban Regeneration Project (URP) of UDA. The housing projects carried out under URP fall within three main categories such as low-income housing, middle-income housing and luxurious housing. All housing developments

proposed by URP of UDA in the boundary limits of Colombo Commercial City are incorporated into CCCDP – 2019-2030 under the project code – E-2-1-2.

- Low-income housing development projects

No.	Project Name	Location	Remarks
01			
02			
03			
04			

- Middle-income housing development projects

No.	Project Name	Location	Remarks
01			
02			
03			
04			

- Luxurious housing development projects

No.	Project Name	Location	Remarks
01			
02			
03			
04			

(c) Special Property Development Projects conducted by UDA in collaboration with relevant stakeholders (Project Code – E-2-1-3)

No.	Project Name	Location	Project Nature	Remarks
01				
02				
03				
04				

Land	Proposal	Area (Ha.)
Bloemendhal Solid Waste Land	Urban Park	7.786162
Bakery Watta Land	Housing Development	1.043812
356-Watta-Dematagoda	Housing Development	1.695409
Chalmer's Granaries	Mixed Development	4.116529
Pattiya Junction Land	Mixed Development	1.251772
Henamulla Land	Housing Development	0.324428
Land at Kolonnawa	Mixed Development	0.119749
Tripoly Market Land	Cultural & Recreational Development	4.489795

3.7.2.2) Releasing of Realty Space (lands & built space) for Property Developments (Project Code – E-2-2)

It was identified in the context analysis as elaborated in Volume I of CCCDP – 2019-2030 that there is an increasing demand in real estate market within Colombo Commercial City. This real estate market demand is resulted due to growing economic sectors such as retail, tourism, private office and condominium housing. Even though, there is a market driven demand for real estate in Colombo Commercial City, it can be identified that the supply of realty space is quite limited due to several factors.

There are many potential lands which are currently at an underutilized state with compared to their land values and are not being exposed in the realty market. One of such reasons is the utilization of such potential lands by underserved settlements, government establishments, warehouses and industries which can be considered as inappropriate or less optimum uses in terms of planning point of view. Another reason is the abandoning or underutilization of some buildings due to their deteriorated state even though they are located at prime locations. Most of the old buildings which also possess historical or archeological value fall under this category, and there are many examples how these building are currently being underutilized irrespective of their prime values. On the other hand, there are many valuable lands having higher potentials for investments, but not being exposed in the realty market as they are being owned by state agencies and that there is no interest or proper mechanism to expose them in the market.

Hence, considering the above factors, following strategic interventions are proposed under the project code – E-2-2 by Colombo Commercial City Development Plan – 2019-2030 to release more potential lands for developments.

(a) Releasing lands occupied by Underserved Settlements through Urban Regeneration Project (URP) of UDA – (Project Code – E-2-2-1)

Urban Regeneration Project (URP) of UDA was commenced in year 2010 to fulfill the mission of identifying households living in underserved settlements within City of Colombo and relocating them to newly constructed housing units in high-rise apartment buildings. The objectives of URP are to provide better housing for underserved settlement communities while providing enhanced

opportunities to upgrade their lifestyles and to release prime lands which are currently being utilized by underserved settlements for investments and potential developments.

The list of lands which are proposed to be released for investments and public and private developments are indicated in the Table No. …

No.	The name of the land	Existing Underserved Settlements (USS)	Proposed relocation for USS	Releasing Land Extent	Proposed Development

It is expected to release approximately 390 Acres of lands within Colombo Commercial City by relocating underserved settlement communities to newly constructed housing units in high-rise apartment buildings. It is important to note that 48% of total liberating lands are located in the immediate or neighboring surroundings of waterfronts of Colombo Commercial City. This strategy can be considered as one of the most contributing interventions to achieve the anticipated goal; The most sought Waterfront Business Environment Experience in the World.

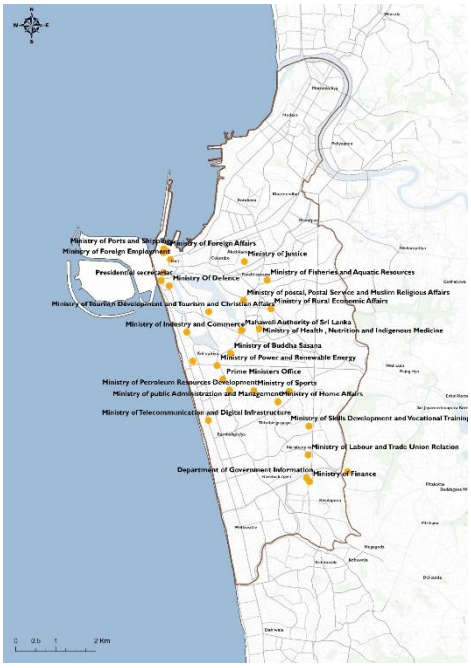
Hence, the Urban Regeneration Project components; relocation of underserved settlements and releasing of lands for investments are incorporated into the Colombo Commercial City Development Plan under the Project Code – E-2-2-1.

(b) Releasing of lands by relocating Government Establishments to Kotte Capital City ((Project Code – E-2-2-2)

Sri Jayawardhanapura Kotte Sri Lanka's New Administrative Capital City Project was initiated by the Special Gazette Notification No. 335/5 of 1985 and one of the policy decisions followed that was the locating of administrative establishments within the declared administrative city boundary. Accordingly, many administrative establishments have already been located within Kotte administrative city. The continuity of this initiative was ensured by the recent intervention of Western Region Megapolis Planning Project – 2030 through which it has been identified to shift 214 number of Government and Semi-government Institutions to Kotte Administrative Capital City. This proposal has also been incorporated into the Kotte Capital City Development Plan (2019 – 2030) as one of its main strategies.

It is estimated that approximately 160 Acres of lands within Colombo Commercial City will be released for investments through this intervention. The list of identified Government and Semi-government Institutions which are proposed to be relocated are given in the Annexure No. …

The releasing of properties for investments by relocating Government Establishments to Kotte Capita as proposed by Western Region Megapolis Planning Project – 2030 and Kotte Capital City Development Plan (2019 – 2030) are incorporated into the CCCDP – (2019 – 230) under the Project Code – E-2-2-2.



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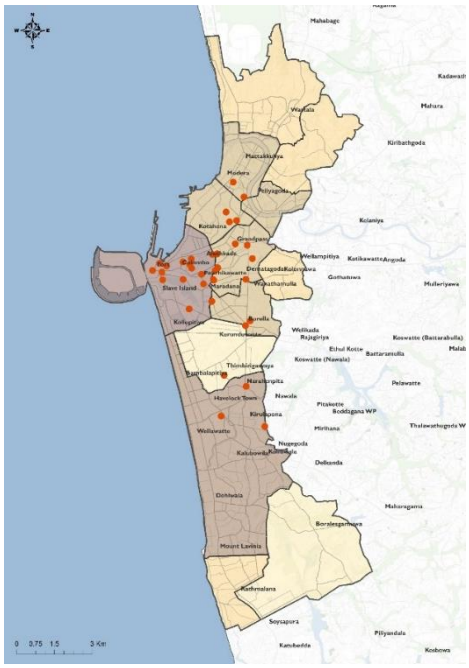
(C) Releasing of Urban Development Authority Owned Properties for Developments (Project Code – E-2-2-3)

The following UDA owned properties located within Colombo Commercial City have been identified to release in the property market for developments under the Project Code – E-2-2-3. The objective of this strategic action is to ensure the adequate supply of realty space to meet with the increasing demand. The list of lands proposed to be released are given in the Table No. …

No.	Name of the Property	Property Code	Extent (ha)	Recommendations/ Remarks

No.	Vacant Lands	Area (Ha.)
1	Bloemendhal Solid Waste Land	7.786162
2	Sirimavo Bandaranayake Stadium Land	1.855256
3	Land in Muthgamuwa Road	1.16954
4	Tripoly Market Land	0.578797
5	Madinnagoda Land	0.884812
6	Land near Waters Edge	1.747851
7	Pradeepa Mw Land	0.248952
8	Tower Flat Land	0.297142
9	Bekary Watta Land	1.043812
10	356-Watta-Dematagoda	1.695409
11	Dias Place Land	0.108042
12	Chalmer's Granaries	4.116529
13	Ferguson Road Land	1.945799
14	Pattiya Junction Land	1.251772
15	Henamulla New Housing Land	0.324428
16	Mayura Place Land	0.583401
17	Bekary Watta Land	0.81438
18	Mudaligewatta Land (Union Place Land)	0.675198
19	Akbar Lane Land	0.052475
20	Exise Department Land	0.356088
21	Telecom Car Park	0.262627
22	Chatham Street Land	0.162219
23	land proposed for J'pura University hostels	0.56791
	Total Area	**28.5**



Other releasing lands (GIS) - TOD

3.7.2.3) Management of Historical Buildings through conservation to safeguard historical value while enhancing economic value (Project Code – E-2-3)

There is a significant number of historically renowned buildings and sites located within Colombo Commercial City, which are the reminiscence of the historical events took place mainly in last five centuries including the Colonial Periods. There are 62 number of Historical Buildings located within Colombo Commercial City, which have been declared as Listed Buildings under the legal provisions of Antiquities Ordinance No. 9 of 1940.

In the present context, some of these buildings are well conserved and optimally used for economic activities. Yet, there is a significant number of buildings which are in a dilapidated status thus needs immediate conservation interventions to avoid them becoming totally disappeared over the time. In addition, most of these listed buildings are located in prime locations with high land values, thus they have the potential to be exposed in the property market and attract more investments.

In order to ensure conservation and optimum utilization of historical buildings to safeguard historical value and enhance economic value, it has been proposed to manage all 62 listed historical buildings (as given in Annexure ….) located within Colombo Commercial City by adopting following Conservation Tools. The objective of adopting these conservation tools is to conserve the identified historical buildings while enhancing their economic, environmental and social values with both direct and indirect means.

- **Reuse:**

This methodology is oriented to reuse the inherited buildings with modern or same use by keeping its original structure and finishing as well. It has academically justified the adoptive reuse of historical (buildings) is a better way forward to the sustainable development. Since it causes to preserve the physical context while transmitting the feelings of the heritage values of a site, the methodology is considered as most influential in heritage conservation.

- **Redesign**

This methodology is oriented to reuse the inherited buildings with modern use by keeping only its original structure while designing its interior 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 are already not physically exist or delipidated. The redevelop concept can used with buildings, monuments, sculpture, etc. This would lead to recreate the historical values within new context.

- **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 attracts the more economic benefits. But it is justifying the heritage valuers that the inherited monuments are having innumerable value besides its economic values. Therefore, embarking the concept among the relevant stakeholders by having proper marketing methodology, would enable people to realize the magnitude of the idea behind.

All the conservation, rehabilitation, management and marketing interventions that will be carried out with regard to 62 number of listed historical buildings and any other identified historically renowned building within Colombo Commercial City will be aligned under the Project Code – E-2-3 within CCCDP – (2019 – 2030). It is recommended to carry out these interventions in accordance with the Antiquities Ordinance No. 9 of 1940 and in consultation with the relevant stakeholder agencies such as Department of Archaeology.

3.7.3) Tourism Development (Project Code – E-3)

Sri Lanka's tourism industry today lies along the continuum from exploration to development, depending on the destination. The Vision of Sri Lanka Tourism Strategic Plan (2017 – 2020) is 'To be recognized as the world's finest island for memorable, authentic and diverse experiences'. The Tourism Strategic Plan (2017 – 2020) identifies Colombo as one of Major Tourism Hubs located in the Main Touring Circuit connecting other major destinations of the country including, Cultural Triangle (Anuradhapura & Polonnaruwa), Kandy, Hill Country (Nuwara Eliya & Bandarawela) and Southwest Coast. The Jones Lang LaSalle Report – 2016 states that, a tourist who spends an average of 10 days in Sri Lanka stays at least 2 days in Colombo and spends around USD 100 per day.

Tourism sector is one of the major economic sectors of Colombo, and it has many potentials to be enhanced by promoting various categories of tourism such as;

- Sun & Beach Tourism
- Cultural & Heritage Tourism
- Fashion Tourism
- Water-based Tourism
- Cruise Tourism
- Nature-based Tourism
- Nightlife Tourism
- Culinary Tourism
- MICE (Meetings, Incentives, Conferences & Events)Tourism

Different Tourism Zones have been identified as indicated in the Map …. based on existing locational and resources potentials of each area to promote above mentioned various categories of tourism. The demarcation of Tourism Zones within Colombo Commercial City and identification of catalysts projects to activate these zones were carried out in accordance with the recommendations given in Sri Lanka Tourism Strategic Plan (2017 – 2020) for Tourism Development in Colombo.

No.	Name of the Tourism Zone	Areas falling within the Zone	Major Tourism Categories to be promoted
01	Beach Tourism Zone	31km long coastal stretch extending from Wattala to Ratmalana	Sun & Beach Tourism Cruise Tourism Fashion Tourism Nightlife Tourism Culinary Tourism
02	Aqua Tourism Zone 01 – River Experience	Surroundings of Kelani River stretching 7km length from Mattakkuliya to Kelaniya	Water-based Tourism Cruise Tourism
03	Aqua Tourism Zone 02 – Canal Experience	Either sides of Hamilton Canal, St. Sebestian Canal, Wellawatta Canal, Dehiwala Canal, Kirulapona Canal, Kinda Canal & Kittampahuwa Canal	Water-based Tourism Fashion Tourism Nightlife Tourism Culinary Tourism

04	Wetland Tourism Zone	Surroundings of Bolgoda Tributaries, canals and Attidiya Marsh & Sanctuary in Boralesgamuwa, Ratmalana & Attidiya	Nature-based Tourism Water-based Tourism Nightlife Tourism Culinary Tourism
05	Colombo Tourism Zenith	Colombo Central Business District Zone including Pettah, Beira Lake Surroundings, Colombo Port City, Kollupitiya, Bambalapitiya, Colombo 07, Borella, Narahenpita & Kirulapona	Fashion Tourism Nightlife Tourism Culinary Tourism MICE Tourism Water-based Tourism
06	Colonial Heritage Zone	Colombo Fort, Pettah, Sea Street, Colombo Port, Colombo 07 & Maradana	Cultural & Heritage Tourism Fashion Tourism Nightlife Tourism Culinary Tourism

With the intention of promoting relevant tourism categories within above identified tourism zones, following tourism related catalyst projects have been either newly proposed or incorporated into the CCCDP – 2019-2030 under the City Economics Development Strategic Action Type 03 with the Project Code – E-3.

3.7.3.1) Catalyst Tourism Projects to promote Beach Tourism Zone (Project Code – E-3-1)

a) Incorporating Tourism Projects proposed by stakeholder agencies at Beach Tourism Zone (Project Code – E-3-1-1)

No.	Project Name	Location/ Description	Implementation Agency	CCCDP Project Code
01	Colombo Port City Project	Adjacent to Galle Face at Colombo Fort	Ministry of Megapolis & Western Development & CHEC	E-3-1-1-1
02	Maritime City Development Project	Beach Strip from Kollupitiya to Wellawatta	Ministry of Megapolis & Western Development	E-3-1-1-2
03	Crow Island Beach Park Project		Metro Colombo Urban development Project	E-3-1-1-3
04	Development of Yacht Marina and Boat			E-3-1-1-4

	Building Yard in Dikowita			
05	Promoting a tourism fishery village at Dikkovita		Ministry of Economic Development	W-4-1-1-1-a *Previous Reference: Table 3.10
06	Developing a linear park along the beach from Kerawalapitiya to Kelani River Mouth at Mattakkuliya		Ministry of Economic Development	W-4-1-1-1-b *Previous Reference: Table 3.10
07	Promoting Preethipiura Beach for Recreational Activities		Ministry of Economic Development	W-4-1-1-1-c *Previous Reference: Table 3.10

b) Tourism Projects proposed by CCCDP – 2019-2030 at Beach Tourism Zone (Project Code – E-3-1-2)

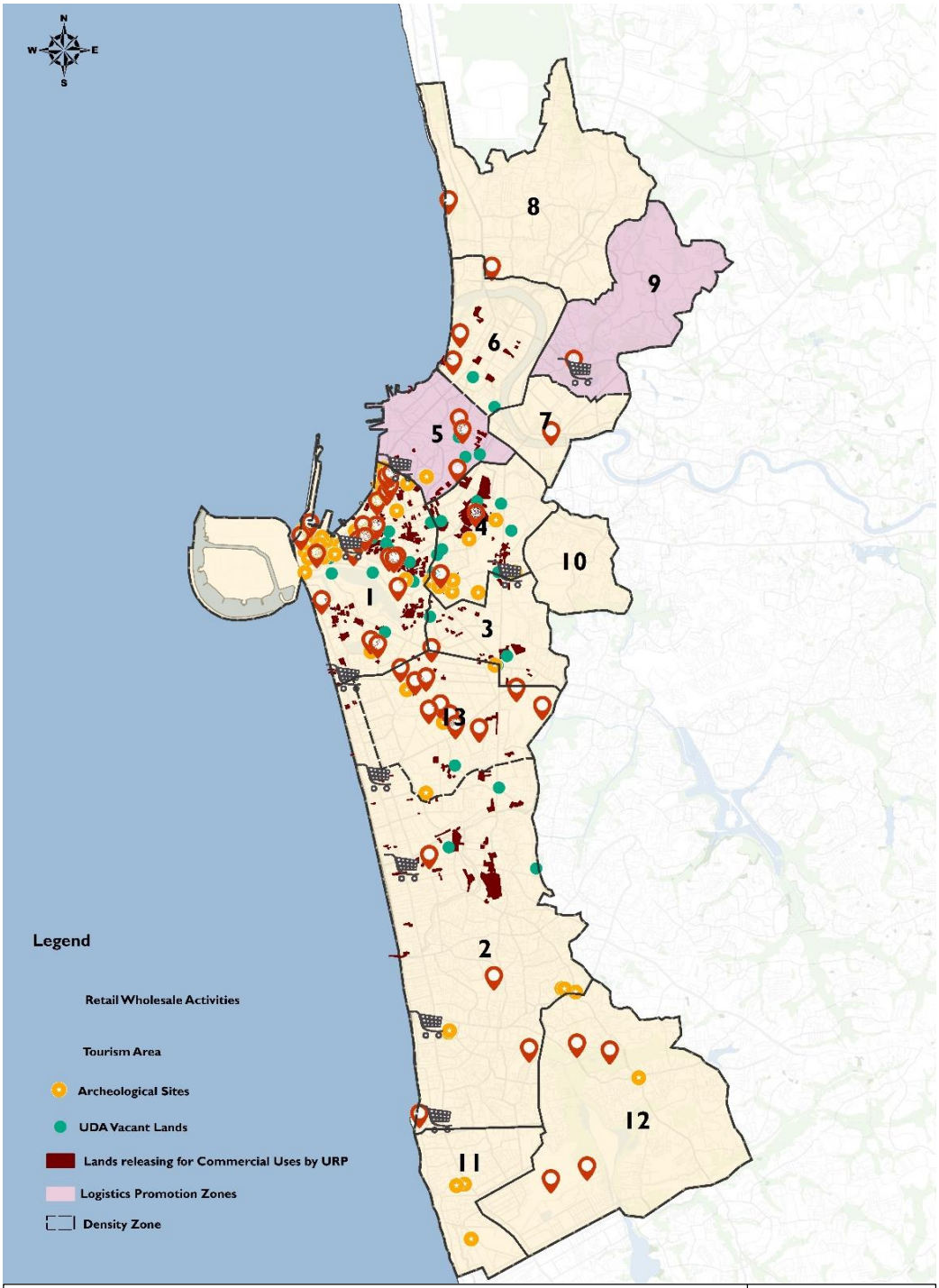
No.	Project Name	Location/ Description	CCCDP Project Code
01	Promoting water recreational and pleasure activities at Kelani River Mouth, Sea-front and Hamilton Canal Entrance Area		W-4-1-1-2 *Previous Reference: Table 3.10
02	Construction of a continuous walkable path (approx. 4.7 km) connecting Crow Island and Pettah Bazaar.		W-4-1-2-5 *Previous Reference: Table 3.11
03	Promoting the beach strip from Dehiwala Railway Station to Mount-lavinia including the section of underserved settlements (fishery industry based community settlement) for fisheries based tourism activities with application of the design concept of 'slum architecture'		W-4-1-3-3 *Previous Reference: Table 3.11

3.7.3.2) Catalyst Tourism Projects to promote Aqua Tourism Zone 01 – River Experience (Project Code – E-3-2)

a) Incorporating Tourism Projects proposed by stakeholder agencies at Aqua Tourism Zone 01 – River Experience (Project Code – E-3-2-1)

No.	Project Name	Location/ Description	Implementation Agency	CCCDP Project Code

01	Promoting water recreational and pleasure activities at Kelani River Mouth, Sea-front and Hamilton Canal Entrance Area			W-4-1-1-2 *Previous Reference: Table 3.10 & .....
02				
03				
04				
05				
06				
07				



Proposed Economic Development Plan 2030	JDA 2018

R&D Unit	Colombo Commercial City Development Plan 2018- 2030

Settlements Development Strategy

‘Promoting Colombo to be an Inclusive Home adored by all City Dwellers’

A variety of Housing Choices ranging from High-rises to Garden Houses in High Quality Living Environments

3.8) Settlements Development Strategy

Introduction

Settlements and housing have been principal components of cities of all time and provisioning of adequate and affordable housing is a mandatory duty of any city development plan. Present Cities attract population in millions creating a high demand for quality housing and settlement facilities. The 11th Sustainable Development Goal; Sustainable Cities and Communities, carries a special focus on the provision of quality housing and making cities and human settlements inclusive, safe, resilient and sustainable. Achievement of this goal becomes a crucial requirement in a context where half of the world population (3.5 billion) currently lives in cities all around the world and in 2050 it is expected to reach 6.5billion. The fact that 828million of current world city population living in slums stresses the due attention on this issue in planning of cities.

The conversion of residential land uses into commercial and other economically profitable uses is a common phenomenon observable in most of the large cities. Rapidly increasing land values qualify economically productive uses as optimum uses while gradually discouraging residential uses within city centers and leading them to peripheral areas causing suburbanization and city sprawl. In this context, housing in city centers become unaffordable especially for low- and middle-income communities. The out migration of city population causes city sprawl which is not regarded as effective phenomenon in the light of energy saving and Smart city concepts. On the other hand, housing unaffordability results in the emergence of underserved settlements.

Both above scenarios are evident within Colombo Commercial City, where the records state that approximately 50% of population of Colombo Municipal Council reside in Underserved Settlements located in the northern and central parts of City of Colombo. On the other hand, there are approximately 850,000 population daily commuting to city for work and to obtain services. Assuming if at least a proportion of this population had access to housing within Colombo Commercial City, it would have avoided considerable amount of traffic influx to the city and consequently would have saved considerable amount of energy, time and resources and reduced carbon emissions.

Hence, provision of affordable housing has been considered as one of the major aspects of CCCDP – 2019-2030 enabling to achieve its anticipated goal; the Smart, Smooth and Sensed Urban Space for all inhabitants. One of the main objectives of the Settlements Development Strategy is to ensure affordable housing of high quality for all communities making Colombo Commercial City an inclusive city. The other major objective is to provide a range of housing choices in appropriate locations to address the housing requirements of various communities of Colombo Commercial City and to ensure overall facilitation of all types of settlements.

The Settlements Development Strategy of CCCDP – 2019-2030 is composed of three broader interventions including overall area settlement facilitation, provision of middle-income and low-income housing in settlement promotion areas and management of underserved settlements. These interventions are proposed in line with the policy recommendations given in the National Housing Policy (Revision of January 2017) which adopts the goal; Shelter for All by 2025. The settlements development Strategy of CCCDP – 2019-2030 adheres to the policy recommendation on urban housing given in National Housing Policy – 2025 which is, 'Increase access to affordable housing

options to all through the optimization of urban land use, integrated mixed development and densification'.

3.8.1) Introducing Six Settlement Promotion Areas to cater future residential demand

Among the future proposed 13 character zones of Colombo Commercial City, six of them are considered to be residential prominent zones. Thus these six zones are designated as Settlement Promotion Areas and will be given special consideration in carrying out residential development and facilitation projects.

3.8.1.1) Identification of Six Settlement Promotion Areas

Identification of residential prominent zones/ settlement promotion areas was based on the determination of overall densification zones and character zones as elaborated in the sections 3.4.1.2 and 3.4.2.2 respectively under the Spatial Development Strategy. The market trends in residential development and suitability for residential development in terms of availability of infrastructure were two main criteria considered for the identification of settlement promotion areas. The six settlement promotion areas fall into three broader densification zones; high, moderate and low thus each area will have different residential activity densities based on the respective densification classification.

Character Zone No.	Settlement Promotion Areas/ (Residential Prominent Character Zones)	Total Extent	Respective Areas falling within the zone	Anticipated Residential Character
06	High Density Residential Zone		Mattakkuliya, Modara, Madampitiya	Special concentration area of High-rise residential apartments built for low-income communities of Colombo
08	Moderate Density Residential Zone I - Wattala		Hekitta, Kerawalapitiya, Dikovita and Part of Mabola	Middle- and high-income housing choices ranging from garden houses to luxury high/intermediate-rise residential apartments Considerable amount of high-rise residential apartments catering low-income communities
10	Moderate Density Residential Zone II - Kolonnawa		Kolonnawa and Wellampitiya	
11	Moderate Density Residential Zone III - Ratmalana		Parts of Ratmalana and Mt-lavinia, Kaldemulla	

12	Moderate Density Green Residential Zone		Part of Ratmalana, Belekkade Junction, Bakery Junction and Boralesgamuwa	Middle- and high-income housing choices ranging from garden houses to luxury intermediate/low-rise residential apartments
13	Low Density Garden Zone		Colombo 07 including Cinnamon Garden, Thimbirigasyaya	Housing choices ranging from garden houses to luxury low-rise residential apartments

Table 3.5: Six Settlement Promotion Areas and anticipated Residential Character of each zone

3.8.1.2) Special Housing Development Projects at Settlement Promotion Areas

The following Housing Development Projects proposed by both Urban Development Authority under Urban Regeneration Project and through CCCDP – 2019-2030 and other stakeholder agencies have been incorporated into the CCCDP – 2019-2030 under Settlements Development Strategy – Action Project Type 01 with the Project Code – S-1.

a) Housing Development Projects undertaken by UDA (Project Code – E-2-1-2)

The current interventions of Urban Development Authority on the housing sector is through the Urban Regeneration Project (URP) which conducts intermediate-rise or high-rise residential apartments focusing on low-income to high-income earning communities. The major focus of URP is on construction of high-rise residential apartments to relocate low-income communities currently residing in underserved settlements within City of Colombo and its suburbs.

The ongoing and proposed low-income housing projects that are falling within the timeframe of CCCDP – 2019-2030 have been incorporated into the plan under Project Code – E-2-1-2 as one of the property development interventions under City Economics Development Strategy. The lists of low-income, middle-income and luxurious housing projects which are mentioned in the Table ….. under section 3.7.2.1 of City Economics Development Strategy of CCCDP – 2019-2030 have been re-arranged here under each Settlement Promotion Area.

- Zone 06 - High Density Residential Zone
- Zone 08 - Moderate Density Residential Zone I – Wattala
- Zone 10 –

b) Housing Development Projects undertaken by other Stakeholder Agencies (Project Code – S-1-1)

The housing development projects undertaken by other relevant stakeholder agencies such as National Housing Development Authority and Urban Settlements Development Authority etc. within the limits of Colombo Commercial City are incorporated into CCCDP – 2019-2030 under the Project Code – S-1-1.

No.	Project Name	Settlement Promotion Zone	Implementation Agency	CCCDP Project Code

3.8.1.3) Facilitation of Settlement Promotion Areas

The following interventions are carried out to facilitate the identified Settlement Promotion Areas.

a) Improving Accessibility of and within identified Settlement Promotion Areas

It is proposed to improve the accessibility within Residential Promotion Areas by introducing more pedestrian friendly road networks. Also, it has been proposed to locate multimodal transport hubs, TOD centers and regular nodal developments in close proximity to identified Settlement Promotion Areas as mentioned in the Table ….. The relevant MMTH, TODs and Regular Nodal Developments are elaborated under the section 3.6.4 of Transport Development Strategy of CCCDP – 2019-2030.

No	Settlement Promotion Area	Main Transport Hub in Close Proximity
01	High Density Residential Zone	Pettah & Peliyagoda MMTH
02	Moderate Density Residential Zone I - Wattala	Peliyagoda MMTH & Hunupitiya Regular Nodal Development
03	Moderate Density Residential Zone II - Kolonnawa	Peliyagoda MMTH & Dematagoda TOD
04	Moderate Density Residential Zone III - Ratmalana	Ratmalana TOD
05	Moderate Density Green Residential Zone	Boralesgamuwa Regular Nodal Development
06	Low Density Garden Zone	Pettah MMTH

b) Provision of more Public Open Spaces

It is proposed to provide more Public Open Spaces within identified Settlement Promotion Areas in order ensure that residents have access to adequate open spaces within the settlements. The list of

major parks provided within Settlement Promotion Areas are given in the Table … A detailed elaboration on all types of Public Open Spaces provided are given under the Public Open Recreational Space Management Strategy.

c) Provision of adequate infrastructure facilities

Availability of adequate infrastructure facilities such as pipe-borne water, electricity and sewerage and waste water management was considered as a main criterion in determining Settlement Promotion Areas. One of the main reasons to select Ratmalana and Boralesgamuwa as Settlement Promotion Areas was the availability of a sewerage and waste water management systems which are currently at an underutilized status in terms of their capacity usage.

In addition, it has been identified that provision of sewerage and waste water management systems is a mandatory requirement in the Settlement Promotion Areas; Moderate Density Residential Zone I – Wattala and Moderate Density Residential Zone II – Kolonnawa which are not currently being covered by any sewerage and waste water management system.

The demand forecast on pipe borne water supply, sewerage, solid waste and waste water disposal of each densification zone including Settlement Promotion Areas are given under the section ….. of Utilities Management Strategy of CCCDP – 2019-2030.

3.8.2) Carrying out Overall Area Settlement Facilitation

The concept of human settlement is a combination of both social and physical components. A settlement is a combination of group of human and their habitat with all the infrastructure and the natural setting required to create a human settlement. It implies that when the settlement exceeds the threshold population in respect to the resources in a habitat it causes to create many issues related to urban settlement. Therefore, a settlements development should focus on empowering both social and physical components as elaborated under the Settlements Development Strategy – Action Project Type 02 with the Project Code – S-2.

Major factors that have been highlighted by the specific targets under 11th Sustainable Development Goal are ensuring access for all to adequate, safe and affordable housing, having access to safe, affordable and sustainable transport systems and having sustainable settlement plan with more green and public spaces. The interventions under Overall Area Settlement Facilitation have been proposed in order to address these concern areas.

3.8.2.1) Identification of overall housing requirement to cater future demand

As per the population forecast, the future expected population distribution and corresponding housing requirement in each character zone are presented in the Table No….

Zone No.	Character Zone	Population - 2030	Residential Space – 2030/ (m^2)	No. of Houses

**Note: No. of Housing Units has been calculated based considering average household size as 4 and average floor area of a housing unit as ….m^2

3.8.2.2) Overall Area Settlement Facilitation Interventions

In addition to the facilitation of identified Settlement Promotion Areas, following infrastructure facilities are provided covering entire Colombo Commercial City focusing on overall area settlement facilitation.

- Improving the accessibility and mobility within Colombo Commercial City by;
    - Introducing new public transport modes such as LRT, Electrified Railway and Bus Priority Lane Systems and by improving existing Rail and Road Network
    - Enabling easy transfer between different modes of transport by placing MMTHs, TOD Centers and Nodal Developments at strategic points and introducing Park & Ride Systems

      (Detailed Elaborations are given under the Transport Development Strategy of CCCDP – 2019-2030)
- Ensuring the adequate availability of social infrastructure such as schools, hospitals, crematoriums and public markets. (Detailed Elaborations are given under the Utilities Management Strategy of CCCDP – 2019-2030)
- Provisioning of adequate Public Open Recreational Spaces as to ensure that every child has access to a children's park within a radius of 500m and every citizen has access to a larger park within 1-2km radius

3.8.3) Management of Underserved Settlements

As per the most recent survey on underserved settlements conducted by UDA in 2011, approximately 53% of population of City of Colombo lives in underserved settlements under poor living conditions such as 41% of settlements having common toilets, 8% without toilets, 28% having serious issues regarding disposal of sewage and 50% not having connected to the city's sewer network. On the other hand, most of these underserved settlements are located in prime locations of Colombo Commercial City especially along the river, canal and coast reservations, and this has led to serious negative environmental and economic repercussions as elaborated in the Chapter 03 of Volume I of CCCDP – 2019-2030.

In this context, CCCDP – 2019-2030 aims to provide sustainable solutions to the issues related to existence of underserved settlements by adopting two main approaches such as relocation and re-design/ redevelopment interventions as appropriate for the specific situations. It is expected that these interventions would contribute to achieve the objective of CCCDP – 2019-2030; assuring improved quality of lives of all communities and above minimum standards in physical quality of living environments of all citizens in Colombo Commercial City by 2030.

The application of relocation and re-design/ redevelopment interventions on will be carried out based on following criterion based on the type and character of the underserved settlements.

No.	Type/ Character of Underserved Settlements	Recommended Intervention
01	Shanties (Any settlement that can be categorized as a 'Shanty' based on the definitions given in Table …)	Relocation
02	Slums located in the reservations of coast, inland water bodies, marshes, railway and any other type of declared reservations and slums located adjacent to water bodies	Relocation
03	Unauthorized Slums (USS households who do not have freehold land rights)	Relocation
04	Slums where households have freehold rights to the land	Redesign/ Redevelopment
05	Underserved settlements which have a locational attachment to the livelihood/ culture of majority of settlement dwellers	Redesign/ Redevelopment
06	Low-income community flats which are in poor condition	Redesign/ Redevelopment

Term	Definition
Slum	'slum' refers to old tenement buildings built for influxes of migrant labor to the city mostly in the 1930s. In the local language this type of settlement arrangement is called mudukku. People who live these types of houses do not like to call their houses by the official name or popular local term. They usually call these houses 'row houses' (peli gewal)
Shanty	The collection of small, single-unit improvised structures constructed with nondurable materials on vacant land throughout the city are shanties. Shanties illegally occupy state or private lands, usually with no regular water, sanitation or electricity supply, the majorities are built on land subject to frequent flooding. In local language this type of settlement arrangement is called *pelpath*. This term reflects a group of people who live in more difficult conditions and greater poverty than "*mudukku*" or slums according the common usage.

Source: The Policy Paper on Slum and Shanty Upgrading in Colombo prepared by the Slums and Shanty Division of Urban Development Authority of Ministry of Local Government, Housing and Construction in 1979.

3.8.3.1) Relocation of Underserved Settlements (Project Code – S-2)

All types of underserved settlement community relocation projects that will be carried out within the Colombo Commercial City will be aligned under Settlements Development Strategy – Action Project Type 02 with the Project Code – S-2.

It is recommended to adopt following model approaches as applicable for underserved settlement community relocation projects.

a) Public Private Partnership (PPP) Model

Land is handed over to a developer, who in return receives additional Floor Space Index (FSI) to build both market rate housing for sale & rehabilitation housing for slum dwellers.

b) On-site Relocation (In-situ development)

The implementing agency would provide a temporary accommodation for slum-dwellers until construction is completed. Then, beneficiaries will be moved back onto their original land, into improved housing with better amenities.

c) Participatory Slum Upgrading Program (PSUP)

Strengthening the capacity of local, central and regional institutions and key stakeholders' in settlement and slum improvement through the use of good governance and management approaches, pilot projects and contributing, where needed, to the policy development, and the implementation of institutional, legislative, financial, and normative and implementation frameworks.

The settlements which have been identified to be relocated under the Urban Regeneration Project of UDA are listed in the Table …

No.	Name of the Settlement

3.8.3.2) Redesign/ Redevelopment of Underserved Settlements (Project Code – S-2)

All types of underserved settlement redesign/redevelopment projects that will be carried out within the Colombo Commercial City will be aligned under Settlements Development Strategy – Action Project Type 02 with the Project Code – S-2.

It is recommended to adopt following model approaches as applicable for underserved settlement redesign/ redevelopment interventions.

a) Place based approach

Proposed Redesign & Maintenance Actions:

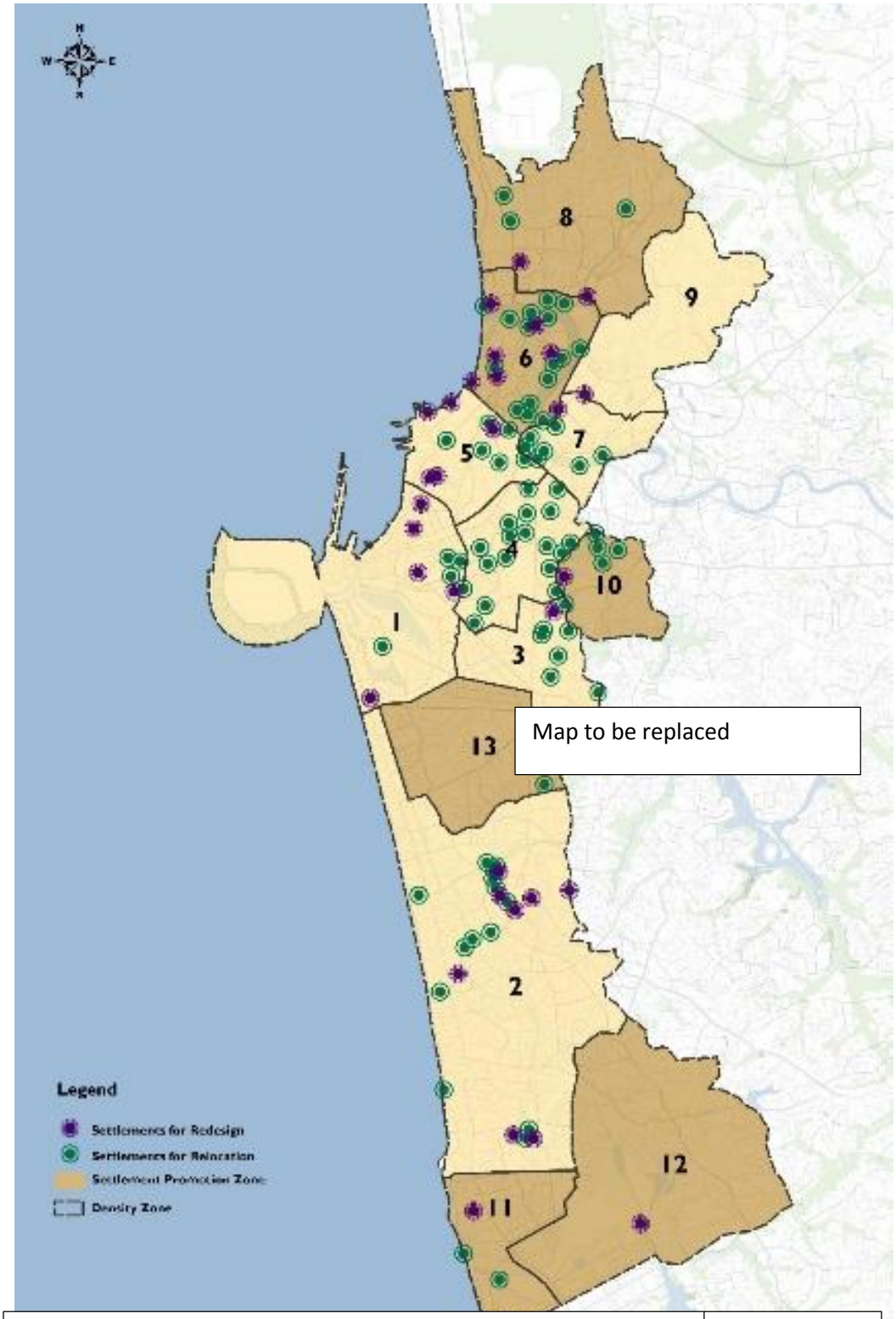
- Installing or improving basic infrastructure
- Removal or mitigation of environmental hazards
- Providing incentives for community management and maintenance
- Constructing or rehabilitating community facilities such as nurseries, health posts, community open space
- Regularizing security of tenure
- Home improvement
- Relocation/compensation for the small number of residents dislocated by the improvements
- Improving access to health care and education as well as social support programs to address issues of security, violence, among others
- Enhancement of income-earning opportunities through training and micro- credit

b) Slum Improvement Projects

The settlements have been initially identified to be redesigned/ redeveloped are listed in the Table …

No.	Name of the Settlement

Settlement Development Plan



Map to be replaced

Proposed Settlement Development and Management Plan 2030	JDA 2018
R&D Unit	Colombo Commercial City Development Plan 2018- 2030

Utilities Management Strategy

‘Enriching the City with upgraded Utility Services’

Efficient Networks of Utility Services running through Every Corner of the City

3.9) Utilities Management Strategy

Introduction

Well managed effective utilities network is a key component of a city that enables its efficiency functioning. It is important to have holistic and integrated solutions for city utilities management to ensure wise-resource management, energy conservation and equal access to infrastructure. Identification of demand and ensuring the adequate supply to match with the demand are basic functions of effective utilities management. The reason why a Utilities Management Plan should be combined with the City Development Plan is because it is necessary to ensure that all types of utilities and infrastructure are adequately supplied to meet the future demand that would be created consequent the anticipated developments which are being induced and facilitated through the Plan.

In the path of making "Colombo to be experienced as the Smart, Vibrant and Tropical Water Garden City of South Asia" the city should be provided with modern and adequate utilities and infrastructure facilities to cater all its owners; inhabitants, commuters and tourists. Two main objectives of CCCDP – 2019-2030 which guide on utilities management are to have optimum utility of the existing and proposed infrastructure systems by 2025 and to have an urban environment with state-of-the-art utilities and smart facilities enjoyable by all residents and commuters of Colombo Commercial City by 2030.

In order to fulfill the above mentioned two objectives related to utilities management of Colombo Commercial City, three types of broader interventions are made. Ensuring efficient supply of utilities such as pipe-borne water and electricity and effective management of waste water, solid-waste and storm water is one of the main interventions made through CCCDP – 2019-2030. In addition, special focus is given on provision of adequate social infrastructure and open public facilities to create convenient nodes, streets and public places.

3.9.1) Efficient Supply of Utilities

Supply of Pipe-borne water and electricity and management of waste water & sewerage, solid waste and storm water are the key focus areas considered under the broader intervention of efficient supply of utilities. All projects falling within the above focus areas are aligned under the Utilities Management Strategy – Action Project Type – 01 with the project code – U-1.

3.9.1.1.) Pipe-borne Water Supply

The pipe-borne water supply within Colombo Commercial City is owned and managed by National Water Supply and Drainage Board of Sri Lanka under the Western Province Metropolitan Area Water Supply Master Plan – 2013 which covers Colombo District and parts of Gampaha and Kalutara Districts. The mainly used surface water sources of the existing system are:

- Labugama and Kalatuwawa impounding reservoirs
- Kelani River and its tributary Seethawaka
- Kalu River and tributary Kuda River

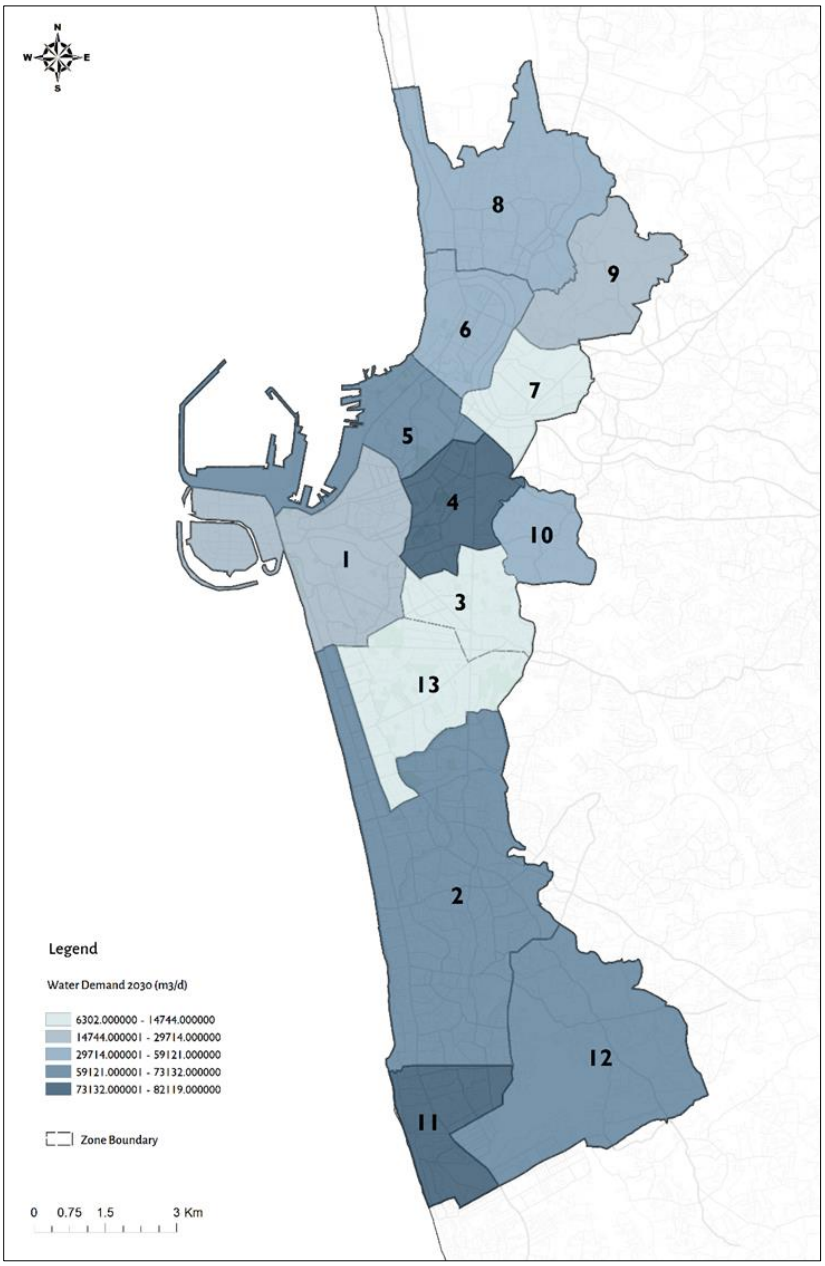
The Kelani River is an important source of drinking water for Colombo District. The Labugama and Kalatuwawa reservoirs are situated around 39 km from Colombo City and, at the border of Colombo and Ratnapura Districts.

a) Pipe-borne water supply demand

Colombo Municipal Council area has a big demand compared to the other local authorities. Generally, normal daily water consumption is considered to be 300,000 m^3/d with Non-Revenue Water. Ambatale water treatment plant is the main water supplier plant for CMC area. According to the Western Province Metropolitan Area Water Supply Master Plan (2013), projected water demand for planning area is 614,173 m^3/d and according to the plan projected domestic and commercial water consumption for 2030 is 627,925 m^3/d. for the calculate water demand in the plan get as a Residential water demand per person per day (lpcd) range from120 liters to 135 liters from low density to high density development. (These calculations assume the residential water demand per person per day (lpcd) as a range vary from120 liters to 135 liters from low density to high density development accordingly).

District	Estimated Ave. Day Consum. in 2011	Projected Maximum Day Water Demand (m^3/day)						
		2012	2015	2020	2025	2030	2035	2040
Colombo	554,495	712,498	798,371	814,130	898,508	971,255	1,057,200	1,138,382
Gampaha	143,236	171,591	224,742	334,119	418,488	489,056	549,184	604,837
Kalutara	72,758	97,717	137,543	186,734	253,109	312,917	383,142	434,700
Sub Total	**770,489**	**981,806**	**1,160,656**	**1,334,983**	**1,570,105**	**1,773,228**	**1,989,526**	**2,177,919**
Gampaha DSD*	**8,556**	**10,981**	**17,194**	**21,948**	**32,906**	**40,394**	**45,641**	**49,597**
Negombo DSD*				14,500	14,500	14,500	14,500	14,500
Bentota DSD*	**1,270**	**1,859**	**2,138**	**7,523**	**10,882**	**13,721**	**15,187**	**16,593**
Total	**780,315**	**994,646**	**1,179,988**	**1,378,954**	**1,628,393**	**1,841,843**	**2,064,854**	**2,258,609**
CMC	250,594	328,783	350,990	314,029	346,486	361,570	376,598	393,086

Note: demands include UFW, *indicates locations outside the study area
Source: The Study Team



b) Incorporating Water Supply Improvement Projects proposed by relevant stakeholders (Project Code – U-1-1)

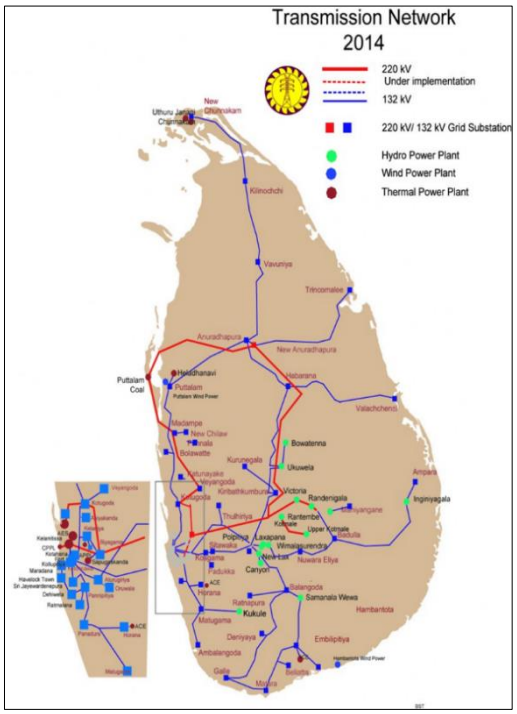
Greater Colombo & Colombo City, and water treatment plant improvement projects in Labugama, Kalatuwawa and Kelani River Bank can be considered as the main ongoing water supply rehabilitation projects. These projects would benefit 950,000 people and supply additional 22,000 m^3/d. Western Province Metropolitan Area Water Supply Master Plan has identified various short- and long-term projects to fulfill the expected water demand. The water supply projects which are related to the water supply system of Colombo Commercial City as proposed by National Water Supply & Drainage Board are incorporated into the CCCDP – 2019-2030 under the Project Code – U-1-1.

No	Water Supply Project	Project Code
01	Development of reservoir in Kelani River	U-1-1-1
02	Weliwita Water Supply Project	U-1-1-2
03	Kalu Ganga Water Supply Project – Phase II	U-1-1-3
04	Kandana Phase II WTP Improvement	U-1-1-4
05	Kethhena WTP Improvement	U-1-1-5
06	Water loss reduction in high priority are	U-1-1-6

3.9.1.2) Electricity Supply

Colombo Commercial City has 100% coverage of electricity throughout the city and it is supplied from the national grid. There are few power plants located within the Western Region, that are mainly concentrated in Colombo Metropolitan Region, namely Kelanitissa, Sapugaskanda and Kerawalapitiya. The 2014 demand and energy in Western Region was around 1,165 MW was 4,822 GWh. Thus, the existing power supply can meet the future demand up to date. However, it will not be enough to cater for 2030.

Presently Colombo Metropolitan has to consider laying their medium voltage power lines underground or use insulated conductors within its built-up areas. Megapolis plan proposes a power supply plan based on their projections. The power supply authorities in Western Region and planning



ELECTRICITY SALES BY PROVINCE IN GWh(Million kWh)					
Province	C.E.B. 2015	Percentage Change 2015/16	C.E.B. 2016	Percentage of Total 2016	Monthly Av.Sales kWh/Cons. 2016
Colombo City	1,329	6.6%	1,416	11.1%	674
North Western	1,165	9.0%	1,270	9.9%	133
North Central	438	15.6%	506	4.0%	100
Northern	301	13.8%	342	2.7%	93
Division - 1 Total	**3,233**	**9.3%**	**3,534**	**27.6%**	173
Western-North	1,910	7.3%	2,049	16.0%	281
Central	1,133	7.0%	1,212	9.5%	106
Eastern	557	12.5%	626	4.9%	109
Division - 2 Total	**3,600**	**8.0%**	**3,887**	**30.4%**	158
Western-South II	1,203	9.6%	1,319	10.3%	274
Uva	301	10.4%	333	2.6%	76
Sabaragamuwa	457	7.5%	491	3.8%	91
Division - 3 Total	**1,962**	**9.2%**	**2,143**	**16.8%**	147
Western-South I	617	5.7%	652	5.1%	200
Southern	930	9.3%	1,016	7.9%	116
Division - 4 Total	**1,546**	**7.8%**	**1,668**	**13.0%**	139
Bulk Sup. To LECO	**1,446**	7.4%	**1,553**	**12.1%**	-
TOTAL	**11,786**	**8.5%**	**12,785**	**100.0%**	179

area need to follow the development plans to ensure sufficient and reliable power supply.

Figure 16: Transmission Network

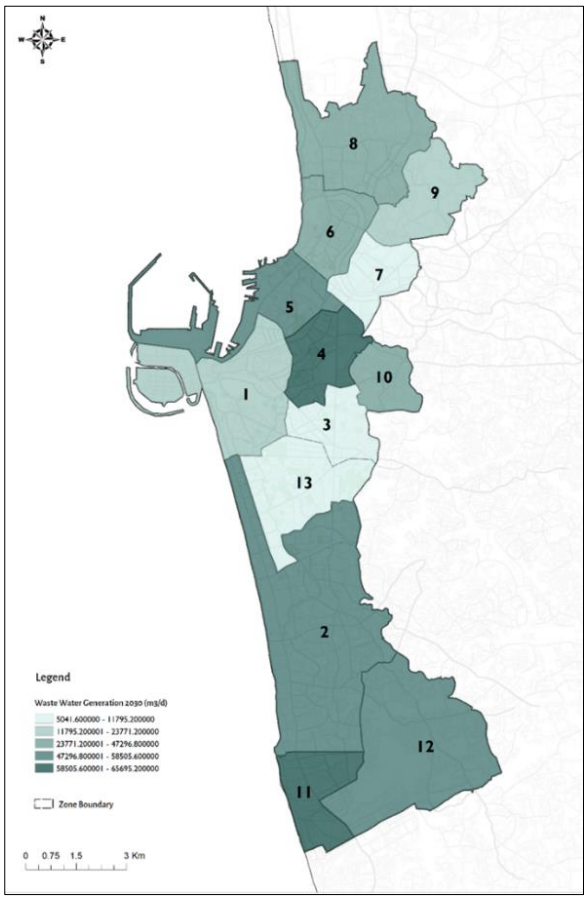
Figure 17: CEB Transmission Network- Source: CEB

3.9.1.3) Waste Water & Sewerage Management

In the planning area wastewater systems are owned and managed by the National Water Supply and Drainage Board (NWSDB) and other relevant local authorities. The two main waste water systems in operation within Colombo Commercial City are Colombo Municipal Council Sewerage System (CMCSS) and Ratmalana Waste Water Management System. The existing capacity of CMCSS is ……. Today the Colombo Sewerage System owned and operated by CMC has experienced many failures requiring urgent attention. There are several instances that public life was threatened, and country's economy was affected due to sudden failures in the system. Ratmalana Waste Water System is owned and managed by the NWSDB. The catchment of the plant covers, a part of DMMC, part of Moratuwa MC, Boralesgamuwa UC (Proposed), part of Maharagama UC (Proposed). The plant capacity is 17000 (m^3 per day) and its existing usage is 7000 (m^3 per day).

a) Future Forecast of Waste Water Generation

With the new development plan, the project planning area has a high requirement for an efficient wastewater system. Existing wastewater and sewerage systems neither do not meet the entire planning area nor the existing capacity. According to wastewater generation statistics of 2017, wastewater capacity is nearly **233,618 m^3 per day** and projected wastewater generation for **2030 is 502,340 m^3** per day. It emphasis a high deficiency in existing wastewater management capacities and generation potentials. Compared to the projected wastewater generation, the missing wastewater management capacity is about 280,000 m^3/d.



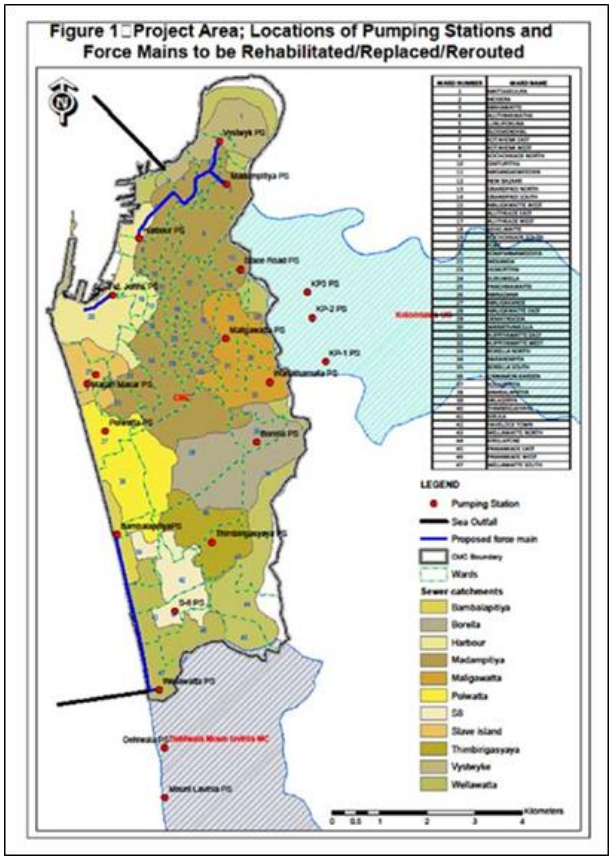
b) Incorporating Wastewater Management Projects proposed by relevant stakeholders (Project Code – U-1-2)

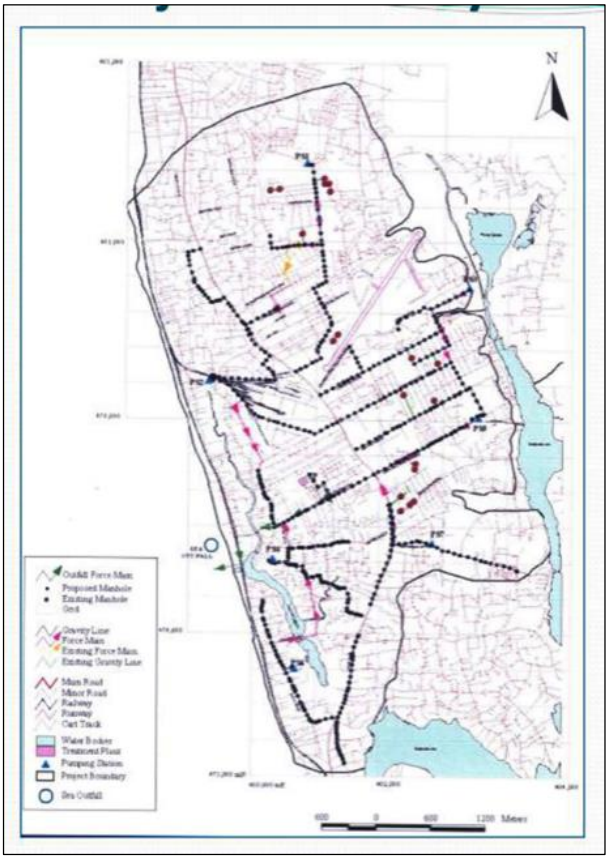
The ongoing and proposed projects conducted by relevant authorities are incorporated into the CCCDP – 2019-2030 under the Project Code – U-1-2.

No	Waste Water Management Project	Project Code
01	Greater Colombo Wastewater Management Project	U-1-2-1
02	Ratmalana – Boralesgamuwa Wastewater Management Project	U-1-2-2

Under the Greater Colombo Wastewater Management Project, it is expected to improve the existing sewerage system by installing of a wastewater treatment plant with the capacity of 2000 million liters per day (MLD). It is expected that the improved wastewater management services serve approximately up to 838,000 residents within the project area.

Under the Boralesgamuwa and Maharagama area wastewater project, it is expected to install a waste water treatment plant with a capacity of 6675 (m^3 per day) with 6270 domestic connections and 551 non-domestic connections.





3.9.1.4) Solid Waste Management

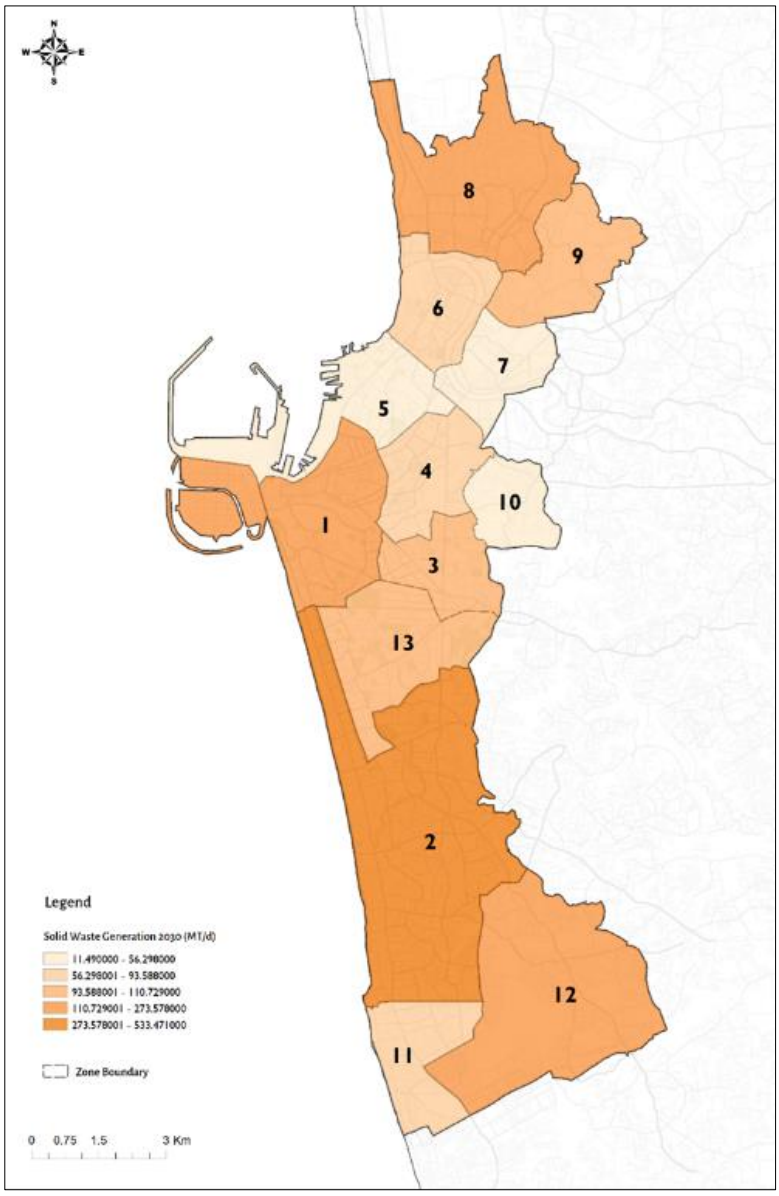
Disposal of solid waste has become a national concern in Sri Lanka. Rapid urbanization has led to the generation of large quantities of solid waste without proper management or sustainable waste disposal measures. Households, markets and commercial places industries, institutions and hospitals, and hotels are the main sources of solid waste generation. Due to plurality of solid waste generation sources, western region and most of the adjacent local authorities face the problem of waste collection and management. Serious issues had arisen especially in finding the locations and establishing the solid waste plants. Against this backdrop, presently Central Environment Authority, National Solid Waste Management Support Center, Waste Management Authority of Western Province and relevant other institutions are taking several actions to minimize these issues.

According to the below table Colombo Municipal and Dehiwala Municipal Councils are the foremost solid waste generating local authorities exist within the planning area.

Local Authority	Population	Floating Population	Waste Generation (MT)	Present Waste Collection (MT/D)
Colombo MC	555,031	600,000	900	765
Peliyagoda UC	27,392	15,000	21	13.5
Wattala PS	156,050	120,00	50	27.5
Wattala UC	30,917	15,500	28	20
Boralesgamuwa UC	813,78	80,000	56	34
Dehiwala MC	209,943	147000	286	155
Kolonnawa UC	57,285	10,000	40	32
Total	**1,036,618**	**867,500**	**1,381**	**1,047**

a) Future Forecast of Solid Waste Generation

Due to high solid waste generation, existing capacities of sites are becoming inadequate. Existing capacities of Karadiyana and Kerawalapitiya dumping sites are 500 MT per day. According to the records daily collection of Solid waste exceeds 1600 MT around Colombo metro region and under the development plan projected solid waste generation for planning area in 2030 is 1888 MT per day.



(b) Incorporating Solid Waste Management Projects proposed by relevant stakeholders (Project Code – U-1-3)

Ministry of megapolis has initiated different projects to solve the solid waste problems. Waste energy project is one of the key projects that is going to be implemented. Under this project waste dumped in Karadiyana and Kerawalapitiya sites will be used to generate energy. Accordingly, waste collected from Dehiwala – Mt. Lavinia, Moratuwa, Maharagama, Boralesgamuwa, Kesbewa, Piliyandala, Homagama local authorities will be used to generate energy.

The Solid Waste Management Projects undertaken by relevant stakeholders within Colombo Commercial City are incorporated into CCCDP – 2019-2030 under the Project Code – U-1-3.

No.	Project Name	Implementing Agency	Project Code
01	Kerawalapitiya Waste to Energy Project (500Mt to 10MW)	Western Power (Pvt) Ltd	U-1-3-1
02	Karadiyana Waste to Energy Project (500Mt to 10MW)	Fairway Holdings (Pvt) Ltd	U-1-3-2
03	Transfer of Solid Waste to Aruwakkaru Sanitary Landfill Site at Puttlam	Ministry of Megapolis & Western Development	U-1-3-3

3.9.2) Provision of Adequate Social Infrastructure

Provision of social infrastructure is essential in ensuring the social development of the community in a city. It ensures the inclusiveness of diverse communities uplifting their quality of life. Therefore, provision of adequate social infrastructure to cater the demand is vital in a development plan.

Colombo City has the best social infrastructure facilities compared to the rest of the country being the country's most demanding city for education, health, sports and recreation facilities. Being the commercial capital of the country, it attracts a huge population flow to the city. In the other hand, as earlier stated in the Need of the Plan, Colombo city also has shortages in some vital social infrastructure facilities which makes the city less user friendly.

Consequently, in the path of making "Colombo to be experienced as the Smart, Vibrant and Tropical Water Garden City of South Asia" the city should be provided with modern and adequate social infrastructure facilities to cater all its owners; inhabitants, commuters and tourists.

Colombo Commercial City Development Plan ensures provision of adequate social infrastructure facilities such as education, health, public markets, sports and recreation facilities, public burial spaces, public sanitary facilities, information centers and public seating areas to ensure more inclusive, comfortable, user friendly city.

Education being a fundamental right of every child in Sri Lanka, the State should take responsibility of making education available for all ensuring equity and giving leadership to all providers of school education and State should ensure free education from kindergarten to university and compulsory education to all children aged 5-16 years making it available, accessible, acceptable and adaptable for them (New Education Act for General Education in Sri Lanka, Ministry of Education).

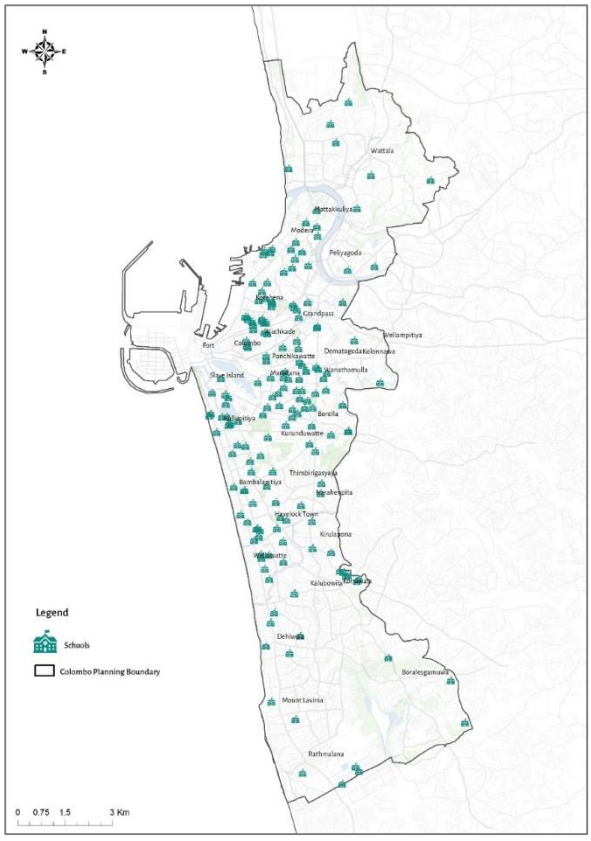
3.9.2.1) Educational Institutions

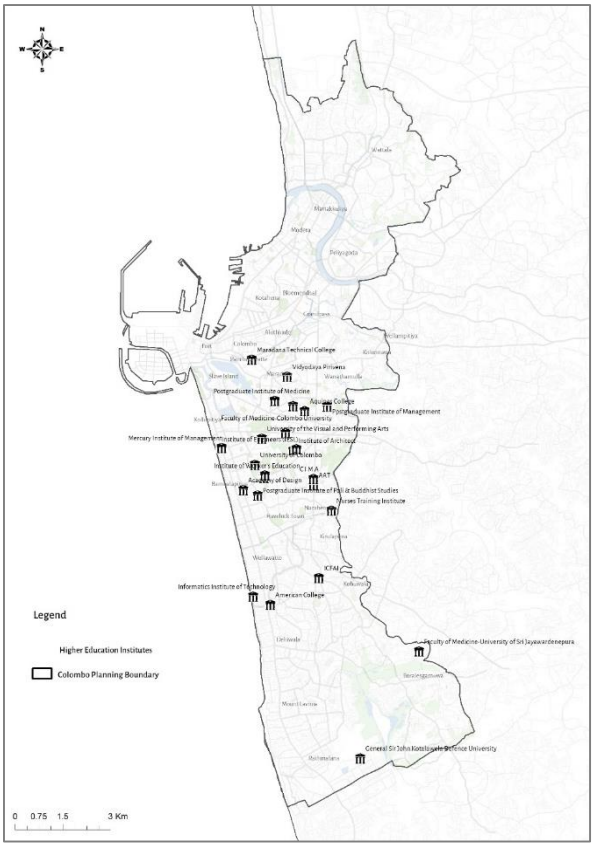
Colombo city is one of the most demanding city for education as it provides various education facilities in primary, secondary and tertiary education sectors. National schools, Provincial schools, Private schools, International schools, Universities, Vocational Training Institutes and other educational institutes have created the enormous demand for education within the city.

Literacy rate of Colombo District is 98.0 which is the highest literacy rate in the country while the country's literacy rate is 95.7 (Census and Statistics Department, 2012) and world literacy rate is 86.0 (ourworldindata.org, 2015). Educated people are a great asset for a country to move forward with the fast developing countries in the world. Thus provision of quality education ensuring the equity is fundamental in the plan.

Colombo City comprises with 38 National schools, 58 Provincial Schools, 48 International schools and 34 Private schools which have ensured adequate primary and secondary schools to cater the children within the city.

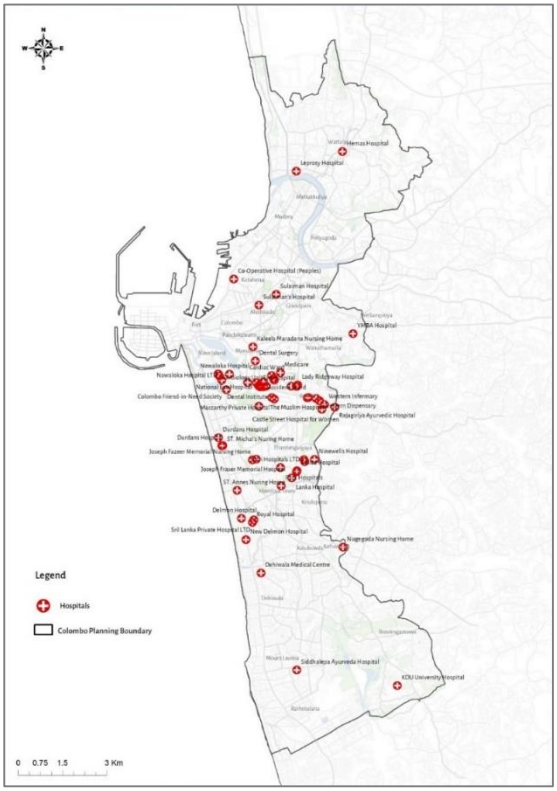
Colombo has many government and private tertiary education providing institutes like University of Colombo, University of Sri Jayawardhanepura, General Sir John Kotalawela Defence University, University of Visual and Performing Arts, British Council, National Institute of Business Management, Institute of Personnel Management, Academy of Design, etc which creates many opportunities for the students to engage in higher education. These higher education institutes attracts not only the residing population but also majority of people from all over the country.





3.9.2.2) Hospitals (Project Code – U-2-1)

Sri Lanka is providing free health services to its citizens as a national priority since 1951 adopting the Free Health Policy. Government has ensured the health facilities of the country by locating National and Base hospitals around the country.



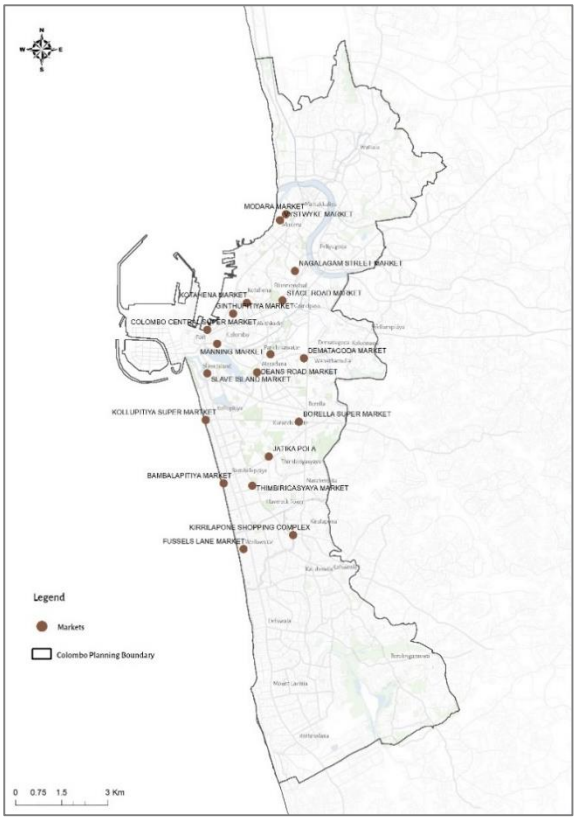
Colombo is acting as the main health services providing city in the country having the national hospital, 5 government hospitals and 20 private hospitals within the city. Most of these hospitals are equipped with modern health facilities to ensure effective health service provision to its citizens.

Government Hospitals in Colombo Commercial City;

- National Hospital of Sri Lanka
- National Eye Hospital of Sri Lanka
- Castle Street Hospital for Women
- De Soysa Hospital for Women
- National Dental Hospital of Sri Lanka
- Lady Ridgeway Hospital for Children
- Colombo South Teaching Hospital – Kalubowila

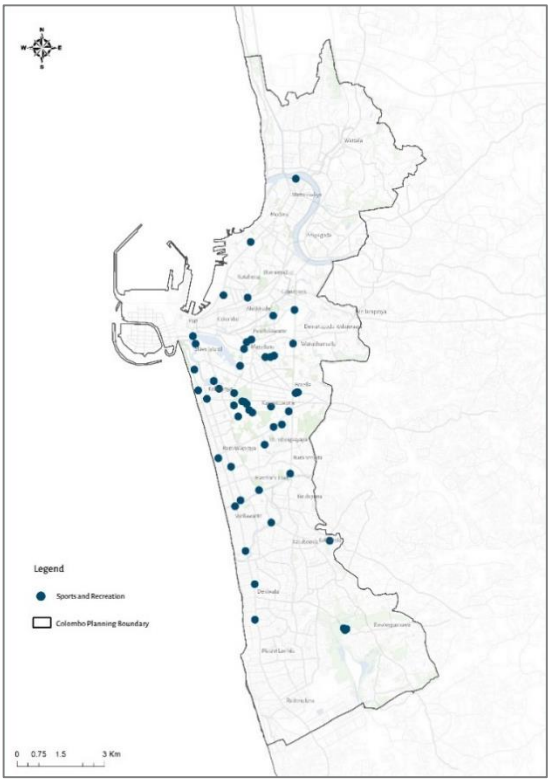
3.9.2.3) Public Markets (Project Code – U-2-2)

Citizens must be provided with essential every day shopping needs within the city. These should be accessible and affordable for everyone. Colombo Commercial City has around 22 public markets to serve its citizens providing sufficient and variety of goods.



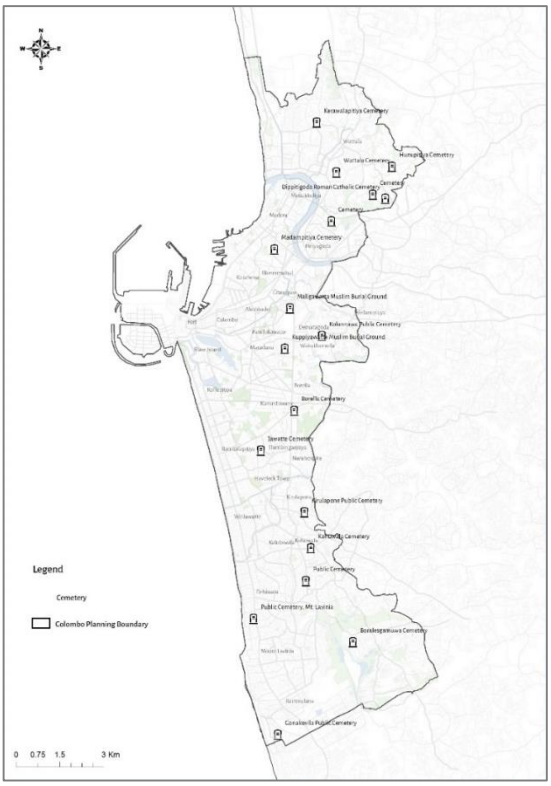
3.9.2.4) Sports and Recreational Facilities (Project Code – U-2-3)

Provision of sports and recreation facilities improves personality and mental health of citizens which is ultimately result in growth of the city. Colombo Commercial City is provided with many sports facilities which are accessible for public such as swimming pools, tennis courts, stadiums, etc. For the recreation purposes city is comprised with cinemas, art galleries, parks, playgrounds, theaters, theme parks, etc which are currently highly occupied with public. Public Open Recreation Space provisioning plan is providing (chapter 7.5.4) more pubic open spaces to cater the future demand of the city.



3.9.2.5) Public Burial Places (Project Code – U-2-4)

Colombo Commercial City has about 18 cemeteries which is approximately 100 acres of land allocated as public burial space. Although burial space is essential for a city, with the growing demand for land in the main commercial city and as these cemeteries are located in prime locations it has become more difficult to allocate space as burial space. Therefore, the existing burial spaces will be used in the future without allocating additional spaces. Cremation is encouraged within the city to ease the issue on burial space.



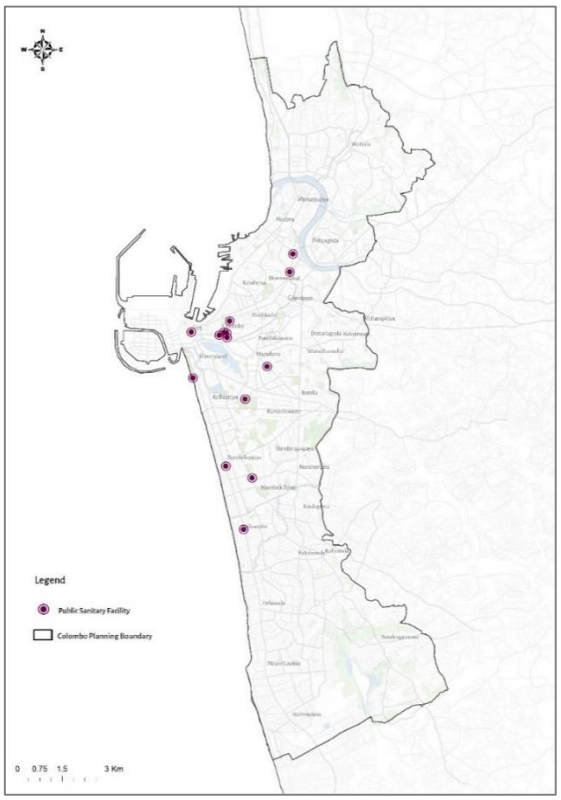
3.9.3) Making Convenient Nodes by providing Open Public Facilities

Colombo is the most population attracting city in the country and it is expected with nearly total of 3 million population of inhabitants and commuters in 2030. Therefore, the city should be more user friendly and comfortable for everyone.

3.9.3.1) Public Sanitary Facilities (Project Code – U-3-1)

Provision of public sanitary facilities is essential for a city with a frequent population flow throughout the day. Public sanitary facilities are especially important for older people, disabled people, families (especially those with babies and very young children), women, tourists and visitors. Thus, Colombo Commercial City Development Plan ensures public sanitary facilities are to be provided in;

- All 17 nodes proposed within the city
- All main public transport terminals and stations and major car parks
- Wide range of businesses participate, including pubs, restaurants, cafes, community centers, retail stores, shopping centers and supermarkets
- All parks and leisure areas



And following facilities should be provided in these facilities;

- Facilities for disabled people
- Baby-change facilities
- Bathing areas in main transport terminals (At Pettah and Peliyagoda MMTHs)
- Available through 24 hours (Facilities at MMTHs, stations, car parks, and public leisure areas)

Further, direction maps displaying public sanitary facilities should be displayed in the city for the easy access of the people. And these facilities should be cleaned daily and should be maintained properly. Therefore, a member of staff at the local authority should be appointed to coordinate the scheme.

3.9.3.2) Other Public Facilities (Project Code – U-3-2)

a) City Information Centers (Project Code – U-3-2-1)

City information centers are essential for a highly commuter and tourists attracting city. Therefore, two city information centers are proposed at Pettah and Peliyagoda Multi Modal Transit Hubs as most of commuters and tourists are arriving to the city through these MMTHs.

Information Centers will be equipped with;

- Multilingual Support
- General Tourist Information
- City Maps
- Information on Latest Events
- Information on Service Providing Institutes
- Free Wi-Fi

(b) Direction Maps (Project Code – U-3-2-2)

Currently only few Direction Maps are displayed within the city. Colombo being one of the busiest and complex city more direction maps are proposed to be displayed at following locations for the ease of public.

- All 17 Nodes
- All main public transport terminals, bus stops, stations and major car parks
- All parks and leisure areas

(c) Seating Areas (Project Code – U-3-2-3)

Colombo City is used by many population categories; older people, disabled people, families, tourists, etc. These people should be provided with seating areas where they can relax and have a pause between their journeys. Although there are some seating areas provided in the city, those are not sufficient to cater the large population flow. Thus, public seating areas are proposed to provide at all main public transport terminals and stations and all parks and leisure areas.

3.9.4) Introducing Smart Facilities

A smart city is a highly developed, innovative, environment-friendly, and incorporates relevant aspects of the economy, technology, mobility, quality of life and other aspects that contribute to the well-being of its residents. It is a high-tech intensive city that connects people, information, and city elements using new technologies and infrastructure to create a sustainable, greener city, competitive and innovative economy, and an enhanced life quality (Tahir & Malek, 2016).

Being the country's one of the well-developed cities, most of the people within the city have relatively high rates of computer and digital literacy rates. Colombo district has 48.9 literacy rate which is the highest among other districts while the country's literacy rate is 28.3 (Department of Census and Statistics, 2017 (during 1st 6 months)). According to the percentage distribution of Internet and E-mail using household population (aged 5 – 69 years), 44.6% use internet while 26.3% use emails in Colombo District (Department of Census and Statistics, 2017 (during 1st 6 months)) which are the highest percentages among other districts. Therefore, there is a high potential to develop the city with technology to improve and ease the lives of inhabitants and commuters.

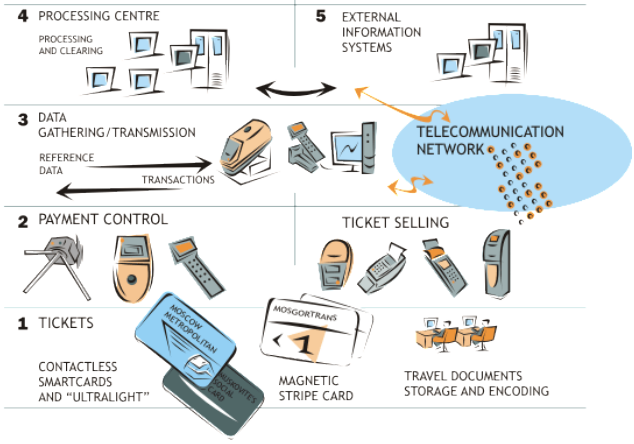
Smart concept can be associated with areas such as energy, transportation, mobility, parking, infrastructure, waste management, lighting, healthcare, security, construction, communication, etc. As an initiative Colombo Commercial City Development Plan propose to integrate smart concept into transportation, street lighting and waste management in the city.

3.9.4.1) Smart Transportation (Project Code – U-3-3-1)

City transportation is an important pillar in a city. Technology can help in reducing the traffic, easy movement of goods and travel management for people. Also it can improve reliability of public transportation network by providing visibility on arrivals/departures/route information for travelers for a smooth journey. It will also reduce pollution, road accidents ensuring safety and promoting a healthier life.

Following features are proposed to the Smart Transportation System of the city by Colombo Commercial City Development Plan.

- Interactive journey planner for all modes
- Automated Vehicle Location System
- Automated Fare Collection System
- Intelligent Signaling System
- Real Time Monitoring System
- Passenger Information Display



3.9.4.2) Smart Street Lighting (Project Code – U-3-3-2)

Street lights improves security and safety of people and vehicle users and it helps for a smooth traffic flow. Use of smart street lighting can reduce the cost and electricity consumption. Intelligent lighting system can dim the lights on streets without traffic and pedestrians. Also street lights can be used with solar powered lights. Smart lighting systems can be equipped with central management software that tracks usage and leads to maintenance efficiency. The surveillance cameras attached to light posts can be used for traffic monitoring and security enhancement of the city.

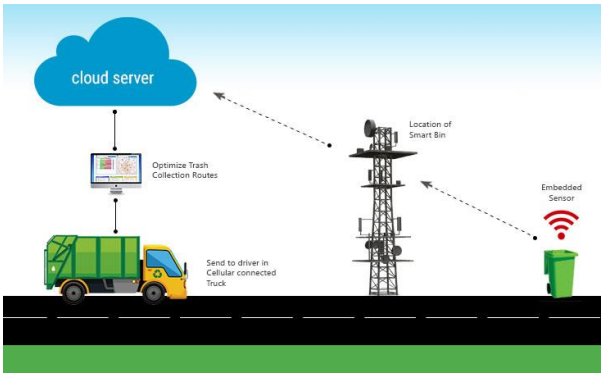
Feature to be incorporated for the Smart Street Lighting System of the City;

- Energy Efficient Lights
- Street Light Control (On/ Off/ Dimming)
- Wi-Fi
- Traffic Monitoring
- Enhance Security

3.9.4.3) Smart Waste Management (Project Code – U-3-3-3)

Waste Management has become a major issue in the city. This can be critically monitored in public gathering places in Colombo city which has contributed for the pollution of natural environment and bad odor. The main issue for this is the improper solid waste management system of the city.

Colombo Commercial City Development Plan propose installing sensors inside the bins which are kept at MMTHs and all major parks and leisure areas, which helps in monitoring the levels of trash in each bin. Then the bins can be emptied only when they are full without following the standardized process to collect the waste bins frequently. When the bins are full, the respective local authority and the collecting vehicles will get notifications through the sensors where they can empty the bins.



Public Open Recreational Space (PORS) Management Strategy

'Harmonizing Garden Ambiance into the City Fabric'

A Chain of Green & Blue Pastures

3.10) Public Open Recreational Space (PORS) Management Strategy

Introduction

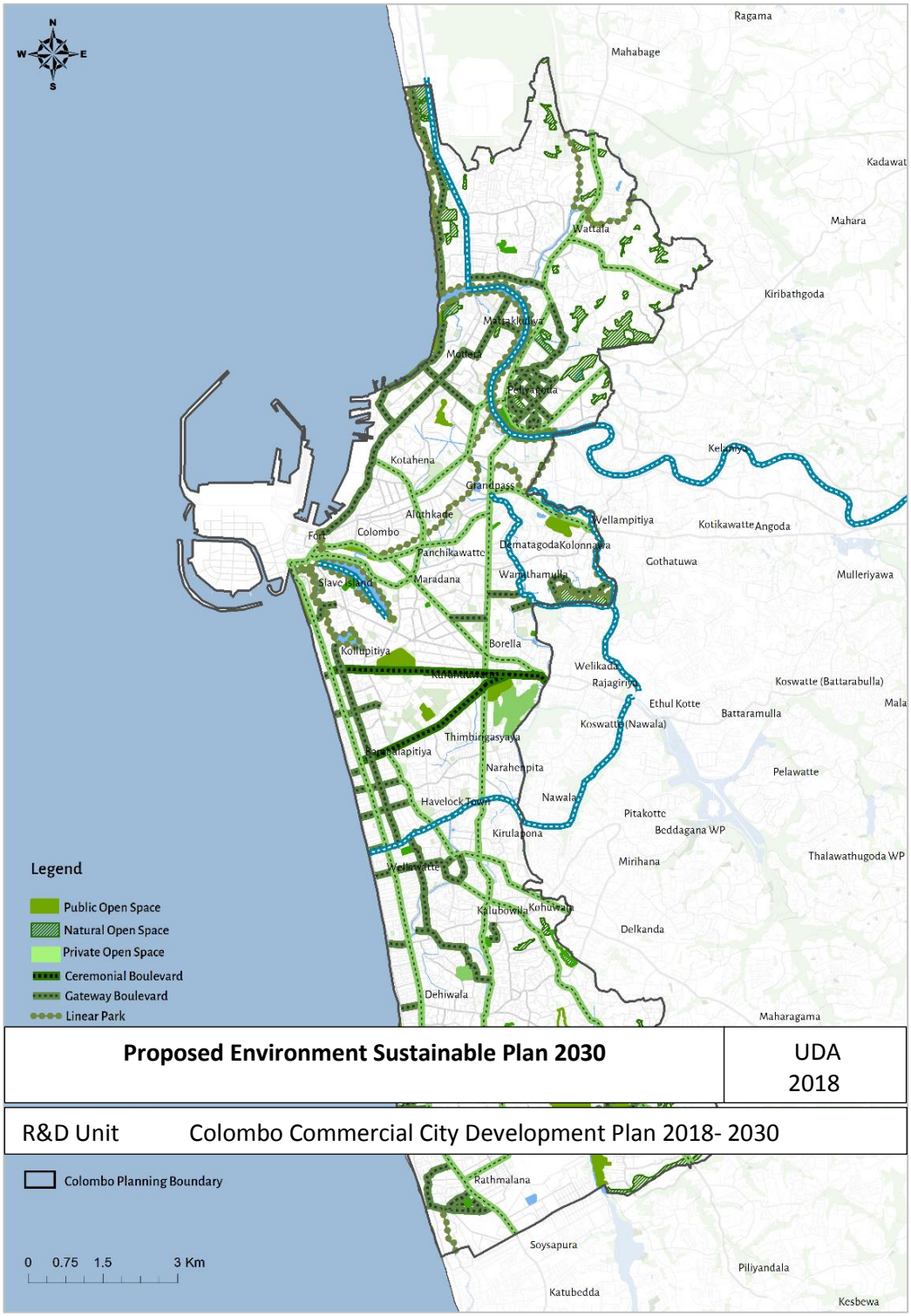
Public Open Recreational Spaces are a key component of a convenient and attractive city. One of the major goals of Colombo Commercial City Development Plan is the Revived Internationally Renowned Green Garden City of South Asia. City of Colombo still has the reminiscence of 'Garden City' which was planned in 1921 through Sir Patrick Geddes Plan. There are number of specific objectives aligned in the path of achieving the above mentioned goal.

- To create a network of parks and green spaces of 520 ha linked with water and wetland networks in Greater Colombo by 2030.
- To ensure that every citizen of Greater Colombo has access to public open spaces within 500m walking distance by 2030.
- To have an average of 35% green cover and the enhanced green experience in Greater Colombo by 2030.
- To maintain 20% of the total area as special garden zones by 2030.
- To assure 'Green Developments' in Colombo with energy conscious, conserving and environmental friendly designs and practices.

These strategic interventions will have desired outcomes to**,** engage the community in promoting parks and green spaces as accessible places for everyone to experience and enjoy, to provide good quality parks and green spaces that are well managed and provide a range of attractive facilities. The Plan has described the Environment Sustainable Strategies under 03 Sub sections,

1. Environmental Conservation.
2. Green Space Networking (Landscape Management).
3. Provisioning of Public Open Spaces.

PORS Plan



3.10.1) Environment Conservation Plan

Since the Colombo City is designated as "Wetland City" according to the Ramsar Conservation …… it s important protect and conserve this valuable asset for the future persistence of the city. Accordingly, the

Colombo Commercial City Development Plan identified Marshes, Wetlands and Water Network and its Reservations as Conservations areas.

3.10.1.1) Marshes & Wetlands within Colombo Commercial City

There are different types of wetland categories in the western province which is developed in 2010 collaboration with relevant agencies. According to that, compare to the other area Colombo have less wetlands. There are 1236.17 ha wetland coverage in 2010 in planning are but when it is 2018 the total hectare of wetland is 627.59ha. Which means, 38.88% of wetlands and paddy lands have been encroached by 2018 comparing to wetland in 2010. Plan discussed to reduce the encroachment of wetland and how to wise use wetland. Following chart mentioned the wetland types and zones which is identified in the planning area.

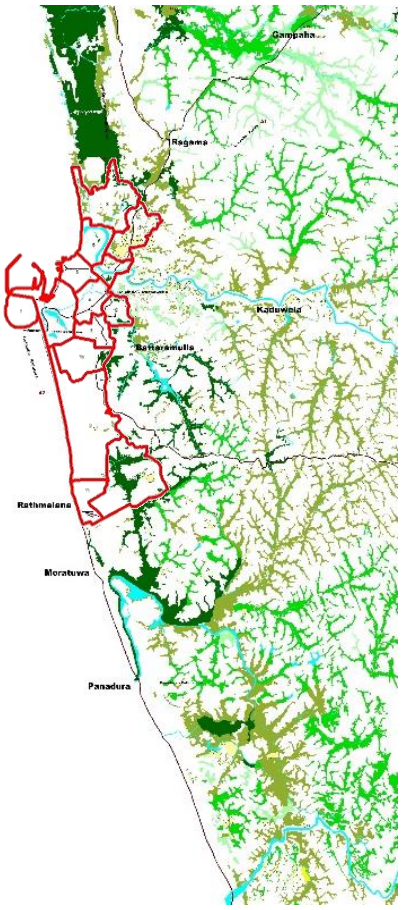


Table 1: Wetlands Categories in Colombo, Commercial City

Wetland Protection Area	Muthurajawela – Part of Wattala Pradesiya Sabha. Attidiya Marsh – Boralesgamuwa Urban Council. Kolonnawa Marsh - Kolonnawa Urban Council.	434.25ha
Wetland Nature Conservation Area	Wattala Pradeshiya Sabha. Peliyagoda Urban Council	78.94ha
Wetland Agriculture Area	Kolonnawa Urban Council	0.97ha
Low lying Potential Development Area	Wattala Pradeshiya Sabha Peliyagoda Urban Council Part of Keliniya Pradeshiya Sabha	125.63ha
Total Wetland Area		627.59ha

3.10.1.2) Special Environmental Conservation Areas within Colombo Commercial City

a) Bellawila Attidiya Sanctuary

The Bellanvila Attidiya Sanctuary was gazzeted under the Gazzet Notification No. …. dated ……. As …….. The wetland is interconnected to the flood plains of the Bolgoda system through the Bolgoda Canal. Several other man made canals connect the Attidiya marshes to the Colombo marshes. A small man-made lake is also located within the wetland system. Attidiya is located within the wet zone and receives an annual rainfall of 2500-5000mm. The average annual temperature is around 270 C with average humidity of around 80%.

b) Water bodies and reservation

	Name	Length (km)	Width (m - Avg.)	Water Level (m)		Reservation (m)	Authority
				Dry	Wet		

1	Kelani River	7	100			15m	Irrigation Department
2	New Mutwal Tunnel	1	8	1.47	1.47		SLLRDC
3	Mutwal Tunnel	1.3	10	1.47	1.47		SLLRDC
4	St. Sebastian Cannel South	5	20	1.37	1.6		SLLRDC
5	Torrington Diversion Tunnel	1.6	-	-	-		SLLRDC
6	Wellawatta Canal	3.1	20	1.09	1.19		SLLRDC
7	Dehiwala Canal	6.8	25	1.3	1.29		SLLRDC
8	Bolgoda Canal	10	12	1.3	2.35		SLLRDC
9	Kirulapone Canal	1.3	25	1.7	1.79		SLLRDC
10	Heen Ela	2.2	20	1.19	1.83		SLLRDC
11	Torrington Canal	1.6	12	1.4	2		SLLRDC
12	Dematagoda Canal	2.7	20	1.9	1.83		SLLRDC
13	Kolonnawa Canal	1.6	30	1.91	2.01		SLLRDC
14	Dematagoda Diversion	4.7	30	1.3	1.61		SLLRDC
15	Hamilton Canal	4.1	20				SLLRDC
16	Coastal Length	34					Coast Conservation Department
17	Mudun Ela		20				SLLRDC

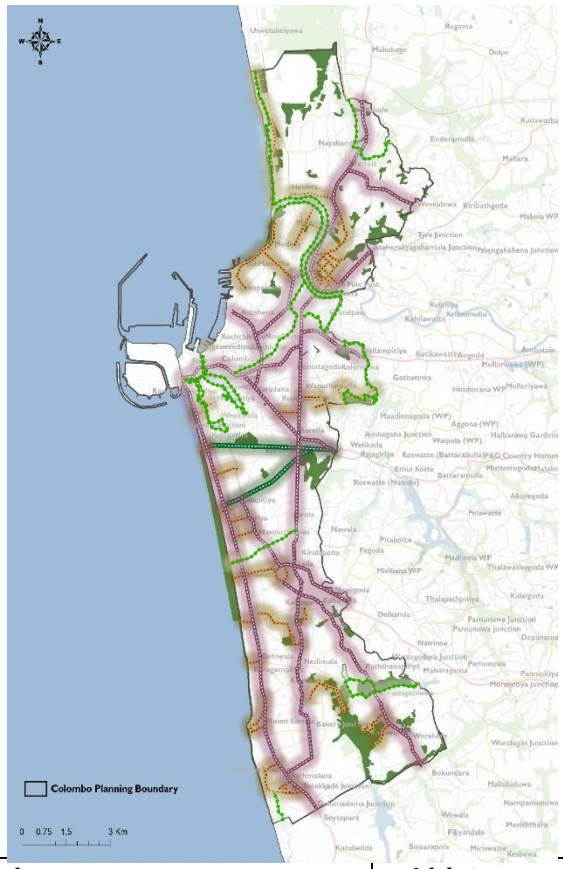
3.10.2) Networking of Green Spaces (Project Code – O-1)

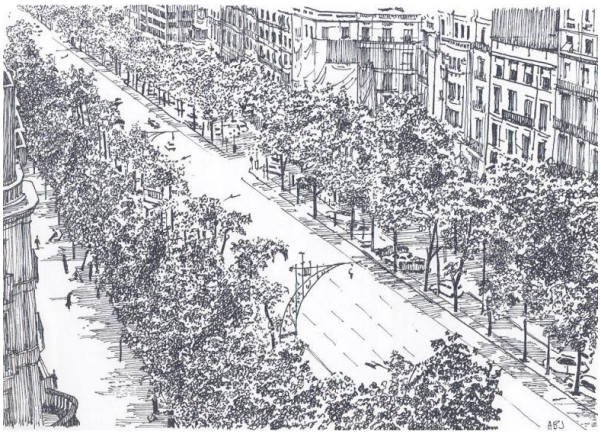
Landscaping is a key component of Sustainable Environment Management. City landscape manage via connecting public open space in landscaping management plan. Connecting public open space via natural features (trees, water body) is the major objective of the plan. Accordingly, the Plan has 03 major interventions to Promote Landscaping within the Planning area.

1. Connecting Public Open Spaces via Ceremonial Boulevards
2. Connecting Public Open Spaces via Gateway Boulevards (Connecting with waterbodies)
3. Connecting Public Open Spaces via Transit Boulevards
4. Connecting Public Open Spaces via Linear Parks and Water Transportation.

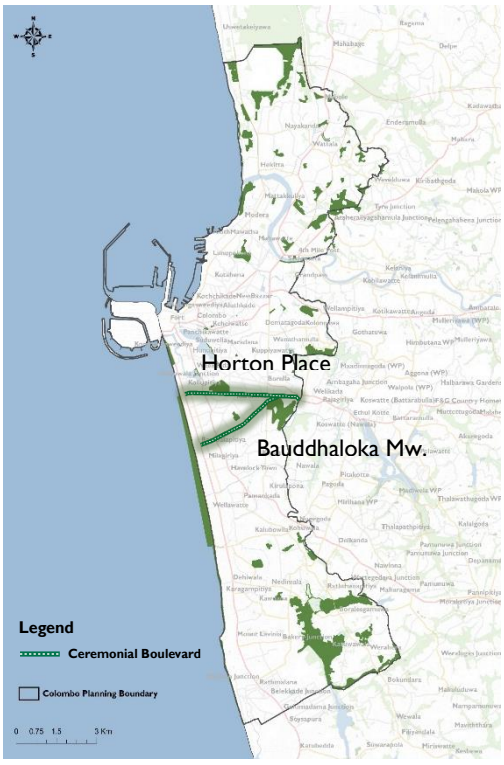
3.10.2.1) Connecting Public Open Spaces via Ceremonial Boulevards (Project Code – O-1-1)

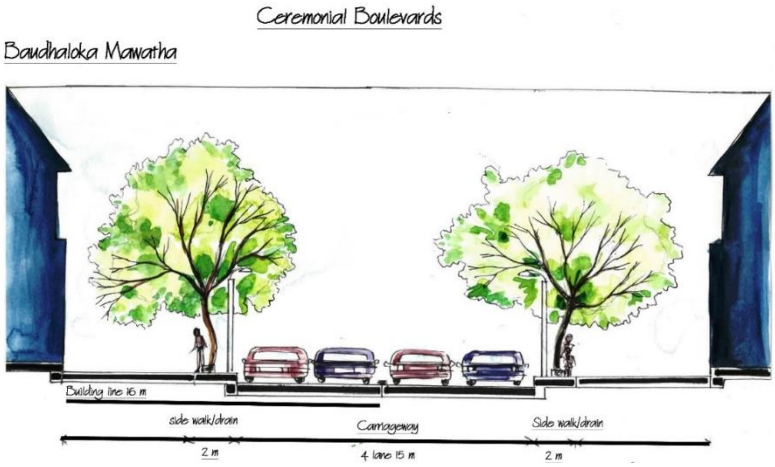
The Ceremonial Boulevards has different urban designing Characters of its tree escapes, Colors, texture and etc… Currently, Bauddhaloka Mawatha and the surrounding area can be seen as a green area and there are remaining character of Boulevard. Accordingly, it named as a ceremonial boulevard since it is a main access to parliament road which is connect the Galle Road. Based on this the plan has identified 03 major roads as Ceremonial Boulevards as follows,





Road	Width (m)
Horton Place Road	12
Bauddhaloka Mawatha up to Sri Jayawardenepura Rd	15
Dudley Senanayake Mw. & Sri Jayawardenepura Rd	10

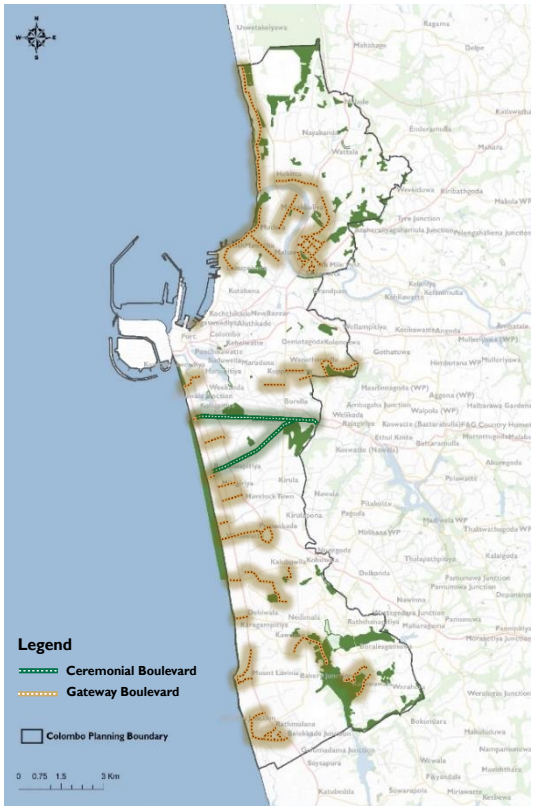


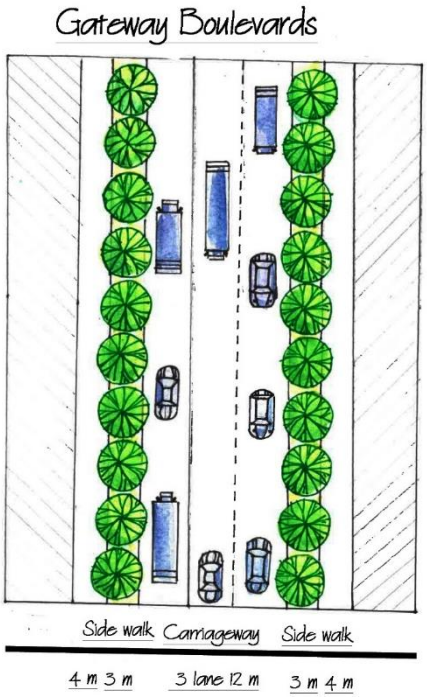


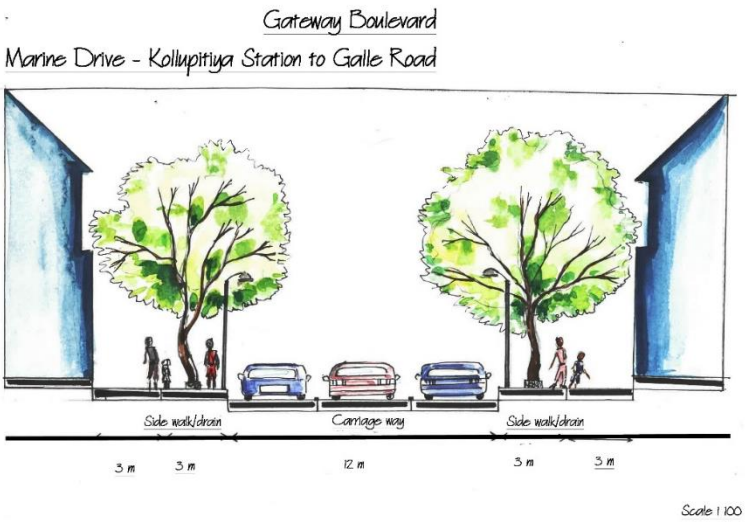
3.10.2.2) Connecting Public Open Spaces via Gateway Boulevards (Connecting with water bodies) (Project Code – O-1-2)

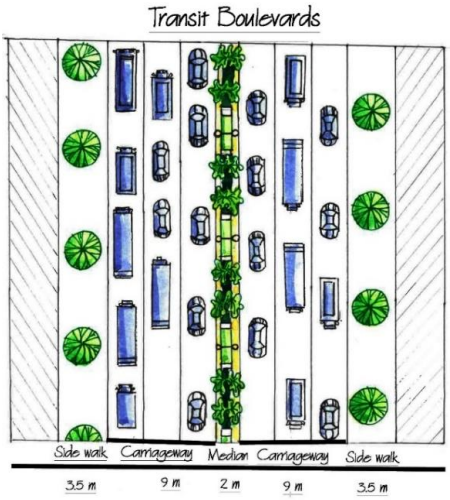
The Plan has identified number of Gate Boulevard to develop within the planning area which are connecting with the Water bodies. These Gateway boulevards will provide different landscaping approach. The identified Gateway boulevards are,

a) W.A. Silva Mw.
b) Lester James Peries Mw.
c) Vajira Road
d) 5th Lane Bambalapitiya
e) Station Road Bambalapitiya
f) St. Peter's Place
g) Wellawatta Station Road
h) Wasala Road
i) Station Road Dehiwala
j) Marine Drive Kollupitiya Station to Galle Road
k) Justice Akbar Mw.
l) York Street / Olcott Mw.
m) Sri Sumanatissa Mw.
n) Madampitiya Road
o) Fransewatta Ln
p) Mattakkuliya Church Road
q) Station Road Ratmalana
r) Station Road Mt. Lavinia
s) Hotel Road
t) Straferd Avenue Havelock Road
u) Sea Road
v) Wijaya Road
w) Gajaba Road
x) Preethipura Road
y) Hekitta Road







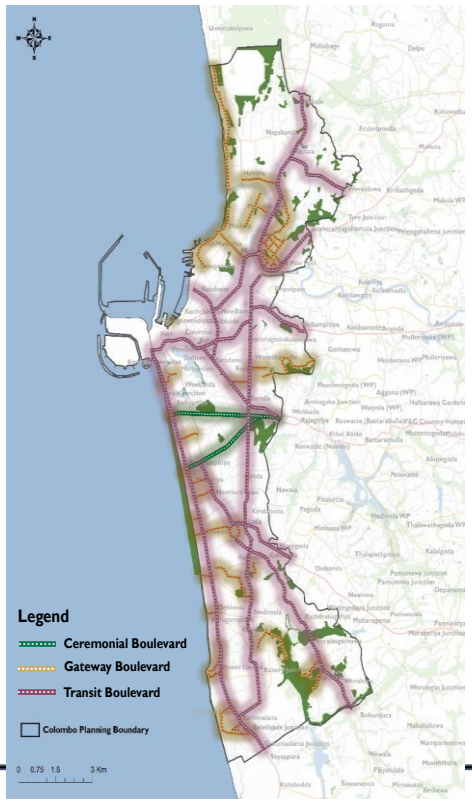


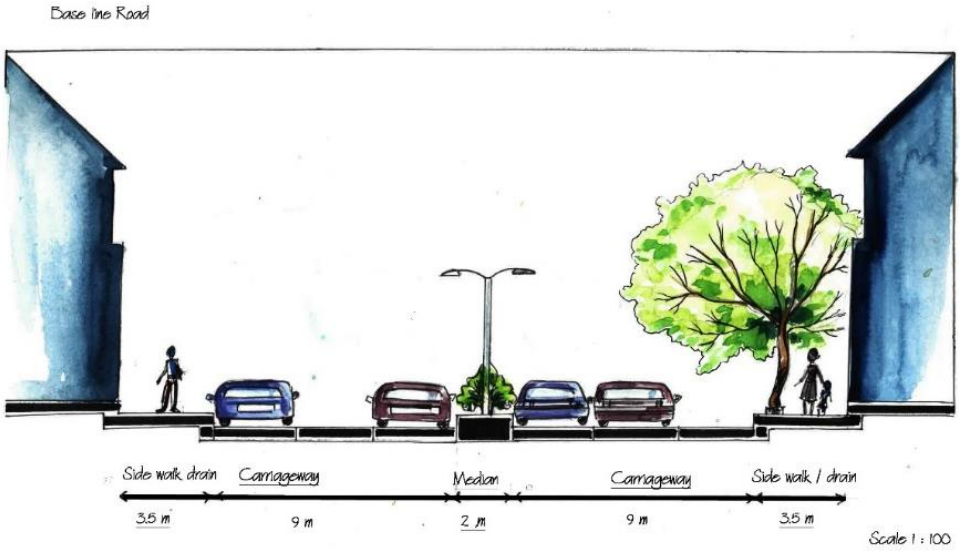
3.10.2.3) Connecting Public Open Spaces via Transit Boulevards (Project Code – O-1-3)

The transit boulevards were mainly identified based on the functions of the roads. The main intention of these roads are to develop or landscape to reduce the Air pollution while maintaining the tree line in the median of the roads. Following are the identified main roads as Transit Boulevards,

i) Kandy Road
j) Negombo Road
k) Baseline Road
l) Cotta Road
m) Maradana Road
n) Awissawella Road
o) Sirimawo Bandaranayaka Mawatha
p) D.R.Wijewardhane Road

a) Sri Sumanatissa Mawatha
b) Hunupitiya Railway Road
c) Horana Road
d) High level Road
e) Baseline Extension
f) Hunupitiya Road
g) Olcott Road
h) T.B. Jayah Mawatha





3.10.2.4) Connecting Public Open Spaces via Linear Parks and Water Transportation (Project Code – O-1-4)

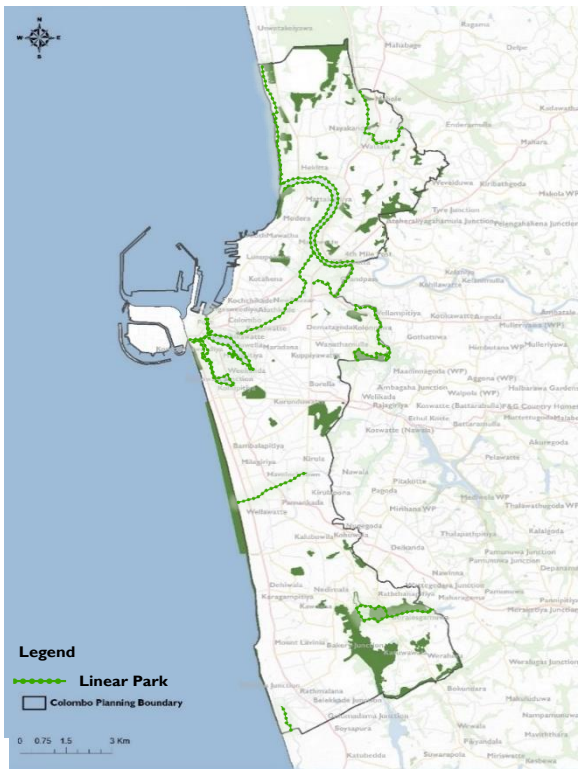
a. Proposed Water Transport Network ((Project Code – O-1-4-1)

Water transportation is the one of the best transport mode which can be used for the city development. According to the Megaplolis master Plan which was prepared by the Ministry of Megapolis and Western development "Wellawatta Canal" has identified as one of the major water transportation rout which connects to the Battaramulla. As the main development intentions of Colombo commercial city development to promote these canal network for the developments, plan has identified 03 other Canal and River network for the water transportation as follows,

- Kelani River
- Wellawatta Canal
- Kolonnawa Canal
- Beira Lake

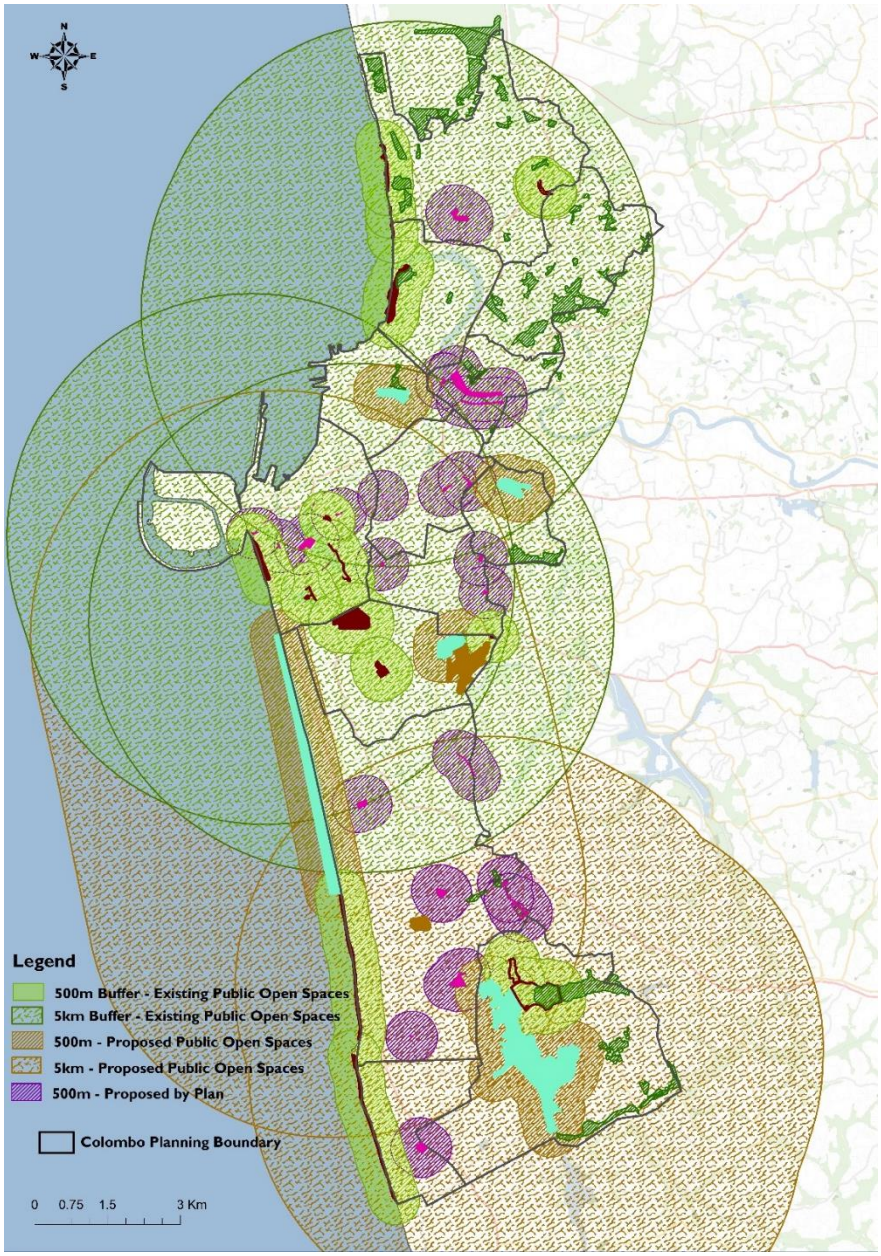
The plan has identified 09 canal network which can be proposed Linear parks to connect the public open spaces and its main purpose is to promote Green space and Recreational activities. And also, to reduce the encroachments of water bodies and wetlands. These linear parks were proposed covering entire zones as follows,

- Preethipura Linear Park parallel to the beach
- Kelani River Right bank Linear Park
- Sebastian Canal Linear Park
- Hunupitiya – Wattala Kalu Ela
- Kiththampahuwa Canal
- Heen Canal
- Kirulapona canal Linear Park
- Boralesgamuwa Linear Park (120 Road to Boralesgamuwa Tank)
- Ratmalana canal Linear Park



3.10.3) Provisioning of Public Open Spaces (Project Code - O-2)

The provision of public open space is a basic element of settlement planning and an important component of community life. Public open space supports a broad spectrum of activities and interactions between people and nature and sustains critical environmental functions for the health of communities.



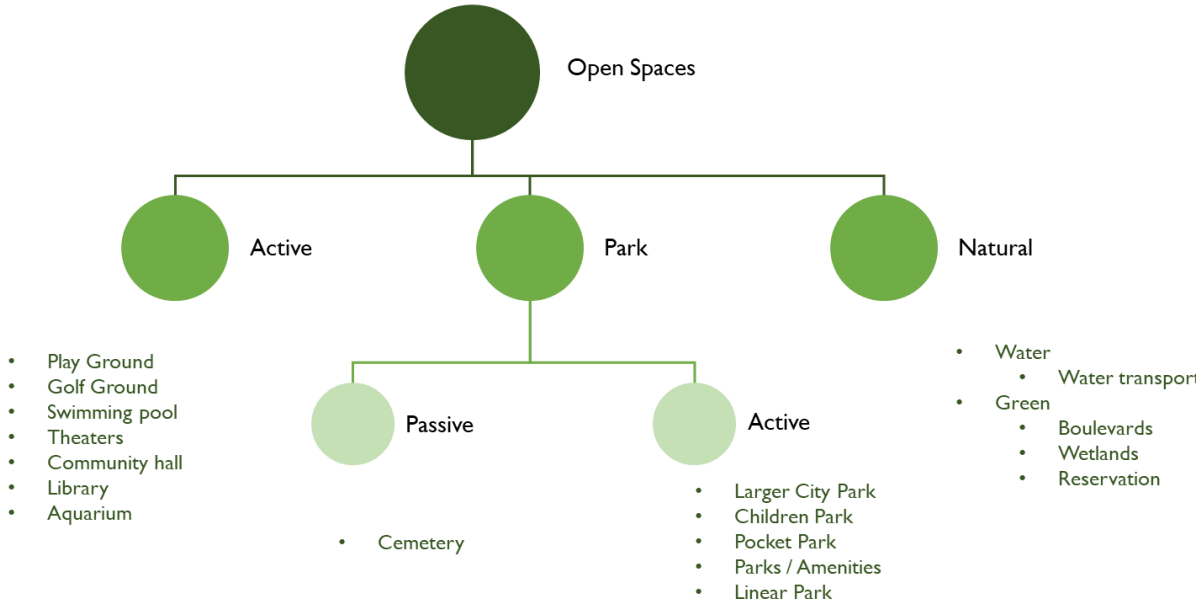
The plan has identified three types of Open Space for developments,

1. **Active Open Space**:

   Land set aside for the primary purpose of formal outdoor sports by the community.
2. **Passive Open Space**:

   Open space that is set aside for parks, gardens, linear corridors, conservation bushlands, nature reserves, public squares and community gardens that are made available for passive recreation, play and unstructured physical activity.

3. Natural open Space



3.10.3.1) Future Forecasting and Calculations

Current standard of Public Open Space in Sri Lanka is 1.4 ha per 1000 population. But considering the compactness of Colombo find out the public open space standard is 0.2ha per 1000 with 500m walking distance. But proposed to keep a standard for larger city parks is 1.4ha per1000 population.

If take standard of 0.2 ha for 1000 populations, Public Open Space requirement is approximately 258 ha. But existing public open space provision is approx. 132 ha and accordingly balance Public Space requirement is 126.28 ha.

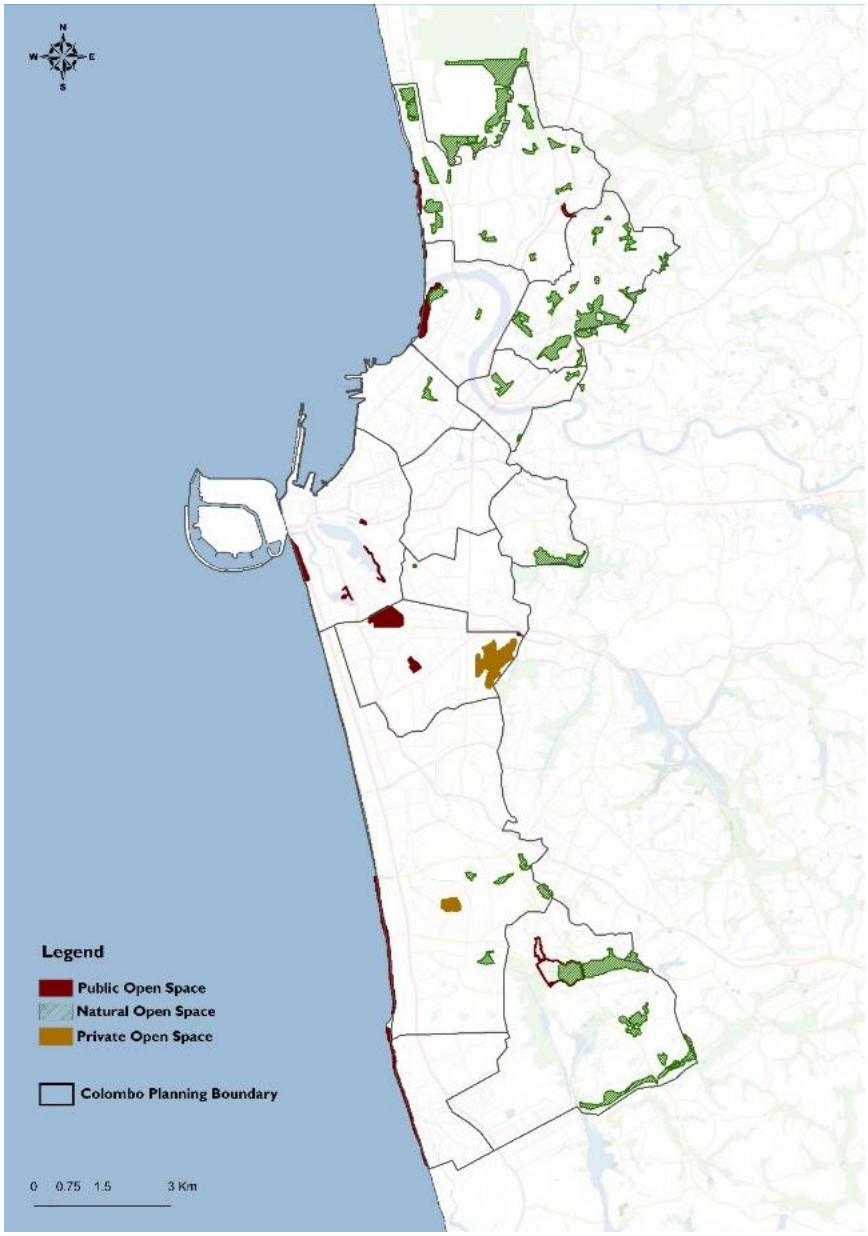


Table 2: Public Open Spaces requirement based on different zones

Zone No.	Character	**Required public open space (ha)** (0.2 ha for1000 People)	**Existing Public open space (ha)**	**Total Public Open Space with proposed (ha)**	**Gap with proposed projects (ha)**
1	Exclusive Premium Development	22.82	9.76	9.76	**13.06**
2	Premium Mixed Development	76.14	21.96	124.95	-48.80
3	High Density Green	14.89	0	0	**14.89**
4	High Dense Compact Mixed Development	10.66	0	0	**10.66**
5	Compact Logistics Development	4.55	0	10.38	-5.82
6	High Density Residential	11.74	14.72	14.72	-2.97
7	Transport Oriented Development	1.54	0	0	**1.54**
8	Moderate Density Residential	37.31	5.73	5.73	**31.58**
9	Moderate Density Logistics Development	15.47	0.03	0.03	**15.44**
10	Moderate Density Residential	8.63	0	12.45	-3.81
11	Moderate Density Residential	12.06	9.42	9.42	**2.64**
12	Low Development Green Residential	30.41	3.44	173.18	-142.76
13	Low Density Garden	12.19	70.08	87.55	-75.35
		258.46	**132.18**	**445.91**	-187.44

When considering the open space requirement in order to the entire planning area it is fulfills. But the main intention of this PORS development is to fulfill the requirement of Open Spaces based on the density or development intensity of identified 13 character zones. In that context the PORS requirement need to be fulfilled. Accordingly, major projects are proposed while converting passive wetlands as active open spaces to fulfill the requirement as follows,

3.10.3.2) Provision of Public Open Spaces (Project Code – O-2-1)

- Kimbula Ela Urban Park
- Meethotamulla Park
- Borella Urban Park
- Maritime City Project
- Attidiya Marsh

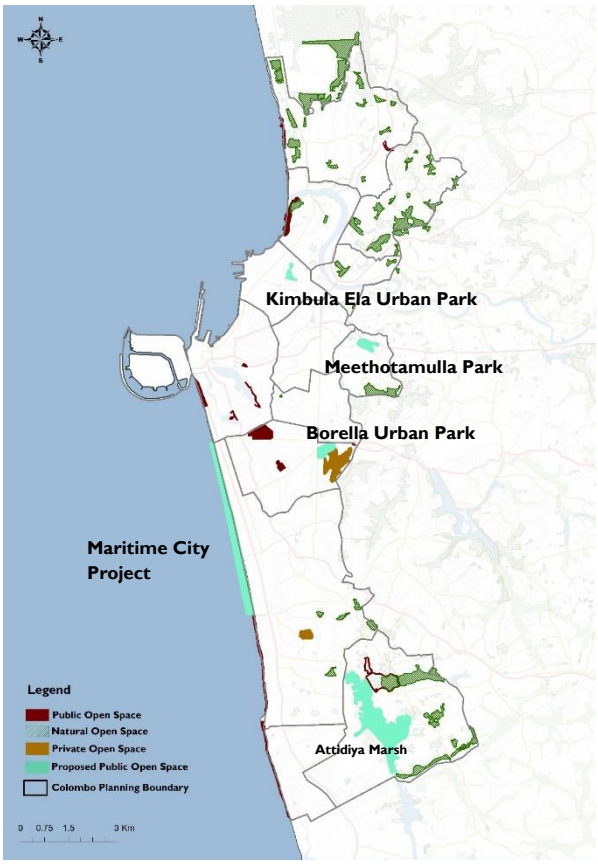


Table 3: Public Open Spaces requirement based on different zones

Zone No.	Character	Required public open space (ha) (0.2 ha for1000 People)	Existing Public open space (ha)	Total Public Open Space with proposed (ha)	Gap with proposed projects (ha)	Proposed Public Open Spaces from Plan	Gap with all proposed open spaces
1	Exclusive Premium Development	22.82	9.76	9.76	13.06	11.68	1.38
2	Premium Mixed Development	76.14	21.96	124.95	-48.80	12.65	-61.45
3	High Density Green	14.89	0	0	14.89	1.52	13.37
4	High Dense Compact Mixed Development	10.66	0	0	10.66	4.33	6.33
5	Compact Logistics Development	4.55	0	10.38	-5.82	0.35	-6.17
6	High Density Residential	11.74	14.72	14.72	-2.97	5.47	-8.44
7	Transport Oriented Development	1.54	0	0	1.54	19.67	-18.12
8	Moderate Density Residential	37.31	5.73	5.73	31.58	7.04	24.54
9	Moderate Density Logistics Development	15.47	0.03	0.03	15.44	0.89	14.55
10	Moderate Density Residential	8.63	0	12.45	-3.81	3.22	-7.03
11	Moderate Density Residential	12.06	9.42	9.42	2.64	3.42	-0.77
12	Low Development Green Residential	30.41	3.44	173.18	-142.76	1.55	-144.32
13	Low Density Garden	12.19	70.08	87.55	-75.35	0	-75.35
		258.46	**132.18**	**445.91**	-187.44	**71.79**	-261.49

Plan proposed to create a small public open scape (Park) within 400m buffer to serve the service.

Larger City Parks Requirement

Larger City Park requirement is calculated for the area according to the standard radiance which is served to area as 5 km. Currently, Colombo commercial city has two major larger parks which serves for the entire country such as, Viharamahadevi Park and Gall face Green. But only these two parks will not impact to acive the adequate open space for the Colombo Commercial City. But after developing Meritme city project, Attidiya bird sanctuary park and Peliyagoda Urban Square Park will fulfill the requirement of Larger parks in the planning area and it will provide different recreational experience for the citizens and Commuters.

3.11) Implementation Plan

The anticipated vision for Colombo Commercial City 'Aquarina – The City in Water' is proposed to be achieved with 03 broader goals, 16 Objectives and 07 broader strategies. Planning & Building Regulations, Planning Guidelines and Strategic Projects derived under each broader strategy are the ultimate tools designed to implement the plan in real grounds.

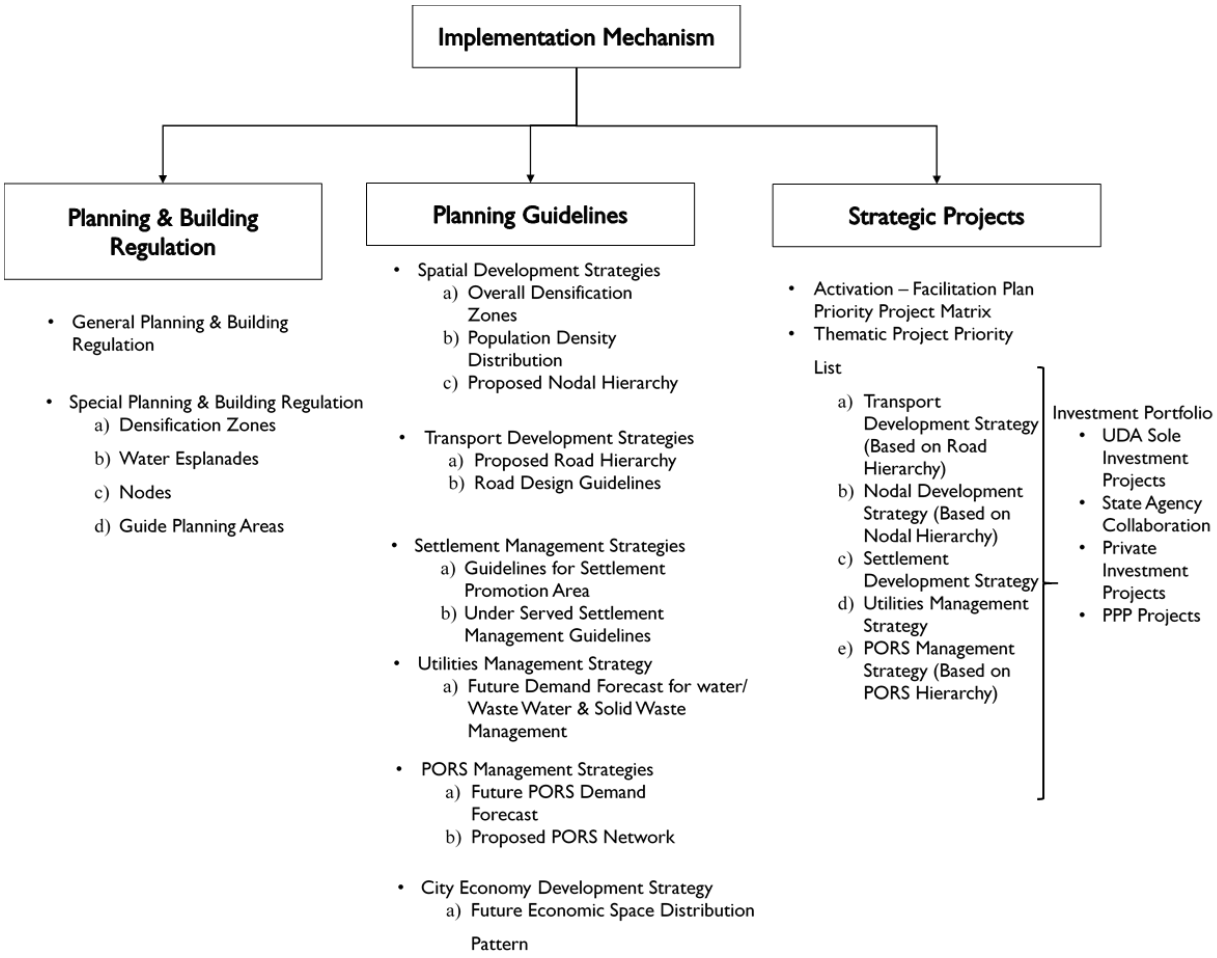


Figure 18:Implementation Mechanism

3.11.1) Prioritization of Strategic Projects

Strategic Projects, which can be identified as the major interventions to activate Aquarina have been prioritized to ensure successful and convenient implementation of the plan in different phases. Prioritization of projects was carried out based on four major criteria such as projects with most benefits and least costs, inter-dependency of projects, projects having higher contribution to achieve the vision and projects with minimum risk due to uncertainty, disputation among stakeholders and complexity. The appropriate financing mechanism is also proposed in order to guide the relevant stakeholder in implementation of identified projects and to ensure smooth realization of the future vision of Colombo Commercial City.

(1) Projects with Most Benefits and Optimum Costs

In

Project Prioritization

Projects with most benefits and Least Cost.

Inter Dependency of the Projects.

Projects which have highest contribution in achieving the vision.

Projects with least Risk due to Uncertainty/ Disputation among Stakeholders/ Complexity.

Identification of projects with most benefits, three aspects were considered such as positive impacts on environment, society and city economy through financial benefits. The financial benefits were evaluated in terms of the contribution of relevant project to attract more investments and increase land values. The following matrix was developed to evaluate each project under above mentioned criteria. The projects were initially scored based on 1 – 10 criteria with 1 given for projects with low leas benefits and 10 given for projects with most benefits.

Project Name	Impact Factors						
	Impact on Environmental Setting	Impact on Social Setting	Impact on Financial Benefits			Total	Normalize Value
			Investments	Land Values	Composite Financial Impact		
Project 3							100%

Figure 19: Financial benefits

Project Name	Impact Factors						
	Environment	Social	Finacial			Total	Normalized Value
			Land development costs	Public infrastructure Development Cost	Composite Financial Cost		
Project 1	Y1	Y2	X1	X2	X1+X2 = Y3	Y1+Y2+Y3	**(Y1+Y2+Y3)/ ∑(Y1+Y2+Y3) * 100%**
Project 2							
Project 3							

One of the limitations that can occur during the implementation of identified strategic projects is the costs attached to them in terms of negative impacts on environment, society and financial costs. Financial costs are also usually attributed to factors such as land development costs and public infrastructure development costs. The following matrix was developed to evaluate each project in terms of above-mentioned criteria. 1 – 10 scale was adopted in here as well in the inverse terms as to give 1 for projects with most costs and 10 for projects with least costs.

(2) Inter-dependency of Projects

Inter-dependency of projects is another criteria considered in prioritization of strategic projects. The concept here is that a project which is a pre-requisite for a one or more other project automatically gains its priority in the order of implementation. Hence, a Pair-wise Matrix was worked out to derive the order of implementation of the identified projects.

- 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

Figure 20: impacts on environment, society

Project	P1	P2	P3	P4	P5	P6	Total	Normalized Value
P1	0							
P2		0						
P3			0					
P4				0				
P5					0			
P6						0		
Total								

Figure 21: Inter-dependency of projects

(3) Projects having higher contribution to achieve the vision

The projects which have higher contribution or direct impact to achieve the vision were given high scores in prioritization of projects. This was evaluated based on the contribution of each project in achieving objectives under three broader goals.

Project Name	Goal 01				Goal 02				Goal 03					Normalized Value
	O1	O2	O3	O4	O5	O6	O7	O8	O9	O10	O11	O12	Total	
P1														
P2														
P3														
P4														
P5														
P6														

Figure 22: Projects having higher contribution to achieve the vision

(4) Projects with Least Risk due to Uncertainty, Disputation among Stakeholder and Complexity

In practical implementation of projects, it is important to evaluate each project's stand in terms of the risk. The risk of a project can be occurred due to uncertainty, disputation among stakeholders and complexity. Hence, a similar matrix was developed to evaluate each project under above three factors. Accordingly, 1 – 10 scale was used with 1 given for projects with least risks and 10 given for projects with higher risks.

3.11.2) Prioritized Projects

The prioritized projects were classified into three broader categories such 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 implementable with the next 11 years in the period of 2019 to 2030.

Identified first priority projects are also classified into three categories such as;

(1) Strategic Projects identified by Colombo Commercial City Development Plan – 2030
(2) Complementary Projects identified by Colombo Commercial City Development Plan – 2030
(3) Existing and on-going projects incorporated by Colombo Commercial City Development Plan - 2030

1st Priority Projects (2019 – 2030)

Category 01 – Strategic Projects identified by Colombo Commercial City Development Plan - 2030

Project Code	Project Name	Tentative Project Cost (LKR Mn)	Responsible Agencies	Financing Mechanism
S-W	**Water Esplanade Development Strategy**			
S-W-1	***Cleaning and Connecting of Water Bodies***			
S-W-1-1	Canal Improvement & Retention Area Development at Peliyagoda	80	SLLR&DC	Treasury Funding
S-W-1-2	Connecting the missing links of existing waterway network	750	SLLRDC/ Provincial Irrigation Department/ Central Environment Authority	Treasury Funding
S-W-1-3	Cleaning the waterway networks		SLLRDC/ Provincial Irrigation Department/ Central Environment Authority	Treasury Funding
S-W-2	***Waterfront Projects***			
S-W-2-1	Develop a Yacht Habour to promote a tourism at Dikkovita	2,000	Sri Lanka Port Authority/ Coast Conservation Department/Tourism Development Authority	Treasury Funding
S-W-2-2	Construct a new Regional Bus-stand with a Mixed Development at Peliyagoda	28,000	UDA/SLTB/Irrigation Department	PPP
S-W-2-3	Public Square with Mixed Development at Peliyagoda	360	UDA/Irrigation Department/ Peliyagoda UC	PPP
S-T	**Transport Development Strategy**			
S-T-1	***Drive with Water Roads***			
S-T-1-1	Development of Major Roads along both sides of Kelani River	400	RDA	Treasury Funding
S-T-1-2	Constructing a road along canals by continuing Lake Drive	600	RDA	Treasury Funding
S-T-1-3	Connecting missing links of the existing road at both sides of Dehiwala Canal.	30	RDA	Treasury Funding
S-T-1-4	Constructing a Major Road along Wellawatta canal	150	RDA	Treasury Funding
S-T-1-5	Road improvement along St. Sebestian Canal	200	RDA	Treasury Funding
S-T-1-6	Marine Drive Extension	2,500	RDA	Treasury Funding
S-T-2	***Roads***			
S-T-2-1	Baseline Extension up to Rathmalana	2,000	RDA	Treasury Funding
S-T-2-2	Construction of a New Road connecting Low Level and Peliyagoda	12	RDA	Treasury Funding
S-T-2-3	Widening of 1st Priority Roads	12,000	RDA	Treasury Funding
S-T-2-4	Hendala Road Extension	4	RDA	Treasury Funding
S-T-3	***Railway***			
S-T-3-1	New Rail Station Location for Cotta Road Station & New Rail Line via Borella	1,500	Sri Lanka Railway Department (SLRD)	Treasury Funding
S-T-3-2	New Rail Station Location for Dematagoda	600	Sri Lanka Railway Department (SLRD)	Treasury Funding
S-O	**Public Open Recreational Space Management Strategy**			
S-O-1	***Pocket Parks***			
S-O-1-1	Pocket Park near Kelani River - St. Sebestian canal	15	UDA/Irrigation Department/ Peliyagoda UC/SLLR&DC	Treasury Funding
S-O-2	***Linear Parks***			
S-O-2-1	Construction of a linear park along St. Sebastian canal left & Right banks	200	UDA/CMC/Irrigation Department/CEA	Treasury Funding
S-O-2-2	Construction of a linear park along Kelani River left & right banks.	1,000	UDA/CMC/Irrigation Department/CEA	Treasury Funding
S-O-2-3	Construction of a linear park along Kittampahuwa Canal to connect Kollonawa Marsh Recreational Area and Meethotamulla Urban Park	300	UDA/SLLR&DC/CMC	Treasury Funding
S-O-3	***Urban Parks***			
S-O-3-1	Urban Square Development at Peliyagoda	400	UDA/Peliyagoda UC	Treasury Funding
S-O-3-1	Ratmalana Urban Park Development at Railway Land	10	UDA/DMMC	Treasury Funding
S-O-4	***Wetland Parks***			
S-O-4-1	Promoting a Wetland Recreational Area at Attidiya Bird Sanctuary and Nendimala Canal area.	1,400	UDA/Forest Department/CEA/Boralesgamuwa PS	Treasury Funding/PPP

S-U	**Utilities Management Strategy**			
S-U-1	***Pipe Borne Water Supply***			
S-U-1-1	Construction of Kelani River Upstream Reservoirs	10,300	Irrigation Department/NWSDB	Treasury Funding
S-U-1-2	Water loss reduction in high priority area	44,000	NWSDB	Treasury Funding
S-U-2	***Waste Water***			
S-U-2-1	Improvement of Public Sanitary Facilities	300	CMC/DMMC	Treasury Funding
S-U-3	***Solid Waste***			
S-U-3-1	Transfer of Waste to the Aruwakkalu Sanitary Landfill, Puttalam	31,000	Ministry of Megapolis/CEA	Treasury Funding/PPP
S-U-3-2	Integrated Solid Waste Management - Colombo and Suburban area	2,000	08 Local Authorities/CEA/	Treasury Funding
	Strategic Project Cost (A)	**142,111**		

Category 02 – Complementary Projects identified by Colombo Commercial City Development Plan - 2030

Project Code	Project Name	Tentative Project Cost (LKR Mn)	Responsible Agencies	Financing Mechanism
C-W	**Water Esplanade Development Strategy**			
C-W-1	***Waterfront Projects***			
C-W-1-1	Hamilton Canal Entrance Development	400	Irrigation Department/ UDA/ SLLRDC/ CEA/ Wattala PC	PPP/ Treasury Funding
C-W-1-2	Development of Preethipura Beach for Recreational Activities	100	Coast Conservation Department/ UDA/ Wattala PS	PPP
C-T	**Transport Development Strategy**			
C-T-1	***Roads***			
C-T-1-1	Improvement of identified Secondary Roads within Greater Colombo	400	RDA	Treasury Funding
C-T-2	**TODs**			
C-T-2-1	Introducing Park & Ride System to Rathmalana & Peliyagoda	100	DMMC, CMC, Peliyagoda PS	PPP
C-O	**Public Open Recreational Space Management Strategy**			
C-O-1	**Pocket Parks**			
C-O-1-1	Pocket park in Dematagoda Railway Station	15	UDA/SLRD	Treasury Funding
C-O-1-2	Park Near to Dematagoda canal Housing Development Area	20	UDA	Treasury Funding
C-O-2	**Linear Parks**			
C-O-2-1	Construction of a linear park connecting Weras Ganga Recreational Area and Boralesgamuwa Lake Recreational Area	40	UDA/SLLR&DC/Boralesgamuwa UC	Treasury Funding
C-O-2-2	Construction of a linear park at the left side of Wellawatta Canal	25	UDA/SLLR&DC/CMC	Treasury Funding
C-O-2-3	Beira Lake Linear Park Development		UDA/SLLR&DC/CMC	Treasury Funding
C-O-2-4	Construction of a linear path along the Beach from Hekitta to Dikowita	250	UDA/Coast Conservation Department (CCD)	Treasury Funding
C-O-2-5	Construction of a linear park at both sides of Mudun Ela by continuing the existing path	50	UDA/SLLR&DC/Peliyagoda UC	
C-O-3	***Urban Parks***			
C-O-3-1	Urban Park Development at Borella	350	UDA/CMC	Treasury Funding
C-O-3-2	Urban Park Development at Kalubowila Dehiwala Area	75	UDA/DMMC	Treasury Funding
C-O-4	**Wetland Parks**			
C-O-4-1	Wetland Park Development at Hekitta	170	UDA/Wattala PS	Treasury Funding
C-O-5	**Boulevards & Pedestrian Paths**			
C-O-5-1	Development of Ceremonial Boulevards	75	RDA/UDA	Treasury Funding
C-O-5-2	Construction of Boulevard Roads to connect Wellawatta Junction at Galle road, Railway Station and water transportation hub.	20	UDA/RDA	Treasury Funding

C-O-5-3	Crow Island Beach Park Project- Construction of a walkable road connecting Crow Island & Pettah Historical Tourism Area	70	UDA/RDA	Treasury Funding
C-E	**Economics Development Strategy**			
C-E-1	Conservation of archeologically important buildings & to open up for tourism activities.	3,000	UDA/ Archeological Department/ CMC	Treasury Funding/ Private
	Complementary Project Cost (B)	**5,160**		

Category 03 – Existing and on-going projects incorporated by Colombo Commercial City Development Plan - 2030

Project Code	Project Name	Tentative Project Cost (LKR Mn)	Responsible Agencies	Financing Mechanism
O-W	**Water Esplanade Development Strategy**			
O-W-1	***Waterfront Projects***			
O-W-1-1	Beira Lake Intervention Area Development Project		UDA/CMC/SLLRDC/SLPA/NHDA/Private Parties	Treasury/PPP/Private
O-W-1-2	Maritime City Development Project	31,000	Ministry of Megapolis & Western Development	PPP
O-W-2	***Drainage Improvements***			
O-W-2-1	Ongoing & Proposed Interventions for Macro Drainage Network & Micro Drainage improvement by SLLRDC		SLLR&DC	Treasury Funding
O-W-2-2	Proposed interventions for Storm Water Drainage Network Improvement by CMC		CMC	Treasury Funding
O-T	Transport Development Strategy			
O-T-1	***Railway***			
O-T-1-1	Light Rail Transit System (LRT) Development	11,600	Private Partners/SLLR&DC/UDA/RDA	PPP
O-T-1-2	Railway Electrification	14,600	Railway Department/ Private Partners	PPP
O-T-1-3	Construction of LRT & BRT stations in close proximity to Railway stations	800	Sri Lanka Railway Department (SLRD)/Private Partners	PPP
O-T-2	***TODs***			
O-T-2-1	Development of Multi Modal Transport Hub at Pettah	32,000	UDA/Ministry of Megapolis & Western Region Development/CMC	PPP
O-O	**Public Open Recreational Space Management Strategy**			
O-O-1	***Urban Parks***			
O-O-1-1	Kimbulawala Urban Park Development		UDA/CMC	Treasury Funding

2nd Priority Projects (2019 – 2030)

Category 01 – Strategic Projects identified by Colombo Commercial City Development Plan - 2030

Project Code	Project Name	Tentative Project Cost (LKR Mn)	Responsible Agencies	Financing Mechanism
	Develop a continuation of the beach by a beach nourishment at Mount Lavinia Beach Hotel	300	CCD/UDA	PPP/Private
	Enhance the view along the Port wall (Demolishing of Port Wall)	30	UDA/Port Authority	Treasury Funding
	Widening of 2nd Priority Roads	3600	RDA	Treasury Funding
	Construct & Widenning of Roads at both sides of Mudun Ela	400	RDA	Treasury Funding
	Hekitta Road Extension	300	RDA	Treasury Funding
	Construct Pedestrian bridges linking Urban square & the Bus stand	1200	RDA	Treasury Funding
	Gathering Space/ Park Peliyagoda	150	UDA/Peliyagoda UC	PPP/Private

	Rooftop Public Deck on the Expert City Buildings (Sight Seen deck, Open restaurants	25	UDA/CMC	PPP
	Public Square with Mixed Development at Pattah	7300	UDA/CMC/Private Partners	PPP
	Regeneration area in Railway Land for Mixed Development at Rathmalana	600	SLRD/UDA/Private Partners	PPP/ Private
	Promote Under Ground Service Ducks		NWSDB/CEB/CMC/Other 07 Local Authorities	Treasury Funding
	Port & Logistic Activity Developments		Port Authority/UDA/RDA	PPP

Category 02 – Complementary Projects identified by Colombo Commercial City Development Plan - 2030

Project Code	Project Name	Tentative Project Cost (LKR Mn)	Responsible Agencies	Financing Mechanism
	Convert the beach front area to a fishery based tourism activity area- From Dehiwala Railway station to Mount Lavinia Beach hotel		CCD/SLTDA/UDA/ Fisheries and Aquatic Department	Treasury Funding
	Design intervention for fishery community settlements (Application of Slum Architecture)		CCD/SLTDA/UDA	Treasury Funding
	Develop the waterfront at Open University area.	20	Open University Sri Lanka	PPP
	Coastal line and Railway Station Re -development at Wellawatta	600	Sri Lanka Railway Department (SLRD)	Treasury Funding
	Pocket park and linear park (near to Sunethradevi Road Kohuwala)	100	UDA/DMMC	Treasury Funding
	Pocket Park St. Sebastian Hill Street - St. Sebastian canal	15	UDA/CMC	Treasury Funding
	Pocket Park in Jayathikala Place - St. Sebastian Canal	25	UDA/CMC	Treasury Funding
	Pocket Water base Park Maradana	5	UDA/CMC	Treasury Funding
	Construct a Linear Park/ Bicycle path connecting Railway, LRT station, Mixed Development at Rathmalana	20	UDA	Treasury Funding
	Linear Park along Kirulapona canal	20	UDA/SLLR&DC	Treasury Funding
	Linear Park along Boralesgamuwa (120 Road to Boralesgamuwa Tank)	20	UDA/SLLR&DC	Treasury Funding
	Linear Park along Rathmalana canal	10	UDA/SLLR&DC	Treasury Funding
	Linear Park along Hunupitiya – Wattala Kalu Ela	25	UDA/SLLR&DC	Treasury Funding
	Linear Park along Kiththampahuwa Canal	30	UDA/SLLR&DC	Treasury Funding
	Linear Park along Heen Canal	20	UDA/SLLR&DC	Treasury Funding
	Proposed path way along the Wetland to Create continuous connectivity of green spaces	570	UDA/SLLR&DC	Treasury Funding
	Preethipura linear park parallel to the beach	100	UDA/CCD	Treasury Funding
	Kolonnawa Canal Linear Park	20	UDA/SLLR&DC	Treasury Funding
	Walking path to link Hunupitiya node and Wattala junction	25	UDA/Wattala PS	Treasury Funding
	Cycling path to connect Zoological garden and coastal line	100	UDA/DMMC	Treasury Funding
	Borella Urban Park Development	450	UDA/CMC	Treasury Funding
	Open up Cooray Park to public by connecting access ways to linear park and adjacent Roads.	20	UDA/CMC	Treasury Funding
	Rohini Place Wetland Park Dehiwala	470	UDA/DMMC	Treasury Funding
	Construct a jogging path along the wetland in Hunupitiya	20	UDA/Wattala PS/SLLR&DC	Treasury Funding
	Develop Walkable boulevards connecting Galle Road and Marine Drive	20	UDA/RDA	Treasury Funding
	Construct boulevard roads to connect Wellawatta junction at Galle road, Railway station and water transportation hub.	25	UDA/RDA	Treasury Funding
	Development of Gateway Boulevards	550	RDA	Treasury Funding
	Construct a Beach park at Rathmalana Proposed TOD center	800	UDA/CCD	PPP
	Promote an Agriculture Tourism Modal Village at Katuwawala		UDA/Agriculture Department/ Boralesgamuwa UC	PPP/ Private

	Promote mixed development Project at Existing Dematagoda Railway station	3200	UDA/Private Partner	PPP/ Private

Category 03 – Existing and on-going projects incorporated by Colombo Commercial City Development Plan - 2030

Project Code	Project Name	Tentative Project Cost (LKR Mn)	Responsible Agencies	Financing Mechanism
	Incorporate the Development Proposal of Colombo North Gate	30	UDA/CMC	Treasury Funding
	Incorporate the Modara Kovil Sacred area Development Proposal		UDA/CMC	
	Elevated Highways Development (Peliyagoda to Athurugiriya & Port)	40000	RDA	Treasury Funding
	Bus Rapid Transit System (BRT)	13000	RDA/Private Partners	PPP
	Blumendhal Logistic & Urban Park Development	100	UDA/Port Authority/SLLR&DC/CEA	PPP
	Development of Urban Park in Borella Cemetry	400	UDA/CMC	Treasury Funding
	Develop an urban park at existing Meethotamulla Waste Dumping site.	350	UDA/CMC/CEA	Treasury Funding

3rd Priority Projects (2019 – 2030)

Category 01 – Strategic Projects identified by Colombo Commercial City Development Plan - 2030

Project Code	Project Name	Tentative Project Cost (LKR Mn)	Responsible Agencies	Financing Mechanism
	Road Improvement along Dematagoda Canal	250	RDA	Treasury Funding
	Road Improvement along Heen Ela	180	RDA	Treasury Funding
	Create Road connection to the existing highway line in Hunupitiya.	100	RDA	Treasury Funding
	Upgrade Commercial Developments incorporate with the railway station development in Hunupitiya.	2500	UDA/SLRD	PPP/Private
	Promote mixed Developments at land owned to Agriculture department fertilizer stores in Hunupitiya.	4500	UDA/Private Partners	PPP/Private
	Develop a mixed use activity with the development of proposed water transportation hub at the adjacent lot of Wellawatta Canal and Marine Drive.	300	UDA/CMC	PPP/Private
	Proposed Regeneration areas at Peliyagoda and Colombo North Area		UDA/CMC/Peliyagoda UC	PPP/Private
	Kelani Right Bank Water Supply Project Stage - 11	29000	NWSDB/ Irrigation Department	Treasury Funding
	Waste Water treatment Plant at Wattala	18000	CMC (Drainage Planning)	Treasury Funding
	Waste Water treatment Plant at Dehiwala Mt. Levinea	30000	CMC (Drainage Planning)	Treasury Funding
	Sea Out Fall improvement at Dehiwala	40000	CMC (Drainage Planning)	Treasury Funding
	Waste Water treatment Plant at Kelaniya - Peliyagoda	13000	CMC (Drainage Planning)	Treasury Funding
	Weliwita Water Supply Project	35000	NWSDB	Treasury Funding
	Kethhena WTP Improvement	48000	NWSDB	Treasury Funding
	Kandana Phase II WTP Improvement	7228	NWSDB	Treasury Funding
				Treasury Funding

Category 02 – Complementary Projects identified by Colombo Commercial City Development Plan - 2030

Project Code	Project Name	Tentative Project Cost (LKR Mn)	Responsible Agencies	Financing Mechanism
	Construct three pedestrian bridges to link both sides of the canal	1200	RDA	Treasury Funding
	Proposed Wetland park at Aththidiya sanctuary	2700	UDA/CEA/Forest Department	PPP

	Recreational development at Cooray Park	20	UDA/CMC	Treasury Funding
	Reconstruct the Aludagoda Garden as park and play ground	30	CMC	Treasury Funding
	Landscape project at Boralesgamuwa town center	30	UDA/ Boralesgamuwa UC	Treasury Funding
	Developmnet of Transit Boulevards	200	RDA	Treasury Funding
	Develop walkable Boulevard Roads connecting Marine Drive	10	UDA/RDA	Treasury Funding
	Mixed development Project at Marine Drive Land	170	UDA/Private Partners	PPP/Private
	Promote a Mixed Development Project at Sri Nigrodarama Mawatha Slums area	1300	UDA/Private Partners	PPP/Private
	Develop a commercial based mixed development at existing police station land at Boralesgamuwa	100	UDA/Private Partners	PPP/Private
	Proposed mixed development project at UDA land at Boralesgamuwa	350	UDA/Boralesgamuwa UC	PPP/Private
	Social housing development project (Relocation)	192,500	UDA	Treasury Funding
	Social housing development project (Redesign)	55,000	UDA	Treasury Funding
	Middle income Housing Developments	38000	UDA	Treasury Funding
	High Income Housing Developments		Private Partners	

Category 03 – Existing and on-going projects incorporated by Colombo Commercial City Development Plan - 2030

Project Code	Project Name	Tentative Project Cost (LKR Mn)	Responsible Agencies	Financing Mechanism
	Incorporate the proposal to promote water transportation from Wellawatta to Battaramulla.	18000	SLLR&DC/ Ministry of Megapolis & Wesetrn Development	Treasury Funding
	Kelani New Bridge Development	35000	RDA	PPP
	Incorporate the Dehiwala Super market Redevelopment Projects and mixed development projects at UDA market land and Dehiwala UC market land	300	UDA/DMMC	PPP/Private