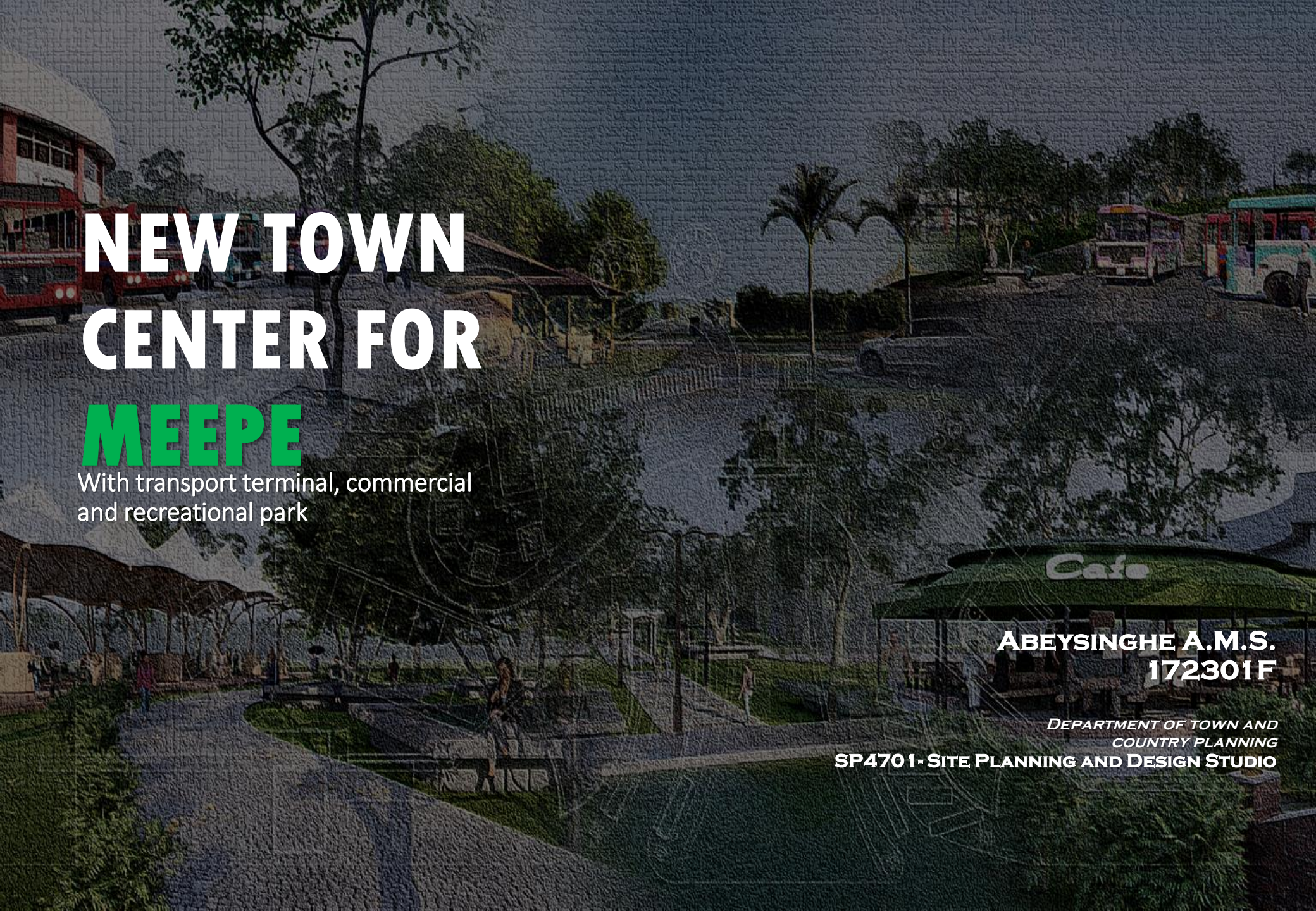

NEW TOWN CENTER FOR MEEPE

With transport terminal, commercial and recreational park

Abeysinghe A.M.S.
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Department of town and country planning
SP4701 - Site Planning and Design Studio

ACKNOWLEDGMENT

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SITE INTRODUCTION

1. SITE INTRODUCTION

1.1 Location

Meepe is situated in Seethawaka PS in adjoining with 2 DSDs of Hanwella & Padukka of Colombo District. The functional boundary covers 7 GNDs spreading around 523 Ha including Major Junctions of Meepe & Galagedara. The Major A road running through Meepe boundary is A4 high level & two major B Roads are Meepe – Ingiriya (B285) & Meepe-Padukka (B123).

The selected site located in the middle of Meepe town and currently few grocery shops are functioning here and also the current bus halt is also located in this site. The greener area behind these shops are not well functioning. And the canal going through this site is poorly maintained.

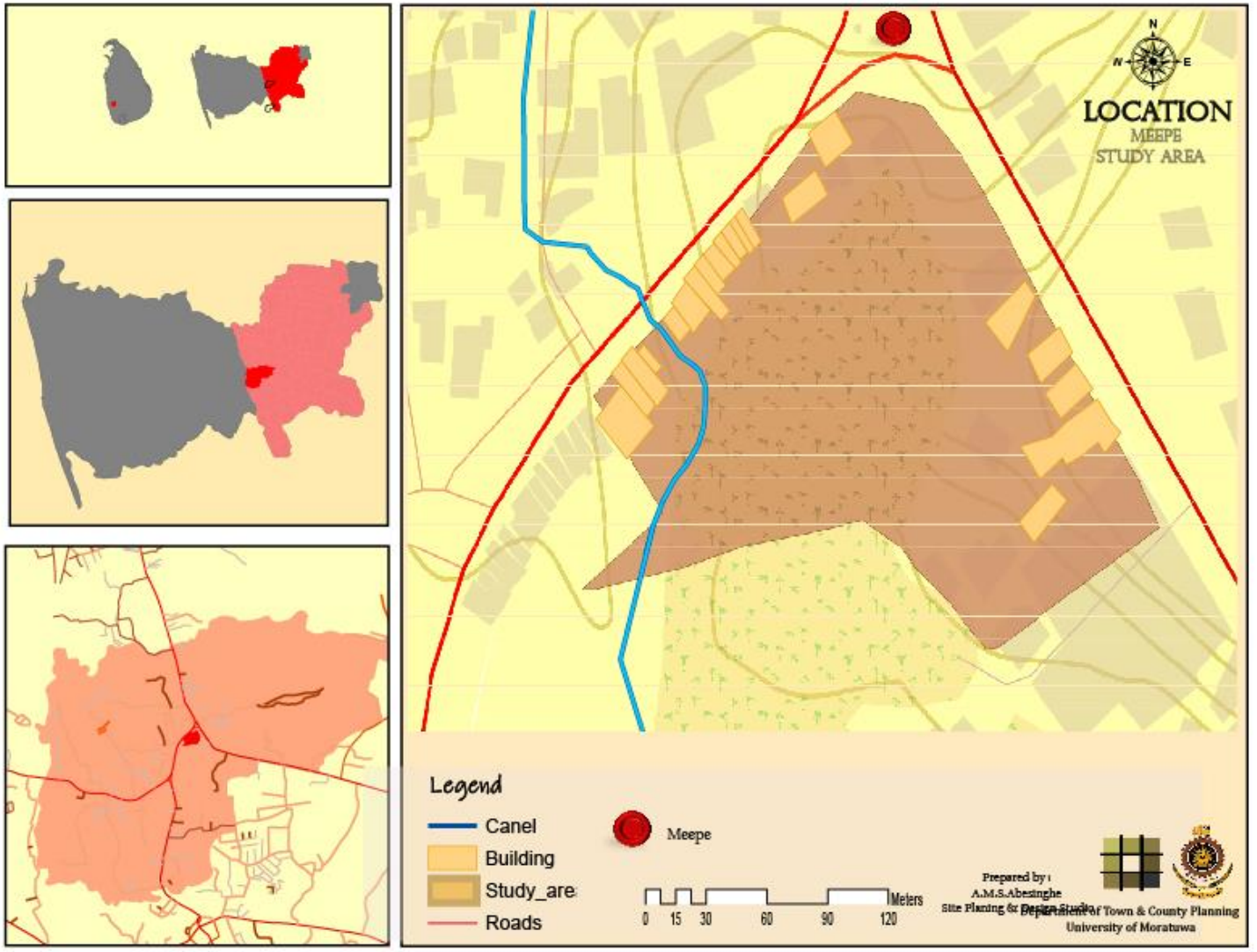


Figure 1Location Map

1.2 Layout Plan

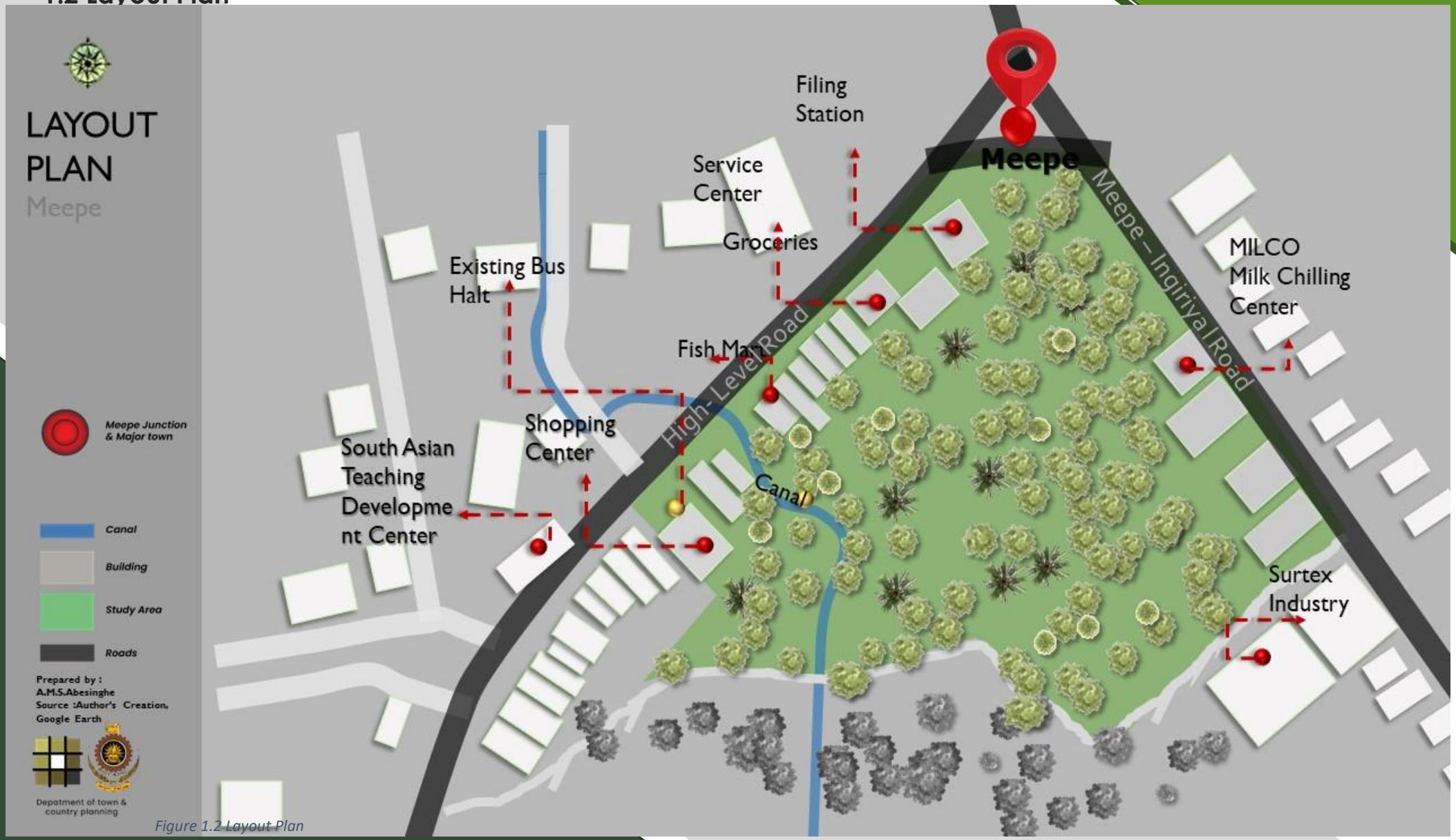


Figure 1.2 Layout Plan

1.3 Boundary Delineation

Figure 1.3 Boundary Deliniation

1.4 History of the site (Previous situation)

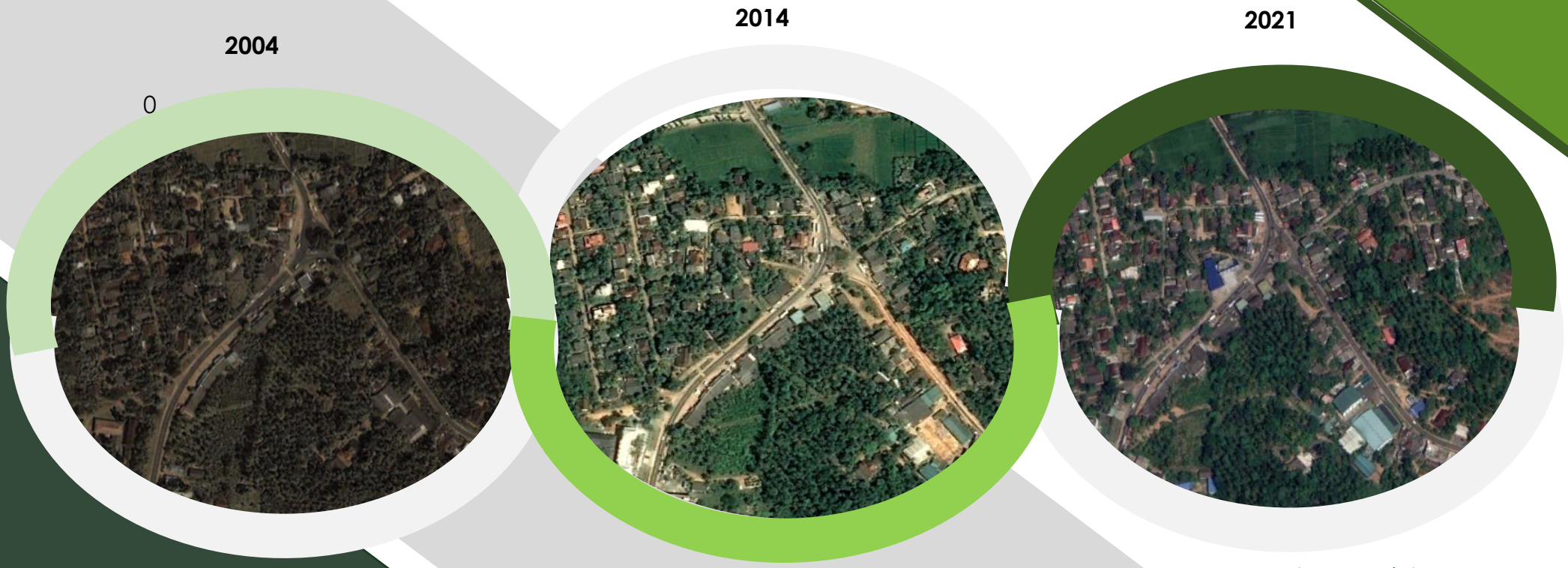


Figure 1.4 Evolution

When comparing the satellite images taken in 2004 and 2020, we can clearly identify the greener land has been reduced by time. But the commercial area remains the same. In 2004 the greener area consisted of well-functioning coconut plantation according to records, but the recent situation is the coconut plantation is poorly maintained and number of trees are reduced, and also the outer boundary of the greenery land used for other human activities and hence the greener area reduces gradually over the past years.

In parallel to that we can identify the number of commercial units has been increased in both high level and meepe-ingiriya road. Earlier this area was a small town, but now this area evolved to a much complex and functional town center.

1.5 Land ownership

All the land area owned by private owners. The existing filling station, the service center and milco chilling center are fully operating within the site with private ownership. The greenery area is owned by one individual and the commercial unit lands are owned by shop owners.

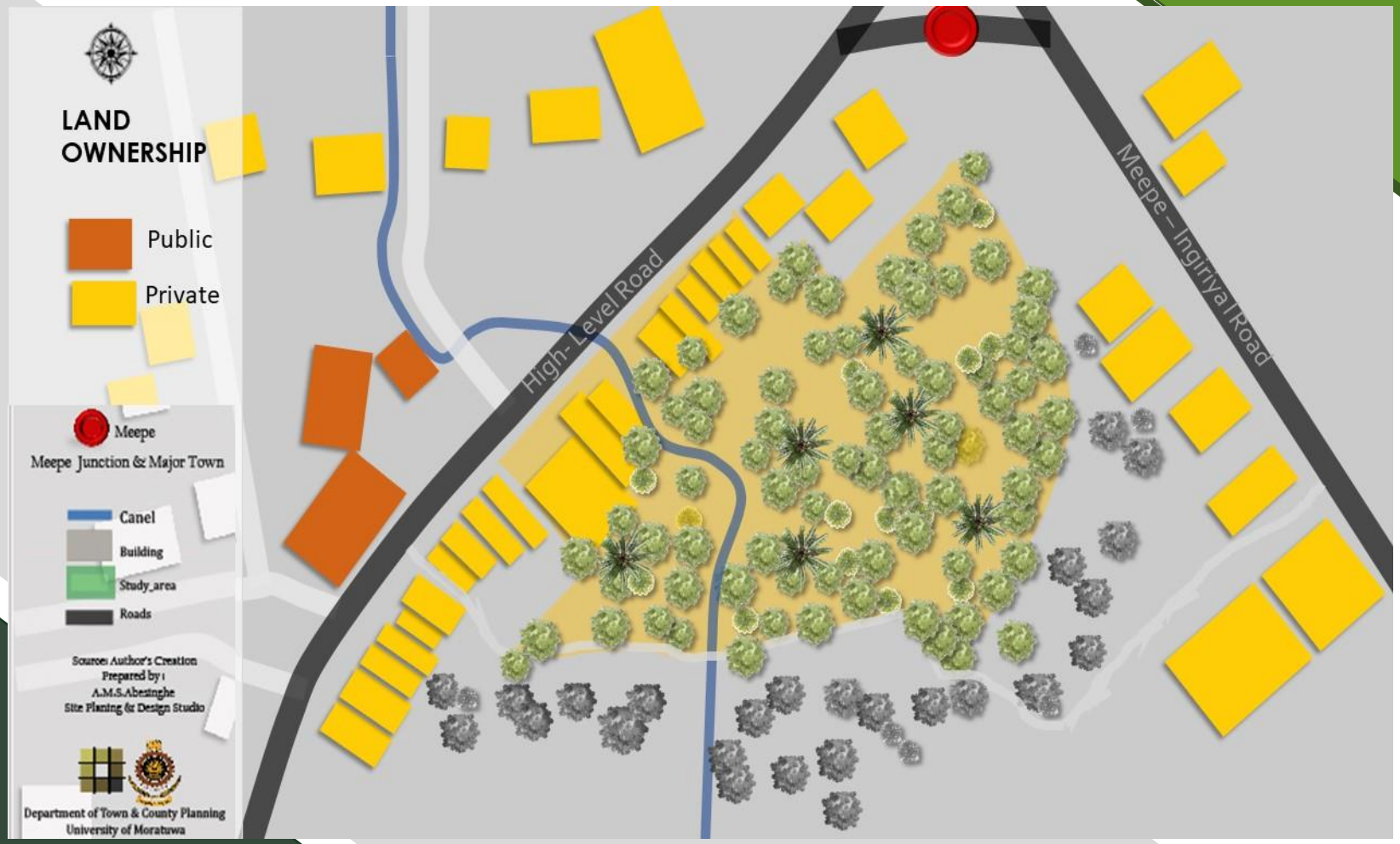


Figure 1.2 Land Ownership Plan

1.6 Existing situation of the site (at local and national context)

CONTEX ANALYSIS

2. CONTEXTUAL ANALYSIS

2.1 Accessibility

- Site is facing the High-level road and Meepe – Ingiriya Road.
- Easy accessible point to both Galle road and low level road(Colombo – Hanwella road)
- Nearest train station is in padukka which is 2km away.
- Katunyaka-Bandarayaka international airport is 60km away.
- Colombo port is 37.6km away

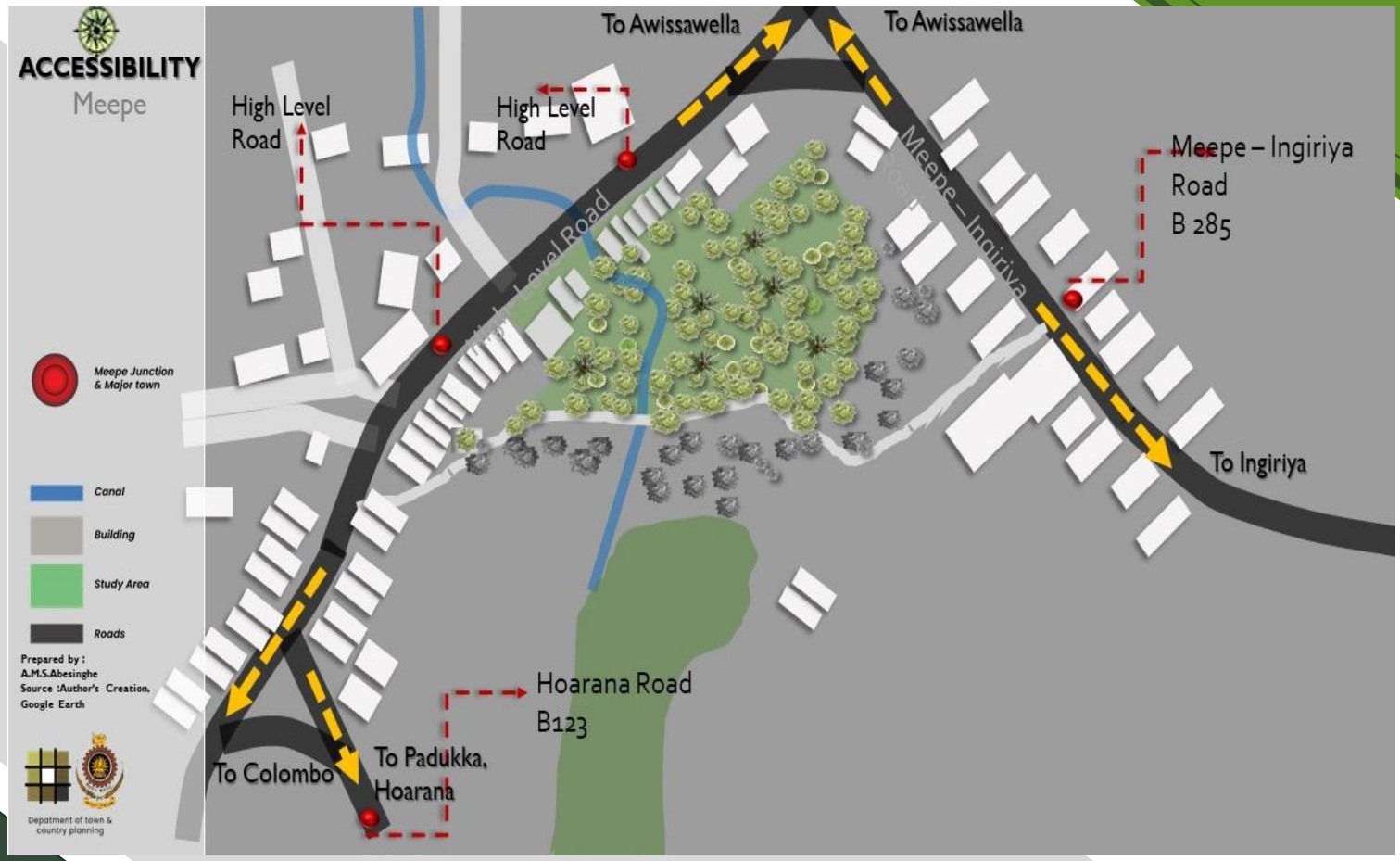


Figure 2.1 Accessibility Map

2.2 Land value

Since the selected land is in Meepe town area, the value of a perch lies between LKR281, 350 to LKR350000.
The reasons for this higher land value is probably the easy access to the high level road, and easily accessible to Colombo, Horana, hanwella, and Avissawella areas. And also 3 phase electricity and water facilities given to the area increased the land value in the area.

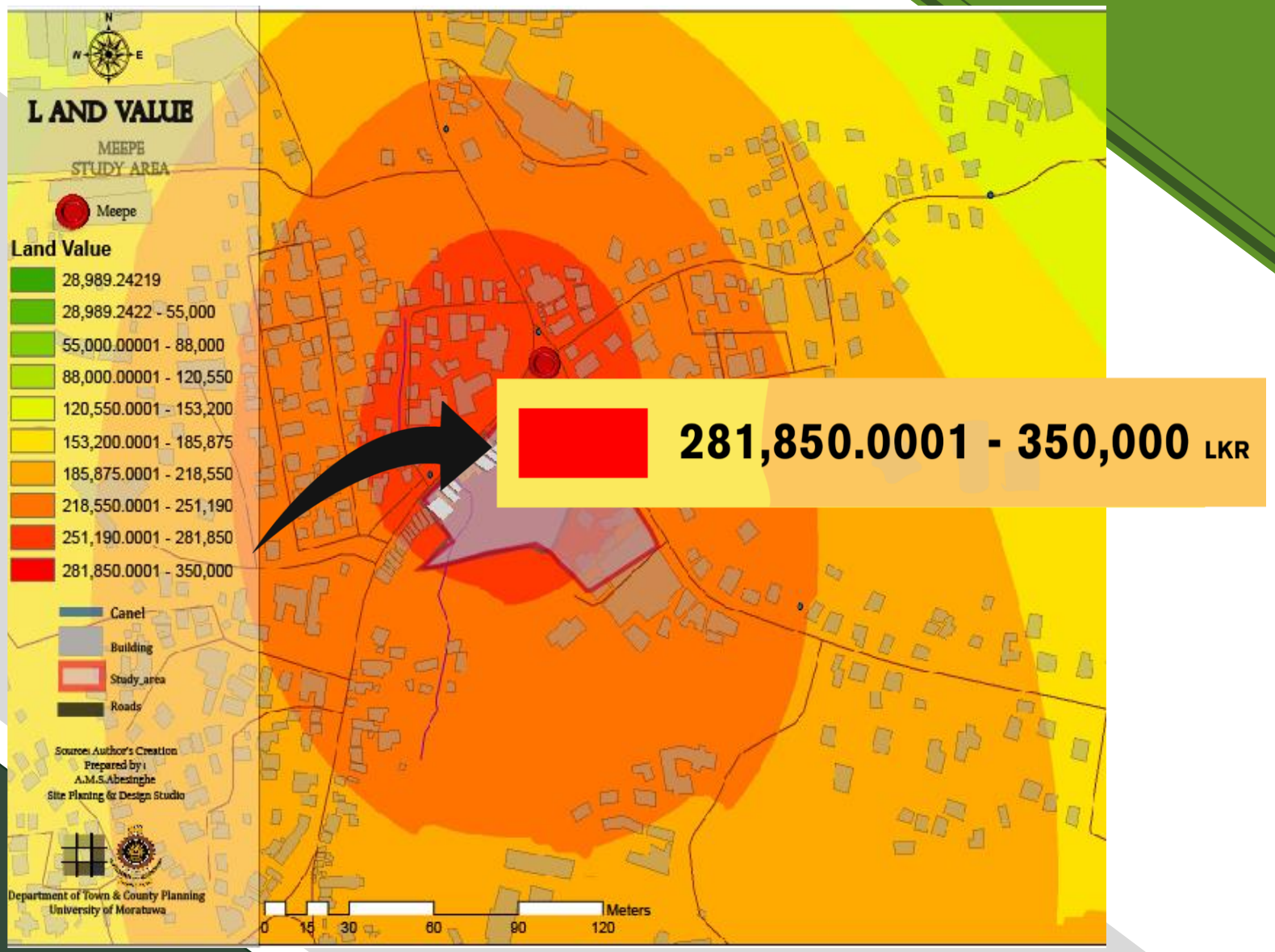


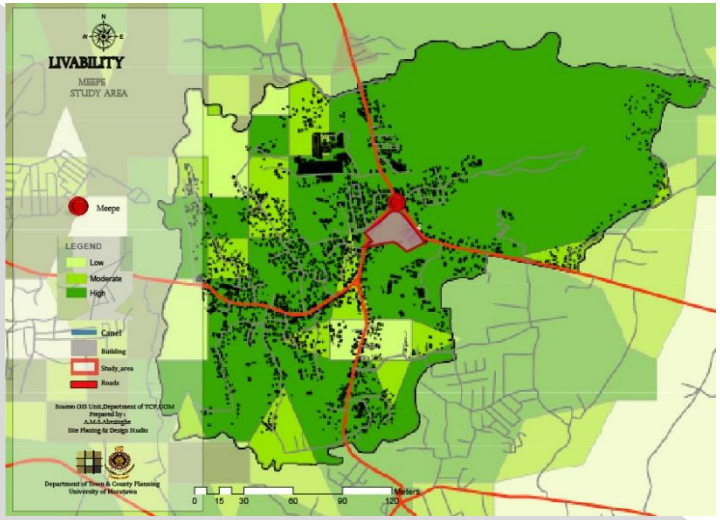
Figure 2.2 Land Ownership Map

2.3 Functional Efficiency

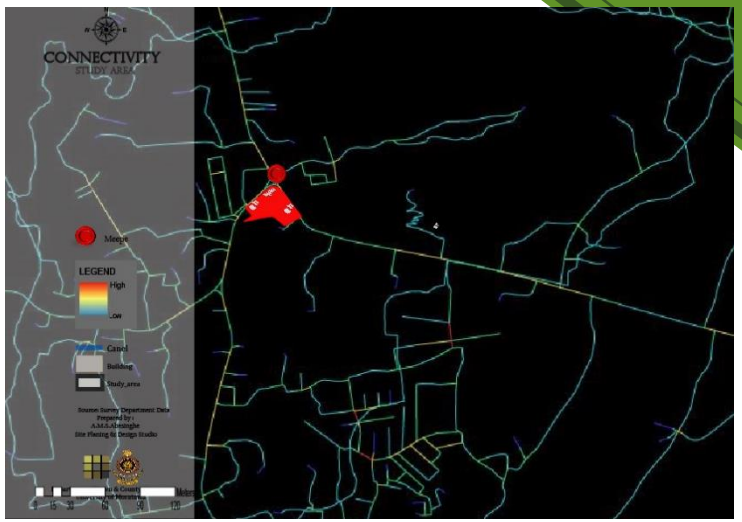
1. Legibility
2. Connectivity
3. Serviceability

These are the main attributes of functional efficiency. Legibility refers how a person can easily read the place. These connectivity & integration maps show how the area integrate & connect with the surrounding localities. The livability & high development potential caused to agglomeration of more people on the area due to high serviceability. According to all those reasons we can conclude that this area is highly functionally efficient.

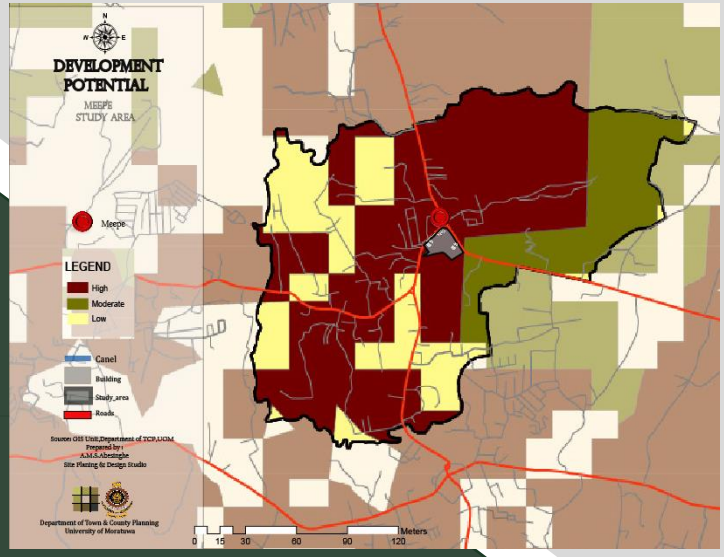
Livability



Connectivity



Development Pressure



Integration

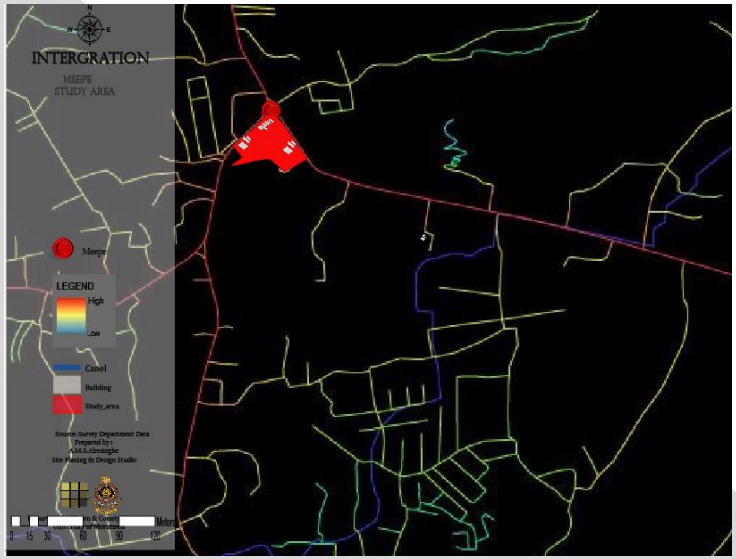


Figure 2.3 Functional Efficiency

2.4 Land use and building use

Currently the land area facing the high level road being used for commercial activities. Few grocery shops are functioning on this selected land. Service center and Filling center were located in the Meepe junction and also there are MILCO milk chilling center. The residents of the area and the people going to Colombo direction on high level road and Meepe – Ingiriya Road are taking common goods from these shops. The buildings are using for following shops,

- Grocery shops
- Communications
- Farm shop
- Fish mart
- Bakery

On the other hand the greener area behind the shops are used for old coconut plantation which is poorly maintained. The canal crossing the High-level road goes through this land and it is not maintained properly. Lot of waste being disposed to this, hence it is at an unusable state.

Figure 2.4 Land Use Map

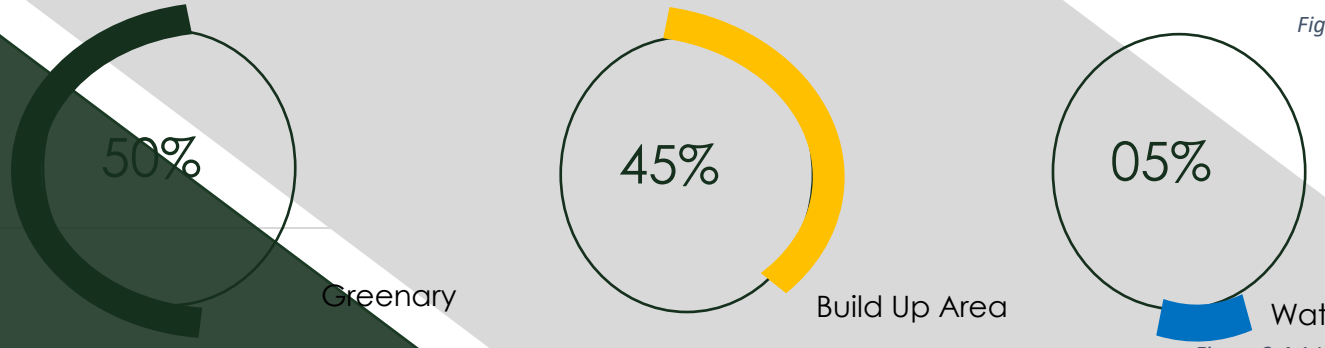


Figure 2.4.1 Land use Present age

2.5 Visibility

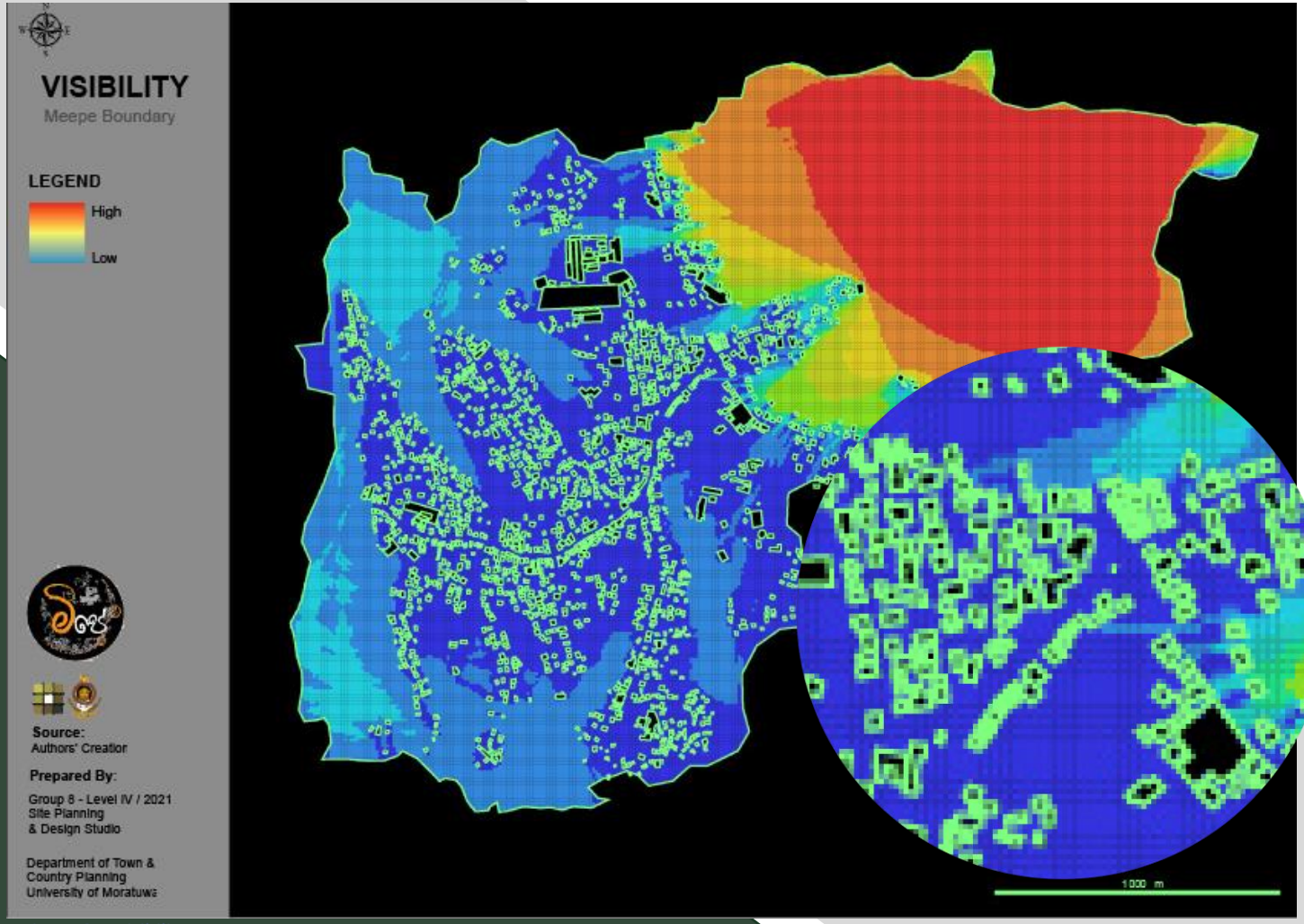


Figure 2.5 Visibility

The site is easily visible from each side of the junction. Since the upper corner of the land is the junction of the High-level and meepe-ingiriya road the people coming from the avissawella direction can directly see the selected site. And the people are coming from Colombo direction notices this site with the scenic kithulkanda mountain view. And the site bounds to meepe-ingiriya road, the site is clearly visible from that side too.

2.6 Demography Profile

2.6.1 Population

Area	2012	2020	2040
Arukwatta North	1520	1621	1900
Arukawtta South	2168	2311	2710
Galagedara East	2790	2974	3488
Galagedara north	2391	2549	2989
Galagedara south	1247	1330	1559
padukka	2939	3133	3674
pahala padukka	1329	1417	1662
Pitumpe north	1438	1533	1798
Pitumpe south	1332	1420	1665
Mawathagama east	914	975	1143
Mawathagama west	1976	2107	2470

Figure 2.6.1 Population

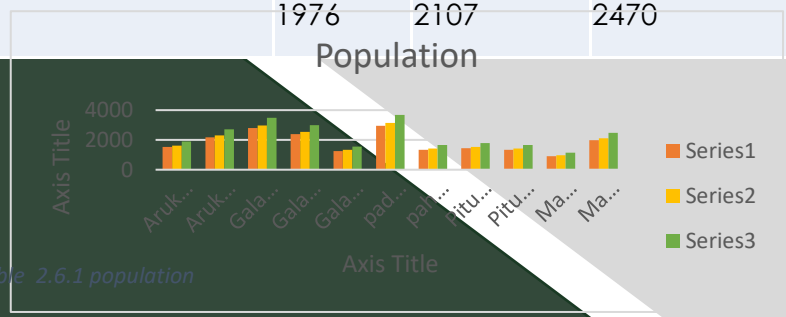


Table 2.6.1 population

2.6.2 Commuter population

Seethawaka	
Male Resident	13139
Female Resident	14038
Total	27177
Male in-migrant	4836
Female in-migrant	6284
Total	11120
Ratio	0.40917
Meepe Population	2790
Estimated in-migrant Population	1142

Table 2.6.2 Commuter Population

Commuter population can be defined as the population who daily come to meepe from the outside. The commute population in meepe is high due to several reasons. The main reason for this is the South Asian Teaching Development center and the other main attractions like kithul kanda mountain resort. And also people are visiting daily to meepe for getting public services, banking purposes and commercial purposes

2.7 Problem and Potential

Potential	Constrain
Meepe bus stop has a locational advantage situating at the High-level road (A4)	Lack of Bus stand
Easy Accessibility to Galle road and Low-level road through Meepe	Higher city traffic in peak hours
Higher commutable population to the town	lack of public facilities such as washrooms, rest areas etc.
Several bus routes starting from Meepe interconnecting nearby towns	Congested, poorly designed and maintained built structures development in and around the bus stop.
Higher percentage of communities use public transportation in this area	No specific bus parking bays or bus stops in town center (especially along the main street) which confuses passengers.
Many high- and middle-class residents live in meepe area	Lack of quality food restaurant and gymnasium facilities.
Many immigrants tends to look for areas near Meepe (Easy access to Colombo)	Neighborhood residents don't have any kind of recreational facilities (parks / playgrounds)
A bigger greenery area with higher land value located in the Meepe town area	Lack of well functioned commercial buildings
Srilanka technological campus and south Asian teaching development center located within meepe city	Rise of health problems due to poorly maintained canal system
A large-scale milk chilling center located within the city	Lack of vehicle parking spaces
	100% land owned by private property

Table 2.7 Problem and Potential

2.8 SWOT Analysis

- Strategic Location – A greenery location in middle of the town
- Accessibility to nearby major towns / roads
- Many high- and middle-class living residents
- Several bus routes starting from Meepe interconnecting nearby towns
- Existing bus stop at the same location

- Poorly maintained canal system
- lack of public facilities such as washrooms, rest areas etc
- Lack of quality food restaurant and gymnasium facilities.
- Neighborhood residents don't have any kind of recreational facilities (parks / playgrounds)
- Lack of well functioned commercial buildings
- 100% private land ownership

- Higher commutable population
- Higher percentage of communities use public transportation
- Many immigrants tends to look for areas near Meepe (Easy access to Colombo)
- A chilling center within the site

- Pandemics
- Illegal activities happening in isolated backyard area

WHY WE N EED A PLAN

3. WHY WE NEED A PLAN

3.1 To curb negative externalities

3.1.1 Traffic congestion at High level road

Context

Only one small bus halt available for loading and unloading passengers to Colombo direction

Magnitude

Many people use the city as a transaction point to change from one bus route to another. Commute community is also high due to in city higher educational centers. It is observed that the most of the buses tend to occupy the high-level road also when loading and unloading passengers. This generates a huge traffic in the area especially in the peak hours.

Significance

Road Link	Type	Connection to site	Connection to main corridor	Carriageway length (m)
High-level Road (A4)	Major	Yes	Both end	15m
Meepe Ingiriya Road	Major	Yes	Both end	10m
Meepe - Horana Road	Major	No	One End	10m

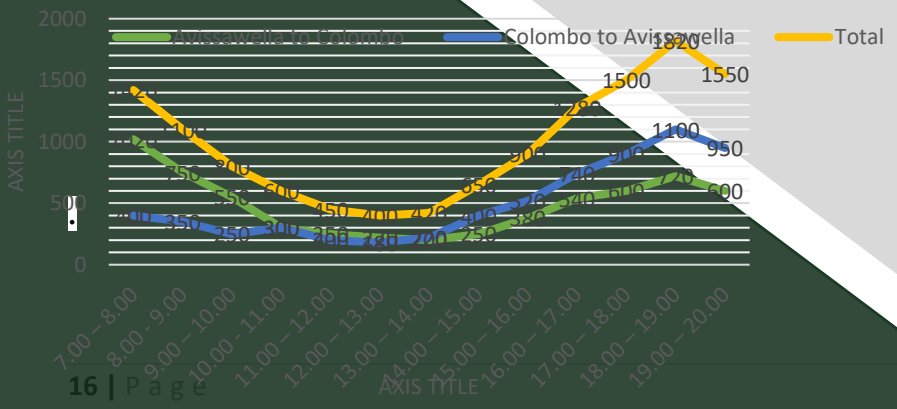
Table 3.1.1 Road Link

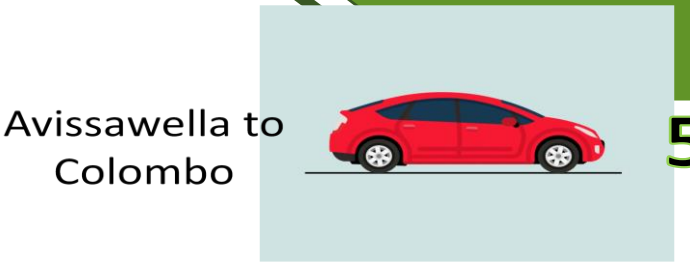
Traffic composition of high level road (A4)

No	Time Interval	Avissawella to Colombo	Colombo to Avissawella	Total
1	7.00 – 8.00	1020	400	1420
2	8.00 - 9.00	750	350	1100
3	9.00 – 10.00	550	250	800
4	10.00 - 11.00	300	300	600
5	11.00 – 12.00	250	200	450
6	12.00 – 13.00	220	180	400
7	13.00 – 14.00	200	220	420
8	14.00 – 15.00	250	400	650

9	15.00 – 16.00	380	520	900
10	16.00 – 17.00	540	740	1280
11	17.00 – 18.00	600	900	1500
12	18.00 – 19.00	720	1100	1820
13	19.00 – 20.00	600	950	1550
	Total	6380	6510	12890

Table 13.1.1Traffic Congestion A4 Road





Considering the traffic flow direction we can observe 51% of the vehicles flow towards avissawella direction and 49% of the vehicles flow Colombo direction during the measured time period. As peak hours we can identify 7.00am to 9.00am and 4.00pm to 8.00pm as peak hours.

Name	Type	signalyzed/ unsignalyzed/ roundabout	No. of Turns	Distance to the site	Bus stop junction	Marked/ Unmarked	No. of pedestrian signs	Junction signs
Meepe city junction	3 way	Unsignalized	6	10m	yes	Unmarked	2	Yes
Galagedara junction	3 way	Unsignalized	6	650m	yes	Unmarked	1	No

3.1.1.1 Bus Count per the Day

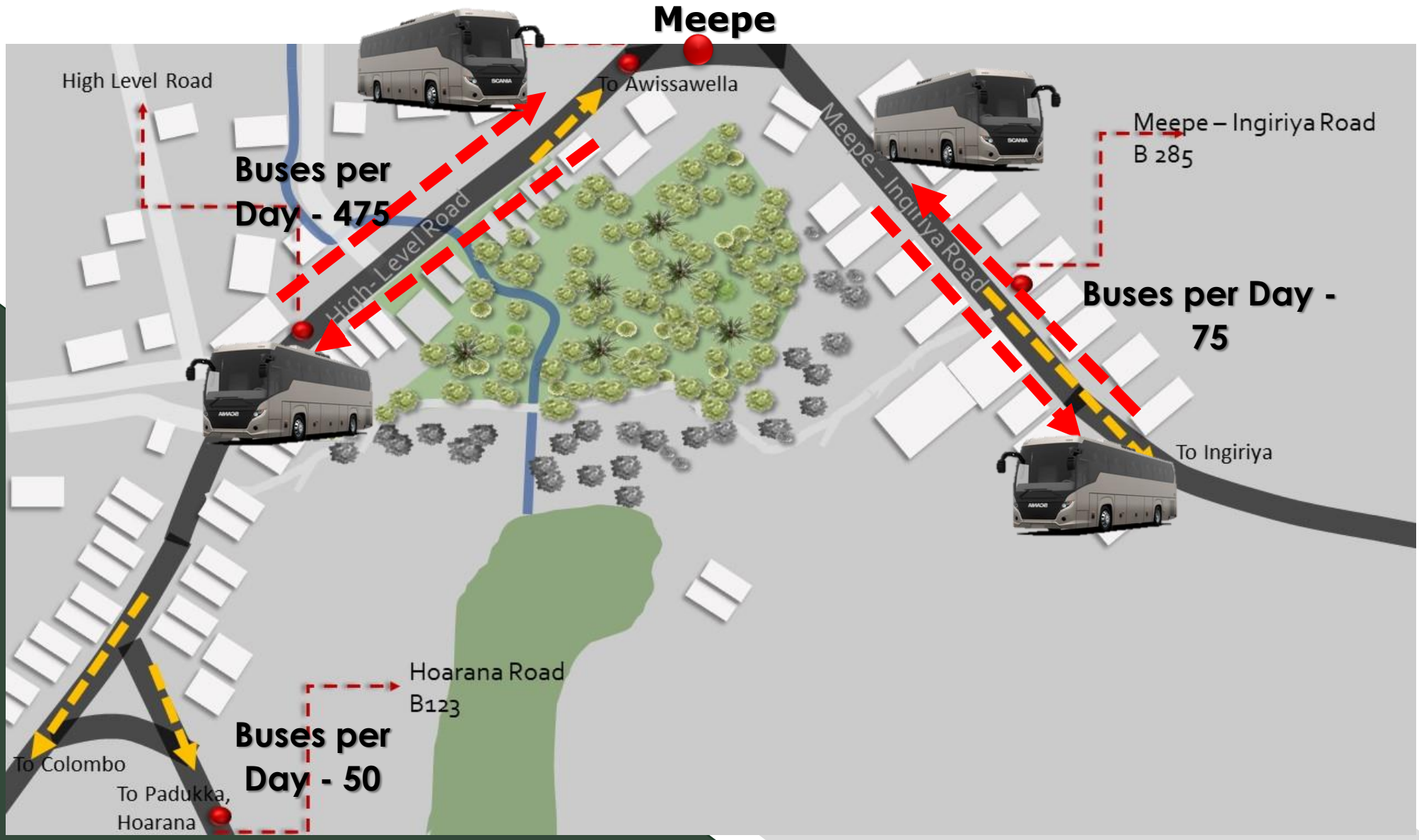
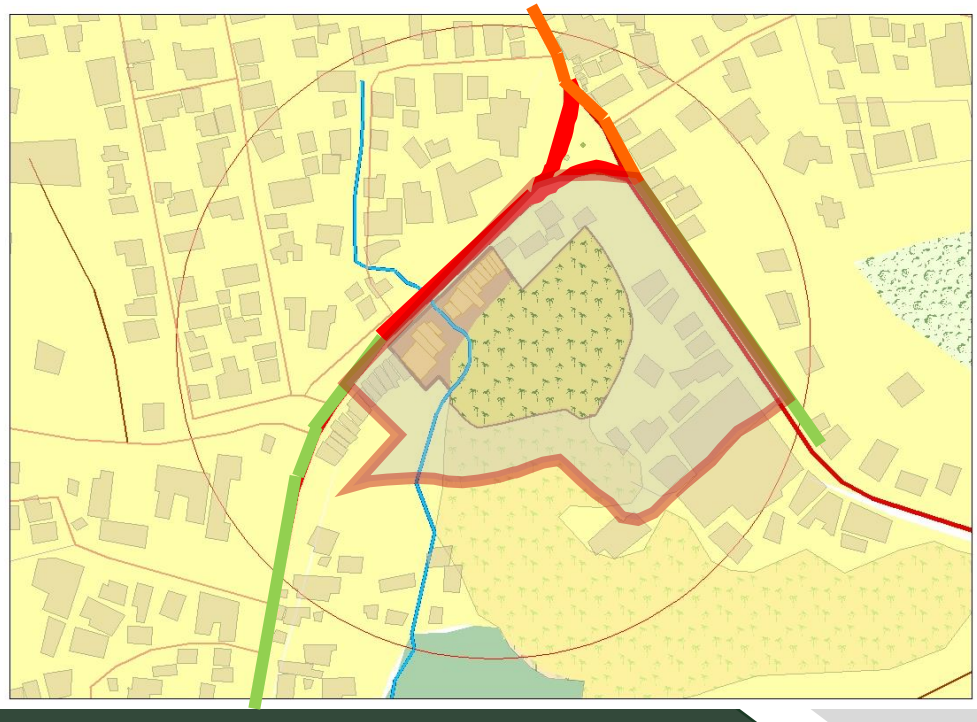


Figure 13.1.2 Bus Count Per Day

3.1.1.2 Traffic congestion

Vehicle Movement – Weekdays
7 a.m. – 8.00 a.m.

Vehicle Movement – Weekdays
6 p.m. – 7 p.m.



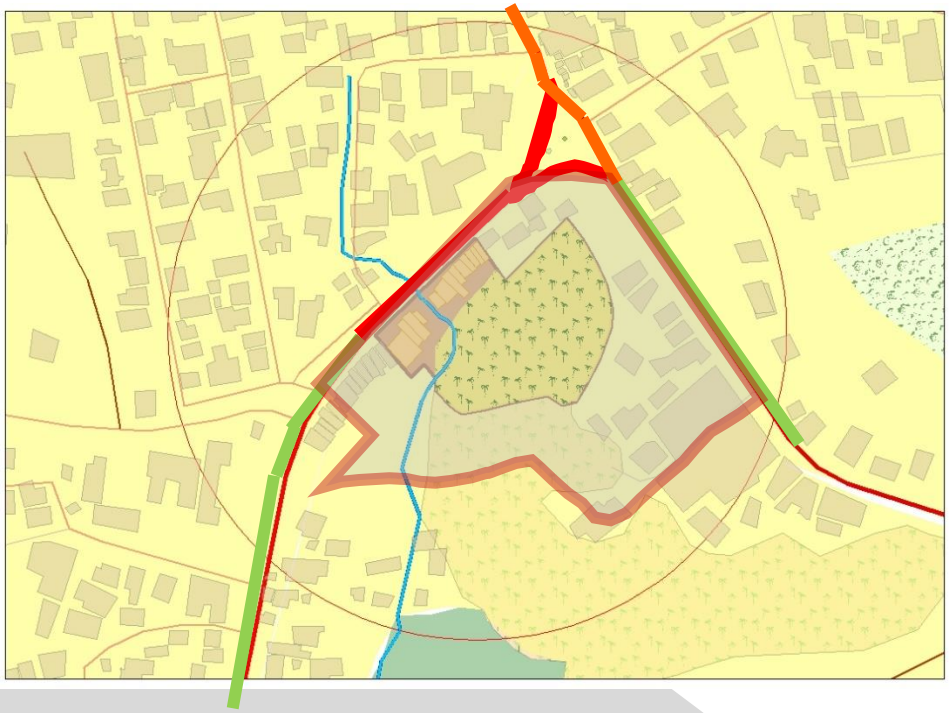


Figure 3.1.3 Traffic Congestion

High **Low**

3.1.2 Lack of bus passenger facilities

Context
Only one small one bus halt to the Colombo direction

Magnitude
Many people use the city as a transaction point to change from one bus route to another. Commute community is also high due to in city higher educational centers. The existing bus stop cannot host this massive number of busses and the passengers. And there is no facility provided to the passenger crowd.

Significance
Residential population: 2790
Commute population: 400
Transact population: 900

Figure 3.2 Existing Bus Stop

3.2 To elevate the socio-economic status of places

3.2.1 Effect on city beautification

Context
Old fashioned commercial buildings, unattended greener area and the ill-maintained canal system

Magnitude
All the existing commercial units are old fashioned and in need of an upgrade. These buildings are built arbitrarily in different time periods and degrade the city beautification. The unattended greener area is also visible to both High-level and Meepe-Ingiriya road. Waste disposed of in the canal causes many health problems.

Significance

Filling station - 1
Service station - 1
Shops - 21
Greener area - 0.57ha

Figure 3..2.1 Existing Situation

3.3 To maintain Genius Loci

And also the site has a unique view with the Kithul Kanda Mountain as the background, So, it is important to preserve the distinctive characteristics of the scenic view.

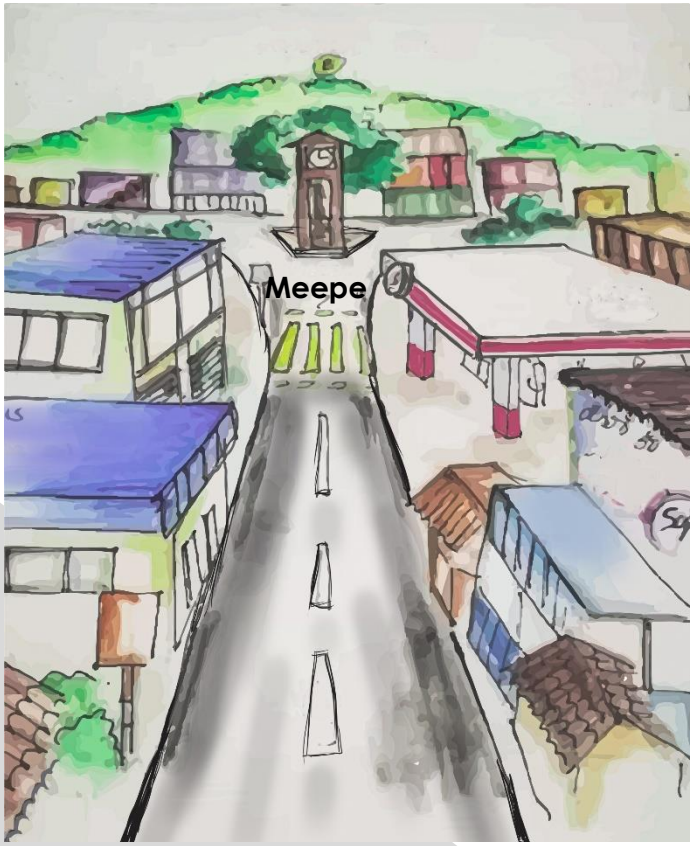


Figure 3.3 View of Existing Situation

3.4 Alternative Approaches

Shopping complex with necessary parking allocation

Mixed development with Iconic Development

Office Development with Parking Facilities

Commercial Development with apparel industry

Restaurant with parking & recreational facilities

3.5 Highest and Best Use

		Shopping complex with necessary parking allocation	Restaurant with parking & recreational facilities	Commercial Development with apparel industry	Office Development with Parking Facilities	Mixed development with Iconic Development	New town with transport terminal, commercial and recreational park
Legal Possibility	alignment with the DGP	7	7	6	6	6	10
Environmental impact	Enhance the scenic beauty of the city	4	8	2	2	6	9
Financial and economic profit	Employment generation	6	3	9	4	5	7
Social Impact	Underutilized lands & vacant lands convert to utilize lands	5	8	5	5	6	9
Physical Infrastructure Facilities	Significance of the location	8	7	5	7	7	10
Total		30	33	27	24	30	45

Table 3.5 Highest and Best Use

3.5 Finalization of the proposal

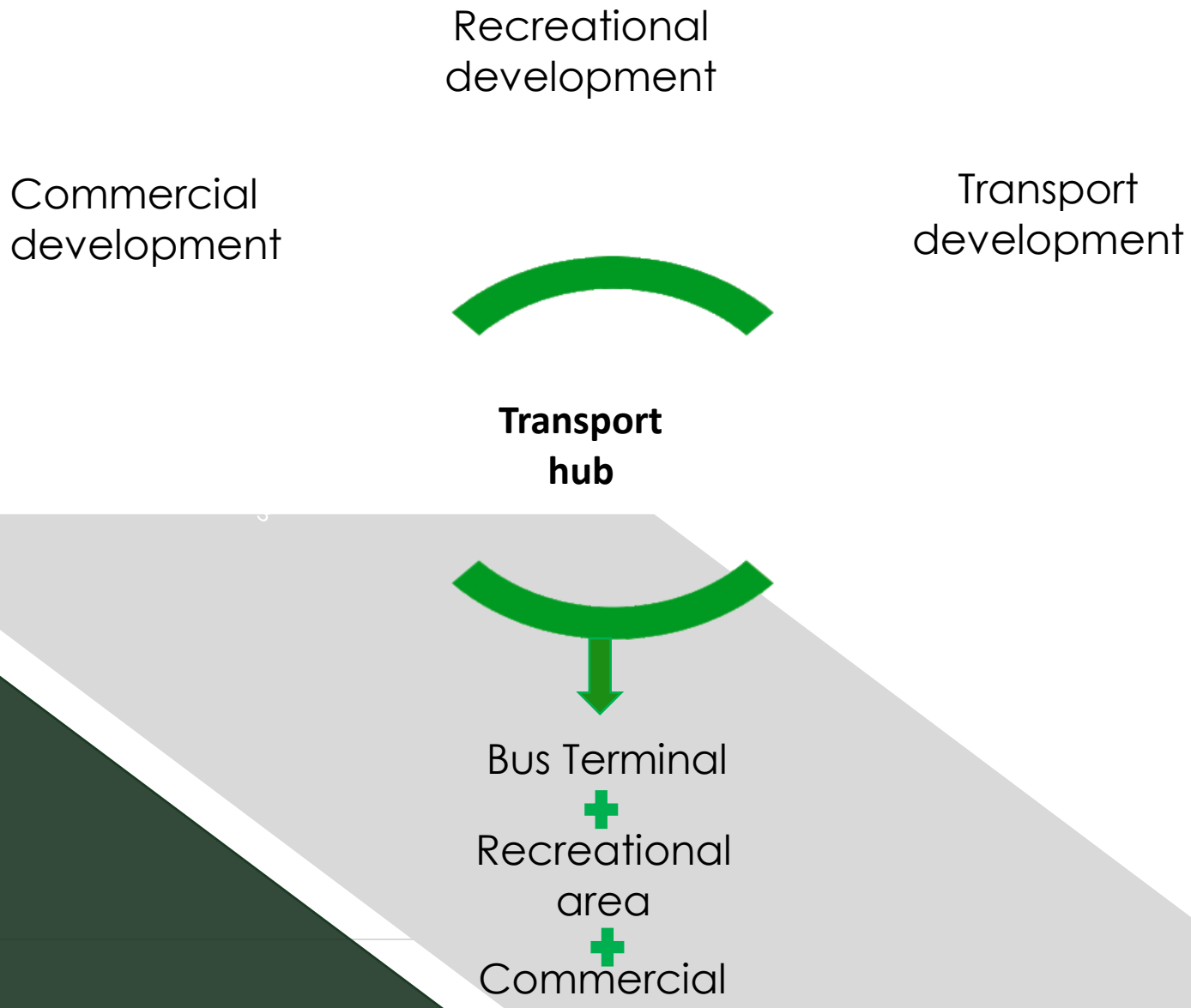


Figure 3.6 Finalization of the Site

3.7 Market Analysis

3.7.1 Demand Analysis

Bus Terminal

Scale: Regional

Range: within 25km

Customer Profile	
Potential age group	Any age of people can access to that premises
Income level	Any
Target group	commuter & Transit population, Residential population
Estimated targeted crowd	Residential: 2790 (Galagedara East Grama Niladari division) commuter & Transit population : 1100 (Daily average)
Services required	• Bus parking facilities • Passenger waiting and sitting area • Public Toilets • Disable Access Facilities • Ticket booking facilities • Commercial area

Recreational Area

Scale: City

Range: Within 2km

Customer Profile	
Potential age group	Any age of people can access to that premises
Income level	Middle and High income community
Target group	Residential population
Estimated targeted crowd	Residential: 1000 (Middle and High income community within 2km)
Services required	• Sitting and relaxing area • Walking and Cycling paths • Children park Area • Disable Access Facilities • Open Gymnasium • Café • Canal base open area

Table 3.7.1Demand Analysis

3.7.2 Supply Analysis

Bus Terminal Competitors

City	Target Group	Market range	Level of Servicers	Potentials for them	What they do not have
Homagama	Any	Neighborhood	Medium	Easy access	Not utilize properly
Padukka	Any	City	Medium	Easy access	No adequate facilities
Avissawella	Any	Regional	High	Easy access 3 district people	No adequate facilities
Piliyandala	Any	Neighborhood	Medium	Easy Access	

Agglomeration of services

City	Three-wheel park	Passenger Car park	Public toilets	Filling station	Refreshment Bars
Homagama	✓	✓	✓	✓	
Padukka	✓				
Avissawella	✓		✓	✓	
Meepe	✓	✓	✓	✓	✓

Table 3.7.2 Supply Analysis

Recreational Area Competitors

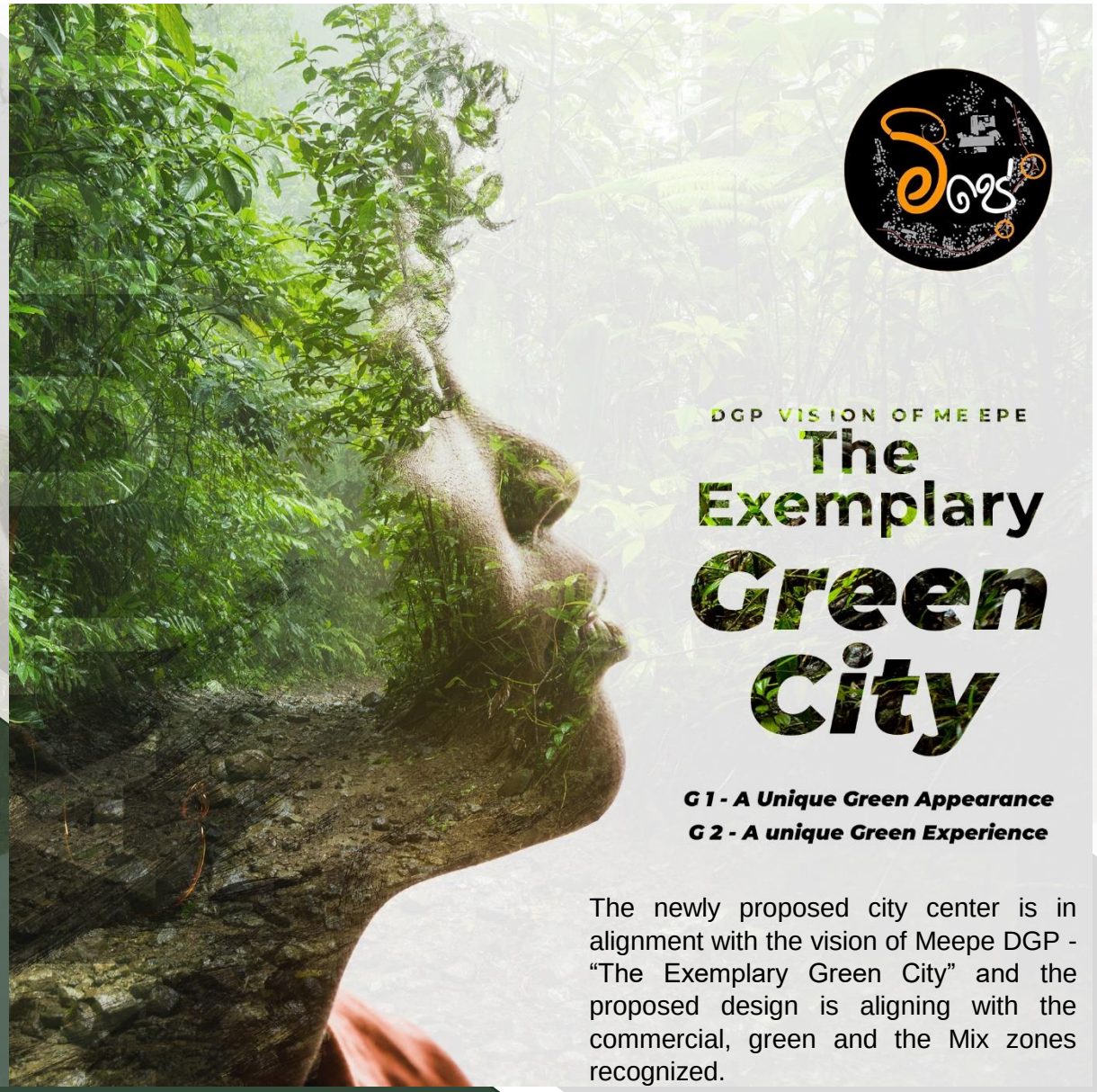
City	Target Group	Market range	Level of Servicers	Potentials for them	What they do not have
Homagama	Any	neighborhood	High	Easy Access	
Padukka	Any	City	Middle	Easy access	Poor maintenance
Avissawella	Any	City	High	Tourist Attraction	Not an easy access
Piliyandala	Any	City	Middle	Easy Access	

Agglomeration of services

City	Three-wheel park	Passenger Car park	Public toilets	Street Vendors	Refreshment Bars
Homagama	✓				
Padukka	✓			✓	
Avissawella	✓	✓	✓	✓	✓
Meepe	✓	✓		✓	✓

Table 1.3.7.2 Supply Analysis

3.8 Alignment with the GDP



The newly proposed city center is in alignment with the vision of Meepe DGP - “The Exemplary Green City” and the proposed design is aligning with the commercial, green and the Mix zones recognized.

Commercial Zone

Type of the Regulation	Requirement	Proposed Design	Applicable
Permissible Users	Commercial, Residential, Recreational & Zero Pollutant Industries	Commercial	✓
Building Height	Max 2 stories	Only 1 floor	✓
FAR	Commercial – 1: 0.6	Commercial – 1: 0.6	✓
Building Line	8m from the center line of the main road (B285 road)	8m from the center line of the main road (B285 road)	✓
Signs & Billboards	Sign & billboards shall not be exceeding the maximum height of 12m & no any reflective billboards or sign boards allowed.	No Sign & billboards	✓
Pedestrian Pathways	pedestrian walkways should provide in both sides of the main road in mix use zone 2 & all other streets & roads should be maintained a tree	pedestrian walkways should provide in both sides of the main road in mix use zone 2 & all other streets & roads should be maintained a tree	✓

Green Garden Zone

Type of the Regulation	Requirement	Proposed Design	Applicable
Permissible Users	All the suitable recreational activities are permitted in the zone.	Recreational Park, Open cafeteria	✓
Building Height	Building heights shall not be exceeding 02 stories. (Maximum height 8m)	Only 1 story	✓
Structure	All structures should be 100% transparent and should not barriered to the scenery Kithulgala mountain.	All structures 100% transparent Not barrierd to the scenery kithulkanda mountain	✓
Trees and vegetation	Encourage landscaping elements like hedges/ green walls and green belts	Encourage landscaping elements like hedges/ green walls and green belts	✓
Signs and bill boards	No bill boards are allowed.	No bill boards	✓
Construction materials	Transparent (glass) and environment friendly construction materials are allowed.	environment friendly construction materials are used	✓

Mix Use Zone

Type of the Regulation	Requirement	Proposed Design	Applicable
Permissible Users	All registered commercial business including, Banks & Offices, Wholesale, Supermarket & retails Customer Care services & Service activities as bakeries, automobile repair centers, stationary, laundries etc Hotels & Restaurants Mix use	Alll registered commercial	✓ ✓
Building Heights	Galagedra Junction to Meepe – Max 3 stories	Only 2 floors	✓
FAR	1000 sq.m above – 2.0	2000 sq.m – 2.0	✓
Street line Building Line	Min Road width of High level rd (A4) – 14m Building Line from middle of Road – 11m	Main Road width of High-level road (A4) – 14m Building Line from middle of Road – 11m	✓
Signs & Billboards	No billboards exceeding 15m in height or covering more than 30% of building frontage is allowed.	No Billboards	✓
Pedestrian Pathways	3m width pavement	3m width pavement	

Table 3.8 Alignment with DGP

3.9 Carrying capacity

3.91 Maximum population

Visitor capacity of Recreational Area

As per the UDA Workshop on "Spatial and Design Standards for Urban Development" held in April 1983, recommended minimum standard of 1.4 ha. (3.5 acres) land per 1000 persons to be allocated for public outdoor recreation and that value still stands as a standard. (Reference: https://www.uda.gov.lk/attachments/regulations/pors_urban_areas.pdf)

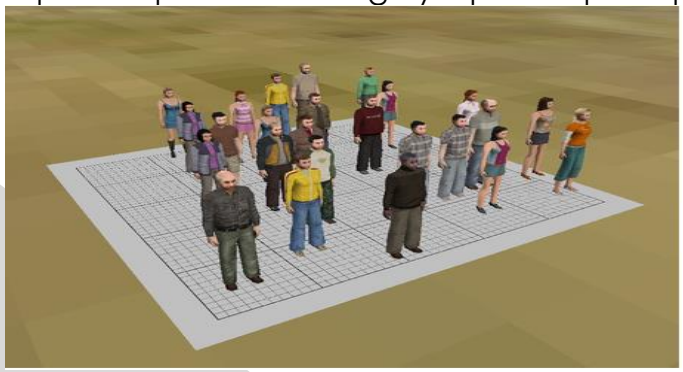
So using those details we can calculate the maximum number of persons can occupy in the proposed recreational area. Out of 0.57ha of the recreational area only 0.4ha can accommodate people.

Maximum visitors for 1.4 ha = 1000
Maximum visitors for 1 ha = 1000/1.4 = 715

Maximum visitors for Recreational area = 0.4 x 715 = 300

Passenger Capacity of Bus Terminal

According to the publication "Crowd Safety and Crowd Risk Analysis" by "Prof. Dr. G. Keith Still" (Ref: https://www.gkstill.com/Support/crowd-density/CrowdDensity-1.html) the ideal standing population of a public space is averagely 1 person per sqm^2.



The estimated passenger area of the proposed bus terminal is around 140 sqm^2. And we can conclude the ideal passenger count of the bus terminal is 140 passengers.

Customer population for the commercial activities

It is estimated that about 1500 residential, commute and transact population uses Meepe city. There are 16 shops currently functioning as well. These all commercial units are to be relocated to the newly proposed bus terminal. The current shop space is not enough to host this population and the new commercial units will have the commercial 2000sqm*2 To host this massive crowd.

3.9.2 Public Toilets

The proper ratio of Female toilets to Male toilets as a standard is 5:3. The same ratio is considered for the proposed public toilet infrastructure. As per the "British Standard 6465-1:2006+A1:2009 – Sanitary Installation" the calculated number of public toilets per population is as follows.

Female public toilets

Population	No.of Toilets	No, of Basins
75 to 100	4	4
100 to 125	5	5
125 to 150	6	6

Male public toilets

Population	No.of Toilets	No, of Urinals	No. of Basins
75 to 100	3	3	3
100 to 125	3	3	3
125 to 150	4	4	4

The estimated passengers in the bus terminal at the peak time 120 and estimated visitors at the recreational area at the peak time is 100. So the crowd at the proposed area at peak time will be around 220. So aligning with the guidelines there should be below facilities for the proposed area.

- Male - 3 toilets , 3 urinals and 3 basins
- Female - 5 toilets and 5 basins
- 1 disability access toilet

Waste water generation

Waste water management also holds a critical factor when designing a social infrastructure. There are 2 types of waste water.

1. Blackwater: Waste discharged from the human body through toilets and Urinals
2. Greywater: Domestic wastewater from baths, showers, wash basins, kitchens etc. other than Blackwater

Combined Blackwater and greywater is called All Waste

Pre calculated Waste water values for Bus terminal, Recreational area and commercial area as follows.

Area / Building / Crew	Bus Terminal	Recreational Area	Working Staff	Shops	Total
daily user count	1000	200	50	16	1250 users and 16 shops
Avg. time stay	5 minutes	1 hour	10 hours	10 hours working time	-
Black water (l/p/d)	0.5 X 1000 = 500	5 X 200 = 1000	25 X 75 = 3750	16 X 50 = 800	6050
Gray water (l/p/d)	1 X 1000 = 1000	5 X 200 = 1000	50 X 50 = 2500	16 X 500 = 8000	12500
All waste (l/p/d)	1500	2000	6250	8800	18550

As per the above total the estimated wastewater quantity for the proposed bus terminal and recreational area will be 16900 liters per day.

3.9.4 Electricity Demand

The people in Seethawaka Pradeshiya Sabha have 100% access to electricity and the power is supplied from the national grid. There are three electricity substations with a capacity of 132kv in seethawaka region and the cable network has been installed by the CEB in meepe area covering all the area.

3.9.5 Water demand

According to the Volume vi of the Western province Megapolis plan (2013), the water purification plants at Kosgama and Labugama in the planning area are capable of providing water to all 54 GN divisions in the Hanwella divisional secretariat area until the year 2040. Further, it is reported that all 36 GN divisions in Padukka divisional secretariat area could be provided with water from Labugama and Kalatuwawa till 2040.

So it can be clearly identified that even with the water demand increasing by the year, the Meepe area will receive uninterrupted water supply throughout the year.

3.9.6 Public Transport demand

The only public transportation medium in this area is the bus system. Since High-level road goes through meepe, public transportation is always available to Colombo and to the Avissawella direction. And also to horana and hanwella directions buses are going regularly because of the few inter provincial long bus routes going through Meepe and also to Hanwella and Horana towns a regular bus route starting from meepe town. And also many use meepe as a transit to change from one bus route to another.

3.10 Stakeholder Perception

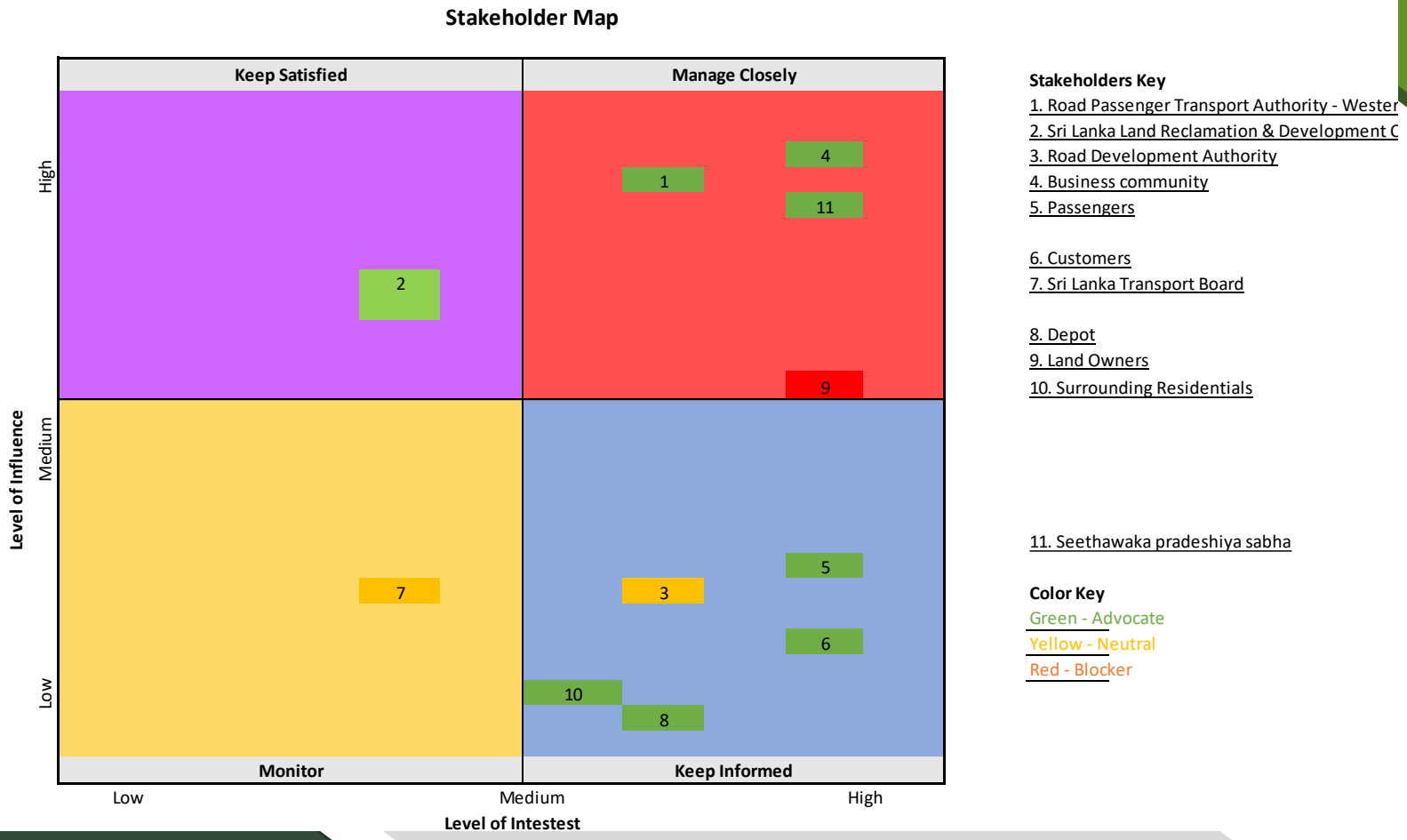


Figure 3.10 Stakeholder Perception

DESIGN LAYOUT

4. DESIGN CONCEPT AND DETAILED SITE

4.1 Concept Plan of Site

The conceptual plan is designed mainly focusing on the Bus terminal, Recreational area and the commercial slots. The parking area development and the canal development happen parallely along with the main units. And also there exists a filling station, Service center and a Milco chilling center within the premises. So these

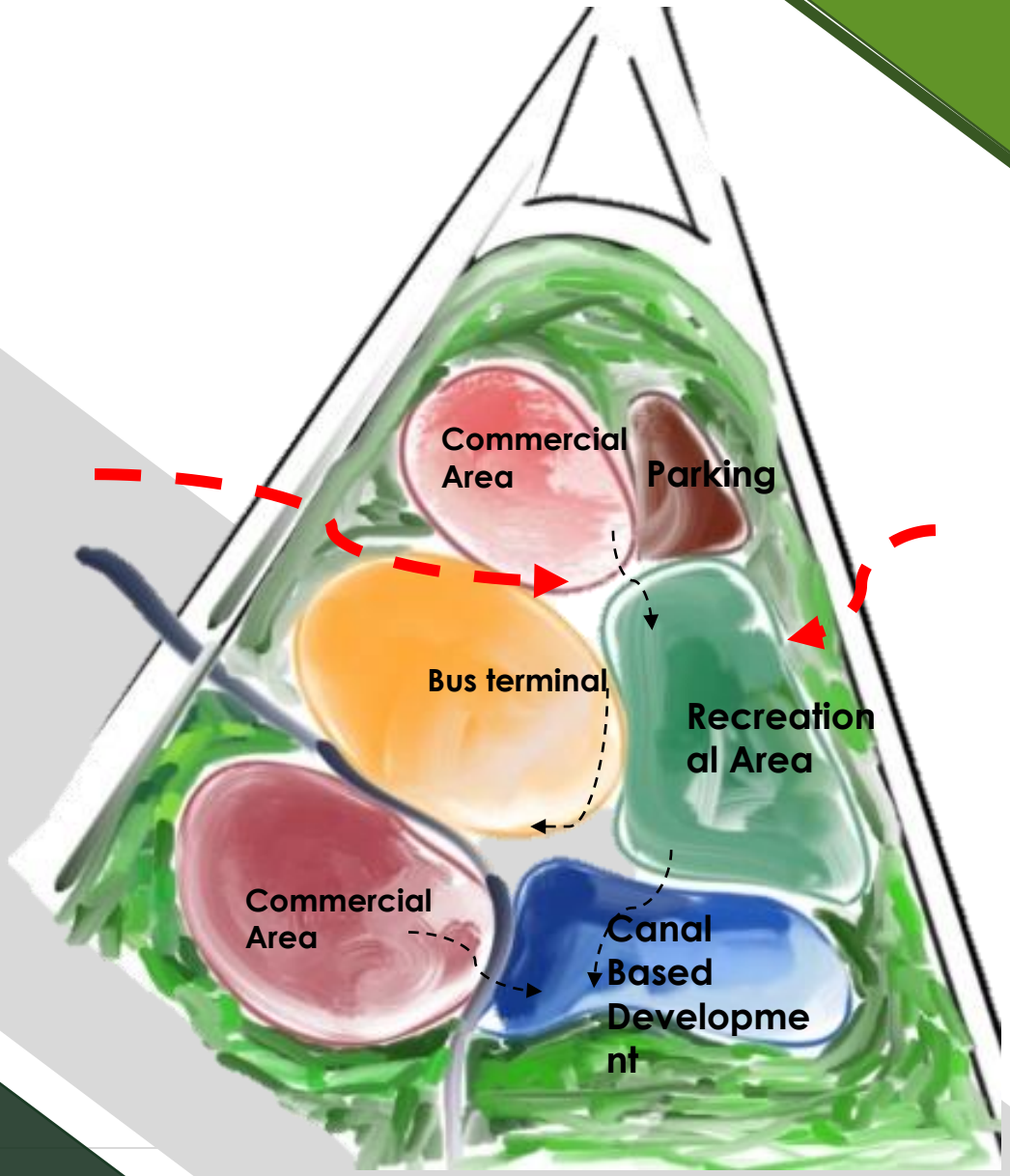
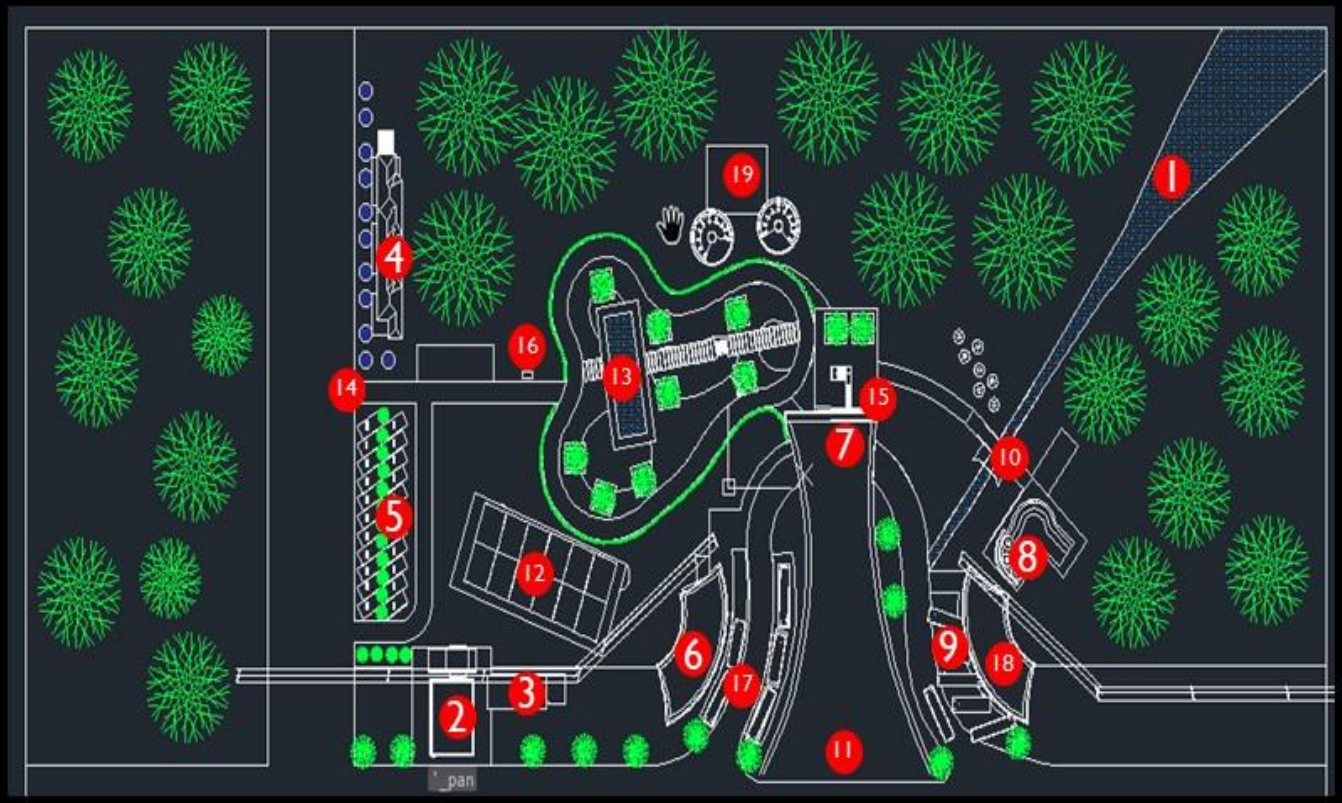


Figure 4.1 Concept Plan

4.2 Detailed Plan of Site

Then the detailed plan is designed identifying all the key components of the design. All the analysis we did before brought us to this final design. There are lot of sub components added to the conceptual design to meet the expected. This figure shows the complete view of the detailed plan of the proposed design.

Detailed Plan of Site



1. Canal
2. Filling Station
3. Service Centre
4. Milko Milk Chilling Center & Bar
5. Vehicle Parking
6. Commercial Building Complex (1)
7. Viewing Deck
8. Cafeteria
9. Bus Parking Area
10. Bridge
11. Park Main entrance
12. Event Area
13. Recreational Park
14. Entrance (2)
15. Ticket Counter (1)
16. Ticket Counter (2)
17. Bus terminal
18. Commercial Building Complex (2)
19. Open Gym

4.2.1 Design

These figures show the proposed conceptual design. The proposed bus terminal and commercial area acts as one unit and both are easily accessible from the high level road. The 2 storied building hosts about 40 commercial units and the area has 40 bus capacity and 300 passenger capacity. On-premise sanitary facilities can be accessed easily from the bus terminal area as well as the recreational park area. Disability access for the sanitary facilities are provided as well.

The one way bus terminal connects through a underground tunnel space to make a circular bus lane. There are 2 sides of the bus terminal and commercial areas, these 2 sides connected by this underground tunnel. One side of the bus terminal is for the busses starting from the meepe and the other side is for the long route buses.

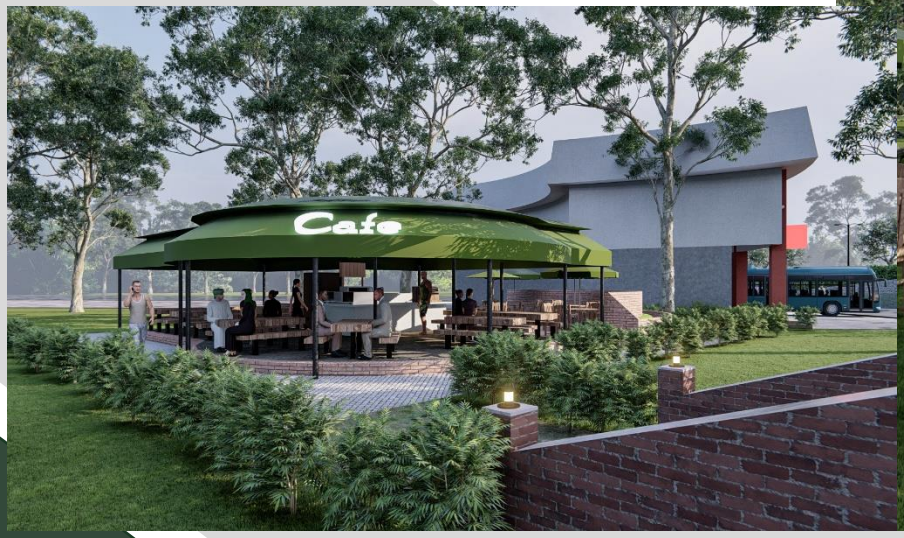
The recreational park area is also easily accessible and visible by the High-level road following health and safety guidelines. The scenic view of the Kithulkanda Mountain creates a picturesque view from the viewing deck. Visitors can enter through both the staircase and the meepe-ingiriya road. Disability access is also available to the premise.

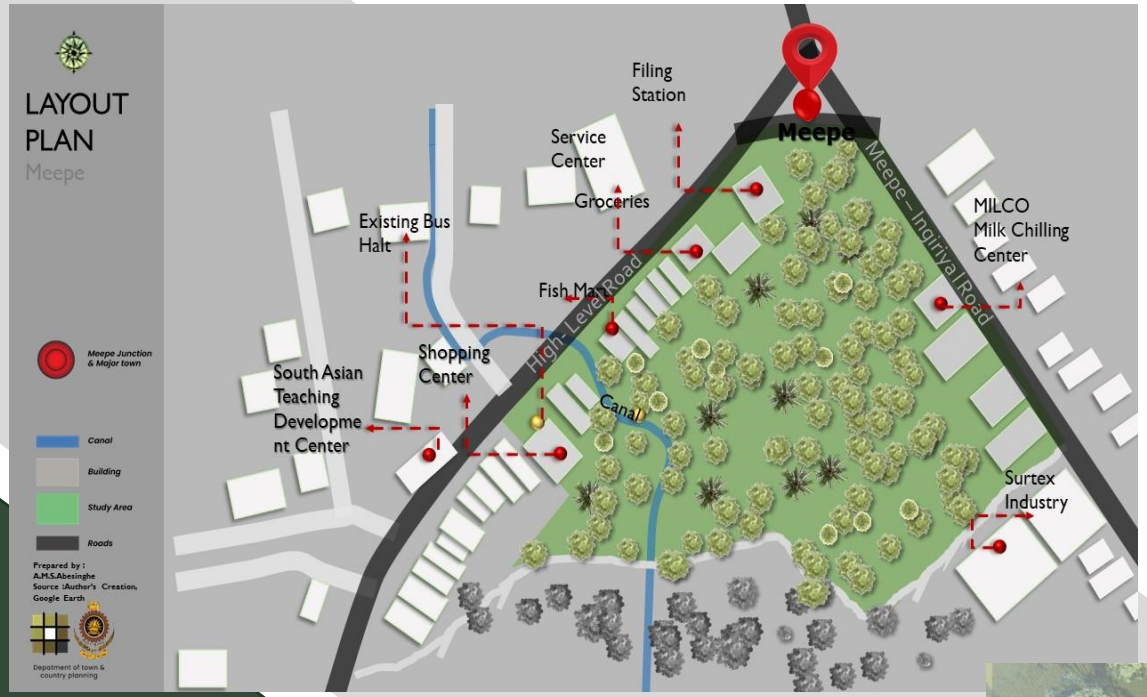
Walking paths and sitting areas are spread throughout the park. And also the redeveloped canal system adds a great experience to visitors. It enhances the scenic view as well.
And also there exists a event area and this is to be used for handling open events. This can handle a crowd of 100 for an event. The open gym area is also freely accessible and adds a new experience to visitors. This also will be an attraction point for the visitors who are coming to do physical exercises.

The car park of the recreational area is facing the meepe-ingiriya road has the capacity to hold 40 Vehicles. This car park is only for the visitors of the recreational area. There is an entrance to the recreational area from the car park as well. Ticket counter is also there at the entrance.

The filling station and the service station are easily accessible and upgraded to hold a large number of vehicles to support the expected need. This area is clearly visible from the meepe junction as well.

The milk bar and The cafe area has a scenic view of the park with entrance from the meepe-ingirya road and will give all the users a great experience. The Milco chilling center is also within the premises of the selected site.




LAYOUT
PLAN
Meepe
Meepe Junction & Major town
Canal
Building
Study Area
Roads
Prepared by :
A.M.S.Abesinghe
Source :Author's Creation, Google Earth
Depatment of town & country planning
Filing Station
Service Center
Meepe
Meepe – Inginiya I Road
Groceries
Existing Bus Halt
MILCO Milk Chilling Center
Fish Mar
High Level Road
Shopping Center
South Asian Teaching Developme nt Center
Canal
Surtex Industry

4.3 Infrastructure Provision

Wastewater generation

Bus Terminal and passenger area	6250 l per day
Commercial units	9500 l per day
Cafe	8500 l per day
Recreational area	3500 l per day

Solid waste generation

Bus Terminal and passenger area	22kg per day
Commercial units	35kg per day
Cafe	80kg per day
Recreational area	25kg per day

Water Requirement

Bus Terminal and passenger area	8000 l per day
Commercial units	15000 l per day
Cafe	12000 l per day
Recreational area	16500 l per day

Electricity Requirement

Bus Terminal and passenger area	4000 kWh per day
Commercial units	12000 kWh per day
Cafe	3500 kWh per day

FEASIBILIITY STUDIES

5. FINANCIAL FEASIBILITY AND MAXIMALLY PRODUCTIVITY AND IMPLEMENTATION PLAN

To ensure the efficiency, sustainability and financial viability of the project it is important to do financial feasibility and maximal productivity study. The project objective is to maximize the social and economic benefits.

To determine the viability of project financial feasibility was using the methods given below.

1. Payback Period Analysis
2. Net Present Value
3. IRR

5.2 Cost Components at the construction period

CATEGORY & ITEMS	PROJECTED SUBTOTAL	PRECENTAGE OF EACH	PRECENTAGE FROM PROJECT TOTAL
PLANNING	13,900,000.00	100%	11.85%
Admin Fees	500,000.00	4%	0.43%
Engineering	3,000,000.00	22%	2.56%
Financing Costs	5,000,000.00	36%	4.26%
Legal	1,000,000.00	7%	0.85%
Permit - Building	200,000.00	1%	0.17%
Permit - Environmental	1,000,000.00	7%	0.85%
Permit - Zoning	200,000.00	1%	0.17%
Plans + Specs	1,000,000.00	7%	0.85%
Review	1,000,000.00	7%	0.85%
Survey	1,000,000.00	7%	0.85%

CATEGORY & ITEMS	PROJECTED SUBTOTAL	PRECENTAGE OF EACH	PRECENTAGE FROM PROJECT TOTAL
Recreational Area	8,540,000.00	1.00	7.28%
Demolition of Existing building	700,000.00	8%	0.60%
Architectural and Engneering cost	910,000.00	11%	0.78%
Construction cost	3,500,000.00	41%	2.98%
Equipment and Furnishings	1,190,000.00	14%	1.01%
Land Acquisition	1,540,000.00	18%	1.31%
Field Supervission of construction	350,000.00	4%	0.30%
Inspection and testing	350,000.00	4%	0.30%

CATEGORY & ITEMS	PROJECTED SUBTOTAL	PRECENTAGE OF EACH	PRECENTAGE FROM PROJECT TOTAL
Café	9,000,000.00	100%	7.67%
Architectural and Engineering cost	2,000,000.00	22%	1.71%
Construction cost	5,000,000.00	56%	4.26%
Equipment and Furnishings	200,000.00	2%	0.17%
Land Acquisition	500,000.00	6%	0.43%
Field Supervission of construction	100,000.00	1%	0.09%
Inspection and testing	200,000.00	2%	0.17%
Insurance and Taxes	1,000,000.00	11%	0.85%

CATEGORY & ITEMS	PROJECTED SUBTOTAL	PRECENTAGE OF EACH	PRECENTAGE FROM PROJECT TOTAL
Over Bridge	3,750,000.00	100%	3.20%
Land Acquisition	1,150,000.00	31%	0.98%
Architectural and Engineering cost	750,000.00	20%	0.64%
Inspection and testing	250,000.00	7%	0.21%
Construction cost	1,500,000.00	40%	1.28%
Finishing	100,000.00	3%	0.09%

CATEGORY & ITEMS	PROJECTED SUBTOTAL	PRECENTAGE OF EACH	PRECENTAGE FROM PROJECT TOTAL
Event Area	21,800,000.00	100%	18.59%
Architectural and Engineering cost	4,000,000.00	18%	3.41%
Construction cost	12,000,000.00	55%	10.23%
Equipment and Furnishings	1,200,000.00	6%	1.02%
Land Acquisition	2,800,000.00	13%	2.39%
Field Supervission of construction	1,000,000.00	5%	0.85%
Inspection and testing	800,000.00	4%	0.68%

CATEGORY & ITEMS	PROJECTED SUBTOTAL	PRECENTAGE OF EACH	PRECENTAGE FROM PROJECT TOTAL
COMMERCIAL BUILDING COMPLEX	48,000,000.00	100%	40.92%
Demolition of Existing building	2,500,000.00	5%	2.13%
Architectural and Engneering cost	10,000,000.00	21%	8.53%
Construction cost	25,000,000.00	52%	21.31%
Equipment and Furnishings	1,000,000.00	2%	0.85%
Land Acquisition	3,000,000.00	6%	2.56%
Field Supervission of construction	500,000.00	1%	0.43%
Inspection and testing	1,000,000.00	2%	0.85%
Insurance and Taxes	5,000,000.00	10%	4.26%

CATEGORY & ITEMS	PROJECTED SUBTOTAL	PRECENTAGE OF EACH	PRECENTAGE FROM PROJECT TOTAL
Parking Area	3,300,000.00	1.00	2.81%
Architectural cost	300,000.00	9%	0.26%
Construction cost	1,500,000.00	45%	1.28%
Equipment cost	300,000.00	9%	0.26%
Land Acquisition	1,050,000.00	32%	0.90%
Inspection and testing	150,000.00	5%	0.13%

CATEGORY & ITEMS	PROJECTED SUBTOTAL	PRECENTAGE OF EACH	PRECENTAGE FROM PROJECT TOTAL
Renovation of Filling station	9,000,000.00	100%	7.67%
Demolition cost of existing	600,000.00	7%	0.51%
Architectural cost	3,000,000.00	33%	2.56%
Construction cost	4,500,000.00	50%	3.84%
Equipment cost	900,000.00	10%	0.77%

Table 5.2 Cost Estimation

Cost Estimate
117,290,000.00/=

5.3 Financial Feasibility

	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7
Cost of Project								
Land Acquisition	10,040,000							
Planning	8,340,000	5,560,000						
Architectural and Engineering cost	10,480,000	6,288,000.00	4,192,000.00					
Equipment and Furnishings	958,000	1,437,000	2,395,000					
Field Supervision of construction	975,000	585,000	390,000					
Cost for construction	26,500,000.00	15,900,000.00	10,600,000.00					
Demolition of Existing building		2,280,000.00	1,520,000.00					
Inspection and testing		275000	2475000					
Insurance and Taxes			6000000					
Finishing			100000					
Utility cost								
Advertisement			1,000,000	500,000	100,000	100,000	100,000	100,000
Maintenance				2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Total cost	**57,293,000**	**32,325,000**	**28,672,000**	**2,500,000**	**2,100,000**	**2,100,000**	**2,100,000**	**2,100,000**
Revenue of the project	**Y0**	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**
Recreational park and car park tickets				10,950,000	10,950,000	10,950,000	10,950,000	10,950,000
Event Area Revenue				9600000	9600000	9600000	9600000	9600000
Commercial unit Rent				14,400,000	14,400,000	14,400,000	14,400,000	14,400,000
Sanitary facility charges				2000000	2000000	2000000	2000000	2000000
Cafe				6,000,000	6,000,000	6,000,000	6,000,000	6,000,000
Total revenue	**0**	**0**	**0**	**42,950,000**	**42,950,000**	**42,950,000**	**42,950,000**	**42,950,000**
Net cash flow	**-57,293,000**	**-32,325,000**	**-28,672,000**	**40,450,000**	**40,850,000**	**40,850,000**	**40,850,000**	**40,850,000**
Cumulative Net Cash Flow	**-57,293,000**	**-89,618,000**	**-118,290,000**	**-77,840,000**	**-36,990,000**	**3,860,000**	**44,710,000**	**85,560,000**
Discounting factor	**1**	**0.909**	**0.826**	**0.751**	**0.683**	**0.621**	**0.564**	**0.513**
NPV@10%	-57,293,000	-29,386,364	-23,695,868	30,390,684	27,901,100	25,364,636	23,058,760	20,962,509
Cumulative Discounted Net Flow	-57,293,000	-86,679,364	-110,375,231	-79,984,548	-52,083,448	-26,718,812	-3,660,052	17,302,457
IRR	**13.8%**							

Table 5.3 Financial Feasibility

5.3.1 Cost of the project at Operational period

Expense	Cost per year (Rs.)
Advertisements	**100,000**
Cleaning Staff	**1,000,000**
Security Services	**800,000**
Other	**200,000**
Total	**2,000,000**

5.3.2 Regular income of the project at operational period

Revenue Method	Income per Year (Rs.)
Recreational park tickets	**7,300,000**
car parking tickets	**3,650,000**
Event Area Revenue	9,600,000
Commercial unit Rent	14,400,000
Sanitary facility charges	2,000,000
Cafe	6,000,000

5.3.3 Payback period

The payback period is imaged how long the project will take to earn back the money that is spent on the project. The table below explains about the payback period of the project. According to the annual cost and income, within 7 years total cost (5 years after project completion) will recover. By 2029 this project recovers its cost and starts to generate profit.

Year	Cumulative Discounted Net Flow
2022	-57,293,000
2023	-86,679,364
2024	-110,375,231
2025	-79,984,548
2026	-52,083,448
2027	-26,718,812
2028	-3,660,052
2029	17,302,457
2030	36,359,284
2031	53,683,671
2032	69,433,115

5.3.4 IRR

IRR value I obtained through the cost analysis is 13.8% and the selected NPV value is 10%. Since the IRR is slightly higher than the NPV value, we can recognize the project as a feasible project. Even if the expected IRR is lower than compared to other government projects, this project has more social and financial benefits as mentioned before. Considering this we can conclude this project is financially feasible to implement.

5.4 Financial Mechanism and Investment Plan

Investment plan of a project demonstrates how to place funds into a proper investment based on the investor's future goals and objectives. Safety of the investment, risk as well as the stage of return should be taken into consideration when preparing an investment plan. Normally there are six financial models that can be identified in the development project. That project is going to develop aligning with two models for investment as follows.

1. Public Private Partnership (PPP)
    i. Bus Terminal development
    ii. Commercial Units relocation Canal and recreational park
    iii. Filling Center and service center upgrade

2. Corporate Social Responsibility (CSR)
    1. Bus terminal development

5.5 Model Evaluation

Public Private Partnership (PPP): This method is mainly used for providing a public asset or service. This balanced approach is especially welcomed in public services which touch on every human being's basic needs & economic development of a country. This proposed project is some kind of large budget project. And it basically focuses on public service.

Corporate Social Responsibility (CSR): This kind of method is mostly used for city beautification projects. According to this method, social welfare is done by investors and investors can do advertising activities. Ex: Bus stops are constructed and maintained by the Abans Company. They advertising their products by using bus stop.(Digital Advertising Board)

Public Private Partnership (PPT)	Ensure higher quality and timely provision of public services	Procurement procedure is longer and more costly in comparison with traditional public procurement
	The operational and project execution risk is transferred from UDA to the private participant	Project agreements are long-term, complicated and comparatively inflexible
	Prevent UDA for getting debt	
	By increasing the efficiency of the UDA's investment, it allows UDA funds to be redirected to other important socioeconomic areas	

	Faster project completions and reduced delays on projects	
	Faster project completions and reduced delays on infrastructure projects	
	Less political interference	
Corporate Social Responsibility (CSR)	Positive Publicity	Shift from the profit market objectives
	Attracts more capital inflow from various sources	Company reputation takes a hit
	Improve the image of the corporation	
	Increase the attraction and retention of employees	

5.6 Implementation Plan With Timeline

			Year 0	Year 01 - 2022				Year 02 - 2023			
No	Activity	Time from commencement	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
1	Community meetings										
2	Land Acquisitioin										
3	Completion of draft project development plan										
4	Preliminary planning clearance										
	a). Preliminary clearance for the project activity										
	b). Environmental clearance for the selected Meepe city center										
	c).Preliminary clearance for sourcing of raw materials										
5	Development permit										
6	Budget Allocation										
	a). Advance Contracting Action										
	b). Establish project Implementation arrangement										
	c). Financial Approval										
	e). Government Legal opinion provided										
	f).Government budget inclusion										
7	Project design with utilities										

8	Procurement Activities
	a).Finance
	b). Construction
9	Site clearance
10	Provide Infrastructure
11	Constructing the project
12	Demolition of Existing building
13	Installation of necessary equipment
14	Certificate of conformity
15	Monitoring and evaluation

SOCIO ECONOMIC, ENVIRONMENT AND PHYSICAL IMPACT OF THE DEVELOPMENT

6. SOCIO ECONOMIC, ENVIRONMENT AND PHYSICAL IMPACT OF THE DEVELOPMENT

6.1 Social Impact Assessment (SIA)

Social impact assessment identifies the positive and negative impacts from the proposed development. In any development the proposed projects should address the physical, economical, environment as well as social aspect.

The key objectives of doing a SIA are as follows.

- Identify stakeholders and communities
- Identify positive and negative impacts to society.
- Take mitigation measures to enhance positive impacts and negative impacts.
- Prioritize the impacts from the data analysis.

Stakeholder Identification

Stakeholder	Role
Passengers / Customers and Park Visitors	Non - Partner
Surrounding Residential Population	Non - partner
Urban Development Authority	Project Developer
Road Passenger Transport Authority - Western Province	Partner
Sri Lanka Land Reclamation & Development Cooperation	Land acquisition
City business community	Partner
Road Development Authority	Partner
Seethawaka pradeshiya sabha	Partner
Land owners	Land ownership
Sri lanka transport board	partner
Commute and transact population	Non - partner
Motor traffic department	Non - partner

Table 16.1Stakeholer Role

6.1.1 Project context

The selected site is highly underutilized and hence in need of a better development strategy. And also, the public sector should be strengthened. This project is done for the new city center in the meepe junction. When looking at the surrounding of Meepe area there is a high potential to develop this land with the locational advantages (high connectivity and integration) , landmarks, and the existing development trend. Therefore, the proposed development project has following sub projects.

- Commercial Area development (Relocation of existing uinits to a new 2 story commercial building
- Bus terminal development
- Recreational area development (Cafe, open gym, event area, car park)
- Canal development
- Service center and filling center renovation

Project	Impact	Positive	Negative	Low	Moderate	High
Bus Terminal	Increase the quality of service					
	Enhanced passenger facilities					
	Enhanced City beautification					
	Noise in the construction period					
	Safety of surrounding people					
	Disable accessibility					
	Quality Sanitary facilities					
Total Impact		6/7	1/7	0./7	2/7	5/7
Recreational park	Enhanced city beautification					
	Improving residential health					
	Creating new income opportunities					
	Increasing the social infrastructure					
	Entertainment					
	Relaxation					
	Disability access					
	Illegal activities can occur (drugs and prostituition)					
Total Impact		7/8	1/8	1/8	4/8	3/8
Commercial Units	Increased quality of service					
	City Beautification					
	Creating new employment opportunities					
	Organized commercial structure					
	Minimum 2nd floor accessibility					
Total Impact		4/5	1/5	0/5	2/5	3/5
Total		17/20	3/20	1/20	8/20	11/20

The total positive impact of the project will be 85% and the negative impact will be 15%. Therefore, it is needed to minimize the negative impacts of the project by taking relevant mitigation measures.

Project	Negative Impact	Level of Impact	Mitigation measures
Bus Terminal	Noise in the construction period	Medium	Since the residential houses are not around the site and also the other site of the road is unoccupied, the negative impact is not high. But this causes impact on pedestrians and bus waiting passengers
Recreational Park	Illegal activities can occur (drugs and prostituition)	low	The negative impact is low since the opportunity to conduct illegal activities are low. And there exists a police station located nearby and also a recreational park has security officers to minimize these effects.
Commercial Units	Minimum 2nd floor accessibility	Medium	As a solution to minimize this impact when planning the commercial structure, we can put non essential services (Eg: Phone repair shops) to the upper floor.

6.2 Environmental Impact Assessment (EIA)/ Initial Environmental Examination (IEA)

In Sri Lanka, the Environmental Impact Assessment (EIA) is the main instrument that is used to ensure social and environmental issues arising out of major development projects (during project implementation, construction, and operation) are well addressed. In addition, the EIA is a means of providing the project information, impacts on the environment and proposals for impact mitigation to the public and stakeholders. On the other EIA is a process involves public consultation and a key tool that decision makers (Project Approving Agency/Agencies) use to grant environmental clearance. Before implement a project it is need to do EIA or IEE. When go through the EIA/IEE process it is necessary to fill Basic Information Questionnaire (BIQ) provide by Central Environmental Authority. After fill that BIQ CEA tells that whether it is need to do EIA or IEE. In Sri Lanka there is a process to initiate the EIA or IEE. The project proponent first has to find out whether the project proposal falls within the "prescribed project" list by verifying with the CEA or referring to the Government Gazette No. 772/22 of 24.06.93, 859/14 of 23.02.95, 1104/22 of 06.11.99 and 1108/1 of 29.11.99. If the project is a prescribed project requiring EIA/IEE, the CEA will then determine which will be the appropriate Project Approving Agency (PAA) for administering the EIA/IEE process. The PAA will guide the project proponent in preparation of an EIA/IEE. According to my knowledge and considering the above things Initial Environmental Examination is enough for this proposed project. An IEE was carried out to examine the impacts of the environment as a whole. For this IEE try to study the present status of land related characters such as land use, physical resources, biological resources and socio economic status etc. This study was carried out through conducting detailed field surveys and collecting available documented data, maps and other relevant information

Project	Impact	Positive	Negative	Low	Moderate	High
Bus Terminal	Higher Waste disposal					
	Noise and Vibration generation					
	Enhanced City beautification					
	Air Pollution				1	
Total		1/4	3/4	0/4	2/4	2/4
Recreational Park	Higher waste disposal					
	Enhanced city beautification					
	Renovating poorly maintained canal					
	Reducing mosquito related problems					
	Increasing city greenscape					
	Reducing bird nesting spaces					
Total		4/6	2/6	0/6	2/6	4/6
Commercial units	Higher waste disposal					
	Higher water pollution					
	City beautification					
Total		1/3	2/3	1/3	0/3	2/3
Total		6/13	7/13	1/13	4/13	8/13

6.2.1 Mitigation methods

Use green building concepts for building constructions and find the materials

- Minimal disturbance to landscapes and site condition
- Use of non-toxic and recycled / recyclable/ biodegradable material Wood, Earthen materials, Steel, Aluminum, Iron, Copper, Bricks, Concrete, Gypsum, Straw bale insulation, wool carpet, linoleum flooring
- Efficient use of water and water recycling
- Use of energy efficient and eco-friendly equipment
- Use of renewable energy
- Quality of indoor air quality for human safety and comfort
- Effective controls and building management systems

Limit fuel usage

- Minimize haul distance
- Reduce the vehicle idling time
- Use greener, alternative fuel sources (Biomass energy, Natural gas etc
- Use hybrid equipment

Reduce noise & vibration

- Aware the nearby people about that project and explain to them about the expectations about that project.
- Limitation of construction activity in day time (Not working in the night time and holidays)
- Minimize noise generation machines
- Proper maintenance of vibration and excavation machines during the construction period
- Switching of plant when not in use
- Supervision of staff with proper instructions & give enough resting time to machines & workers

Minimize the air quality impact

- Use locally endemic plants for the landscaping
- Burning should not do in the site when considering the dark emission pollution
- Should use materials not generating the unnecessary dust & Good maintenance of the site
- To reduce the emissions regular watering down of the affected area
- Find suitable location to stores and handling of materials like cement & sand
- Control of cutting and grinding materials on the site
- Appropriate covering of skips and vehicles

Properly dispose of waste

- Salvaging, reusing and recycling existing materials
- Hardware, appliances and fixtures can be recycled or reused

Utilize reusable technology and green building concept for design

- Use green building materials: - Green materials leading a cost saving, lesser environmental impacts & efficiently recycled and reused. Micro concrete tiles, Durra boards, a new type of cement dust which is more efficient, and Ginikuru timber which is much cheaper than ordinary timber and lasts longer.

- By minimizing waste, saving fossil fuels due to recycling, improving recycling process, optimized use of available resources, improved intellectual capital, optimized, effective and efficient processes, enhanced organizational performance, credibility and sustainability and reduced the cost are the reasons to protect environmental sensitivity of the site area.

6.2.2 Waste water generation

Waste water management also holds a critical factor when designing a social infrastructure. There are 2 types of waste water.

1. Blackwater: Waste discharged from the human body through toilets and Urinals
2. Greywater: Domestic wastewater from baths, showers, wash basins, kitchens etc. other than Blackwater

Combined Blackwater and greywater is called All Waste

Pre calculated Waste water values for Bus terminal, Recreational area and commercial area as follows.

Area / Building / Crew	Bus Terminal	Recreational Area	Working Staff	Commercial area	Total
daily user count	1000	200	50	16	1250 users and 16 shops
Avg. time stay	5 minutes	1 hour	10 hours	10 hours working time	-
Black water (l/p/d)	0.5 X 1000 = 500	5 X 200 = 1000	25 X 75 = 3750	16 X 50 = 800	6050
Gray water (l/p/d)	1 X 1000 = 1000	5 X 200 = 1000	50 X 50 = 2500	16 X 500 = 8000	12500
All waste (l/p/d)	1500	2000	6250	8800	18550

As per the above total the estimated wastewater quantity for the proposed bus terminal and recreational area will be 16900 liters per day.

6.3 Traffic Impact Assessments (TIA)

Project: New Meepe City Center
Developer: Urban Development Authority with government funded
Nature of the project: the proposed project is more concern on public welfare

Objectives of the study
• To understand the existing traffic congestion of the site and the surrounding
• Estimate the impact of the proposed project
• To examine the parking arrangements in the proposed project

Location:
Provincial council: Western province
Local authority: Seethawaka pradeshiya sabha

Existing conditions

The selected site located in the middle of Meepe town and the site is facing the Highlevel road(A4) and Meepe - Ingiriya road. The surrounding characteristics are mostly commercial containing a filling station, service center, grocery shops, cafes, ..etc. the extent of the site is 2.7ha and owned by private landowners.

Road Link	Type	Connection to site	Connection to main corridor	Carriageway length (m)
Highlevel Road (A4)	Major	Yes	Both end	15m
Meepe Ingiriya Road	Major	Yes	Both end	10m
Meepe - Horana Road	Major	No	One End	10m

Traffic composition of high level road (A4)

No	Time Interval	Avissawella to Colombo	Colombo to Avissawella	Total
1	7.00 – 8.00	1020	400	1420
2	8.00 - 9.00	750	350	1100
3	9.00 – 10.00	550	250	800
4	10.00 - 11.00	300	300	600
5	11.00 – 12.00	250	200	450
6	12.00 – 13.00	220	180	400
7	13.00 – 14.00	200	220	420
8	14.00 – 15.00	250	400	650
9	15.00 – 16.00	380	520	900
10	16.00 – 17.00	540	740	1280
11	17.00 – 18.00	600	900	1500
12	18.00 – 19.00	720	1100	1820
13	19.00 – 20.00	600	950	1550
	Total	6380	6510	12890

By analyzing the obtained survey data we can get a clear understanding of how the traffic varies with the time period. The peak hours can be identified as 7.00 - 8.00 am and 5.00 - 8.00 PM. This massive number of vehicles going through the city is generating a huge traffic at the meepe town currently. With the proposed bus terminal area, the buses will have to load and unload the passengers at the bus terminal, because of this the vehicles entering the city area will be able to move through meepe swiftly. Hence the traffic generation will reduce.

Conclusion

Meepe, an emerging Town center in Seethawaka Pradeshiya Saba Local authority is the entrance point to the largest greenery space of Colombo. Its location in the High Level road (A4), gives Meepe a higher locational advantage. Along the linear direction of High level, Colombo suburbans as Maharagama, Pannipitiya, Kottawa, Homagama have already being developing as first order, self- sufficient cities to cater their inhabitants. So with that upcoming development potential of Colombo suburbans, it is explicitly highlighted that in near future, Meepe will convert into Colombo suburban city center. Since Meepe is situated in a highly rich bio diversified area as Seethawaka, it is necessary to guide the upcoming development pressure, in order to conserve its city character.

By considering the above situation I propose my new city center for meepe including a bus terminal, Commercial units and the recreational park. Here I back my concept using the theories I learnt at the university, by analyzing city data and by referring valid publications.

By considering all I can clearly state that the proposed new meepe city center achieves its goals and objectives, and then the vision of becoming the "exemplary green city".

THANK YOU

"It is always easy to create an ordinary city; what is difficult is to create an extraordinary one, peaceful and restful one, smart and tidy, artful and cultivated one, in short, a livable one!" - Mehmet Murat (Famous Turkish Writer)