



DETAILED TOWN PLANNING SCHEME



DETAILED TOWN PLANNING SCHEME

FOR KSRTC BUS STAND AND SURROUNDINGS,
PATHANAMTHITTA

REPORT

(REVISED)

2024



LOCAL SELF GOVERNMENT DEPARTMENT
PLANNING, PATHANAMTHITTA

PATHANAMTHITTA MUNICIPALITY

**DETAILED TOWN PLANNING SCHEME FOR
KSRTC BUS STAND AND SURROUNDINGS,
PATHANAMTHITTA (REVISED)**

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Local Self Government Department Planning
&
Pathanamthitta Municipality

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1 REVIEW OF EXISTING PUBLISHED DETAILED TOWN PLANNING SCHEMES IN PATHANAMTHITTA TOWN

1.1 INTRODUCTION

Attempts to prepare Spatial plans for the Pathanamthitta town had started immediately after the formation of the District. As a result, three Detailed Town Planning Schemes such as Detailed Town Planning Scheme for Kumbazha Junction and Surroundings, Detailed Town Planning Scheme for Municipal Bus Stand Complex and Detailed Town Planning Scheme for Kannamkara Area were prepared and published in 1984 as the initial phase followed by the publication of two Detailed Town Planning Schemes such as Detailed Town Planning Scheme for KSRTC Bus stand and surroundings and Detailed Town Planning Scheme for Central Area in 1992. Also the Development Plan for Pathanamthitta town was published in 1995. Later in February 2024, The Detailed Town Planning Scheme for Kumbazha Junction and Surroundings was revised and published. Details of the earlier planning efforts in Pathanamthitta town are given in Table 1-1

Table 1-1: Details of the earlier planning efforts in Pathanamthitta town

Sl No:	Name of Detailed Town Planning Scheme/Master Plan	Area (Hectare)	Year of Publication
1	Detailed Town Planning Scheme for Kumbazha Junction and Surroundings, Pathanamthitta	35.04	1984 (Revised in 2024)
2	Detailed Town Planning Scheme for Municipal Bus Stand Complex, Pathanamthitta	24.8	1984
3	Detailed Town Planning Scheme for Kannamkara Area, Pathanamthitta	18.1	1984
4	Detailed Town Planning Scheme for KSRTC Bus stand and surroundings, Pathanamthitta	12.11	1992
5	Detailed Town Planning Scheme for Central Area, Pathanamthitta	30.59	1992
6	Development Plan for Pathanamthitta Town	Entire Town (23.5 Sq. Km)	1995

Considering the four Detailed Town planning schemes such as Detailed Town Planning Scheme for Central Area, Detailed Town Planning Scheme for Municipal Bus Stand Complex, Detailed Town Planning Scheme for KSRTC Bus Stand and Surroundings and Detailed Town Planning Scheme for Kannamkara Area, all these scheme areas are located contiguously at the Central Business District of the town, while the Detailed Town Planning scheme for Kumbazha Junction and surroundings Pathanamthitta lies in an area around 2.5 km towards East of the town centre. Since the revision process of Detailed Town Planning scheme for Kumbazha Junction and surroundings Pathanamthitta has already begun as the initial phase, the remaining four schemes which are spatially positioned together needs to be revised as the next phase. The spatial distribution of published Detailed Town Planning schemes areas in Pathanamthitta town are represented in Figure 1-1.



Figure 1-1: Detailed Town Planning Schemes in Pathanamthitta Municipality

1.2 REVIEW OF EXISTING DETAILED TOWN PLANNING SCHEMES/ MASTER PLANS IN THE STUDY AREA

The Detailed Town Planning Schemes for the Central Business District and its surroundings of Pathanamthitta Municipality encompasses four adjacent scheme areas within the heart of the town. The revision of these schemes hence envisions these areas into a cohesive one, thereby conducting the studies considering the surrounding developments of the central Pathanamthitta. Among the five Detailed Town Planning scheme areas of Pathanamthitta municipality the “Detailed Town planning scheme for Kumbazha Junction & surroundings Pathanamthitta” has already been revised which involves scheme updates, including zoning regulations and map variations through resurveying and is in the published stage. The remaining four Detailed Town Planning scheme of Pathanamthitta Municipality which are spatially tied to one another in and around the central business district.

1.2.1 Detailed Town Planning Scheme for Central Area, Pathanamthitta

For the development of the central area, Detailed Town Planning Scheme was prepared and published on 10/03/1992. The scheme area includes part of Pathanamthitta village in Kozhencherry Taluk. The total extent of the scheme is 30.59 Hectares (approximately) as per the published DTP scheme for Central Area, Pathanamthitta. The Published Detailed Town Planning Scheme for Central Area, Pathanamthitta is shown in Figure 1-2. The scheme area was zoned into Land Reserved for Residential Use, Land Reserved for Commercial use, Land Reserved for Public and Semi-Public Use and Mixed Use (Commercial and Residential). Land to be Acquired for Commercial use (Municipal shopping Complex), Land to be Acquired for Municipal Complex, Land Reserved for Roads, Water Courses Diverted, Land Reserved for Parking and Land to be Acquired for Roads and Junction improvement.

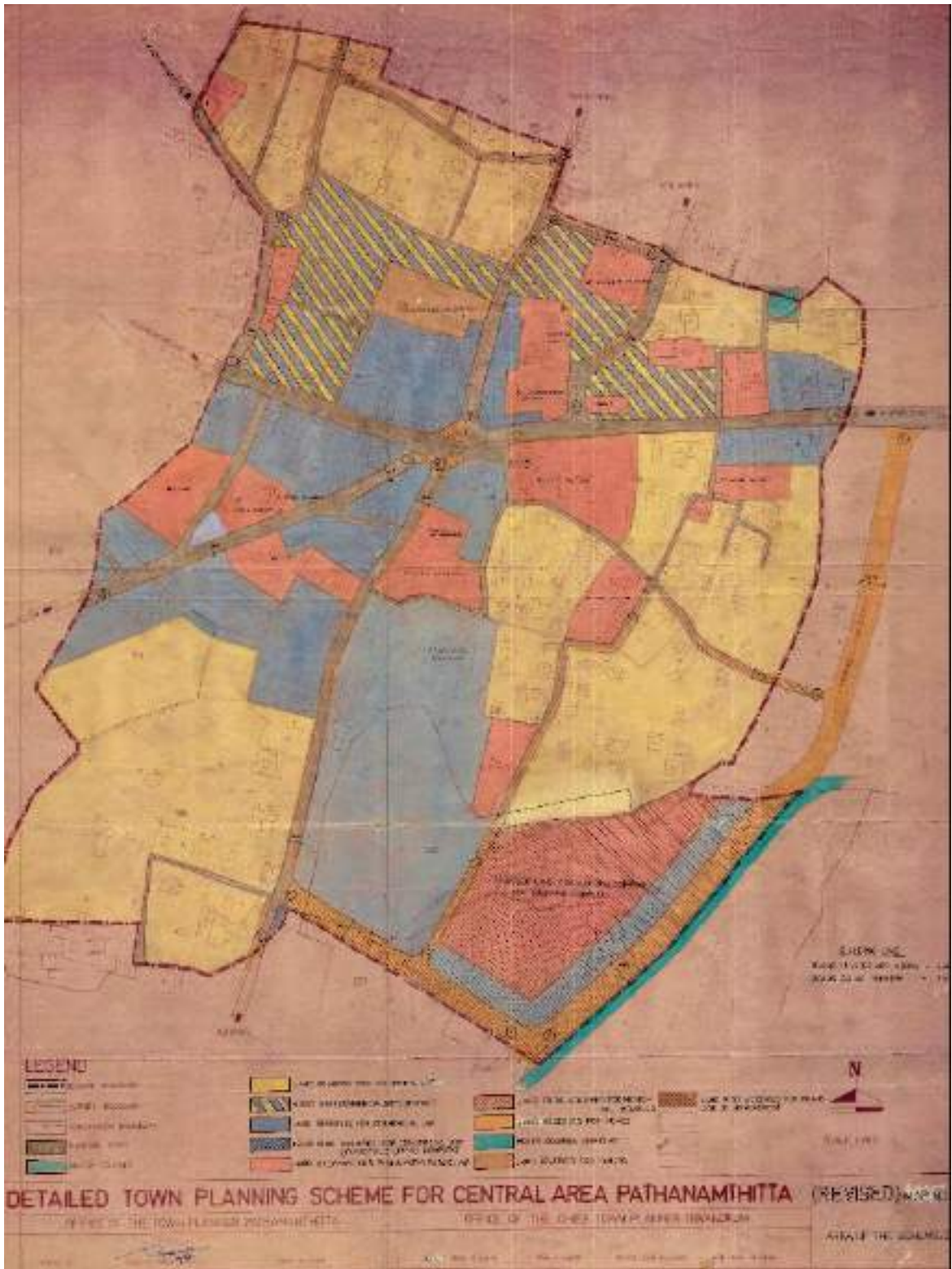


Figure 1-2: *The Published Detailed Town Planning Scheme for Central Area, Pathanamthitta*

1.2.1.1 Major Proposals

To achieve the objective of the scheme, some specific land use proposals and road proposals were put forward in the Detailed Town Planning scheme for Central Area, Pathanamthitta. Key land use proposals and road development proposals for the scheme are discussed below:

- A part of the proposed Ring road of width 18 meter is along the eastern boundary of the scheme.
- Proposed Inner Ring road of 15 m is along the southern boundary connecting Market road and proposed Ring road.
- An area proposed to be acquired for the commercial use and an area proposed to be acquired for municipal complex is on southern boundary of the scheme.

1.2.1.2 Road Widening/ New Road Proposals

Proposal for New streets and widening of existing streets in published Detailed Town Planning scheme for Central Area, Pathanamthitta are listed below:

Table 1-2: Road widening/ New Road proposal of the Published Detailed Town Planning Scheme for Central Area, Pathanamthitta

No. of Streets or Distinguishing letters	Situations	New Streets or widening	Width of streets	Distance between Building Lines
A1 A1	Kozhencherry - Pathanamthitta	Widening	15 M	21M
D2D2	Connecting road between Pathanamthitta Kaipattor road	Widening	10 M	16 M
A A1	Kaipattor - Pathanamthitta road	Widening	15 M	21M
C1 C	Azhoor - Pathanamthitta road	Widening	15 M	21 M
FF2 F, E	Pathanamthitta - Kumbazha road	New & Widening	7 M	13 M
E1 F1	Pathanamthitta - Azhoor road	New	7 M	13 M
C1 C1	Inner ring road	New & Widening	15 M	21 M
F2 F2	Link road from St.Luke Hospital Junction leading to proposed ring road	New & Widening	7 M	13 M

C1 F2	Proposed road along the eastern boundary	New	18 M	27 M
A1 A2	Pathanamthitta - Kumbazha road	Widening	15 M	21 M
B1 B	Pathanamthitta - Kumbazha road leading to KSRTC Stand	Widening	15 M	21 M
DG	Road from Central Junction to GHS	Widening	10 M	16 M
G G1	Extension of road DG	Widening	7 M	13 M
BG	Link road between Pathanamthitta - Mylapra GHS	Widening	7 M	13 M
C2FC2	Pathanamthitta - Kadamanitta	Widening	10 M	16 M
FF	Connecting road between Kadamanitta to Pathanamthitta GHS Road	Widening	7 M	13 M
D1D1	-Do-	Widening	10 M	16 M
G2G2	Road leading to the proposed parking lot from Kozhencherry road	Widening	7 M	13 M

1.2.1.3 Development Regulations

The major zoning regulations in various zones in the scheme which are found to be not in compliance with the present development trends in the area as follows

In Residential Use Zone,

- Other than residential use, Vegetable shops, Groceries, Panshops etc. not exceeding 75 m² were only permitted by the Secretary.
- Minor Educational buildings up to 250 m² in plinth area, Libraries, Reading rooms, Clinics and Nursing homes up to 150 m² in plinth area were permitted by the responsible authority with the approval of the Chief Town Planner.

In Commercial Use Zone,

- Retail shops, Professional offices, Commercial offices, Hostels, Hotels, Lodging houses, Restaurants, Cart stands, Taxi stands, Bus stops, Clinics and Nursing homes plinth area not exceeding 150 m² were permitted by the Secretary.

- Small Residential buildings not exceeding 50 m² plinth areas were permitted with the concurrence of the Chief Town Planner.

In Public and Semi-Public Use Zone,

- Local, State and Central Government offices and establishments, Social and Cultural establishments, Community facilities including hospitals, Nursing homes, Clinics, Dispensaries, Educational institutions, Public utilities and related buildings were permitted by the Secretary.
- Residential uses incidental to above mentioned and Religious uses were permitted with the concurrence of the Chief Town Planner.

In Mixed Use Zone,

- All permitted use in Commercial and Residential uses
- All Restricted uses in Commercial and Residential uses were permitted with the concurrence of the Chief Town Planner.

1.2.1.4 Coverage and FAR Controls

Permissible Coverage and FAR value of buildings under different occupancies as per published Detailed Town Planning scheme for Central Area, Pathanamthitta are listed below:

Table 1-3: Coverage and FAR value

Sl no	Building use of occupancy	Maximum Permissible Coverage (%)	Maximum Permissible FAR
1	Residential	50	1.50
2	Commercial	60	2.00
3	Public and semi public	30	1.50
4	Industrial	40	1.20

1.2.1.5 Building Line

The Building line for different roads as per the published Detailed Town Planning scheme for Central Area, Pathanamthitta are listed below:

Table 1-4: *Building Line*

Road width (m)	Building line (m)
18 and above	4.50
Below 18	3.00

1.2.1.6 Level of Implementation

The major proposals implemented as part of the Detailed Town Planning Scheme is, Ring road of width 18 meter along the eastern boundary. But an area proposed to be acquired for the commercial use and an area proposed to be acquired for municipal complex and shopping complex in the southern boundary of the scheme have not been implemented. The provision of building lines, junction improvement and road widening ensured adequate space for future road development.

1.2.2 Detailed Town Planning Scheme for Municipal Bus Stand Complex, Pathanamthitta

For the development of the Municipal Bus stand complex and surroundings, Detailed Town Planning Scheme was prepared and published on 12/08/1984. The scheme area includes part of Pathanamthitta village in Kozhencherry Taluk. The total extent of the scheme is 24.8 Hectares (approximately) as per the published scheme. The Published Detailed Town Planning Scheme for Municipal Bus Stand Complex, Pathanamthitta is shown in Figure 1-3. Municipal Bus stand, Aban tower, Petrol pump, Mosque, Govt. LP School etc. are the major activity generators in the area. The scheme area is zoned as Area reserved for Residential use, Area to be Reserved for Commercial use, Public and Semi-Public Use, Mixed Use (Commercial and Residential), Paddy fields, Water Courses, Area Reserved for Roads, Land to be Acquired for Roads and Area to be Acquired for Bus, Lorry & Taxi stand etc.

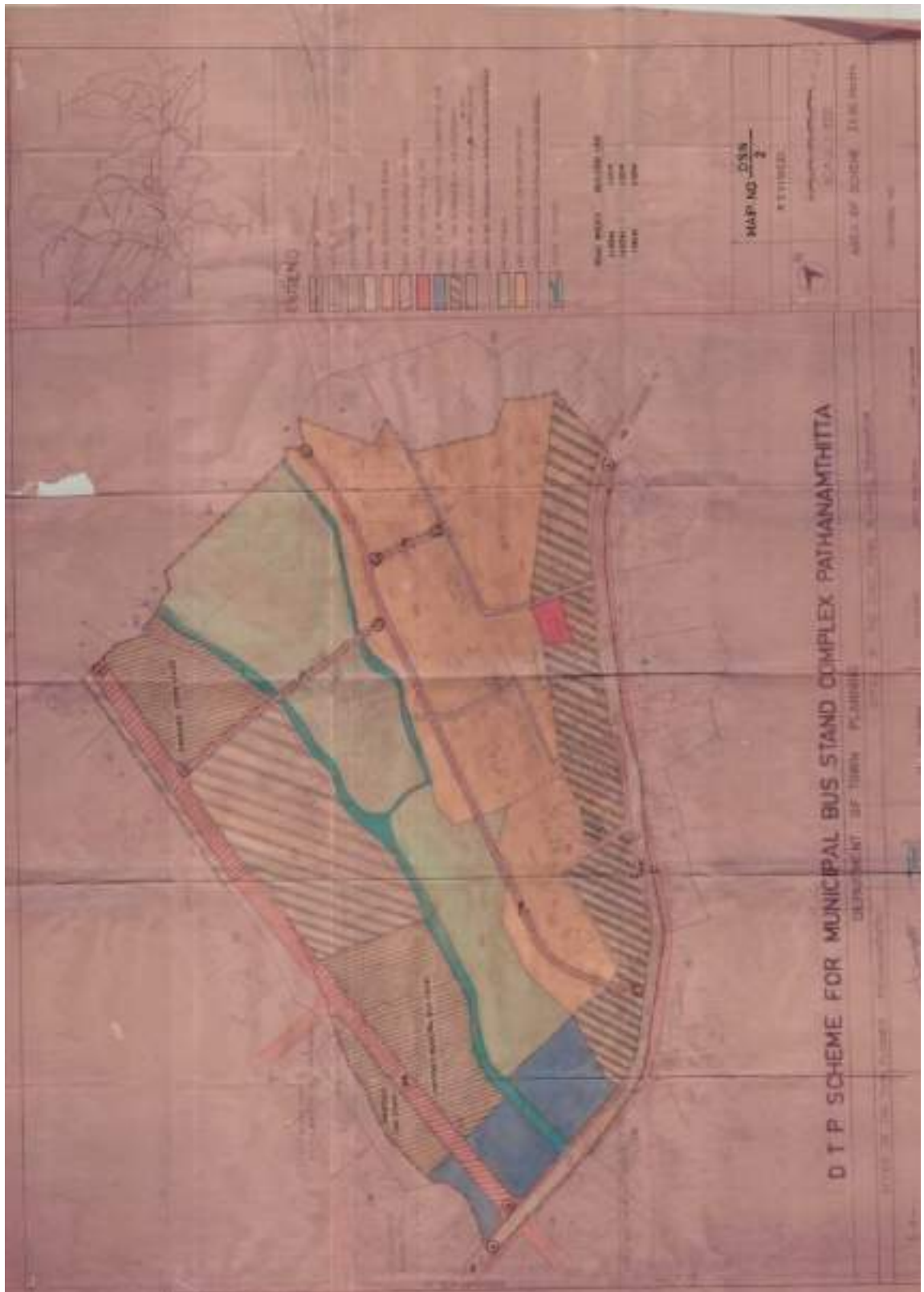


Figure 1-3: *Detailed Town Planning Scheme for Municipal Bus Stand Complex, Pathanamthitta*

1.2.2.1 Major Proposals

To achieve the objective of the scheme, some specific land use proposals and road proposals were put forward in the Detailed Town Planning scheme for Municipal Bus stand complex and surroundings, Pathanmathitta. Key land use proposals and road development proposals for the scheme are discussed below:

- New Municipal bus stand complex having an area of 2.26 hectare is proposed to be acquired.
- An area of 0.76 hectare is proposed to be acquired for the Lorry stand.
- An area of 0.52 hectare is proposed to be acquired for Park.
- An area of 0.20 hectare is proposed to be acquired for Taxi Parking.
- An area of 1.61 hectare is proposed to be acquired for Commercial purpose.
- A part of the proposed Ring road is coming under the scheme.
- Pathanamthitta –Kumbazha road is proposed to be widen to 21 m.
- An area of 1.37 hectare is proposed to be reserved for mixed use (Commercial & Residential).
- Stretches of green belt having an area of 0.91 hectare is proposed to be reserved.
- The chain of paddy field is retained.

1.2.2.2 Road Widening/ New Road Proposals

Proposal for New streets and widening of existing streets in Detailed Town planning scheme for Municipal Bus stand complex and surroundings, Pathanmathitta are listed below:

Table 1-5: Road widening/ New Road proposal of the published Detailed Town Planning Scheme for Municipal Bus stand complex and surroundings, Pathanmathitta

No of Streets or Distinguishing letters	Situations	New Streets or widening	Width of streets	Distance between Building lines
A B C D	Pathanamthitta - Kumbazha road	Widening	21 M	30 M
B E	Link road from Pathanamthitta Kumbazha road from Junction B towards North	Widening	7 M	13 M

C F	Link road from Pathanamthitta Kumbazha road from Junction C towards North	Widening	7 M	13 M
E F	Link road from Pathanamthitta Kumbazha road lying in the North South direction	New	7 M	13 M
A G	Ring road lying along the west boundary	New	8 M	27 M

1.2.2.3 Development Regulations

The major zoning regulations in various zones in the scheme which are found to be not in compliance with the present development trends in the area as follows,

In Residential Use Zone,

- Other than residential area vegetable shops, groceries, panshops etc. not exceeding 75 m² were only permitted by the Secretary.
- Minor educational buildings up to 250 m² in plinth area, Libraries, Reading rooms, Clinics and Nursing homes up to 150 m² in plinth area were permitted by the responsible authority only with the approval of the Chief Town Planner.

In Commercial Use Zone,

- Retail shops, Professional offices, Commercial offices, Hostels, Hotels, Lodging houses, Restaurants, Cart stands, Taxi stands, Bus stops, Clinics and nursing homes plinth area not exceeding 150 m² were permitted by the Secretary.
- Small Residential buildings not exceeding 50 m² plinth area were permitted with the concurrence of the Chief Town Planner.

In Public and Semi-Public Use Zone,

- Local, State and Central Government offices and establishments, social and cultural establishments, Community facilities including hospitals, Nursing homes, Clinics,

Dispensaries, Educational institutions, Public utilities and related buildings were permitted by the Secretary.

- Uses incidental to above mentioned and Religious uses were permitted with the concurrence of the Chief Town Planner.

In Mixed Use Zone,

- All permitted use in Commercial and Residential uses
- All restricted uses in Commercial and Residential uses were permitted with the concurrence of the Chief Town Planner.

1.2.2.4 Coverage and FAR Controls

Permissible Coverage and FAR value of buildings under different occupancies as per published Detailed Town Planning scheme for Municipal Bus stand complex and surroundings, Pathanamthitta are listed below:

Table 1-6: Coverage and FAR

Sl No.	Building use of occupancy	Maximum Permissible Coverage (%)	Maximum Permissible FAR
1	Residential	50	1.50
2	Commercial	60	2.00
3	Public and semi public	30	1.50
4	Industrial	40	1.20

1.2.2.5 Building Line

The Building line for different roads as per Published Detailed Town Planning scheme for Municipal Bus stand complex and surroundings, Pathanmathitta are listed below:

Table 1-7: Building Line

Road width (m)	Building line (m)
21	4.5
18	4.5
7	3.0

1.2.2.6 Level of Implementation

A few of the proposals that are implemented as part of the Detailed Town Planning Scheme are Ring road, Municipal bus stand complex. While some of the other proposals such as the Area to be acquired for Lorry and Taxy stand, the proposed 7 meter road along the western side of proposed residential zone have not come to realization. The land reserved for residential use has not materially changed. No appreciable changes have been made to the area that was reserved for residential development. The area on the northwest corner of the scheme area that was set aside for mixed use has not grown in the way that was intended. The provision of building lines promotes the ideal requirement for future road development.

1.2.3 Detailed Town Planning Scheme for KSRTC Bus Stand and Surroundings, Pathanamthitta

For the development of the KSRTC Bus Stand and Surroundings, Detailed Town Planning Scheme was prepared and published on 10/03/1992. The scheme area includes part of Pathanamthitta village in Kozhencherry Taluk. The total extent of the scheme is 12.11 Hectares (approximately) as per the published Detailed Town Planning Scheme. The Published Detailed Town Planning Scheme for KSRTC Bus Stand and Surroundings, Pathanamthitta is shown in Figure 1-4. The scheme area was zoned to Area to be Reserved for Residential use, Area to be Acquired for Commercial use, Area to be Reserved for KSRTC Bus stand, Area Reserved for Mixed use (Residential & Commercial), Area to be Acquired for residential use and Paddy field retained etc.



Figure 1-4: *Published Detailed Town Planning Scheme for KSRTC Bus Stand and Surroundings, Pathanamthitta*

1.2.3.1 Major Proposals

Major Development proposals in Published Detailed Town Planning Scheme for KSRTC Bus Stand and Surroundings, Pathanamthitta are discussed below:

- To widen the Pathanamthitta-Mylapra road to 15 m
- A new link road connecting Mylapra road and proposed Ring road having a width of 15 m.
- A portion of the inner ring road have a width of 10 m, a ring road having a width of 18 m are coming under this.
- An area of 0.26 hectare is proposed to be acquired for taxi parking.
- An area of 0.74 hectare is proposed to be acquired for commercial purpose.
- An area of 0.85 hectare is reserved for mixed use (Commercial & Residential).
- 0.95 hectare is reserved for commercial purpose.

1.2.3.2 Road widening/ New Proposals

Proposal for new streets and widening of existing streets in Detailed Town Planning schemes for KSRTC Bus Stand and Surroundings, Pathanamthitta are listed below:

Table 1-8: Road widening/ New Road proposal of the published Detailed Town Planning Scheme for KSRTC Bus Stand and Surroundings, Pathanamthitta

No of Streets or Distinguishing letters	Situations	New Streets or widening	Width of streets	Distance between Building Lines
ADBA	Pathanamthitta - Mylapra road	Widening	15 M	21M
C1 C1	Pathanamthitta - Mylapra road and Pathanamthitta GHS Road	Widening	10 M	16 M
	Along the West Boundary	Widening	7 M	13 M
	Pathanamthitta Mylapra road and Road CC lying in the East West Direction	Widening	7 M	13 M

	Road between Pathanamthitta Mylapra road and proposed ring road at east west direction	Widening	15 M	21 M
	Along the North Boundary	Widening	7 M	13 M
	Portion of Ring road	New	18 M	27 M

1.2.3.3 Development Regulations

The major zoning regulations in various zones in the scheme which are found to be not in compliance with the present development trends in the area as follows,

In Residential Use Zone,

- Other than residential uses, vegetable shops, Groceries, Panshops etc. not exceeding 75 m² were only permitted by the Secretary.
- Minor Educational buildings up to 250 m² in plinth area, Libraries, Reading rooms, Clinics and Nursing homes up to 150 m² in plinth area were permitted by the responsible authority only with the approval of the Chief Town Planner.

In Commercial Use Zone,

- Retail shops, Professional offices, Studies, Commercial offices, Hostels, Hotels, Lodging houses, Restaurants, Cart stands, Taxi stands, Bus stops, Clinics and nursing homes plinth area not exceeding 150 m² were permitted by the Secretary
- Small Residential buildings not exceeding 50 m² plinth areas were permitted with the concurrence of the Chief Town Planner.

In Mixed Use Zone,

- All permitted uses in Commercial and Residential uses
- All Restricted uses in Commercial and Residential use were permitted with the concurrence of the Chief Town Planner.

1.2.3.4 Coverage and FAR Controls

Permissible Coverage and FAR value of buildings under different occupancies as per published Detailed Town Planning scheme for KSRTC Bus Stand and Surroundings, Pathanamthitta are listed below:

Table 1-9: Coverage and FAR

Sl. No.	Building use of occupancy	Maximum Permissible Coverage (%)	Maximum Permissible FAR
1	Residential	50	1.50
2	Commercial	60	2.00
3	Public and Semi Public	30	1.50
4	Industrial	40	1.20

1.2.3.5 Building Line

The Building line for different road of published Detailed Town Planning scheme for KSRTC Bus Stand and Surroundings, Pathanamthitta are listed below:

Table 1-10: *Building Line*

Road width (m)	Building Line (m)
15.00	3
10.00	1.5
7.00	1.5

1.2.3.6 Level of Implementation

The development trend of the area has not completely followed the recommendations in the published Detailed Town Planning scheme strategy. Proposals such as the area to be acquired for parking of taxies have not been implemented. The area on the northwest side of the scheme that was set aside for residential use has not grown in the way that was intended. The provision of building lines promoted the ideal requirement for future road development.

1.2.4 Detailed Town Planning Scheme for Kannamkara Area, Pathanamthitta

For the development of the Kannamkara Area, Detailed Town Planning Scheme was prepared and published on 12/08/1984. The scheme area includes part of Pathanamthitta village in Kozhencherry Taluk. The total extent of the scheme is 18.1 Hectares (approximately) as per the published Scheme. The Published Detailed Town Planning Scheme Scheme for Kannamkara Area, Pathanamthitta is shown in Figure 1-5. The Scheme area was zoned to Area Reserved for Residential use, Area Reserved for Public and Semi-Public Use, Area Reserved for Roads, Area to be Acquired for Roads, Area reserved for Mixed use (Residential & Commercial) and Existing Paddy fields to be retained.

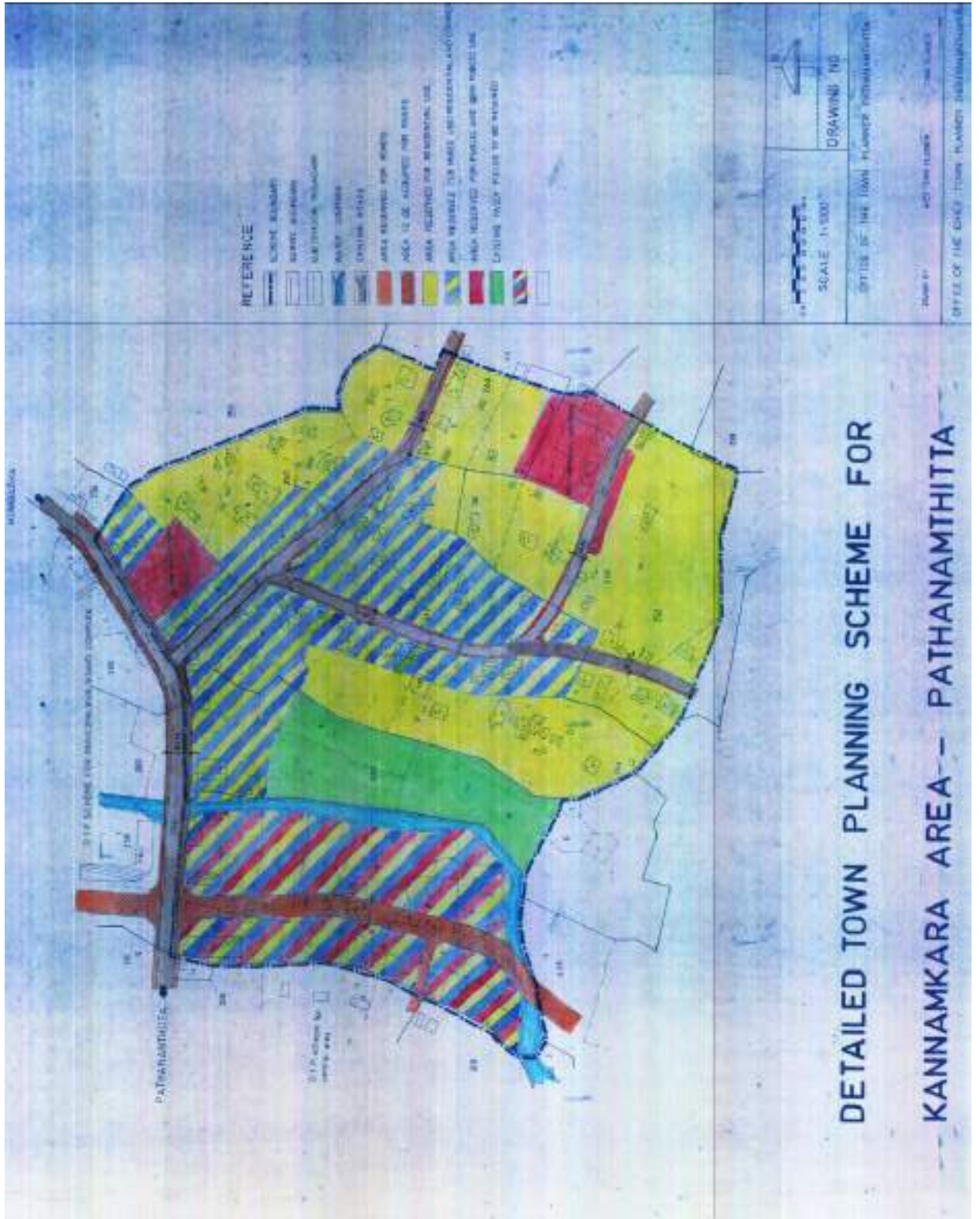


Figure 1-5: Published Detailed Town Planning Scheme for Kannamkara Area, Pathanamthitta

1.2.4.1 Major Proposals

The major Development proposals of Published Detailed Town Planning Scheme for Kannamkara Area, Pathanamthitta are listed below:

1. A part of the proposed Ring road of width 18 meter is coming along the western boundary of the scheme.
2. The chain of paddy field in the scheme is retained.

1.2.4.2 Road widening/ New Road proposals

Proposal for New streets and widening of existing streets in Detailed Town Planning Scheme for Kannamkara Area, Pathanamthitta are listed below:

Table 1-11: Road widening/ New Road proposal of the published Detailed Town Planning Scheme for Kannamkara Area, Pathanamthitta

Name of street or Distinguishing letters	Situation	New Street /widening	Width of street (m)	Distance between Building Line (m)
AA	North end of the scheme	widening	21	27
BB	West side of the scheme	widening	18	24
CC	North eastern side of the scheme	widening	12	18
C1C1	Off take from road CC towards south	widening	12	18
C2C2	Off take from road C1C1 towards east	widening	12	18
DD	Off take from road BB towards west	widening	7	13

1.2.4.3 Development Regulations

The major zoning regulations in various zones in the scheme which are found to be not in compliance with the present development trends in the area as follows,

In Residential Use Zone,

- Other than residential area, vegetable shops, Groceries, Pan Shops etc. not exceeding 75 m² were only permitted by the Secretary.
- Minor Educational buildings up to 250 m² in plinth area, Libraries, Reading rooms, Clinics and Nursing homes up to 150 m² in plinth area were permitted by the responsible authority only with the approval of the Chief Town Planner.

In Commercial Use Zone,

- Retail shops, Professional offices, Studies, Commercial offices, Hostels, Hotels, Lodging houses, Restaurants, Cart stands, Taxi stands, Bus stops, Clinics and Nursing homes plinth area not exceeding 150 m² were permitted by the secretary
- Petrol filling station, Areas and building for residential use and Small residential buildings not exceeding 100 m² plinth area were permitted by the secretary with the concurrence of the Chief Town Planner.

In Public and Semi-Public Use Zone,

- Local, State and Central Government offices and establishments, Social and Cultural establishments, Community facilities including hospitals, Nursing homes, Clinics, Dispensaries, Educational institutions, Public utilities and related buildings were permitted by the Secretary
- Residential uses incidental to above mentioned and Religious uses were permitted with the concurrence of the Chief Town Planner.

In Residential cum-Commercial Mixed Zone,

- All uses Permitted under Residential and Commercial use provided that Commercial use will be permissible only if plot having access street width of minimum 5m.

- All use Restricted under Residential and Commercial use provided that Commercial use will be permissible only if plot having access street width of minimum 5m with the concurrence of the District Town Planner.

In Residential, Commercial cum- Public and Semi-Public Use Zone,

- All uses permitted under Residential, Commercial and Public and Semi-Public Uses provided that Commercial and Public and Semi-Public Uses will be permissible only if plot having access street width of minimum 5m.
- All uses Restricted under Residential, Commercial and Public and Semi-Public Uses provided that Commercial and Public and Semi-Public Uses will be permissible only if plot having access street width of minimum 5m with the concurrence of the Chief Town Planner.

In Paddy Field,

- Paddy cultivation, Pump house and Ponds were permitted by the Secretary.
- Crop other than paddy, Poultry or Animal houses, Farm houses, and conversion of Paddy field in to open air recreation facility were permitted with the concurrence of the Chief Town Planner.

1.2.4.4 Coverage and FAR Controls

Permissible Coverage and FAR value of buildings under different occupancies in published Detailed Town Planning scheme for Kannamkara Area, Pathanamthitta are listed below:

Table 1-12: Coverage and FAR

Sl. No.	Building use of occupancy	Maximum Permissible Coverage (%)	Maximum Permissible FAR
1	Residential	50	1.5
2	Commercial	60	2.0
3	Public and Semi Public	30	1.5

1.2.4.5 Building Line

The Building line for different roads in published Detailed Town Planning scheme Kannamkara Area, Pathanamthitta are listed below:

Table 1-13: *Building Line*

Road width (m)	Building Line(m)
21.00 and below	3.00

1.2.4.6 Level of Implementation

A few of the proposals that are implemented as part of the Detailed Town Planning Scheme are Mixed uses for Commercial, Residential and Public and Semi Public purposes on either side of portion of Ring road, Mixed uses for Commercial and Residential purposes. The land originally reserved for residential use has not materially changed, whereas the part of land reserved for Commercial, Residential and Public and Semi Public purposes on either side of portion of Ring road not come to realisation. The provision of building lines promotes the ideal requirement for future road development.

1.2.5 Development Plan for Pathanamthitta Town

Attempts for preparation of development plan for Pathanamthitta were started way back in 1984. The draft development plan for Pathanamthitta was published in 1995. Development Plan for Pathanamthitta town was intended to provide a frame work for the integrated and comprehensive development of Pathanamthitta Town. The Government accorded sanction for publishing the plan vide G.O. (Rt) 878/95/LAD dated 21.02.1995. Figure 1-6 shows the proposed land use of the present published Development plan. But due to various reasons the plan could not be finalized and not obtained final sanction for the plan ever after a lapse of 25 years. The Municipality Council, Pathanamthitta vide resolution dated 09/07/2018 decided to prepare a new master plan for Pathanamthitta considering the changed development scenario.

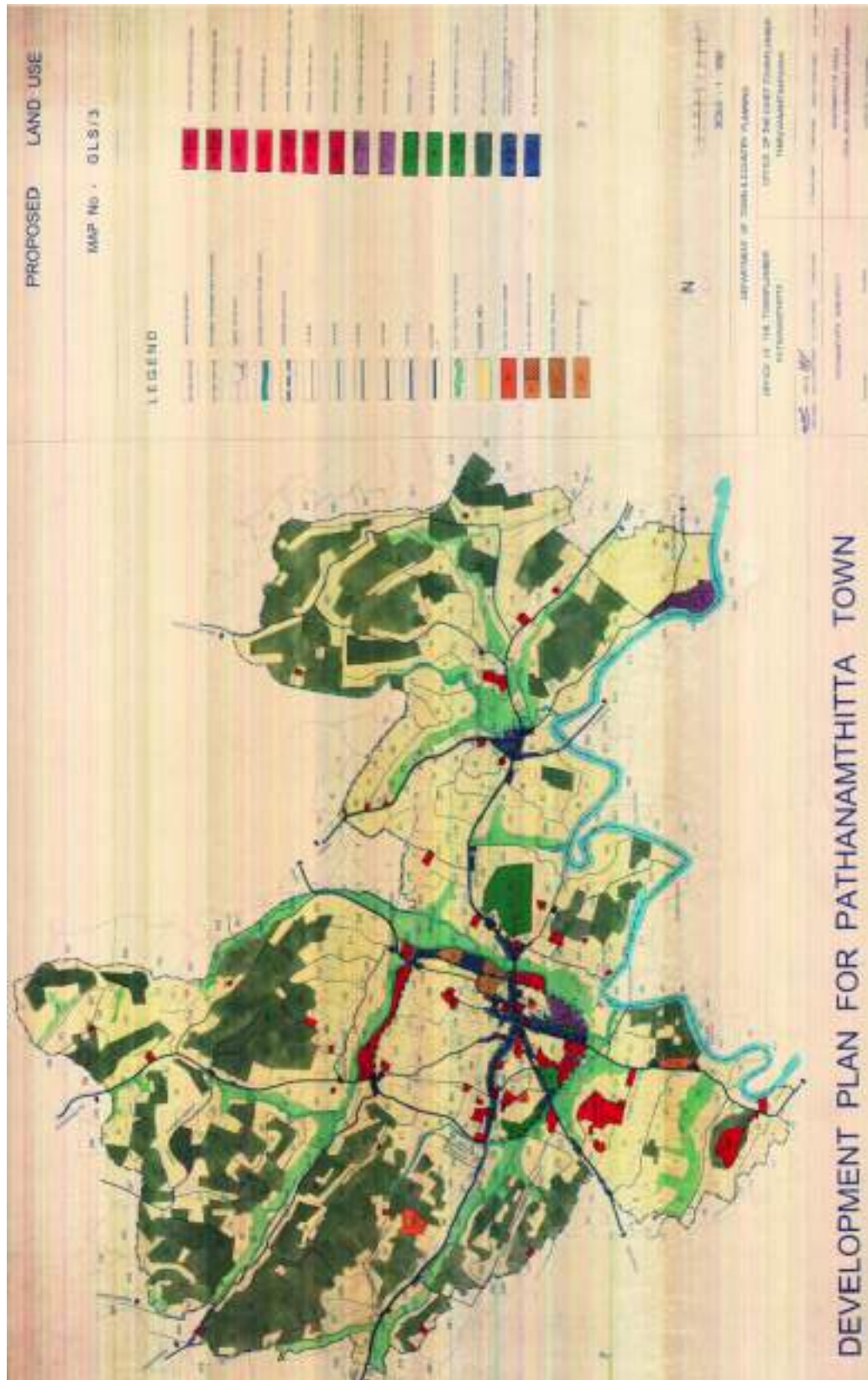
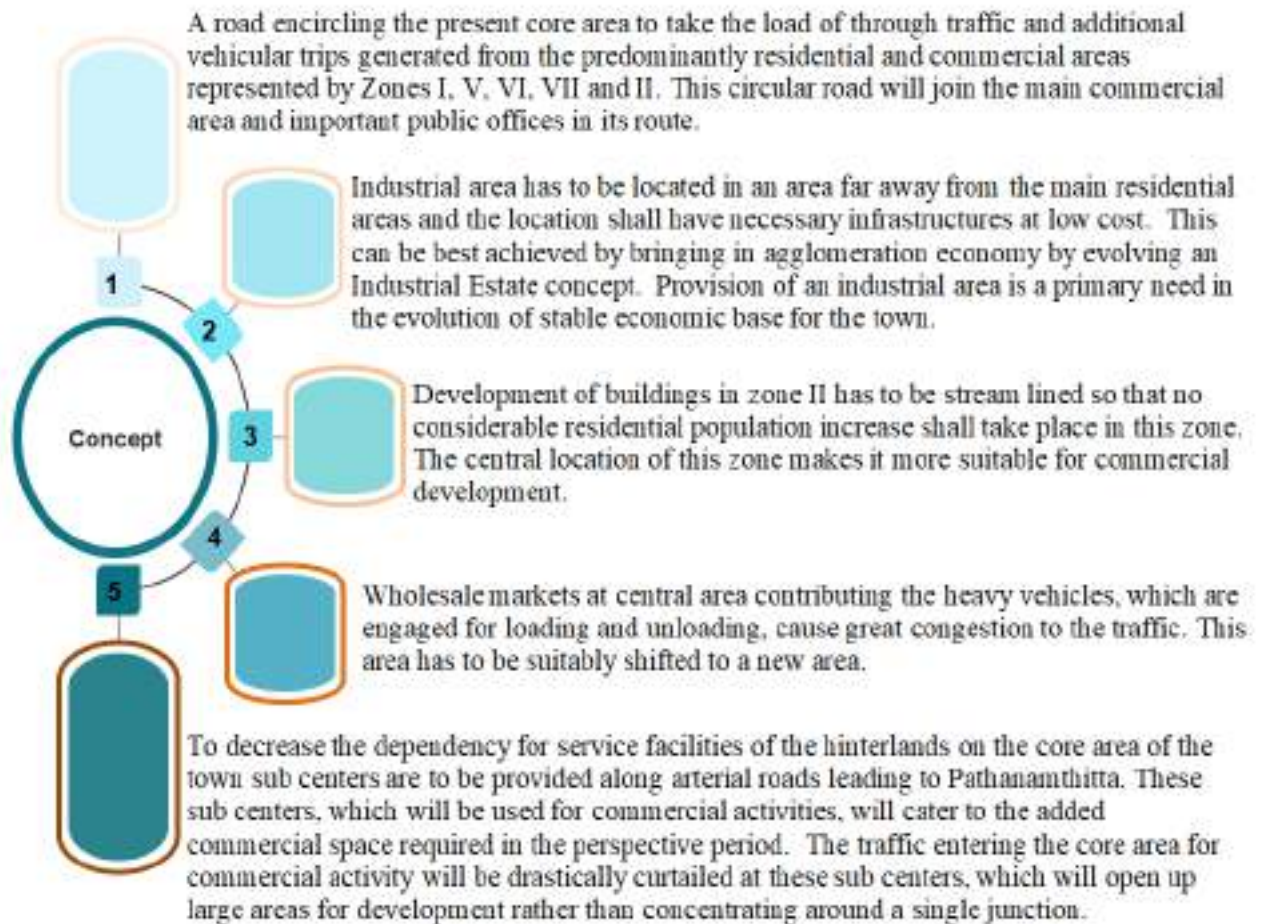


Figure 1-6: Development Plan, Pathanamthitta(1995)

1.2.5.1 Concept of Existing Development Plan



1.2.5.2 Level of Implementation

Proposals of the published Development Plan which are implemented includes, Ring road, Other Roads, Bus Terminal Facilities, Stadium, SP Office, Sabarimala Edathavalam etc. The developments of the town have been controlled as per the proposals of the published Development plan. New buildings were constructed with adequate set back from the road boundary, which enable future road widening more easily.

2 STUDY AND ANALYSIS

2.1 NEED FOR REVISION OF DETAILED TOWN PLANNING SCHEMES

The Central Business District (CBD) of Pathanamthitta Municipality has seen several new developments over the past few years, although the development tendency of the area has diverged from the recommendations of the published Detailed Town Planning scheme strategy. Few of the proposals that are implemented as part of the detailed town planning scheme are Ring Road, Municipal Bus Stand etc. while some of the other proposals, such as lorry stand and taxi parking have not been realised. But the road widening and wetland conservation entrusted through the zoning regulations could reserve land for new developments and ensure risk reduction in the area. Now it is high time to renew the Detailed Town Planning schemes as per the present development trends of the town and to control future developments taking into account the current trend. This itself calls for the revision of the schemes. As per the District Urbanisation report Pathanamthitta (January 2011), Pathanamthitta municipality is proposed as a first order settlement in the district. Even though many proposals of the published Development plan have been implemented, the present development is not fully in accordance with the development concept of that plan. The present land use of the scheme area demonstrates that the region has incurred significant developments, serving as the CBD of the town. Therefore, it is inevitable that the Schemes need to be revised in light of the intense development at central area.

Attempts for preparation of development plan for Pathanamthitta were started way back in 1984. The draft development plan for Pathanamthitta was published in 1995. The municipal council of Pathanamthitta vide resolution dated 09/07/2018 decided to prepare a new Master Plan for Pathanamthitta considering the changed development scenario. Therefore, the changes need to be incorporated into the scheme area also to control the development activities in an integrated manner. Also Development concept, Model projects and Zoning Regulations based on the broad policies visualized in the Master Plan need to be materialised at the scheme level. Current development regulations are based on the published Detailed Town Planning scheme and Development Plan which do not align with the current development scenario of the town. This also calls for the revision of the schemes.

The flood of 2018 and the massive damages it inflicted made Government of Kerala to decide that Disaster Risk Reduction should be mainstreamed in development planning and projects. Accordingly, amendments have been effected in the Kerala Town and Country Planning Act, 2016 section 34. Risk Informed Master Plan is defined under Section 2(r) of the Kerala Town and Country Planning Act, 2016 (KTCP Act, 2016). Guidelines for preparation of Risk Informed Master Plan for the State has been approved by the State Government in 2022. The Kerala Town and Country Planning Act 2016 provide specific guide line for preparation of Master Plan and emphasis the need for preparation of plan with people's participation and their requirements need to get more importance. The preparation process of Risk Informed Master Plan for Pathanamthitta town is undergoing. Therefore the Detailed Town Planning schemes within this area also need to be Risk Informed and it is to be revised.

The Hon. High Court of Kerala has ordered the Government to revise all the Town planning Schemes of the state vide WP(C) 21634/2020 Dated 22.06.2021. The Hon. High Court observed that the existing Detailed Town Planning schemes in force are not in tune with the developments and development trends in the concerned areas and revision of the existing Master Plans and Detailed Town Planning Schemes in conformity with the present developments, complying with the procedure prescribed in the Town Planning Act need to be completed in a time bound manner. Therefore, appropriate orders were issued by the Government, that existing Master Plans and Detailed Town Planning Schemes can be revised in conformity with the present developments as per the Town Planning Act. This necessitates a revision of the current Schemes as well.

2.2 COUNCIL RESOLUTION

Pathanamthitta Municipal council has taken Resolution dated 25/05/2022, to republish the existing published Detailed Town Planning schemes in the town centre as per Section 50 of the Kerala Town and Country Planning Act 2016.

2.3 PLANNING AREA-COMBINED DETAILED TOWN PLANNING SCHEME AREA

For the purpose analysing the existing scenario of the four Published Detailed Town Planning scheme areas in town, the planning area is limited to the combined area of all the four schemes in the Central Business District area of Pathanamthitta town.



Figure 2-1: Detailed Town Planning Schemes in the Planning area

2.4 EXISTING LANDUSE

Considering the existing land use of the Planning area, Commercial use in the CBD area which actually caters vast influence region from the eastern portion of the entire district (without any urban local bodies) is constituting only 16.84% of the area. In fact the planning area is limited to the CBD of the town which is the administrative Headquarters of the entire District, then also Residential Use forms the major land use in the area, accounting for about 23.20% followed by Dry Agriculture land use in 12.43% of area, which actually portrays the unorganised and underutilised development trend in the core area and it necessitates the need to densify the core by inducing more Commercial, Public and Semi-Public and Transportation uses along with urban housing and recreation, thereby preventing urban sprawl. Low lying/ Wet land Area constituting 21.22% of the CBD acts as the natural protective barrier of the CBD from hazard risks. Industrial land use (0.22%) is negligible in the CBD. Public and Semi-public land use constitutes only 5.24% of the Planning area even if the town is the administrative Headquarters of the District. A significant portion of public and semi-public falls in Mini Civil station, Police Station, Market, Town Hall, Veterinary Hospital, Post Office, BSNL, Municipal Office, Hospitals, Religious buildings, Educational institutions etc. The majority of the Transportation use, which is 5.37% of the total, major portion shared by KSRTC and Private Bus Stand. Other

land uses, like water body/Drain, Existing roads, vacant land contribute to 15.49% of the total land use share in the planning area. The existing land use breakup in the planning area is shown in and Figure 2-2 & Figure 2-3 and the break up details for the same are tabulated in Table 2-1.

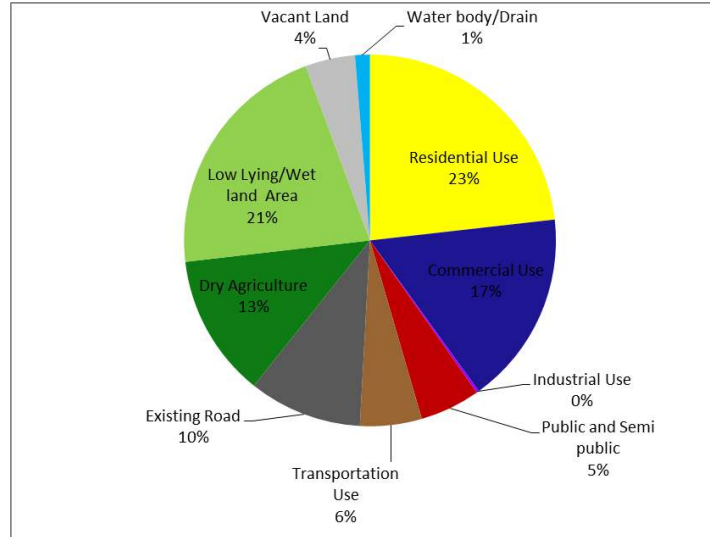


Figure 2-2: Existing Land Use Breakup of the Planning area

Table 2-1: Existing Land Use Breakup of the Planning area

Land Use	Area (Ha)	Percentage Distribution (%)
Residential Use	20.11	23.20
Commercial Use	14.59	16.84
Industrial Use	0.18	0.22
Public and Semi public	4.54	5.24
Transportation Use	4.65	5.37
Existing Road	8.54	9.86
Dry Agriculture	10.77	12.43
Low Lying/Wet land Area	18.38	21.22
Vacant Land	3.76	4.34
Water body/Drain	1.11	1.29
Total	86.67	100

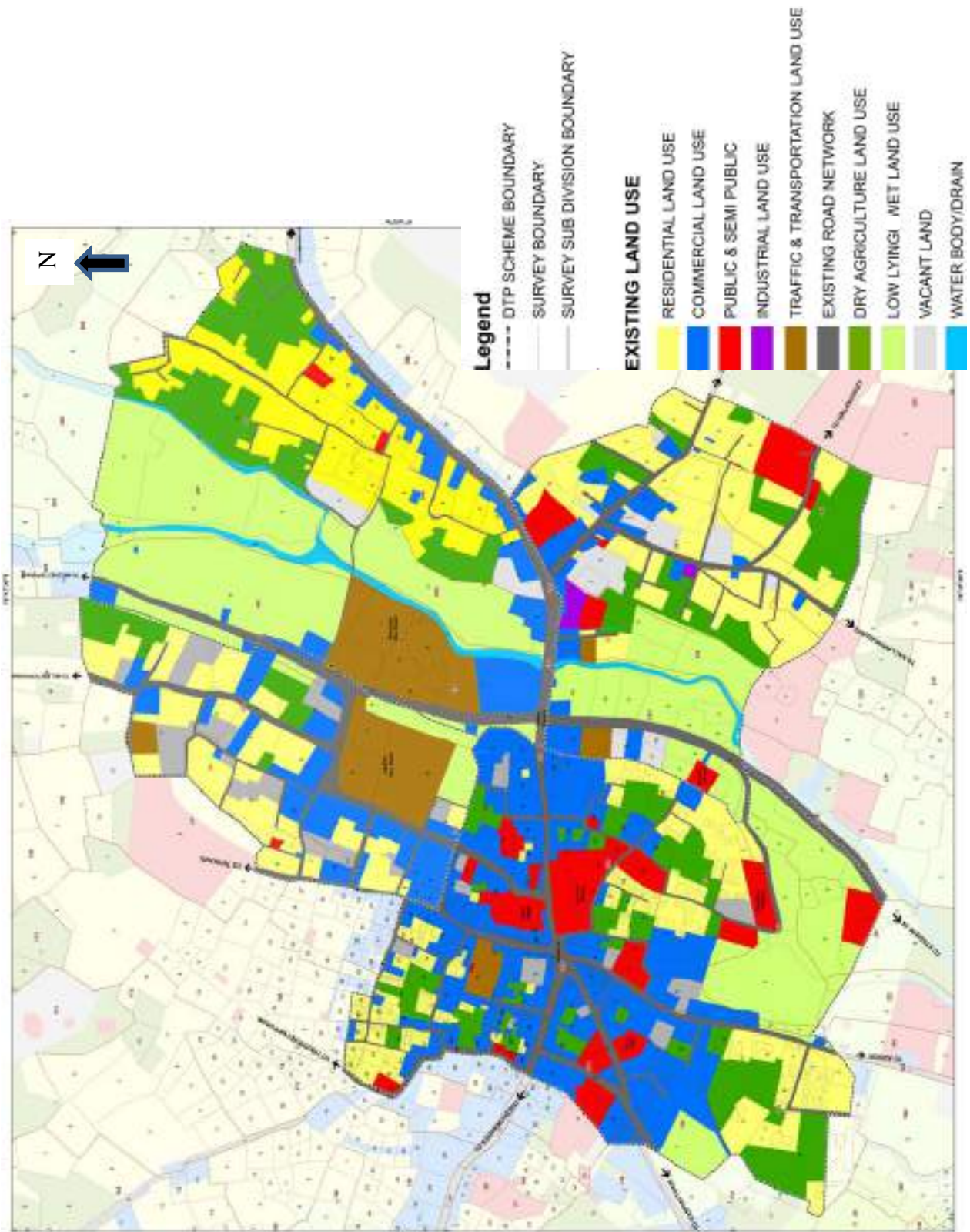


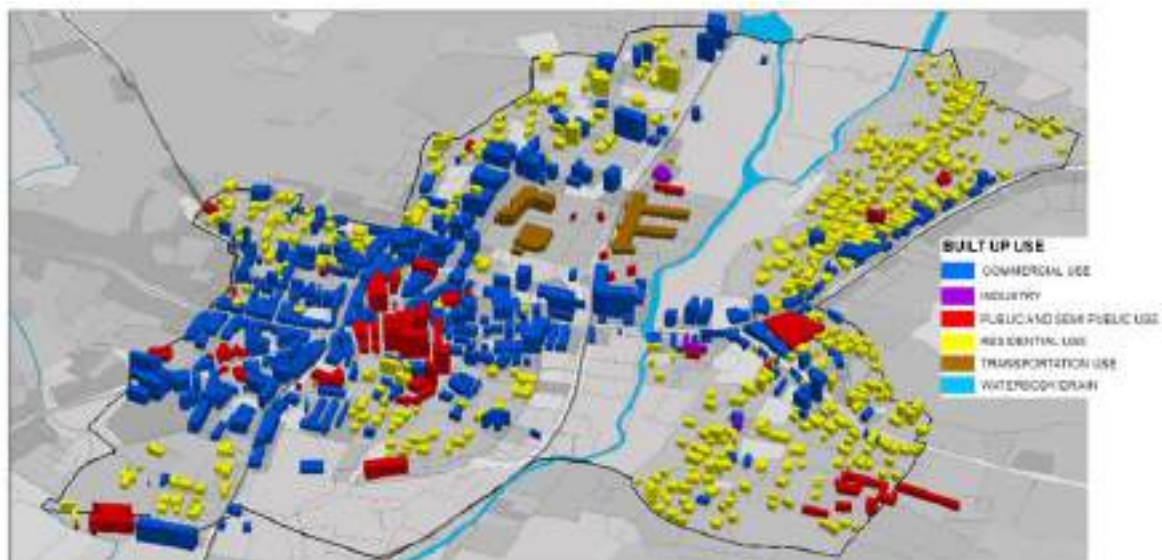
Figure 2-3: Existing Land use of the four Combined Detailed Town Planning schemes area (Planning Area) (Source: Primary Survey)

2.5 BUILT UP DENSITY

Major built up in the study area falls under Commercial, Public & Semi-Public and Residential occupancies. Commercial buildings are more concentrated in the western part of the Planning area along major roads. Public and Semi-Public buildings such as Mini Civil station, Police Station, Market, Town Hall, Veterinary Hospital, Post Office, BSNL, Municipal office etc. are located in the Central area. Additionally, transportation hubs like KSRTC Bus Terminal and Municipal Bus stand are also located at the centre of the study area. The Planning area includes 595 commercial buildings and 531 residential buildings. Additionally, it features two transportation hubs: the KSRTC bus terminal and the Municipal bus stand as shown in Table 2.2.

Table 2-2: Number of Buildings in planning area

Types of Buildings	No. Of Buildings
Commercial	595
Industrial	3
Public & Semi Public	85
Residential	531
Transportation	2



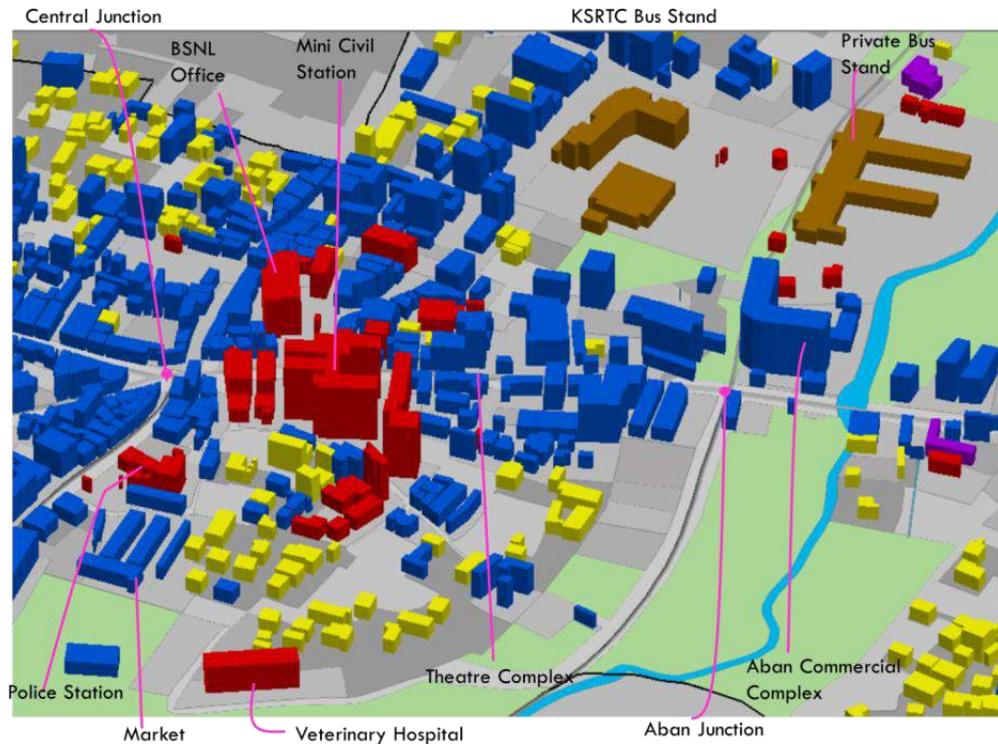


Figure 2-4: *Built up Distribution (Source: Primary Survey)*

2.6 DEMOGRAPHY

Population concentration in Town ward ($2195/\text{km}^2$) and Kallarakkadavu ward ($2260/\text{km}^2$) located on the southern part of the Scheme area are more (Figure 2-5). The highest population density is in Chuttiippara Ward ($4873/\text{km}^2$), although significant portion of this ward lies outside the Combined Detailed Town Planning scheme area. Pettah south Ward ($3861/\text{km}^2$) and Kulasekharapathi Ward ($3557/\text{km}^2$) follow with the next highest population density (Figure 2-6).

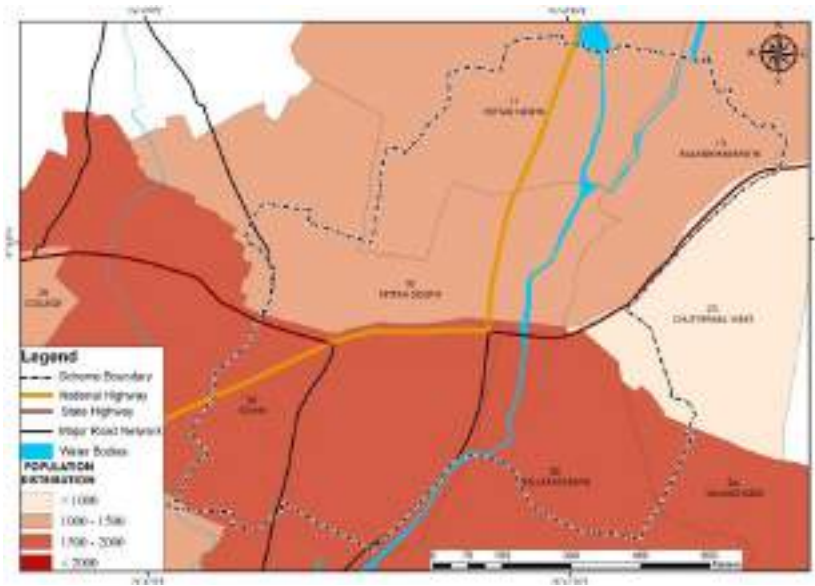


Figure 2-5: Population density (Source: Derived from Census 2011)

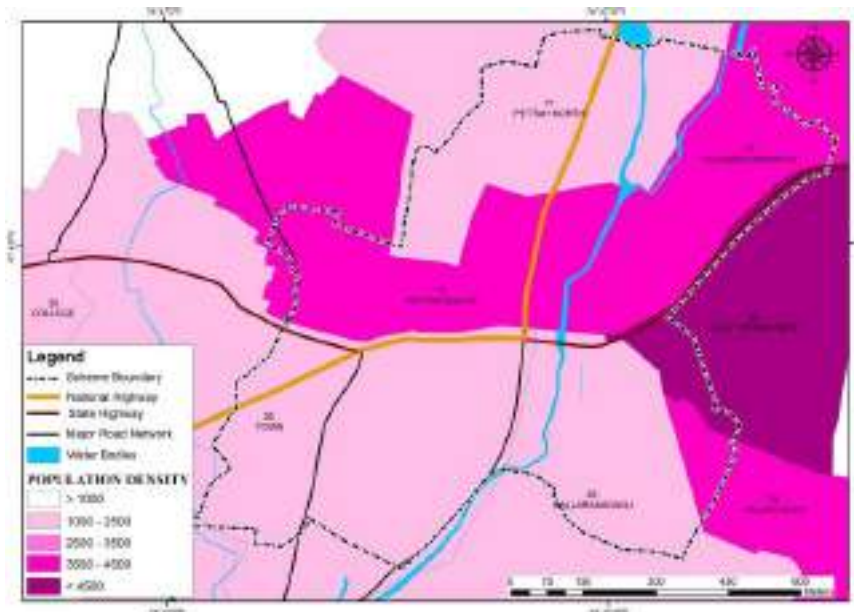


Figure 2-6: Ward wise spatial distribution of population
(Source: Derived from Census 2011)

2.7 ROAD NETWORK AND TRANSPORTATION

Well-designed road networks improve access to businesses, services, amenities, influencing land use and development patterns of an area. The parameters considered to analyse the existing condition of the road network in the Planning area are Road Characteristics, Road

Capacity, and Traffic Volume at Intersections, Footpaths & Encroachments, Pedestrian Crossing, Parking, Bus Stops, Bus Terminals/Auto/Taxi Stands and Street Lighting & Shades.

2.7.1 Road Characteristics

The existing road network of the Combined Detailed Town Planning scheme area consist of roads in different categories such as, National and State highways, Major District Roads and other Municipal roads (Table shown in the figure). Majority of roads are two lane two way road sections with narrow shoulder and footpaths. Narrow shoulders lead to traffic congestions as on street parking are high due to the commercial activities and through the narrow and discontinued footpath (less than 1m) only one person can walk at a time. So people always choose shoulders and carriage ways of road section for walking and it also leads to the slow movement of the vehicle. The existing road structure is not following the universal accessibility and barrier free utilities. The Planning area took into consideration the widening proposal for roads such as T.K. Road and Pathanamthitta- Adoor road, which were proposed as the major roads in the District Urbanization Report (2011).

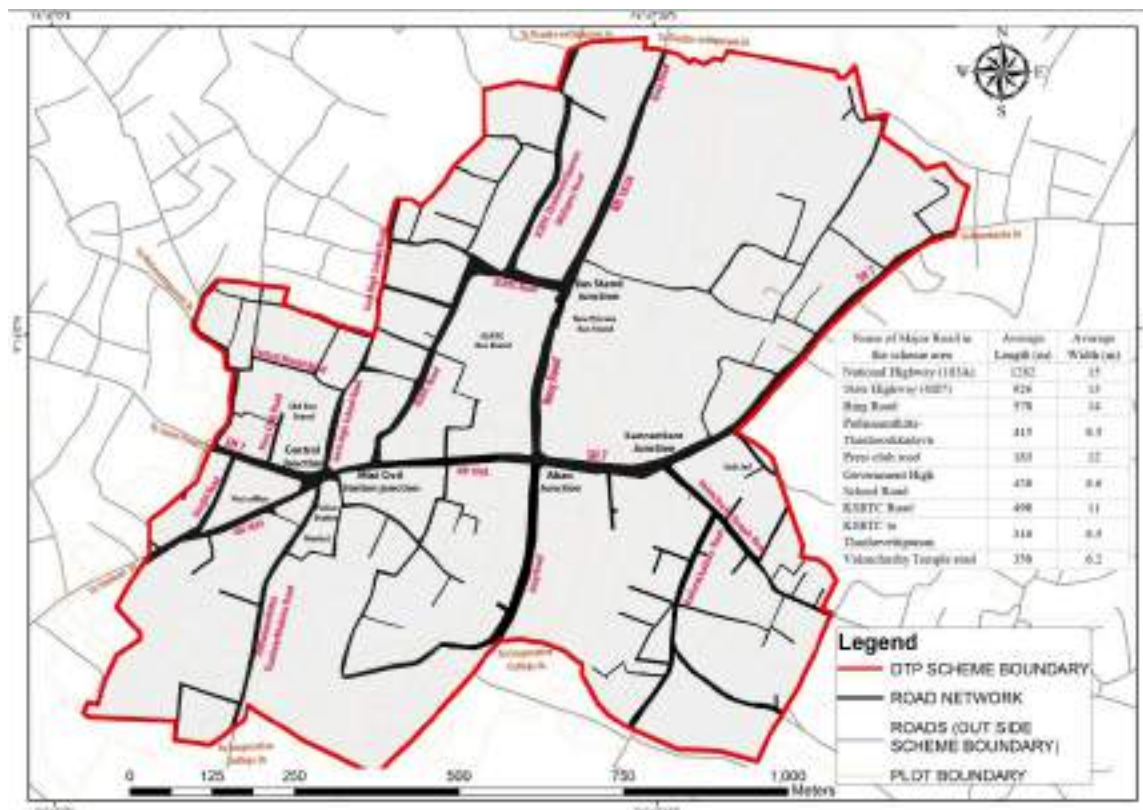


Figure 2-7: Existing road network in the Planning area (Source: Primary Survey)

2.7.2 Road Capacity

Vehicle movement in an area is influenced by the Capacity Utilization of the road. Volume – Capacity (V/C) ratio of road is the indicator of the capacity utilization. It is the ratio of volume of traffic on the road stretch to the capacity of the road stretch. Table shows the Existing (2019) and Projected (2029 & 2039) Capacity Utilization of major roads in the Planning area.

Table 2-3: Volume Capacity ratio (existing and projected) of existing major roads sections in the Planning area (Source: NATPAC Survey)

Sl. No.	Major Road Stretches inside the Scheme area	Observed Existing vehicle Volume (PCU/day)			Road Capacity as per IRC guidelines (PCU/day)	Volume Capacity (V/C) ratio		
		2019	2029	2039		2019	2029	2039
I	Thiruvalla-Kumbazha Road(SH -7)							
1	Kumbazha Jn.-Aban Jn.	43984	53882	65710	15000	2.93	3.59	4.38
2	Aban Jn.- Mini Civil Stn.Jn.	24463	29969	36547	15000	1.63	2.00	2.44
3	Mini Civil Stn.Jn.- Central Jn(one way)	31215	38240	46634	15000	0.87	1.06	1.30
4	Central Jn.- Hospital Jn.	19023	23304	28419	15000	0.79	0.97	1.18
II	Kaippattoor Road							
5	Central Jn.- Stadium Jn	17643	21613	26358	24000	0.74	0.90	1.10
III	Azhoor Road							
6	Central Jn.- Co-operative College Jn.	10473	12358	14538	12000	0.87	1.03	1.21
IV	Kadammanitta Road							
7	Mosque Jn.- Vettippuram	5748	6782	7979	12000	0.48	0.57	0.66
V	Mylappra Road							
8	Mini Civil Stn, Jn.- KSRTC Station-	18877	22274	26204	12000	1.57	1.86	2.18
VI	Ring Road							
9	Co-operative College Jn. - AbanJn	36116	44243	53955	15000	2.41	2.95	3.60
10	AbanJn - Thachanpady Jn.(Thazhevettipuram)	39101	47901	58415	15000	2.61	3.19	3.89

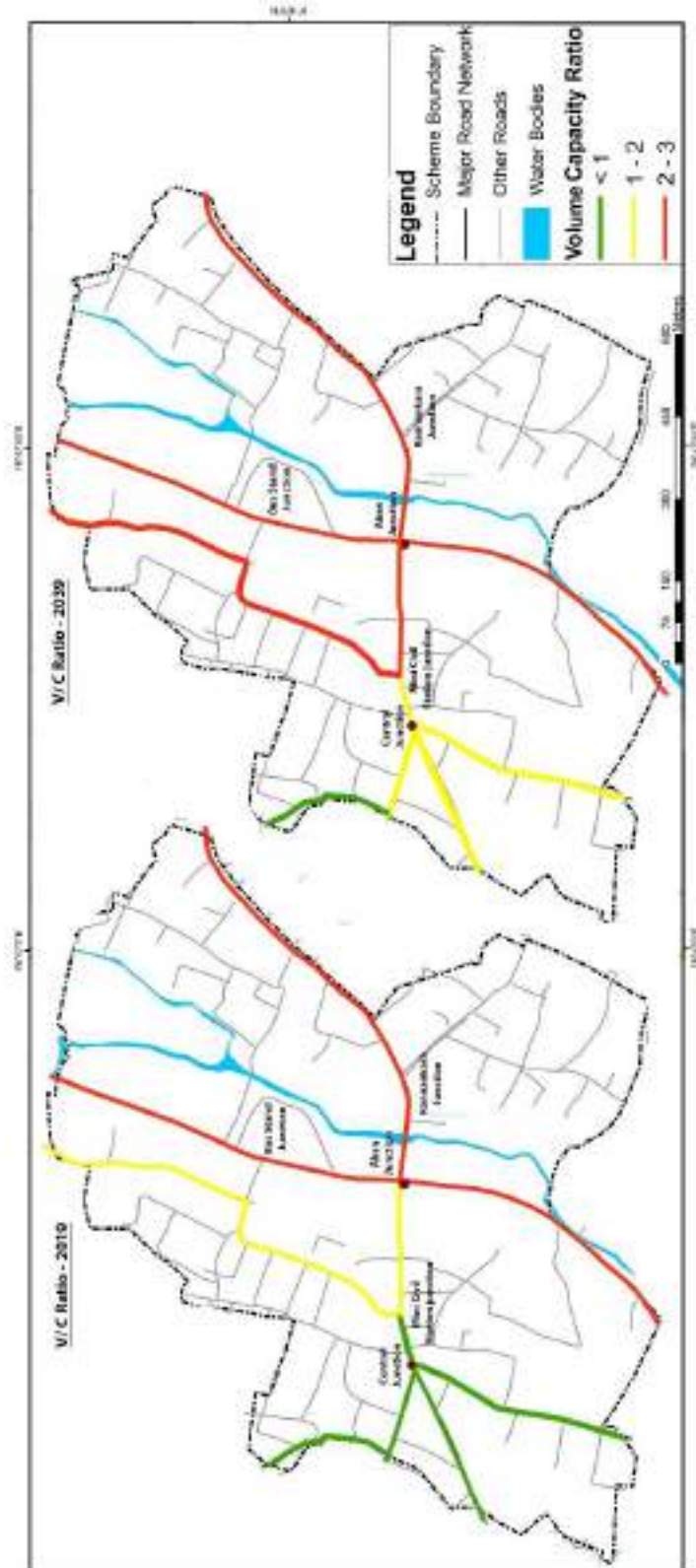


Figure 2-8: Volume Capacity ratio (existing and projected) of existing major roads sections in the Planning area (Source: Derived from NATPAC Survey)

Road Section between Kumbazha to Aban Junction, Co-operative College Junction to Aban Junction and Aban Junction – Thachanpady (Thazhevettipuram) Junction were over utilised to the extent of more than 200% to its carrying capacity. Similarly Aban Junction to Mini Civil Station and Mini Civil Station - KSRTC Station stretch were over utilised to the extent of more than 150% to its carrying capacity. Road capacity of these stretches needs to be increased or alternate roads are to be proposed and junctions are to be improved.

2.7.3 Traffic volume at Intersections

Road intersections play a crucial role in determining traffic flow and efficiency in urban areas. The design and type of intersection (e.g., Signalized, Roundabout, Uncontrolled) influence how many vehicles can pass through per unit of time. Signalized intersections allow controlled movement and safety for both vehicular and pedestrian movement, but can lead to delays due to red lights. Type of Major intersection in the Planning area is shows in Table 2-4.

Table 2-4: Type of major intersection in the Planning area

Name of Junction	Type
Central Junction	Five arm
Aban Junction	Four arm
Mini Civil Station Junction	Three arm
KSRTC Junction	Three arm
KSRTC Junction at Ring road	Three arm
Kannamkara Junction	Three arm
Old bus stand Junction	Three arm

As per Design standards, a street network layout should avoid intersections with more than four-way and with less than 60-degree angle between any two arms. The minimum distance between two intersections should not be less than 100m as this may create significant traffic safety issues and cause congestion.

Central Junction is five arm intersection with most congested and traffic conflict point of the area. The width of road is only 9 meter and not properly channelized. There is a Gandhi Statue in the road junction which is also function as channelization. The five entry point to a junction with only 9 meter width road and high density commercial activity on both side leads to the on street parking, traffic congestion, and delay in vehicle movement in the centre of the town. Aban Junction is the entry point to the town centre and to the ring road for vehicles from Kumbazha region. This Junction is the highly congested junction in the ring road and not properly channelized. Aban Junction witnessed the maximum peak hour traffic flow of 3190 PCU followed by 2909 PCU at Co-operative College Junction.

Mini Civil Station Junction is a three arm junction which is the entry point to the Bus terminals from the town. This junction is also highly congested with two way traffic and sharp turning radius. Junction is not properly channelized and road width is about 10 meter. This Intersection is within 100 meter distance of Central Junction which leads to traffic issue at both junctions when buses are turning.

Another major intersection in the area is KSRTC exit point junction. This junction is located between two bus terminals and in ring road. The grade separator called Aban Flyover is under construction which is starting near this intersection. Currently this junction not properly channelized and this intersection need proper design as the flyover is passing over this intersection.

Major delay of 34.4 seconds was observed on the road stretch between KSRTC Stand to Aban Junction and cause of delay is due to the traffic block at intersection. Central Junction to Police station Junction is also having slow traffic. Delay at intersections shall be sort out by channelizing the traffic flow by undergoing junction improvement measures.



Figure 2-9: Major Intersections in the Planning area

2.7.4 Footpath & Encroachments

A Footpath or Sidewalk is a dedicated part of a street exclusively for pedestrians, located on both sides of the road. These pathways should be easily walkable, kept clean, and ensure safety for pedestrians by being free from encroachments, parked vehicles, and other obstructions such as utilities. Well-maintained footpaths are crucial elements of a well-functioning city street. As per Design standards, (IRC:103-2012, 6.1.5.2), The width of the footpath vary as per the adjacent land use. Footpaths in residential areas require a minimum clear width of 1.8 m, which is enough space for two wheelchairs to pass each other. For commercial areas, the clear width should be at least 2.5 m

Table 2-5: Capacity of Footpath (Source: IRC)

Clear Walking zone of footpath (m)	Max. Number of Person per hour in both direction
1.8	1350
2.0	1800
2.5	2250
3.0	2700
3.5	3150



Figure 2-10: Existing Foot path condition in the Planning area

All major roads in the Planning area has footpath except ring road portion. Generally the top portion of Storm water drain is used as footpath in the town. The range of width of footpath

inside the town area is varies from 0.7m to 1.5m. Existing width of footpath could not cater the pedestrian volume and free movement. Apart from width, other elements like level difference, Surfacing, Vending, Position of Electric post, Bus stops and trees are directly affecting the function of footpath and pedestrian movement.

The height of the kerb above the carriageway should not exceed 150 mm (IRC: 103-2012, 6.1.4). Excessive heights make footpaths hard to use, and many pedestrians prefer to walk in the carriageway. Majority of the footpath inside the town is laid with Guide tiles for better walking. In some areas of town, the footpath that constantly changes levels and it discouraging pedestrians from using it. Pedestrians prefer to walk on the carriageway instead. Streets inside the area do not provide designated zones for vending, so these activities became obstructions to the movement of pedestrians. A designated vending space is required for venders at Mini Civil station Junction, Market Road, and Bus stand Junction.



Figure 2-11: Street Vending

Footpaths contribute to the overall liveability of town by making them more pedestrian-friendly. Town with prioritize footpaths create attractive, vibrant, and inclusive environments where people want to live, work, and visit. Walkable urban areas can boost local economies by increasing foot traffic to businesses and shops. Pedestrians are more likely to patronize local businesses, contributing to economic vitality and supporting small businesses. So town need a proper footpath plan to make pedestrian-friendly town.

2.7.5 Pedestrian crossing

Pedestrian cross movement at major activity/traffic generation areas revealed (Table 2-6) that a high volume of pedestrian cross movements occurred in from Central Junction – Stadium Junction during the time period between 16.30 and 17.30 hours.

Table 2-6: Pedestrian cross movement (Source: NATPAC Survey)

Sl. No.	Name of location	Peak Time		No. of pedestrians		
				Up	Down	Total
1	Central Jn.-Stadium Jn.	16.30	17.30	1398	891	2289
2	Central Jn.-Mini civil station	10.00	11.00	342	418	760
3	Central Jn.-Old Bus stand.	9.15	10.15	277	231	508
4	Central Jn.-Co-operative college Jn.	16.15	17.15	1,075	1,081	2156
5	Mini civil station-KSRTC	12.30	13.30	328	409	737



Figure 2-12: Major Pedestrian crossings in planning area

Pedestrian crossings in a town are essential elements of urban infrastructure designed to ensure the safe and efficient movement of pedestrians across roadways. Facilities like Road Markings, Signage, and Traffic Control Devices accessible to people with disabilities and refuge islands are needed in the town for safe pedestrian cross movement.

Only three locations namely Central Junction, Market Junction and KSRTC Junctions have zebra crossing for pedestrians. There is no zebra crossing in Aban Junction, Mini Civil Station Junction and bus stand junction. The Traffic Control Devices in junctions accessible to people with disabilities and refuge islands are absent in the town.

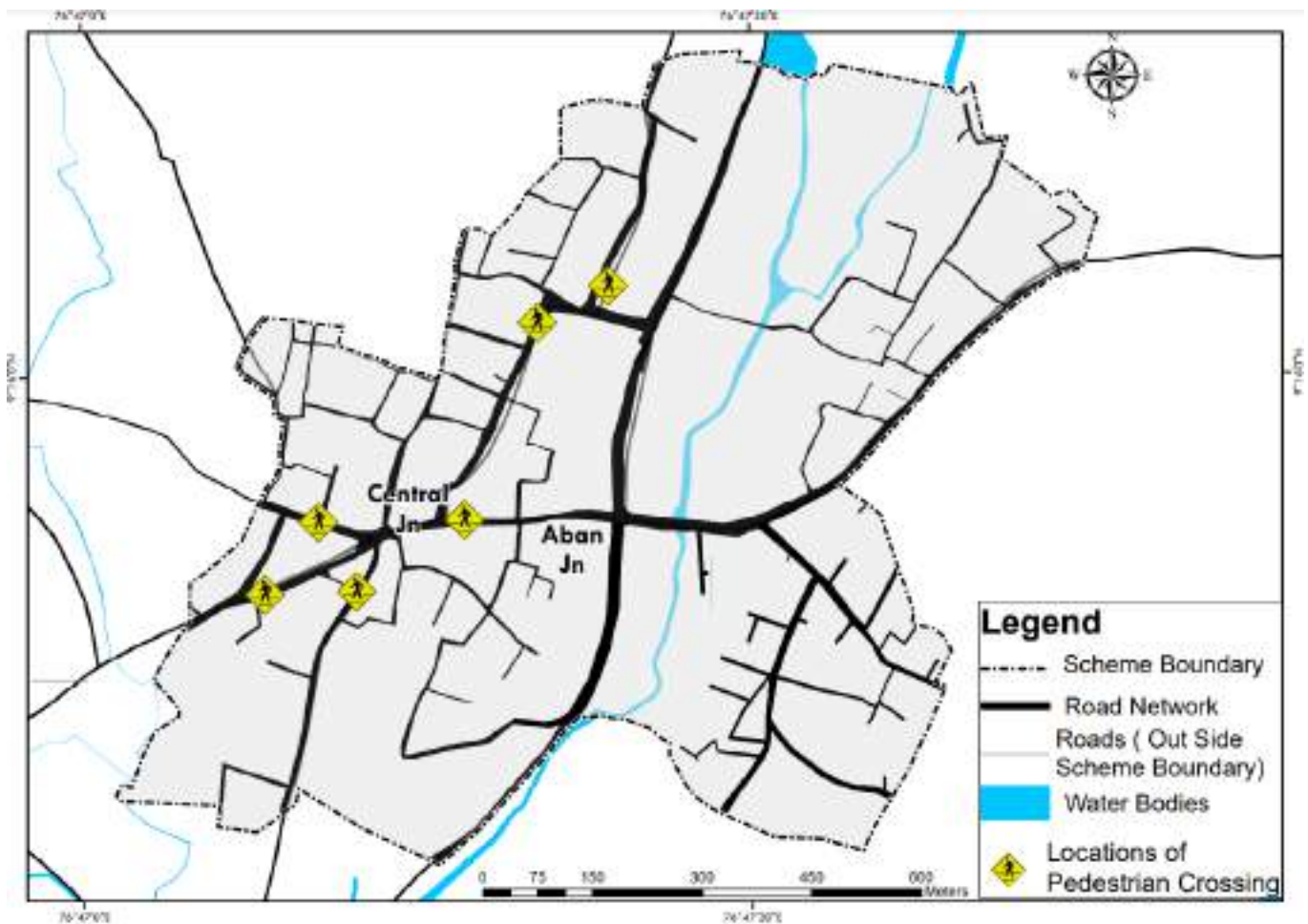


Figure 2-13: Location of existing Zebra crossing in the planning area (Source: Primary Survey)



Figure 2-14: Central Junction



Figure 2-15: KSRTC Junction



Figure 2-16: Aban Junction



Figure 2-17: Mini Civil station Junction

2.7.6 Parking

Highest parking accumulation of 146 vehicles was found in the main road between St Peters Junction and Central Junction at 15.30 hours on a normal working day. About 80% of the vehicles are parked for duration less than 30 min. The town has no dedicated parking space. Old bus stand area is used as public parking space. Space inside the KSRTC bus stand is also used as parking space. There are two private paid parking spaces in the town. Major roads witnessing the on street parking due to the high commercial activities and which leads to the slow movement of vehicles. Figure 2-18 depicts parking locations and on street parking road stretch in

the Planning area. Town need dedicated parking spaces to improve traffic movement and pedestrian walking.



Figure 2-18: Parking location in the Combined Detailed Town Planning Scheme area.



Figure 2-19: Parking locations and on street parking road stretches (Source: Primary Survey)

2.7.7 Public Transport System

Two bus stations ie, KSRTC Bus station and Municipal Bus station are functioning in the town. These bus stations are located near Aban Junction and on either side of the Ring road. A new building complex for KSRTC Bus station is completed. The old private bus stand near Central Junction is now used as a bus bay and parking area.

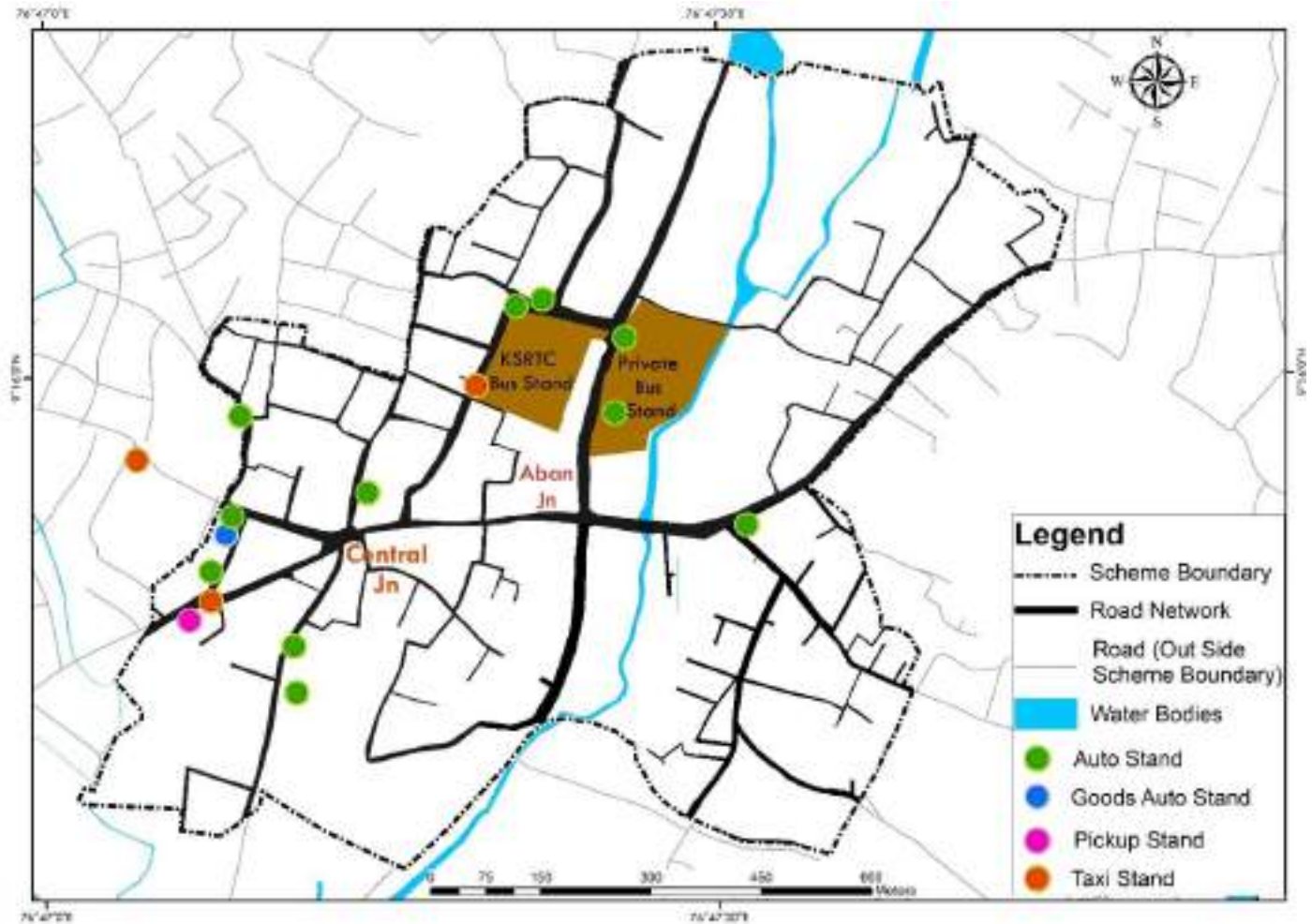


Figure 2-20: Location of major Transportation in Planning area (Source: Primary Survey)



Figure 2-21: Auto and Taxi stands



Figure 2-22: KSRTC Bus Terminal



Figure 2-23: Municipal Bus stand

2.7.8 Bus Stops

Bus stops offer safe and comfortable spaces for waiting. It should be easily identifiable and positioned so they don't obstruct pedestrian pathways. Ideally, bus stops should allow buses to pull over without entering a bus bay, ensuring traffic flow remains smooth.

Five bus stops are in the planning area and none of them has dedicated space for receiving bus. Bus stops are placed by using the space of shoulder and footpath which leads to the obstruction of pedestrians. Bus stops are needed to be redesigned considering the conditions of aesthetic and economic generation to ULB.

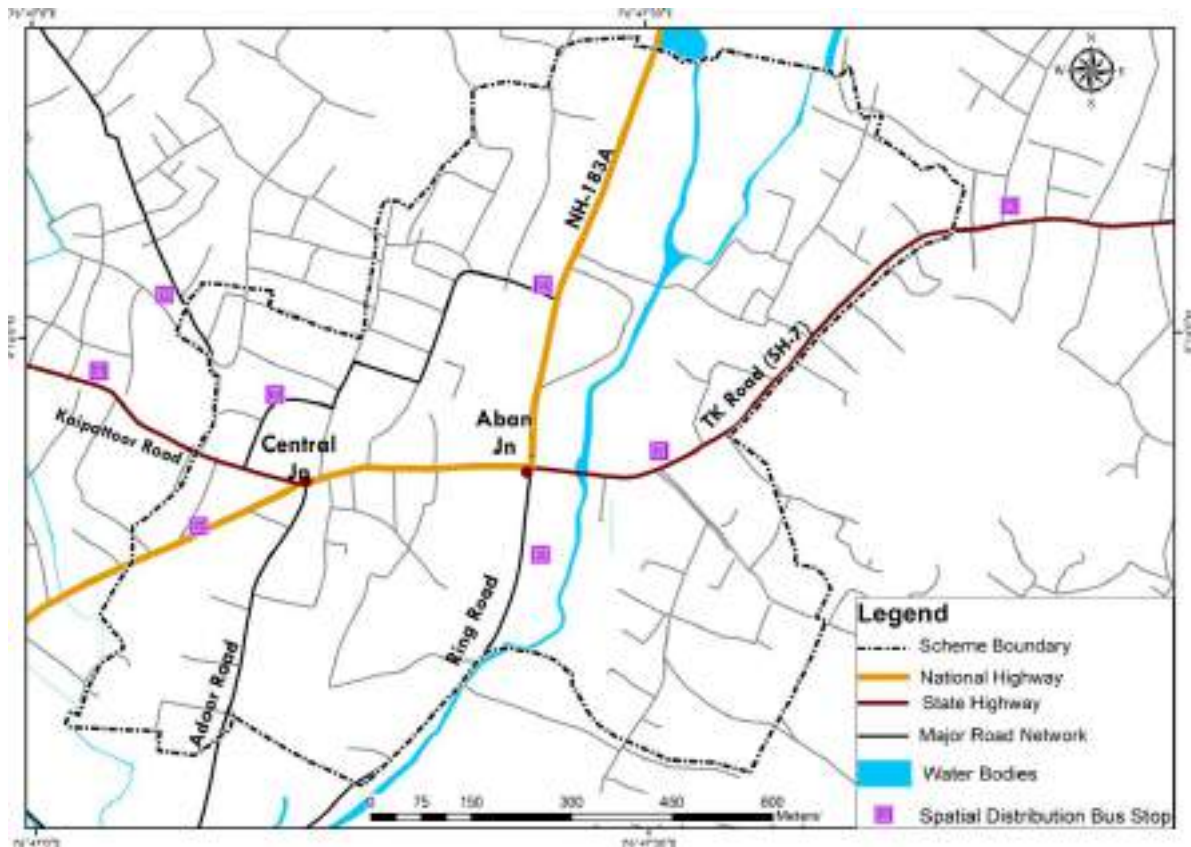


Figure 2-24: Location of Bus stop in Planning area (Source: Primary Survey)



Figure 2-25: Bus stops

2.7.9 Street Lights and Shades

In town, Street lights are provided along with Electric post. There is no separate pole for electric light unless it is a Junction. Not entire planning area is covered by Street lights, but major junctions like Central Junction and KSRTC Junction has street light. The town is not that

much shaded by trees. Buildings are closely located near the road network. So the places for planting trees along the road side are limited. Ring road has the potential to make the road as an avenue.

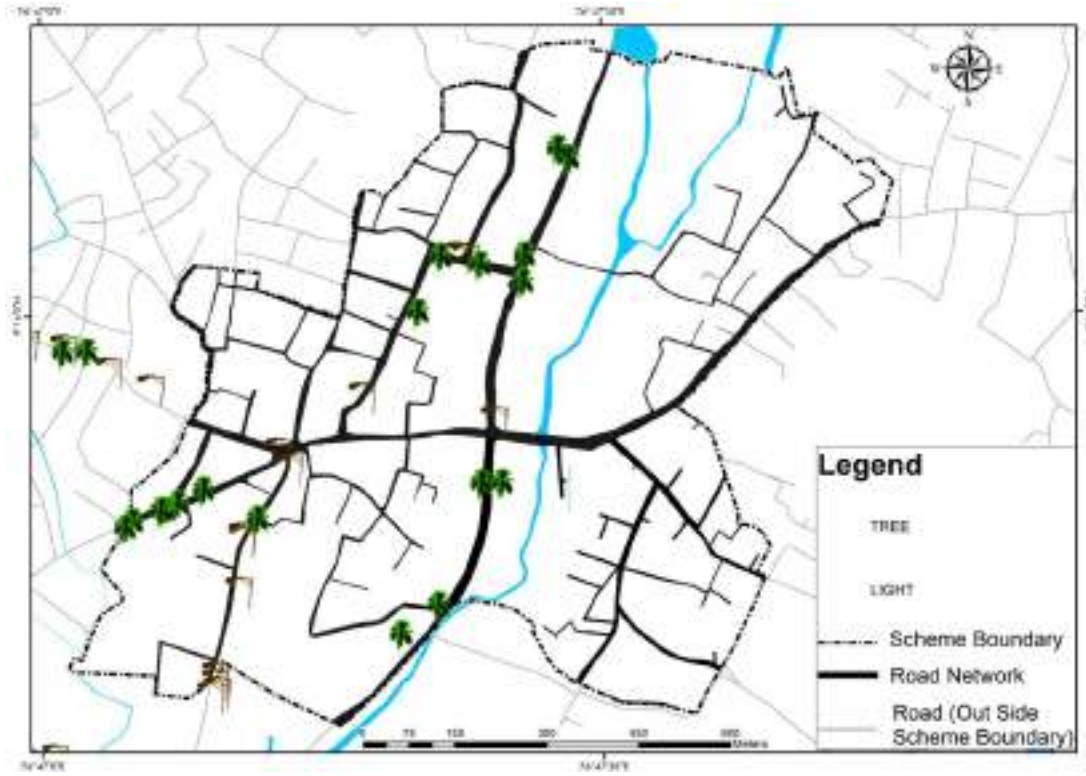


Figure 2-26: Location of street light and Tree cover in Planning area (Source: Primary Survey)



Figure 2-27: High Mast lights in junctions



Figure 2-28: Tree cover in foot paths

2.8 TRADE AND COMMERCE

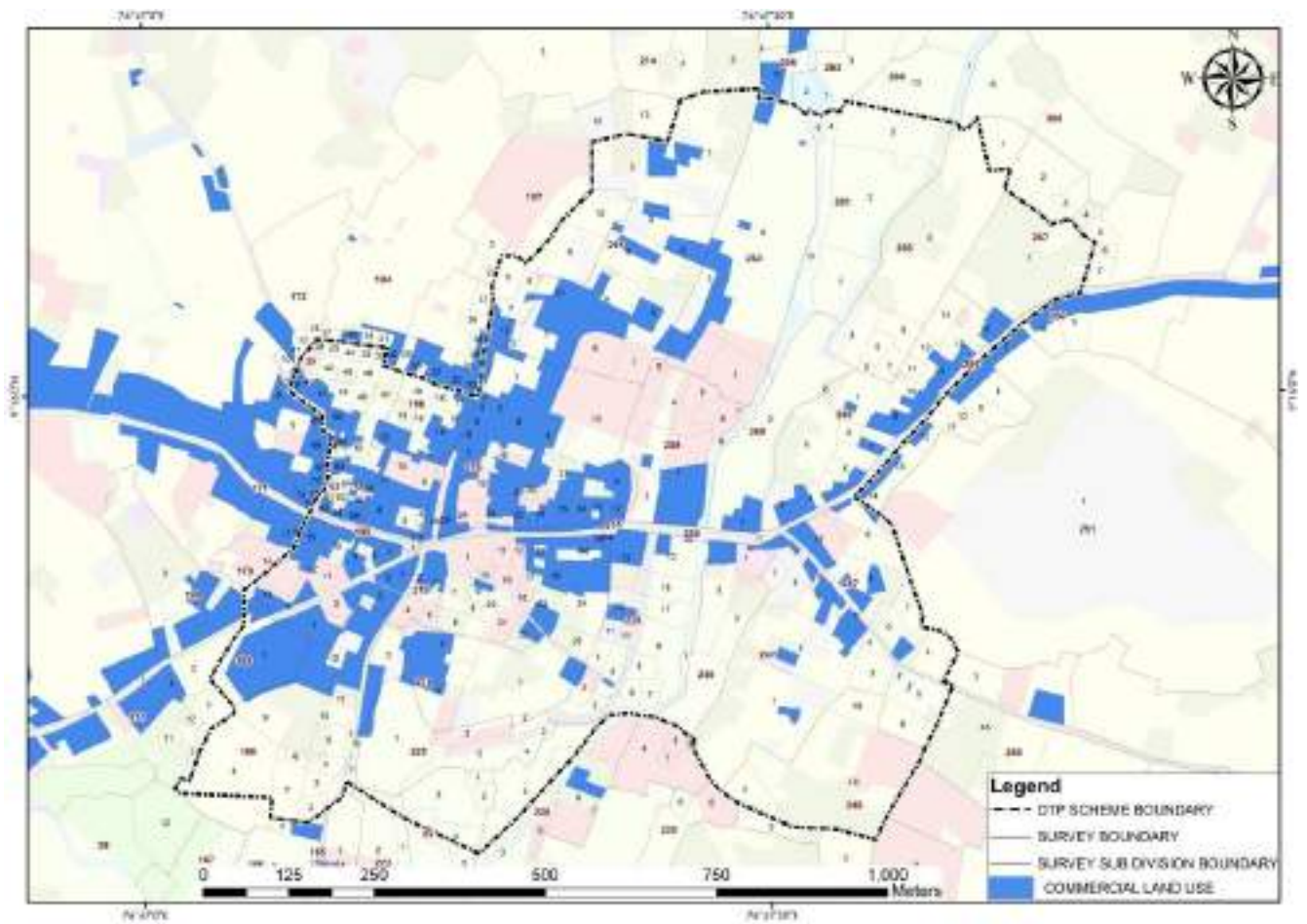


Figure 2-29: Spatial Distribution of Commercial Land (Source: Primary Survey)

Pathanamthitta Municipality had a diverse commercial scenario with a mix of traditional market, wholesale shops, modern retail outlets, and emerging businesses. The town is known for its vibrant market places. Trade and Commerce is one of the major economic bases of the town.

The Pathanamthitta central junction was the main hub of the market activity in earlier days and the area was termed as “Municipal Corner.” The goods from the hilly areas like Seethathodu, Vadasserikkara, Chittar, Konni, Thannithodu were used to come here to the central market convened during Mondays and Thursdays of every week. The central area can also be called as “Gold Zouk” of Pathanamthitta since it contains more than 26 Small scaled Jewelleries within the area limits, established more than 50 years from now.

The Major market of Pathanamthitta town is located in the Central area of the town. Commercial development is concentrated in the Town centre and limited to main road junctions and along major roads.



Figure 2-30: Jewelries in Planning area



Figure 2-31: Major Commercial buildings in Planning area

2.8.1 Market

Pathanamthitta market is located near Municipal office having an area of 0.61 Hectares covers an influence area of 5km radius. The market functions twice in a week and fish, vegetables, meat, fruits etc. are the main commodities exchanged here. Commodities are brought to the market from local area as well as from Tamil Nadu. Goods from the market are sending to various places all over Kerala. About 90 stalls for vegetable, fruits, stationary, provisional, species, chicken centre, go downs, fish stalls, slaughter house etc. are functioning in the market. Permanent as well as temporary stalls are also there. The access to market is 3.00m wide tarred road from the TK road; it can be accessible from other two sides by narrow lanes. Access to the stall is through 2.00m wide internal roads. Enough parking spaces are not available in and around the market area. Traffic congestion is the one of the major issue near market especially during the market days. The wastes are sorted and collected by the private agencies engaged by the Municipality thrice in every week. There is Biogas plant within the market, but the waste treatment plants in the market are not sufficient. No proper drainage facilities which might be the reason for the foul smell that cause pollution in the market and nearby area.

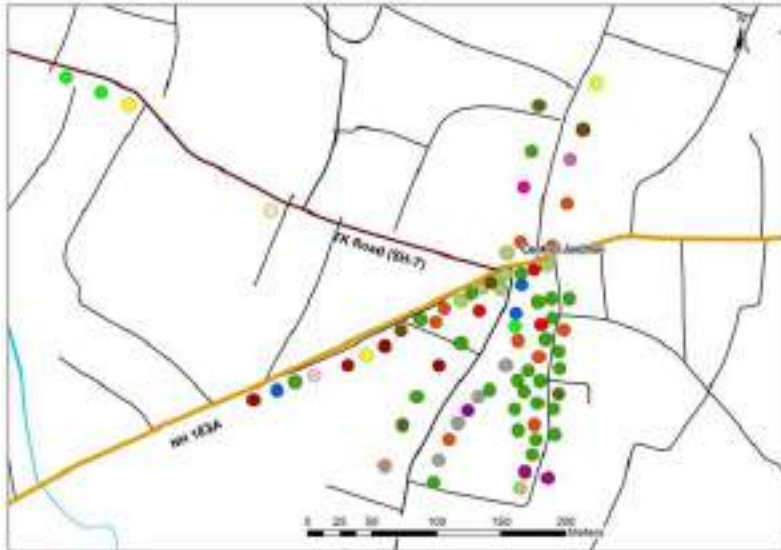


Figure 2-32: Pathanamthitta Market

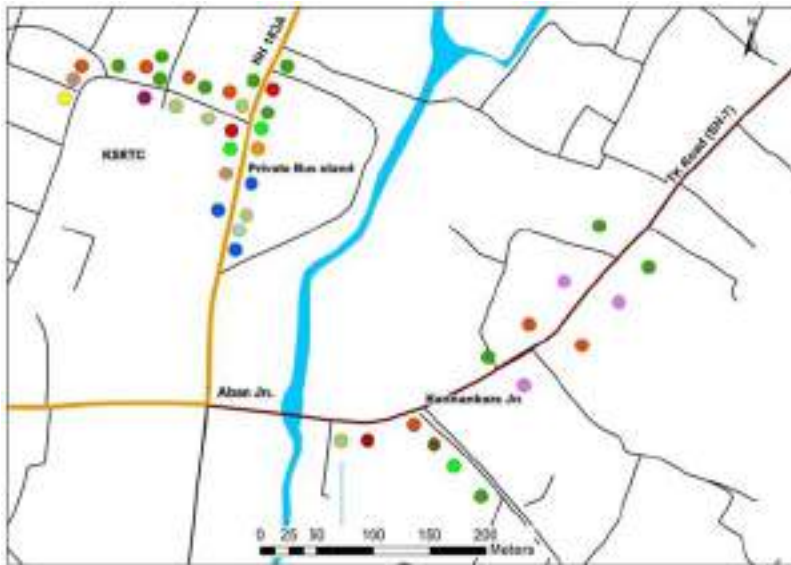
2.8.2 Informal Sector

Hawkers and vendors have long been a common feature of sidewalks and markets of urban centres. Hawkers contribute substantially in meeting the needs of the community. The common community depends the informal sector for their requirements at an affordable price. They indirectly support the local artisans and poorer sections of the community, by making available commodities at a comparatively cheaper rate. Even though their activities can be justified socially, it is conflicting with the management of traffic and pedestrian movement.

In the planning area large number of informal sectors located in Central junction area, Market area, Police station, and KSRTC respectively. Vegetable shops located mainly in central junction and market area. Food items are located near KSRTC Bus Terminal.



Central Junction ,Market and Police Station



KSRTC, Private Bus stand and Kannamkara Junction

Figure 2-33: Informal Sector distribution (Source: Primary Survey)

Street vendor encroachment on pedestrian walkways impedes safe and efficient movement. The absence of pedestrian-centric design elements like lighting, shade, and seating creates an unwelcoming atmosphere for foot traffic. Traffic management deficiencies likely contribute to

congestion and safety hazards. Additionally, vacant buildings not only represent wasted resources but also introduce aesthetic blight and potential safety concerns.

2.9 PHYSICAL INFRASTRUCTURE

2.9.1 Water Supply

Eighty percent of the town's population has access to protected water supply. The Municipality is served by two piped water supply schemes, both owned and operated by the Kerala Water Authority (KWA). Water distribution in the town is managed by KWA based on a zone system, with the town divided into three zones according to topography and the locations of intake wells and overhead tanks (Figure: 2-34). The scheme area falls under the town area zone. Despite this, the town still faces water scarcity issues. Water usage in the planning area is significantly higher compared to other parts of the town due to the concentration of Commercial, Public, and Semi-Public buildings.

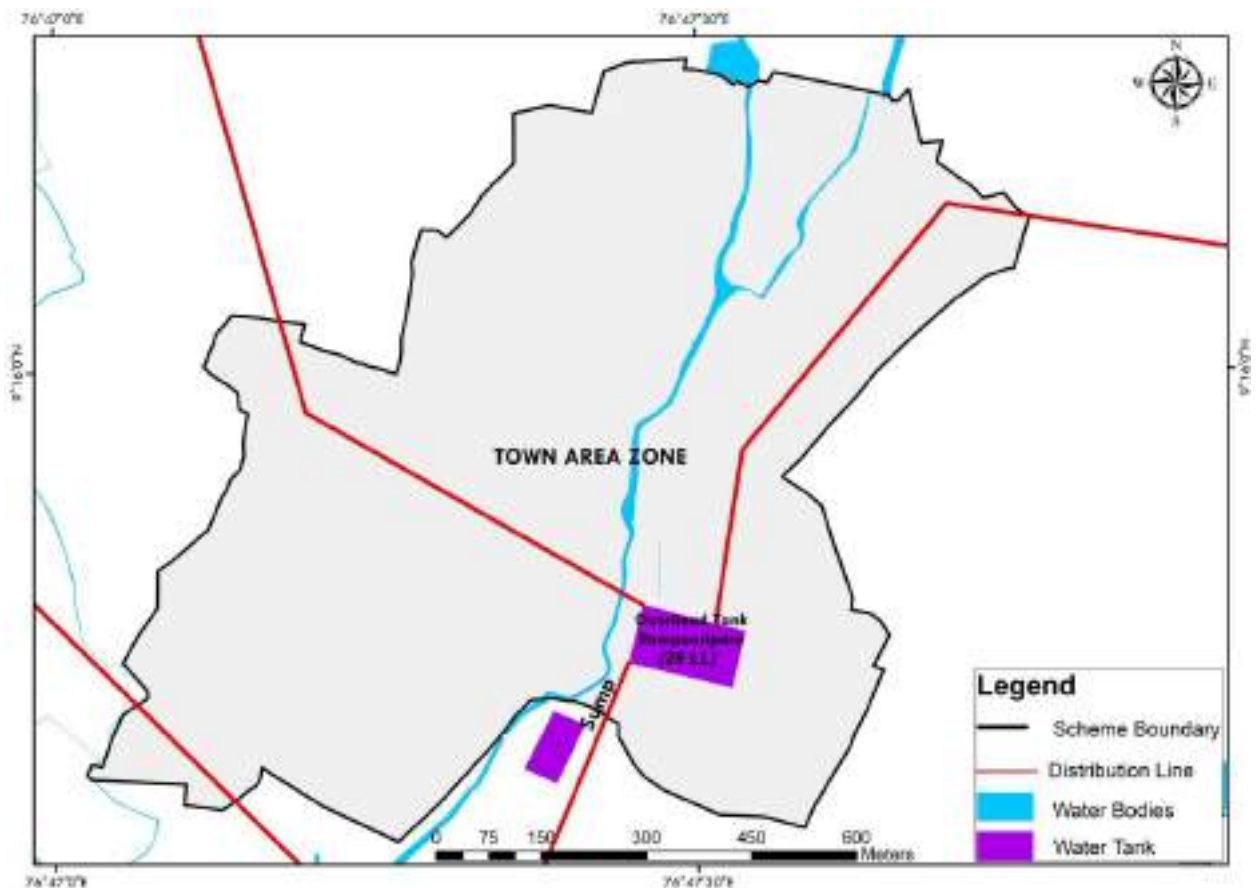


Figure 2-34: Water Supply in Planning area (Source: KWA)

2.9.2 Waste Management

In the planning area, there are two Thumbormozhi units, one biogas plant, and three Material Collection and Recovery Facilities (MCF and MRF). The Thumbormozhi units are located at the Market and the Private Bus Stand, while the biogas plant is situated inside the Market (see Figure 2.35).

The area lacks of scientific sewerage network, relying primarily on onsite sanitation methods such as leach pits and septic tanks for wastewater disposal. Household waste water (grey water) is typically discharged into open drains, and there is no organized facility for the scientific treatment of Septage, almost all households manage and dispose of their waste on their premises. The municipality collects waste from street sweeping, markets, and commercial establishments.

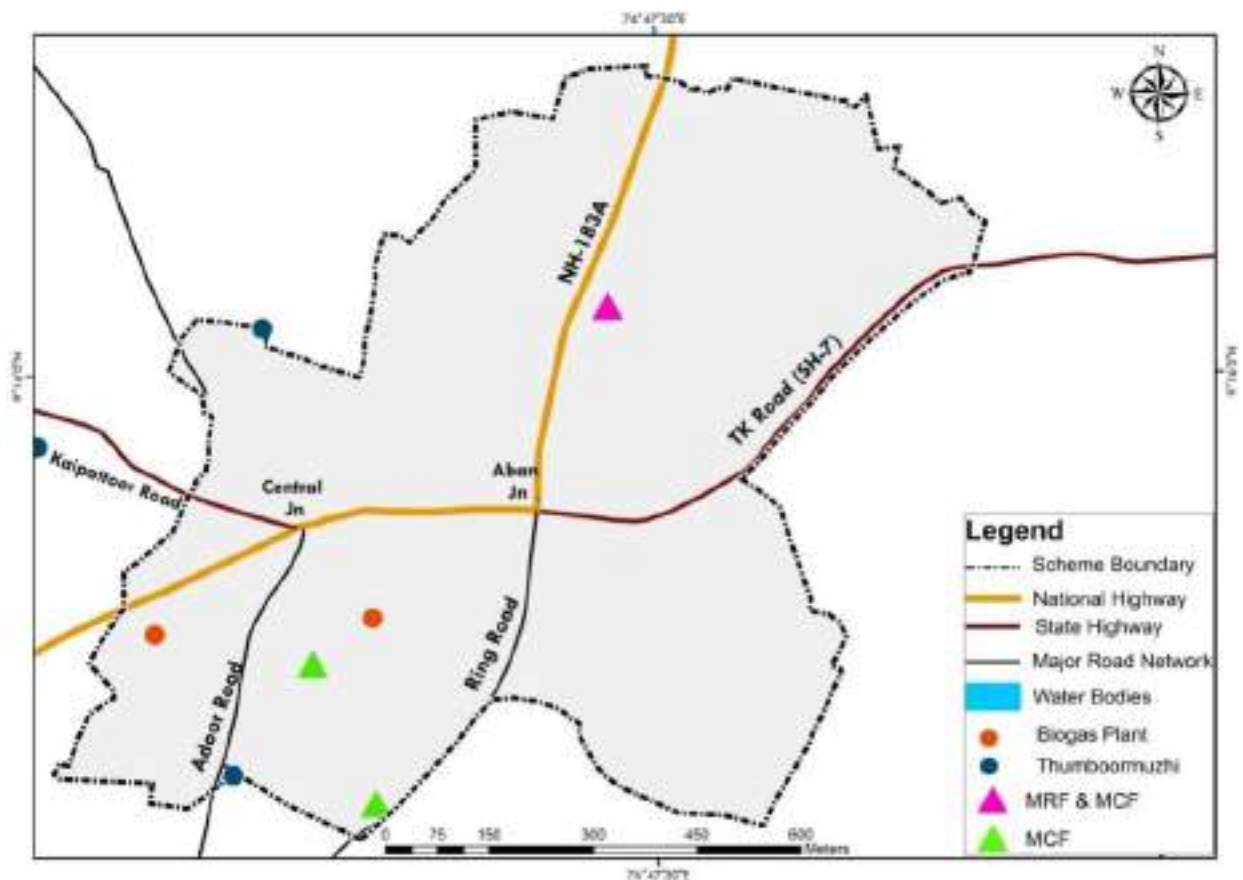


Figure 2-35: Existing Waste Management Facilities in Planning area (Source: Primary Survey)



Figure 2-36: Thumbormozhi & MCF in planning area

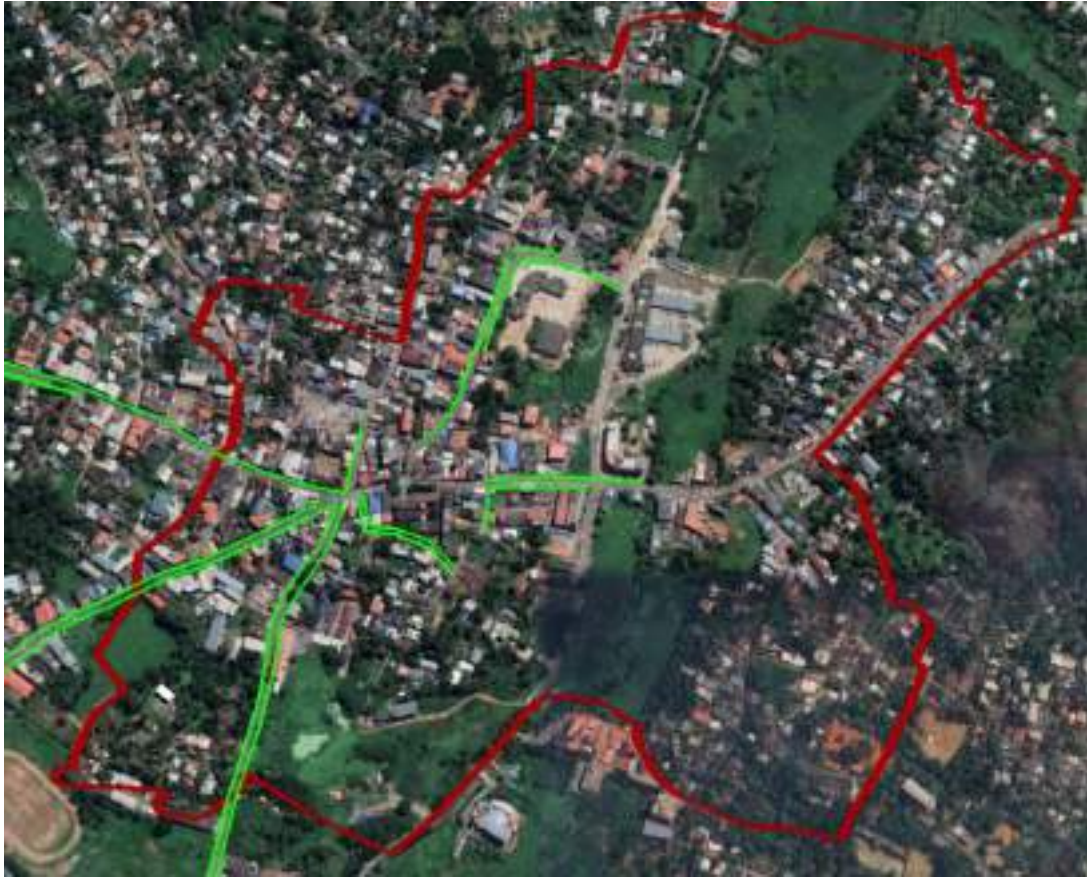


Figure 2-37: Existing Drainage Networks in planning area (Source: Primary Survey)



Figure 2-38: Storm water drainages in planning area

Currently, the planning area suffers from an inadequate drainage system. Most roadside drains are in a deteriorated condition, lacking covers and interconnectivity. This has resulted in the loss of connectivity to the main outlets of the existing drains. Consequently, the area urgently requires a well-designed drainage network to address these issues. To mitigate urban flooding, a continuous and interconnected storm water drainage system as side duct is being planned along the side of the proposed road.

There are no bins at public places to deposit small discarded items like Tickets, Sweet wrappers and other small items. The state generally follows a "bin-less city" policy, and this approach is also adopted in Pathanamthitta Municipality.

Waste management is generally handled at the municipality level, so implementing a separate system for this particular scheme area is impractical. Therefore, while preparing the Municipality master plan that includes the project area, the waste management of this area will also be included in the master pan proposal.

Public comfort stations are located at KSRTC bus Terminal, Municipal bus stand, Market area, Children's park and Old Private Bus Stand. But the issue of proper removal of septage and lack of continuous water supply makes them dysfunctional.



Figure 2-39: Existing Public Comfort station at old bus stand

2.10 ENVIRONMENT

2.10.1 Topography

The Topography of the Pathanamthitta town varies from High to low lying. This scheme area is the lowest elevated region in comparison to the topography of Pathanamthitta town. The elevation of the Pathanamthitta town ranges from 4m to 181m, out of which only 4m to 25m is the elevation of the study area. The majority of the economic activity in the planning area, as well as the main road network and Pathanamthitta Market, are situated in the low lying areas.

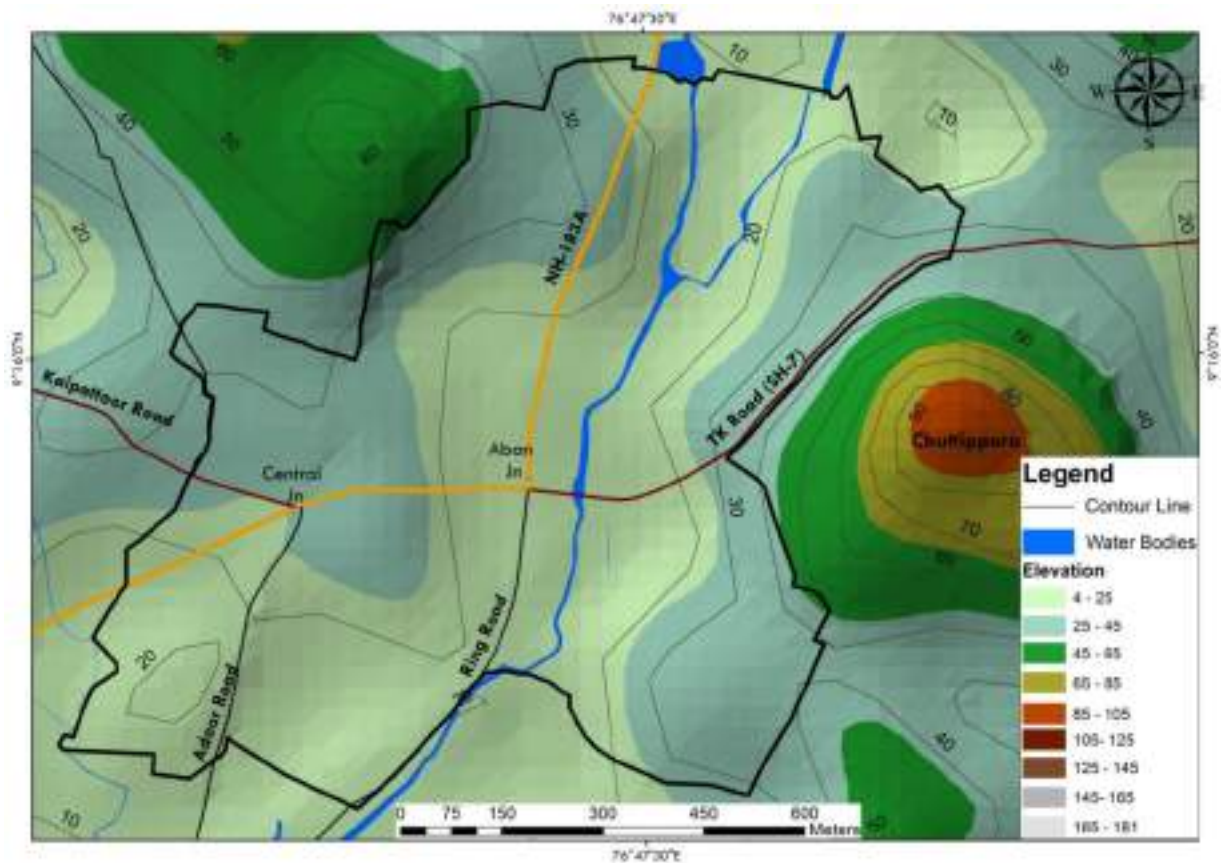


Figure 2-40: Slope Map (Source: LSGD Planning Pathanamthitta)

2.10.2 Wetland /Water Body

In the study area, about 21.27 % is Low lying/wet land and 1.28% is water body which constitute the environmentally sensitive area. The distribution of open spaces both public and private has a clear distinction between different areas within the scheme boundary. Presence of large wet land and swampy areas within close proximity to the central area is the protective

barrier for the town centre from flood hazards, which act as a natural flood control measure. The continuous stretch of wetlands and natural drainage that merges with the Achankovil River near Kallarakkadvu acts as the natural drainage network of the town. These Low-lying urban wetland areas under high pressure for development can only gently be developed with consideration for their ecological importance. The study area currently lacks artificial flood control measures. By constructing recharging ponds, the natural low-lying terrain can be utilized to manage and recharge excess floodwater. Ecological tourism projects can also be implemented here to exploit the urban and economic potential of the land.

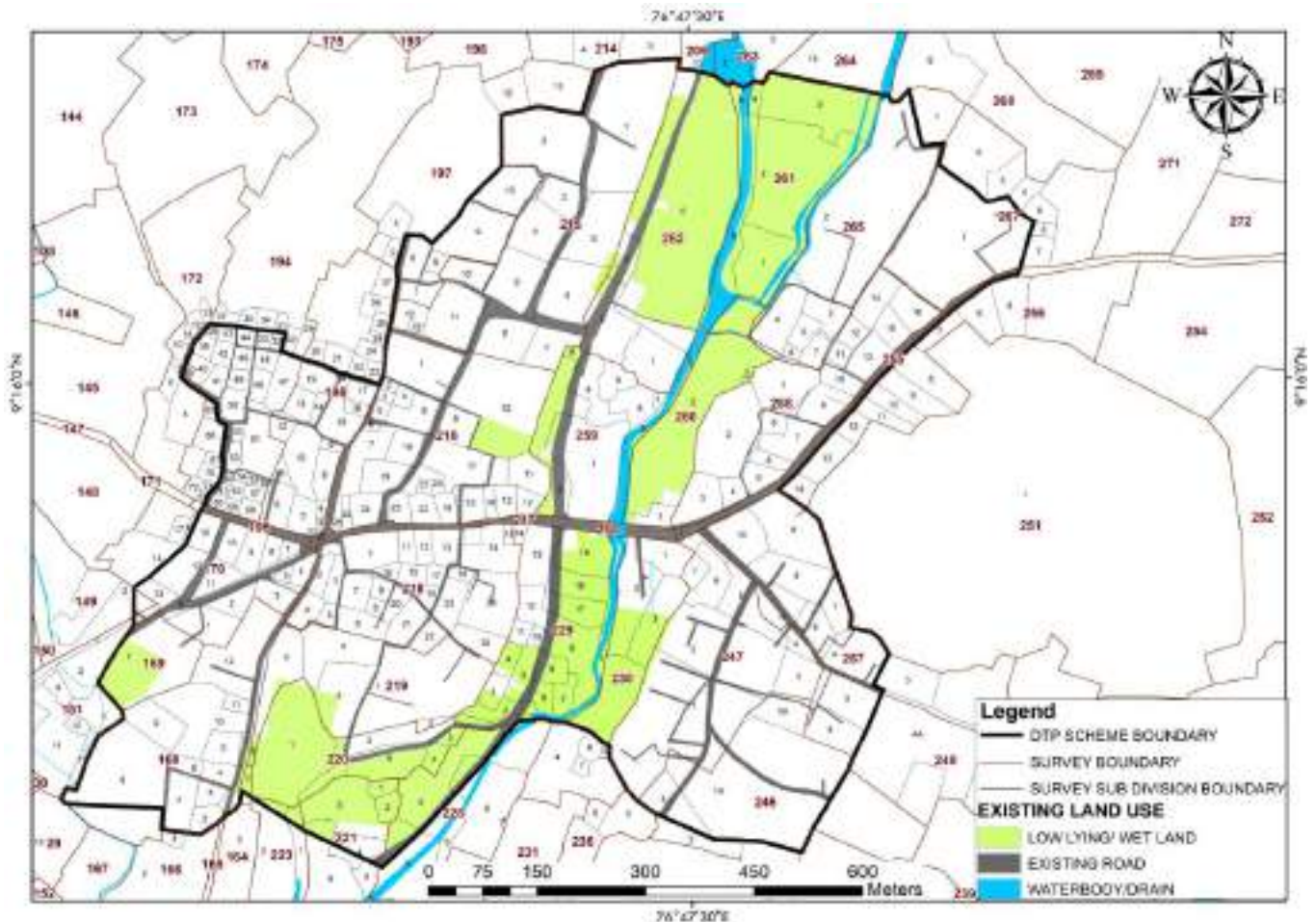


Figure 2-41: Spatial Distribution of Major Low lying /wet land and Water bodies in the planning area (Source: Primary Survey)



Figure 2-42: Existing Low lying/Wet lands



Figure 2-43: Existing Water body/ Water Courses

2.10.3 Risk Assessment

Considering the fifty-year flood return probability map published by Kerala State Disaster Management Authority within the study area, around 60% of the planning area is prone to flood. Also, 75% of the National Highway and 25% of the State Highway within the area are prone to flood. The Major transport terminals, which serve as the town's transportation hub along with major connecting roads which are in flood prone area makes the town centre isolated during the time of flood. However, 21.27% of the planning area consists of low-lying wetlands, and 1.28% consists of water bodies which reduces the risk of inundation in the developed areas. The scheme area currently lacks artificial flood control measures. By constructing recharging ponds, these low-lying terrains can be utilized to absorb and manage flood surplus water. The disastrous impact of the flood can be lessened by building flood-recharging ponds in the low-lying area that have links to the natural drainage system. Recreational opportunities in this area can be enhanced by building an ecological park with flood-recharging pond. Developmental activities by changing the nature of wetlands in these floods prone areas need to be restricted strictly in order to reduce the risk of flood in town. Also risk resilient developments and all weather infrastructures need to be provided within the hazard prone area.

Other than flood, no major hazards are identified in the planning area. Incidents of fire, drought and urban heat waves may also be addressed through the study. It is necessary to place fire hydrants in the planning area at appropriate locations also in the projects include urban forestry and green spaces.

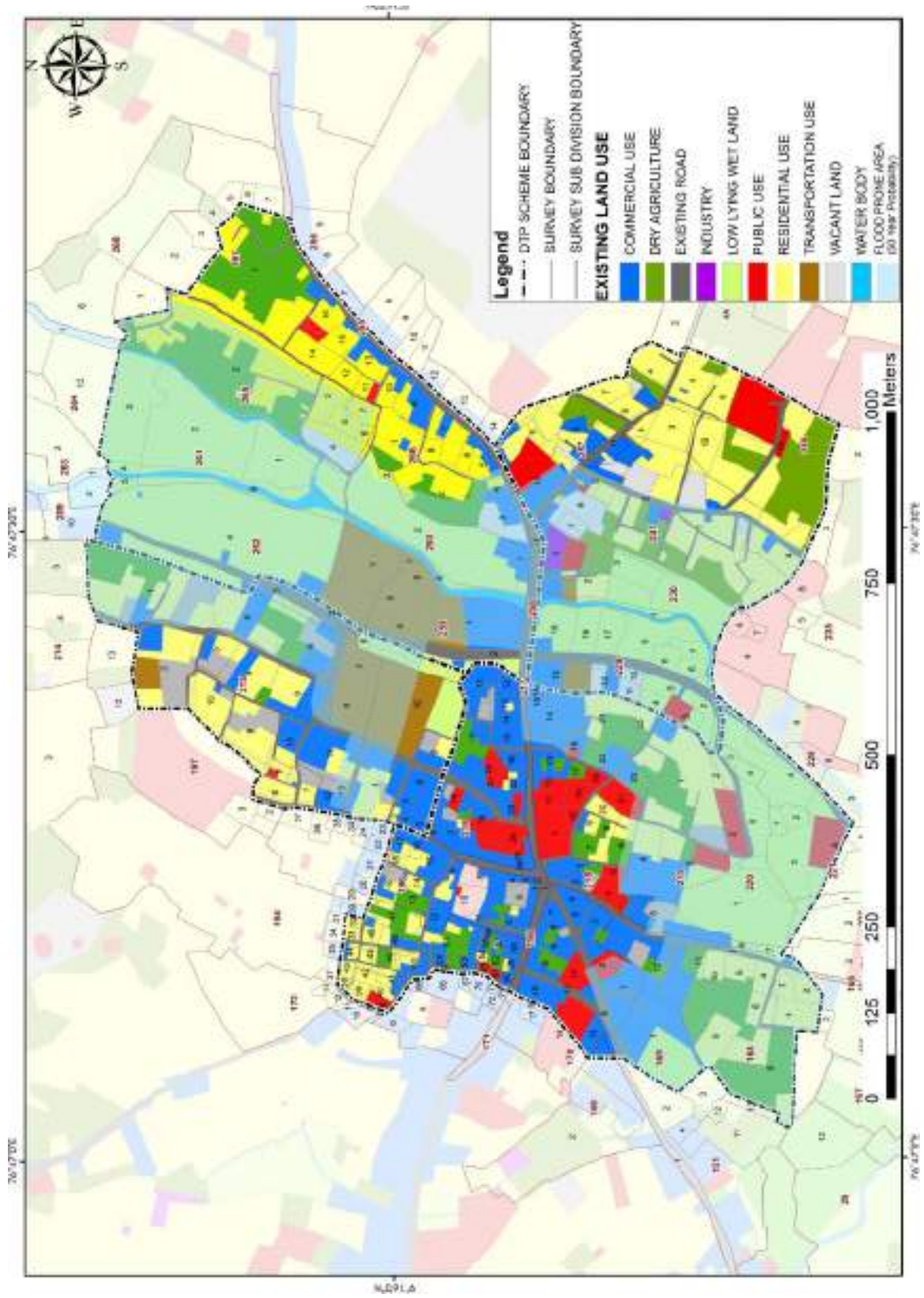


Figure 2-44: Flood prone area (Source: KSDMA)



Figure 2-45: Flood in Pathanamthitta town



Figure 2-46: Fire Accident in Central Junction, Pathanamthitta

2.10.4 Recreation Spaces

The only space available for recreation activity within the study area is the Children's park which is in an area of 810 Sq. m. There are three movie theatres in the town's centre, which the inhabitants use for entertainment. Being the administrative capital of the district, recreational facility in the town has to be improved considering the people of the town and its influence area. By integrating hazard mitigation strategies into recreation planning and civic amenities, we can create safer and more sustainable outdoor spaces for everyone to enjoy and safeguard the well-being of communities.



Figure 2-47: Children's Park near town hall



Figure 2-48: Movie Theaters in planning area

3 ENVISIONING AND PROPOSAL

3.1 URBAN RENEWAL

Urban renewal pertains to the process of transforming underutilised, sometimes degraded and neglected areas of a city into spaces and built environments that are tailored to the needs of contemporary living, work, or culture. Urban renewal is typically aided by a dedicated public effort, though it can occur incrementally as old urban areas are updated through fresh investment. Generally urban decline results from an out dated development with narrow roads, shoddy construction, and unplanned layouts that is confronted by a large population and constant traffic. Local policies and strategies are needed to address urban deterioration and transformation. Infrastructure development is just one aspect of urban renewal; other aspects include environmental, social, economic, and physical advancements. Concept of Urban Renewal is related to development of the parameters shown in figure 3-1



Figure 3-1: Urban renewal development parameters

A number of advantages can result from successful urban renewal, such as improved use of planned and existing infrastructure, an increase in city productivity due to the colocation of housing and more intensive jobs, the attraction of tourists and additional spending, and the creation of new job opportunities. The best practice principles for the renewal process include the rationale (or ‘why’ urban renewal is carried out), the steps of the process, and the governance

arrangements (or 'who' should be responsible through the process). Three main investment players in urban renewal are public improvements, private investment, and suitable land use.

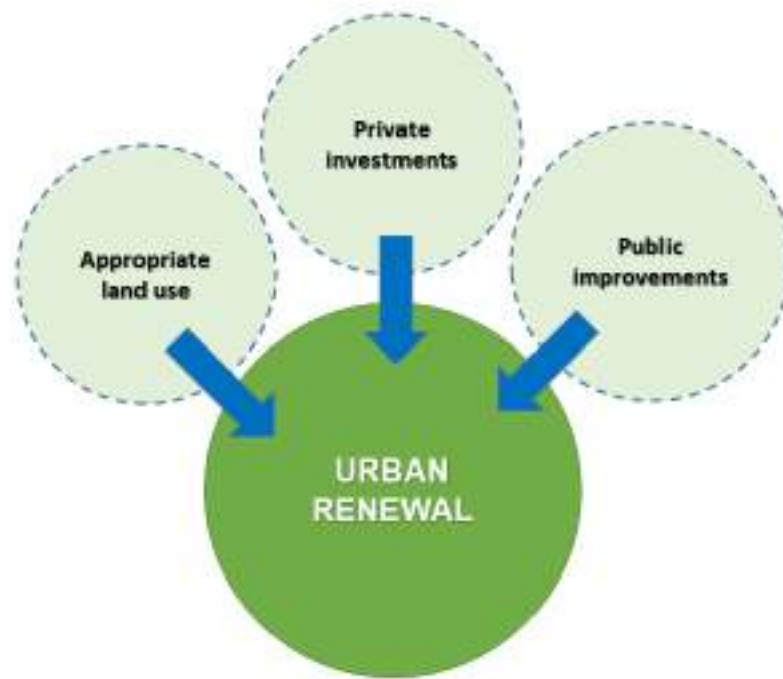


Figure 3-2: Major investment stakeholders in urban renewal

There are four detailed town planning schemes for CBD area of Pathanamthitta Municipality and the proposal have been revised by considering these as a coherent one and the studies have been conducted taking into account the surrounding developments also. The study really focuses on the urban development in a controlled and streamlined manner by proposing a Town Planning Scheme for each of the areas. It also envisions the redevelopment of the public realm through an urban design proposal. Figure 3-3 illustrates the attributes that make urban renovation necessary in Pathanamthitta's CBD.

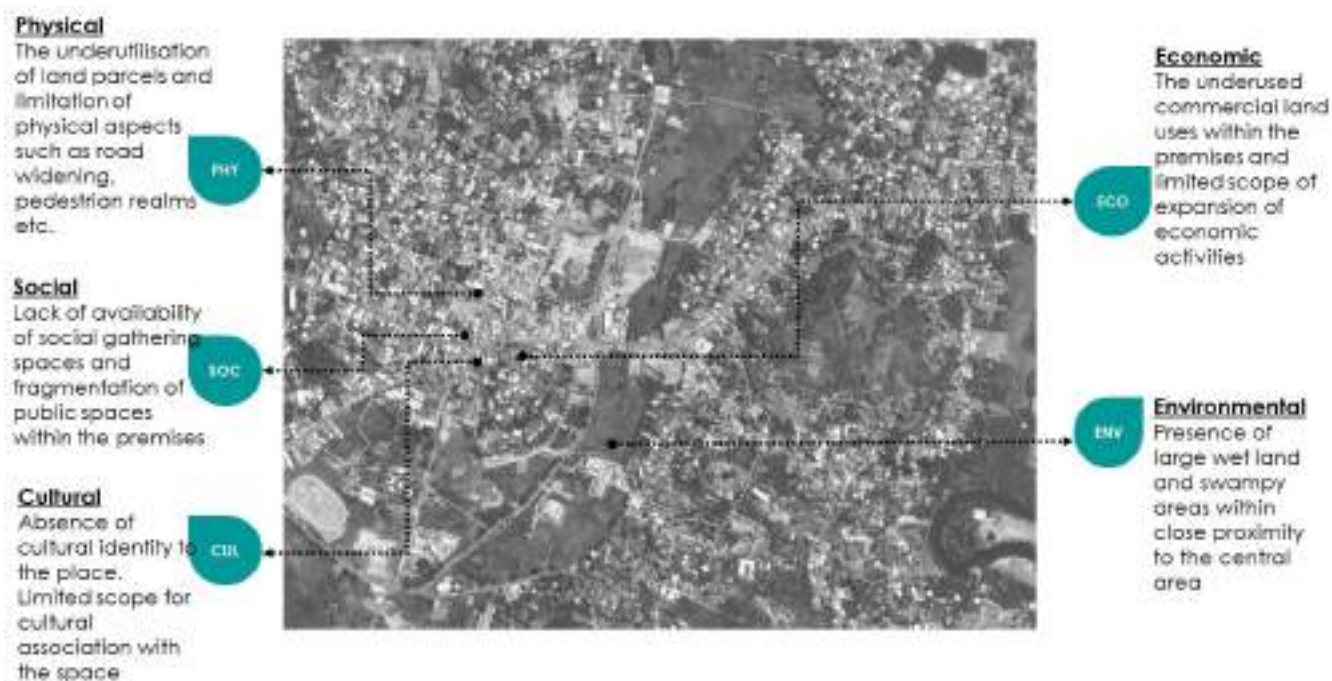


Figure 3-3: Attributes that creates need for Urban renewal to the CBD Pathanamthitta

3.1.1 Character Area

Character area development rules are part of the broader framework for urban design. They allow townscape potential locally for each location, reinforcing or recreating the unique sense of place. The Character Areas are essential for comprehending the city centre and serve as a foundation for ideas that enable for specific features and roles to be fine-tuned for each location. A thorough grasp of the city's character areas and an awareness of how the city functions in regard to accepted urban design principles are thought to be prerequisites for developing an effective urban design strategy. The components of the character for each area are considered in terms of Built use, Urban structure, Street layout, Open/ Green space etc. Rather than being focused on particular site-specific projects, these are meant to reflect an interest in the character and structure of the overall urban form. Contributing to the overall framework and its relationships with other character areas are the roles of the Character Area within the urban design framework.

3.1.1.1 Built Use

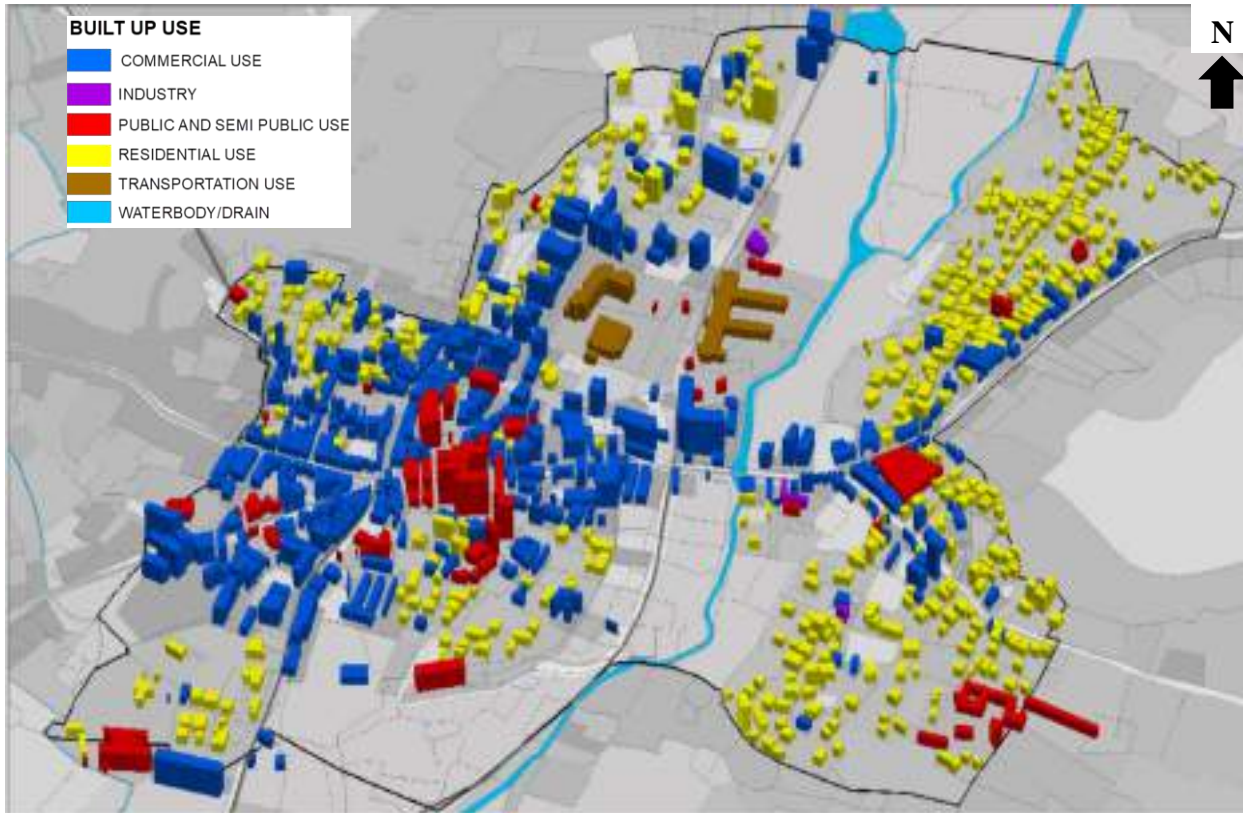


Figure 3-4: Built use in the Combined Detailed Town Planning area (Source: Primary Survey)

The built environment and subsequent land use play an important role in distinguishing character areas in the core area. The presence of commercial, residential, transportation and public built uses has a distinctive value in comparison to other places. The built use in the planning area is shown in Figure 3-4.

3.1.1.2 Urban Structure

The figure ground plan (Figure 3-5) depicts a noticeable contrast in the pattern of growth within the scheme boundaries. The grain sizes in the center and adjacent residential areas are visibly distinct. The eastern section within the scheme boundary is completely different from the center region. This differentiation is created by the plot size, open area, and functional uses. Considering the urban grain character the core parts have coarse grain, but the neighboring areas have a moderately fine grain and the outer sections have a true fine grain and uniform texture.

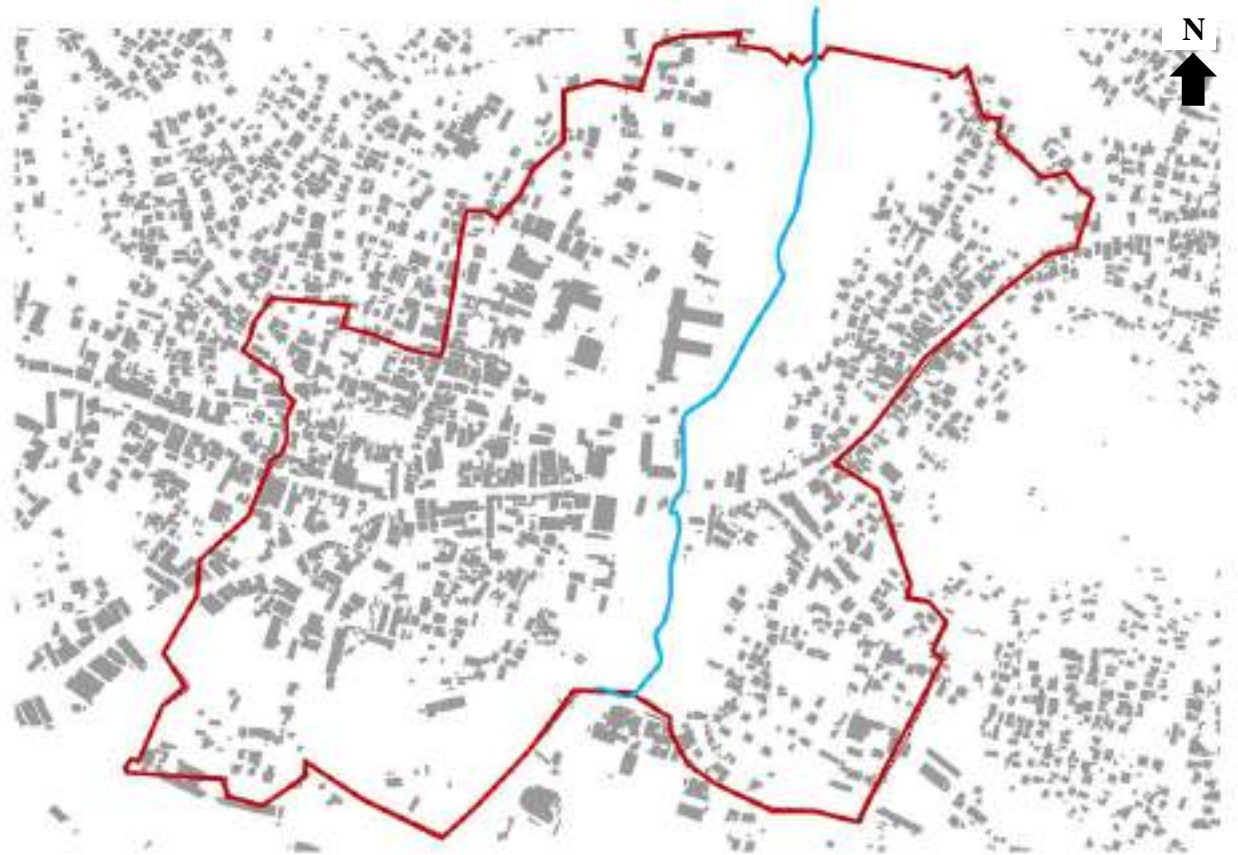


Figure 3-5: Urban structure in the Planning area (Source: Primary Survey)

3.1.1.3 Street Layout

The Ring road and the TK road form an important intersection inside the scheme area, known as the Aban junction. As a result, transportation produces various character districts inside the scheme's boundaries. The center regions so produced are relatively old due to their built use, and the transit routes thus developed have an organic pattern with no unique street type. However, the northern region features more grid streets and movement networks. But due to natural topography and height constraints, the eastern section is entirely newer compared to the central area with a mix of gridded and unplanned road networks. The existing street layout in the planning area is depicted in Figure 3-6



Figure 3-6 : Existing street layout in the Planning area (Source: Primary Survey)



Figure 3-7: Existing Open/Green spaces in the Planning area (Source: Primary Survey)

3.1.1.4 Open/Green Spaces

The distribution of open spaces both public and private has a clear distinction between different areas within the scheme boundary. The central region has relatively small private open spaces distributed within the central pockets of individual plots. The neighbouring areas as because of the residential uses have a comparatively bigger open space which is again detached from the public or pedestrian networks. The presence of vast wet land areas marks a clear distinction with other region of the scheme area. The eastern sections and its open spaces are a bit different because of the distribution, nature and scale of the open spaces. Figure 3-7 represents the existing Open/Green space in the planning area.

Following a detailed analysis of the physical characteristics, including Built use, Urban structure, Street layout, Open/ green space, etc. of the planning area, the region is split into four character areas, as depicted in figure 3-8.

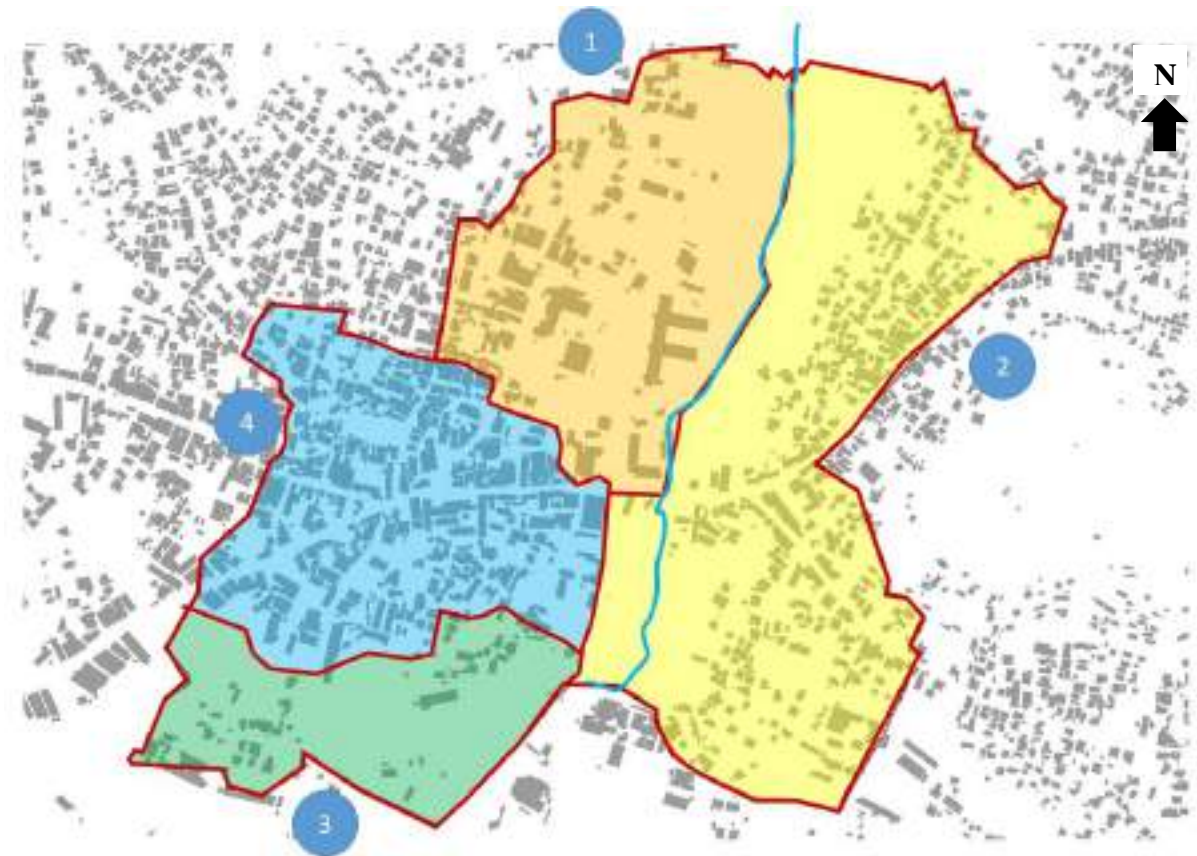


Figure 3-8 : Identified characteristic areas in planning area

3.1.2 Analysis of Existing Character Areas

The purpose of the Character Areas analysis is to highlight the areas that will be most affected by future development, identify the key physical characteristics throughout the planning area and its boundaries, and identify the most significant features and characteristics that could influence future development in the area. The people's interactions with the built environment determine the character of a city or part of a city. That city region's primary function, including its social, cultural, and economic characteristics, is closely associated with its character. Understanding and recognizing existing character informs future development, resulting in more sustainable and appealing environments for living, working, and visiting. Comprehending the local character will be critical in shaping important areas of development within the central business district of the Pathanamthitta municipality. The preliminary examination to understand Character areas were completed throughout the study region according to the following criteria, including

- Primary functional character of the area
- Physical factors such as Urban Grain, Scale, Density, Massing & Height of the built up, Built use, Open space character, Street layout, Age of built environment

3.1.2.1 Character Area 1

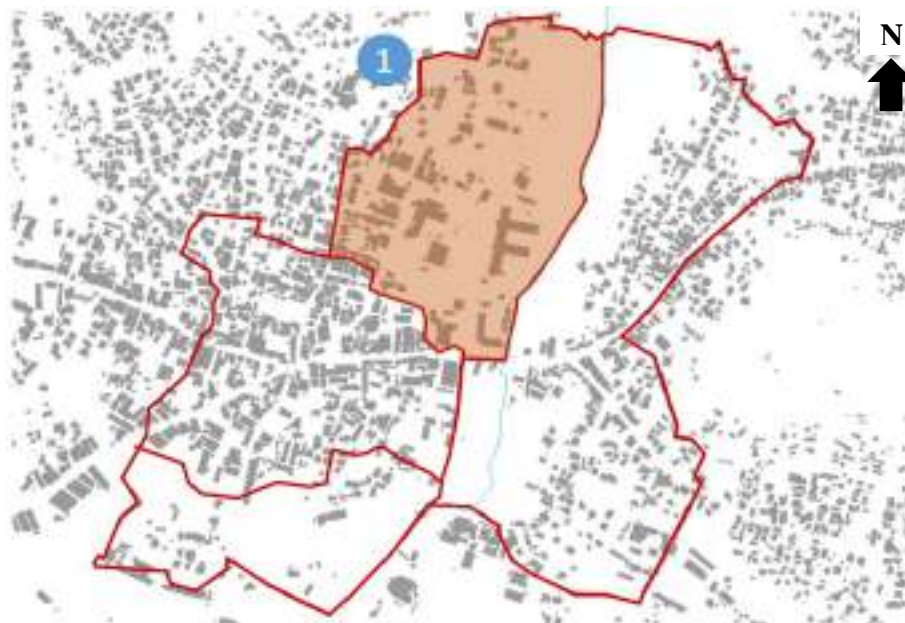


Figure 3-9 : Character Area 1

a. Primary function

Character Area 1 is situated in the North-West part of study area and is illustrated in Figure 3-9. This character area is primarily under transportation related use. There are also various commercial offices in the vicinity, as well as retail shops. The main foot fall generators such as KSRTC Bus terminal and municipal bus stand are located in this area. A few more noteworthy centers that attract people to this area are the Banking institutions, retail supermarkets and auditorium. Thaikkav Govt. School has a sharing boundary with this character area.



Figure 3-10: KSRTC Bus Terminal



Figure 3-11: Municipal Bus stand



Figure 3-12: Aban Tower



Figure 3-13: Fuel Filling Station

b. Significance with respect to Municipal context

This character area defines the regional transit center to the municipality. The presence of Municipal and KSRTC bus terminals, lively retail supermarkets and thriving commercial offices defines this area as the transportation hub. Being the regional transit center, this area plays a crucial part in the entire growth process of the town.

c. Physical aspect of the area

Physical factors such as Grain and texture, Built use, Age, Scale, Density, Massing, Open space, Street layout and economic aspects are studied for the character area and are summarised in Table 3-1

Table 3-1: Physical Aspect of the Character area 1

GRAIN AND TEXTURE	Comprises of coarse grain. Availability of large open spaces and usable public spaces.
BULT USE	Primarily as transportation use, with retail shop buildings and commercial office building in between. Transportation related office spaces and lodging facility could be recommended
AGE	In comparison to the surrounding areas, the area has a mixed concentration of newer and old buildings and streets. Urban renewal options along with new proposal can be implemented.
SCALE, DENSITY & MASSING	The development is primarily low-rise and low-density. Massing does not complement the street character and does not generate any visual attraction.
OPEN SPACE CHARACTER	Large continuous wet land and private open spaces with public access are available. Wet land should be conserved in terms of risk aspect.
STREET PATTERN AND LAYOUT	More grid streets and movement networks. Streets must ensure pedestrian safety using specific traffic calming methods along with junction improvements
ECONOMIC ASPECTS	The presence of retail super markets and location of bus terminals boost economic activity in this area. Further economic strength will be achieved by lodging facilities.

d. Major Constraints

The major constraints identified in this character area are under utilised KSRTC bus stand building, unprotected wet land, Lack of public gathering space, unsafe pedestrian path, unscientific and irregular drainage facilities, Unauthorised construction towards the right of way, Unauthorized Parking, Non-aesthetically placed Electric and telecommunication cable, Irregular footpath being barrier to differentially abled, Disorganized street vending on footpath, Time-worn traffic sign boards, Improper road side furniture, Aesthetically repellent public walls, Inappropriate placement of flex boards, Lack of road marking, Sign boards and Urban forestry.

e. Future Growth and Opportunities

The area has the potential for future economic activity in the form of transit oriented uses and premises, for example Lodging, Restaurants and Civic facilities. The presence of large parcels of land, continuous wetlands with thodu, availability of public gathering friendly spaces are the opportunity for the future growth. In order to accommodate future growth, the character area should promote mixed use in northern side. Establish a town square with Happiness Park and a traffic terminal interface to support the pedestrian network and social gatherings. Additionally, environmentally vulnerable regions should be conserved.

3.1.2.2 Character Area 2

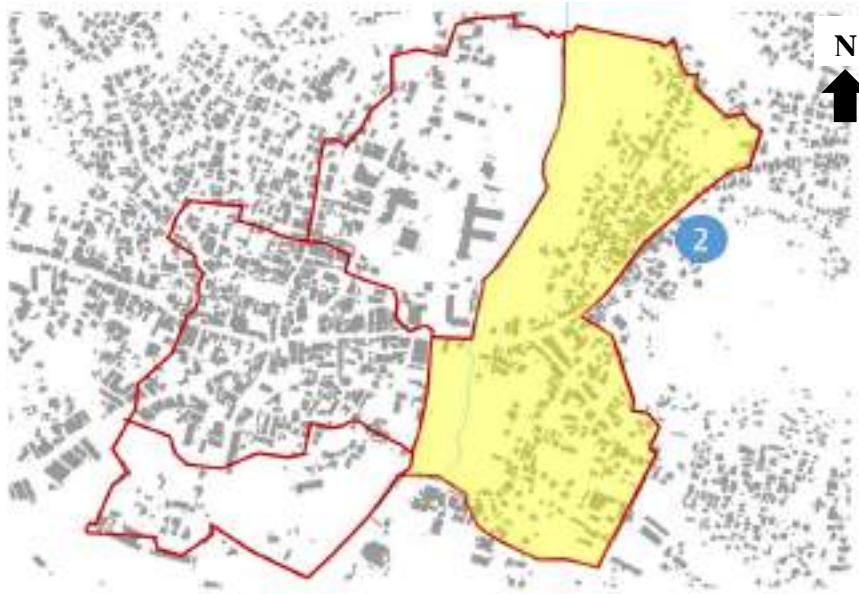


Figure 3-14: Character Area 2

a. Primary function

Character Area 2 is situated in the Eastern side of the study area and is illustrated in Figure 3-10. This character area is primarily used for residential purpose. There are also public buildings and uses in the vicinity, as shops along the side of the major roads. The main activity generators are School of technology and applied science, Chuttipara and Anappara Govt. LP School. Other significant building located in this character area are the District jail. Chuttipara Rock, Fire and rescue station, Amrithavidyalayam, Muthoot Medical Centre have influence on this character area.



Figure 3-15: School of Technology and Applied Science



Figure 3-16: Anappara Govt. LP School



Figure 3-17: Muthoot Medical Centre



Figure 3-19: Fire and Rescue Station



Figure 3-18: District Jail

b. Significance with respect to Municipal context

This character area defines residential area of the town centre along with educational Centre. This character area has the ability to serve as a base camp for the Chutti para Hill Tourism activities. This character area is designated as a residential friendly zone since its proximity to hospitals and presence of educational institutions.

c. Physical aspect of the area

Physical factors such as Grain and texture, Built use, age, Scale, density, massing, Open space, Street layout and economic aspects are studied for the character area and are summarised in table 3-2

Table 3-2: Physical Aspect of the Character area 2

GRAIN AND TEXTURE	Comprises of fine grain with intermediate large units. Need of more permeability, and a hierarchy of open spaces and usable public spaces.
BULT USE	Primarily as residential use, with presence of educational institution
AGE	In comparison to the surrounding areas, the area has a mixed concentration of newer and old buildings and streets. Urban renewal options along with new proposal can be implemented.
SCALE, DENSITY & MASSING	The development is primarily low-rise and low-density. Massing does not complement the street character and does not generate any visual attraction.
OPEN SPACE CHARACTER	Large continuous wet land and private open spaces with public access are available. Wet land should be conserved considering the risk profile of the area. New road proposal are possible to open up the private land parcels.
STREET PATTERN AND LAYOUT	Due to natural topography and height constraints, the area is entirely newer compared to the central area, with a mix of gridded and unplanned road network.
ECONOMIC ASPECTS	The existence of rental housing and educational facilities draws temporary immigrants.

d. Major Constraints

The major constraints identified in this character area are unprotected wet land, proneness to flood, lesser road width to cater the traffic, roads with dead end, land parcel without vehicle access, Bottle neck junctions, Lack of public gathering spaces, unsafe pedestrian paths, unscientific and irregular drainage facilities, irregular footpath being barrier to differentially abled, disorganized street vending activities on footpath, improper road side furniture, In appropriate location for district jail complex.

e. Future Growth and Opportunities

The area has the potential for future economic activity in the form of residential, educational and hospital related service. Large vacant land parcels, continuous wetlands with water bodies, close proximity to medical facilities and educational institutions, and connectivity to the Chutti para tourist destination invite opportunities for future growth. To better accommodate future growth, the character region should introduce new roads and widening of existing road for improved connectivity, encourage mixed use along major roads. As a risk reduction strategy preserve regions that are vulnerable to environmental hazards, create new water course and widen the existing and develop Sponge Park. Introduce green strip to conserve water body and ecologically sensitive area and provide more facility to the existing residential region. After the jail and fire station are relocated, the available land can be used to build the base camp for the Chutti para tourism destination.

3.1.2.3 Character Area 3



Figure 3-20: Character Area 3

a. Primary function

Character Area 3 is in the south-west part of the study area and is illustrated in Figure 3.11. With its vast tracts of underutilised residential land parcels and marshy lands, this character region is mainly utilised for residential purposes. This location includes some public land parcels, Slaughter House, Crematorium and a Veterinary Hospital. Given its proximity to the town's centre, this location may be advantageous for future town growth.



Figure 3-21: Low lying/ Wetland



Figure 3-22: Crematorium



Figure 3-23: District Veterinary Hospital



Figure 3-24; Slaughter House

b. Significance with respect to Municipal context

This character area defines some old vast residential area and presence of marshy land and closeness to the CBD. Nature based solution for flood risk reduction and the ability to support future town growth are offered by this character area.

c. Physical aspect of the area

Physical factors such as Grain and texture, Built use, Age, Scale, Density, Massing, Open space, Street layout and economic aspects are studied for the character area and are summarised in Table 3-3

Table 3-3: Physical Aspect of the Character area 3

GRAIN AND TEXTURE	Comprises of fine grain with large permeability.
BULT USE	Primarily as residential use, with presence of public buildings
AGE	In comparison to the surrounding areas, the area has a concentration of old buildings and streets. Urban renewal options along with new proposal can be implemented.
SCALE, DENSITY & MASSING	The development is primarily low-rise and low-density. Massing does not complement the street character and does not generate any visual attraction.
OPEN SPACE CHARACTER	Large parcel of land and private residential open spaces with public access are available. Wet land should be conserved in terms of risk aspect. New road proposal are possible to open up the private land parcel
STREET PATTERN AND LAYOUT	Presence of large land parcel with dead ended street pattern
ECONOMIC ASPECTS	Ability to support future town growth primarily commercial shops and offices.

d. Major Constraints

The major constraints identified in this character area are unprotected wet land, proneness to flood, lesser road width to cater the traffic, roads with dead end, land parcels without vehicle access, unsafe pedestrian paths, unmaintained drainage facilities, footpath being barrier to differentially abled, improper road side furniture.

e. Future Growth and Opportunities

The area has the potential for accommodating future town growth primarily commercial shops and offices. The town must exploit the wetland's potential to reduce flooding by considering its nature. The character area should build new roads and widen the existing for better connectivity, and promote mixed use along important road in order to better handle future expansion. Create Sponge Park as a risk reduction approach by protecting areas that are susceptible to environmental dangers. Redesigning the Municipal Office Complex is necessary. Implementing a deliberate expansion to the current municipal office building would lead to a comprehensive enhancement of the urban landscape.

3.1.2.4 Character Area 4

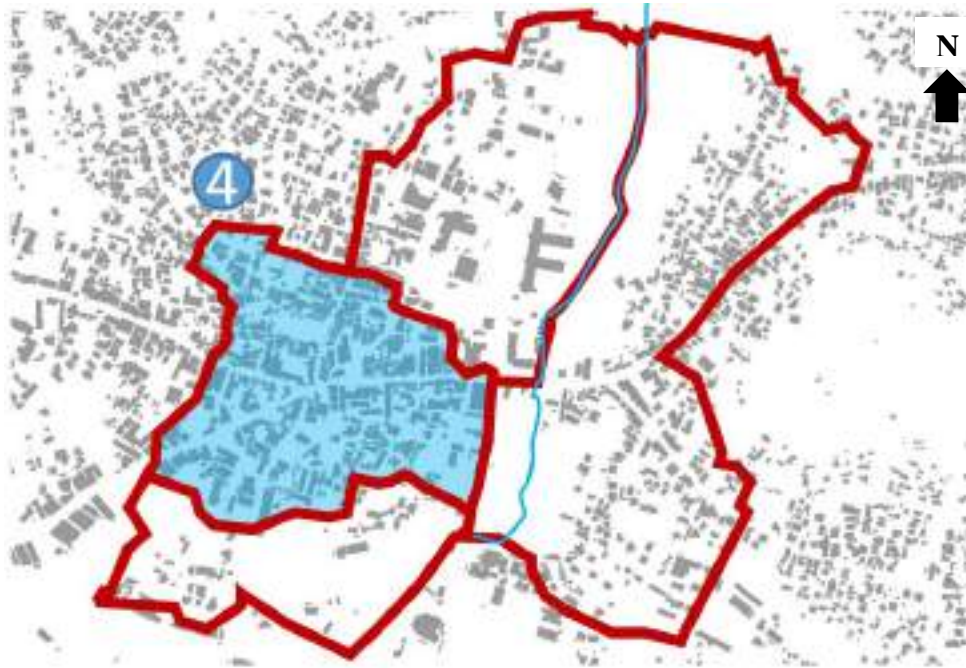


Figure 3-25: Character Area 4

a. Primary function

Character Area 4 is situated in the western part of the study area and is illustrated in Figure 3.12. This character area is primarily used for commercial purposes. There are also various public buildings and uses in the vicinity, as well as wholesale shops. The main activity generators are Mini civil station, Post office, Police station, Municipal office, Bank and Children’s park etc. are coming in this area. Other significant areas that draw people are the Cinema Theaters, Municipal market and the whole sale stores close to the old bus stand. Presence of temples, mosque and Kurisadi in the character area shows the cultural and religious significance of the location.



Figure 3-26: Municipal Office Pathanamthitta



Figure 3-27: Mini Civil Station



Figure 3-28: Police Station



Figure 3-29: Central junction Pathanamthitta



*Figure 3-30: Sree Chithira Thirunal
Town Hall*



Figure 3-31: Head Post Office



Figure 3-32: Pathanamthitta Market

b. Significance with respect to Municipal context

This character area defines the key center area of the municipality. The presence of important public buildings and a thriving commercial area defines this area as the central CBD. Being the center CBD, this area plays an important part in the entire development process.

c. Physical aspect of the area

Physical factors such as Grain and texture, Built use, age, Scale, Density, Massing, Open space, Street layout and economic aspects are studied for the character area and are summarised in table 3-1

Table 3-4: Physical Aspect of the Character area 4

GRAIN AND TEXTURE	Comprises of fine grain with intermediate large units. Need of more permeability, and a hierarchy of open spaces and usable public spaces.
BULT USE	Primarily as commercial use, with large public use buildings in between
AGE	In comparison to the surrounding areas, the area has a higher concentration of older buildings and streets. Urban renewal options can be implemented.
SCALE, DENSITY & MASSING	The development is primarily low-rise and low-density. Massing does not complement the street character and does not generate any visual attraction.
OPEN SPACE CHARACTER	Fragmented, inward-looking open spaces with no public access. The open areas must be integrated into the public domain in a hierarchical order.
STREET PATTERN AND LAYOUT	Organic street forms and layouts provide unclear road crossings and conflict points for pedestrians. Streets must ensure pedestrian safety using specific traffic calming methods.
ECONOMIC ASPECTS	The presence of commercial stores and important civic buildings boosts economic activity in this area. Land use and building rules should permit denser uses with enhanced infrastructure.

d. Major Constraints

The major constraints identified in this character area are Limited space for expansion for roads, physical infrastructure, parking and other public spaces.

e. Future Growth and Opportunities

The area has the potential for future economic activity in the form of service-oriented uses and premises for example, hotels, restaurants, and civic facilities. Also, according to the master plan, as the outer areas expand, the center area can be designated as the CBD, allowing for more civic activities. The presence of commercial uses and the under used land parcels and open spaces within the central region is a huge potential to this area. In order to improve connectivity, the character region should construct new roads, widen the ones that already exist, and encourage mixed use along major thoroughfares to better accommodate future growth. To maximize the amount of economic activity in the character area, encourage the commercial use zone. It is essential to redesign the Municipal Market Complex and introduce a municipal shopping center and parking lot at the old best stand area. Creating a new pedestrian walkway and connecting it to every activity center will boost the local economy in the character region. The leisure center will be improved by the children's park's expansion in the character area. Both traffic-related problems and commercial activity will be improved by central square development and junction renovation. In the civil station, building blocks have to be redesigned and reoriented. Furthermore, areas that are sensitive to the environment should be preserved.

3.2 VISION

The master plan concepts perceives Pathanamthitta Municipality as a “ livable city ” hence the central area and its precincts, that serve as the main CBD, would enhance its link to other areas as the city's major economic base.

“The core CBD zone, which is the key activity hub of Pathanamthitta town, will be interlinked by a network of public spaces, offering greater public facilities and serving as a strategy to stimulate economic growth with a focus on natural disaster resilience”

“Economically revitalized public friendly and risk resilient CBD”

3.3 DEVELOPMENT CONCEPT

The concept for future spatial development of the study area is derived from the findings of the sectoral and spatial studies carried out for the Detailed Town planning Schemes are illustrated in this section. The pattern of existing land use, topographic details, future development opportunities, planned projects in the future, and other secondary spatial information are some of the inputs for the spatial analysis. The development concept serves as a transitional framework for determining the future in light of current conditions and desired outcomes. The resulted concept also functions as a guide for creating the city's proposed land use plan.

Reviewing the existing published Detailed Town Planning scheme in the study area, the sectoral analysis discussed in previous chapters, the principles of urban renewal, the findings on the selected character areas for the study region and their relationship, all aided in the formulation of the development concept. Figure 3-33 illustrate the development concept formulated for the study area.

The core CBD zones, which have the key activities to fulfil the need of the District Headquarters, the pilgrim tourism base camp and, the native population of Pathanamthitta town, can be strengthened by formulating a development concept, through satisfying visions including an interlinked network of public spaces, offering greater public facilities, stimulate economic growth and resilience to natural disasters.

1) **Interlinked network of public spaces can be achieved by,**

- Establishing junction enhancement initiatives at the main intersection such as Aban junction, Central junction, KSRTC junction in the study area.
- Creating continuous walkways for pedestrians by connecting key areas of activity.
- Active commercial frontage, pedestrian priority streets and pathways, vending zones, covered and safe walkways, public amenity networks, passive recreation networks, etc. are some of the approaches to guarantee connectivity.

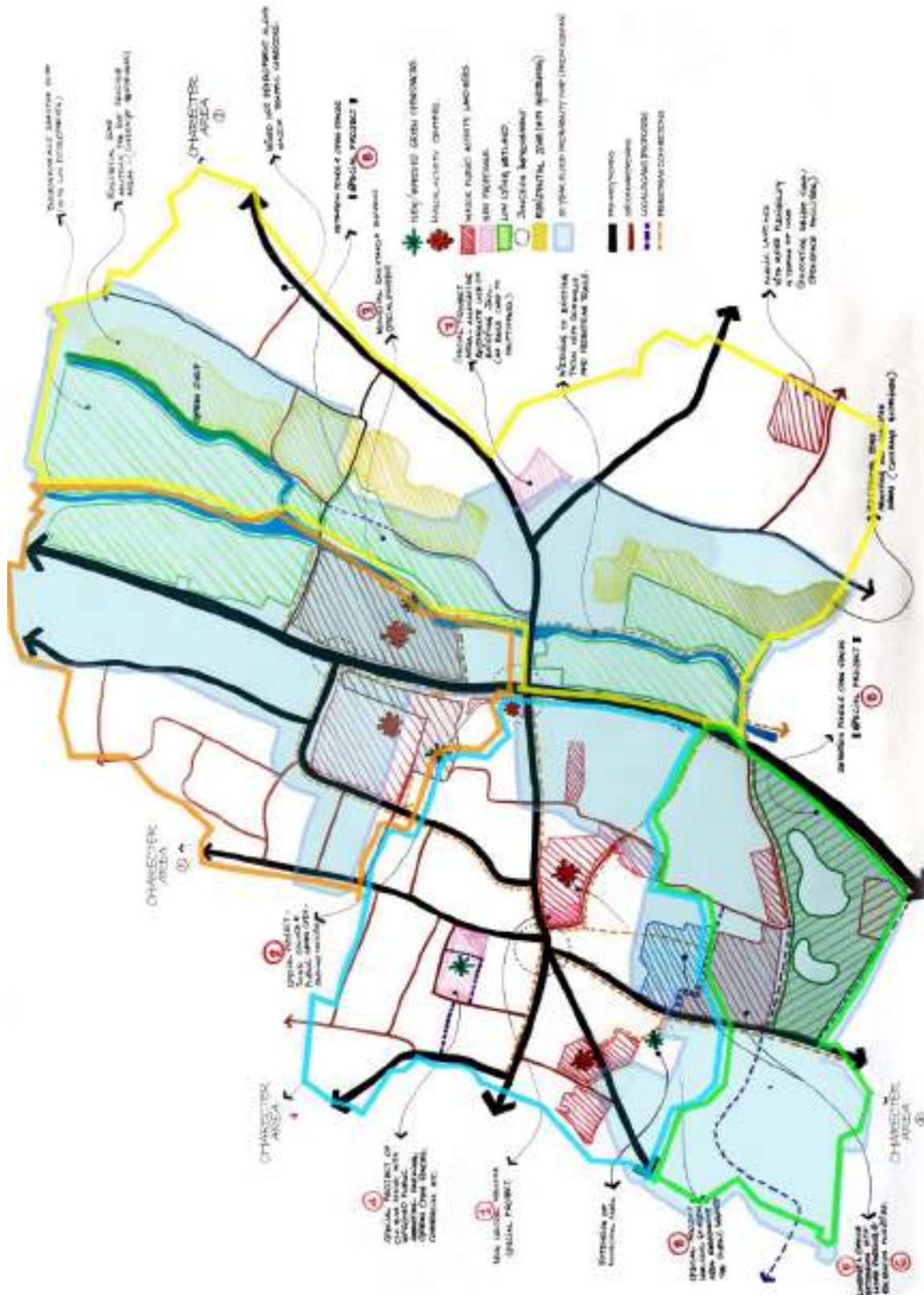


Figure 3-33: Development concept for the Planning area

2) Greater public facilities can be achieved by,

- Renovating Municipal Bus terminal with more public friendly infrastructure and happiness park.
- Creating accessible and barrier free infrastructure facilities for people with disabilities, children and elderly persons in public space and activity centres.
- More urban green spaces are being proposed in the city core area, Municipal bus terminal, Aban Junction, Children's park, Market, Old Municipal bus stand, Municipal office complex etc.
- Introducing new public square at central junction and Aban junction
- Shifting the jail and fire station to a new location.
- Market and municipal office complex expansion with increased parking space.
- Redesign the Mini civil station complex with more public amenity and parking facility.
- Expansion of Municipal Park.

3) Stimulation of economic growth can be achieved by,

- Incorporating mixed-use development along the corridor of major traffic routes.
- Proposing the new road in the study area that would connect the dead ends and open up inaccessible land parcels.
- Enhancing the amount of footfall around the town area by widening the existing road with appropriate roadside walkways.
- To attract economic activity introduce more commercial zones to the CBD area.
- Creating more recreational activity space and parking.
- Proposal for new Municipal shopping complex
- Sponge Park
- Accommodating more lodging and commercial office spaces in town centre.

4) Resilience to natural disaster can be achieved by,

- Conservation of wetland and environmentally sensitive area.
- Retention ponds for flood mitigation.
- To guarantee safe water flow, new water body proposals should be made in addition to existing water body widening and maintenance.
- Establishing relief camp facilities and ensuring open ground in schools
- Introducing green strip and green spaces.

4 PROPOSED LANDUSE

4.1 PROPOSED LANDUSE - PLANNING AREA

The categories of Land use proposed for the four Combined Detailed Town Planning Scheme Area (Planning area) are,

- Existing Road
- Area Reserved for Proposed new road / Widening of Existing road
- Area Reserved for Residential Use Zone
- Area Reserved for Commercial Use Zone
- Area Reserved for Modern Municipal Market
- Area Reserved for Public & Semi Public Use Zone
- Area Reserved for Central Square and Mini Civil Station
- Area Reserved for Town Square
- Area Reserved for Municipal Office Complex
- Area reserved for Town square and Extension of Children's park
- Area Reserved for Basecamp of Chuttippara Tourism Project
- Area Reserved for Mixed Use Zone
- Area Reserved for Traffic & Transportation Use Zone
- Area Reserved for Municipal Shopping Complex & Parking Plaza
- Area Reserved for Transport Terminal Interface
- Area Reserved for Green Strip
- Environmentally Sensitive Zone
- Area Reserved for Sponge Park
- Existing Water Body
- Area Reserved for Widening of Existing/ Proposed Water Body
- Area Reserved for Pedestrian Walkway

The proposed land use break-up, proposed land use map and the area break up of each of the land use zones in the planning area are given in Figure.4.1, Figure.4.2 and Table.4.1 respectively.

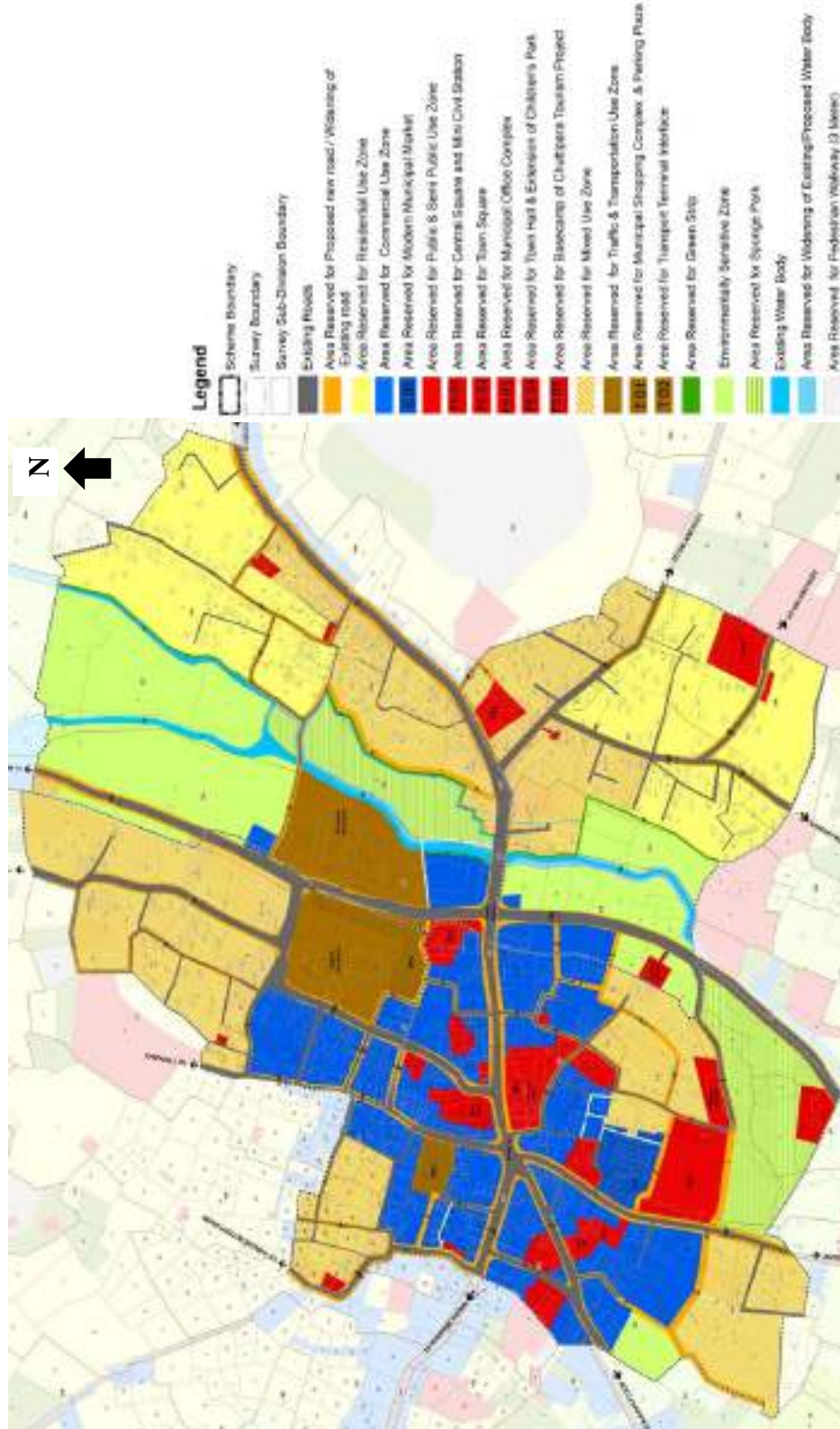


Figure 4-1: Proposed Land Use Map for the planning area

The proposed land use zones are mainly classified into Area Reserved for Residential Use Zone, Area Reserved for Commercial Use Zone, Area Reserved for Mixed Use Zone, etc. and are further subdivided as per the development concept formulated.

Table 4-1: Proposed Land Use Area Breakup for the planning Area

Land Use	Area(Ha)	Percentage Distribution (%)
Existing Road	8.46	9.76
Area to be Reserved for Proposed new road / Widening of Existing road	4.79	5.53
Area Reserved for Residential Use Zone	12.48	14.40
Area Reserved for Commercial Use Zone	12.19	14.07
Area Reserved for Modern Municipal Market	0.70	0.81
Area Reserved for Public & Semi Public Use Zone	3.00	3.46
Area Reserved for Central Square and Mini Civil Station	0.70	0.81
Area Reserved for Town Square	0.30	0.35
Area Reserved for Municipal Office Complex	0.99	1.14
Area Reserved for Town Hall & Extension of Children's Park	0.28	0.33
Area Reserved for Basecamp of Chuttipara Tourism Project	0.27	0.32
Area Reserved for Mixed Use Zone	19.91	22.97
Area Reserved for Traffic & Transportation Use Zone	3.84	4.43
Area Reserved for Municipal Shopping Complex & Parking Plaza	0.35	0.40
Area Reserved for Transport Terminal Interface	0.66	0.76
Area Reserved for Green Strip	0.36	0.42
Environmentally Sensitive Zone	10.76	12.42
Area Reserved for Sponge Park	4.69	5.41
Existing Water Body	1.10	1.27
Area Reserved for Widening of Existing/ Proposed Water Body	0.66	0.76
Area Reserved for Pedestrian Walkway	0.16	0.19
Total	86.67	100

The four Detailed Town Planning Schemes extends in an area (Planning Area) of 86.67 Hectares. The major land uses proposed are Area Reserved for Mixed Use Zone (22.97%), Area Reserved for Residential Use Zone (14.40%), Area Reserved for Commercial use Zone (14.07%) and Environmentally Sensitive Zone (12.42%). The other land uses are Area Reserved for Public

& Semi Public Use Zone (3.46%), Area Reserved for Transport Terminal Interface (0.76%) and Area Reserved for Water Body (1.27%) as shown in Figure 4-2.

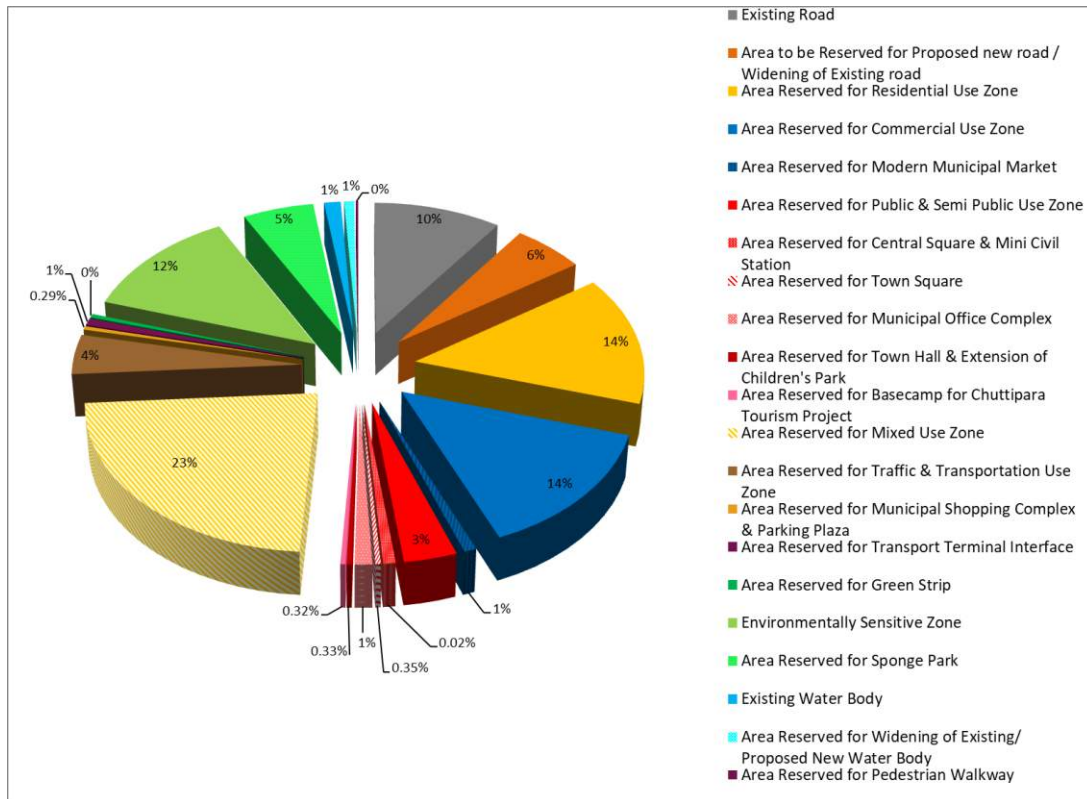


Figure 4-2: Proposed Land Use Breakup for the planning Area

4.2 DETAILED TOWN PLANNING SCHEME FOR KSRTC BUS STAND & SURROUNDINGS, PATHANMATHITTA

The Detailed Town Planning Scheme for KSRTC Bus Stand & Surroundings, Pathanmathitta extends in an area of 12.78 Hectares. The major land uses proposed are Area Reserved for Mixed Use Zone (48.72%), Area Reserved for Traffic & Transportation Use Zone (13.02%) and Area Reserved for Commercial Use Zone (14.67%). The other land uses are Area Reserved for Transport Terminal Interface (4.67%) and Environmentally Sensitive Zone (0.19%) as shown in Figure 4-3.

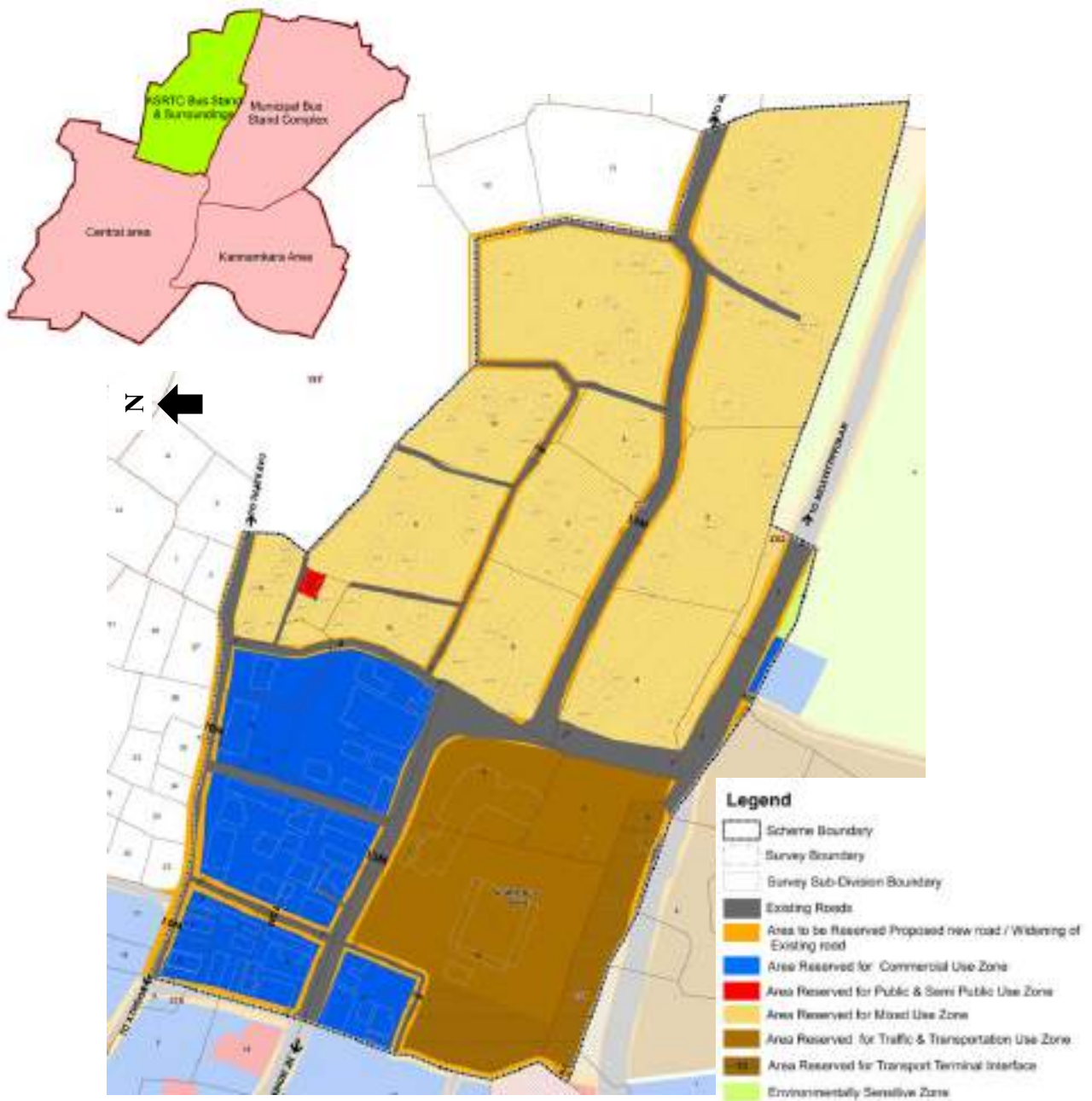


Figure 4-3: Proposed Land Use Map for Detailed Town Planning Scheme for KSRTC Bus Stand & Surroundings, Pathanmathitta

Table 4-2: Proposed Land Use Area Breakup for Detailed Town Planning Scheme for KSRTC

Land Use	Area(Ha)	Percentage Distribution (%)
Existing Road	1.65	12.92
Area to be Reserved for Proposed new road / Widening of Existing road	0.64	5.67
Area Reserved for Commercial Use Zone	1.94	14.67
Area Reserved for Public & Semi Public Use Zone	0.02	0.14
Area Reserved for Mixed Use Zone	6.24	48.72
Area Reserved for Traffic & Transportation Use Zone	1.66	13.02
Area Reserved for Transport Terminal Interface	0.60	4.67
Environmentally Sensitive Zone	0.02	0.19
Total	12.78	100

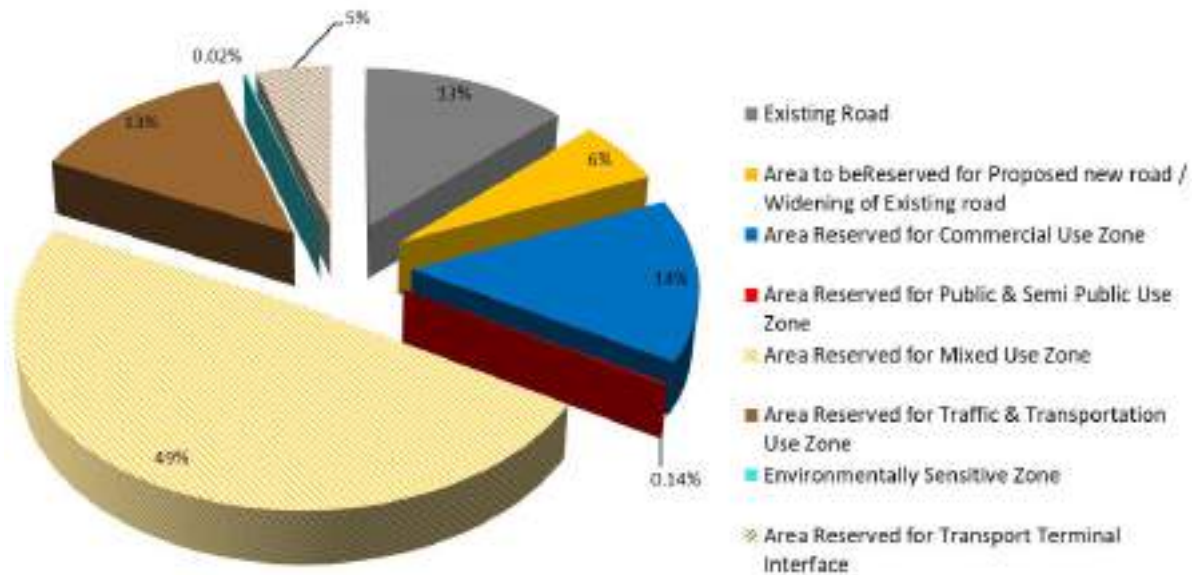


Figure 4-4: Proposed Land Use Breakup for Detailed Town Planning Scheme for KSRTC Bus Stand & Surroundings, Pathanamthitta

5 MODEL PROJECTS

5.1 CENTRAL SQUARE AND MINI CIVIL STATION

The project is proposed at the central junction of Pathanamthitta town. The project aims to enhance the character of the town center, fostering a vibrant and welcoming space. This proposes the revitalization of the Five-way junction into a Central Town Square, prioritizing pedestrian access and community engagement by incorporating public plaza and strategically placed vending zones. The project area falls under the use of Public and Semi-Public as per land use plan. It is a Government owned land. The Mini Civil station space extent to an area of 0.78 hectares in that Mini Civil station building covers an area of 0.17 hectare and old Municipal office occupies an area of 0.04 hectares. The remaining project area belongs to the Central Junction space and it may vary according to the design changes.



Figure 5-1: Location of Central Square and Mini Civil station

The redesign of the Five-way junction aims to address traffic congestion and enhance vibrancy. The current lanes prioritize car traffic, making pedestrians feel unsafe. The project also includes the redesign of the old Municipal building and the Mini Civil station complex, incorporating a public plaza and shared spaces. This redesign aims to resolve issues such as

footpath encroachment by street vendors, hostile pedestrian environments, under utilisation of resources, and blight and safety hazards caused by unused buildings. The provision of pedestrian walkways aims to address issues such as uninviting streets, disorientation, and lack of aesthetics, economic decline, and maintenance neglect.

The Municipal complex area faces numerous challenges. Street vendors encroaching on pedestrian walkways hinder safe and efficient movement. The lack of pedestrian-friendly design features, such as lighting, shade, and seating, creates an uninviting environment for foot traffic. Poor traffic management likely adds to congestion and safety issues. Furthermore, vacant buildings not only waste resources but also contribute to aesthetic blight and pose potential safety risks. The public plaza can become a lively hub by incorporating designated areas for vendors to solve footpath encroachment issues. Introducing pedestrian-friendly features such as ample shade, lighting, and seating will transform hostile environments. Vacant buildings can be repurposed into community centers or markets, thereby maximizing resources. This will rejuvenate the area, converting blight into a thriving space, and improving safety through increased foot traffic and activity. The redesign of Mini Civil Station complex incorporated as next phase with more parking spaces, effective utilisation of internal spaces and designated entry and exit point.

5.1.1 Redesign of Intersection

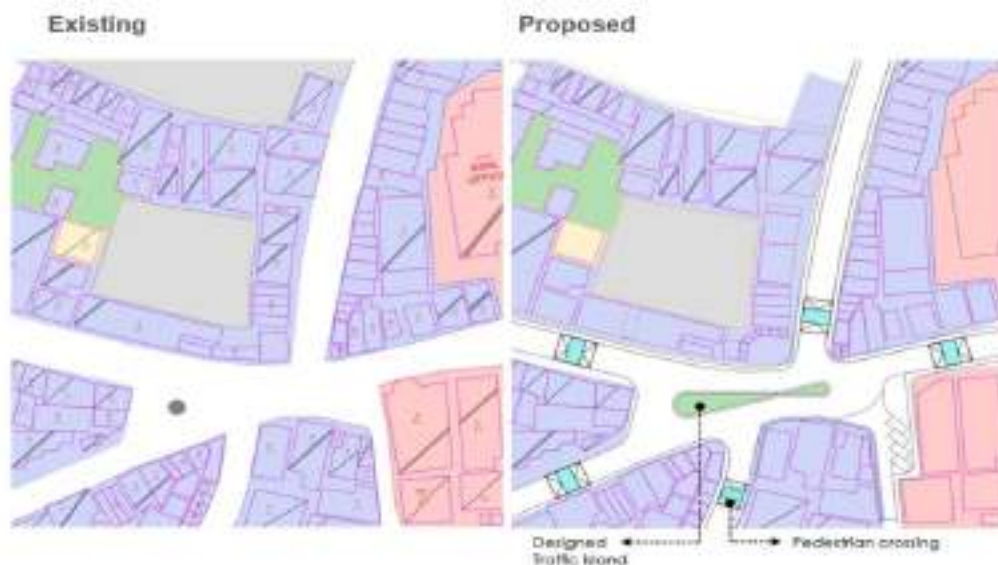


Figure 5-2: Existing and Proposed condition of the traffic island for central Junction



Figure 5-3: Proposed 3D model design for central Junction

5.1.2 Redesign of Old Municipal Building and Mini civil station complex

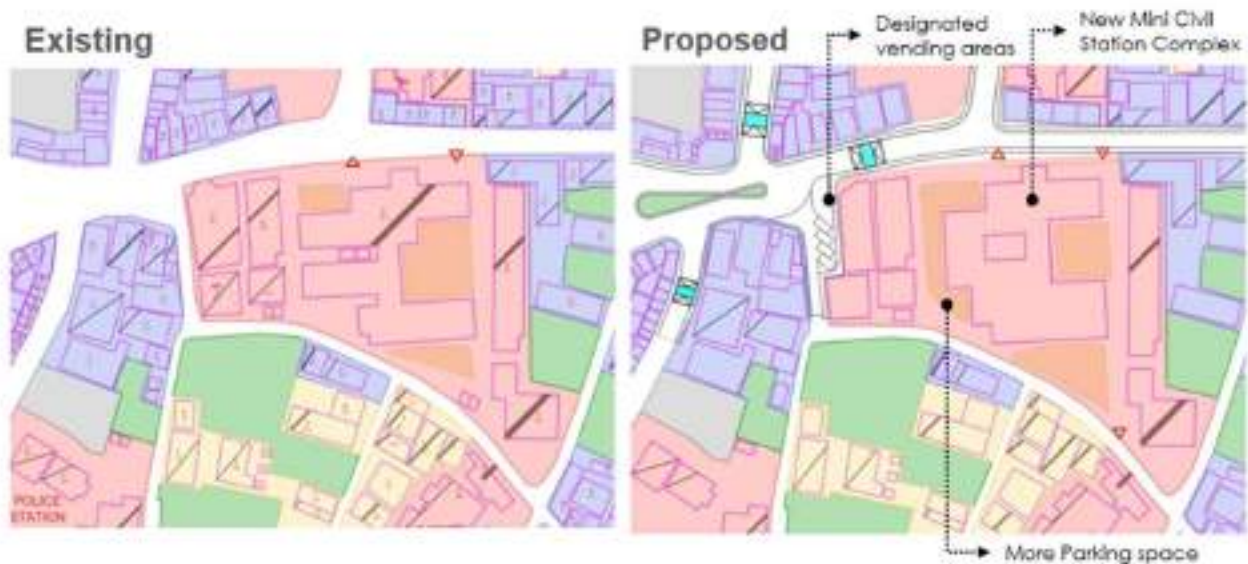


Figure 5-4: Existing and Proposed condition of old Municipal building & Mini Civil station building complex



Figure 5-5: Proposed 3D model design for Old Municipal office Building



Figure 5-6: Proposed 3D model design for street next to Old Municipal office Building

5.2 TOWN SQUARE

The project is located at Aban Junction in Pathanamthitta Town, at the intersection of TK Road and Ring Road, Near Proposed Flyover. The project located close to the Junction near to the Public Transport Terminals in the Town. It is a Municipal owned land with approximate area of 75 cents. The project aims to enhance the character of the town center, fostering a vibrant and welcoming space. This proposes the revitalization of junction into a Town Square, prioritizing pedestrian access and community engagement by incorporating a public gathering space with an open stage.

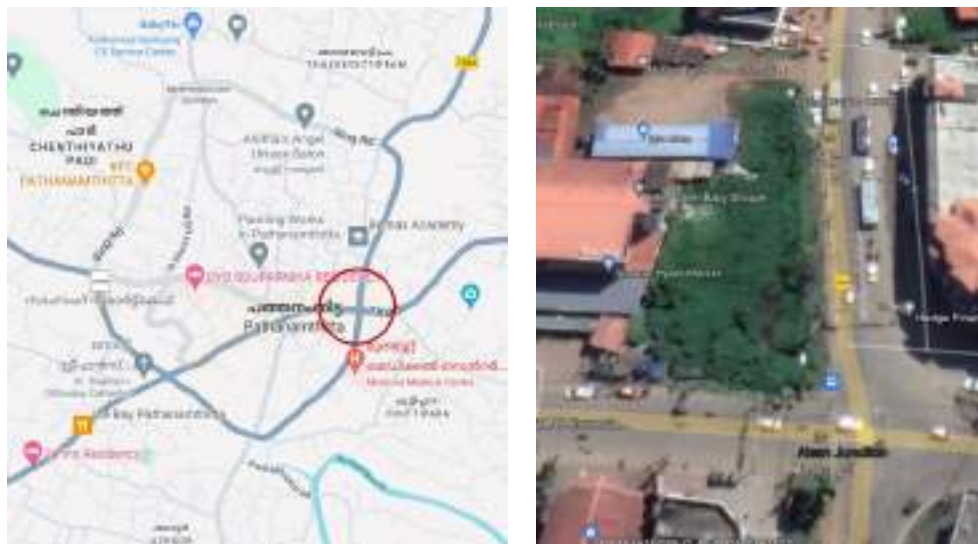


Figure 5-7: Location of Town square



Figure 5-8: Existing site condition

The project formulated based on some factors it involves social, economical and environmental aspects which is described in Table 5-1.

Table 5-1: Aspect selected for the project Town Square

SOCIAL ELEMENTS	ECONOMIC ELEMENTS	ENVIRONMENTAL ELEMENTS
Sri. KK Nair & Justice M.Fathima Beevi Memorial Square	Open stage - <i>Social Gathering, Cultural Events, Political Meetings</i>	Urban Green Space
Open stage- <i>Social Gathering, Cultural Events, Political Meetings</i>	Digital display board	Landscape Interface - <i>Street Furniture, Green Walls- Flowering Plants And Creepers, Proper Drainage Efficient Space Utilisation, Breathing Area For Town</i>
Pedestrian Walkway- <i>Disabled Friendly (Tactile Paving, Wheelchair Accessible, vehicular Entry Restricted)</i>	Kiosks	Risk Aspect Considerations - <i>Urban Green Spaces For Rainwater Recharging And Fresh Air, Shading To Reduce Urban Heat</i>
Street Furniture	Employment generation	Proper Waste Management
Selfie Points	Energy management - <i>Solar installations for power generation, Self-sustained town square</i>	Energy Management - <i>Solar Installations For Power Generation, Self-Sustained Town Square</i>
Safety Aspects - <i>CCTV Camera Surveillance Proper Lighting (Wall Mount Lighting And Lamp Pole), Protective Fencing, Tactile Paved Pathways</i>		

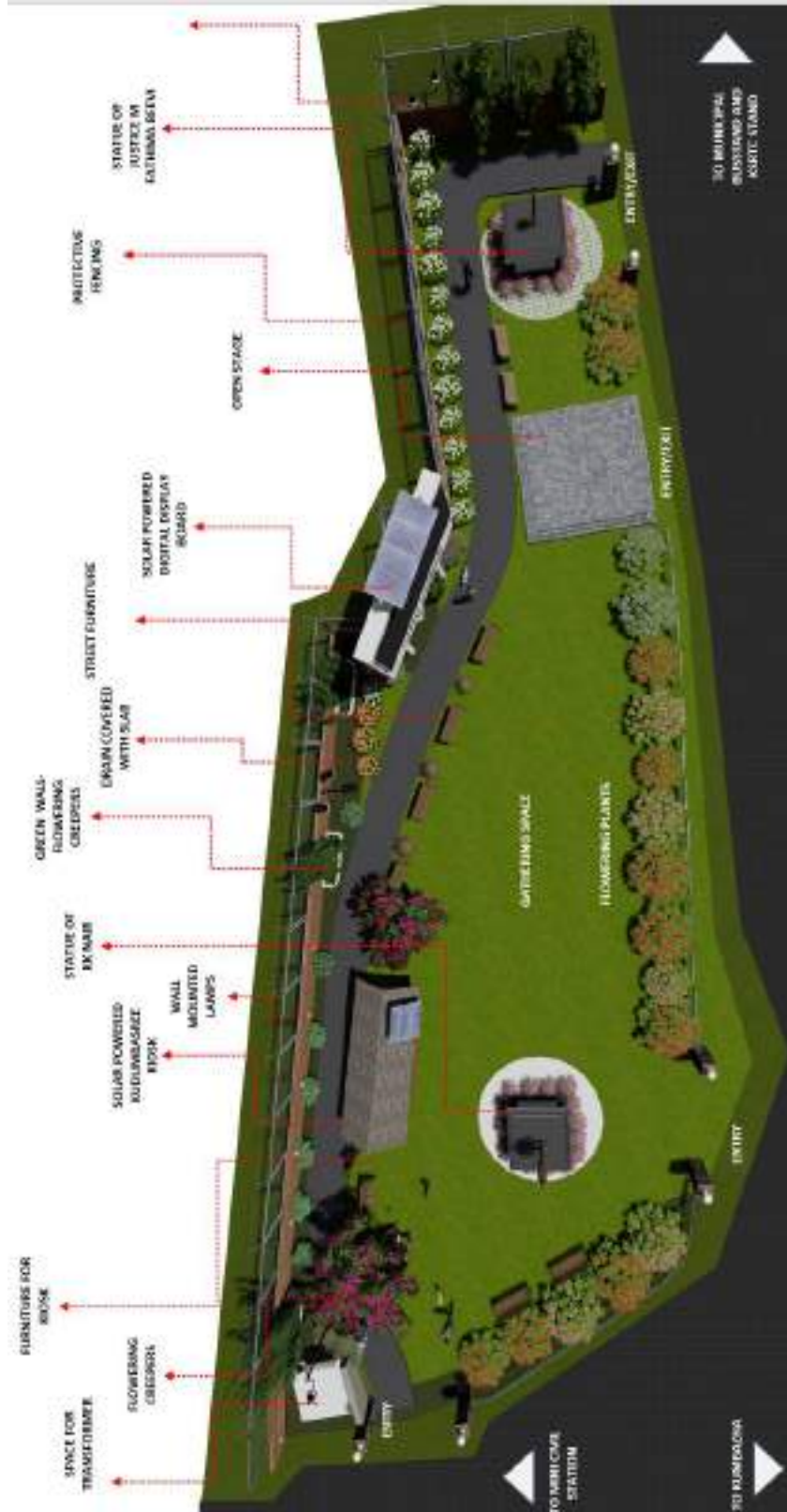


Figure 5-9: Proposed layout for Town Square



Figure 5-10: 3D Views of Proposed Town Square

5.3 TRANSPORT TERMINAL INTERFACE

KSRTC bus station and its connection with the next activity centers such as the Mini civil station and with the Municipal bus station needs to be strengthened using commercial active streets, vending activities. The area left unused in between the KSRTC bus terminal and the Municipal bus stand and the area adjacent to the KSRTC bus terminal are integrated to an interface connecting both the terminals and also with other major centers in town. Essential amenities for local and floating population along with recreational facilities like Happiness Park are provided with in the area. The Figures given below shows the Location, Major public strategies adopted and existing characteristics of the site and Design synthesis.



Figure 5-11: Location of Proposed Transport Terminal Interface

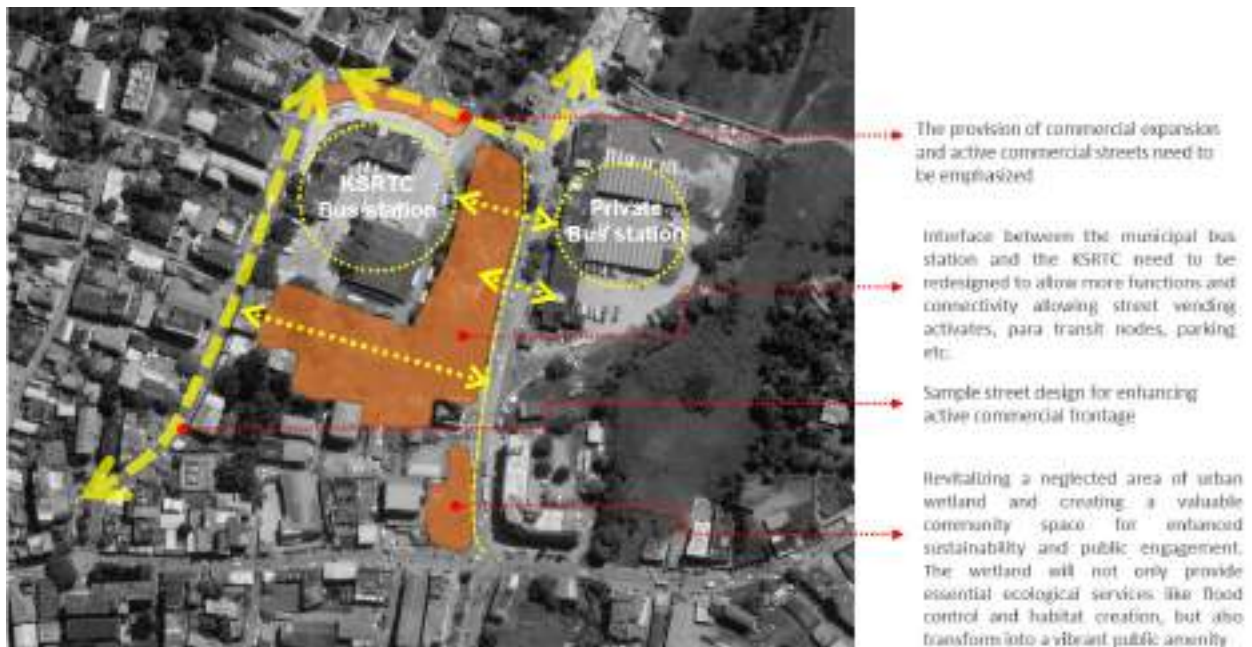


Figure 5-12; Major Public network strategies adopted



Figure 5-13: Existing Characteristics of the site



Figure 5-14: Design Synthesis

Interface design consists of different elements and it is vividly described in the Table 5-2

Table 5-2: Aspect selected for the project Traffic Terminal Interface

SOCIAL ELEMENTS	ECONOMIC ELEMENTS	ENVIRONMENTAL ELEMENTS
Open green spaces - <i>Social Gathering, Cultural Events, Children's play area, Basketball and cricket entertainment spaces</i>	Employment generation - <i>Digital display board, Kiosks, Rented cycle facilities, Interstate bus halting spaces, EV charging area, Multistoried car parking facilities</i>	Urban Green Space
Pedestrian Walkway - <i>Disabled Friendly (Tactile</i>	Energy management - <i>Solar installations for</i>	Landscape Interface – <i>Street Furniture, Green Walls-</i>

<i>Paving, Wheelchair Accessible, vehicular Entry Restricted)</i>	<i>power generation, Self-sustained traffic interface</i>	<i>Flowering Plants And Creepers, Proper Drainage, Efficient Space Utilisation, Breathing Area For Town</i>
<i>Safety Aspects - CCTV Camera Surveillance, Proper Lighting (high mast Lighting And Lamp Pole), Protective vegetation Fencing, Tactile Paved Pathways</i>		<i>Risk Aspect Considerations - Urban Green Spaces For Rainwater Recharging And Fresh Air, Shading to Reduce Urban Heat</i>
<i>Street Furniture</i>		<i>Energy Management - Solar Installations For Power Generation, Self Sustained traffic interface</i>
<i>Selfie Point</i>		<i>Proper Waste Management</i>



Figure 5-15: Proposed Layout for Traffic Terminal Interface



Figure 5-16: 3D Views of Proposed Traffic Terminal Interface

5.4 MUNICIPAL BUS STAND

The Municipal Bus Stand and KSRTC Bus Terminal located facing each other on either side of the Ring Road forms the major Transit hub of the town. The project involves redesigning the Municipal Bus Stand complex. Its goal is to create a strong connection between the Major public building and activity centers with KSRTC Bus Station and The Municipal Bus Station. The Municipal Bus Stand covers an area of 2.18 hectares, in that the Bus stand building complex occupying 0.42 hectares of area. The Municipality owns the entire land of the Municipal Bus stand. Currently, the area is designated as traffic and transportation use according to the land use plan. The present difficulties in the area includes Unattractive Surroundings, Lack of designated bus lanes, Barrier free pedestrian facilities, Insufficient street lighting at night, Jaywalking on the main road, Non availability of resting benches, Inaccessibility of stairs, Poor condition of toilets, Unorganized parking, Lack of Differentially abled/ Elderly/ Children friendly facilities.



Figure 5-17: Location of Municipal Bus Stand



Figure 5-18: Existing conditions of Municipal Bus stand



Figure 5-19: Major issues identified in the existing Municipal Bus stand



Figure 5-20: Proposed layout plan for Municipal Bus stand

The vision of the Detailed Town Planning scheme (Economically revitalized public friendly and risk resilient CBD) establishes the necessity of the project. The project area comes within the core CBD zone, which is the key activity hub of Pathanamthitta town, area should be interlinked by a network of public spaces, offering greater public facilities and serving as a strategy to stimulate economic growth with a focus on natural disaster resilience. The proposal includes improved facilities like Defined Entry/ Exits, driveways, open air theatre, ample parking space, volleyball court/ interchangeable green field, child play area, defines pathways all around, watch tower, vertical circulation cores, waste management spaces. The Figures given below shows the Reference picture of the various amenities for the proposal, 3D view and elevation of Proposed Municipal Bus stand Layout.



Figure 5-21: Reference picture of the various amenities for the proposal (Source: Internet)



Figure 5-22: 3D view of Proposed Municipal Bus stand Layout



▲ BUILDING FACADE OF THE RESTRICTURED BUILDING



▲ BUILDING FACADE OF THE RESTRICTURED BUILDING

Figure 5-23: Front Elevation and 3 D View of the proposed Municipal Bus stand

5.5 MUNICIPAL SHOPPING COMPLEX AND PARKING PLAZA

A shopping complex with sufficient parking spaces within the building may reduce the parking issues within the central area. The proposal includes improved facilities like defined Entry/ Exits, Driveways, Three-floor parking area and Solar Powered commercial shopping complex at the top, a dedicated Auto stand, Resting space with Board game facilities, Open green space with Street furniture, Waste management spaces, EV vehicle charging points etc. The Figures given below shows the Location (Old Bus stand), Proposed Layout, 3D View of the Proposed Municipal shopping complex and parking plaza.



Figure 5-24: Location of Proposed Municipal shopping complex and parking plaza



Figure 5-25: Proposed Layout for Municipal shopping complex and parking plaza



Figure 5-26: 3D View of the Proposed Municipal shopping complex and parking plaza

5.6 MUNICIPAL OFFICE COMPLEX AND MODERN MUNICIPAL MARKET

The project area is located near the existing Pathanamthitta Municipal office. This project proposes a strategic extension to the existing Municipal office building to achieve multifaceted improvements in the urban environment. The design approach emphasizes good urban design principles by enhancing permeability, encouraging pedestrian activity, and incorporating sustainable infrastructure. The extension of the Municipal office emphasizes porosity, creating a seamless connection between the existing building and the nearby market. This establishes a new pedestrian axis, encouraging foot traffic and injecting vibrancy into the district. Project integrates wetland areas with flood-resilient extent of the project. Infrastructure that strengthens

environmental advantages and fortifies the urban fabric. The project area, spanning 4.32 hectares, is owned by the Municipality. For the envisaged market, Modern market facilities with integrated waste treatment systems should be offered. Introduction of modernisation which boosts business activity and indirectly promotes city-level recreation. The project area is demarcated as special zone in proposed land use plan.



Figure 5-27: Location of Proposed Municipal office complex and modern municipal market

5.7 SPONGE PARK

Sponge parks offer a unique solution, transforming underutilized wetlands into vibrant connectors between key town areas. This approach not only fosters social connections but also promotes environmental well-being. By strategically integrating walking paths, educational features and diverse recreational spaces wetland parks can become vital hubs encouraging healthier and more connected communities.

Wetland parks tackle many urban challenges. They restore ecosystem habitat, reduce flooding and clean polluted water. These green spaces improve public health by offering places to relax and connect with nature. By linking important areas of the city wetland parks create a more connected and resilient urban environment. The Locations of the proposed sponge parks (Eastern side of Municipal Bus stand and Southern side of Municipal office) shown in the Figure 5-28



Figure 5-28: Locations of proposed Sponge park

These projects address several issues by passive recreation and public space creation, wetland ecosystems conservation, sense of place, flood mitigation and disaster resilience etc. Wetland parks address numerous urban challenges. They restore wildlife habitats, reduce flooding and clean polluted water. These green spaces enhance public health by providing areas for relaxation and connection with nature. By linking important parts of the city, wetland parks contribute to a more connected and resilient urban environment. According to the Detailed Town Planning scheme vision and planning standards, Pathanamthitta Municipality lacks sufficient public open spaces and gathering areas to serve its population. This underscores the necessity of the project.

Need for a vibrant and sustainable public space that combines recreation with the wetland ecosystems to benefit both the community and the environment. Incorporating flood resilient ponds and wetland parks, seamlessly integrating the Municipal bus stand expansion for improved public services. There is a scope for urban canal revitalization, which can help foster a resilient city by creating vibrant public spaces and ecological corridors alongside the canal and wetlands while simultaneously improving flood mitigation and promoting a healthy environment.

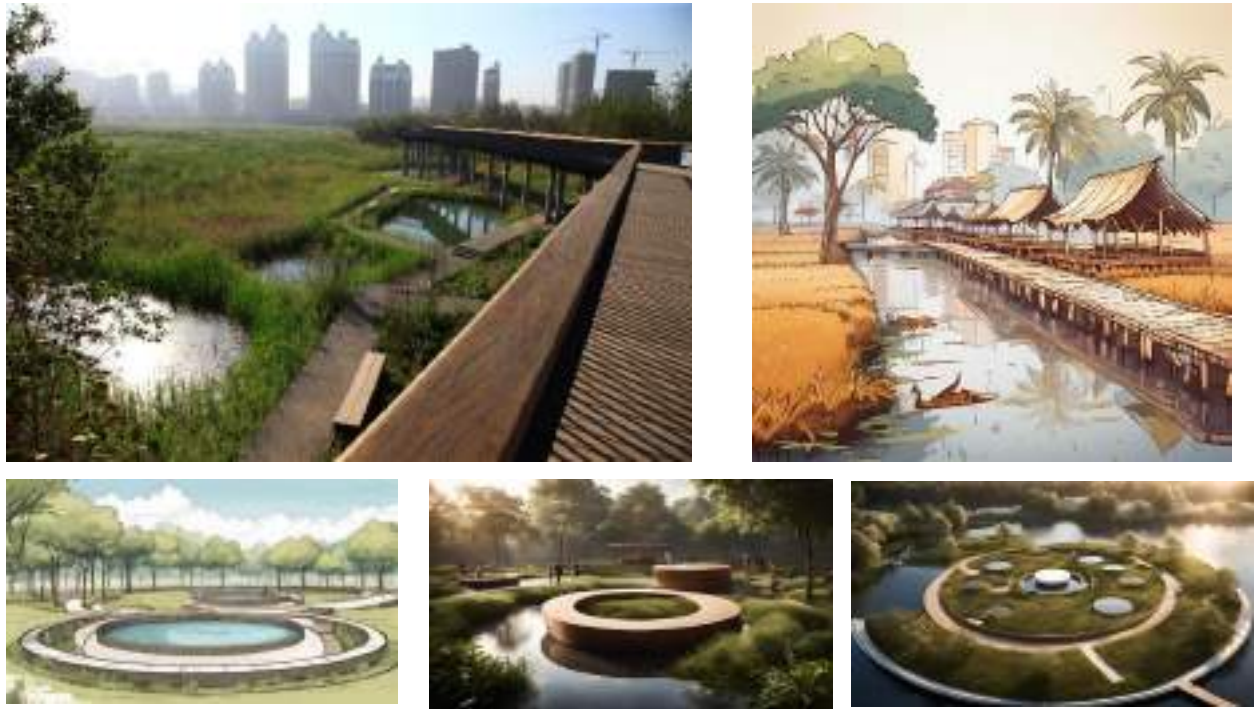


Figure 5-29: Reference images and AI generated sponge park Concepts

5.8 PEDESTRIAN WALKWAY

The streetscape lacks pedestrian-friendly design elements, creating an unwelcoming atmosphere that prioritizes vehicles over pedestrians. This disorientation, along with a lack of aesthetic appeal, discourages walking, hindering the development of a vibrant public space. As a result, the economic vitality of the street diminishes due to decreased foot traffic and a decline in overall upkeep. This negative cycle perpetuates the street's uninviting nature, making urban revitalization challenging.

Therefor the walkways are proposed connecting all major activity centers in the planning area such as KSRTC Bus Terminal, Municipal Bus Stand, Town Square, Sponge park, Central square and Mini Civil station, Municipal shopping complex and parking plaza, Modern

Municipal market, Municipal office complex, Base camp for Chuttipara tourism project, children’s park, town hall and other commercial streets and public buildings. Images shown below depicts pathway locations and present issues in the site.



Figure 5-30: Central Junction pathway locations and present issues in the site.

Defined entry points, safe and comfortable & pedestrian friendly walkways, specific connections to major plaza points will attract people to move towards walking habits. The proposed pedestrian walkway prioritizes a human-centered approach, fostering increased physical activity and promoting public health and wellbeing. By creating a permeable and accessible connection to and from the market area, the walkway promotes pedestrian movement, enhancing connectivity and overall permeability. This shift towards a walkable environment not only stimulates local economic activity but also contributes to a lower carbon footprint for the district. Figure 5.31 shows the proposed pedestrian walkway network.

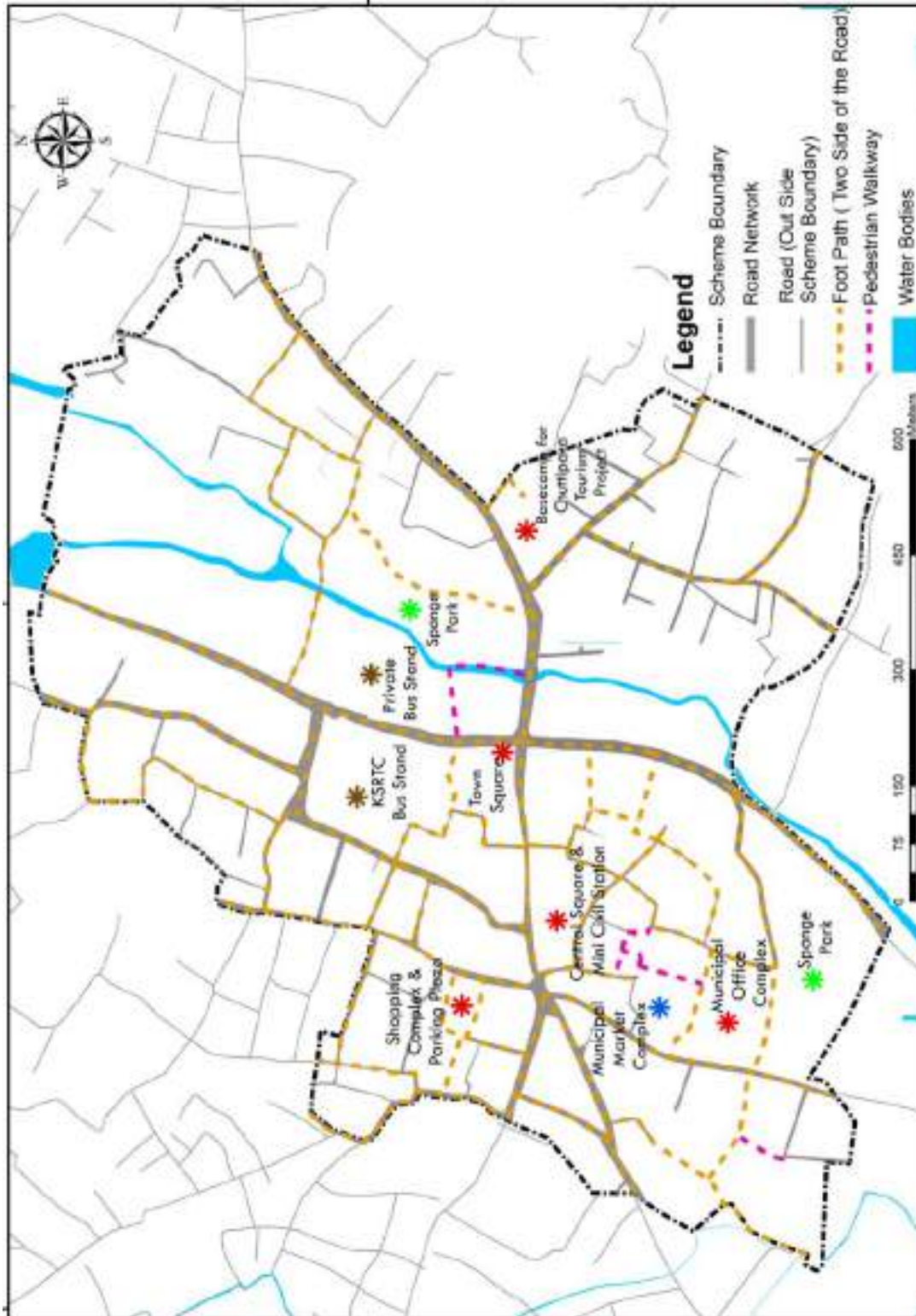


Figure 5-31: Pedestrian walkway network

5.9 RING ROAD BEAUTIFICATION

Pathanamthitta is in the second position in terms clean air nationally according to the statistics Central Pollution Control Board. As per the Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines Pathanamthitta Municipality does not have enough open space to cater its population. The Detailed Town Planning scheme and Master Plan envisages this as the key developmental gesture to act on to attain a sustainable and natural wellbeing to its inhabitants. The project consist mainly of the beautification of main parts of Ring road providing way side amenities thereby ensuring a safe and continuous pedestrian realm along the major Transport corridor of the Municipality. A portion of the Ring road starting from St. Peters Junction to Aban Junction has been taken as the stretch to show case the pilot project. To get a continuous stretch, Aban Junction to St. Peters Junction is taken, but in Detailed Town Planning scheme area doesn't have the full stretch it starts from the Aban Junction to Co-operative college junction. On the availability of sufficient land area and other infrastructures, this area has been zoned as five character zones. Each of this character zone has been provided with individual model design solutions. The zonation criteria and elements in different zones area given in the table and model images are shown below.



Figure 5-32: Location of Proposed Ring road Beautification project



Figure 5-33: Character Zones in Ring Road

Table 5-3: The zonation criteria and elements in different character zones

CHARACTER ZONES	ELEMENTS IN THE ZONE
Zone 1- Area with width between 0.8 m to 1.5 m	<ul style="list-style-type: none"> • Planting Flowering Plants (Climatically Adaptable Species)
Zone 2 – Area with width between 1.5 m to 3 m	<ul style="list-style-type: none"> • Planting Flowering Plants (Climatically Adaptable Species) • Minimum Width Foot Paths
Zone 3 – Area with width between 3 m to 5 m	<ul style="list-style-type: none"> • Planting Flowering Plants (Climatically Adaptable Species) • Foot Paths, Planting Shrubs, Trees
Zone 4 – Area with width 5 m to 7m	<ul style="list-style-type: none"> • Planting Flowering Plants, Creepers & Shrubs (Climatically Adaptable Species) • Foot Paths With Street Furniture Including Waste Bins etc.
Zone 5 – Area with width more than 7 m	<ul style="list-style-type: none"> • Planting Flowering Plants, Creepers & Shrubs (Climatically Adaptable Species) • Foot paths with street furniture including waste bins etc. • Comfort Stations



Figure 5-34: Proposed Character Zone 1 for Ring road Beatification



ZONE 2
AREA WITH WIDTH BETWEEN 1.5 TO 3 METERS



Before and after conditions
of the Zone-2 Area

Figure 5-35: Proposed Character Zone 2 for Ring road Beatification



ZONE 3



Before and after conditions

Figure 5-36: Proposed Character Zone 3 for Ring road Beatification



ZONE 4
AREA WITH WIDTH 5 TO 7 METERS



Before and after conditions
of the Zone-4 Area

Figure 5-37: Proposed Character Zone 4 for Ring road Beatification



ZONE 5
AREA WITH WIDTH MORE THAN 7 METERS



Before and after conditions
of the Zone-5 Area

Figure 5-38: Proposed Character Zone 4 for Ring road Beatification

5.10 EXTENSION OF CHILDREN’S PARK

An extension of the existing children’s park is proposed adjacent to the town hall. Project aims to increase the green, recreational breathing space along with interconnection of footpaths within the town area. The project easily interconnects the road towards stadium junction from Central Square to the market road. Green spaces reduce the heat wave effect due to climate changes. The images show the proposed three dimensional pictures and layout of the project.

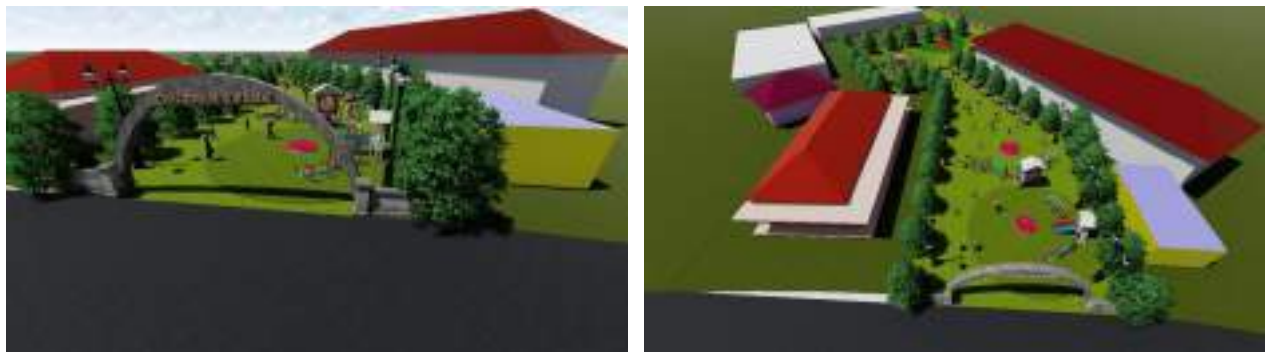


Figure 5-39: 3D Views of the proposed children’s park

5.11 CHUTTIPARA TOURISM BASE CAMP

Chuttipara having high tourism potential in the town locates adjacent to eastern side of the planning area. The access and base camp facility for Chuttipara can be provided within the planning area since the entry point to the chuttipara rock falls within the scheme area. District jail which is located in the urban centre and flood prone area can be relocated suitably and the land can be utilised for Chuttipara tourism project.

Building the base camp for the Chuttipara tourist destination is possible on the area that will remain after the District jail is relocated. The Project consist of Accommodation such as Tents or Cottages or Cabins or Dormitories, Food sector, Sanitation facilities, Storage and equipment area for Gear, food, first aid, and other essential supplies, Rental Services like trekking poles, sleeping bags etc. Medical facilities, Activity areas such as Bonfire Area, Outdoor Games or Sports Area, Adventure Activity Zones, Communication facilities, Power supply facilities, Common areas, parking and transport facilities and Security. The Locations for the proposed Base camp and reference images of facility are shown in the following Figures



Figure 5-40: Locations for the proposed Chuttipara tourist destination Base camp



*Figure 5-41: Reference images for the proposed Chutti para tourism Project Base camp
(Source: Internet)*

5.12 VENDING STREET

Along the eastern edge of the proposed sponge park, close to the Municipal bus terminal, there is a proposal for a 0.24 hectares green strip. A pedestrian-friendly vending street with street lighting, seating, and nightlife-friendly temporary vending stores, vending on wheels can be installed on the 4-meter-wide, 0.21 hectare tract of land, which is approximately 253 meters long. Figure 5.42 shows the vending Street's location inside the planning area. Figure 5.43 shows a 3D depiction of the street vending street.



Figure 5-42: Location of the proposed vending Street



Figure 5-43: 3D view of the proposed Street vending

6 DETAILED TOWN PLANNING SCHEME FOR KSRTC BUS STAND AND SURROUNDINGS, PATHANAMTHITTA (REVISED)

6.1 TITLE

This scheme may be called the Detailed Town Planning Scheme for KSRTC Bus stand and surroundings, Pathanamthitta (Revised)

6.2 DEFINITIONS

In this scheme unless, the context otherwise requires:-

- a) “Act” means the Kerala Town and Country Planning Act 2016 (Act 9 of 2016).
- b) “Chief Town Planner” means Chief Town Planner of the Local Self Government Department (Planning).
- c) “Government” means the Government of Kerala.
- d) “Map” means a map annexed to the scheme.
- e) “Responsible Authority” means the Secretary, Pathanamthitta Municipality unless the Government order otherwise.
- f) “Secretary” means the Secretary, Pathanamthitta Municipality.
- g) “Schedule” means a schedule appended to the scheme.
- h) “Scheme” means the “Detailed Town Planning Scheme for KSRTC Bus stand and surroundings, Pathanamthitta (Revised).”
- i) “Street” means a private street or a public street or pedestrian pathway, synonymous with road and giving access to more than one plot or one building.
- j) “Town Planner” means District Town Planner of the Local Self Government Department (Planning) having jurisdiction over the area.
- k) “Water Body” means all water body areas including the area of an artificial or natural drainage course.

6.3 AREA OF THE SCHEME

The area to which the scheme applies shall be within the inner edge of the boundary lines (marked as scheme boundary in the legend of the maps). The extent of the Scheme area is approximately 12.78 Hectares. Land assembly pertaining to the scheme is detailed in schedule I (form II).

6.4 BOUNDARIES OF THE SCHEME

The boundaries of the detailed town planning scheme are as described under:

- North :- Survey Numbers: 214/3,4 ; 197/12,13
- East :-Survey Numbers: 210/10, 262/2,4 ; 259/1,2,4
- South :- Survey Numbers: 216/7,8,11,17
- West :- Survey Numbers: 197/2,3,5 ; 196/15,16,17,23,24,34,35,36,37

6.5 STREETS

1. Subject to the provisions of the scheme, all streets mentioned in schedule II (form III) shall be constructed by the responsible authority or implementing agency concerned on the lines shown in the scheme map provided that reasonable modifications in the alignment of streets or in the layout of any portion of the area, may be made by the responsible authority with the approval of the Town Planner.
2. No person shall build any wall or erect any fence or other construction or projection or make any encroachment in or over any land intended for use as a street or lane.
3. All roads in the scheme should have separate utility and storm water drainage ducts with standard specifications under the footpath and should ensure cross-ducting at a standard interval.
4. The responsible authority may permit providing a sufficient and satisfactory system of drains along the public streets wherever required.

6.6 RESERVATION OF LAND AND ZONING

6.6.1 Zones and Regulations

1. For the implementation and enforcement of the proposals envisaged in this Detailed Town Planning scheme, the areas have been divided under various categories as listed below.

- (i) Area Reserved for Commercial Use Zone
- (ii) Area Reserved for Public & Semi Public Use Zone
- (iii) Area Reserved for Mixed Use Zone
- (iv) Area Reserved for Traffic & Transportation Use Zone
- (v) Area Reserved for Transport Terminal Interface
- (vi) Environmentally Sensitive Zone

2. “Uses Permitted” in a zone cover the uses that can be normally accommodated in the relevant zone. Such uses may be permitted by the Secretary. In some cases, it may be possible to permit some other uses also, which are not likely to affect the quality and environment in a zone specified for a particular use. Such cases have to be individually studied based on their performance characteristics and spatial locational factors. Such cases which come under this category are classified as “Uses Restricted”. Restricted-1 category deals with the uses that shall be restricted uses that may be permitted by the Secretary with the concurrence of the Town Planner. Restricted -2 category deals with the uses that shall be restricted uses that may be permitted by the Secretary with the concurrence of the Chief Town Planner of the Local Self Government Department (Planning).

3. “Uses prohibited” are various objectionable uses in each zone which shall not be permitted under normal circumstances. All uses which does not come under ‘Uses Permitted’ or ‘Uses Restricted’ will be considered as ‘Uses *prohibited*’

4. Zoning regulations are not intended to prohibit existing uses that have been lawfully established prior to the enforcement of these regulations, unless otherwise specifically mentioned in this scheme. All existing uses in every zone shall be permitted to continue.

5. If any land in a zone is put to a “*Use Prohibited*” as stated in Para 3, before coming into operation of this Detailed Town Planning Scheme, such use shall be termed as non-

conforming use. A non-conforming use may be allowed to continue in its existing location, if they are lawfully established prior to the enforcement of these regulations, and essential repairs and maintenance for the structure may be permitted by the Secretary, provided that the said use create no adverse environmental influence in the zone. Addition, alteration or reconstruction, may be permitted for such uses by the Secretary with the concurrence of the Town Planner. The total built up area of such non-conforming use shall not exceed 1.5 times the existing built up area subject to the General Regulation No. 6.6.3.26.

6. Any use not specified either in the “uses permitted” or “uses restricted” category of a particular use zone, but which is of a similar nature to any use permitted or restricted in that particular use zone, can be considered by the Secretary, with the concurrence of the Town Planner having jurisdiction over the area.

6.6.2 Zoning Regulations

Table 6-1: Zoning Regulation

Sl. No.	Uses Permitted	Uses Restricted 1	Uses Restricted 2
1.	Area Reserved for Commercial use zone		
	<p>All Commercial Shops, Show Rooms, Shopping Complexes, Shopping Malls, Super or Hyper Markets, Commercial Offices, Professional Offices & Establishments, Banking and Financial Institutions, Business Houses, Restaurants, Parking Buildings, Mechanised Parking, Parking Plazas, Weighbridge etc.</p> <p>Alteration and Addition of Existing Residential Buildings</p> <p>All single or multi-family dwelling unit having at least one floor/ Part of the floor under commercial use</p> <p>Lodge & Lodging Houses and Special Residential, Dormitories Hotels, Canteen, Hostel, Boarding Houses, Tourist Resorts</p> <p>Social Welfare Institution, Library & Reading Rooms, Clubs, Cultural Institutions, Nurseries/</p>	<p>Building for Religious Use, Religious educational building</p> <p>Fuel Filling Station, Saw mill, Gas godown</p>	<p>Multiplex</p>

	<p>Day Care and Crèche/Anganwadis</p> <p>Hospital, Medical Lab, Dispensaries, Clinics & Diagnostic Centers, Nursing Home, Palliative Care Centres</p> <p>Auditorium/ Wedding halls, Theatres, Movie halls, Parks & Open Spaces, Stadiums & Exhibition Grounds, Gymnasium / Yoga Centers / Sports Centers & Indoor Games, Training Centers</p> <p>Local/ State/ Central Government or Public Sector Offices & Establishments</p> <p>Information Technology or Information Technology Enabled Service Building/Uses and their Ancillary Buildings</p> <p>Auto/Taxi stands, Bus Bays, Modern Slaughter Houses, Modern Meat Processing Unit, Public Comfort station, Public Utility Areas and Public Utility Buildings,</p> <p>Service or Light industries of Non Nuisance nature (see Annexure I)</p>		
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2.	Area Reserved for Public & Semi Public Use Zone		
	<p>Addition, Alteration, Reconstruction, Essential Repairs, Maintenance of existing structures including Construction of New Blocks without change of use</p> <p>All Educational Building including Library & Reading rooms, Cultural Institutions, Nurseries/ Day Care and Crèche/ Anganwadis, Coaching Centres, Religious Educational Buildings</p> <p>Local/ State/ Central Government or Public Sector Offices & Establishments, Buildings for Religious Use</p> <p>Hospitals, Medical Lab, Community Facilities, Clinics & Diagnostic Centers, Dispensaries</p> <p>Social & Cultural Establishments, Community Halls, Auditorium / Wedding Halls, Gymnasium / Yoga Centers / Sports Centers & Indoor Games, Training Centers,, Parks & Open Spaces</p> <p>Residences of Single and Multiple Dwelling Units, Quarters, Hostels, Canteen, Hotels Orphanages & Old age homes / Boarding houses / Lodging facilities, Seminaries/ Convents/ Ashram/ Mutt</p>	Expansion or modernization of Existing Burial Grounds/ Cremation Ground / Crematorium/ Common Vault.	Multiplex

	<p>Shops, Restaurants, Professional Offices, Banking and Financial Institutions, Parking Building, Mechanised Parking, Parking Plaza</p> <p>Auto / Taxi stands, Bus Bays, Modern Slaughter Houses, Modern Meat Processing Unit, Public Utility Areas and Public Utility Buildings or Establishments</p> <p>Service or Light industries of Non Nuisance nature (see Annexure I)</p>		
3.	Area Reserved for Mixed Use Zone		
	Land to a depth of 250 m from centre line of road (right of way) on either side of the roads having proposed width of 21 m in Area Reserved for Residential Use Zone is also deemed as Area Reserved for Mixed Use Zone		
	All uses permitted in Area Reserved for Residential Use Zone or Area Reserved for Commercial Use Zone or Area Reserved for Public & Semi Public Use Zone	All uses in Restricted 1 of Area Reserved for Residential Use Zone or Area Reserved for Commercial Use Zone or Area Reserved for Public & Semi Public Use Zone Truck terminals	All uses in restricted 2 of Area Reserved for Residential Use Zone or Area Reserved for Commercial Use Zone or Area Reserved for Public &

			Semi Public Use Zone
4.	Area Reserved for Traffic & Transportation Use Zone		
	<p>All buildings and uses connected with Transport and Communication such as Transport Terminals/ Bus Terminals/ Truck Terminals and Ancillary Structures</p> <p>Medical Lab, Clinics & Diagnostic Centers, Dispenseries</p> <p>Social & Cultural Establishments Gymnasium/ Yoga Centers/ Sports Centers & Indoor Games, Training Centers, Parks & Open Spaces</p> <p>Local/ State/ Central Government or Public Sector Offices & Establishments.</p> <p>Parking Building, Mechanised Parking, Parking Plaza, Multi-Level car parking, Weighbridges, Auto / Taxi stands, Bus Bays, Information Kiosk, Electric Vehicle Charging Station, Public Utility Areas and Public Utility Buildings or Establishments</p> <p>Addition, alteration, reconstruction, essential repairs and maintenance of existing authorized</p>	Fuel filling stations	

	<p>structures without change of use</p> <p>Any remunerative uses attached to the transport terminals as value capture mechanism such as commercial buildings, malls, retails shops, hotels, restaurants, canteens, convention halls, movie halls, lodges and dormitories, Quarters, Office Spaces, Commercial Establishments, Library & Reading rooms, Club, Nurseries/ Day Care and Crèche/ Anganwadis, Coaching Centres etc.</p>		
5.	Area Reserved for Transport Terminal Interface		
	<p>Any construction/land development essential for the development/ improvement of Transport Terminal Interface</p> <p>Addition, alteration, essential repairs and maintenance of existing authorized structures to a total built up area up to 150 Sq. m including exiting area without change of use</p> <p>Local/ State/ Central Government or Public Sector Offices & Establishments.</p> <p>Open air Auditorium, Open Stage, Open Gym, Parks & Open Spaces, Exhibition Grounds, Garden, Landscaping, Statue, Tot lots, Street</p>		

	Furniture, Vending kiosk, Information Kiosk, Comfort station Mechanised Parking, Parking Yard, Auto / Taxi stands, Bus Bays, Public Utility Areas and Public Utility Buildings or Establishments		
6.	Environmentally Sensitive Zone		
	Paddy Cultivation, all types of wet agriculture and horticulture Fish Farms/ Seed Farms/ Pump House/ Ponds without any building construction	Addition, alteration, essential repairs and maintenance of existing authorized structures to a total built up area up to 150 Sq. m including exiting area without change of use subject to the General Regulation No. 6.6.3.26.	

6.6.3 General Regulations

1. All future developments in the Scheme area shall be in conformity with the provisions of Detailed Town Planning Scheme for KSRTC Bus stand and surroundings, Pathanamthitta (Revised).
2. Existing areas and structures of Archaeological Importance, Agricultural uses may be permitted in all the zones and shall not constitute non-conforming uses.
3. All future developments shall also be in conformity with the provisions of Kerala Municipality Building Rules in force, unless otherwise specified in these regulations.
4. Expansion of existing public and semi-public institutions to adjacent plots irrespective of the land use in which such adjacent plot is zoned for shall be treated as ‘Uses Restricted 1’ with the concurrence of the Town Planner. However, this provision shall not be applicable for land zoned as ‘Environmentally Sensitive Zone’
5. Regulation of constructions and land developments on the sides of new road/ roads proposed for widening/ pedestrian walkways as per the scheme shall be governed by the distance from the center line of the street (Right of way), unless otherwise specified in the Detailed Town Planning Scheme in force or any Detailed Road Alignment approved by the Government. If widening on one side of any stretch of the street is constrained due to the physical barriers of existing/ proposed water body, protected archaeological monuments/ sites then the street widening in that stretch shall be accounted from the other side.
6. If widening of existing roads or formation of new roads has been implemented to its full proposed width as envisaged in the Detailed Town Planning Scheme but with change in the alignment, the land parcels in stretches excluded from the original alignment envisaged in the Detailed Town Planning Scheme may be changed to adjacent suitable land use zone in the Detailed Town Planning Scheme, with the concurrence of the Town Planner.
7. Silence Zone, as prescribed by the Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986 and its subsequent amendments shall be applicable to the area under this scheme.

8. In the event of change in alignment of any new road proposals and road widening proposals in the Detailed Town Planning Scheme, after the commencement of land acquisition of the new alignment and during its implementation by an implementing agency, the land parcels in stretches excluded from the original alignment may be changed to adjacent suitable land use zone as permitted by the Secretary with the concurrence of the Town Planner.
9. Operational constructions as defined in the Kerala Town & Country Planning Act 2016 shall be treated as permitted use in the Detailed Town Planning Scheme.
10. Any use not specified either in the 'uses Permitted' or 'Uses Restricted' category of a particular use zone but which is of a similar nature to any use 'Permitted' or 'Restricted' in that particular use zone, may be permitted by the Secretary with the concurrence of the Town Planner.
11. Any Government approved Guide lines/ Regulations for natural hazard mitigation/ environmental risk reduction shall be applicable in all zones.
12. Disaster Mitigation Projects by competent authorities shall be permitted in all zones.
13. On both side of 'Area Reserved for Pedestrian Walkway' low height or vision transparent boundary walls shall be permitted as a part of 'Eyes on the street concept' for making streets and public spaces active at all time and safe.
14. No construction/ land development shall obstruct/ reduce drainage capacity in the area.
15. ATMs, water tanks, waste management units, public utility buildings/structures, Electric charging stations for vehicles shall be treated as permitted uses in all zones except in land zoned as 'Environmentally Sensitive Zone'
16. In case of uncertainty in identifying the alignment and boundary of water body, Thodu, Existing public road in the absence of survey boundaries for the same in the Proposed Land Use Maps, it shall be referred to the actual position on ground as well as revenue records and decision taken by the Secretary in this regard shall be final.
17. If different land use zones fall within a single plot, all uses permitted as per zoning regulations of such land use zones may be permitted by the Secretary in the plot. If application submitted includes any of the restricted uses and not included in such permitted uses, the Secretary shall issue permit with the concurrence of the Chief Town

Planner, as the case may be. However, for the part of the plot which comes under 'Environmentally Sensitive Zone' this provision shall not be applicable.

18. Survey detail as provided in the Detailed Town Planning Scheme is obtained from the Department of Survey and Land Records. During the preparation of the plan, Litho maps (cadastral survey) are compiled and geo-referenced by standard procedure. However the survey number details, survey boundary and areas as available in the revenue records shall be final.
19. Every building should be provided with an appropriate technique such as Pipe composting/ Biogas plants/ vermicomposting etc. for processing organic waste at the source itself. Proper drawings should be supplemented with the building permit applications.
20. No constructions other than side protection drain covers and essential protection works are permitted in water course in the scheme area. Also no constructions obstructing the flow of water course are permitted in the scheme area.
21. Committee for Large scale development projects in Master Plans, constituted by Government as per G.O (Ms) No. 3/2024/LSGD dated 12.1.2024 may be entrusted with the responsibility of making recommendations for large scale projects under Detailed Town Planning Scheme.
22. All construction in the flood prone area in the Detailed Town Planning scheme shall be flood resilient.
23. Projects of Central/ State Government, Local Self Government Institutions, Public Sector Undertakings and other Government Institutions may be permitted in all zones
24. The Government shall have the power to issue clarifications in respect of technical interpretations, if any, required on any of the provisions of the Detailed Town Planning Scheme in consultation with the Chief Town Planner.
25. The government may in any particular case and subject to any condition as they may impose and in consultation with the Chief Town Planner dispense with or modify any of the requirements made obligatory by any law and their decision shall be final.

26. As per Pathanamthitta Municipality council decision No. 1 dated 09/10/2024, In land upto a depth of 25m (after road widening proposal if any) or depth upto the adjoining water body (existing/proposed new/proposed for widening) whichever is less, on the either side of roads, having an existing/proposed width of 15m or more in Environmentally Sensitive Zone or Area reserved for Sponge Park, developments can be permitted by the Municipal Secretary subject to the following regulations.

1. Uses permitted in commercial use zone shall be permitted here.
2. The plot should have direct access from the above mentioned road having an existing/proposed width of 15m or more.
3. All new buildings constructing in plots abutting either sides of above said roads should be on stilts with the floor level of building at a minimum height of 90cm from the average centre line level of the same road.
4. Construction of compound walls, Ground concreting, Surface Interlocking/paving, Ramps, Drive ways and all such constructions other than piles are restricted in ground to ensure water recharging and free flow of water under the building.
5. The land shall not be filled for any uses such as access, parking, open spaces etc.
6. Septic tanks with proper anchoring, regulatory/ control valves and inspection chambers should be made mandatory before issuing occupancy to new buildings to prevent diffusion of septic wastes into Open wells and Ground water. Regular Pumping, Cleaning and Periodic maintenance of septic tanks by the owner shall be ensured by the local body.
7. Coverage shall be limited to 60% for buildings having footprint area above 100sq.m.
8. These buildings shall be levied double tax rates and are ineligible for any relief or compensation from Government in the event of Natural Hazards.
9. All the buildings shall be insured.
10. Constructions should be in land, which is converted as dry land (Purayidam) in BTR as per Kerala Conservation of Paddy land and Wet Land Act, 2008 as on the date of publication of this scheme.

11. All new constructions shall have an open balcony / open passage/ a terrace in the upper floors or an open stair connecting the upper floors to the ground facing the yard abutting the adjoining street to facilitate easy evacuation.
12. All new buildings or addition of upper floors shall have a minimum of 50% of the roof terrace kept open to sky, which shall be accessible to facilitate easy evacuation.
13. Proper drainage facilities should be ensured by the plot owner to drain out the excess storm water and prevent flooding in the plot.
14. Addition or reconstruction of all existing buildings in the above said zones shall also comply with these regulations.

6.6.4 Acquisition of Lands

Any land in the area required for the purpose of the scheme may be acquired by purchase, exchange or otherwise by the Secretary/ Responsible authority/ Approved agency at any time subject to the provisions of the Act and without prejudice to the interests of the scheme.

6.6.5 Prohibition of Building in Unhealthy Sites

With a view to prevent contamination of water sources and channels due to existence of burial grounds, sewage tanks and pumping stations, treatment plants or insanitary or low lying lands, the Secretary may refuse to sanction any building within portions of the area, in the vicinity of which, in his/her opinion the construction of building would be objectionable.

6.6.6 Street Vending

There is a need to regularize the street vending activity in order to ensure smooth flow of pedestrian/vehicular traffic as well as to maintain cleanliness and public hygiene. Vending zones in the scheme area shall be as per the recommendations of the Town Vending Committee constituted as per the Protection of livelihood and regulation of street vending Act, 2014.

6.6.7 Drainage

Sufficient means of effectual drainage and discharge of sewage shall be provided in every private street by the owners or occupiers of sites abutting thereof and every site and building shall be provided with suitable drains leading there from to the nearest street drains. All the sullage water shall be disposed of in such a way as to prevent it from running on to or stagnating on adjacent streets. It may be used for watering gardens and compounds if no nuisance is erected thereby or allowed to flow in to drains or channels on it having previously been treated sanitarily in the manner required by the Secretary.

6.6.8 Penalty

Any person who commits or knowingly permits a breach of any of the provisions of the Scheme or who neglects or fails to comply with any of the provisions of the Scheme or any orders, conditions, proceedings, restrictions, limitations, or terms made or imposed under or in pursuance of any of the provisions of the Scheme, the rules or the Act shall on conviction be

punished in accordance with section 68 of the Kerala Town and Country Planning Act and provisions under Kerala Municipality Building Rule.

SCHEDULE 1

ഫാറം-I

2021-ലെ കേരള നഗര-ഗ്രാമാസൂത്രണ (വിശദ നഗരാസൂത്രണ പദ്ധതി രൂപീകരണവും അനുബന്ധ നൽകലും) ചട്ടങ്ങൾ

[ചട്ടം (7) (എ) (II)കാണുക]

കെ.എസ്.ആർ.ടി.സി ബസ് സ്റ്റാൻഡ്, പത്തനംതിട്ട വിശദ നഗരാസൂത്രണ പദ്ധതി പത്തനംതിട്ട മുനിസിപ്പൽ കൗൺസിൽ

വിശദ നഗരാസൂത്രണ പദ്ധതി നടപ്പിലാക്കേണ്ട ഭൂമി സംബന്ധിച്ച്

കെ.എസ്.ആർ.ടി.സി ബസ് സ്റ്റാൻഡ്, പത്തനംതിട്ട വിശദ നഗരാസൂത്രണ പദ്ധതി നടപ്പിലാക്കേണ്ടത് ഏത് ഭൂമിയിലാണെന്നു താഴെ വിവരിച്ചിരിക്കുന്നു.

(എ) അസൂത്രണ പ്രദേശത്തിൻറെ അതിരുകൾ:

വടക്ക്- സർവ്വേ നമ്പരുകൾ 214/3,4 , 197/2,13

കിഴക്ക്- സർവ്വേ നമ്പരുകൾ 210/10, 262/2,4 , 259/1,2,4

തെക്ക്- സർവ്വേ നമ്പരുകൾ 216/7,8,17

പടിഞ്ഞാറ്- സർവ്വേ നമ്പരുകൾ 197/2,3,5 , 196/15,16,17,23,24,34,35,36,37

(ബി) റവന്യൂ സർവ്വേ അല്ലെങ്കിൽ റീസർവ്വേ നമ്പരുകളും, ബാധകമാകുന്ന പക്ഷം ബ്ലോക്ക് നമ്പരുകളും റവന്യൂ വാർഡ് നമ്പരുകളും/ ഉൾപ്പെട്ടിട്ടുള്ള ദേശത്തിൻറെ പേര്, അതോടൊപ്പം അതതു റവന്യൂ വില്ലേജുകളുടെ പേരും

പത്തനംതിട്ട വില്ലേജ്, സർവ്വേ നമ്പരുകൾ - 197(p), 215,216(p), 259(p), 262(p)


സെക്രട്ടറി

Municipal Secretary
Pathanamthitta


ചെയർപേഴ്സൺ

CHAIRPERSON
Pathanamthitta Municipality

സ്ഥലം : പത്തനംതിട്ട

തീയതി : 09-10-2024



SCHEDULE 2

ഫാറം-II

2021-ലെ കേരള നഗര-ഗ്രാമാസൂത്രണ (വിശദ നഗരാസൂത്രണ പദ്ധതി രൂപീകരണവും അനുരതി നൽകലും) ചട്ടങ്ങൾ

[ചട്ടം (7) (എ) (VI) കാണുക]

കെ.എസ്.ആർ.ടി.സി ബസ് സ്റ്റാൻഡ്, പത്തനംതിട്ട വിശദ നഗരാസൂത്രണ പദ്ധതി

പത്തനംതിട്ട മുനിസിപ്പൽ കൗൺസിൽ

നിർദ്ദേശിച്ചിരിക്കുന്ന പുതിയ നിരത്തുകളും വീതി കൂട്ടുവാൻ നിർദ്ദേശിച്ചിരിക്കുന്ന നിലവിലെ നിരത്തുകളും

വിശദ നഗരാസൂത്രണ പദ്ധതി പ്രകാരം നിരത്തിനു നൽകിയിരിക്കുന്ന പേര് (ഡി എസ് എൻ /02)	നിരത്തിന്റെ വിശദീകരണം	പുതിയ നിരത്തോ നിലവിലെ നിരത്തിന്റെ വീതി കൂട്ടലോ എന്നത്	നിരത്തിന്റെ നീളം (മീറ്ററിൽ)	നിർദ്ദേശിച്ചിരിക്കുന്ന നിരത്തിന്റെ വീതി (മീറ്ററിൽ)	നിരത്തിന്റെ അതിരിൽ നിന്ന് ബിൽഡിങ് ലൈനിലേക്കുള്ള ദൂരം (മീറ്ററിൽ)	കുറിപ്പ്
(1)	(2)	(3)	(4)	(5)	(6)	(7)
AA	പത്തനംതിട്ട - മൈലപ്ര റോഡ് ഭാഗം	വീതി കൂട്ടൽ	61	15	-	-
BB	റിങ് റോഡ് ഭാഗം	വീതി കൂട്ടൽ	240	18	-	-
A1A1	സെൻട്രൽ ജംക്ഷൻ - തൈക്കാവ് സ്കൂൾ റോഡ് ഭാഗം	വീതി കൂട്ടൽ	259	10	-	-
A2A2	പത്തനംതിട്ട - മൈലപ്ര റോഡ് (AA), സെൻട്രൽ ജംക്ഷൻ - തൈക്കാവ്	വീതി കൂട്ടൽ	71	12	-	-

	സ്കൂൾ റോഡ് (A1A) എന്നിവ ബന്ധിപ്പിക്കുന്ന റോഡ് (ശ്രീനൃഗൻ ക്രോസ്സ് റോഡ്)						
A3A3	പത്തനംതിട്ട - മൈലപ്ര റോഡ് (AA), സെൻട്രൽ ജംക്ഷൻ - തൈക്കാവ് സ്കൂൾ റോഡ് (A1A) എന്നിവ ബന്ധിപ്പിക്കുന്ന റോഡ് (KSRTC ക്രോസ്സ് റോഡ് 1)	വീതി കൂട്ടൽ	75	10	-	-	
A4A4	പത്തനംതിട്ട - മൈലപ്ര റോഡ് (AA), സെൻട്രൽ ജംക്ഷൻ - തൈക്കാവ് സ്കൂൾ റോഡ് (A1A) എന്നിവ ബന്ധിപ്പിക്കുന്ന റോഡ്	വീതി കൂട്ടൽ	123	7	-	-	

A5A5	A4A4 റോഡ്, പത്തനംതിട്ട - മൈലപ്പു റോഡ് (AA) എന്നിവ ബന്ധിപ്പിക്കുന്ന റോഡ് (ഗാന്ധി നഗർ റോഡ്)	വീതി കൂട്ടൽ	423	7	-	-
A6A6	പത്തനംതിട്ട - മൈലപ്പു റോഡ് (AA) ൽ നിന്നും കിഴക്കോട്ട് കെ.എസ്.ആർ.ടി.സി യുടെ ഞെക്ക വശത്തായുള്ള റോഡ്	വീതി കൂട്ടലും പുതിയ റോഡും	198	7	-	-
BB1	പത്തനംതിട്ട - മൈലപ്പു റോഡ് (AA), റിങ് റോഡ് (BB) എന്നിവ ബന്ധിപ്പിക്കുന്ന റോഡ്	വീതി കൂട്ടൽ	67	15	-	-
B2B2	റിങ് റോഡ് (BB) ൽ നിന്നും കിഴക്കോട്ട് ഭൂമിസിപ്പൽ ബസ് സ്റ്റാന്റിലിനു വടക്കു	വീതി കൂട്ടൽ	5	7	-	-

	വശത്തു കൂടിയുള്ള റോഡ്					
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 സെക്രട്ടറി

[Handwritten signature in green ink]
 ചെയർപേഴ്സൺ

സ്ഥലം : പത്തനംതിട്ട

Municipal Secretary
 Pathanamthitta

CHAIRPERSON
 Pathanamthitta Municipality

തീയതി : 09-10-2024



SCHEDULE 3

ഫാറം-IV

2021-ലെ കേരള നഗര-ഗ്രാമാസൂത്രണ (വിശദ നഗരാസൂത്രണ പദ്ധതി രൂപീകരണവും അനുരതി നൽകലും) ചട്ടങ്ങൾ

[ചട്ടം (7)(എ)(VII)കാണുക]

പത്തനംതിട്ട മുനിസിപ്പൽ കൗൺസിലിന് വേണ്ടിയുള്ള കെ.എസ്.ആർ.ടി.സി ബസ് സ്റ്റാൻഡ്, പത്തനംതിട്ട വിശദ നഗരാസൂത്രണ പദ്ധതി

വിശദ നഗരാസൂത്രണ പദ്ധതിക്കു വേണ്ടി ഏറ്റെടുക്കുന്നതിനായി നിർദ്ദേശിച്ചിട്ടുള്ള ഭൂമി

ഭൂമി ഏറ്റെടുക്കുന്നതിന്റെ ഉദ്ദേശ്യം	വിശദ നഗരാസൂത്രണ പദ്ധതി മാപ്പിൽ രേഖപ്പെടുത്തിയിട്ടുള്ളതിന്റെ സ്വചന	തിരുമാനിക്കപ്പെട്ട/നിർദ്ദേശിക്കപ്പെട്ട ഭൂമിയുടെ ഏറ്റെടുക്കൽ തീതി	ഉൾപ്പെടുത്തപ്പെട്ട വിശദാംശങ്ങൾ		ഭൂമിയുടെ സ്വഭാവം/ സർവ്വേ സർവ്വേ നമ്പറുകൾ	ഏറ്റെടുക്കുന്ന ഭൂമിയുടെ വിസ്തൃതി (ഹെക്ടർ)	ഭൂമിയിൽ നിലവിലുള്ള കെട്ടിടങ്ങൾ, പണിപ്പാടുകൾ ആദിയാവയുടെ വിവരണം	ക്രമ നമ്പർ
			വില്ലേജം/ വില്ലേജിൻറെ പേര്	ബ്ലോക്ക് നമ്പരും റവന്യൂ വാർഡ് നമ്പരുകളും ഉൾപ്പെടുത്തിയിട്ടുള്ള ദേശത്തിന്റെ പേര് (ബാധകമായിടത്ത്)				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ഇല്ല								





സ്ഥലം : പത്തനംതിട്ട

തീയതി : 09-10-2024

Municipal Secretary
Pathanamthitta

CHAIRPERSON
Pathanamthitta Municipality

SCHEDULE 4

ഫാറം-V

2021-ലെ കേരള നഗര-ഗ്രാമാസൂത്രണ (വിശദ നഗരസൂത്രണ പദ്ധതി രൂപീകരണവും അനുബന്ധനൽകലും) ചട്ടങ്ങൾ

[ചട്ടം(7)(എ)(ix)കാണുക]

പത്തനംതിട്ട മുനിസിപ്പൽ കാൺസിലിന് വേണ്ടിയുള്ള കെ.എസ്.ആർ.ടി.സി ബസ് സ്റ്റാൻഡ്, പത്തനംതിട്ട വിശദ നഗരസൂത്രണ പദ്ധതി

വിശദ നഗരസൂത്രണ പദ്ധതിക്കു വേണ്ടി നീക്കിവയ്ക്കുന്നതിനായി നിർദ്ദേശിച്ചിട്ടുള്ള ഭൂമി

ക്രമ നമ്പർ	പ്രദേശം	വിശദ നഗരസൂത്രണ പദ്ധതി ഭാഗ്യിൽ രേഖപ്പെടുത്തിയിട്ടുള്ള തീർന്ന സൂചന	സ്ഥലം നീക്കി വെച്ചുപുതുക്കിയിട്ടുള്ള ഉദ്ദേശ്യം	ഹെക്റ്ററിൽ ഉള്ള ഏകദേശ വിസ്തീർണ്ണം	കുറിപ്പ്
(1)	(2)	(3)	(4)	(5)	(6)
1	പത്തനംതിട്ട വില്ലേജ്, സർവ്വേ നമ്പറുകൾ - 197(p), 215(p), 216(p), 259(p), 262(p)	നിലവിലെ റോഡിന്റെ വീതികൂട്ടലിനും പുതിയ റോഡിനുമായി റിസർവ് ചെയ്തിട്ടുള്ള പ്രദേശം	നിലവിലുള്ള റോഡുകൾ/തെങ്ങുകൾ/പാതകൾ, എന്നിവയുടെ വീതി കൂട്ടൽ, അവയോട് അനുബന്ധിച്ച വസ്തു വകുപ്പുകൾ, പ്രവർത്തനങ്ങൾ എന്നിവയുടെ വികസനത്തിനായി	0.64	-
2	പത്തനംതിട്ട വില്ലേജ്, സർവ്വേ നമ്പറുകൾ - 197(p), 215(p), 216(p), 262(p)	കൊമേർഷ്യൽ മേഖലയായി റിസർവ് ചെയ്തിട്ടുള്ള പ്രദേശം	വാണിജ്യ പ്രവർത്തനങ്ങളുടെ ഉത്തേജനത്തിനായി	1.94	-
3	പത്തനംതിട്ട വില്ലേജ്, സർവ്വേ നമ്പറുകൾ - 197(p)	പബ്ലിക് സെലി ഉപയോഗത്തിനായി	പബ്ലിക് സെലി സ്ഥാപനത്തിന്റെ	0.02	-

		റിസേർവ് ചെയ്തിട്ടുള്ള പ്രദേശം	ഉടമസ്ഥതയിലോ പ്രവർത്തിക്കുന്നതോ ആയ വസ്തുവകകൾ. പബ്ലിക് ആൻഡ് സെമി പബ്ലിക് സൗകര്യങ്ങൾക്കായി ഉപയോഗിക്കുന്ന ഭൂമികൾക്കും പൊതു, സ്വകാര്യസൗകര്യങ്ങളായി നിയുക്തമാക്കിയ സ്ഥാപനങ്ങൾക്കും പബ്ലിക് ആൻഡ് സെമി പബ്ലിക് മേഖല ബാധകമാണ്		
4	പത്തനംതിട്ട വില്ലേജ്, സർവ്വേ നമ്പരുകൾ - 197(p), 215(p), 262(p)	മിക്സഡ് ഉപയോഗത്തിനായി റിസേർവ് ചെയ്തിട്ടുള്ള പ്രദേശം	വാസാഹ്ലം, വാണിജ്യം, പബ്ലിക് ആൻഡ് സെമി പബ്ലിക് അല്ലെങ്കിൽ ഇവ ഒന്നിച്ചോ ഉള്ള വസ്തുവകകളുടെയും ഭൂമിയുടെയും വികസനത്തിനായി	6.24	-
5	പത്തനംതിട്ട വില്ലേജ്, സർവ്വേ നമ്പരുകൾ- 215(p), 216(p), 262(p)	ട്രാഫിക് ആൻഡ് ട്രാൻസ്പോർട്ടേഷൻ ഉപയോഗ മേഖലയായി റിസേർവ്	ട്രാഫിക് ആൻഡ് ട്രാൻസ്പോർട്ടേഷൻ ഉപയോഗ മേഖലയുടെ വികസനത്തിനായി	1.66	-

		ചെയ്തിട്ടുള്ള പ്രദേശം	യി		
6	പത്തനംതിട്ട വില്ലേജ്, സർവ്വേ നമ്പരുകൾ - 216(p), 259(p)	ട്രാൻസ്‌പോർട്ട് ടെർമിനൽ ഇന്റർഫേസിയായി റീസേർവ് ചെയ്തിട്ടുള്ള പ്രദേശം	ട്രാൻസ്‌പോർട്ട് ടെർമിനൽ ഇന്റർഫേസിന്റെ വികസനത്തിനായി	0.60	-
7	പത്തനംതിട്ട വില്ലേജ്, സർവ്വേ നമ്പരുകൾ - 262(p)	പരിസ്ഥിതി ലോല മേഖലയായി റീസേർവ് ചെയ്തിട്ടുള്ള പ്രദേശം	വെള്ളപ്പൊക്ക ദുരന്ത മൂലമുണ്ടായ ലാഭകരണത്തിനായി	0.02	-




സെക്രട്ടറി
ചെയർപേഴ്സൺ

സ്ഥലം : പത്തനംതിട്ട
 തീയതി : 09-10-2024

Municipal Secretary
 Pathanamthitta

CHAIRPERSON
 Pathanamthitta Municipality



SCHEDULE 5

ഫാറം-VI

2021-ലെ കേരളനഗര-ഗ്രാമസൂത്രണ (വിശദ നഗരസൂത്രണ പദ്ധതി രൂപീകരണവും അനുബന്ധ നൽകലും) ചട്ടങ്ങൾ

[ചട്ടം (7)(എ)(X)കാണുക]

പത്തനംതിട്ട മുനിസിപ്പൽ കൗൺസിലിന് വേണ്ടിയുള്ള കെ.എസ്.ആർ.ടി.സി ബസ് സ്റ്റാൻഡ്, പത്തനംതിട്ട വിശദ നഗരസൂത്രണ പദ്ധതി

വിശദ നഗരസൂത്രണ പദ്ധതിയുടെ മതിപ്പ് ചെലവ്

(പദ്ധതിക്കായി ഏറ്റെടുക്കുന്ന ഭൂമിയിലെ വികസനത്തിനായി മാത്രം)

ചെലവ്			മതിപ്പ്		
ക്രമ നമ്പർ	ഇനം	ഏകദേശ വില (രൂപയിൽ)	ക്രമ നമ്പർ	ഇനം	പ്രതീക്ഷിക്കുന്ന ത് (രൂപയിൽ)
ഇല്ല					


 സെക്രട്ടറി

Municipal Secretary
 Pathanamthitta


 ചെയർപേഴ്സൺ

CHAIRPERSON
 Pathanamthitta Municipality

സ്ഥലം : പത്തനംതിട്ട

തീയതി : 09-10-2024



ANNEXURE I

LIST OF NON-OBNOXIOUS AND NON-NUISANCE TYPE OF SERVICE OR LIGHT INDUSTRIES PERMISSIBLE IN VARIOUS ZONES.

1	Aerated water and fruit beverages
2	Aluminium utensils from aluminium circles by pressing only (dry mechanical operations)
3	Apparel Making
4	Assembly of air coolers /conditioners, repairing and servicing
5	Assembly of bicycles, baby carriage and other small non-motorized vehicles
6	Atta – Chakkies, Flour mill, Oil mill
7	Automobile servicing (excluding repair)
8	Ayurvedic and homeopathic medicines (without boiler), Ayurvedic Medicinal Formulations
9	Bailing (hydraulic press) of waste papers
10	Bakery/confectionery/sweets products (with production capacity <1tpd (with gas or electrical oven)
11	Bamboo and cane products.
12	Bi-axially oriented PP film along with metalizing operations
13	Bio fertilizer and bio-pesticides without using inorganic chemicals
14	Biomass briquettes (sun drying) without using toxic hazardous wastes
15	Biscuits trays etc. from rolled PVC sheet (using automatic vacuum forming machines)
16	Blending and packing of tea
17	Blending of melamine resins & different powder, additives by physical mixing
18	Block making of printing without foundry (excluding wooden block making)
19	Bodybuilding of motor vehicles
20	Brass and bell metal utensils manufacturing from circles(dry mechanical operation without re-rolling facility)
21	Cardboard or corrugated box and paper products (excluding paper or pulp manufacturing and without using boilers)

22	Carpentry & wooden furniture manufacturing (excluding saw mill) with the help of electrical (motorized) machines such as electrical wood planner, steel saw cutting circular blade, etc.
23	Carpet weaving
24	Carrying and preservation of fruits and production of jam, jelly etc.
25	Cement products (without using asbestos / boiler / steam curing) like pipe, pillar, jafri, well ring, block/tiles etc. (should be done in closed covered shed to control fugitive emissions)
26	Ceramic colour manufacturing by mixing & blending only (not using boiler and waste water recycling process)
27	Chalk making from plaster of Paris (only casting without boilers etc. (sun drying / electrical oven)
28	Charging and repairing of batteries
29	Chilling plant and ice making without using ammonia
30	CO ₂ recovery
31	Coir (Without bleaching/dyeing)
32	Coke briquetting (sun drying)
33	Cold Storage
34	Compressed oxygen gas from crude liquid oxygen (without use of any solvents and by maintaining pressure & temperature only for separation of other gases)
35	Concrete batching plants
36	Copper, brass and metal utensils
37	Cotton and silk printing
38	Cotton Spinning. Weaving, ginning, clearing, pressing etc.
39	Cotton weaving in handloom & power looms.
40	Cutting, sizing and polishing of marble stone
41	Dal Mills
42	Decoration of ceramic cups and plates by electric furnace
43	Diesel pump repairing and servicing (complete mechanical dry process)
44	Digital printing on PVC clothes
45	Distilled water (without boiler) with electricity as source of heat
46	Domestic electrical appliances.
47	Electric lamp (bulb) and CFL manufacturing by assembling only
48	Electrical and electronic item assembling (completely dry process)

49	Electroplating, tinplating, welding etc.
50	Embroidery and lace manufacturing.
51	Emery powder (fine dust of sand) manufacturing
52	Engineering and fabrication units (dry process without any heat treatment / metal surface finishing operations / painting)
53	Engineering workshop and general fabrication works (Without any chemical Treatment)
54	Facility of handling, storage and transportation of food grains in bulk
55	Flavored betel nuts production/ grinding (completely dry mechanical operations)
56	Fly ash bricks/ block manufacturing
57	Fly ash export, transport & disposal facilities
58	Foam bed, latex threads
59	Footwear (Rubber and PVC)
60	Fountain pen manufacturing by assembling only
61	Furniture making
62	Garment making / Tailoring.
63	Gas operated baby boiler
64	Glass ampules and vials making from glass tubes
65	Glass putty and sealant (by mixing with machine only)
66	Glass, ceramic, earthen potteries, tile and tile manufacturing using electrical kiln or not involving fossil fuel kiln
67	Glue from starch (physical mixing) with gas / electrically operated oven/boiler
68	Gold and silver smithy (purification with acid smelting operation and sulphuric acid polishing operation) (using less or equal to 1 litre of sulphuric acid/ nitric acid per month)
69	Ground nut decorticating
70	Handloom/ carpet weaving (without dyeing and bleaching operation)
71	Heat treatment with any of the new technology like ultrasound probe , induction hardening , ionization beam, gas carburizing etc.
72	Ice cream or ice making
73	Insulation and other coated papers (excluding paper or pipe manufacturing)
74	Ivory, carving and ivory works

75	Jobbing and machining
76	Laundry, dry cleaning and dyeing
77	Leather cutting and stitching (more than 10 machine and using motor)
78	Leather foot wear and leather products (excluding tanning and hide processing except cottage scale)
79	Light engineering
80	Lubricating oil, greases or petroleum based products (only blending at normal temperature)
81	Making of paper boxes, bags, envelopes etc.
82	Manufacture and assembling of umbrellas and production of spare parts of umbrellas.
83	Manufacture and repair of musical instruments
84	Manufacture and repairing of brass and bell metal products
85	Manufacture and repairing of electric fans.
86	Manufacture of “aval” (Beaten rice) appam.
87	Manufacture of agarbathi and other cosmetics.
88	Manufacture of agricultural implements, screws etc.(blacksmith and foundry)
89	Manufacture of Beverages
90	Manufacture of biproduct from nonbiodegradable waste
91	Manufacture of cement products such as well-kerbs, tube, closets etc.
92	Manufacture of chinaware’s and crockery.
93	Manufacture of clay models
94	Manufacture of Cotton thread, rope twine etc.
95	Manufacture of electric meters, production of electric and allied products, repairing and servicing of electrical appliances.
96	Manufacture of electrical machinery and repairing of electric motors armature winding etc.
97	Manufacture of glass and glass products
98	Manufacture of hydrogenated oil
99	Manufacture of iron and steel furniture.
100	Manufacture of Jewelry
101	Manufacture of jute products including repairing of gunny bags.
102	Manufacture of large containers and chinaware.
103	Manufacture of lemongrass oil, candles etc.

104	Manufacture of miscellaneous wooden articles such as sticks, sandals, rules etc.
105	Manufacture of paperboard and paper hand.
106	Manufacture of quilts and mattresses.
107	Manufacture of rubber gloves.
108	Manufacture of Rubber products such as rubber sheets, nipples, rubber shoes including smoke-rubber.
109	Manufacture of sewing machine parts and assembling and repairing of sewing machine.
110	Manufacture of small machine tools and machine parts.
111	Manufacture of soaps involving process without generation of trade effluents (Saponification of fats and fatty acids only)
112	Manufacture of sports goods, balloons etc.
113	Manufacture of stone images and stone wares
114	Manufacture of structural stone goods, stone crushing, stone carving, stone dressing, etc.
115	Manufacture of structural wooden goods such as doors, beams etc.
116	Manufacture of syrup.
117	Manufacture of tin cans and copper vessels.
118	Manufacture of Tobacco products.
119	Manufacture of wood and wooden products
120	Manufacture of wooden furniture and fixtures.
121	Manufacture of wooden industrial goods
122	Manufacture of wooden utensils, photo frames, toys, etc., and photo framing.
123	Manufacturing of coir items from coconut husks
124	Manufacturing of formulated synthetic detergent products
125	Manufacturing of medical instruments
126	Manufacturing of metal caps containers etc.
127	Manufacturing of optical lenses (using electrical furnace)
128	Manufacturing of pasted veneers using gas fired boiler or thermic fluid heater and by sun drying
129	Manufacturing of shoe brush and wire brush
130	Medical oxygen
131	Mineral stack yard / Railway sidings
132	Mineralised water

133	Miscellaneous printing works including type cutting, book binding
134	Oil and gas transportation pipe line
135	Oil ginning/expelling
136	Oil mill Ghani and extraction (no hydrogenation/refining)
137	Oil mills (vegetables)
138	Optical frames
139	Organic and inorganic nutrients (by physical mixing)
140	Organic manure (manual mixing)
141	Packing materials manufacturing from non-asbestos fiber, vegetable fiber yarn
142	Packing of powdered milk
143	Padlocks
144	Paint (by mixing process only)
145	Paper Pins and U Clips
146	Phenyl/ toilet cleaner formulation and bottling
147	Polythene and plastic processed products manufacturing (virgin plastic)
148	Poultry, Hatchery and Piggery
149	Pressure testing units
150	Printing and publishing of books, newspapers and periodicals.
151	Printing of cotton textiles
152	Printing press
153	Processing and preservation of cashew nuts
154	Processing of Cardamom, ginger, pepper etc.
155	Processing, grinding, packing and distribution of coffee and tea
156	Production of Dairy Products
157	Production of rice, flour etc., by hand pounding.
158	Production of vinegar.
159	Puffed rice (muri) (using gas or electrical heating system)
160	Pulverization of bamboo and scrap wood
161	Radio and T.V. servicing and repairing.
162	Ready mix cement concrete
163	Repairing of electric motors and generators (dry mechanical process)
164	Repairing of photographic equipment, spectacles etc.
165	Repairing of watches and clocks
166	Reprocessing of waste cotton

167	Rolling mill (gas fired) and cold rolling mill
168	Rope plastic &cotton
169	Rubber goods industry (with
170	Rubberized coir mattresses
171	Sanitary fittings and other similar industries
172	Sawing and planning of wood
173	Scientific and mathematical instrument manufacturing apparatus manufacturing unit
174	Scrap Sourting
175	Seasoning of wood in steam heated chamber
176	Slaughtering preservation of meat, fish and cleaning fish
177	Small foundries
178	Solar module non-conventional energy apparatus manufacturing unit
179	Solar power generation through solar photovoltaic cell, wind power and mini hydel power (less than 25 MW)
180	Spice grinding
181	Steel furniture without spray painting
182	Steeping and processing of grains
183	Tamarind powder manufacturing
184	Tissue culturing
185	Toy making
186	Tyres and tube retreating (without boilers)
187	Vulcanizing and repairing of tyres and tubes
188	Watch, pen and spectacles repairing
189	Water Softening and demineralization plants
190	Weaving of silk by Handloom
191	Wooden electrical accessories
192	woolen hosiers making (Dry process only without any dyeing / washing operation)



LOCAL SELF GOVERNMENT DEPARTMENT PLANNING, PATHANAMTHITTA

PATHANAMTHITTA MUNICIPALITY