

Re-development Plan for Commercial Area of Kollam City: Focus on Chammakada and Surrounding Areas of Chinnakada

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Abstract: *Redevelopment is the actual situation and guideline of land uses and designs. The city redevelopment includes the migration of organizations, the destruction of designs, the movement of individuals, and the utilization of a famous space (government acquisition of property for public reason) as a legitimate instrument to take private property for city-started advancement projects. Over the long haul, metropolitan recharging advanced into a strategy dependent on obliteration and more on redesign and venture, and today is a fundamental piece of numerous neighborhood governments, frequently joined with little and enormous business motivations. The historic commercial areas and their streets are among the most important elements of historical city centres, which puts them at the forefront of areas needing appropriate policies to deal with their problems to survive for future generations. A place called Chamakada and surroundings, situated at the heart of Kollam city, has been an export & commercial core of Kollam, is considered the area for study. The study area identified comes under the AMRUT Scheme of Kollam Corporation. The uncontrolled traffic conditions, dilapidated conditions of the existing buildings, elevated pollution levels in the Kollam Canal Stretch, which runs through the Kollam City, made the old prominent market spaces lose their pride. The study focuses on Land Use Planning by inspecting the traffic pattern, transportation issues in congested areas at peak hours, and the implications of N.M.T., thereby analysing the redevelopment implications on Study Area and scrutinizing the significance of commercial space in CBD Area. The study identifies the solutions for the commercial redevelopment in the city. The study aims to fulfil the community needs and provide plan for the policymakers, which enables proper decision-making.*

Keywords: Redevelopment, Landuse, Infrastructure, Built-form

1. Introduction

Urban redevelopment has been seen by proponents as an economic engine and a reform mechanism and by critics as a mechanism for control. It may enhance existing communities, and in some case, result in the demolition of neighborhoods. [2].

The term renewal defined as a fashionable American term in the 1950s, which meant large-scale destructive redevelopment of an urban area, often it was adopted in the United Kingdom to mean the re-planning of towns or urban centers, to modernize them and provide access for traffic, whereas, redevelopment refers to demolition of blighted areas and development on the same site [3]. It is seen as a solution to existing problems of congestion and poor design, which sometimes results in wasteful resources, destroying communities, and creating urban deserts until building occurs [3]. Urban renewal activities in 1958 classified in the discussions of the World Housing and Planning federation into three main policies: redevelopment, conservation and rehabilitation, together with the methods of urban infill and revitalization. [1]. Urban renewal operations have included the most important procedures as

- Redevelopment,
- Rehabilitation,
- Conservation, and
- Urban infill [1]

Redevelopment objectives should likewise consolidate different parts of local area improvement like plan, protection of notable resources, public spaces, advancement of natural equity, ecological remediation and even issues that upgrade the degree of social administrations gave to neighborhood inhabitants [6].

India's Smart Cities Mission is a national-level urban initiative that is raising awareness of such approaches, and encouraging urban local bodies (ULBs) to promote area based development [4].

2. Importance of Commercial Redevelopment

Redevelopment includes the reorganization of the urban, functional and population structure of an existing urban area through the removal of the dilapidated buildings and neighborhoods that occupy the largest proportion of the existing urban fabric, with the exception of buildings of historical value, and then rebuilding them according to a new plan which shows the use of the land and the pattern of population distribution [1]. Many cities link the revitalization of the central business district and gentrification of residential neighborhoods to earlier urban renewal programs. Over time, urban renewal evolved into a policy based less on destruction and more on renovation and investment, and today is an integral part of many local governments, often combined with small and big business incentives [2].

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In India, various urban sector components were earlier addressed through a single mission (JNNURM- Jawaharlal Nehru National Urban Renewal Mission), these components have now been split across missions. For instance, AMRUT has prioritised water and sanitation over other objectives; SCM (Smart City Mission) is committed to area specific urban renewal and redevelopment; SBM (Swachh Bharat Mission) primarily addresses issues of hygiene, waste management, and public health; and HRIDAY (National Heritage City Development and Augmentation Yojana) is dedicated to the planned urban development of heritage cities [5]. Urban development processes in historical/commercial centers must be geared to preserving the urban character of the region, protecting the existing heritage and its originality, with a focus on human beings; they should focus on buildings of heritage value in order to balance social and economic concerns by environmental concerns, both urban and natural [1].

3. Aim and Objectives of the study

The study aims to provide a Re-Development plan for Chamakada& Surroundings of Kollam City.

The objectives of the study are:

- To study the Kollam city and its commercial developments.
- To study the pattern of traffic and transportation issues in congested areas at peak hours and the implications of N.M.T in the Study area.
- To analyse the redevelopment implications on Study Area.
- To analyse the significance of commercial space in the CBD Area.
- To provide the provisions for an improved built (urban) form.
- To provide policies guided toward the creation of an Area Redevelopment Plan.
- To provide a Re-Development Plan For Chamakada& Surroundings of Kollam CBD Area
- Re-Development Plan also has objectives related to the tourism potential and recreational activities with the provisions of infrastructure and other services by utilizing the natural setting in the study area.

4. Methodology

Methodology of the study derived from its objectives, at different stages of the study. It also uses information related with geospatial technology, Arc GIS, Total station, Auto-CAD and Mymaps for the study. Data collection for the study done through primary and secondary surveys, through questionnaires, reports and field surveys from the people, mainly shopkeepers, governmental archives and the governmental departments such as the NATPAC and the Spatial Analysis Wing of the District's Town planning department, Kollam. The surveys, and the departmental informations about the study area were made to analyze the scope of an area based redevelopment plan in the commercial area. The study area was taken and finalised after the conduction of reconnaissance/ physical surveys,

commercial surveys, analysing the issues and areas having the development potential. Demographical data for the study based on Census 2011 and the delineation of the study area was done by deriving several parameters from various literature surveys. After analyzing the data collected from the case studies of commercial redevelopment, parameters derived for the study area, to derive therecommendations for a redevelopment plan for the commercial area.

5. Results and Discussion

Trade and commerce considered as one of the vital sectors of the planning area. The city centres viz Chinnakada and surroundings had been developed as the first order commercial node in the district. The city needs to provide higher-order commercial facilities to all the people of Kollam district.

The main challenge facing by the street vendors is that such types of trading activities are only effective for pedestrians. They have been trafficked on specific road stretches. But many of these sidewalks are limited by spall for movements only. In many instances, the authorities have ordered many amenities and other modern sheds but failed. Public platforms with clean exemplary waste disposal facilities and time-bound for pedestrian crossing are constructed. In foreign countries, can redeem a crowded group of people through these business on clean pathways offering public hygiene. Parking facilities and toilet facilities are essential when providing such guidance.

The financial institutions in higher-order nodes/junctions. Availability of such institutions should be equally available for the public. Hence the equitable distribution of financial institutions is not general in the planning area.

Through the years, the developments in road traffic led to the negligence of trade through water ways in Chamakkada –Chinnakada area. This resulted in wide problems like traffic congestion due to narrow roads, lack of parking and other infrastructure facilities etc.

6. Commercial Development

Kollam (past Quilon) is a district in the southern region of Kerala, found 70 km north of the state's capital Thiruvananthapuram. The Arabian Sea flanks it on the west, Tamil Nadu on the east, Alapuzha and Pathanamthitta locale on the north, and Thiruvananthapuram region on the south. Chinnakada is the central business district (CBD), the commercial and business centre of Kollam city, in which Chamakada is a part. Chinnakada is lying in the Coordinates: 8°53'13.5" N, 76°35'26.47" E.

Chamakada Area of Chinnakada is located in the confluence of three roads – Main road, Paikada road and Thamarakulam road. Also, the Vadayattukotta road has been taken in the study part, because of its commercial importance. The Chamakada and area along the access roads are demarcated as the Commercial hub is selected as the Study Area.

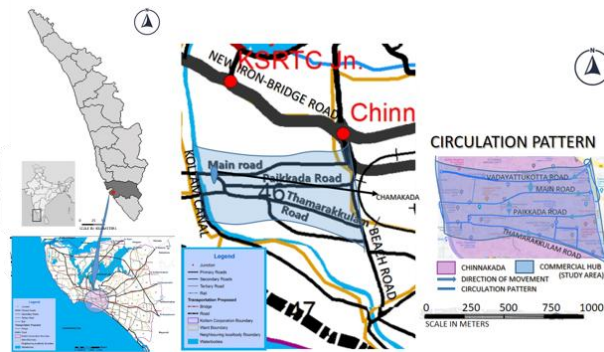


Figure 1 : Location of study area

Chinnakada or Chinnakkada is considered the heart of the city of Kollam in Kerala, India. Chinnakada is a busy junction where 5 city roads and one National highway interconnect at a traffic roundabout. The city's symbolic clock tower and the Railway Station, located in Chinnakada. Chamakada or Chamakkada is one of the exchange center points of the city of Kollam, India. It is a significant neighborhood in the city and is situated at the center Downtown Kollam region. The region is extremely well known for discount vendors and rice dealers.

5.2 Commercial Land use

The Chinnakada junction has highest CCI (Commercial Concentration Index) higher than 30 is the first order node of KMC area. Sakthikulangara, Anchalumoodu, Pallimukku nodes area coming under 1st order nodes.

The range between 20-30 lies in 2nd order node and the nodes coming under these category are Monnamkutty, Kavanadu and Kadappakkada. The CCI values lie under 10-20 are coming under 3rd order are Ramankulanagara and Ayathil.

Remaning nodes area all coming under 4th order nodes. Depending on the commercial landuse percentage the hierarchy of commercial nodes are depicted on the figure of commercial landuse map.

Total number of markets in Kollam Corporation area is 24. It includes the oldest market in established in 1914 in Chamakada. 15 nos of them are owned by corporation and 8 nos area privately owned.

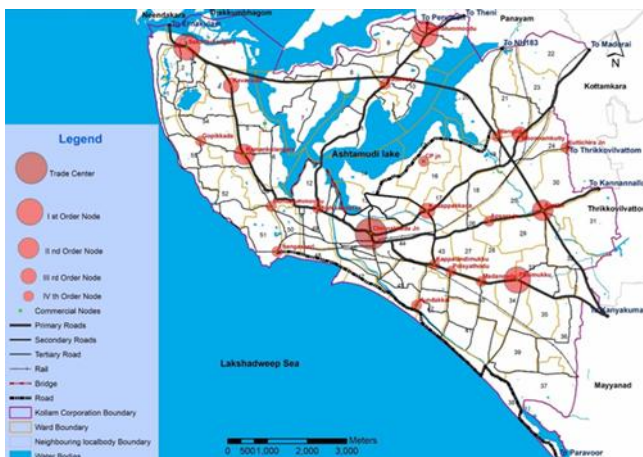


Figure 3: Commercial Nodes

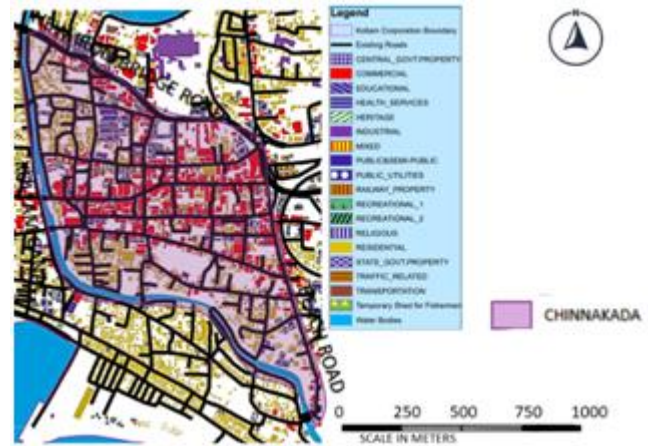


Figure 4 :Base Map generated on G.I.S with Spatial Analysis Wing, Department of Town planning, Kollam

After proper map detailing, the Study Area was selected, to find out the commercial Land-use of the marked Chinnakada Area for its selection.

With the Land use classifications and the Base map, a general map representing land use zones created to have an understanding of the commercial hub and its activities to be chosen as the study area.

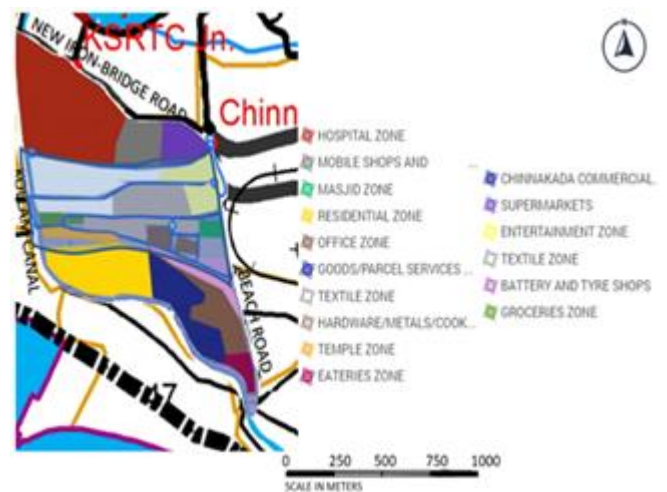


Figure 5: Land use zones

The land-use zones identified each zone and analysed that towards the core strip is a mixed zone of various commercial activities and other prominent functions, including entertainment, religious sites, etc.

5.3 Spatial Mapping

The Spatial Mapping of the study area, provides a brief characteristics of the buildings, along each of its significant roads.



Figure 6 :Spatial Map of study area

5.4 Traffic & Transportation

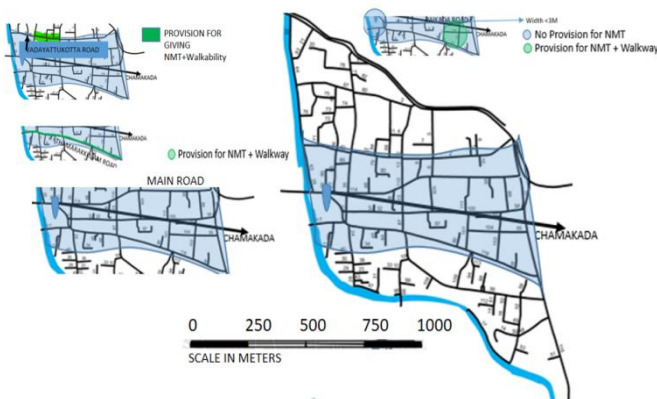


Figure 6:Traffic & Transportation along Study Area

Along Vadayattukotta Road- The provision to give N.M.T (Non-motorised Transit) are given along the road width ranges to 9m, having its possibility.

Along Main Road- The provision to give N.M.T (Non-motorised Transit) can be possible only by minimising the vehicular traffic since it is the road that is suffering the most vehicle congestion than all the other roads in the study area.

Along Paikada Road- The provision to give N.M.T (Non-motorised Transit) can be possible in the marked area. It can also be provided along the non-provision marked area by restricting the private passenger vehicular flow and encouraging pedestrian access.

Along Thamarakulam Road- The provision to give N.M.T (Non-motorised Transit) can be possible in the marked area, it can be developed into a walkway along the sides, as well, since it is an alternate access route to the market place and the residential zone.

5.5 Infrastructure

The infrastructure along the Study area, taking into consideration, is the Streetlights, Drainage, Drinking Water, Toilet and Recreation facilities.

The infrastructure, detailed along with the land connecting road strips of the Study area, same as taken in the Traffic and Transportation. (Figure 7).

5.6 Built-form

The Built-form gives the urban image of the buildings in the area, their age, common characteristics and specific condition or use. The Built-form along the road strips in the Study area are taken, as follows. (Figure 8).

5.6 Analysis & Issues

There are several issues along the study area, some of these along the road strips are discussed below.

5.6.1 Main Road

The buildings in Chamakada market are mostly old, have old and conventional roofing, they are markets storage spaces for the grains. They are mostly seen close to the chamakada – paikada stretch.

NAME OF THE ROAD	INFRASTRUCTURE				
	STREETLIGHT	DRAINAGE	DRINKING WATER	TOILET	RECREATION FACILITIES
1. VADAYATUKKOTTA ROAD	YES	YES	YES	YES	YES
	WORKING CONDITION	ALONG ROADSIDE		INSIDE SHOPPING COMPLEXES	THEATRES
	PROVIDED ALSO ALONG THE ROADS LINKING THE MAIN ROAD				NOT IN WORKING CONDITION
NAME OF THE ROAD	INFRASTRUCTURE				
	STREETLIGHT	DRAINAGE	DRINKING WATER	TOILET	RECREATION FACILITIES
2. MAIN ROAD	YES	YES	NO	YES	YES
	NOT IN FULLY WORKING CONDITION	ALONG ROADSIDE		INSIDE SHOPPING COMPLEXES	THEATRES
	PROVIDED ALSO ALONG THE ROADS LINKING THE PAIKADA ROAD			NOT ALONG THE PETTY (WHOLESALE AND RETAIL) SHOPS	USHA THEATRE IS LOCATED IN BETWEEN THE MAIN AND PAIKADA ROADS
NAME OF THE ROAD	INFRASTRUCTURE				
	STREETLIGHT	DRAINAGE	DRINKING WATER	TOILET	RECREATION FACILITIES
3. PAIKADA ROAD	YES	YES	NO	YES	YES
	WORKING CONDITION	ALONG ROADSIDE		INSIDE SHOPPING COMPLEXES	USHA THEATRES
	PROVIDED ALSO ALONG THE ROADS LINKING THE THAMARAKULAM ROAD			NOT ALONG THE PETTY (WHOLESALE AND RETAIL) SHOPS	
NAME OF THE ROAD	INFRASTRUCTURE				
	STREETLIGHT	DRAINAGE	DRINKING WATER	TOILET	RECREATION FACILITIES
4. THAMARAKULAM ROAD	YES	YES	NO	NO	AJ HALL
	WORKING CONDITION	ALONG ROADSIDE & CANAL			NOT IN A WORKING CONDITION
		FOUL SMELL, WATER LOGGING & POLLUTION			

Figure 7 :Traffic & Transportation along Study Area.

NAME OF THE ROAD		BUILT-FORM		
1. VADAYATUKOTTA ROAD	COMPRISES	BUILT-AGE	COMMON CHARA.	SPECIFIC CONDITION/USE
	Musilyar Buildings, Stationary & Furniture complexes, Rada Bazaar, Mobile shopping complexes, Textile showrooms, etc.	25-60	Mainly consists of shopping complexes for different purposes and function.	New complexes for Stationary items, such as shops like Priceless shifted its location from main road, for its easily access and business. Musilyar Buildings are in the verge of reconstruction, due to its present condition and future business.

NAME OF THE ROAD		BUILT-FORM		
2. MAIN ROAD	COMPRISES	BUILT-AGE	COMMON CHARA.	SPECIFIC CONDITION/USE
	textile showrooms, restaurants, stationary items, exclusive clothing showrooms, jewellery shops, bakeries, sports shops, street shops, residencies etc.	25-100	Mainly consists of textile centre and a mixed-use zone.	Can buy items of day to day life.

NAME OF THE ROAD		BUILT-FORM		
3. PAIKADA ROAD	COMPRISES	BUILT-AGE	COMMON CHARA.	SPECIFIC CONDITION/USE
	textile showrooms, hardware/metals/cooking-ware shops, stationary items, jewellery shops, bakeries, street shops along the byroutes, residencies etc.	25-100	Mainly consists of Petty shops of meta/hardware/cookery/fruits and grains shops of Asbestos and concrete roofs.	Can buy household items.

NAME OF THE ROAD		BUILT-FORM		
4. THAMARAKULAM ROAD	COMPRISES	BUILT-AGE	COMMON CHARA.	SPECIFIC CONDITION/USE
	Residences, Government offices, tyre and battery shops, stationary items, jewellery shops, bakeries, street shops along the byroutes, residencies etc.	25-50	Mainly consists of Presidences, apartments and government offices.	Accommodation availability directly or by rent. Accessibility to private bus stand and other modes of transport.

Figure 8: Built-form along Study Area.

The street lights are lit in the main road to paikada link road. Eventhough, the main road lights doesn't function properly. There is traffic congestion on this road and the main cause is due to a large number of commercial spaces, but also with the improper parking of the vehicles, especially the two-wheelers covering small spaces and making it difficult for all other modes of vehicles to accommodate.

5.6.1 Paikada Road

The road spaces are encroached by the shop-keepers. Due to this, Vehicles parking alongside the road gets affected. There isn't proper pedestrian access.

5.6.2 Thamarakulam Road

The private bus stand of Andamukam is located adjacent to the PSC office and in between the roads of Paikada and Thamarakulam. Even though, the bus stand has the potential to develop parking spaces for vehicular traffic. There is slight congestion in the traffic route and have insufficient parking facilities.

There is a scrap shop adjacent to the Andamukam private bus stand to collect the scrap materials and items which can be recycled and reused. There are certain interest groups (as shown in pictures) that collect from them. Even though it's a

better practice there are encroachments on to the existing drain covered walking lanes.

There is a drainage problem existing in the Andamukam road, since the roads have a raised elevation from the ground, making it difficult for the shopkeepers to manage their sales in the monsoons and rainy seasons. The shops here are mainly managed by migrants from Rajasthan. Ramdev Trading Co.in the study area is an example of it.

6. Conclusion

This chapter deals with the conclusion of the entire study. It states that the objectives of the study have been achieved. The way forward for this subject is also mentioned by stating proposals for future redevelopments.

The Chamakada is an identity of the past and is rich in its possibilities as an export and trade hub, with its dominance of market culture along with the CBD Area.

The whole study are a prerequisites development in terms of providing infrastructure. The area lacks proper water supply, proper sewage and solid waste management.

By strengthening the trade links along the water channels, can also bring tourism potential towards the area. The true identity and culture of this Commercial hub should be protected to understand a sense of feeling of the place.

Trade & Commerce can be considered as one of the key sector of the planning area. The city centres viz. Chinnakada& surroundings had been developed as the first order commercial node, facilitates to all the people of Kollam district. The main challenges facing by the street vendors is that, such type of trading activities are only effective for pedestrains. They are trafficked on specified road stretches. Parking facilities and toilet facilities are essential when providing such guidance.

The financial institutions are commonly seen in the higher order nodes/ junctions. Equitable distribution of financial institutions is not available in the planning area. For transfer of goods to the commercial spaces possibilities have been identified. Trucks can ply through the Thamarakulam road, at fixed intervals of time, which also have provisions for NMT.

Government policies for redevelopment of the Study Area, such as Ullarungal Scheme can be adopted for the walkway proposals. Electric rickshaws as per the current Kerala Budget- 2021, shows its prominence. Kerala IT Mission has its wide applications when linked with the working of the Town planning Department of Kollam.

The inhabitants & visitors can have an involvement in the expanded quality of life to create a more wonderful & reasonable place to live & work.

7. Recommendations

Recommendations for the commercial redevelopment of the

Chamakada-Chinnakada areas are based on three objectives: Environmental Sustainability, Liveability, and Economic & Cultural Vitality. From the above analysis, recommendations are to be made for 4 parameters : Land use, Infrastructure, Transportation and Built-form.

- The pedestrian ways, elevated way, E- Rickshaw, Truck waiting point and Smart bus stop increases the accessibility of goods and passengers to the place.
- The Trans-CAD facility can provide better routing facilities and effective use of road networks, with the round-about at Chinnakada Junction as its centre can create more effective route mapping and increases the connectivity of the place.
- The floating market, public space provision along the AJ park can bring business and enhances tourism potential for the future.
- The possibility of Water Metro can also be acknowledged along the Kollam Canal connecting the North and South end points of Kerala.
- The Drainage separation and Waste Shark can enhance the availability of freshwater and, can protect against water-logging and foul smell.
- A new Built-form with modern roofing solutions, which adds membrane to the conventional roofing can enhance the life of the old buildings along with the Chamakada Market Area and makes a unique urban form, which also makes it identifiable.
- Encourage community awareness programs to incorporate a sense of community within the people.

References

- [1] Mehanna, W. A. E. H., & Mehanna, W. A. E. H. (2019). Urban renewal for traditional commercial streets at the historical centers of cities. *Alexandria Engineering Journal*, 58(4), 1127-1143.
- [2] Md. Abdul Khader (2017). *A Report on Urban Redevelopment*.
- [3] Dhote, K. K., Silakri, R. K., & Onkar, P (2013). *Urban Renewal and Redevelopment: Identification of Appropriate Planning Intervention for Indian Cities*.
- [4] Shenvi, A., & Slangen, R. H. (2018). *Enabling smart urban redevelopment in India through floor area ratio incentives*.
- [5] Aashima Verma, Gunjan Bansal (2016). *Urban development in India: A special focus Public Finance Newsletter*.
- [6] Ahluwalia, I. J. (2011). Planning for urban development in India. *ICRIER Paper, Indian Council for Research on International Economic Relations (ICRIER), New Delhi*.
- [7] Mowla, Q.A. (2001): Governance for Urban Development: the Case of Dhaka City in Asian Studies, *Journal of Jahangirnagar University, Dhaka, No.20, June 2001 pp.66.77*.
- [8] Mahbub-Un-Nabi, A.S.M. (2012), *Urban Planning Techniques*, Prohati Library: Dhaka, Bangladesh.
- [9] M.H.M. Al-Saffar, G.M.R. Al-Siliq (2014). *The sustainable urban development in Al_Kharkh historic center*. *J. Eng.*, 20, pp. 1-28.
- [10] W.A.E.-H. Mehanna (2015). *A Proposed methodology*

to facilitate the positive social contribution in the conservation of heritage zones, Faculty of engineering, Tanta University, Egypt.

- [11] O.A. Alwan (2009). *Preserving the heritage markets within an integrated framework to preserve the urban heritage in the historical centers of cities*, *J. Plan. Develop.*, 7, pp. 105-124.
- [12] S.M. Khedr (2014). *The impact of the principles of urban street design on the visual perception in a commercial street*, Sudan University of Science and Technology, Sudan.
- [13] Reports of Spatial Analysis Wing, Department of Town planning, Kollam.
- [14] NATPAC, Traffic and Transportation Studies for AMRUT Cities - Kollam Corporation, March 2020.

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