

Violation of Development Control Provisions by Public and Semi-public Developers along Kachia Road, Kaduna Metropolis

Damina, Bulus Gyuk¹, Andrew, Julius Baji²Yakubu,
Ahmed Ubangari³Deborah Babarinsa⁴,

¹Department of Urban and Regional Planning, Waziri Umaru Federal polytechnic, Birnin Kebbi, Nigeria
gyuk2010@yahoo.com

²Department of Environmental Management, Kaduna State University, Kafanchan Campus Kaduna State, Nigeria
bajijulius@gmail.com

³Department of Urban and Regional Planning, Nasarawa State Polytechnic, Lafia, Nasarawa State, Nigeria
yaxahmed@gmail.com

⁴Department of Environmental Management, Kaduna State University, Kafanchan Campus Kaduna State, Nigeria
yemisibabarinsa@gmail.com

Abstract: Urban roads are planned such that provision is made for future expansion through reservation of adequate right of way to allow free flow of traffic. Violation of development control guidelines as it affects road reservation is a common phenomenon in cities of developing countries especially by informal sector activities. It is worrisome when public and semi-public activities and developments constitute part of the problem. This presents an ugly situation, because areas reserved for road expansion and hosting of road furniture are taken up not only by informal activities but by public and semi-public activities. The study identified developments along the Kachia road reservation with emphasis on public and semi-public developments. Results revealed that government institutions and corporate private organizations are the principal violators of encroachment along the Kachia road reservation. It is therefore, among other recommendations that immediate intervention be undertaken in areas that are most affected by encroached activities through clearing of such developments; as well as strict enforcement of development control to ensure compliance by all.

Keywords: Encroachment, reservation, public and semi-public, developments

I. Introduction

Development in cities normally patterns along major transportation routes, due to advantage of ease of accessibility. Roads are designed and provided principally to convey inter and intra city traffics. Urban roads are planned in such a way that provision is made for future expansion by provision of adequate right of way to effectively provide for carriage way, shoulders, side drains, road furniture and reservation for future expansion [9]. These provisions are made to allow for free flow of vehicular and pedestrian traffics [2]. In recent times, competition among urban uses for accessibility and easy contact to customers, are responsible for proliferation of hawking, parking, shopping, banks and other urban developments within the paths designated for road reservation [7]. These development, although contribute immensely to employment generation and income, but has its attendant planning implications [8]. This paper therefore, explores violation of development control provisions on road reservation especially by public and semi-public uses in Nigerian cities, with the choice of Kachia Road in Kaduna metropolis as a case study.

Kaduna has a number of inter-city and intra city roads of which the Kachia road is the primary movement axis in Kaduna South. It serves both intercity and intra-city purposes connecting major towns like Sabon Tasha, Mararaban Rido, Kachia and the Kaduna Refinery and Petrochemical Company (KRPC). Kachia road has a designed right of way of 60 meters. However, observations revealed that a number of activities like commercial (permanent and temporary) shops, on street parking, mechanic workshops, and institutional buildings are located within the road reservation. Private developments are easily controlled by the Development Control Department of the Kaduna State Urban Planning and Development Authority (KASUPDA). The control of development by public and semi-public agencies presents a rather difficult and in some cases impossible situation for KASUPDA to sanction. This is so, because both KASUPDA and those public developers are state owned agencies with legal backing to operate.

It is argued that transportation plays a key role in the creation, growth, consolidation and even the decline of towns [5]. Indeed, the urban road of a town is of immense importance to the economic development and livability of the town. The spread of production, trade ideas or acquisition of knowledge and the economic growth of mankind depend on mobility [12].

1.1 Definition of Terms

Roads are paths established over land for passage of vehicles, people and animals [6]. Roads provide dependable pathways for moving people and goods from one place to another. Roads range in quality from dirt paths to concrete paved multi-lane highways. Urban road network refers to the continuous linkages that exist among all categories of roads in spatial area. Urban roads are those which connect the city to other parts of the territory or link the various settlements with them. The different types of urban road network differ in location, amount of traffic and speed at which traffic can safely travel[1].

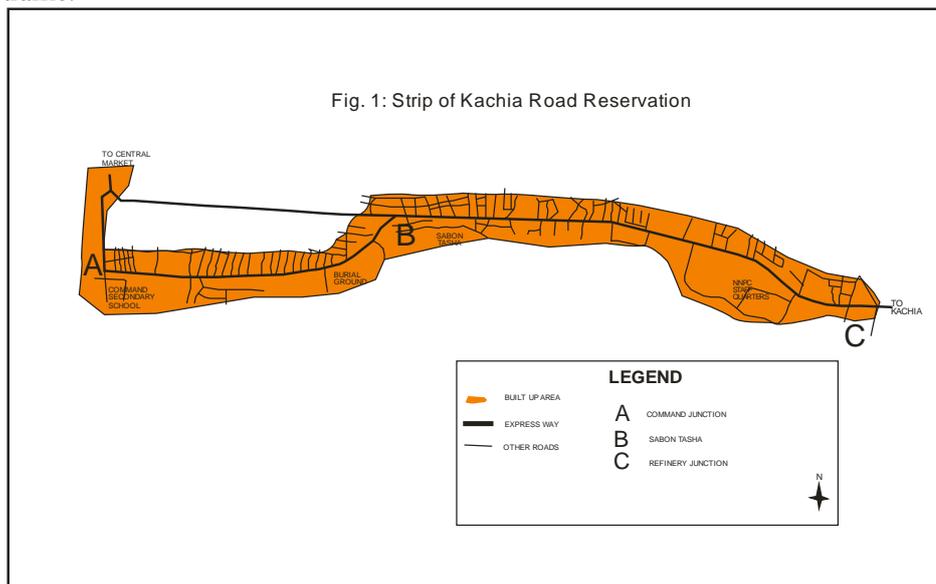
Fundamentally, there are two broad types of road classifications; the regional and urban roads. This broad classification derives mainly from complexity in design and functionality. Ideally each class of road leads to the next greater volume of traffic [10]. Therefore, a system of urban roads hierarchy has the following order and right of way as contained in the Zaria master plan as shown in Table 1.

Table 1: Urban Road Types based on Right of Ways

S/No	ROAD TYPE	RIGHT OF WAYS (m)
1.	Highway/Bypass	90
2.	Arterial Road	60
3.	Sub-Arterial	45
4.	Feeders	30
5.	Collector	18
6.	Residential Street	13.5
7.	Loop Street/Cul-de-Sac	9
8.	Service Lane	5 – 8.0

Source: adopted from [4]

Kachia road is the spine of movement in the southern part of Kaduna Metropolis, which starts from the Ahmadu Bello Stadium roundabout and extends through to refinery junction. It connects Kaduna central to the southern part of Kaduna state. It is also the main medium connecting other access roads from Sabon Tasha district. It is one of the busiest roads in the southern part of the metropolis which cater for both urban and regional traffic.



Source: Authors 2016

Development Control is the process of implementing building and subdivision regulation and specifications with a view to ensuring that physical developments in urban and rural lands proceeds according to a predetermined standard[11]. Most of the problems confronting Nigerian cities today probably would have been prevented if there is effective development control. In the absence of development control, not only is urban liveability threatened but also, often steps taken to contain the problem pitches the people against the professionals in the development control departments [12]. It is worthy of note, that in few cases where development control is termed successful in Nigerian cities, it is purely effected on private non-corporate developers. Despite the provisions in the Nigerian Urban and Regional planning Law of 1992 which mandates the development control department to regulate all developments on land. Government agencies most times do not see reasons to approach the development control department before commencement of development. This is because of the feeling that development control department is also a government agency like others.

Encroachment in the context of this paper means any excavation, digging, paving, landscaping, and construction of an improvement or placement of personal property within an Easement or Right of Way [3]. Encroachments include, but not limited to fences, sidewalks, driveways, mailboxes, newspaper boxes, utility boxes, and poles, trees, shrubs, grass, sprinklers and other landscaping improvements[5].

1.2 Factors Responsible for the Choice of Kachia Road Reservation

The Kachia road is one of the major movement corridors linking the city center and the settlements in the southern part of the metropolis and state. The road passes through the Sabon Tasha. The road is very busy hence it has high record of pedestrian and vehicular movement. The nature and physical condition of the road reservation is suitable for future road expansion. The road leads to the Kaduna refinery (KRPC) a major pull factor along the Kachia road. In addition, lack of strict enforcement of development control along the road permits the nature of activities and development along the road reservation.

II. Methodology

The research relied on both Primary and secondary data. Primary data was sourced through the use and field observation to identify various land uses located within the Kachia road reservation and their implications. While Secondary sources includes the review of literature and records relating to concepts, types and hierarchy of urban roads from published and unpublished materials, land use maps from the Kaduna State Urban Planning Authority (KASUPDA), FMWH, Kaduna south and Chikun local governments respectively. Data analysis was undertaken using simple statistical computation and presentation in tables, pictures and illustrations.

III. Results and Discussions

3.1. Existing uses and Development Activities along the Kachia Road

Six major development activities are located within the Kachia road reservation and are presented in the table 2 below.

Table 2: Kachia Road Reservation: Encroachment activities.

S/No	Encroachment Activities	Area Coverage (Ha)	Area (m ²)	Area %
1.	Commercial	9.957	9957	10.5
2.	Industrial	8.954	8954	9.7
3.	Public and semi public	8.802	8202	8.2
4.	Mixed use (commercial residential)	6.211	6211	6.5
5.	Agricultural	1.651	1651	1.7
6.	Open spaces	58.833	5883	59.5
	Total	93.800	93800	100

Source fieldsurvey, 2012

3.1.1 Commercial Activities

This is the dominant activity located within the Kachia road reservation. It consists of banks, street trading, corner shops, restaurants, hotels, computer centers, un-organized mini-market, and filling stations representing 10.5% of the total activities along the road.

3.1.2 Light Industrial Activities

This is the next major activity which consists of motor mechanic, motorcycle mechanic, carpentry, bicycle repairs, and block industries. This activity covers 8.954 hectares which makes up about 9% of the total activities within the road reservation as shown in table 2

3.1.3 Public And Semi Public Activities

These includes the Kaduna Polytechnic College of Administration and Social Studies, Kaduna South District Office (KASUPDA), Command Secondary School, places of worship (Churches), PHCN collection centre, Kaduna State Judiciary Court, Federal Ministry of Works (annex), Kaduna State Board of Internal Revenue, Motor park, Narayi Development Area Office covering 8% of the road reservation as shown in table 2.

3.1.4 Mixed Land Activities

These activities are located along the Television -Sabon Tasha axis and consist of residential and commercial uses. These buildings in most cases have two rooms comprising a living room and another room facing the road used as shop. This covers about 6.211 hectares, representing 6.5% of the road reservation as shown in table 2.

3.1.5 Agricultural Land Activities

Areas used for Agriculture, covers about 1.651 hectares and are located mainly along the by-pass after Command Secondary School towards the right hand side of the road reservation before the Sabo bridge. Agricultural land is also located within the polytechnic staff quarters, and before refinery junction. This activity constitutes 1.7% encroachment of the road reservation.

3.1.6 Open Spaces

Open spaces covers 58.833 hectares and has the largest percentage of 59.5% of existing activities on the reservation area. This consists of organized and unorganized open spaces which includes recreational areas like football field, beautification areas, cemetery, circulation and other incidental uses.

3.2 Encroached Public And Semi Public Developments

3.2.1 Banking Activities

There are not less five banks namely FCMB, Stanbic IBTC bank, Micro finance bank, Eco bank and Keystone bank located along the Kachia road reservation. These banks owing to their activities, has the potential of generating high traffic thereby constituting serious movement and environmental challenge along that axis.

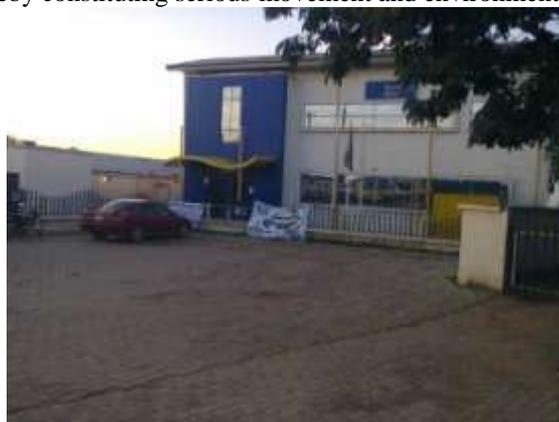


Plate 4.1: Keystone Bank developed within the Kachia road reservation at Sabon Tasha

Table 3: Kachia Road Reservation: Banking Activities

S/No	Bank	Number	Area (Ha)	Area (m ²)
1.	FCMB	1	0.04	400
2.	Syanbic IBTC	2	0.038	380
3.	Ecobank	2	0.026	260
4.	Keystone	1	0.04	400
	Total	6	0.144	1440

Source Field Survey, 2012

3.2. Institutional Activities

This includes public and institutional activities located along the Kachia road. They include the Command secondary school, Kaduna polytechnic (college of administration and social studies by-pass campus), Kaduna south district office (KASUPDA), PHCN collection centre, Kaduna state Customary court, Federal Ministry of Works, Narayi Development Area, Kaduna board of internal revenue. Although, some of these activities do not directly encroach on the reservation, their presence has led to increase in traffic and parking along the Kachia road (See table4).

Table 4 Kachia Road Reservation: Institutional Activities

S/No	Encroachment Activities	Area (Ha)	(m ²)
1.	Command Sec. Sch.	3.09	3090
2.	Kaduna Polytechnic	4.70	4700
3.	KASUPDA	0.01	100
4.	PHCN	0.012	120
5.	Federal Ministry of Works	0.014	140
6.	Kaduna state Judiciary Court	0.01	100
7.	Narayi Devt. Area Government	0.06	600
8.	Kaduna board of internal revenue	0.01	100
	Total	7.906	7906

Source: Field Survey 2012

3.3 Associated Problems As A Result Of Violation By Public And Semi Public Developers Along Kachia Road Reservation

3.3.1 Traffic Congestion:

Results from field survey conducted reveals that institutional and largely commercial activities within the Kachia road reservation generate high traffic volume. Areas like Command Junction and Sabon Tasha are noted to have the dominant activities and generate the highest volume of traffic within the study area. This is responsible for the high concentration of parking within Sabon Tasha area and Command junction.

Table 5: Kachia Road Reservation- Traffic Volume at selected high traffic points

S/No	Location/Station	Inflow (PCU)	Outflow (PCU)	Total (PCU)
1.	Sabon Tasha	24596	27977	52573
2.	Command Junction	21877	22183	44060
	Total	46473	50160	96633

Source: Field Survey, 2012

The survey period for both stations was twelve (12) hours from 7 am to 7pm conducted for a period of five (5) days. High traffic volume is responsible for the congestion largely due to commercial activities in these areas and the location of public offices and corporate organization offices.

Indiscriminate Parking: The survey conducted along the problem area shows the parking accumulation in the table below:

Table 6: Kachia Road Reservation: Parking Accumulation at selected traffic points:

S/No	Location	Mode of Transportation	Parking Accumulation
1.	Command Junction	Motor cycle	232
		Private cars	30
		Mini buses	502
		Taxi	821
		Long vehicle	27
	Total		1612
2.	Sabon Tasha	Motor cycle	551
		Private cars	294
		Mini buses	869
		Taxi	993
		Long vehicle	138
	Total		2845

Source: Field Survey, 2012



Plate 4.4: On-street parking along the road

3.3.2 Accident

High accident rates were recorded along Kachia road between the command junction and Sabon Tasha, 225 accidents were reported in 2009, these accidents decreased to 194 in 2010. The figures greatly increased to 547 in 2011 and increased again to 551 in the year 2012. This was as a result of numerous activities on this road which generates high traffic volume, indiscriminate parking/on street parking and reduction in the road capacity.

Table 5: Kachia Road Reservation accident record, 2010-2012

S/No	Year	Total number of Accident reported	Number of Accidents on Kachia road			Percentage
			A	B	Total	
1.	2009	225	64	161	225	15
2.	2010	194	82	112	194	13
3.	2011	547	179	368	547	36
4.	2012	551	219	332	551	36
	Total	1517	544	973	2089	100

Source: Road Safety (DTO)/Road Union Sabon Tasha

A= Command junction – Before bridge

B= after bridge – Refinery junction

3.3.3 Obstruction Of Road Visibility Plane:

There are numerous minor road intersections within the area. These road intersections are major activity areas, thereby reducing the visibility plane for vehicles at junctions which often results to accidents. The main intersections include the post office junction, the UngwaPamajunction and court road junction.

3.4 Summary Of Findings

Survey result reveals that 36.6% of the Kachia road reservation has been taken over by various activities among which include public and semi-public activities, light industrial, Commercial, Banking Activities, Petrol stations, Religious Activities etc. These activities (at strategic points and locations) cause problems like congestion, traffic conflicts, accidents and indiscriminate parking due to lack of provision for parking. High volume of traffic at strategic locations and indiscriminate parking are major contributors to accidents within the study area. There is conflict between pedestrian and vehicular traffic in Sabon-Tasha. The commercial activities were observed to be responsible for traffic generation and also the on-street parking which reduces road width thereby resulting to accidents. On-street parking, indiscriminate placement of sign posts and erection of temporary structures reduces visibility and the aesthetic value of the environment.

IV. Conclusion

The relationship between transportation and land use development is a matter of much theoretical interest, practical importance and one that has received considerable attention over many years in many countries. Therefore, analysis of encroachment of development activities on urban road reservation along the Kachia road Kaduna, conforms to the need to regulate development along major roads within cities. Efforts have been made to identify the types and problems of such activities within the road reservation. However, the purpose of the research is to identify developments located within the road reservation, which is an indication of low enforcement of development control and adherence to development guidelines by developers. The uniqueness of Kachia road is that government agencies and corporate private organizations are active contributors to the problem. Finally the authorities concerned with the enforcement of development guidelines in the metropolis should ensure strict compliance to tenets of development control as it affects road reservation. This will not only enhance the visual quality of the environment but will ensure accessibility and functionality of major routes.

V. Recommendations

1. The Zonal Controller of Works and the Kaduna State Urban Planning Authority (KASUPDA) should ensure that all principles and standards are fully observed and guidelines are enforced.
2. The federal government through the federal ministry of works should ensure strict compliance with its policy on road construction and setbacks. The Ministry should partner with KASUPDA zonal officers to control development along the road reservation.
3. The Zonal Controller of Works and KASUPDA should improve development control guidelines, discourage corrupt practices and promote professionalism. This can be achieved through the establishment of an ad-hoc committee, charged with the responsibility of ensuring strict compliance with the established planning laws at the state level and the engagement of more professionals in relevant fields. Immediate action should be taken where violation is identified so as to prevent encroachment at early stage.

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