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Entegrating the urban interface between town and gown: stimulating the socio-economic edge conditions between the University of Lagos and its host communities for symbiotic benefits

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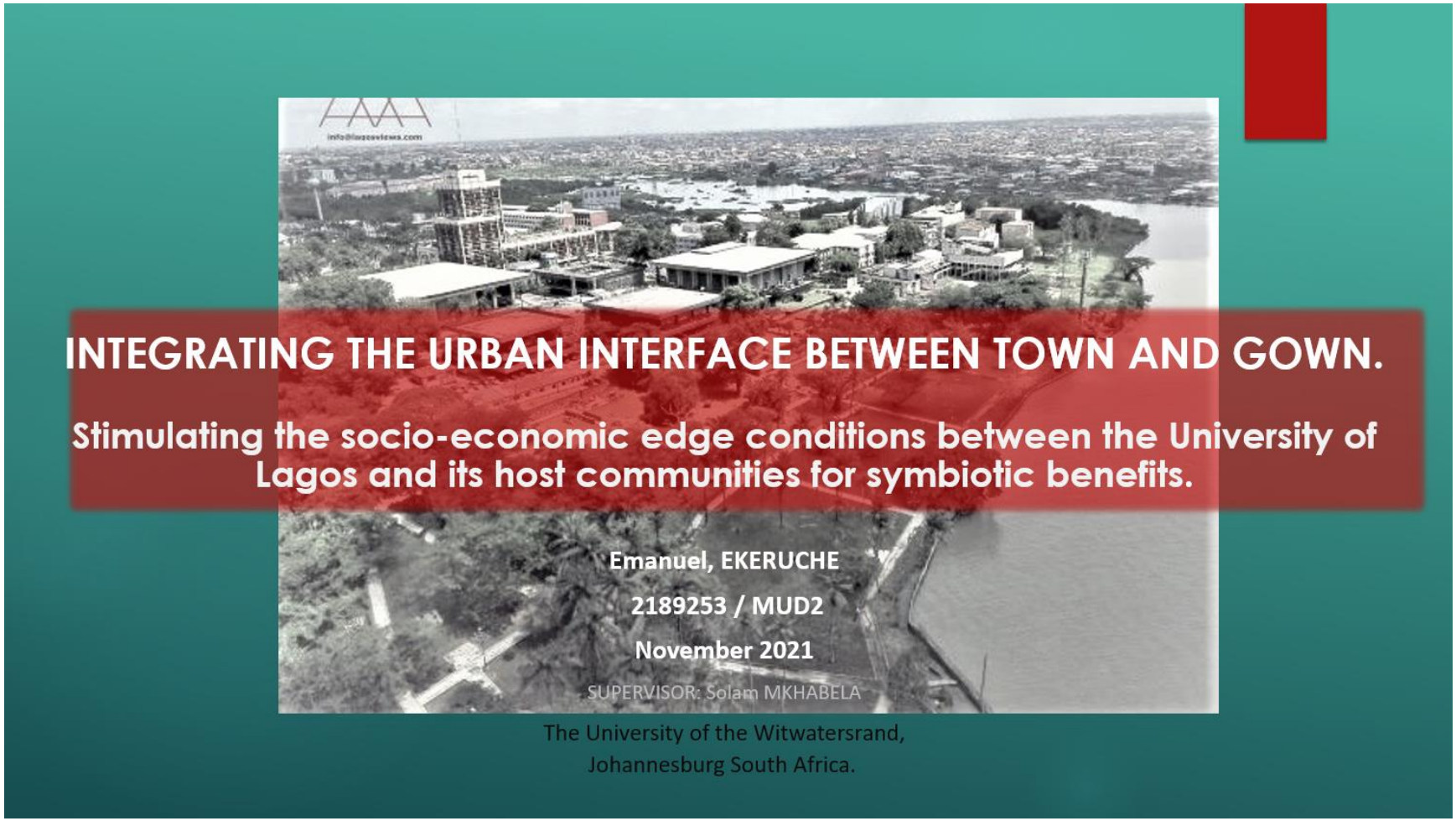
INTRODUCTION OF RESEARCH TOPIC



DECLARATION

I **Emanuel Ekeruche** (Student number **2189253**) am a student registered for a Masters in Urban Design in the year 2021.

I hereby declare the following:

- I am aware that plagiarism (the use someone else's work without their permission and/or without acknowledging the original source) is wrong
- I have followed the required conventions in referencing the thoughts and their ideas of others.
- I understand that the University of the Witwatersrand may take disciplinary actions against me if there is a belief that this is not my own unaided work or that I have failed to acknowledge the source of the ideas or words in my writing.

Signature_____ _____Date 20th of March 2021

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LIST OF ABBREVIATIONS AND DEFINITIONS

BOT: Build Operate and Transfer

CBD: Central Business District

CoJ: City of Johannesburg

Ha: Hectares

LAMATA: Lagos metropolitan area transport authority

LASPARK: Lagos State Parks and Garden Agency

LASRAB: Lagos State Records and Archives Bureau

LAWMA: Lagos Waste Management Authority

L.B.S.: Lagos Bureau of Statistics

N.M.T.: Non-Motorized Transport

pcu: passenger care unit

SWM: Solid waste management

UNILAG: The University of Lagos. Nigeria.

DEFINITIONS

Akoka Community:

Iwaya Community:

Onike Community:

Onitiri Community:

Makoko Community: Are all host (riverine) Communities around the University of Lagos, with high population density, mainly residential with minor commercial activities, and lacking in many basic infrastructures.

B.O.T. (Build Operate Transfer) is a procurement mechanism where a government agency grants the right to its development to a private third party under agreed conditions and specification, where the third party would develop and operate for a profit before handing over the facility to the agency.

Empiricism: is the theory that believes in evidence and fact-based decisions where experience, results of experiments, or proven methods should be the basis of normative choices.

Normative: An accepted idea of the ideal of character and behavior but not necessarily based on empirical evidence.

Green infrastructure: is an interconnected network of open green spaces that provides ecosystem balancing service.

Land Use: The modification and transformation of natural environments into built spaces for settlement and other human activities.

Lagosians: A native or inhabitant of Lagos, Nigeria.

On-street parking is a form of parking that involves parking along the roadsides. The road may or may not be metered.

Parking: Bring a vehicle to a halt and leave it temporarily in a car park or by the side of the road.

Pedestrian: A person traveling on foot. Including persons with disabilities or encumbered movement.

Waste management: Activities required to manage waste from generation to disposal, including collection, transport, treatment, and disposal.

ABSTRACT

As the awkward relationships between Greenfield-established universities and their host communities persist in urban campuses, some institutions are now willing to engage their surrounding communities in ways that would be more mutually beneficial than the current exclusion status quo. This research seeks to investigate the University of Lagos, South west Nigeria, and its various surrounding communities using urban design as a social engineering tool to reverse their current conflicting edge conditions into a symbiotic advantageous relationship. This would be geared at refocusing urban movement patterns from the current motorized priority circumstance to adapting the Non-Motorized Transport (N.M.T.) guidelines to redefine neighbourhoods into spatial equality communities. Pedestrian priority movement would be established through coding and other urban design tools, theories, and statutory guidelines.

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"Live as if you were to die tomorrow. Learn as if you were to live forever" –Mahatma Gandhi

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To God be the Glory.

DEDICATION

To My dearest Adedoja Folasade EKERUCHE *nee Ogunsanwo* (Dec 31, 1976-Aug 8, 2021) encouraging till your last breadth.

Fantastic wife and mother.

Gone too soon.

We miss you dearly.

CHAPTER 01 – ***INTRODUCTION TO RESEARCH***

1.1 HISTORICAL BACKGROUND

Western-style university education is relatively new in Nigeria at circa sixty-five years. The amalgamation of Nigeria's geographic entity was formalized in 1918 by the fusion of the Northern and Southern protectorates with the colony of Lagos by the British Crown. Consequently, the administrative workforce requirements necessitated establishing an institution for middle and higher-level local workforce training. According to Hussey (1959, as cited by Ejiogu & Sule, 2012), who posited that too many Europeans holding various cadre positions were unsustainable, they recommended establishing higher institutions to train locals for various low and middle-level positions. This led to establishing the first post-secondary institution in 1938, the 'Yaba higher college' now known as the Yaba College of Technology in Lagos, southwest of Nigeria. In anticipation of decolonization, Dr. Eric Ashby of the University of Cambridge was appointed to recommend a post-secondary academic structure to serve the post-independent nation's peculiarities. Among the 'Ashby Report' recommendations was the establishment of four new universities in the Northern region, eastern and western regions, and the federal capital city of Lagos. According to the world education service (2017), there were five fully operational universities by 1965, with a student population of approximately five thousand, but by 2015, Fifty years later, the figure had risen to one hundred and fifty-two (152) universities, consisting of federal, states, and private universities with a registered student population of one million nine hundred and sixty-two thousand three hundred and sixty-four (1,962, 364) students.

Post-independent Nigeria (1960) brought a new normative for university campuses' design, and planning had evolved from the nineteenth-century European and American collegiate campus planning style where faculties were housed in archaic temples cathedral. The current trend, according to Coulson et al. was that,

" the movement endowed America with Campuses of vastly different appearances, yet united by bold plans of organizational clarity that imbued higher education with a grand civic expression befitting its stature in an urbanizing society" Coulson 2011:6.

The British and the Europeans also aligned with the new movement of developing green fields into campus-cities, essentially due to the demand for higher education.

(Ejiogu and Sule, 2012; McMillan and associates, 1962; Unilag.edu.ng 2020 and world education service 2017)



Photo 1.1: Aerial View of the University of Lagos, Established in 1962. 802 acre site in Akoka-Yaba of Lagos state. Western Nigeria.

Designed by: Robert S. McMillan Associates. (Source: Courtesy Lagosviews.com, accessed [2019])



Figure 1.1: Architectural model of the University of Ile-Ife (now Obafemi Awolowo University) Master Plan 1962. 13,000 acres site located in Ile-Ife Osun State. Western Nigeria

Designed by: Egboramy Company and Arieh Sharon+Elder Sharon *(Source: University of Il-Ife Master Plan 1962)*

Figures 1 and 2 shows examples of university campuses built on green field sites as was the norm in the 1960s. This style is what the Nigerian Government adopted and it is what is recommended till date for both private and state universities.

1.2 CONTEXTUAL BACKGROUND (A brief story of Lagos, Nigeria)

Lagos State, Nigeria, (6° 35′ 0″ N, 3° 45′ 0″ E) is located in the southwestern region of the Country. It is the smallest of the federating units covering an area of 356,861 hectares, of which 21% are wetlands. Its highest altitude above sea level is 7meters on the Lagos Island and 47meters on the mainland. It has approximately a 21million daytime inhabitants (2017 EST.), with an average population density of 7,871/km2. Lagos state government claimed that it had enumerated 4.75 million houses in the State as of 2013. (LASRAB).

The State has a long active history, and in understanding the evolution of this city-state, it is best described in two parts: the colonial era and the post-independence era.

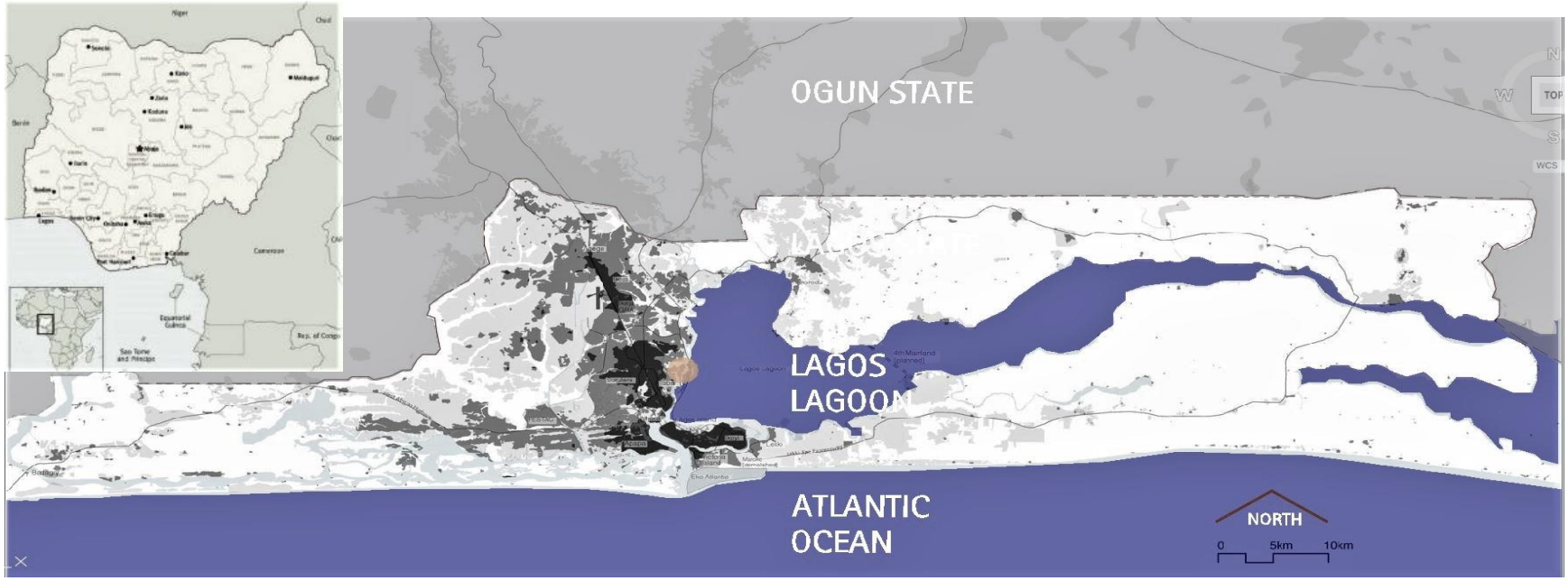


Figure 1.2: *Lagos state map showing the Atlantic Ocean and the Lagos Lagoon. Darkened areas show growth development pattern. (Source: Courtesy Lindsey Sawyer, enhanced by author, 2020)*

In the pre-colonial era, Lagos' territory was also known as 'Eko' while it was a protectorate of the previous Benin Empire of present-day West Africa. An excellent summation of the colonial period made by Godwin and Hopwood, who noted that:

> "From 1861 to 1960, this place on the coast of West Africa known as Lagos was to remain a British colony for a mare 100 years, 46 of which served as Nigeria's administrative capital. Before that, this small fishing community, geographically sited on the estuary of Ogun River, was a vassal of the ancient empire of Benin and part of the myriad of Lagoon and waterways which follow the coast of the bright of Benin." Godwin and Hopwood (2012:6)

During the colonial era, The British annexed Lagos as a colony and later seized the Benin Empire. These actions evolved to the establishment of the colony of Lagos and the protectorate of Nigeria. Under this new structure, Lagos was declared the capital of Nigeria in 1914. Britannica wrote that the British crown colony governed Lagos as part of its United Kingdom's West African settlements. Even after Nigeria attained independence in 1960, Lagos continued to be the capital until 1991, when it lost its administrative status to a new more centrally located Federal Capital Territory; nevertheless, it retained its social, economic status.

Also, according to the Lagos Bureau of Statistics (L.B.S.), Lagos has evolved tremendously during the present post-independence era, though the State occupies a mere 903,066 acres of land, about 0.4% of the landmass of Nigeria. The State is host to 70% of the Country's economic activities, with over 2000 manufacturing industries and 200 financial institutions. The State readily admits it faces inadequate and overstretched infrastructures that have to provide for its 7,871 people per square kilometer population density. This vibrant city has become many things to many people, locals and foreigners alike. The accounts of Fourchard (2011) captures the essence of Lagos that has been missing for many,

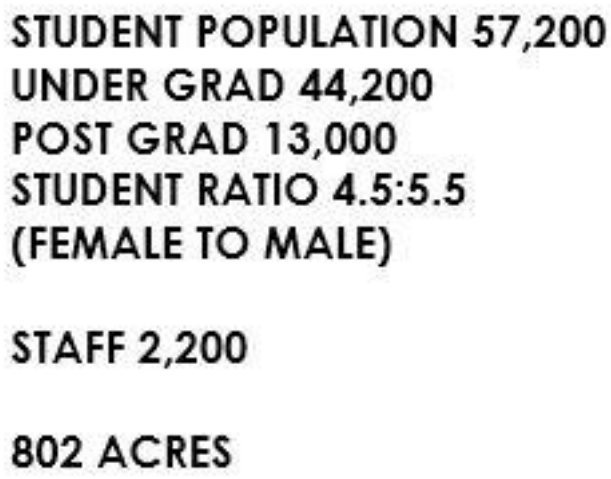
"Despite the lack of all basic amenities and public services, Lagos continues to function as a city because it is conceived as a series of self-regulatory systems which has to free itself from the constraints of colonization and post-independence town planning. Lagos illustrates the large-scale efficiency of systems and agents considered marginal, informal, or illegal: it is the celebration of informality which cannot be reduced to disorder as it generates economic dynamism and reveals the capacity of Lagosians to develop their infrastructure" Fourchard, (2011:1)

However, some of its neighbors and visitors believe Lagos is 'generally famous for its frantic and fast-paced life.' The 'uninitiated' can easily fall prey to extortion or fraud, the welcoming sign at the city gates carries a simple uninspiring sign that reads "this is Lagos," almost as a caution to visitors and new migrants alike to be vigilant.

Most Lagosians hold the above assertion to be accurate, including this writer, who has experienced life in the city for over four decades, yet we love our Lagos.

1.3 CONTEXTUAL BACKGROUND 2 (A brief story of the University of Lagos)

The University of Lagos was founded in 1962 by a federal act of parliament, which has been amended several times yet, has guided the University's growth, development, and structure. Initially, the university was to be sited on the commercial island with its ports, trade and, vibrant economy. This is why the federal government accepted the initial recommendation to focus the school on the following programs of study: Business, Commerce, Medicine and, Law, but later added Engineering, sciences, and the arts in its second phase. Because the



city was considered a very vibrant, commercial and trading city; the mentioned programs which were seen as complementary to its growth formed the bedrock under which the academic structure was built. The University's first intake consisted of 130 students who took off from a temporary location in Suru-Lere, about four kilometers west of where the permanent site was to be located in the fishing community of Akoka. Thereafter, the master plan for the University was divided into three phases, having its first operational master plan adopted in 1980. The first phase was building the academic core, which housed the faculty of Law, business, and medicine (though the medical school was located on another campus 7 km away from the Main Campus). The administrative buildings and main library were also part of the first phase. Later, the institution was moved to its current site in 1964 with a total student population of 993 on completing the first phase, which was designed by Robert S. McMillan Associates (an American firm of architects and planners). The second phase commenced

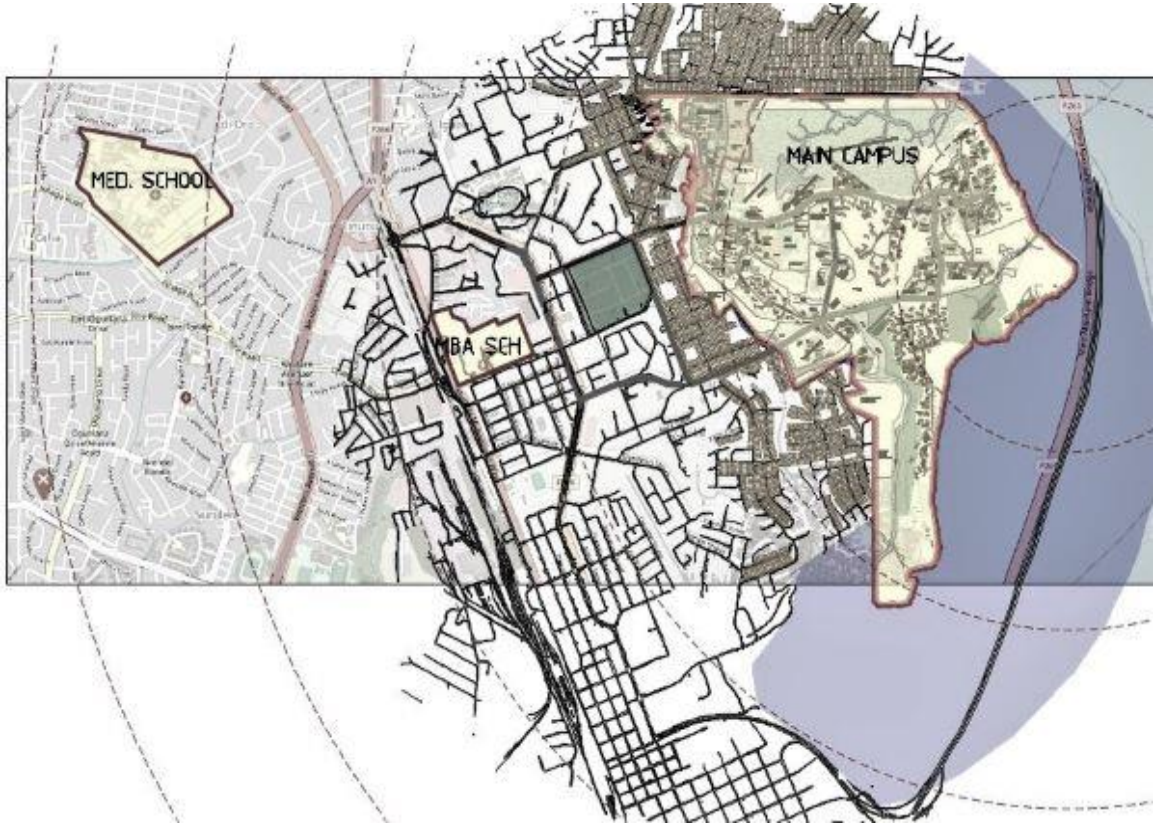


Figure 1.3: *Map showing geographic relationship between the main campus Akoka, the MBA Campus Yaba and, and the medical school Campus Suru-Lere, Lagos (Source:* Google maps over laid on Lagos street maps, enhanced by the author, 2020)

with 1800 students who enrolled in the University, with engineering and science programs. The number of program faculties, as well as students, grew with the urbanization of the city. By 1990, the registered students' population stood at 24,450 for full-time, part-time, and distance learning programs, while the State's population was estimated at 7.75million people. Currently (for instance, the year 2020), the students' population stands at 57,200 while the city's population has equally doubled to 14.4million over just thirty years. Unilag currently operates from 3 campuses, all within a 7km radius in the mainland of Lagos.

(Unilag.edu.ng, university master plan, 2014, lagosstate .gov.ng).

1.31 THE 3 CAMPUSES

The University currently has three campuses, two of them located in Yaba, the State's education district and the new tech hub of the city of which has been nick named 'YabaconValley or the Silicon Lagoon.' The third one is in Suru-Lere, a 23km2 land area of 0ver 500,000 inhabitants (2006 census). The two campuses in Yaba consist of the Main Campus in Akoka, and the most recently acquired former federal school of radiography. The third is the College of medicine in the Idi-Araba community of Suru-Lere.

The Akoka campus. (6° 31′ 0″ N, 3° 23′ 10″ E)

The Campus's main entrance is situated through the Akoka community along the famous university road; however, several communities border the edge of the Campus. Among the border communities of the University's Main Campus are Akoka, Onitiri, Onike, and the Iwaya communities. The main Campus, which is our area of focus, is assigned on an 802-acre plot of land that had previously consisted of 4 fishing hamlets which were relocated after the government acquisition if the site in 1961. A large part of the land was made up of green infrastructures such as natural canals, streams, and swamps. It is located in the northeastern part of Yaba, Lagos. Akoka has always been a hub of major tertiary institutions that host the UNILAG and the Federal College of education (technical)

Akoka, the Yaba College of Technology (Yaba Tech), barely 2 km away from the Akoka community. Ironically the University is the smallest federal University in Nigeria by size allotted on a 325 hectare plot as against the University of Ilorin, north-central Nigeria which is on a 15,000 hectare site. But it is by far the most populated, interestingly it is also the only Campus in the Country of over 120 universities to be sited by a waterfront, enjoying the serene, breathtaking view of the Lagos lagoon.

www.nuc.edu.ng, unilag.edu.ng



Photo 1.2: *Aerial view of the first phase of the Unilag development overlooking the lagoon (Source:* Info@lagosviews.com, accessed [2019])

The Yaba campus (6° 31′ 3.04″ N, 3° 21′ 14.85″ E)

This Campus was the former Federal school of Radiography, which was assimilated by the College of medicine in 2005. This Campus is the latest and the smallest of the three campuses on less than 10acres of land and is approximately 3km from the Main Campus and 4km from the medical school campus. Other campuses and several research institutes surround this tiny Campus; the location falls within the research city as recognized by the 'Mainland Central Model Master Plan (2013)'.

Unilag.edu.ng, Kadiri Associates (2014)

This area has become a Tech hub for a lot of its technology savvy youths, with malls, restaurants and good night life.

The Suru-Lere Campus (6° 31′ 3.64″ N, 3° 21′ 13.58″ E)

This is the University's Medical Campus and is located approximately 7km from the principal university site in Akoka. It is also known as the Lagos University Teaching Hospital (LUTH). The College consists of 32 departments with a staff strength of 1,850 and 2000 students. The Campus is apportioned on a 65-hectare plot and, is also hosts the Lagos university teaching hospital. It was established in 1961 to produce 100 medical doctors annually. Currently, the bed capacity has grown from the initial 330 beds to just under 800 beds. It is also the largest teaching hospital in Nigeria, catering to patients.
www.luthnigeria.org, Kadiri Associates (2014)

1.4 PROBLEM STATEMENT

At independence in 1960, Lagos' population was estimated at under 1 million; today, it is estimated at 17-21 million people. The University of Lagos, which commenced with fewer than 200 students, now has about 57,200 students in its 2019 records. This growth though seemingly proportional, has resulted in a clear urban divide between the school and the surrounding communities. The University rigorously controlled growth pattern and development, unlike the host communities that was allowed to grow amorphously hence has slipped into urban dilapidation and decay, recording a population density of up to 12,000/m2. Even though this exponential growth did not come with corresponding growth in public infrastructure, the proactive thinking of today is about taking advantage of the numerous benefits in creating closer ties between the Campus and the community. This form of symbiotic relationship has been advanced to create an unimaginable synergy for campus edge communities. However, this is an aspiring position between the University of Lagos and the Akoka community situated around it. Now, the University authorities believe that they will benefit from

the economic, social, and gentrification that would occur within the school's edges if they engage with the community more amicably than previously. (UN WPP 2020, Unilag.edu.ng, Unilag revised master plan, 2014). This, therefore, inspires the following research questions:

1.5 RESEARCH QUESTION

The current study's primary objective has generated a vital question: how can a normative urban design approach be used to stimulate an interactive and socio-economic active edge condition between gated urban campuses and their host communities for a better symbiotic relationship?

SUB-QUESTIONS

- How can university communities be spatially integrated with their host communities?
- How will the redesign of active public spaces around the University edge integrate them optimally with their host communities?
- Should the socio-economic activities around the campus edges be unified or reorganized along its active perimeters?
- How can normative urban design trends in university campus designs be used to influence the urban fabric of its host community?
- Will the universal movement be enhanced if the motorized movement is de-emphasized in pedestrian movement given a prominent space along the routes linking the Campus and its surrounding communities?
- How can universities apply urban design principles to become positive influencers in the spatial organization of cities?
- In what ways can universities play a leading role in the physical development of their cities?

The questions above lead to the current study's objective.

1.6 AIMS

The current study shows that an active symbiotic edge can foster a cordial relationship between citadels of higher learning that had previously been gated and isolated, and their host communities, using a classic example while extracting vital data from previous attempts at such urban restructuring. Hence, the main objective of this study is appropriately and adequately captured by the UNILAG authorities when they stated in the revised master plan thus:

> "To develop a university with a distinct identity and yet well integrated with its immediate environment and to stimulate town and gown interactions between the university and its host communities" – (Unilag revised master plan, 2014, p139).

1.7 RATIONALE FOR STUDY

Modern African Universities were built as private urban entities disconnected from the urban fabric of their surrounding cities. However, normative thinking shows that there are many benefits to cordial town-gown relations than security concerns that had previously made the campuses reclusive. The communities, too, have a lot to gain in terms of best practices of public urban infrastructure and socio-economic benefits if the Campus is comfortable enough to embrace its host as is now posited. While the University of Lagos had shut out the surrounding communities in its sixty-five years of existence, in the revised university master plan (2014), it had a shift of policy direction by adopting to foster a better relationship with its surrounding community, hoping to craft a better equilibrium than what currently obtains. The Campus also can take advantage of its strategic position to expand its fortunes and not compromising on its security. This research would endeavor to show what roles good urban design can play to achieve this school's new direction.

*CHAPTER 02 – **LITERATURE REVIEW***

2.1 STUDY BACKGROUND

This research will investigate the complex relationships of University campuses built on Greenfields sites, socially and economically isolated from its host communities and, now exhibiting severe dichotomy in their urban morphology. Academic exploration of new trends discusses that a separation of town and gown is no longer in the benefit of the development of modern university campuses. The research will advance various urban design strategies geared at reconciling this awkward urban dichotomy in which the University and the host communities now operate.

Genuine collaboration based on mutual respect needs is a workable approach to having a smoother relationship. The other is a clarified expectation of each other's fundamental desires. Many institutions now practice inclusive urban and socio-economic planning according to Sungu-Eryilmas (2009:23), "The University of Pennsylvania as a local contracting program that generated more than $65million in business for west Philadelphia firms in 2002."

That universities impact their host communities is no longer a matter for debate; hence, Ogeah and Ajalaye (2011:37), in their article in the *global journal of social science* posited that

> "they noted that the university has made the local economy of the regions around it grow and blossom with sales of goods and services provided by merchants for students' consumption." Ogeah and Ajalaye 2011

The final vision for public realm intervention between contrasting communities, such as the current case study, is best derived from the challenge posed. Various theoretic concepts by leading urbanists would guide the overall framework. In this instance, Bentley et

al., Lynch, Jacobs, and Gehl's theoretical concepts would comprise the primary premise, secondly established statutory framework such as the City of Johannesburg complete street manual and the Lagos Non-Motorized Transport Policy will all be employed to ensure the final recommendations will be in line with international best practice and local statutory regulations. This project would activate the elements of; Permeability, Legibility, walkability, edge conditions, public squares, defensible spaces, complete streets guidelines, and Lagos N.M.T. policy as the guild for the final vision.

2.2 TRENDS

- PERMEABILITY: The level of access or restriction into a place as its measure of permeability. A high rate of accessibility choice is considered a positive attribute in urban space planning as ease of movement in and out of neighborhoods eliminates disjoining of communities. Bentley et al. (2005:12) stated that "the permeability of any system of public spaces depends on the number of public routes it offers from one point to another," They also mentioned the importance of visual access to the points of permeation. They finally made the point that a thorough analysis of the movement pattern of the surrounding areas undertaken so that the chosen point(s) of permeation chosen be recognizable and legible to visitors also.

- LEGIBILITY: Legibility is ensuring that the locations and functions of elements in places are recognizable and clear. According to Lynch (1960:2), it is the "mental image of that city which is held by its citizens," a city where its elements (nodes, edges, paths, districts, and landmarks) are easily identifiable. Bentley et al. (2005) and Lynch (1960) position that legibility at the urban scale is important as people should be able to read with clarity their urban environments in terms of ‘urban scale, time and complexity.’ As permeability is about the degree of choices rendered, legibility is about recognizing those choices. An excellent

example of legibility is the 'connect corridor' embarked on by the University of Syracuse in 2004. This project aimed to connect the host city through a bicycle and pedestrian link across an edge created over 40 years previously.

- EDGES: they are boundary lines between phases, a long break in continuity. Such as edges of development, shorelines, and walls; they are oblique references. Edges may be penetrable or not; in the latter, it becomes a socio-economic and urban separator and a delineator of neighborhoods or towns. By their intrinsic nature as delineators, edges catalyze the clarity of urban spaces. Edges could be of natural elements such as green infrastructure, or human-made such as streets, building lines; edges are summarized by Lynch (1960:63) as “the boundaries between two kinds of area.”

- WALKABILITY: This is a term used to describe the friendliness of pedestrian activity in a neighbourhood. The Compact Oxford English Dictionary (2006) defines the pedestrian as "a person walking rather than traveling in a vehicle." Walkability is measured in terms of comfort, safety, clarity, and quality. This measure of continence must consider people with hindered mobility, such as wheelchairs, baby strollers, or adults walking with minors. Walkability is a natural human activity considered the cheapest and healthiest mode of transportation for many people.

  According to Gehl (2011:133),” walking demands space, it is necessary to be able to walk reasonably freely without disturbance…” ibid also believes that it is essential to locate rest stop at regular intervals throughout the city.

- DEFENSIBLE SPACES: This is a 'socio-physical phenomenon' where residents of a community adopt and protect common open-public areas within their community using passive and active surveillance techniques. This proactive community action has been shown to enhance users' safety in open public areas around residential communities. According to Newman (1996), when communities exhibit a sense of territoriality over open public spaces around their neighbourhood, and these spaces are

responsibly cared for, crime and criminal activities cannot incubate. (ibid, 1996) listed factors such as territoriality, natural surveillance, image (of security), milieu (proximity to safe refuge), and safe adjoining areas are listed as parameters for achieving defensible functional spaces by design. He contextualized his doctrine when he professed that;

> "Defensible spaces are not about fencing. It is about the reassignment of physical areas and areas of responsibility-the demarcation of new paces of responsibilities" Newman 1996:2.

- URBAN SQUARES: The Square is probably man's first experience with urban space, and it could be a cluster of buildings around a large defined space or a large building built around a courtyard. Krier laments the lack of use of squares and courtyards in contemporary urban planning. He believes the evolution (or lack of) socialization of humans has had a significant influence on the discrediting of the courtyard technique despite its numerous advantages. *(Ibid.)* Argues that from medieval times till the development of the early tenements housing, the courtyards had been very successful, and there is no reason to discard it. He even recommends functions best suited for squares as "public administrative buildings, youth centers, concert halls, cafes, and bars." In his theory of 'self-congregation, Whyte (1980) holds that if you want to activate an open space, the introduction of food is essential to the endeavor.

2.3 CoJ COMPLETE STREETS MANUAL: Initially, the streets were seen as an area for public circulation and recreation; according to (Krier, 1984) they are a product of the result of an expansion of settlements, which were planned with a human scale for the movement of horses and wagons. He emphasizes that the previous narrow streets encouraged better interaction among the users, but with the motorization of the urban space, the intimacy has been lost. A profound statement was made by Whyte (1980:19) when he stated that "the street is the river of life of the city, they come to these places not to escape but to partake of it."

The CoJ complete street Guideline is a design-based transportation policy of how streets should be designed, delineated, and apportioned for all users' safety. The method of planning, design, maintenance, and operation to inspire safety and comfort for all ages and gender regardless of the mode of transport should be clearly stated and or illustrated. Elements of complete streets include pedestrian infrastructures such as sidewalks and raised crosswalks—traffic calming measures with clear definitions of movement edges.

Bicycle accommodations, protected dedicated lanes for cyclists with parking provisions, and the rapid bus transport system. The complete guidelines adopted for this research would give clear directions on how the inadequacies of road reserves in undeveloped cities can be addressed. According to the CoJ manual, some factors that make streets unsafe include

> "A lack of paved or limited areas for a sidewalk. The conflict between pedestrians' vehicular movement in the inner cities. A lack of street lighting which has made movement unsafe for all users during dark hours, finally a lack of a dedicated path for cyclists and no clear road markings and signage on the streets." CoJ complete streets manual (2006).

2.4 LAGOS NON-MOTORIZED TRANSPORT POLICY (2018): Lagos state is burdened with urgently developing a viable transport system to meet the city's urgent needs become a model for other rapidly urbanizing societies. Previously (colonial) mobility planning was centered on vehicular movement, but in the current policy, there is a shift to a people-centered transport policy. The city is rapidly growing at the rate of 72 new residents per hour. If the trajectory of allowing motorization is sustained soon, there will be no space for pedestrians and communal playgrounds for children and socialization.

The new N.M.T. policy includes but is not the extracts under listed;

- ***Principles and standards of street design*** with (emphasis on pedestrian mobility)
- ***The standard for built environment regulation*** (Ensuring private developers adhere to the policy direction)

- ***Street network planning guidelines*** (using movement syntax analysis to create shorter walking distances in communities and expand safe public transport)
- ***Provision for street management*** (prioritizing N.M.T. users) etc.

The new Lagos N.M.T. policy is geared at creating a sustainable socio-economic and environmentally viable society. This new manual aspires to make walking, cycling, and the use of public transport are important modes to improve mobility and enhance accessibility. The N.M.T. policy's effectiveness would depend mainly on the upgrade of infrastructural facilities along the road reserve to accommodate footpaths, cycle tracks, and greenways. The strategy to ensure the safety of the N.M.T. users includes;

- Systematic traffic calming to ensure smaller streets are safe places for mixing of pedestrians and other modes.
- Ensure that pedestrian and cycle infrastructure are physically separated from motor vehicle traffic. Lagos N.M.T. policy (2018)

2.5 THE UNIVERSITY OF LAGOS REVISED MASTER PLAN 1962-2014: In January of 1963, the American firm of Robert S. McMillan Associates was appointed by the Federal Government of Nigeria to propose and design a university in Lagos. A former British crown colony and now the newly independent Nigerian State's commercial and administrative capital (up on till 1992).

The design consultants submitted their proposal in May of 1963; four months later, Messrs G Cappa L.T.D.'s Italian construction firm commenced construction on phase one of the development. The Prime minister of the Country dedicated the opening of the new University's first phase on January 6th, 1964.

Robert S. McMillan associates recommended, among other things, that;

- Planning should not be futuristic.
- Detailed planning should be limited to 10 years.
- Futuristic planning should be sketch design and guidelines.

The first operative development master plan for the University was adopted in 1980 to commemorate the end of the first phase of the university development. A revised comprehensive development master plan was commissioned by the University in 2012. In response to the award, the local planning firm of Kadiri associates submitted the interim report 03 in September of 2004. The report stated that part of the goal of the revisions was to

- Review the postgraduate and undergraduate ratio of the University to 60-40, respectively
- The need to look at the desired mega-university status, the effect on the Campus, and its infrastructure
- The management of the proposed nature reserves of the University
- Deal with the issues of sustainability, pollution control management, signages, and signals around the Campus.
- Integrating the overall campus plan into existing locality and town plans, especially in terms of infrastructural services.

CHAPTER 03 – ***RESEARCH METHOD***

3.1 INTRODUCTION: This is an inquiry into the movement patterns and activities of a city in an attempt to identify those catalysts that establish the pull and push factors in the public spaces of an urban environment. Urban design researchers have also attempted to establish the qualitative and quantitative rhythm of understanding a complex urban life; this is what Koch and Sand (2009) describe as "Rhythemanalysis."

3.2 METHODOLOGY: The qualitative research method would be employed for this research. This is a form of scientific investigative research, evidence gathering to deduce un-predetermined results and providing local findings beyond the scope of the research (Mack, Woodsong, Macqueen, Guest, and Namey, 2005). This method is most appropriate for urban design research, which is mainly

premised on fieldwork, desktop study, and design interventions. According to (ibid: 1), "the strength of the qualitative research is its ability to provide a complex description of how people experience a given research issue."

The method of qualitative research method to be adopted would be 'Participant Observations.' This is the collection of data on naturally occurring behaviors and movement patterns in their natural elements. The use of questionnaires and interviews will not be necessary for the nature of this research.

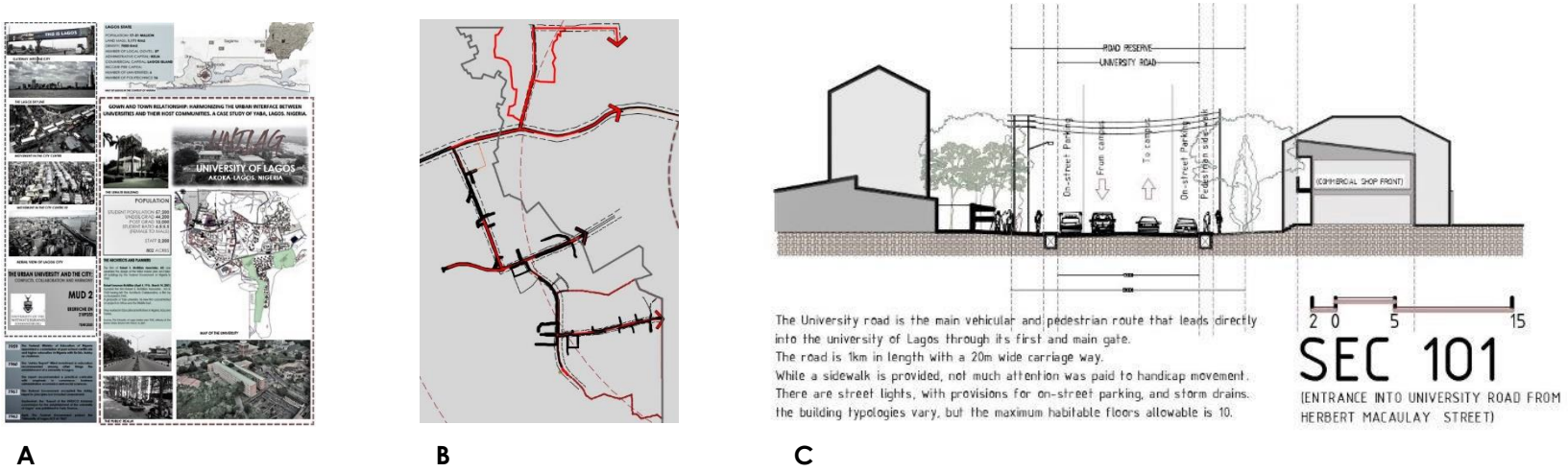
As with most urban design thesis, a variety of methods would be applied to understand the site in context and factors that have evolved it thus far. Concentric area-demarcations of the region to the subject scale would be a necessary parameter. Aspects of quantitative research methods such as observations, oral history analysis of visual and textual materials, and case studies would be used.

- RESEARCH BY DESIGN: This is an inquiry in which design is a considerable part of the research process. . This method generates critical analysis through design work that may include recognized projects, proposals, conceivable realism, and choices. The method is endorsed through peer review by panels of professionals who jointly cover the range of disciplinary proficiencies addressed by the research project. The inquiry of the role of the proposal in research is a critical aspect of the entire scheme. (Hauberg, 2011). Research by design mainly entails Data collection, measurement, analysis (this research would also include a proposal)

- PHOTOGRAPHY: These are made as articulated statements of explicitly sited experience. This would be used to derive other integral parts of the urban informants within the demarcated areas of study. Photographs are beneficial to forming social

context in creating objective evidence (Schwartz 1989). According to Marshall and Gretchen (2006), photography would help validate and interpret other data collected.

- MAPS AND GRAPHIC ILLUSTRATIONS: This method would involve extensive use of historical and situational maps and surveys of the demarcated areas. Various graphic illustrations would be used to emphasize graphic details. Reinforcing the information provided by these illustrations would also inspire the use of three-dimensional drawings. With the aid of images and drawings, I hope to improve the idea of the research literature.



A **B** **C**

Figure 3.1(A, B, C): *Examples of graphic illustrations and map. (Source: developed by the author for use in this research, 2020)*

CHAPTER 04 – ***CONTEXTUAL STUDY***

4.0 INTRODUCTION

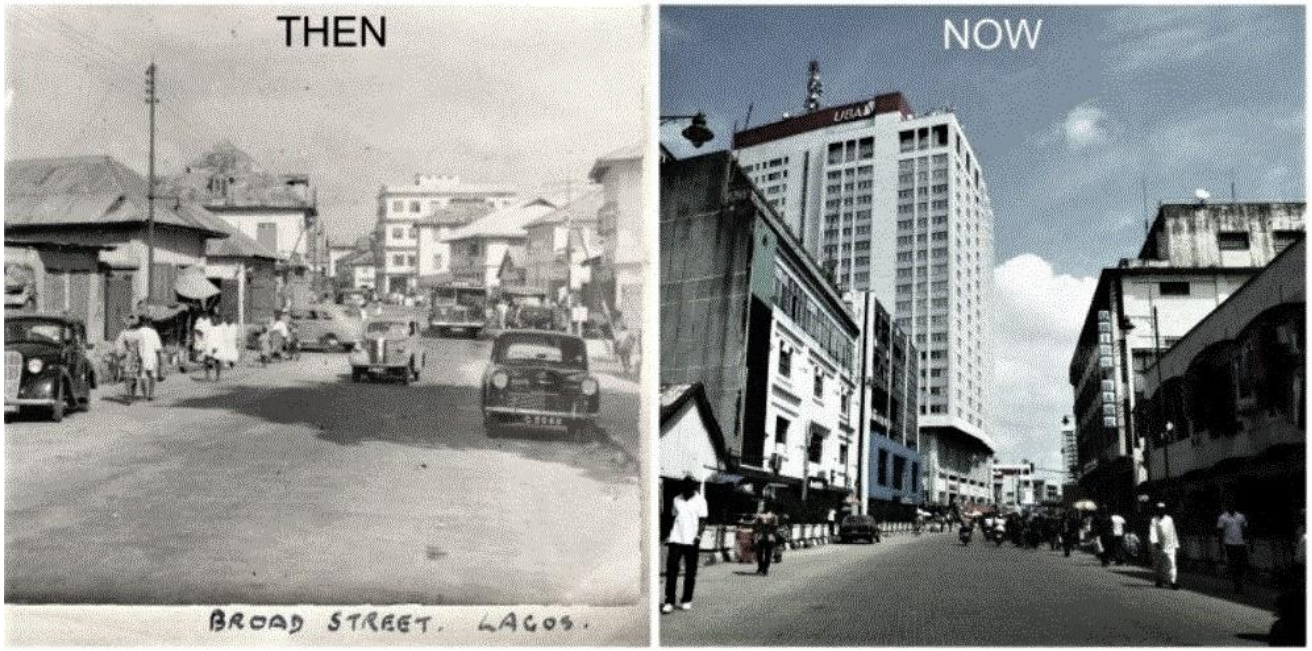
4.1 HISTORICAL DEVELOPMENT OF LAGOS CITY: Located in southwestern Nigeria, on the Bight of Benin coast. It is bounded by the Ogun State to the eastern and northern periphery, by the Republic of Benin to the west, and by the Bight of Benin to the south. From 1914 to 1954, the area included in the State was administered by the British as part of the British

Colony of Nigeria. The requirements of the 1954 constitution led to the formation of the Federal Territory of Lagos (the 27-square-mile [70-square-km] area of Lagos Island, including the city of Lagos) and the transfer of the city's surrounding region to the management of the Western Nigeria government. This arrangement restricted the growth of Lagos city onto the mainland, however, and in 1967 the national government created the State of Lagos fussing the hinterlands with the commercial islands under a single administrative organ (www.britannica.com).

According to the World economic forum (2016), even already as Nigeria's most populous city, it is still growing – very rapidly. According to United Nations data, the population of Lagos is projected to increase by 77 people *every hour* between 2010 and 2030*,* making it Africa's fastest-growing city. This city's astonishing growth has left many analysts bewildered, especially with the Lagos state government in its official website stating it*.*

> "provides free education to over One Million pupils/students in **1,010** primary schools with a population of about **497,318** pupils; 670 Junior and Senior Secondary Schools with a population of about **564,758** students and 5 Technical and Vocational Schools across the state" *(lagosstate.gov.ng* 2018).

Lagos state is also home to 8 tertiary institutions (two federal, one State, and five private accredited universities) with an approximate 100,000 registered student population.



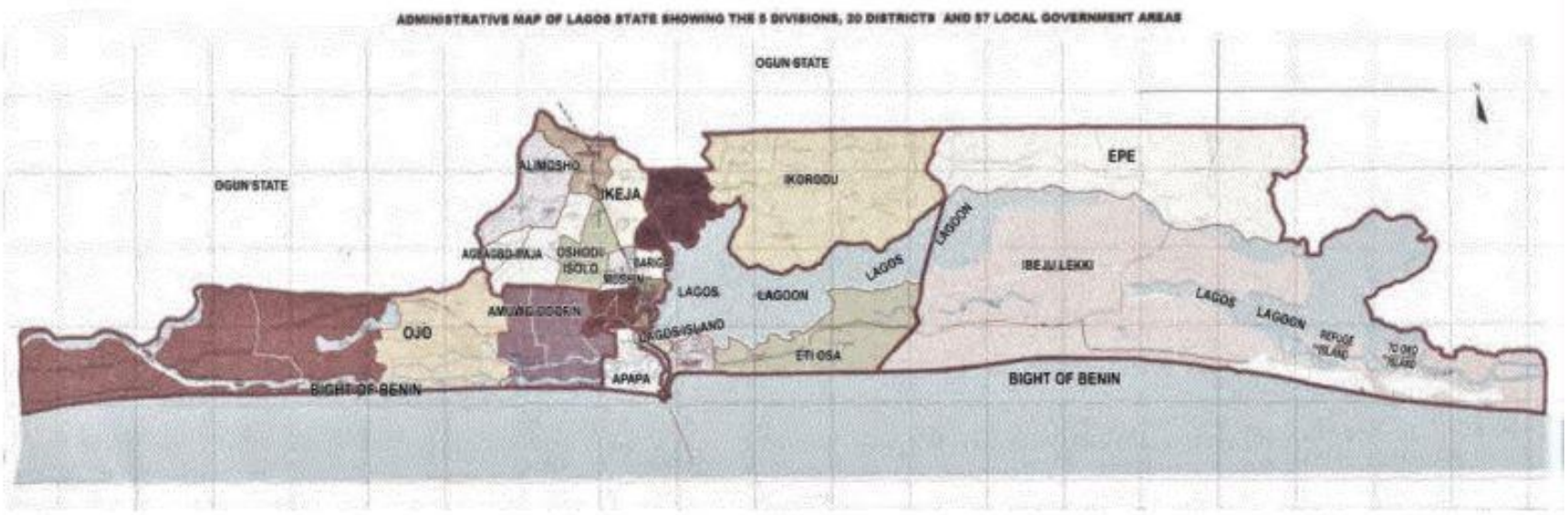
A B

Photo 4.1: (A and B): Picture showing Lagos Island (Broad Street) CBD circa 1930s and 2020s (Source: courtesy autojosh.com, [2021])

	Student Population
University of Lagos	40,000
Yaba College of Technology	27,000
Lagos State Polytechnic (LASPOTECH)	23,935
Lagos State University (LASU)	21,000
Adeniran Ogunsanya College of Education (AOCOED)	10,694
CALEB University	2,700
Michael Otedola College of Primary Education (MOCPED)	1,300
Lagos State College of Health Tech	1,200
Others (appx.)	10,000
TOTAL	81,000

Figure 4.1: Table showing the population of tertiary school's enrolment in Lagos State 2018. (Source: Courtesy Lagos state ministry of Education, [2020])

Administratively, as with many mega-urban areas in sub-Saharan Africa, Lagos is run by a variety of administrative components or local government areas, each headed by a supposedly self-regulating council under the overall supervision of a state governor. Made up of five divisions –Lagos, Ikeja, Badagry Ikorodu, and Epe – the state structure comprised 20 local council areas, of which 17 were located within the cosmopolitan part. In 2002 it was further subdivided into 57 local council development areas -LCDA. This indicates that, theoretically, although the federal constitution makes provision for one state governor, there could be as many different political activities in operation for the 57 LCDA (Okunlola)



Source: Lagos State Government, Ministry of Physical Planning and Urban Development 2009.

Figure 4.2: *Administrative map of Lagos State showing the 5 divisions 20 districts and 37 local government areas (Source: Lagos state Government 2009)*

4.11 ***ADMINISTRATIVE ORGANIZATION****:* The creation of Lagos as an autonomous federating unit occurred on May 14th, 1967, by the promulgation of decree No 14 of 1967. Prior to this, the municipality was administered as a federal territory by the Nigerian government through the federal ministry of Lagos affairs. The State served the dual function of as part of the federating units and the seat of the federal government unity 1992when the seat of the central government was relocated to a new federal capital territory. Notwithstanding, Lagos remains the economic and commercial nucleus of the region. Extant political records state that "Lagos is to the people of Nigeria what the head is to the body of an individual."

The State comprises five administrative divisions: Ikeja, Lagos (Eko), Badagry Epe, and Ikorodu divisions established by Edict No 3 of 1968. This Edict goes further to sub-divide the State into 20 local government areas and 37 local development areas. In 2002 a further sub-division was carried out, transforming the 37 LDAs into 57 Local Council Development Area (LCDA).

Since its inception, the State has been administered by an executive governor and a house of assembly. However, from 1967 to 1979 and 1985 to 1999, the State was administered by military governors and sole-administrators. Lagos operates a multi-party system but has been dominated by one party since 1999. The State is currently run by an executive governor, his deputy, with the assistance of forty other members of the executive cabinet. The state house of the assembly comprises forty members, two each from every local government area. Representing the State in the National assembly are two senators and twelve members of the house of assembly.

4.12 ***ECONOMY****:* Lagos state is the focal point of economic activities in Nigeria. The city's economic activities amount to 26% of Nigeria's gross domestic product (G.D.P.). Also, over 50% of the non-oil industry earners are located in Lagos, hosting all of the major bank's headquarters and the Nigerian stock exchange. Also home to over 200 financial institutions, twenty-nine industrial estates, and four central business districts. Lagos's estimated G.D.P. is put at $145billion as of 2016 (Federal Bureau of Statistics). This is larger than the economy of any other country in the West African sub-region.



Photo 4.2: Picture showing the skyline of the old Lagos economic district. (Source: courtesy of Google [poster unknown], accessed [2021])

4.13 ***CLIMATE****:* Lagos has a tropical climate consisting of the dry season and the rainy season. Lagos experiences two rainy seasons, the first from April to July; this is followed by an August break and then another mild, rainy season from October to November. Monthly rainfall in May and July average 400mm, while between August and September, it comes down to 200mm. The main dry season is accompanied by harmattan winds from the Sahara desert, especially between December and early February. The highest maximum temperatures recorded in Lagos was 37.3 degrees, and the minimum is 13.9 degrees (university master plan/ world meteorological organization).

4.14 ***DRAINAGE****:* The natural drainage system is made up of a maze of lagoons, creeks, and canals, which constitute approximately 22% of the total area of the State, about 787km2. These major water bodies are. Namely, the Lagos lagoon, the Lekki lagoon, the Ologe lagoon, and the Yewa and Ogun River, also are the Kuramo waters, five cowrie creeks, and the Omu-creeks. (University master plan/ Drainage master plan for Lagos).

4.15 ***VEGETATION***: The two major vegetation types identifiable in Lagos are the forest of the coastal belt and the low land rain forest. The swamp forests are a combination of Mangrove forest and coastal vegetation developed under the coastal areas' brackish conditions and the swamp of the freshwater (university master plan).

4.2 INFRASTRUCTURE OF THE CITY

4.21 ***RESIDENT AND DAY-TME POPULATION****:* The population of Lagos is largely disputed, with figures ranging between 14m and 21m, depending on whom you ask. What is not in dispute is that the Yoruba ethnic group largely dominates the city. However, it is believed that the State is host to the over 250 ethnic nationalities of the Country and many other forging nationalities from all the continents of the world.



Photo 4.3: Picture showing a crowded street at a CBD in Lagos ahead of 2016 Christmas celebrations. (Source: courtesy of Reuters/Akindele, 2016)

The World population review estimates that about 68% of the population lives in the slums, with millions living around the expansive Lagos lagoon with no access to basic infrastructure. The review estimates that by 2050, Lagos' population is expected to have doubled from its current figures, which would make it the 3rd largest city in the world.
(worldpopulationreview.com)
Due to the city's actual population dispute, it has not been easy to place actual numbers to the State's day and night-time populations. However, what is not in dispute is that the night-time population is 15-20% less than the daytime population.

4.22 ***VEHICULAR ROADS AND BRIDGES****:* With water bodies making up 60% of the Lagos land area, it is no surprise that Lagos is interlinked with numerous bridges and fly-overs roads. There are numerous flyovers across the state to ease vehicular flow of



Photo 4.4: Picture showing women on canoes selling food on the Lagoon among thousands of stilted homes. *(Source: courtesy of Reuters/ Esiri, G.)*

traffic. The main bridges are the third mainland bridge, which is 11.8km long on and eight lanes wide. This bridge is reputed to be one of Africa's longest bridges and it carries passengers across the Lagos Lagoon. It was full commissioned in 1990 and its official name is the 'Ibrahim Babangida Bridge.'

The other three major bridges are the Eko Bridge, Carter Bridge, and the Lekki-Ikoyi Bridge.

The Eko Bridge is the shortest of the three bridges that connect the mainland of Lagos to the Island. The bridge spanned a length of 480m and was constructed in phases between 1965 and 1975.

Carter Bridge is the oldest of the three, originally built in 1901 by the British Colonial Government. The bridge was later dismantled and rebuilt in the 1970s. It was named after a former Colonial Lagos governor, Sir Gilbert Thomas Carter

The Lekki-Ikoyi link bridge is the newest of the bridges and is a modern suspension cable bridge designed with sidewalks that have become very popular amongst joggers in the vicinity. This bridge is the only one that does not link the Island with the mainland but links two parts of the Island together and was commissioned in 2013.

(Lagosstate .gov.ng/aboutlagos)

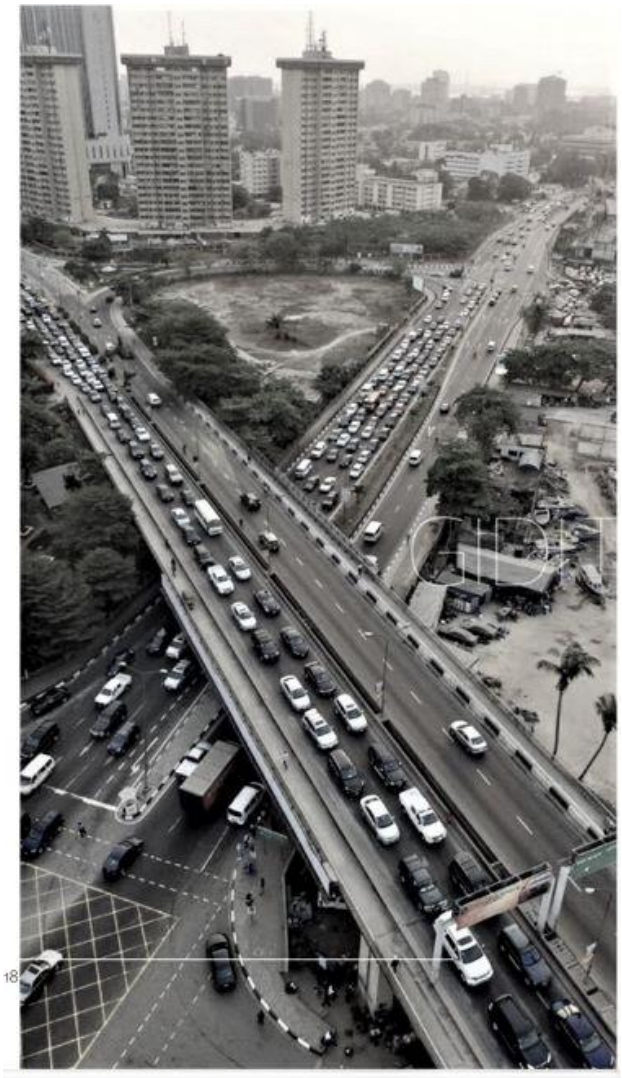


Photo 4.5: Picture showing Falomo Bridge over Ozumba Mbadiwe road. *(Source: courtesy of Giditraffic.com, 2021)*

4.23 ***PEDESTRIAN WALKWAYS:*** The pedestrian movement of Lagosians has not been adequately catered for. The lack of dedicated N.M.T. corridors has left pedestrians to navigate spaces and share carriageways with fast-moving motorized vehicles. Most road designs in the city have leaned towards vehicular dominance. Because of this design imbalance, most pedestrians have been forced to compete with motorized vehicles for space, sometimes leading to catastrophic ends. (Augustus 2013, Lagos N.M.T. policy)



Photo 4.6: Picture showing pedestrian movement on a busy commercial street in Yaba area of Lagos. (Source: courtesy of Lagos island info on word press, [2021])

Fortunately, the city just adopted the Lagos Non-motorized transport policy in 2018 to urgently tackle numerous challenges of developing a viable universal movement system across the city. The city managers have joined the league of cities focusing on non-motorized movement in the interest of public health and safety. The Lagos N.M.T. policy will focus on; principles and standards for street design, street network planning guidelines, and pedestrian-focused street management, amongst others. (Lagos N.M.T. policy)

4.24 ***PARKING****:* Vehicular movement and parking is an integral part of the activities in any city; Lagos is no exception. What compounds the case of Lagos is the city's population density, the lack of street parking infrastructure, and the lack of a safe and comfortable mass transit system, which has led many to rely on private vehicles for their daily commute. Parking in Lagos has become one of the numerous hurdles that city managers are grappling with. The wide shortfall in safe mass transit has led to the reliance on private vehicles, with over 900,000 vehicles plying the roads daily.



Photo 4.7: Picture showing on-street parking on a residential Lagos street. (Source: courtesy of istock, 2021)

Although there is a parking policy in Lagos which states that indiscriminate parking or repairs of motor vehicles in any public way is strictly prohibited, this policy is largely ignored because there are no viable alternatives to this policy in many parts of the city. On-street parking is a menace in Lagos as it has contributed to disruption in traffic flow, accidents, and chaos around the city. This phenomenon is made worse in commercial areas lacking any form of dedicated parking, as motorists are forced to double-parking in very narrow streets.
(Asiyanbola and Akinpelu 2012)

4.25 ***TRAFFIC PATTERN****:* Up until the mid-1990s, there was no verifiable urban transport plan for the entire Lagos metropolis. There was no characteristic distribution of traffic in the metropolis. There was the poplar 'Lagos rush', and this is the movement of people from the Lagos mainland to the commercial island from 5 am up until 8 am, and there was the 'business rush from 8:30 am till about

11 am. At about after lunchtime, there begins an exodus of the almost 1 million people that come to work on the island, gradually moving back to their mainland homes. While there was the Lagos Metropolitan transport service (LMTS) and later the Lagos state transport corporation (LSTC) running transport services, there was no master plan for the city's transport management. Even though road networks were laid out, they only developed when the city grew into the plan.



Photo 4.8: Picture showing parts of the 3rd mainland bridge. (Source: courtesy of Auto Josh Blog, 2021)

Despite its small landmass, the city of Lagos and its suburbs has almost 6000km of road network and three bridges linking the mainland with the Lagos Island.

There are four major factors still working against the transportation coordination of the city of Lagos. The first challenge is the lack of statutory coordination from the six government agencies tasked with various aspects of the city roads. This lack of proper harmonization by the federal, state, and local government creates discomfort and impedes movement of persons and goods across the city. Secondly, the city's physical terrain, consisting of vast areas of swampland, poses technical challenges of providing canals, drainages, and culverts in more places than the city can readily afford. Thirdly is the lack of traffic control and general discipline among the road users of the city. Finally is the lack of a complete street guideline as obtainable in other cities that should highlight the minimum requirements for roads and streets within the city, making provisions for all road users, cyclists, pedestrians

and the physically impaired, etc. instead, the city managers have inadvertently given motorists dominant possession of most roads. All of these challenges led to the development of the Lagos non-motorized transport policy in 2018. This policy, among other things, will develop the Lagos street design manual, which will be the premise of all future street designs in Lagos.

As of the year 1990, it was estimated that there was 7-10million daily passenger demand in the city. Lagos is also reputed for high traffic congestion in most parts of the city.

(United Nations University, Lagos N.M.T. policy)

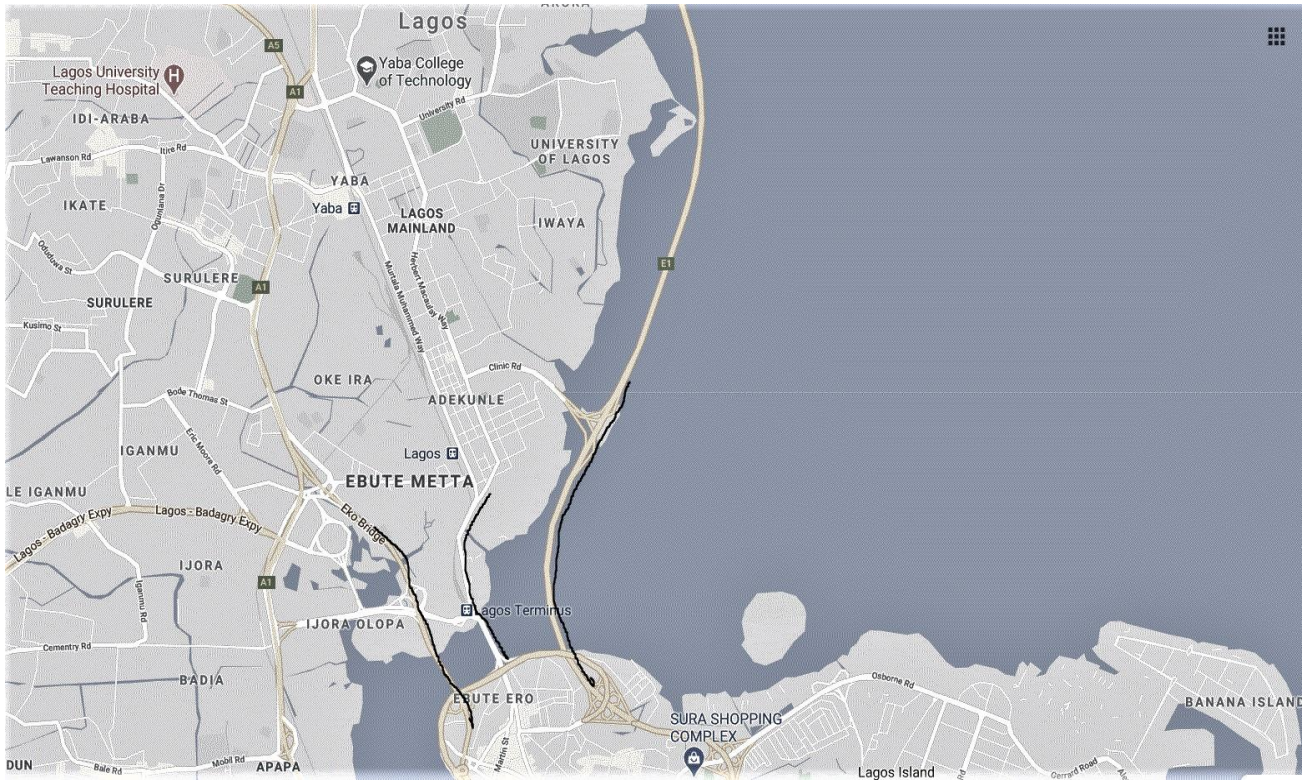


Figure 4.3: *Picture showing Eko Bridge, Carter Bridge and 3rd Mainland Bridge. (Source:* courtesy of Google maps, 2021)

4.26 ***TRANSPORTATION****:* Lagos comprise the most extensive road network in West Africa. It is also serviced by a growing regional rail line, ferry services, and an international airport. A new 35km light-rail from Badagry to Lagos Island known as the Lagos Light-Rail Mass Transit (LRMT) is scheduled to be commissioned in 2021. The city is also interconnected with many highways, roads, streets, and bridges. The city also has a Bus Rapid Transit (B.R.T.) system operated by LAGBUS with 1,309 mass transit vehicles operating 57 routes with an annual passage base of over 62million. The Lagos data book estimates the total length of tarred road in Lagos to be 5,514km (2001). Motor vehicle registration records of 2015 showed that there were 833,957 vehicles and 25,958 motorcycles registered in the State.

Rail: A 27km Lagos mass transit light rail is under construction and scheduled to be completed in 2022. The rail will consist of a R.E.D. Line and a BLUE line. The blue line runs between the Marina in Lagos Island and the suburb town of Lagos in Okokomaiko, operating 13 stops. The red line will take advantage of the existing rail line corridor to convey between 350-400,000 people daily serviced by 11 stops, according to a statement released by the Lagos Metropolitan Area Transport (LAMATA) in July 2020. The statement read in part; "the red line is supposed to be

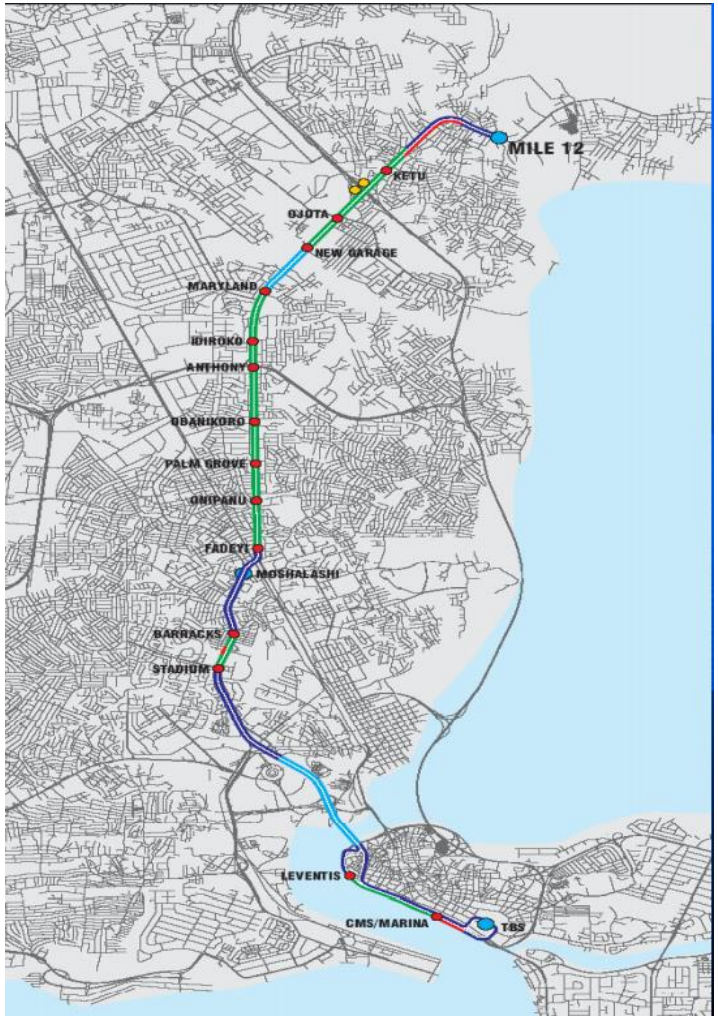


Figure 4.4: Map showing the BRT/ monorail train route in a part of Lagos city. *(Source:* courtesy LAMATA. 2018)

a quick win because it will share tracks with the Nigerian Railway Corporation on its Lagos-Ibadan corridor."

Ferries: The Lagos government has 167 ferries shuttling its waterways, conveying approximately 26 million people per annum, with another 136 boats conveying another 1.5million people per year. Most of these ferry services are run by private ferry services with strict regulations, while the rest are operated by the Lagos ferry services corporation (LSFSC), which was established in 1983.



Photo 4.9: Picture showing one of the Lagos ferry terminals, Ikoyi. *(Source: courtesy LAGFERRY, 2020)*

Air: The city and its environs are serviced by the Murtala Mohammed international airport (MMIA), one of the busiest airports on the African continent. The airport consists of both the local and international wings, which are approximately 1km from each other. It is estimated that the airport can currently handle 10,000 passengers/hr. In 2017 the airport handled 5.4m passengers. The MMIA was the first airport in Nigeria, and it was built circa 1947.

A second airport, Lekki international airport, is currently being proposed on the city's Lagos Island axis.

(Lagos state.gov.ng/aboutlagos, Lagos state data book 2020)

4.27 ***WASTE MANAGEMENT****:* Lagos, no doubt, is struggling with the numerous challenges associated with cities of the south. The over-population associated with the city has compounded the city's problems with its managers, especially its waste weak management structure. Lagosians generate approximately 13,000 metric tons of solid waste per day, with the city barely able to cope with the

volume. This has led many of the inhabitants to resort to dumping refuse into drains and canals, aggravating the perennial issue of flooding in this low-lying city. In 2011 the Lagos state government dredged almost 700,000 metric tons of silt from the city's drains and canals. The state agency designated to deal with matters relating to sanitation is the Lagos state waste management board (LAWMA). It was first established in 1977 as the Lagos State Refuse Disposal Board (LSRDB) but later metamorphosed into the current Lagos Waste Management Authority (LAWMA) in 1991. This organization aims to manage through the collection, transportation, and disposal, intending to improve Lagosians' living conditions regarding their health and sanitation. In trying to deal with the task of managing the enormous waste generated in the overpopulated city, LAWMA is attempting to engage the matter from several angles. The authority is employing mass public sensitization campaigns across the State, educating people on the dangers of dumping refuse into drains and canals and encouraging recycling at various levels enumerating local recycling's economic benefits. Also, the Global Methane Initiative (G.M.I.), a voluntary international partnership, is funding studies on the feasibility of capturing landfill gas from two of the stats landfill locations for power generation. (LWAMA 2020)

4.3 HISTORICAL DEVELOPMENT OF UNILAG: The development of the University was initially planned for 3 phases. The first phase was conceived at inception and began in October of 1962. This phase commenced at the temporary site in Suru-Lere with two faculties and one school, business and social studies faculty of Law, and the medical school, which was conceived as an autonomous institution attached to a teaching hospital-Lagos university teaching hospital (LUTH).
Further to the successful completion of the first phase, the first set of the student was moved to the permanent site at the beginning 1956/66 academic session with 993 students.

The second phase began in October of 1964 with the establishment of the faculty of engineering, schools of Sciences and Social sciences, and the College of education. This phase of the University's development was interrupted by the university crises of 1965,

followed by the National crises of 1967-1970 (The Nigerian civil war). In 1967 the medical school was elevated to the College of medicine. The advanced federal teachers training college, which was part of the take-off facilities from the permanent site, was incorporated to become the new College of education. By this time, the university enrolment figures had ramped up to 1800 students.

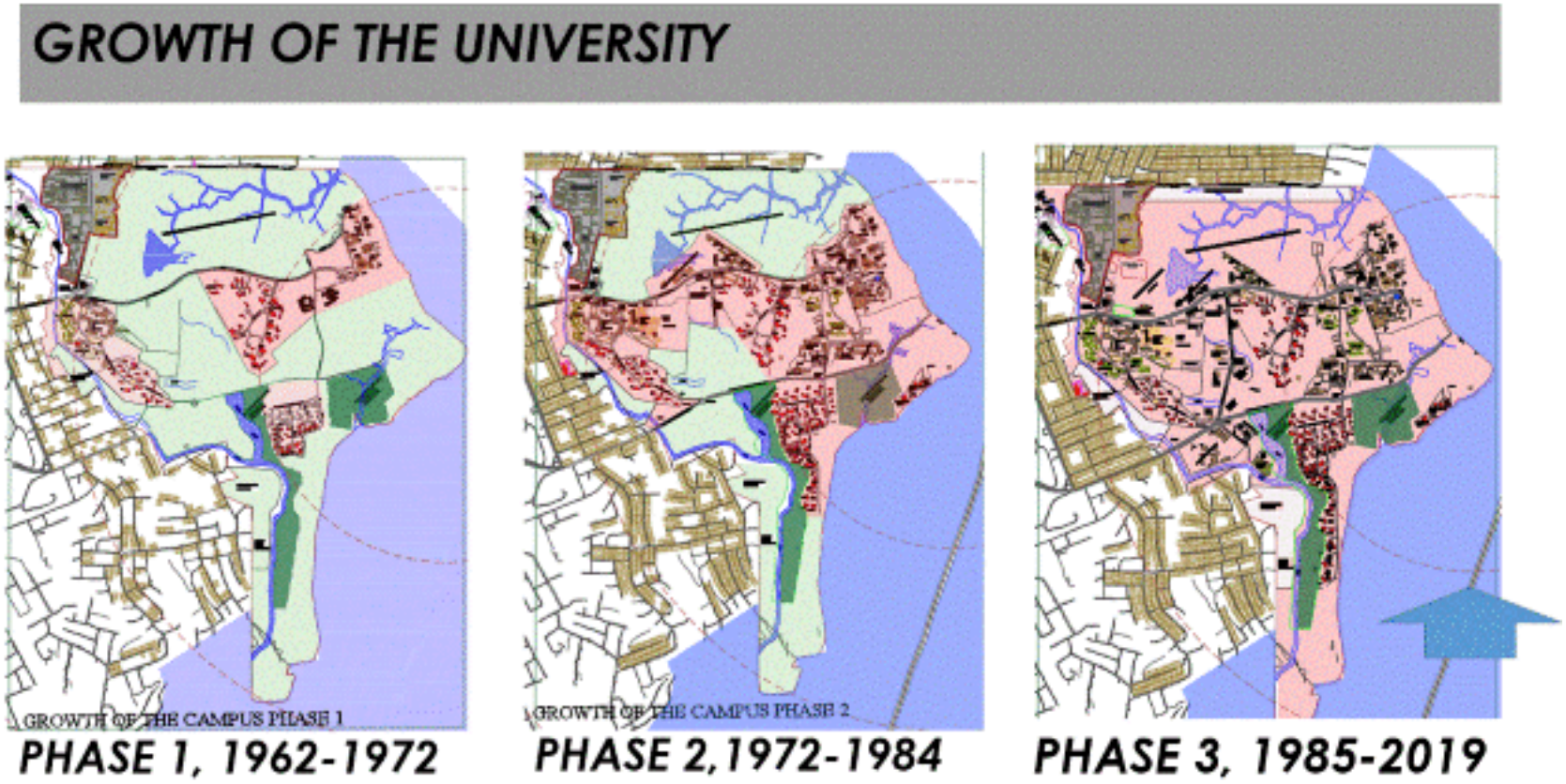


Figure 4.5: *Maps shows the phases of physical development between 1962 – 2019.*
(Source: courtesy Author, 2020)

In later years, further development saw Lagos international school (a co-educational high school) and the postgraduate school's formal inauguration both in 1981. From the modest total student intake of 131 students in 1962, the student population had grown to 24,450 by the 1995/96 admission session.

Between 1981 and 1991 was challenging for academia as the nation grappled with a downturn in economic fortunes. Been a State-sponsored institution, the Campus had its fair share of dilapidation, disrepair, and brain drain.

4.31 ***ADMINISTRATIVE ORGANISATION****:* There are three administrative organs that overs see the running of the University these are; The Council, The Senate, and the Congregation.

The Council overs sees the policies and operations of the University, including finance, discipline, properties, and conditions of service.

The Senate, chaired by the vice-chancellor, is responsible for all the academic affairs of the University, admissions, examinations syllabus, and courses of study.

The Congregation, comprising all staff members holding degrees, is a wider platform for conferring on matters of general interest.

4.32 ***CAMPUS LAND USE AND DISPOSITIONS****:* The University categorizes the disposition of the entire 363 Hectares of the University's main campus site into four main groups, namely, the developed area, underdeveloped but committed area (these are primarily on the university edges), and the canal. This research will take advantage of these designated plots to make proposals in line with the aspirations of the University that will enhance the university edges to be more complimentary to the aspirations of the host communities they adjoin.

The University developed area covers 156 Ha of land or 43% of the campus land area. This area has been developed for administrative, academics, commercial residential, and

Recreational uses.

Another category is areas developed but is used by entities not within the control of the institution. Such areas cover a total of 12% 0r 177Ha of university land. These areas are mostly located in the northwest of the Campus and are made up of the developments such as Federal College of education (technical) and St. Finbarrs College, both located on the west and east of Akoka road, respectively. Also is an elementary school, all on Akoka road. Ironically a few of these developments predate the arrival of the University in that location.

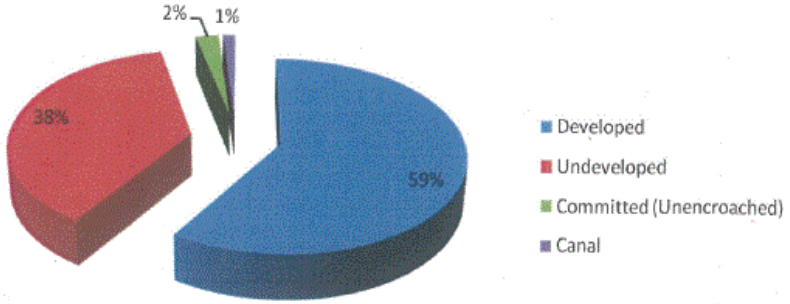


Figure 4.6: Chart showing Campus land Disposition. (Source: courtesy Unilag master plan review, 2014)

Noteworthy is the mention of the very active physical encroachment into university land, especially from the Iwaya and Makoko riverine communities. The extent of this encroachment was documented by visits of this author to the various boundary communities. These infrastructural deficient communities have both colonized and or invaded a land area of almost 36Ha 0r 10% of the entire campus land. It is essential to state that this research proposal is based on the theory that most, if not all, of these lands, will be reclaimed and developed through a public, private joint venture partnership.

Use	Area (Ha)	Percentage
Central Administrative Area	2.478	1.59
Academic	26.254	16.84
Communal	31.995	20.52
Housing	51.938	33.32
Recreation	15.295	9.81
Commercial	3.139	2.01
Circulation	24.807	15.91
Total	**155.907**	**100.00**

Figure 4.7: Table showing Land use analysis. (Source: courtesy Unilag master plan review, 2014)

4.33 ***UNDERDEVELOPED****:* the underdeveloped lands are essentially categorized into two types, the swampy lands are covering 137Ha, which serves as green infrastructure, and the non-swampy area covering 0.5Ha or a gross total of 37% of the campus landmass.

Underdeveloped but committed, another significant category of used land is located along the western boundary. These are The Fola-Agoro B.O.T. scheme (6Ha), Ajayi B.O.T. scheme (9Ha), and the proposed Iwaya student hostel B.O.T. scheme (9Ha). Of these 24 Ha, only 8Ha have not been actively encroached upon. The development proposals recommended in this research are engineers to mutually benefit both the University and the host communities as part of the attempt to fostering better harmonious relationships.

Land Disposition	Area (Ha)	% of Total
Developed		
University Use	155.907	43.04
Non-University Use	21.406	5.91
Encroachment	36.576	10.10
Sub-Total	**213.889**	**59.05**
Undeveloped		
Swamp	135.084	37.29
Non-Swamp	0.409	0.12
Sub-Total	**135.493**	**37.41**
Committed (Un-encroached)	**8.294**	**2.29**
Canal	**4.452**	**1.25**
TOTAL	**362.218**	**100.00**

Figure 4.8b: Table showing Campus Land use Dispositions Source: courtesy Unilag master plan review, 2014

4.34 ***RESIDENT AND DAY TIME POPULATIONS****:* Unilag is predominantly an on-campus accommodation institution. From its inception, the school has aspired to accommodate as many of its staff and students as possible. The school's accommodation policy is to strive to accommodate at least 75% of its full-time student population. The main Campus's daytime student population is almost 34,000; hence, the school aspires to accommodate 24,000 of these students by all means within their resources. In this research project, this author is proposing 3000-bed spaces in an area already designated as the Iwaya student hostel B.O.T. scheme.

Another accommodation policy is to house at least 50% of their staff and dependants comfortably within the secure environments of the Campus. The current staff population is 2400, with an additional 6200 dependants. This research project will employ the activation of all of these B.O.T. sites as catalysts to re-activate the otherwise dead edges of Iwaya and other similar communities.

The daytime population took into cognizance other ancillary activities within the Campus, such as the commercial vendors, banks, Elementary school, and secondary school, all of which operate within the school independently and deals with the general public directly.

Show table 3.34

4.4 CAMPUS INFRASTRUCTURE

4.41 ***VEHICULAR ROADS AND BRIDGES****:* The University is currently accessible by two main roads. The first is the Dan-Fodio Boulevard from the main gate and the Health Centre road leading to the second gate that connects the Onike/Iwaya communities. The right of way for both roads is 16meters.



Photo 4.10: Picture shows the longest bridge on campus Medical Centre road. (Source: courtesy Author, 2020)

Dan-Fodio Boulevard is the longest road on the Campus at 1.6km. Other main roads are Commercial road Tafawa-Balewa road, both of which connect Dan-Fodio with Health Centre road on the western and eastern parts of the Campus, respectively. Other secondary roads link the Campus with the staff and some student residences. In total, there 29 vehicular access routes within campus 4 are main artery routes with a 16meter right of way, with ten minor routes. The minor routes are especially located in the various residential districts across the

Campus, and all have the right of way of between 5.5-6metres. Closes link the more private staff residences; 15 of these road types exist on the Campus terminated by a cul-de-sac and have a 5metre right of way. In addition to the existing roads, there are five other roads proposed to intra-connect the Campus further in the future. The roads are located mostly in the undeveloped parts of the campus.3 of these roads will go eastwards toward Morounfolu street on the eastern border area of the Campus to connect the Morounfolu B.O.T. scheme. This scheme is an integral part of the future intervention to be proposed.

UNILAG revised master plan (2014), Unilag.edu.ng



Photo 4.11: Picture shows Pedestrian Movement at an off peak period along major university road (Source: courtesy Author, 2020)

4.42: ***PEDESTRIAN WALKWAYS****:* within the Campus are a network of formal and informal pedestrian circulation that provides access to buildings and parking facilities. Only very few of the facilities are covered. The pedestrian movement around the Campus is not very legible, with no clear signs or provisions for people with disabilities or special needs. Both the Campus and the city have this characteristic in common, where little or no provisions are made for the pedestrian. It almost seems like a deliberate colonial design policy to save costs, not lives, in their transportation architecture. Drawing from the complete street guidelines adopted for this research, new recommendations for re-coding the roads, streets, and other public places within the Campus would be stated. These



Photo 4.12: Picture shows designated staff and student parking (Source: courtesy Author, 2020)

recommendations would also be exercised on the principal roads around the campus edges to display the new normative of best practice in urban design and renewal.

4.43: ***PARKING****:* The Campus has become highly motorized due to its urbane nature and the fact that its transportation design is made essentially for motorized movement and comfort. This has led to a proliferation of vehicular parking spaces consuming valuable real estate on this Campus. Parking areas are usually located in the front or behind the buildings they serve. The parking facilities have been designated as open to the public, reserved for parking permit holders, or commercialized. Walking around the Campus shows a predisposition for vehicles and vehicular movement over any other means of transport. Apart from parking facilities, the Campus also has four bus and taxi ranks distributed around the Campus.

UNILAG revised master plan (2014), Unilag.edu.ng



Photo 4.12: Picture shows an example of designated parking area (Arts Block Complex) on campus, many of such areas exits. *(Source: Author, 2020)*

Show table 6.4

4.44 *TRAFFIC PATTERN AND TRANSPORTATION:* Kadiri Associates carried out *a traffic survey report* in 2014 as a basis for informants for the University's interim revised master plan. This traffic survey showed that the main-gate by Dan Fodio Blvd. accounts for 68% of vehicular inflow and outflow for the weekdays and 61% for the weekends. The total inflow and outflow for the weekdays through the main gate is 20,074pcu and for the weekends

is 13,254pcu. The survey suggested that the average weekday volume at both gate's main gate (Akoka) and the second gate (Onike) are 34% higher than the weekend volumes.

The studies carried out in 2014 by *Kadiri Associates* suggested that the inbound traffic peaks between 7 am and 9 am and then experiences a decline till 2 pm when traffic movement that's to increase again till 5 pm. It was also observed in the 2014 studies that traffic movement varied with the days of the week at the current two points of access. Mondays have a higher traffic movement on the second gate, and Wednesdays are when the main gate experiences its peak movement of vehicular traffic.



Photo 4.13: Picture shows a local taxi rack on Campus. This taxi rack operates only within the Campus. *(Source:* Author, 2020)

TRAFFIC FORECAST (2014-2034) is based on a documented growth pattern established between 2010 and 2014; according to the Unilag revised master plan (p. 126), "a major assumption in the traffic forecast is that the established growth rate will not be constant throughout the twenty-year period." It is envisaged in the forecast planning that the hourly traffic as the main gate will grow from 1,776pcu in 2014 to 3,891pcu by 2023. The second gate will see a lower growth pattern from 539pcu in 2014 to 930pcu in 2033. Finally, it is forecasted that the main gate (Akoka) will remain the main access point into the Campus by 2034

UNILAG revised master plan (2014), Unilag.edu.ng



Photo 4.14: *Picture shows vehicular and pedestrian movement during off peak. (Source:* Author, 2020)

4.5 **SERVICE INFRASTRUCTURE OF THE CAMPUS**

4.51 ***WATER DISTRIBUTION*****:** The University adopted a main distribution ring system. This enables the water supply to be integrated and interconnected. The advantage is that it enables the isolation of damaged portions during repairs with minimal disruption to other parts of the Campus. The university maintenance team claims they do not have any updated drawings for the water distribution around the Campus.

UNILAG revised master plan (2014)

4.52 ***ELECTRICITY:*** in 2004, the Unilag authorities carried out a comprehensive power audit to determine the existing power system's sustainability and efficacy. According to the directorate of works and physical planning, the existing structure comprises an 11KVA high voltage supply from Nigeria's state power holding company, PHCN, and Ajah-distribution 132KV injection sub-station feed into the University's high voltage panel

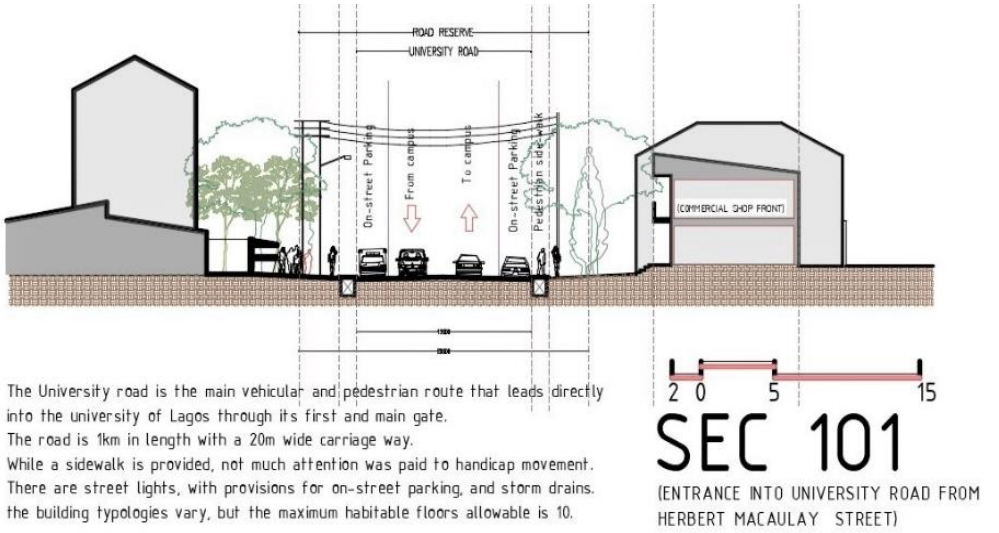


Figure 4.8-Illustration of Section across University road from Herbert Macaulay

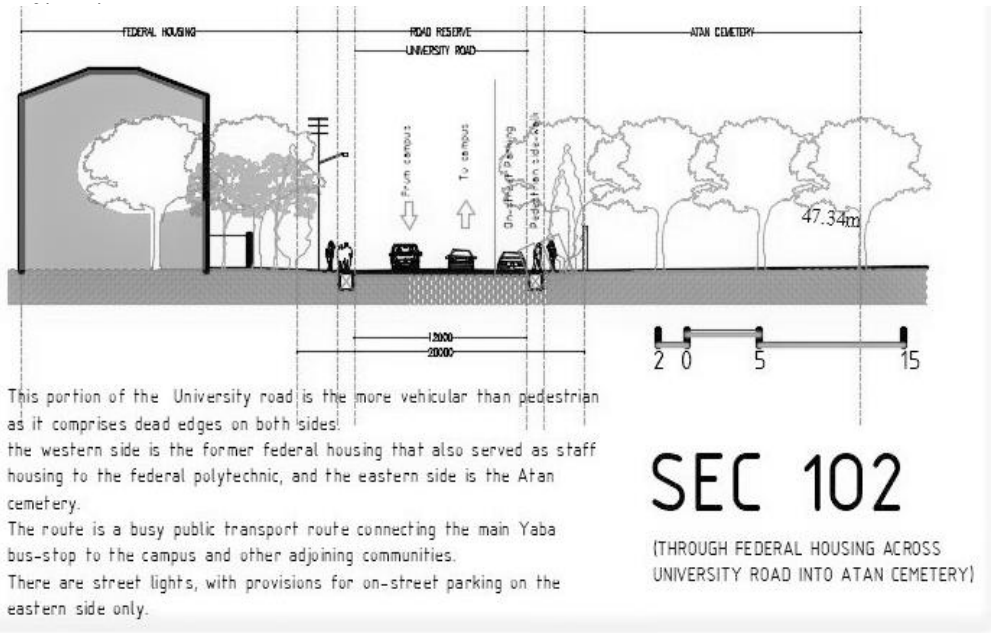


Figure 4.9-*Illustration of Section across University road from Atan Cemetery*

in the electrical switch room. Ten numbers of feeder pillars distribute this through ring-main units into fifty numbers distribution transformers ranging from 100KVA to 1000KVA. The peak load demand for the Campus was recorded as 6MW. An additional two units of 5MW transformers have been procured for installation. This is expected to surface for the University's projected power demand if the additional transformers are dedicated to campus use.

ALTERNATIVE POWER PROVISIONS, Under the National Universities Commission (NUC) guidelines, certain buildings are listed, and utilities are listed for standby power supply. Unilag currently operates two numbers 2MW standby power generators, which are both in active use. The university facilities management unit has devised a load shedding schedule to keep the cost at a sustainable level.

UNILAG revised master plan (2014)

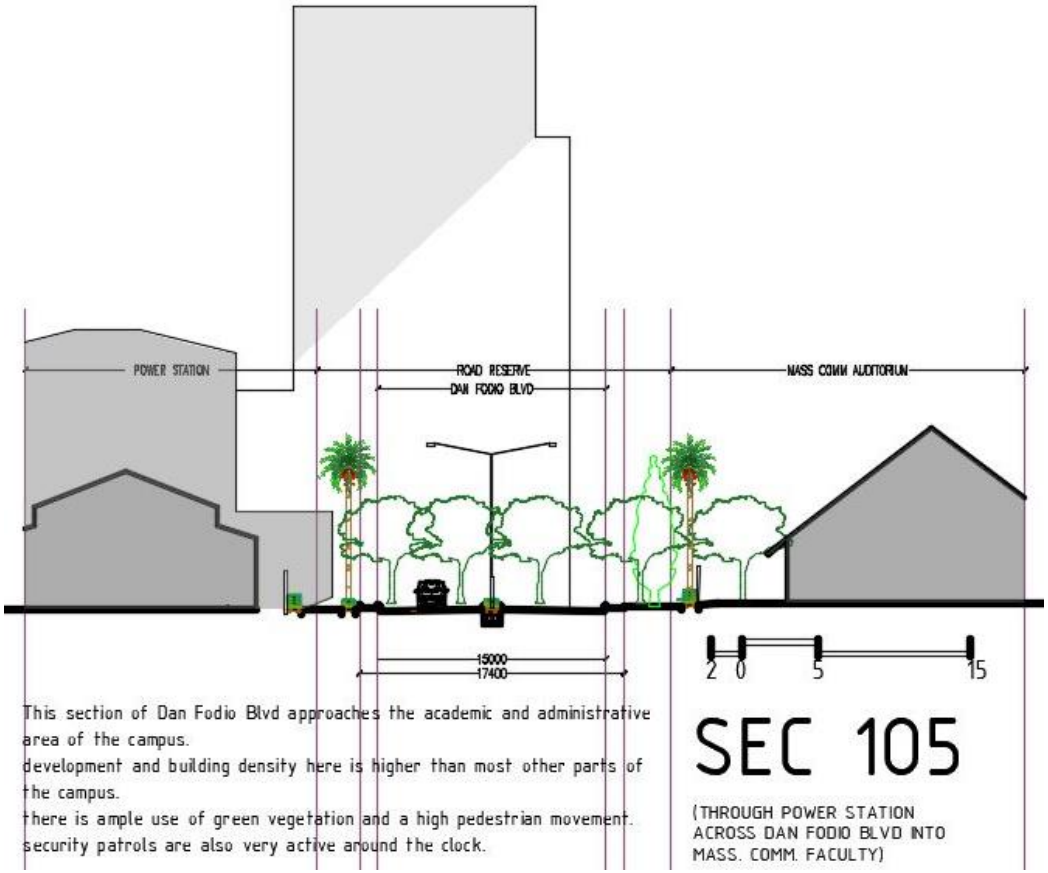


Figure 4.10 -Illustration of Section across Dan-Fodio Blvd inside Unilag Campus

4.53 ***WASTE MANAGEMENT:*** The summation of the various dictionary definition of waste is said to be any material or substance that is no longer useful after the completion process of its total functions. Or any substance that is to be discarded because it is of no economic value to its owner. Waste is characterized by its physical State, whether solid, liquid or gaseous. The management of waste, especially in cosmopolitan cities, has become critical to maintaining good public health and safety.

UNILAG revised master plan (2014)

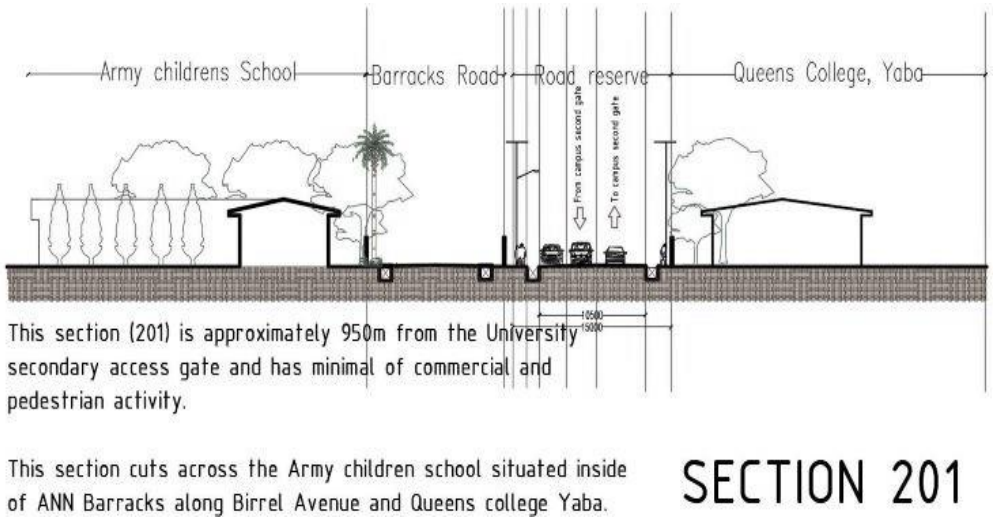


Figure 4.11 -Illustration of Section across Birrel Avenue through ANN Barracks and Queens College Yaba.

SOLID WASTE MANAGEMENT: As the population of the University increased, so did the challenges of solid waste management (SWM). A sub-unit of the health centre is mandated to manage the SWM of the Campus from generation, storage, collection, transportation, processing, and disposal. There is no available data to quantify the volume of solid waste generated with the Campus. However, solid waste consists mainly of domestic waste, medical waste, construction and demolition waste, and sewage and sanitary waste.

SOIL (LIQUID) MANAGEMENT: The wastewater management is under the physical planning department. It is located in the services area of the University. The department considered the construction of wetlands as a proactive approach for excess wastewater treatment. The rapid increase in population necessitated this line of thought.

The sanitary wastewater from the campus community is conveyed in sewers ranging from 100mm to 200mm diameter pipes from homes, offices, classrooms, and student residences to a central sewage pumping station located in the services area. The pump area consists of six numbers of lift stations and one sewage treatment plant. Both are at depths of 8m and 12m, respectively. Lift stations with pump capacity ranging between 15hp to 50hp are strategically located within the campus community.

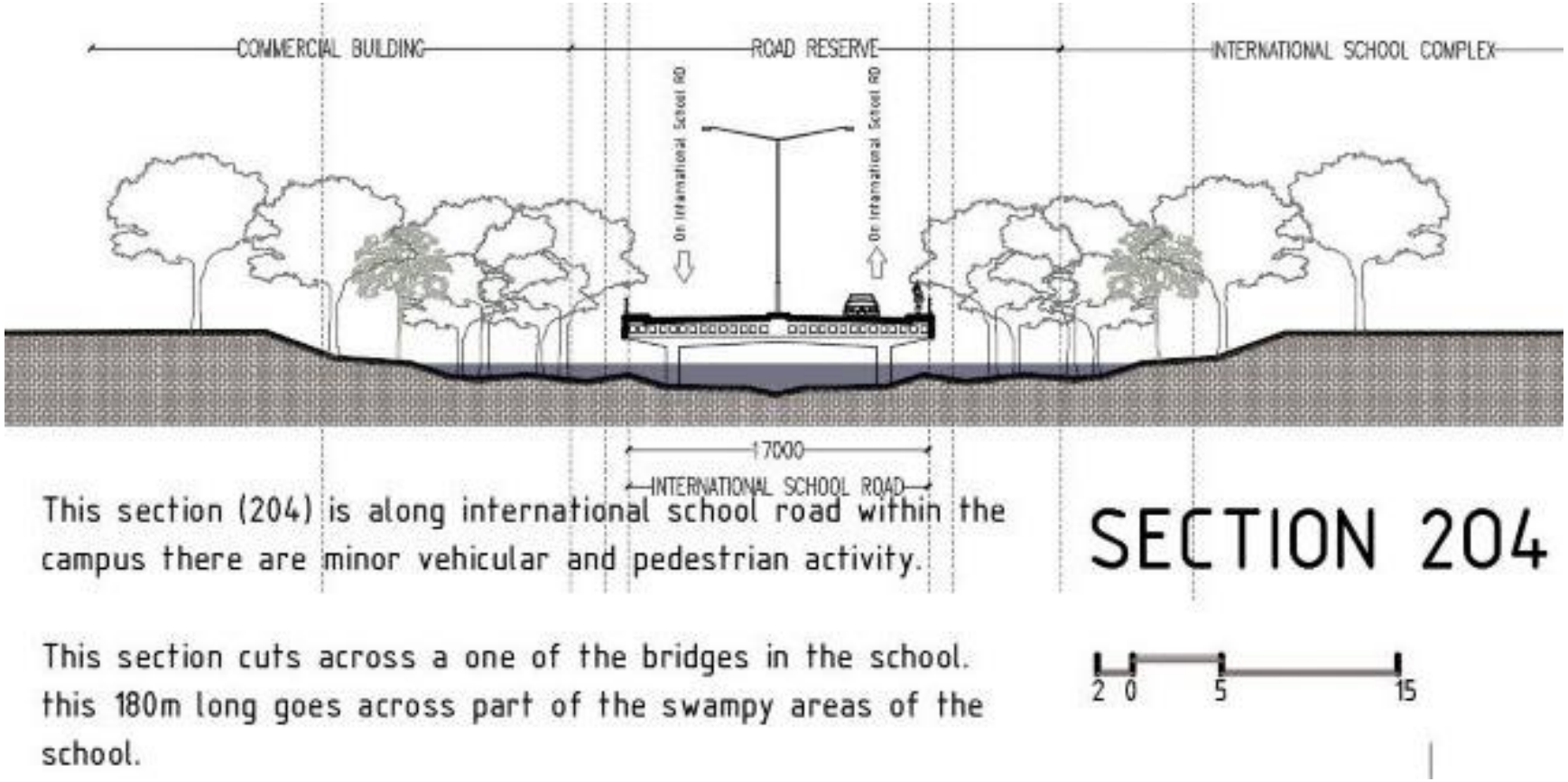
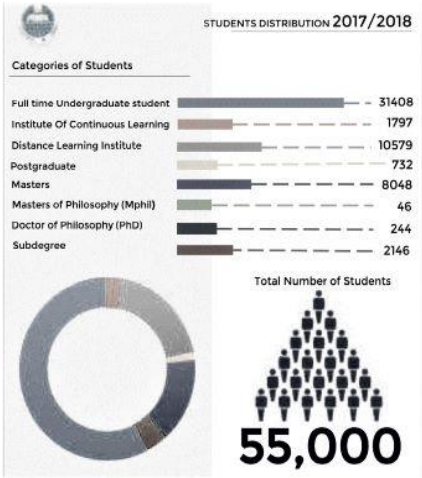


Figure 4.12 -Illustration of Section across International school road showing a bridge within the campus over green infrastructure



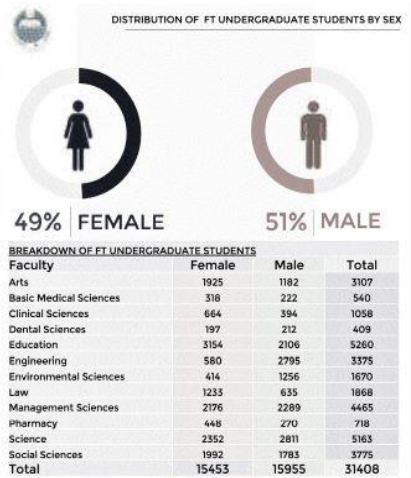
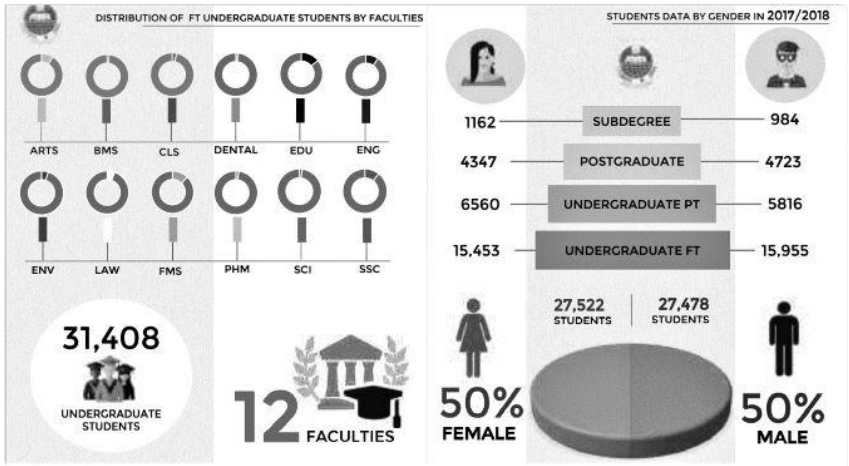


Figure 4.13 A



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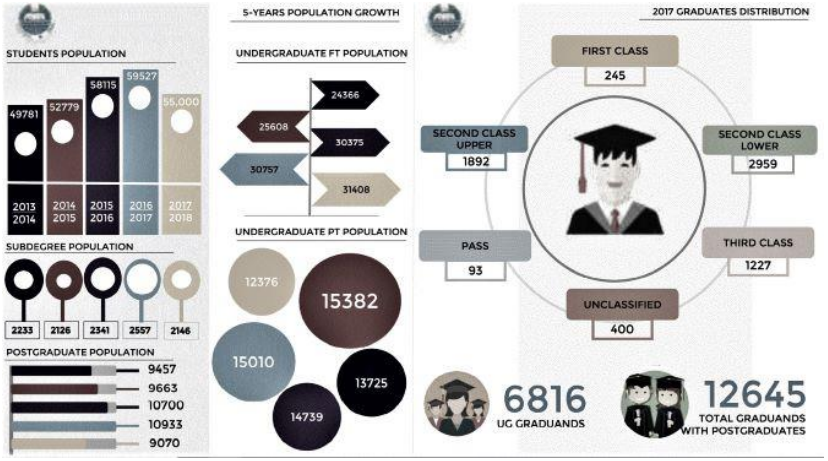
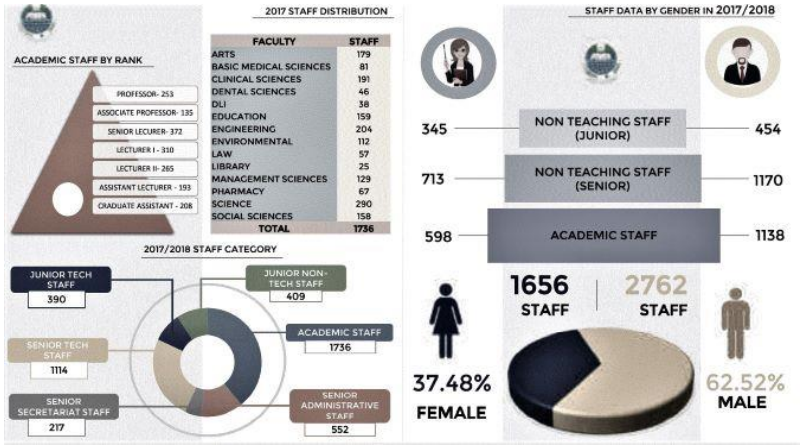


Figure 4.13 C



D

Various statistics on the University of Lagos showing population growth, student gender ratio, staff gender ratio and graduate distribution (Courtesy Unilag Pocket book 2019)

4.54 ***CANAL****:* The canal system in the University is a total of 1.4Km long and covers a land area of 4.5 Ha of the landmass. Most of the physical development around the University was done while maintaining these natural drainage channels' integrity. UNILAG revised master plan (2014)

CHAPTER 05 ***– DESIGN***

5.1 INTRODUCTION The study of the relationship between town and gown is an inquiry into how symbiotic socio-economic benefits can be unlocked between neighbours hitherto where engaged in an awkward relationship. The constant boundary encroachment conflicts, perceived security implications, and social class dichotomy are the usual suspects for the university campus's reluctance to be liberal with its territories. It is the objective of this research to establish the administrative, social, and economic constitution of the Campus, especially with regards to its urban spaces and its public realm. Also, all the untapped potential benefits that the Campus still has locked in that could be beneficial to its various host communities can be unbundled. For instance, the various B.O.T. locations around the campus edges could activate the economy in those locations when developed; instituting other points of ingress/egress into the Campus through other communities would activate the existing real estate market along the edges of these new accesses.



Photo 5.1: *Picture of a public sitting area on Campus. (Source:* Author, 2020)

The University's host city's historical background is important to create context and a better understand of the evolution of the city and how it has impacted its environment. This background analysis also assisted in determining the character, constitution and economic State, and evolution of the subject city. All of this critical information would determine the premise and nature synergy been recommended.

Finally, this research aims at showing that a deliberate and organized activation of campus edge conditions has a lot more benefits to both town and Campus than managing the existing conflicts as they are.

5.2 EXISTING CONDITIONS: The University is characterized as an urban campus because it is located in a city of more than 200,000 people, and its activities impact its surrounding communities socio-economically. This Campus, though, is on a 'mare' 800 acres of land has a registered enrolment of 70% of the total 57,000 student population. During academic sessions, the campus houses over 20,000 residents (staff and their dependants and the on-campus student population) are administered like a small independent town. That the Campus is a federal territory has helped to reinforce its independence from the surrounding local administration. Within the Campus are several sports facilities, including a mini-stadium, an independent power plant (I.P.P.) portable water system, a fire station, a police post, banks, commercial nodes, roads, bridges, and other infrastructure characteristics of a small urban community. The Campus operates a works department whose duty is to minister to the maintenance of the community to ensure public health and safety.

All major infrastructural developments are undertaken by the Federal Ministry of Works with the Federal executive council's approval, of which the nation's president is the chairman. However, due to economic constraints, the much-needed rehabilitation has been few and far between. This could also be as a result of the number of federal universities in Nigeria grew from 5 in 1961 to 38 by the year 2021. Be that as it may, due to the strategic importance of the University of Lagos to the

nation’s educational and strategic development interest, many local and international donor agencies regularly come to her aid.

The current infrastructural challenges of Lagos City are significantly more desperate than that of the federally funded UNILAG. The overstretched infrastructure of Lagos is leading to rapid growth and the expansion of the existing slums in the city. Public transportation, power, potable water, housing, and waste management are in dire strait. Lagos's government is attempting to tackle these challenges, but with the twin handicap of financial unavailability and high political intrigues constantly retarding progress, development is stunted. However, it is not all gloom as some gains have been recorded, especially in the areas of public transportation with the establishment of the Bus Rapid Transport (B.R.T.), the ongoing mono line project, and the waterways transport services also in the management of solid waste where the expansion and development of new dumpsites have been established.

5.3 DESIGN PRINCIPLES*:* This would be based on planning to address the realities on the ground effectively. The design would be planned around the use of N.M.T., the use of automobiles would be de-emphasized with all the elements that make good pedestrian experience implemented, some of the principles are under listed

- Pedestrian first
- Transit support
- Place-making
- Complete community
- Community participation

(www.resilientcity.org)

Pedestrian first, vehicular dependent transportation is not a sustainable approach to planning a resilient city planning. Non-motorized movement such as walking, cycling, and jogging will be promoted as a lifestyle and infrastructure provided for this new urban planning normative.

Transit support; the design will promote transit-supportive movement, and this will be done by providing for mass transit movement over the use of car-transportation. Comfortable stops or rest areas such as open public parks would be used.

Place making; the use of vibrant nodes as landmarks would be used to make exceptional public spaces. Multi-functional open spaces with light commercial activities would intermittently enhance the experience of the public realm.

Complete community; these are also known as the 5-minute city where most of life's daily needs within neighbourhood walking distances of 500 meters radius. For this new norm to be effective, walkways must be safe and enjoyable for all pedestrians. People should be able to walk to school, play, and shop or engage in activities of their daily life without commuting.

Community participation; the active participation of members of the community would be encouraged for the scheme to be fully successful. Residents and stakeholders must be part of designing their communities. They must also embrace and engage the new vision by encouraging the new idea of walking, jogging, and de-emphasizing vehicular transport.

5.4 DESIGN STRATEGY; this is a recommended approach to engage a project with the aim of integrating the planning process with the contextual reality. In this context, a combination of imperialism and rationalism will be employed.

The resolution of complex non-linear problems in city planning through process-related narratives are primarily based on rationalism or Empiricism. These schools of thought are the premise by which critical urban space production, such as the city block, is determined. The rationalist would discount; ambiance, collaborative planning, community cohesion over cost, comfort, data, and statistics, and the empiricist would do the opposite.

Empiricism is the theory that believes in evidence and fact-based decisions where experience, results of experiments, or proven methods should be the basis of normative choices.



Photo 5.2 a Picture *shows a typical street along the edge of the university (Iwaya road)* courtesy Google maps 2019

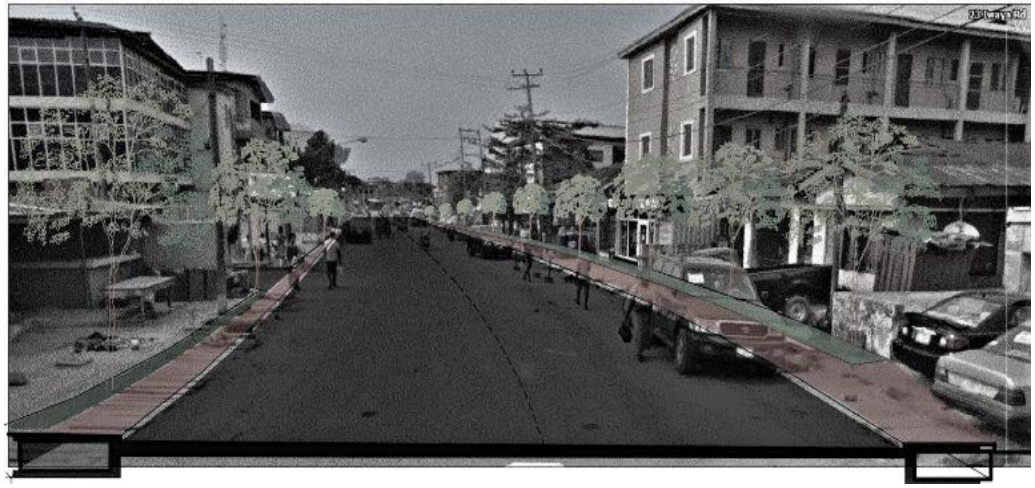


Photo 5.2b *Picture **a** shows a typical street around the edge of the campus (iwaya road, from the Onike area).*
*Picture **b** shows an illustrated strategy of the proposed street upgrade.*
Courtesy Google maps and Author (2020)

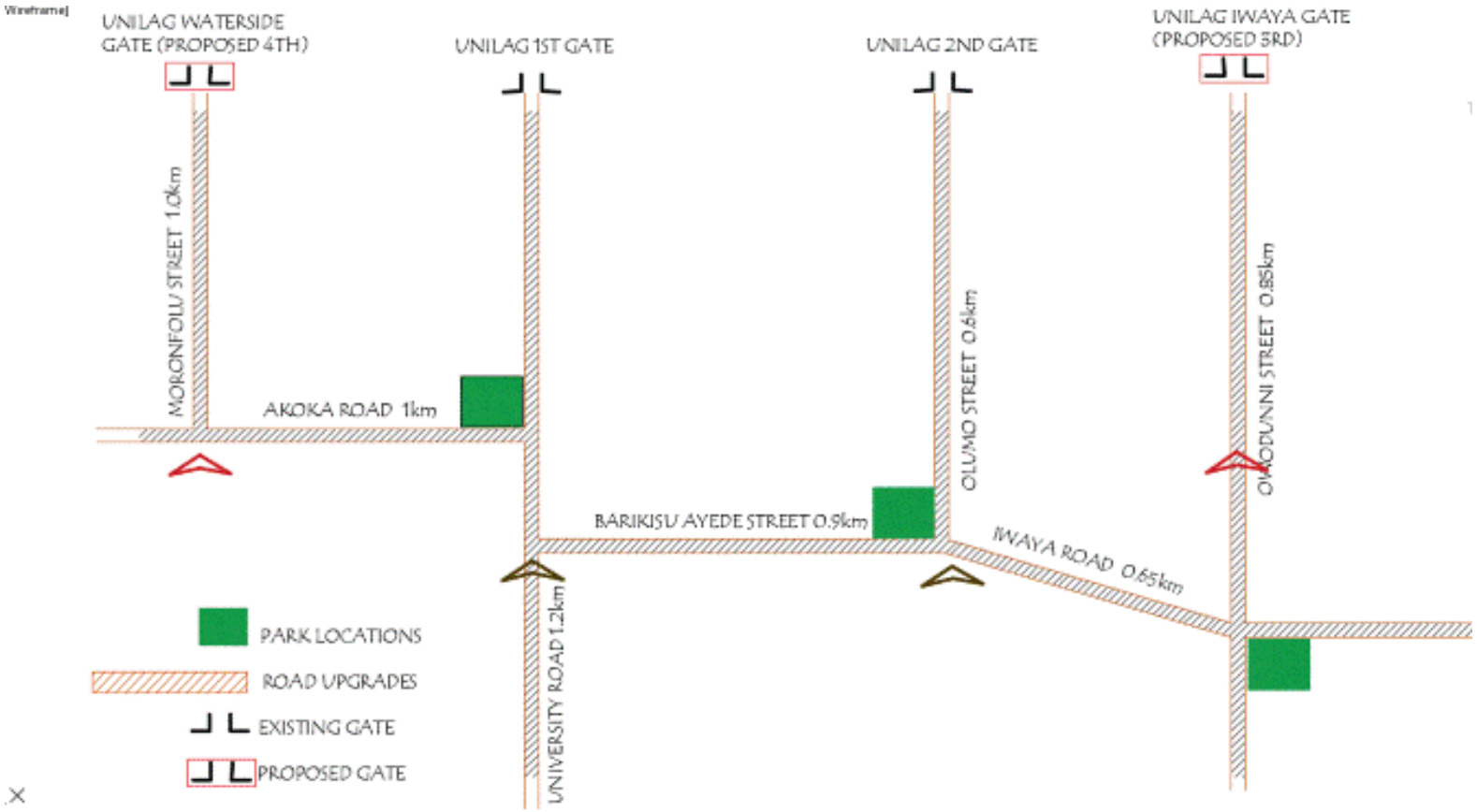


Figure 5.1: *Illustration of the overall strategy, showing the relationship between the interventions in a simple manner (Source:* Author, 2020

The principles of proper city forms, which include equity, cohesiveness, functionality, and sustainability, must be cardinal features. A good city form should be reliable and consistent, using both traditional patterns and modern technologies.

The premise of the strategy to be employed in this research is simple.

- Movement upgrades around the campus edge.
- Development of the University's proposed B.O.T. areas
- Introduction of public parks and rest areas
- Increase in permeability into the Campus through other communities

The redevelopment and regeneration of the transportation movement upgrade around the campus edge is expected to bring a new lease of life to these old residential communities. These routes would be remodeled to accommodate N.M.T. movement safely and conveniently. Provisions of bus stops, street lighting, and appropriate vegetation are expected to create legibility and better the livability of the neighborhood. Traffic calming mechanisms would be used in narrow streets to make pedestrian movement safer in line with the Lagos N.M.T. policy and the CoJ complete street guidelines.

ROUTE UPGRADE FOR NON-MOTORISED MOVEMENT

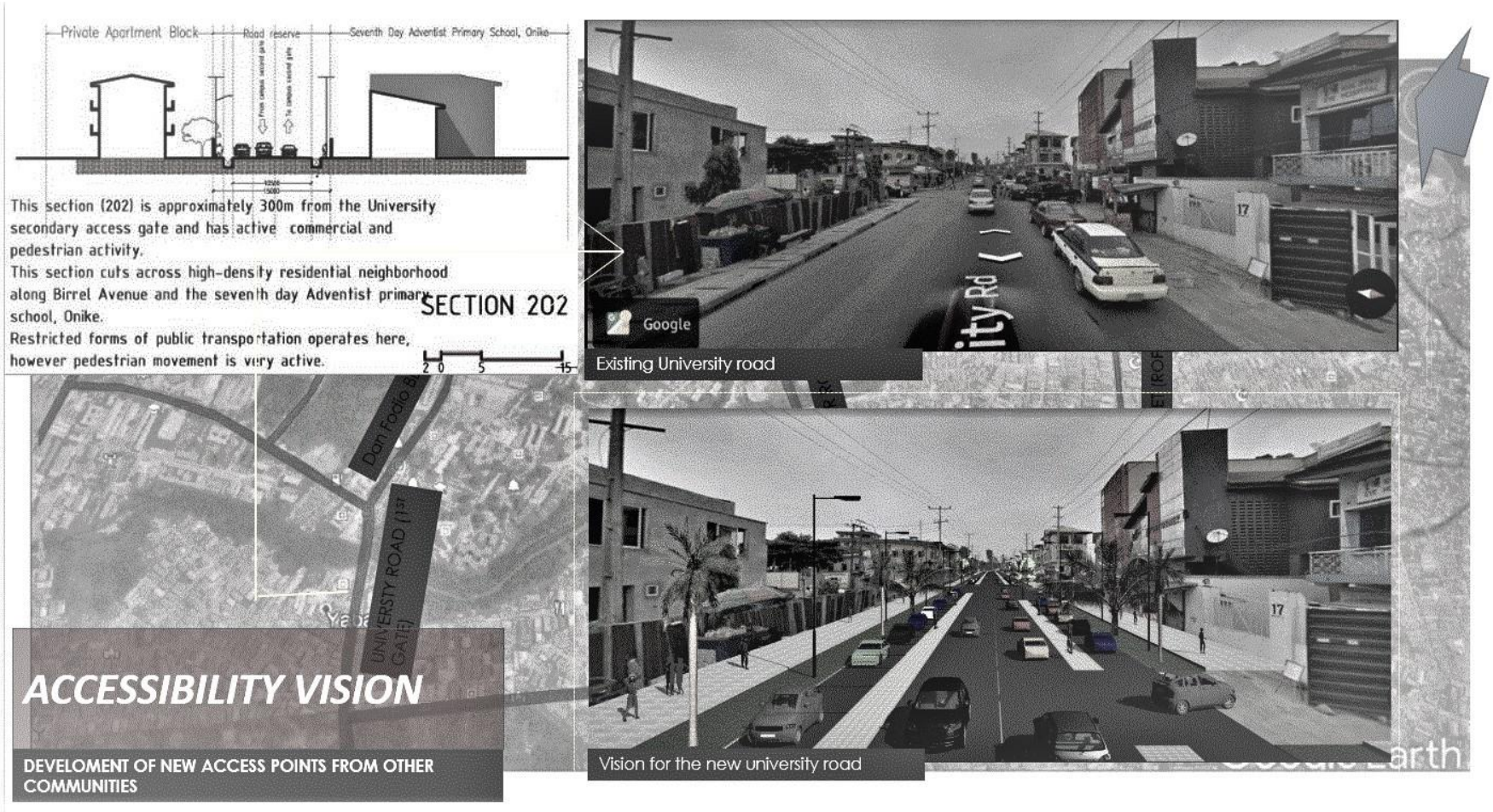


Photo 5.2C *Picture **shows** a typical street around the edge of the campus (University road). Illustrated strategy of the proposed street upgrade showing existing and proposed. Courtesy Google maps and Author (2020)*

The University management has identified and designated 5 locations to be developed with private investors under the build operate transfer arrangement (B.O.T.). These developments are mainly planned to be residential districts, with light commercial activities. These private equity investments would help build the future capacity of the residential potential of the University for both staffs, students, and subsidized retirees housing. The locations of these B.O.T. sites are;

- The Iwaya B.O.T.; staff and student housing, 9.4 hectares (Iwaya community)
- Ajayi street B.O.T.; staff Housing, 9.2 Hectares (Onitiri community)
- Fola-Agoro street B.O.T.; staff and subsidized retiree housing 5.6 hectares (Fola-Agoro community)
- Morounfolu Street B.O.T.; mixed-use development size. not determined (Akoka community)
- St Finbarrs College road B.O.T.; commercial 1.5 Hectares (Akoka community)

The development of these schemes, though they will be phased, would be integral to the new overall vision of forging the relationship between the University of Lagos and its host communities.

The Introduction of public parks and rest areas is an idea in line with the mandate of the Lagos State Parks and Garden Agency (LASPARK). This agency was established in 2012 to 'make Lagos greener and healthier through the creation and maintenance of functional public parks and gardens and the maintenance of trees.' Subsequent to the appropriation of lands (mainly lost spaces in the city), LASPARK declared that it had identified 327 parks and gardens across the city. In the claim, LASPARK stated that 212 were recently established by the government, 85 by private developers, and 31 were established by schools for private and communal use.

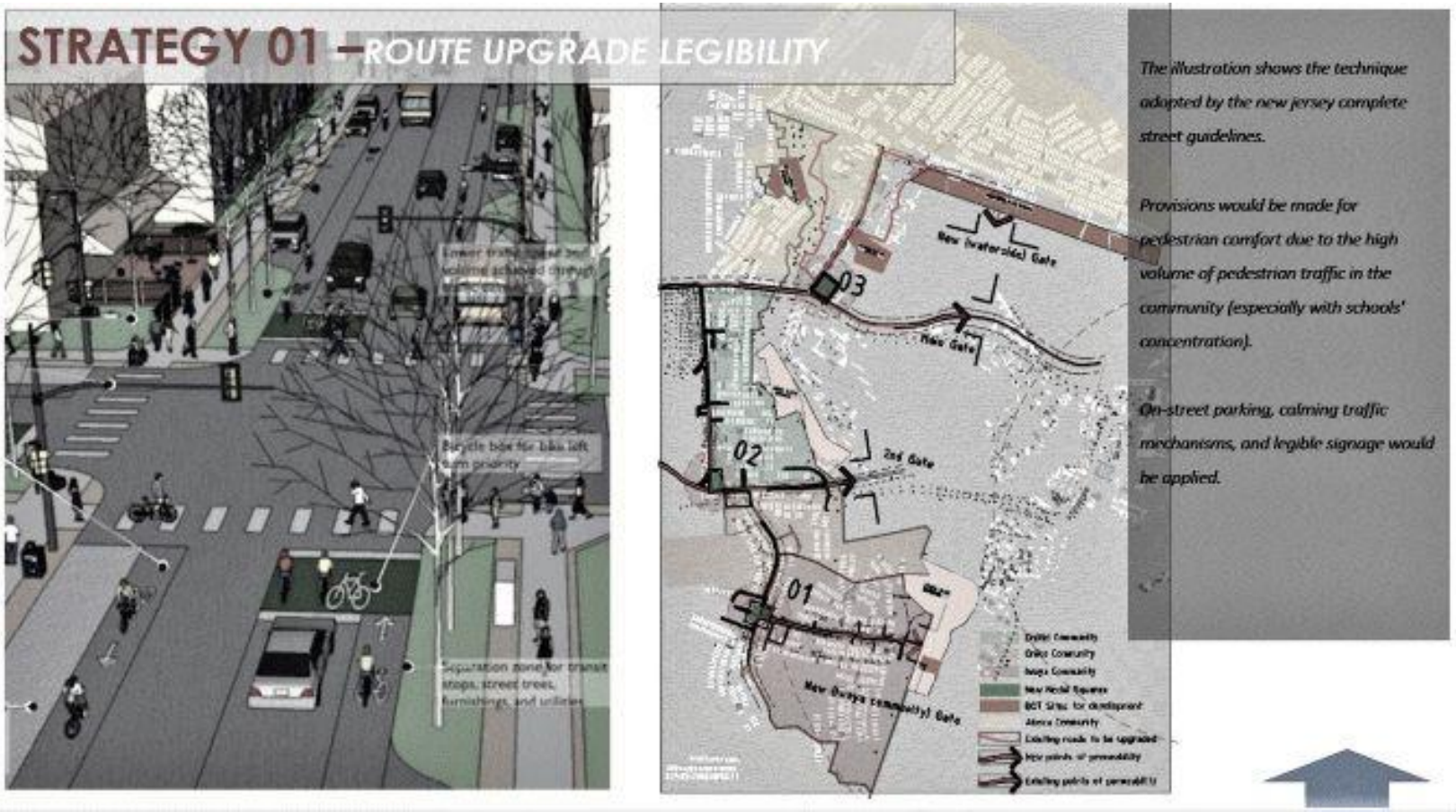


Figure 5.2: *a) Shows illustration of typical route upgrade; b) shows Map showing extent of intervention; route upgrade, and location of new parks, areas for B0T schemes and the new points of access into the campus*

As part of the regeneration and reactivation of the University's edges, three new multipurpose parks would be developed to serve as communal recreation areas, transport nodes, and centers for light commercial activities.

First of these important public parks are to be located in the Iwaya community. This would serve as a nodal landmark for both visitors and residents accessing the would-be 'newest gate' of the University (3rd gate).



Figure 5.3: *Illustration of the proposed Onike community park (Source: Author, 2020).*

A second park is to be located in the onike community also to serve as another nodal landmark for visitors attempting to access the University's 2nd gate, and finally, the biggest and most important of these parks is to be located opposite the University's

premier access. This 'university gate park' would be located on university land, and the University would be responsible for its maintenance.

The increase in permeability into the Campus through other communities is significant to forge stronger campus-community relations. During the field study for this research, the economic activities around both gates of the Campus are socio-economically very vibrant. The current ingress and egress into the Unilag campus are from two different communities, and additional access is recommended to be introduced from a different community from the previous two.

The most suitable would be from the Iwaya community. This new point of permeability will be linked to the proposed upgraded Iwaya road, a new public park, and a B.O.T. development.

5.4 PHASING AND VISION*:* Phasing is the act of dividing a large task into smaller manageable actions. In general, after the design phase, which also consists of a series of activities, comes the implementation stage; this is also best phased to minimize the social disruptions that can occur with most urban renewal processes. In this context, phasing will be discussed as evolving the entire vision from a series of smaller activities. The order of phasing the final vision of this research will be through an evolution of predetermined steps. Each project phase will be goal-oriented, with timelines that, when met, will indicate progression to the final vision. This research will discuss the project execution phasing through; route upgrades, new park

developments, development of the residential B.O.T. schemes around the Campus, and the introduction of two new access points into the university campus from other communities with no access.

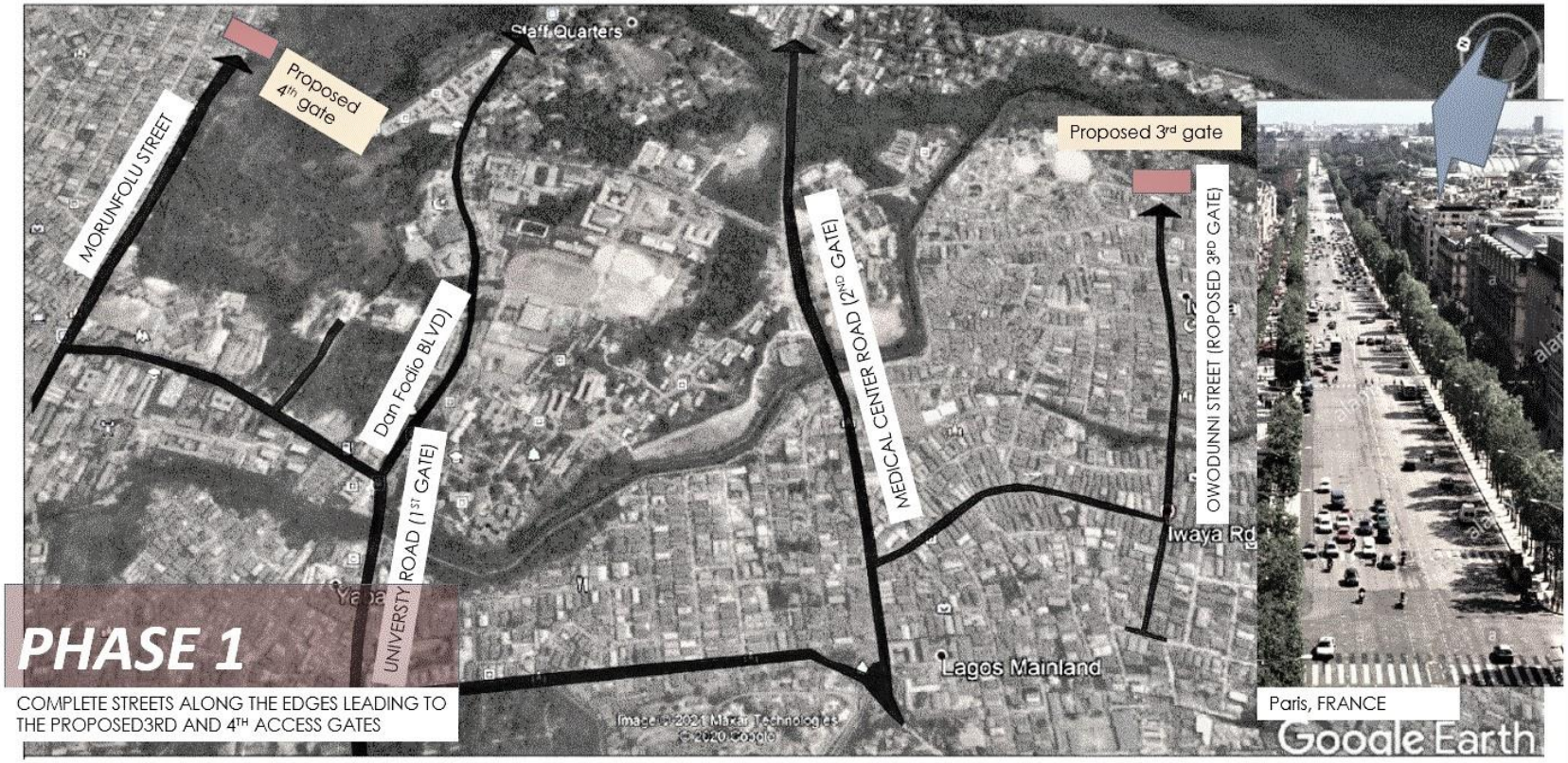


Figure 5.4a: *Illustration of the **first phase** (movement upgrade around the edges especially leading to the two new access gates) proposed vision for the edge conditions. (Source: Author, 2020)*

Route movement will include the upgrade of approximately 6.15km of roads around the campus edges. These roads include Morounfolu Street 1km(route to the new university fourth gate access road), Akoka road 1km, University road (university main access road) 1.2km, Olumu street (university second gate road) 0.6km, Iwaya road 1.55km and Owodunni street (route to the new university third gate access road). The identified routes are to be upgraded with appropriate sidewalks, trees, street lights,

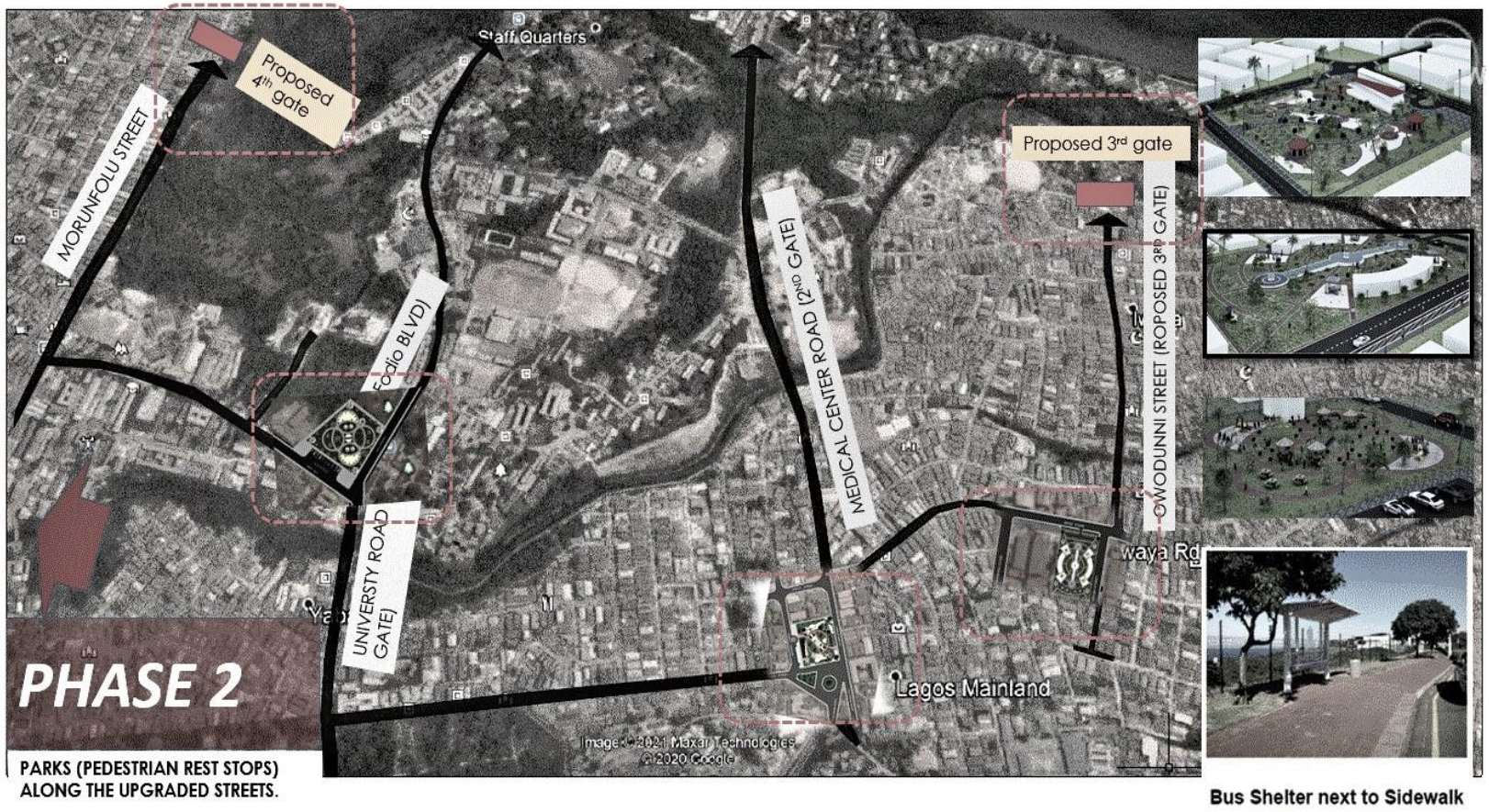


Figure 5.4b: *Illustration of the **second phase** leading to the two new access gates, proposed vision location of parks and rest stops along these paths (Source: Google maps, Author, 2020)*

pedestrian signs, and crossing marks, clear directional signs, and rest areas for N.M.T. users. The goal is to activate a gentrification process in the edges and appreciate property values in the neighbourhood.

The transit upgrade is scheduled to be the first phase of urban renewal.



Figure 5.4c: *Illustration of the **third phase** showing the locations of the new residential developments (BOT schemes) the community parks and all the routs to be upgraded (Source: Google maps, Author, 2020)*

The development of three new parks around the university edges would promote the new Lagos N.M.T. policy by creating rest stops with light commercial activities with bus stops and public conveniences. These parks are to be located in the communities of Iwaya, Onike, and the principal park will be located close to the University's main gate. These new open public spaces are deliberately located along the direct access routes to the Campus so that the roads that interconnect the Campus and the community are anchored together by the new green open space.

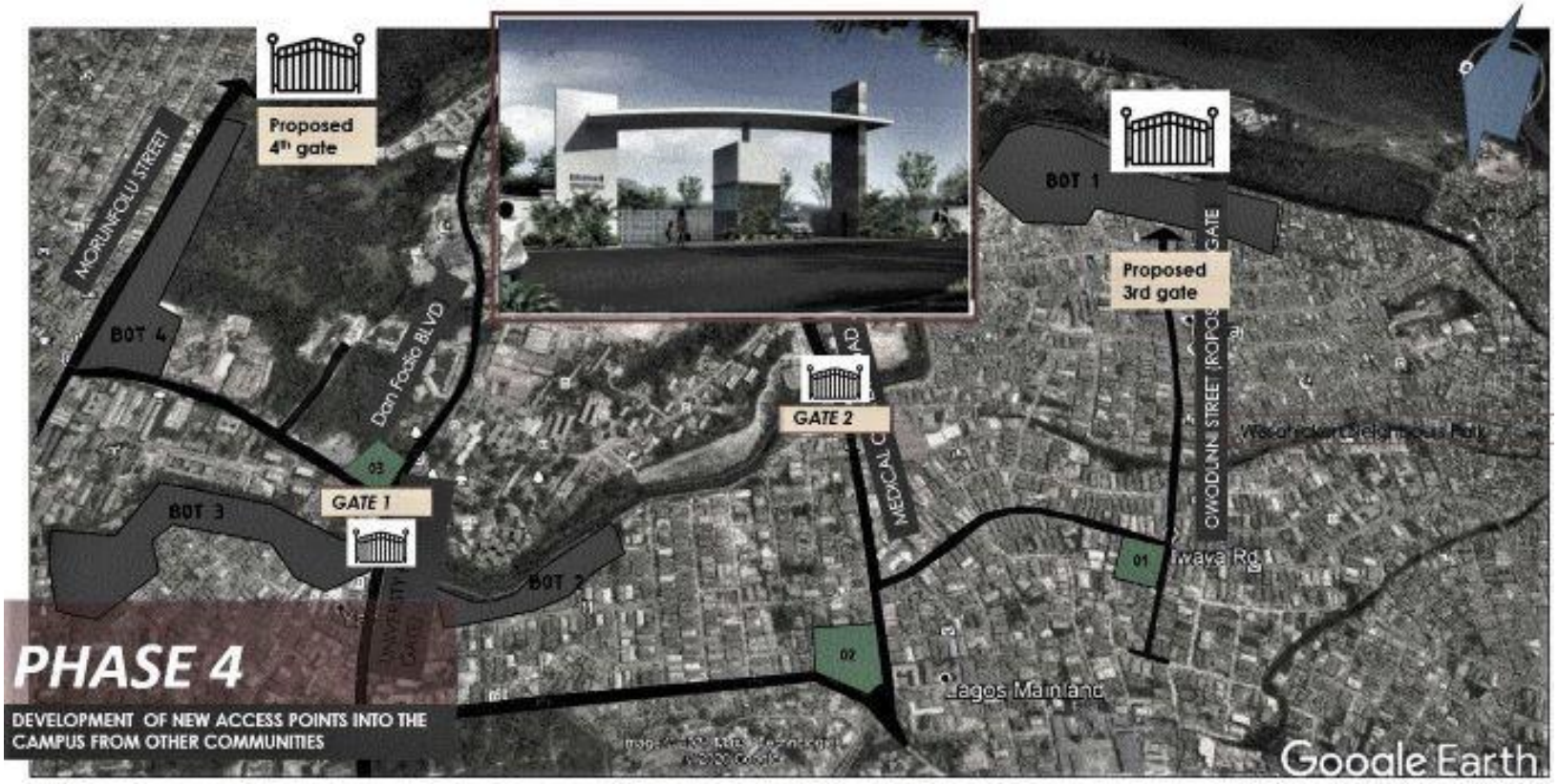


Figure 5.4d: *Illustration of the **fourth phase** showing the locations of the new residential developments (BOT schemes) the community parks and all the routs to be upgraded (Source: Google maps, Author, 2020)*

The development of the parks is in the second phase of edge activations through urban renewal.

There are five sites allocated by the university management along the edges of the Campus various types of development, but mostly for residential purposes. However, the university management is concerned that there are vigorous intrusions into the university property from the Makoko and Iwaya communities. These intrusions cover an area of 36.67Ha of 10% of the entire campus site' (university master plan review 2014:80). Even the Ajayi B.O.T. has been encroached by up to 50%. It is hoped that the federal and State government will encourage an evacuation of most of these encroachments and recover most of the land.

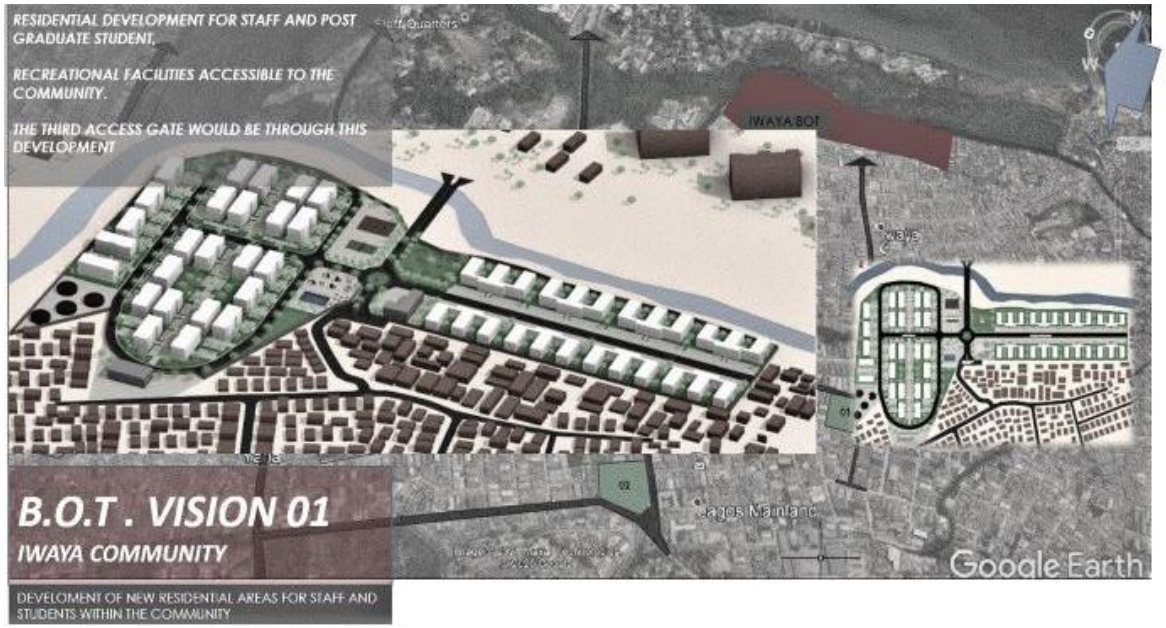


Figure 5.5a: *Illustration of the proposed vision for the Iwaya community BOT site. (Source: Author, 2020)*

The four sites where developments are to be actively pursued are:

- Iwaya B.O.T.'s 9.4Ha of land, which is experiencing active communal encroachment. The goal of this development will stem this phenomenon, create more housing for staff and students, justify the need for new access into the University from the Iwaya community and serve as the catalyst to boost the economic and social activities of the area through further gentrification.

- Ajayi Street B.O.T.s 9.2Ha, located in the Onitiri community, this site has also experienced encroachment to the tune of 50%. This B.O.T. location is designated mainly for staff residences and a few postgraduate student housing, and a university guest house. The Onitiri community has not experienced any notable form of urban renewal or modern development since the 1980s. It is expected this development will bring new focus to the community.



Figure 5.5b: *Illustration of the proposed vision for the Onitiri community BOT site. (Source: Author, 2020)*

- Fola Agoro B.O.T.s 5.6Ha has also experienced its share of encroachment from the host community. The fast pace of the city's growth has also been a catalyst to this persistent encroachment. The site is also designated for staff residential. The University is considering extending its services such as power and water to this site due to its proximity to the Campus.
- Morounfolu street .BO.T.s 8.5Ha is yet to experience any significant encroachment because of the nature of the site. The location is swampy and waterlogged hence would require a significant level of investment before the area can be developed. It is this preconstruction cost that has discouraged encroacher from invading the site, unlike the other B.O.T. locations.



Figure 5.6 *Illustration of the proposed vision for the Morounfolu Street in the Akoka Water-side community* (courtesy Author 2020)

The vision in this context is to activate the Campus and community edges using urban design tool that would rejuvenate the social and economic lives of the surrounding communities and at the same time promote the vision of the institution's ambition to house at least 50% of its staff and 75% of its student population.

Urban design vision is the inspiration and guidance that serves as the frame for the detailed design team to undertake their task.

This proposal will attempt to interlink most of the communities that border Campus with a series of urban developments that will change the public realm of these communities. The principal framework would include road upgrades along the routes that interconnect both the existing and proposed entrance points of the campus community. These roads would be designed using the CoJ design guidelines and the Lagos N.M.T. policy guidelines. These documents advocate that the pedestrian have a safe and convenient right to the street as the motorized vehicles.

The upgrade proposal would also include the provisions to open public parks that would house bus stops, ablutions, and other minor commercial activities. This new scheme would provide for two new points of movement permeability into the Campus from communities that hitherto did not possess such privilege. These new access points would be from the Iwaya community





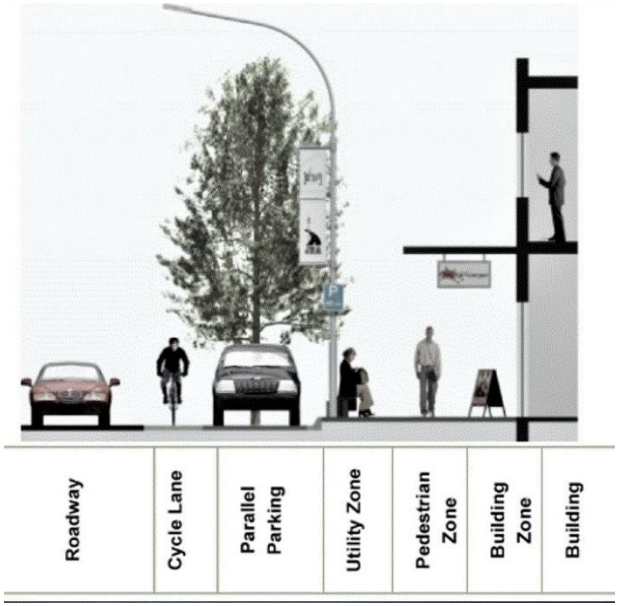


Figure 5.7a **b** **c** courtesy internet

Picture a) showing traffic calming a technique
Picture b) showing proper walkability conditions
Illustration c) typical street design for small neighbourhoods

and Morounfolu street community in Akoka, also known as 'waterside.' It is expected that this introduction would diffuse traffic movement into the Campus and

around the communities allowing for more choices from the over 20,000 people that move in and out of the university campus daily.

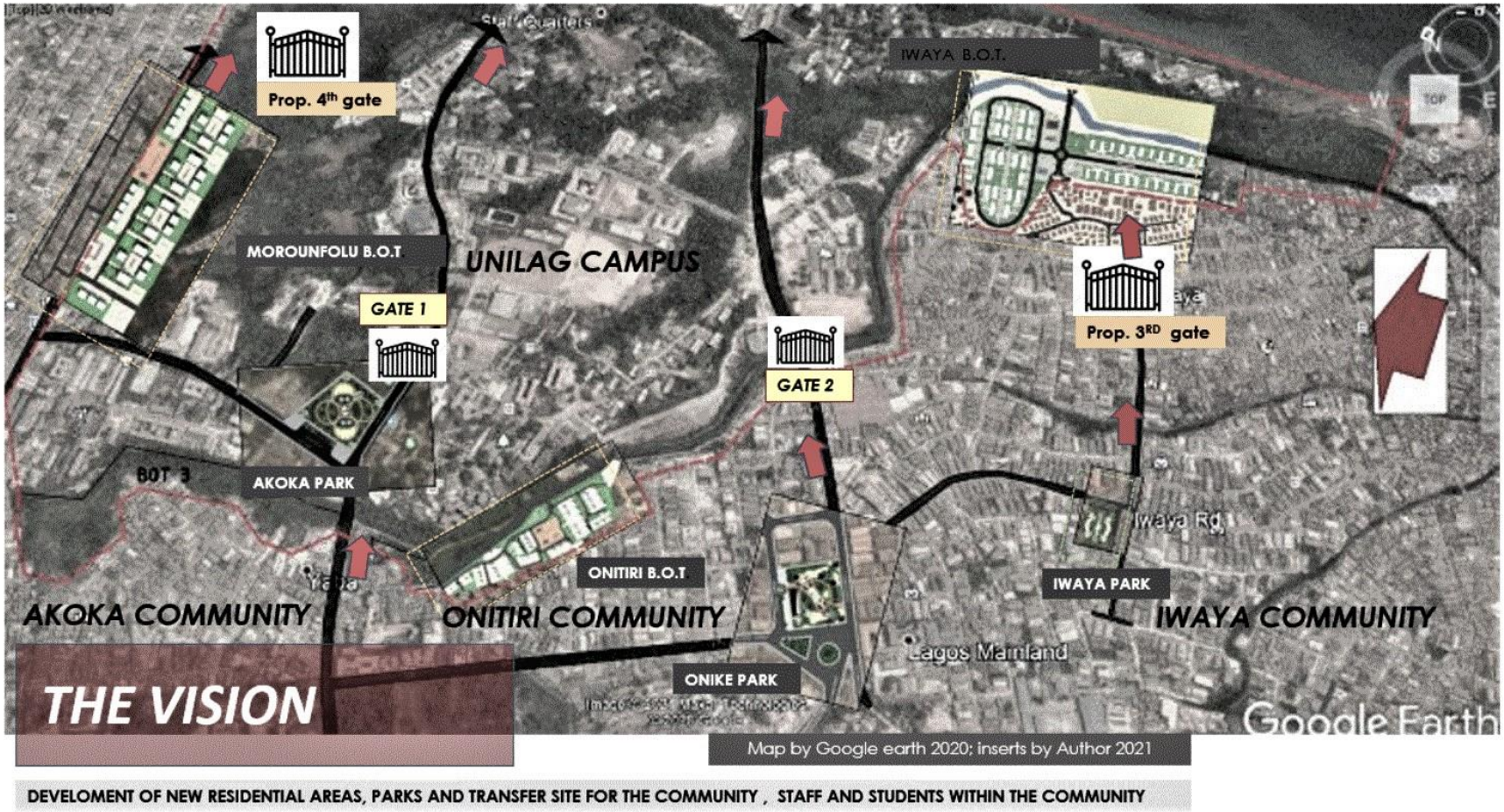


Figure 5.8 *Map of the proposed overall vision for the entire scheme including the route upgrade, the parks, the BOT schemes and the new access points into the campus from other communities*
Courtesy Author 2020

*CHAPTER 06 – **CONCLUSION***

***6.1 INTRODUCTION**:* Having planned out the structure of the research into four broad segments consisting of 1) Informants 2) Theories and Case studies, 3) Strategies and Intervention 4) Phasing and Vision. A clear understanding of the historical context of the host community and surrounding city and the relationship between the University's urban structure and social fabric giving clarity to possible fault lines and possible areas of urban conflict.

Areas of interventions targeting maximum impact were mapped out along and within the University's edges to act as the fulcrum for the edge upgrade. These interventions included; non-motorized transport leading to upgrade of pedestrian equity of the movement upgrade, the addition of permeable points into the Campus, and finally, the development of new residential districts in designated B.O.T. schemes.

6.2 OPPORTUNITY FOR FUTURE RESEARCH; the undisputed high level of vehicular dominance in most highways and Lagos neighbourhoods is a phenomenon leaving many questions unanswered. Further research into the planning model bequeathed to southern cities by the colonialists compared to what they practice in the northern cities could be investigated to determine why N.M.T. is considered in the north but not in the south. Another inquiry could be to determine the impacts of not having an N.M.T. policy on the growth and social engineering of a typical city in the south and how it has affected neighbourhood movement patterns.

6.3 ANSWERING THE RESEARCH QUESTION; This research sought to answer the question, how a normative design approach can be used to stimulate and activate an active socio-economic condition in gated university campus communities to result in symbiotic benefits?. In theory, there are a series of urban design instruments that were employed in this instance. However, in the design proposal used in this dissertation, the strategy was focused on the rejuvenation of key elements of the social fabric, hoping this will catalyst other positive reactions in the immediate communities and the city in general.

However, the challenges envisaged are few but significant to the success of the final implementation of this project. The first would be the level of intergovernmental cooperation, the University is owned and operated by the federal government, and the surrounding roads are maintained by the State and others by the local government. Cooperation between government agencies in the different tiers of government has been usually notoriously unreliable. Secondly, the New Lagos N.M.T. policy (2018) is yet to be fully ratified; hence has not been adopted as a government policy, so it cannot be fully enforced.

6.4 SUMMARY OF THE DESIGN PROCESS: The informants were derived from documents, site investigations, and social inquires. Some of these informative documents included historical and recent maps acquired from both the state government and the university archives; pictures, illustrations, sketches, and the aid of Google earth and maps were used in this research to demonstrate actual context. Other documents used for proper contextualization were written

documents related to the history of Lagos city, Nigeria, and the evolution of the Unilag. These informants dealt with their land areas, population, urban management, economy, climate, urban growth, transportation, and social fabric.

The frame theoretical framework was built around relevant authoritative works of literature such as life between buildings (Jan Gehl), Image of the city (Kevin Lynch), responsive environments and, complete street design guidelines et al. the purpose of this literatures is to examine urban principles such as; permeability, legibility, walkability, edge conditions, and defensible spaces. The outcome was the establishment of an integrated interface between the University and its various surrounding communities.

The vision strategy was derived from a series of selective interventions in selected and some predetermined areas, all of which were not in conflict with the neighbourhood development plans. These included complete street upgrades using the CoJ and Lagos N.M.T. policy guidelines. The development of new parks along the selected upgraded roads is meant to enhance the pedestrian experience, serve as a node and landmark to the university accesses. The vision also provided two new permeable points (gates) into the university campus from communities that hitherto did not possess such privilege.

Finally, the development of the B.O.T. sites is to be actively pursued as this is an integral part of the research and design proposal.

The proposal is an interconnected, phased upgrade of the edge conditions of the University of Lagos, Akoka through roads, parks, residential development, and new university accesses.

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World population review. Lagos population 2021 (demographics, Maps, Graphs)

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10. Did your research involve animal experimentation or human participants as defined in A.4 of the Senate Standing Orders on Higher degrees? YES | NO *

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13. Has the work been published in any peer reviewed journals. If yes how many papers? YES | NO *

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04 August 2020
Person No: 2189253
PAG

Mr EN Ekeruche
33 Outpan Road
House 27 River Club
Sandton
2196
South Africa

Dear Mr Emmanuel Ekeruche

Master of Urban Design: Approval of Title

We have pleasure in advising that your proposal entitled *Integrating the urban interface between town and gown - Stimulating the socio-economic edge conditions between the University of Lagos and its host communities for symbiotic benefits.* has been approved. Please note that any amendments to this title have to be endorsed by the Faculty's higher degrees committee and formally approved.

Yours sincerely



Mr Yaseen Stoffberg
Faculty Registrar
Faculty of Engineering and the Built Environment

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HUMAN RESEARCH ETHICS COMMITTEE

SCHOOL OF ARCHITECTURE PLANNING

CLEARANCE CERTIFICATE
PROTOCOL NUMBER: SOAP090/09/2020

PROJECT TITLE:	Integrating the Urban Interface Between Town and Gown; Stimulating Edge Conditions Between the University of Lagos and it Host Communities.
INVESTIGATOR/S:	Emmanuel Ekeruche (Student No: 2189253)
SCHOOL:	Architecture and Planning
DEGREE PROGRAMME:	Master of Urban Design (MUD)
DATE CONSIDERED:	20 October 2020
EXPIRY DATE:	20 October 2021
DECISION OF THE COMMITTEE:	Approved

CHAIRPERSON
(Dr Brian Boshoff)

DATE: 21.10.20

cc: Supervisor/s: Ludwig Hansen

DECLARATION OF INVESTIGATORS
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to endure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee.

Signature **Date**

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