KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

KUMASI

COLLEGE OF ARCHITECTURE AND PLANNING

FACULTY OF ARCHITECTURE AND BUILDING TECHNOLOGY

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COURT COMPLEX DESIGN, TEMA

By

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September 2009

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

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COURT COMPLEX DESIGN, TEMA

A Thesis Report submitted to the Department of Architecture,

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By

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DECLARATION

I hereby declare that this submission is my own work towards the M. Arch and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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.....	.....	18 SEPT '09
Palmer Ofori-Nyako / 20064704	Signature	Date
.....	.....	28th SEPTEMBER 200
Mr. Daniel Duah (Supervisor)	Signature	Date
.....	.....	.....
Prof. G.W.K Intsiful (Head of Department)	Signature	Date

DEDICATION

This project report is dedicated to my parents for their love care and support throughout my life.

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ACKNOWLEDGEMENT

My profound gratitude first goes to God Almighty for his guidance, grace and strength that helped me to complete this report. Secondly to my supervisor, Mr. Daniel Duah, for his guidance, reproach and encouragement to make this project a reality. Thirdly to my parents for their moral and financial support and prayers, without which this report could not have been a reality.

Finally to my friends Sena, Lorraine, Leslie, Pearl, Maurice and Michael for their prayers and support in diverse ways.

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ABSTRACT

A Courthouse according to the Heinemann Students dictionary is a place where judges, magistrates and other officials hear and judge legal matters.

Courthouses generally are attended by all members of the public. Its design should be such that all these members of the public feel accommodated whenever they visit them. The main aim of this study was to identify design guidelines for Court buildings and to recommend design considerations for future courts in Ghana. The main objectives of the study is to study broadly the general operations and services of the Ghana Judicial Service and to identify problems in some selected court which may slow down Justice delivery.

The study included visits to Courthouses to conduct surveys on the provisions made in their designs that will aid the public when it comes to the adjudication of cases

The Recommendations made included:

A. Meet projected spatial requirements for the future. This is because from the case studies conducted and studies conducted on the Tema court it was noticed that most of our court rooms are small therefore causing overcrowding with some attendants standing outside.

B. New court complexes must also meet new trends in design. This could be in terms of incorporation of new technologies and spaces such as public information rooms, electronic reference rooms and audio visual rooms to mention but a few. These will help in efficient and prompt justice delivery.

C. Legislation should be passed in Parliament to make it an offence to design Civic buildings without provisions for disabled access.

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND

A country is said to become more urbanized as its cities grow in number, its urban populations increase in size, and the proportion of its population living in urban areas rises. The degree of urbanization varies across the world but generally reflects the wealth of individual countries. The rich, industrialized countries tend to be the most highly urbanized. In the Netherlands, for example, 89 per cent of the population is urban, compared to only 13 per cent in Ethiopia, a much poorer country. In recent history, the degree of urbanization has been relatively low in Africa and Asia compared to Europe and North America. However, as a result of large-scale migration from rural areas and a natural increase in the urban populations themselves, the populations of cities in the developing world have been growing rapidly. The population of Cairo, for example, has trebled in the last 40 years, and more than half of Africa's people are expected to be living in cities by 2020. Similarly, the urban share of the population in China has risen from about one in five in 1960 to nearly half today.

At the start of the 20th century only about one person in ten lived in a city, but today the proportion of urban and rural dwellers is approximately equal. By 2025 nearly two-thirds of the world's population will live in urban areas.

Many people are ambivalent about cities, believing that they embody the best and worst aspects of civilization. On the one hand, the diversity of peoples and activities encourages innovation and creativity, which in turn create opportunities that attract still more people. On the other,

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problems of overcrowding, crime, poverty, and pollution may be severe. Cities, therefore, have come to reflect the hopes and fears of the modern world.

(Reference: http://www.pacificislandtravel.com/nature_gallery/urbanization.htm)

Ghana has a population of 22 million with a growth rate of 3% annually and a land use of 453 km². A trip to Accra reveals new buildings of varied storey's and uses springing up every day as Accra responds to trends of urbanization globally.

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Urbanization in the country is increasing rapidly. Surveys show that from 1996 to the year 2020, the overall population in the country is expected to triple therefore reaching an approximated estimate of 27 million, of this figure, Accra is to increase from 3 million to 6 million.

As earlier stated, it is required that population increase should come with the provision of employment, amenities, services and institutions to curb crime, without the provision of these come increase in cases of poverty, crime and the general collapse of society. Amongst such institutions to curb crime include Police Stations, Prisons and Court houses.

The ever-growing population as a result of migration in cities like Tema, Koforidua, and Cape Coast in Ghana has found need for the provision of such institutions of Justice to curb crime.

In my opinion there are three approaches to solving the problem of crime in growing cities.

1. Decentralization of basic developmental projects which make people in other regions migrate to the capital only in most cases to get disappointed.
2. After spreading basic developmental projects, education should be given on why the citizenry should stay in their respective regions and develop their area rather than migrate.

3. Since migration in most cases cannot be controlled, to check crime, institutions of Justice as earlier mentioned should be provided. As earlier mentioned some of these institutions include Police Stations, Court Houses and Prisons.
4. The judicial service should be upgraded and strengthened to facilitate the rule of law

These approaches should not be alternatives; rather an effective implementation of the three will gradually make the country safer and a more efficient urban environment.

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Out of the three, this dissertation concentrates on Institutions of Justice specifically Court Houses with Tema in the Greater Accra Region of Ghana as its location.

1.2 HISTORICAL BACKGROUND OF TEMA

Ghana at one point in time had only one harbour which was located in Takoradi 150 miles from Accra. The Eastern and Central parts of the country could not be served either by the Takoradi Harbour or by the surf port of Accra, due to inadequacies in handling major cargo operations.

The advantages which led to the choice of Tema as the site for the new harbour in those days was due to its proximity to the capital Accra and the desirability to create an industrial pole served by a modern harbour near the capital.

The Government's decision to construct the harbour in 1951 brought into focus the need for the parallel creation of a township which would provide residential accommodation and amenities for the harbour and the work force of the industries associated with it. [5]

1.3 PROBLEM STATEMENT

Tema has a population of 209,000 people according to the Ghana Health Service. As earlier mentioned Tema is divided into four sub municipalities. The population however increases annually at a rate of 4.4%. Unfortunately Tema has no proper structure it can call a courthouse to serve its ever growing population whenever disputes arise. The courts in Tema are at scattered locations as mentioned below:

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The first court is a District court located on the premises of the Tema Development Cooperation (TDC). This court is however facing eviction from the TDC. The Ghana Judicial Service however has no immediate location to relocate the district court should the TDC carry out its planned eviction.

There are two Circuit courts housed in make-shift wooden structures on the premises of the Tema Community Centre. There is therefore no privacy for the court to undertake its operations since the Community centre is also doubles as a meeting point for State Transport travelers. Also due to spatial constraints, the court faces problems of storage of its dockets and other important documentation.

Tema has two High Courts adjacent to the circuit courts. Even though the High courts are in well built structures as compared to the other courts, it is surrounded by food seller and other commercial activities. There is therefore a lot of noise produced around the premises due to such activities thus disturbing court proceedings.

There seems to be very little considerations made in terms of the design of any of these structures.

1.4 AIM OF THE STUDY

The aim of the study is to recommend appropriate design considerations for future court buildings and to

bring to the fore evolving trends in courts design which will aid in efficient and fast justice delivery in Ghana.

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1.5 OBJECTIVES

The research has the following objective:

1. To study broadly the general operations and services of the Ghana Judicial Service.
2. To identify problems in some selected court which may slow down Justice delivery.
3. to design a court complex that will accommodate the entire public and court staff.

1.6 SCOPE OF RESEARCH

The research was carried out on courts in Tema, Koforidua and Kumasi.

1.7 RESEARCH METHODOLOGY

Methodologies employed for this study are from Primary and secondary sources. The primary sources used consist of visual observations, photographs, interviews, measured drawings and case studies while secondary sources consist of library readings and internet searches.

The research was done in four phases:

1. Review of literature on the subject matter to acquire fundamental knowledge on old and new trends in court house design.
2. Seven courts were visited and observed to gather information on provisions made in design and whether the structures meet the status of a Judicial building. Randomly views of Architects, judicial staff and users of court buildings were gathered through interviews.
3. Data was collected by means of interviews, observation and case studies
4. An analysis of the data collected was done by placing them under various topics like security, circulation etc.
5. Recommendations were made to improve the situation encountered.

1.8 ORGANIZATION OF CHAPTERS

The study has been organized in five chapters;

1. Chapter one is an introduction to the subject matter which includes the background, historical background of Tema, aims, objectives and scope of the study.
2. Chapter two contains the literature review of the topic under study.
3. Chapter three is the research methodology.
4. Chapter four contains the site selection and the design considerations stage.
5. Chapter five is design recommendations and conclusion.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

A court house is where all these professionals meet to settle disputes in the modern times. According to the Heinemann International Students Dictionary, a law court is a place where judges, magistrates, and other official as hear and judge legal matters. [6]

Courthouses are therefore one of the most symbolic and essential buildings in every country. The planning and design of courthouses therefore requires careful and delicate considerations. It is the preeminent symbol of federal authority in local communities; a federal courthouse must express solemnity, stability, integrity, rigor, and fairness.[12]

2.2 HISTORICAL DEVELOPMENT OF COURT HOUSES

The history of Law courts is believed to have its origins from ancient Athens in Greece during the archaic period. In those days it is believed when you thought someone had hurt you or in some cases had stolen something of yours, you dragged the person to an aristocrat. These aristocrats had the responsibility to arbitrate such matters as a result of their high social standing in society. The offender could either be beaten or killed based on the judgment the aristocrat gives.

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As time progressed the people requested to know what the law really was. The Athenian aristocrats therefore wrote down the laws.

During the Athenian democracy the system changed again, now instead of having the aristocrats being the judges, there would be juries of people to decide who was guilty and who was not and also to decide the form of punishment.

Athenian juries were made up of 500 people. They sat in a big theatre and listened to the accuser make a speech as to why the defendant is guilty after which the defendant would also give a speech as to refute the claims of the accuser. The people of the jury after listening to the parties involved then cast votes. Whoever got more votes won the case. The major loop hole in this system was that there was always a high tendency of popular people to win cases as compared to the unpopular in society.

There was therefore the absence of equal justice and disputes could not be settled peacefully. The correction for this led to the involvement of professionals which included lawyers, judges and other staff of the judiciary in modern day arbitration. Even though juries are still used, they are carefully selected.[16]

2.3 KEY CONSIDERATIONS IN PLANNING AND DESIGN OF COURTHOUSES

When designing a courthouse, careful consideration should be given to the location (site), user group, zoning, circulation paths, accessibility and security. There should also be a careful understanding of court operations and processes.

2.3.1 SITE SELECTION CRITERIA

The location of courthouses should be easily accessible to members of the public. At the planning stage, the designer should take into consideration issues of population growth since as has been mentioned earlier population growth is a constrained proximity to other offices of local and national government.

Court house siting decisions should be made on the basis of balance of interests rather than on single issue considerations such as prisoner transport, parking or land cost.[13]

Civic centre sites should be considered foremost. Where possible court staff, public and the local government should be included in the site selection process. The selection of a site should therefore take into consideration the following:

a. The sites expansion potential

b. Accessibility

c. Site use restrictions as prescribed by local authorities

d. Impact on surrounding environment

e. Inter-relationship with other services such as libraries, attorney offices etc

f. Availability of basic services such as water, electricity, waste disposal

2.3.2 THE USER GROUP

The user group consists of the general public, jurors, magistrates, judges and other staff of the

judiciary. Knowing the user group in some cases helps designers in creating appropriate spaces for users. For example districts and magistrate courts are usually attended by the uneducated and the lower class in society and therefore in some courts, the treatment of the spaces of lower courts is different from that of higher courts. This is due to the sometimes destructive nature of users.[2]

2.3.3 ZONING

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There are 4 primary zones in any courthouse these are:

I. **The Private Zones** – These are areas for judges, court staff and other authorized persons. The public may only use this space upon invitation.

II. **The Public Zones** – The public zone begins from the main entrance or hall and waiting rooms.

III. **The Prisoners Paths** – The prisoners from the cells, generally directly into the dock up a staircase from a holding room usually placed in the basement.

IV. **The Interface Zone** – This is the area where all the three zones earlier mentioned meet. This is the Courtroom, where all members of the adjudication process come together.[2]

2.3.4 CIRCULATION IN A COURTHOUSE

In most courthouse built before 1950 in the United States, public spaces are used by judge, jurors, attorneys, and staff and even sometimes by prisoners to reach courtrooms and judge's

chambers. In modern times, careful consideration is given to circulation to enhance efficiency, convenience, and security. The zones mentioned earlier are linked together by a circulation system divided into three groupings.

I. **Public Circulation** – this area is limited to the main hall, lobbies, waiting areas, public service areas and public hallways. In some courthouses in the United States the public has its own elevators (vertical circulation).

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II. **Private Circulation** – these are areas used by judges, staff and jurors to judge's chambers, offices, courtrooms and if necessary, voir dire (preliminary questioning) rooms.

III. **Prisoners Circulation** – Prisoners use a separate corridor to reach the courtroom. A staircase connects the prisoners holding room to the courtroom.

The circulation system is an important factor to consider in selecting appropriate locations for various functions and departments in the building. The optimum locations depend on interdepartmental communications, public convenience and security, as well as on the volume of visitors and the frequency and nature of transactions that take place. All this information should be systematically recorded and classified on the basis of priority. The most important consideration in courthouse design is that most circulation routes should be self evident. This is because the majority of people, jurors and witnesses may be using the building for the first time and therefore it should be easy for them to locate court rooms, waiting rooms etc.

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The public zone should include areas of circulation, waiting, public restrooms, kiosks of Information (manned or unmanned), public telephones, access to the area to file and receive documents and to the public hearing rooms. Only with permission of judicial officials should the public enter into the area of judicial support personnel or the judge's chambers. The separation of circulation patterns should begin at the entrance of the building. By preference judges should enter directly from the parking area.

Designs should allow between 10-15 per cent for circulation.[10]

It is believed that when members of the public constantly stop to ask for directions it is a sure sign of a poorly planned building.

2.3.5 ACCESSIBILITY

The Judiciary has always sought to make justice accessible to all. Accessibility in courthouses should therefore consider the disabled, elderly, poor and in some cases the non – English speaking public. Even though signage is recommended such that unauthorized people do not stray into private areas, it should not be extensively used. Court buildings should have ramps, lifts and railings and elements of the such for the disabled and the elderly.

The location of the judicial center should be readily accessible to the public and take into account the growth of the population, public transportation, and proximity to other offices of the local and national government.[10]

2.3.6 SECURITY

Security in any building is broad. Achieving security can be grouped in three; the first group is by design and planning, the second is by installation of security systems and the third is by

personnel staffing that is security guards. Connections between private corridors and public lobbies must be monitored in order to maintain security. In courts where cases of treason and other high level cases are heard, bullet proof glazing for windows is provided. Metal detectors are also sometimes placed at entrances to prevent the public from bringing any foreign materials to the courtroom.

Since security planning is a basic and critical part of courthouse design, it must be factored in at the beginning of the design process and carefully integrated with other building system controls, such as for fire-safety and HVAC. [12]

2.4 THE JUDICIARY IN GHANA

The Judiciary in Ghana divides courts into two main groups, the lower courts and the superior courts. The Lower Courts consist of the Circuit and District / Magistrate Courts and the Superior Courts consist of the Supreme, Appeal and High Courts.

I. A Supreme Court is made up of the chief justice and not less than nine other justices. The Supreme is the highest court in the court structure and deals with cases which are complex in nature and therefore a higher interpretation.

II. The Court of Appeal consists of any three of not less than 10 justices. Subject to the provisions made in the constitution of Ghana, can hear and determine appeal cases from a judgment made in a High court or Regional Tribunal.

III. The High Court consists of a chief justice and not less than 20 justices of the High Court. The High court has supervisory jurisdiction over all lower courts in the country. While exercising this jurisdiction, it issues orders and directions for the purposes of enforcing securing

the enforcement of its supervisory power. The High court however cannot handle cases of higher treason.

IV. The Lower Courts the lower is lower or inferior courts include Districts courts, Circuit court, Commercial courts and the House of Chiefs. In these courts gowns and wigs are not required. Cases in these courts have very little paper work as compared to that of the higher courts.[2]

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2.4.1 KEY AREAS AND SPACES IN A COURTHOUSE

I. Registry: The Registrar of the courthouse is the Secretary of the courthouse. A court complex which has both lower courts and superior courts will have a different Registrar for each court in the complex. The registry is where the dockets of each case are kept as ordered by the judge.

In some courts the Registrar's office has a safe for keeping very important elements of a case. Spaces for the registry should be large enough for its staff with an inner office for the Registrar. An office for the Assistant Registrar can also be provided if the need is found. The Registrar's office should also be spacious enough for meeting groups of people since in some courts he is the one who reads out will to families of deceased persons alternatively a conference room can be provided.

II. Courtrooms: Courtrooms generally have the same planning the reason being when cases of one type are concluded a judge may continue with the other type if the balance of cases necessitates this procedure. The main difference between a civil court and a criminal court is that a dock is not needed in the former. The judge sits higher than all the members of the courtroom this is as a result of his position as the final authority.

III. Chambers for Judges: The Judges chamber is linked to the courtrooms and usually has segregated entry and exit. This space should be large enough for the judge and meetings with lawyers and their clients. In some cases the Judge's chamber has an adjoining office for a personal secretary. There is also a separate sanitary space for the Judge. As much as possible areas used by Judges in courthouses should be separated from areas used by the general public.

IV. Conference Rooms: Conference rooms in a court house include meeting rooms for lawyers and their clients, meeting rooms for jurors and meeting or deliberation rooms for Judges.

V. Accommodation for court support staff: These are office spaces for the staff of the court. The support staff of the court includes bailiffs, accountants and administrators to mention but a few.

VI. Customer service spaces: These include corridors, reception and waiting areas.

2.4.2 COURTS OF THE EARLY DAYS

In the nineteenth century and early twentieth century, courts which were built had a particular character.

The Hays County Courthouse in San Marcos, Texas (1908) conforms to Neo-classical or Beaux Arts classism. These were planned that they follow earlier practices of symmetry compositions in relation to form and space. These court buildings usually had rotundas which provided impressive large central interiors for circulation. But for the Judges furniture, the courts of earlier times has simple furniture

The exterior of theses courts made use of columns, pediments and domes. In the 1930's courts in the United States were designed in Moderne style. These had repetitive lines, with decorative vocabulary based upon clean forms and new materials of the time

In the United States, the change in court house design started after the Second World War these designs adhered to principles of functionality and economy.

There were very little technological incorporations in old courthouses.

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2.4.3 TRENDS IN THE MODERN COURTHOUSE

Modern day courthouses have much incorporation in an attempt to make justice delivery quick and efficient. New court buildings that will be put up in Ghana will benefit enormously with the adjudication of cases. The following are some new trends in courthouse design.

I. INFORMATION COMMUNICATION TECHNOLOGY – ICT.

Public Information Booth: one of the foremost elements which should be added to court buildings is an information booth at the main entrance where members of the public are provided with information on court cases. This minimizes the number of non case specific inquiries made by the public.

New technology: The Warren B. Rudman courthouse in Concord, New Hampshire in the United States, each courtroom has a jury box equipped with removable 36- inch video screens on which the jurors can view evidence electronically during trials. One of its courtrooms is wired such that lawyers can transfer information from their computers to participants.

New court buildings on Ghana can incorporate some of such electrical devices in them to make the delivery of justice efficient and fast.

II. MULTI OCCUPANCY

This involves the increase in the number of floors and therefore spaces to accommodate more people. It also includes the provision of one stop shop for the public in search for justice. Courthouses these days have press rooms, jury assembly and waiting rooms, private and public law libraries.

III. INTRODUCTION OF PROFESSIONAL COURT ADMINISTRATORS

A court administrator oversees the overall running of the court building. Office spaces are provided for the head administrator and his staff.

IV. AESTHETICS-EXTERIOR

The design of court buildings is gradually shifting from the conventional type with Greek columns,

gables and red burnt-clay tiled roofs to a more sophisticated steel, glass, multi – storey buildings with underground parking. The design of courthouses should be self imposing on the surrounding structures as a result of its position as one of the most important building in society.

2.5 CASE STUDIES

Several courthouses are being built across the globe. Some of these have been chosen and

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studied as a basis of design for the proposed court complex and also to bring to the fore new trends in

court design . Attention has been given to courthouses in Ghana because it is where the proposed court complex will be built.

2.5.1 WARREN B. RUDMAN UNITED STATES COURTHOUSE, CONCORD NEW HAMPSHIRE

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The formal symmetrical granite-and –limestone façade recalls the monumental American civic structures of the late 19th century. The fact that the building conveys seriousness and solemnity is no accident, the Architects claim that "A courthouse has a different purpose than an office building, school or house. We wanted people to recognize instantly that they were entering a court of law" therefore every attempt was made it appears as such.

The courthouse which cost $ 32 million to build is also formal and symmetrical within, from the geometrical stone flooring to the regularly spaced skylight.

2.5.2 DESCRIPTION

The courthouse was constructed on a tight site and lies adjacent to the James C. Cleveland Federal Building, a structure built in 1960 that houses federal courts. A hall way has specially been built to connect the two buildings.

The ground floor includes a lobby, courtrooms, jury assembly rooms and the office for the clerk of the court. In the United States this is considered the most important space in the

courthouse since it is where the general planning and scheduling of court operations take place. In a way the Clerk of courts office can be compared to the office of the Registrar.

The first floor is secure and closed to the public, it is occupied by facilities for United States marshals and a holding block for prisoners.

Most of the buildings eight court rooms are located on the third floor. This floor is accessible by means of a granite stair which rises from the main lobby. According to the architect, even though elevators have been provided the public opt for the graceful staircase. The entire building sits on a basement used mainly for parking.

Concord is one of Americas 13 original district courts, the buildings Architects were mindful of the look and the durability of the materials used. They chose a palette of stone, cherry wood, and stainless steel to convey a sense of longevity as well as dignity for the building.

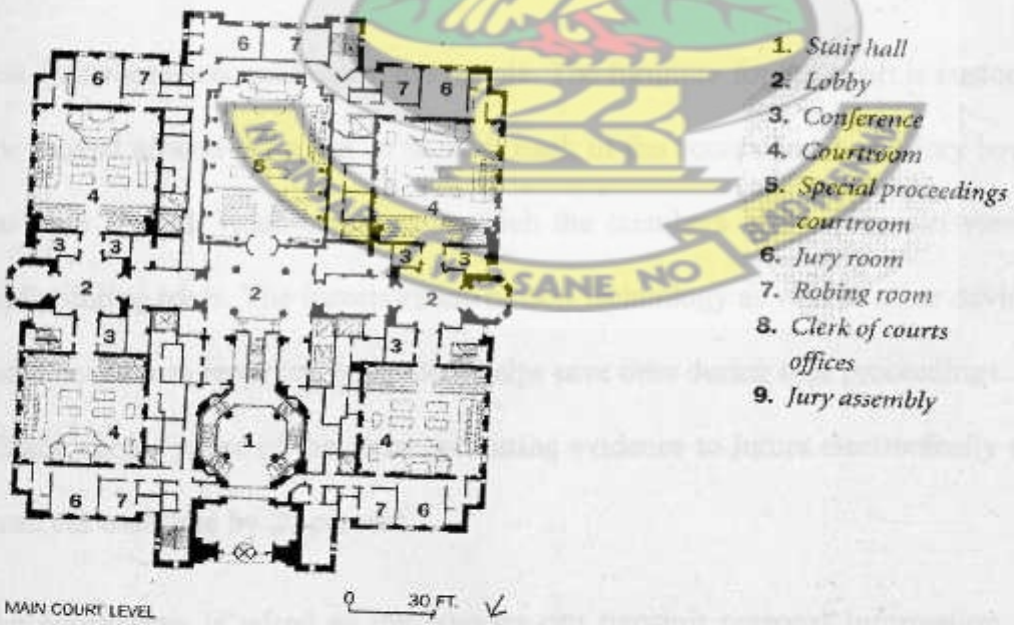

Fig 2.1Ground floor plan of court building

2.5.3 SECURITY

The Architects in consultation with the senior judge of the courthouse decided to arrange the courtrooms around the perimeter of the building, with bulletproof classically inspired vertical windows and round windows as fenestration.

Another security measure adopted by the designers was to include three separate circulation systems, one for the public, another for the judges and staff and the last system for the prisoners. This prevents members of the jury from running into prisoners in hallways and other circulation paths. Visitors upon entering the building pass through a security checkpoint while prisoners are brought into the building through a circular vehicular entrance in the basement. There closed-circuit cameras installed throughout the building therefore letting marshals monitor activity in every space.

2.5.4 LATEST TECHNOLOGY

The largest courtroom accommodates 3oo people. The furniture for the court is custom designed and can be moved around the room as needed. Each of the courtrooms has a jury box equipped with removable 36-inch video screens on which the members of the jury can view evidence electronically during trials. The incorporation of new technology as well as other devices such as sophisticated courtroom reporting equipment helps save time during trial proceedings. According to judge Stahl, senior judge of the court presenting evidence to jurors electronically rather than on paper can cut trial time by 20 percent.

One of the courtrooms is wired so the lawyers can transmit personal information from their laptop computers to participants of the trial. It should be noted that in the courtroom, the

designers have made it possible that the judge controls all information that moves around the court. Another advantage to the new technology is that the clerk of the court can follow court proceedings from his office via a computer.

The architects also left room for future expansion of cabling and connections. Technological advances in the legal process, Carlhain (the architect) admits are just beginning.[1]

2.5.5 PERSONAL OBSERVATION

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It was observed from the site plan that the site for the building is rather small and also even though the building maintains the traditional courthouse look it keeps abreast with modern trends of technology for efficient justice delivery.

2.5.6 MERITS

- The plan of this courthouse is sandwiched into a small site which consists of the State Capital complex, Cleveland building and postal service facilities.

2.5.7 DEMERITS

- The demerit found is arguable in that the site chosen for the court is small therefore there is little spaces for parking around the building hence the use of underground parking which adds to the cost of construction.

2.6 CASE STUDY TWO –APPEAL COURT, KUMASI

The Kumasi Court of Appeal is located at the Ministries area in Kumasi 20metres drive off the Harper road. The court of appeal was built to mediate the transfer of cases from Accra. It is also meant to serve the Northern sector of the country.

2.6.1 DESCRIPTON

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The court is a four storey structure which will houses two Courts of Appeal, a Human Rights Court, an Industrial Court (Labour Court), two Land Courts and two Commercial Courts. The court is in a "T" shape therefore giving it three wings. The first wing houses the judges and other court staff, the second wing houses court staff and the third and final wing is where the courts are located.

Parking for judges is in the basement while the general public park in front of the building. Storage for archives, senior staff canteen, offices for the Information Communication Technology staff and service inspection room are located in the basement.

The ground floor consists of offices for the staff and judges of the court, the Registry and the waiting at the entrance. The waiting area is secure from the rest of the building and is the only area accessible to the general public. Members of the public who may want to access the rest of the building will therefore need a special pass to do so.

The first floor has one wing housing offices for judges and their secretaries, another for the staff of the court and the third a court for Alternative Dispute Resolution (A.D.R) an Appeal court and a High court.

The second, third and fourth floors of the court is no different from the first but for the reading room and an electronic reference library for the lawyers and judges. The Chief Justice of the country however after visiting the building requested the reading room located on the third floor be changed to a conference room as is the case on the on the second and fourth floors.

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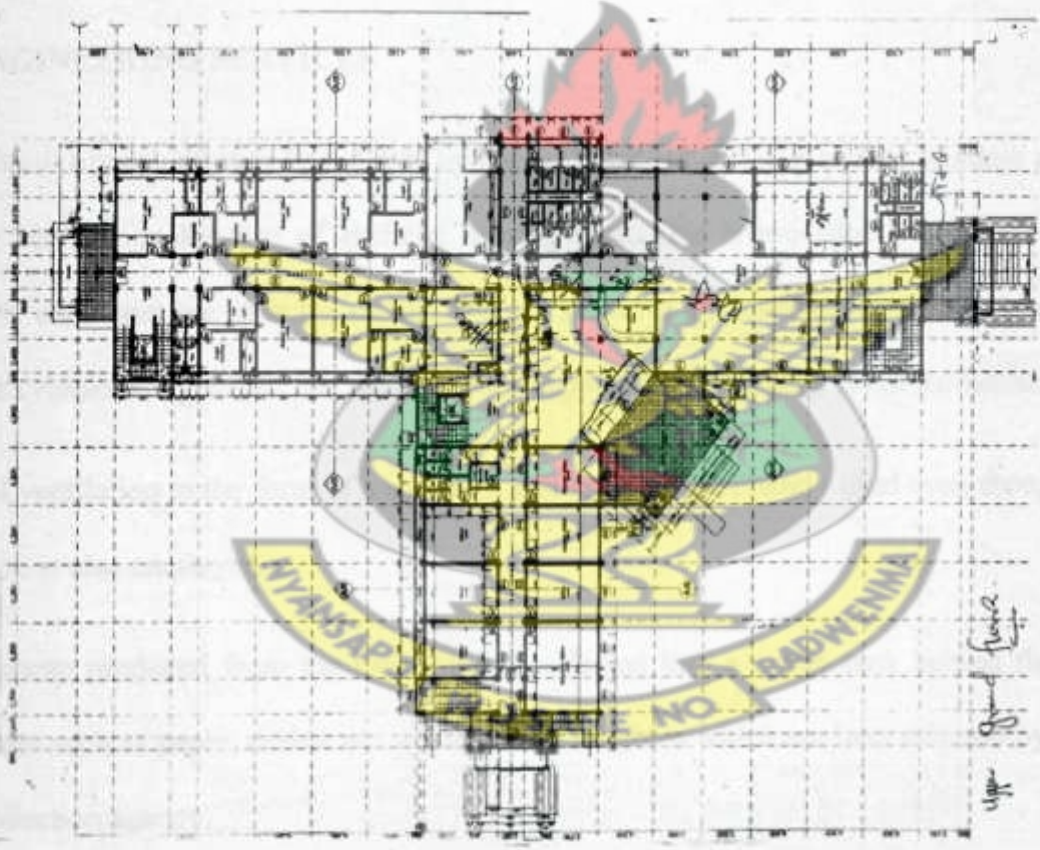

Fig 2.2 Ground floor plan of the Kumasi Appeal Court

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2.6.2 SECURITY

As earlier mentioned in preceding chapters in relation to considerations in court design, security is very important. The Appeal court has a security post at every entrance therefore putting a check on members of the public who may accidentally stray into areas where they are not welcome. The building has CCTV cameras installed in almost every hallway. So important is the issue of security that nowhere on the floor plan of the building can ne find the CCTV monitoring room despite its presence somewhere inside the building.

2.6.3 ENGINEERING SERVICES

The Kumasi Appeal court is lit entirely by naturally by aid of large sliding window panes, the building however makes use of artificial lighting also. This is provided by fluorescent tubes. Electricity and water are from the mains. There is however an onsite generator and underground water tank respectively which can be used when supply from the mains is not forthcoming.

Artificial ventilation in the form of a split unit system is predominantly used even though natural ventilation is also employed.

All the waste produced from the building are collected into a septic tank behind the facility. Solid waste such as paper, rubber etc. are collected into bins which are later emptied by the local waste collection agency.

2.6.4 CIRCULATION

Circulation paths within the building are grouped into three, the first for the general public, the second for the staff of the court and lastly one for the judges and their personal staff. The judges

have an elevator and stair which starts from the basement and runs through the building to all the areas where the judge's chambers are located. The staffs of the court also have an elevator and stair for vertical circulation. Members of the public visiting the court use a stair located at the end of the South wing of the building.

2.6.5 MERITS

- Security in the Appeal court building has been given careful consideration with the positioning of CCTV cameras in every corner of the building.
- Parking is well segregated for the judges and public.
- The building is physically challenged friendly.

2.6.6 DEMERITS

- Disabled Staff of the building who may want to access the canteen located in the basement may have difficulty in doing so.
- The facility has very little soft landscaping around it.

2.7 CASE STUDY THREE - HIGH COURT, KUMASI

The Kumasi High court was built basically to bring justice to the people of Kumasi. Like the Appeal court, building of the High Court prevents the people from travelling all the way to Accra or Koforidua to get their case heard. The court is located opposite the Bank of Ghana building and adjacent the military museum and 30 metres from the Kumasi Prisons.

2.7.1 DESCRIPTION

The court is a two store structure of about 200 x 100 with parking for the general public at the frontage and judges parking and chambers on the first and second floors respectively. Te ground floor houses the registry, a bank, cashiers offices, typing pool, robbing room for the lawyers and circuit courts.

There are four high courts in the building. All of these are located on the first floor. The judge's chambers are also located on the first floor with each having a door linking them to the courts. However since the circuit courts do not have chambers for the judges, judges had to access the ground floor via a stair.

2.7.2 SECURITY

Unlike the Appeal court which was built later, the High court does not have CCTV cameras. However the Architect separated the judge's chambers from areas accessible to members of the public.

2.7.3 ENGINEERING SERVICES

Electricity and water supply to the court is from the mains. The building has no generator to providing electricity should there be a power outage. Natural ventilation and lighting are predominantly used as compared to artificial means. There is therefore the extensive use of specially designed sun shading devices for the High court to aid ventilation and at the same time prevents views outside.

2.7.4 CIRCULATION

Circulation paths within the building are grouped into three, the first for the general public, the second for the staff of the court and lastly one for the judges and their personal staff. However unlike the Appeal court building, the High court does not have elevators for vertical circulation.

Members of the public, court staff as well as judges all use staircases to their respective destinations. Horizontal circulation is by means of corridors and hallways.[13]

2.7.5 MERITS

- Circulation in the building has been carefully been planned
- There is an extensive use of sun shading devices to control lighting and ventilation

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2.7.6 DEMERITS

- Lack of adequate parking spaces
- The building is not planned with features for the physically challenged
- There is no special parking space for impounded vehicles leaving them exposed to the vagaries of the weather.

2.8 CASE STUDY FOUR - LA CROSSE COUNTY COURTHOUSE, LA CROSSE WISCONSIN

2.8.1 INTRODUCTION

The site chosen for constructing this courthouse is along a major highway leading into La Crosse's historic downtown. This is where many of the existing buildings are more than a hundred years old. The pedestrian-friendly streets are lined with brick houses hence the architects choice of brick as a building material in order to blend the building with is surroundings.

Separating the courthouse from the downtown is a square block of surface parking –this is the former site or the city's third courthouse built in 1903 and torn down in 1965.

Today the new law enforcement centre sits amid a civic campus of large government structures built within the past 40 years, including the former jail and courts building.

The courthouse, fifth in La Crosse's history is 169,000 square foot building designed by DLR Group based in Nebraska. The $ 18.5 million project includes 5 courtrooms; a jail with 172 beds housed in 8 pods that range from minimum to maximum security; and offices for the court staff, the district attorney, clerk of courts, the sheriff department, and 911 emergency dispatch.

2.8.2 DESCRIPTION

The architects of the La Crosse building claim to have a definite intent to have a building that would reinforce justice with a goal of achieving staff efficiency and flexibility first. It is worth noting that the architects were charged with the task of a new building – part courthouse, part police station and part jail.

The four storey building is similar in scale and colour to the surrounding modern civic structures. The buildings ribbon windows and bands of brown burnt bricks on the tan façade emphasize the building's horizontality. The courthouse side of the building has tempered reflective glass and a glass clad reflective polycarbonate on the jail side to communicate an image of law enforcement and serve a functional purpose, thereby visually separating the buildings occupants' from the outside world.

2.8.3 SECURITY AND SERVICES

Inside the courthouse the architects had to create a balance between creating a secure environment that was also user friendly. At the front door at the entrance is a metal detector. According to the architects of the building, they did not want to repel people and scare them with overt security measures. All of the buildings intrusiveness is at the front door.[1]

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2.8.4 LATEST TECHNOLOGY

Each of the courtrooms include a sound system with individually controlled microphones, wiring for videoconferencing, modern connections for personal computers, assistive listening devices for the hearing impaired and an alarm system in case of emergencies.[13]

2.8.5 MERITS

- The building has been designed such that it sits in context with its surrounding buildings and the downtown.
- Unlike other courthouses, this court has a jail, police station and post office. Combining these three was done successfully.

2.9 GENERAL OBSERVATION AND CONCLUSION

After studying these court buildings many issues were brought to the fore. Among these included security, spaces allocated for staff and visitors parking. The most important service a court

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should have in the opinion of the author is electricity considering the fact that there is constant processing of information for the courts to use in dispensing off cases. Any hitch that may arise during these processes may delay or prevent justice being served. Circulation is also important in a courthouse design. There should be separation between areas allocated for judge's circulation and that for the general public. This is because judges are the decision makers in every case brought to court hence they should have the space to take decisions without coming into contact with concerned parties outside the courtroom.

Another observation made is that modern day courthouses should make extensive use of new technology to prevent delays in court processes. It is therefore very necessary to have a room for Information Communication Technology (ICT). Microphones, visual evidence display devices, CCTV cameras are some of the new technologies incorporated into courthouse during design.

It was also noticed that most courthouses in Ghana adhered to none of the styles mentioned. The Supreme Court however is an example of classical Architecture.

Finally a courthouse may be designed to have the traditional look of a courthouse with its Greek columns, burnt clay tile roofs and white exterior or the modern glazed exterior, curved forms and tile clad facades whatever the case may be the building should give the message "we are up to something important, please behave accordingly".

2.10 COURT STRUCTURE AND DISTRIBUTION IN GHANA

The highest court in Ghana is the Supreme Court which was established in 1876. After the coup on January 13, 1972, the Supreme Court was again abolished by the National Redemption Council with the reason that the 1969 constitution had been suspended and so there was no need for a court to "interpret and enforce it". Its functions were transferred to the Court of Appeal. This was again reverted by the 1979 constitution when the third republic was established on September 24, 1979. The Supreme Court was left intact after the December 31, 1981 coup by the Provisional National Defence Council, though it made changes to the court system by introducing public tribunals.

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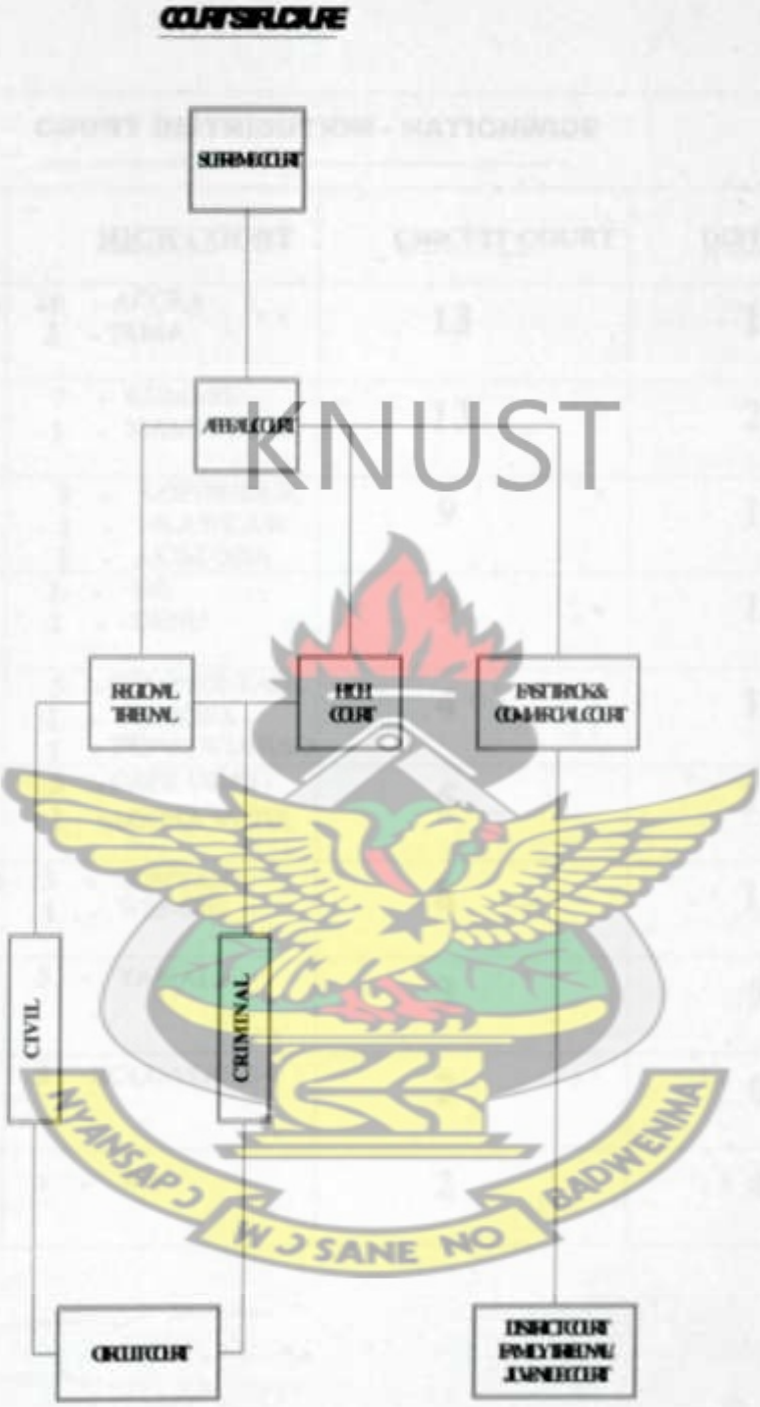

Table 2.1 Structure of the Court System in Ghana ***(Asare-Yeboah, January 2009)***

COURT DISTRIBUTION - NATIONWIDE			
	HIGH COURT	CIRCUIT COURT	DISTRICT COURT
GREATER ACCRA REGION	26 - ACCRA 3 - TEMA	13	14
ASHANTI REGION	7 - KUMASI 1 - MAMPONG	13	23
EASTERN REGION	3 - KOFORIDUA 1 - NKAWKAW 1 - AKIM ODA	9	19
VOLTA REGION	2 - HO 1 - DENU	9	15
WESTERN REGION	5 -SEKONDI-TADI. 1 - TARKWA 1 - SEFWI WIAWSO	4	17
CENTRAL REGION	3 - CAPE COAST 1 -AGONA SWDR.	5	10
BRONG AHAFO REGION	3 - SUNYANI 1 - WENCHI	8	19
NORTHERN REGION	3 - TAMALE	3	9
UPPER EAST REGION	2 -BOLGATANGA	2	6
UPPER WEST REGION	1 - WA	2	4

Table 2.2 Structure of the Court System in Ghana ***(Asare-Yeboah, January 2009)***

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CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 INTRODUCTION

Different methods of data collection were employed in the research. These can be grouped under primary and secondary sources. The primary sources include visual observation, photographs, interviews, and case studies. Secondary sources include the internet and written literature.

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3.1.1 PRIMARY SOURCES

I. Visual Observation

Court buildings in Ghana studied include the Kumasi Appeal and High courts, the Koforidua High court and the Tema Circuit court. A personal observation on the type of material used, state of the building, spatial organization and their inter relationship. The surrounding physical environment was also observed in terms of their typology and whether or not the courts studied can benefit from them.

II. Photographs

The use of photographs was very important resource which was employed. Photographs were used as proof of the situation encountered and also served as a library which readily provides information which may have been forgotten.

IV. Interviews

Interviews were conducted with court staff especially the Registers and some judges. Court

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users were also interviewed for their opinions on how comfortable the court rooms are and their impressions on

the quality justice delivery.

VI. Case Studies

A case study on foreign and local court buildings was done to provide knowledge on requirements in designing courts and also to provide an update on new trends in their design.

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3.1.2 SECONDARY SOURCES

I. Internet

The internet provided a wide information base for written articles and reports on the topic.

II. Library

Most of the research information was obtained from reading published materials on the topic. Such materials included journals and books

CHAPTER FOUR

4.0 SITE STUDIES: TOWARDS A DESIGN

4.1 SITE STUDIES

4.1.1 SITE LOCATION

Every capital town in Ghana has a High court. Tema in the Greater Accra Region of Ghana, despite its population which is more than that of many capital cities coupled with its status in Ghana as a major Industrial hub has not got any proper structure it can call a court building. With the increases in drug related crime (due to it also being a port city), land disputes and Industrial cases, the Judiciary would wish Tema to have a befitting court building to handle these cases which keep increasing. However due to lack of funds, it has not been able to do so.

As earlier mentioned all of the Courts in Tema but for the Tema High Court are on rented premises. Currently the Judicial Service is facing eviction from these premises. The courts, namely the circuit and district courts are in dilapidated make-shift wooden structures. This does not befit Tema. Hence the decision to locate the proposed court there.

4.2 SITE SELECTION CRITERIA

The location of courthouses should be easily accessible to members of the public. At the planning stage, the designer should take into consideration issues of population growth since as has been mentioned earlier population growth is contributory to increase in crime.

Civic centre sites should be considered foremost. Where possible court staff, public and the local government should be included in the site selection process. The selection of a site should therefore take into consideration the following as mentioned in chapter two:

a. The sites expansion potential

b. Accessibility

c. Site use restrictions as prescribed by local authorities

d. Impact on surrounding environment

e. Inter-relationship with other services such as libraries, attorney offices etc

f. Availability of basic services such as water, electricity, waste disposal

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4.2.1 Site expansion potential

The site for the court should be sizeable for an expansion. It is therefore important that when there is the liberty to choose a site, a site which is large enough to demarcate an area for expansion should be chosen.

4.2.2 Accessibility

The site should be easily accessible to all. Accessibility on the facility however should be clearly defined. One of the accesses should be for Judges, another for the public and the last for the accused.

4.2.3 Site use restrictions as prescribed by local authorities

The site should be in an area designated for civic buildings. The proposed facility should also

adhere to local authority laws.

4.2.4 Impact on surrounding environment

With environmental protection on the minds of every government, the siting of any facility should impact positively on the surrounding existing environment.

4.2.5 Inter-relationship with surrounding buildings

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Court buildings should ideally be in a location where they can benefit from surrounding buildings in its locality e.g. libraries, attorneys office, police stations and in some cases hospitals.

4.2.6 Availability of basic services

There should basic services on and around the site. Some of these include water, electricity and waste collection.

4.3 SITE SELECTION

Based on the literature reviewed on site selection criteria for court buildings and the above criteria sited, two sites were considered for the design of the court complex. The first site sits in an area designated for civic buildings in Tema Community Two 50 metres from the newly constructed Value Added Tax office and opposite the electricity co-operation head quarters. The second site which is one originally belonging to the Ghana Judicial Service, sits in the Tema town centre 200 metres from the Tema Commercial Bank main branch and adjacent the Social Security an National Investment Trust office. This is an area gradually becoming the banking

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hub of Tema United Bank for Africa, Home Finance Company and Fidelity banks located in close proximity to each other. Site A refers to the VAT office site and B refers to the Judicial Service site.

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Fig 4.1 Map of Tema showing the two sites

4.4 SITE A – VALUE ADDED TAX OFFICE SITE

4.4.1 LOCATION

The site is located between Tema Value Added Tax office and Electricity Cooperation main office.

4.4.2 CONDITION

The land is bare with no structure on it and thus not used at all.

4.4.3 STRENGTHS

1. Access from the main road.

2. The site has good vegetation cover thus preventing soil erosion.

3. The site sits in a civic area therefore there can be co- ordination between the proposed court building and the other existing civic buildings.

4.4.4 WEAKNESSES

1. The site has no existing defined boundaries making it difficult to plan.

2. There are no good views which can be taken advantage of.

3. Even though the site is in a civic area, poor adherence to building regulations has resulted in the building of church and some commercial activities being undertaken.

4.5 SITE B – JUDICIAL SERVICE SITE

4.5.1 LOCATION

The site is located at the Tema town centre.

4.5.2 CONDITION

In 1975, the Judicial Service stopped working on a court complex for Tema on this site. This was due to the unavailability of funds. Presently the Judicial service with the Tema Developers has

decided to pull down the dilapidated structure and put in its place a befitting court for Tema and the Greater Accra for that matter.

4.5.3 STRENGTHS

1. Access from the main road.

2. The site has a good vegetation cover.

3. The site sits in a civic area therefore there can be co- ordination between the proposed court building and the other existing civic buildings.

4. The site has boundaries making it easy to plan In terms of locating the facility and other ancillaries which make the structure function.

5. Presence of basic services such as electricity, water and waste collection.

6. Good view of the sea.

4.5.4 WEAKNESSES

1. There were no identifiable weaknesses.

4.6 CONCLUSION

Site B was chosen considering the strengths it presents as against that of site A, presence of basic services and good views to mention but a few.

4.7 SITE ANALYSIS

The site chosen for the proposed court complex covers an area of 18000 square meters.

Problems

1. Insufficient shading.
2. The site is exposed and sunny.
3. Poor lighting.
4. Uncontrolled footpaths

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Opportunities

1. Existing car park.
2. Good surface drainage.
3. Vehicular access
4. Good and open view of the sea.
5. Presence of basic services.

Possibilities

1. Retain existing car park
2. Separate vehicles and pedestrians.
3. Provide shade.
4. Maintain views towards the sea.
5. Improve pavements.

6. Improve soil quality.

4.7.1 CONCLUSIONS

1. Footpaths should be upgraded to pavements.

2. Soil type should be improved.

3. Views should be enhanced.

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4.7.2 SITE INVENTORY – PERIPHERAL STUDIES

The area around the site is gradually becoming the banking hub of Tema. Even though the site is a few metres away co-coordinating the activities with the other civic buildings in terms of security, offices for lawyers, transfer of money from HFC bank in the court to the mother branch will be an advantage.

The facilities found around the site include Social Security National Investment Trust building, Ghana Commercial Bank Main office, United Bank for Africa building, Ghana National Petroleum building and a five storey office block.

Fig 4.2 Ghana National Petroleum

Fig 4.3 Ghana Commercial Bank

Fig 4.4 United Bank for Africa

Fig4.5 SSNIT building

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4.8 CONCLUSION

1. This study gives an understanding of the number of floors the new building can go. The decision made was to go three floors with a sub-basement for judges parking.

2. It also gives a fair idea of materials and elements which can be employed. Building materials to be used should be able to withstand the vagaries of the sea.

3. Based on the peripheral study, the proposed court will have a plan form devoid of circles and hidden parapet roofs. Paint work will be toned down colours like white or beige. The facades can also employ the use of recessed facades and fins as a means on sun shading as is the case with the existing buildings. These proposed design considerations are to blend the court in with the existing Architecture.

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4.9 THE SITE – THE EXISTING CONDITIONS AND INVENTORY

- ***Site conditions***

As was earlier mentioned, the site chosen for the court has an existing structure on it. This structure has been neglected since 1975 and has thus undergone deterioration. Steel reinforcements used in the colums and floor slabs have also undergone rust due to the sites close proximity to the sea. These are conditions buildings located near the sea undergo an example is the old Cape Coast hospital. In order to forestall rust, all reinforced elements should have a bigger cover than the usual.

The Judicial Service who is the owner of the site has therefore decided to pull down the structure and rebuild a new court in its place.

Fig 4.6 Crack in the wall of the structure

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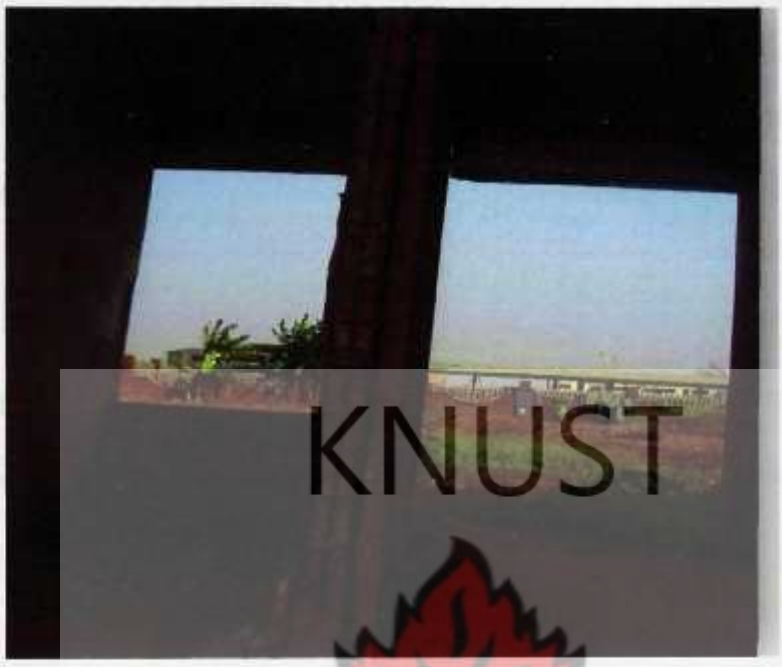

Fig 4.7 Exposed iron rods

Fig 4.8 Crumbling blockwork on the site

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- ***Drainage***

There is a covered drain along the road on the west. This drains into a bigger drain along a south road mentioned earlier.

- ***Electricity***

The site is well serviced with electricity with two transformers locate 200 metres away. These supply street lights and other surrounding facilities with electricity and can therefore as a supplier for the proposed facility.

- ***Water supply***

The UBA bank and SSNIT buildings have water supplied to them from the Tema mains, this will be tapped onto the proposed site.

Site inventory

- ***Topography***

The site slopes from the North to the South. The slope is 0.5m every 20m.

- ***Size***

The total land size is 14400m.sq.

- ***Views***

The site has good views of the Tema dock yard and the sea on the South. This should be taken advantage of.

CHAPTER FIVE

5.0 RECOMMENDATIONS AND CONCUSION

5.1 DESIGN PHILOSOPHY

The philosophy for the design was coined out of the various case studies which were conducted on the different court buildings around the world. From the study it was noticed that noticed that there are two court building design typologies. The first is the traditional type with its Greek columns, high volumes, wooden interiors and burnt clay tile roofs to mention but a few. This typology arguably gives court buildings an intimidating feeling when entered. The second type is the somewhat flexible modern type with glass sliding windows, tiled walls, elevators, green areas and sophisticated technological devices.

Fig 5.1 Examples of new courts springing up in Europe.

In a developing country like ours where the citizenry is reluctant to make use of institutions of justice due to illiteracy, fear and little education, hence a hybrid of the two typologies will create a building that makes use of some of the elements of the traditional and add some from the new. This will make the proposed building less intimidating as attributed with institutions of justice. From this the phrase ***"making justice approachable and accessible to all"*** was derived as a philosophy.

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5.2 DESIGN CONCEPT

To achieve the above mentioned philosophy the following were considered:

5.2.1 Design

The Judiciary, the world over, is constantly seeking ways of making itself more accommodating and accessible to the citizenry and what better way to start this but by design.

The proposed design will deviate from the symmetrical buildings with large columns which are typical of 19th century court houses. From the peripheral studies conducted, the proposed design will have a post modern style. A rather unsymmetrical plan form, modern facades, modern technological devices etc such that when built it sits as part of the existing architecture but still portray the image and values of a court building.

5.2.2 Materials

The materials for the exterior of the court will be concrete, block work and brick. Brick was chosen to break the monotony of concrete and block work. Interior spaces will have to be durable and exhibit

dignity and seriousness. To achieve this wood will be used for the interior. Wood also softens a space.

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5.2.3 Disabled Access

Disabled access goes beyond literally being able to enter the building but also the ability to use it. According to the United Nations, Ministry of Social Affairs, National Committee for the Disabled; "In the physical terms, the provision of a barrier free environment can be undertaken in four complementary domains:

1. Inside the building
2. In the immediate vicinity of the building
3. On local roads and paths.
4. In open areas and residential areas

Even though these are generally applicable to all building typologies, they can still be employed for the court building. There will therefore be elements such as rails, ramps etc to aid the disabled use the building.

5.2.4 Landscaping

Landscaping should be balanced clearly with the creation of outdoor sitting areas for visitors.

Such areas can be used by lawyers and their clients or families who may come to court to settle disputes. While wood is used to soften interior spaces, soft landscaping softens the exterior.

5.3 DESIGN PROCESSES

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5.3.1 Design Brief

Based on the case study conducted and brief from the Judicial Service in Tema, a design brief was drawn. The brief was grouped under the four zones mentioned in chapter two namely public, private, prisoners and interface zones.

A. Public zone

- Reception

  Main hall and lounge

- Cafeteria

  Kitchen

  Main eating area

  Dry and cold storage

  Delivery yard

  Sanitary area

Inner office

B. Private Zone

- Judges chambers
- Jury rooms
- Registry
- Bailiffs office
- Dockets room
- Police posts
- Administration offices
- Library for court staff and lawyers
- Offices for court staff
- Archives
- Judges parking
- Impounded vehicles yard
- Library

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C. Prisoners paths

- Cells or holding rooms

D. Interface Zones

- High, District and Circuit Court rooms
- Consultation rooms

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5.3.2 Accommodation Schedule

Spaces	Proposed unit	Norm/unit-m²	Assignable area-m²
Reception			
Main hall/	3	300	900
Lounge	6	9	54
Judges Chambers	9	25	225
Office for court staff	12	25	300
Consultation room	4	6	24
High court	3	600	1800
Circuit court	3	600	1800
District court	3	600	1800

Holding rooms and cells	4	6	24
Jury room	2	8	16
Archives	1	100	100
Library			
Librarians office	1	50	50
Storage room			
Police posts	4	50	200
Dockets	1	100	100
HFC bank	1	100	100
Bailiffs office-open plan	1	25	25
Registry-Open plan	1	100	100
Registrars office			
Asst. Registrars office.	1	100	100
Asst.1 Registrars office.	1	25	25
Cafeteria			
Kitchen	1	50	50
Main eating area	1	300	300
Cold storage	1	15	15
Dry storage	1	25	25

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Delivery yard	1	100	100 7783m.sq.

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Table 4.1 Accommodation Schedule

5.4 CONCEPTUAL SITE PLANNING

Fig 5.2 shows views towards the sea and accessibility from the Tema Township. These views can be enhanced and taken advantage of Fig 5.3 shows accessibility from the Tema – Accra beach road. This study helps with knowing where to place the entrance to the proposed facility. Since the public access the existing area from the north, an access should be placed there for them. The existing car park which will be used is on the west therefore placing public vehicular access there would be much easier to locate.

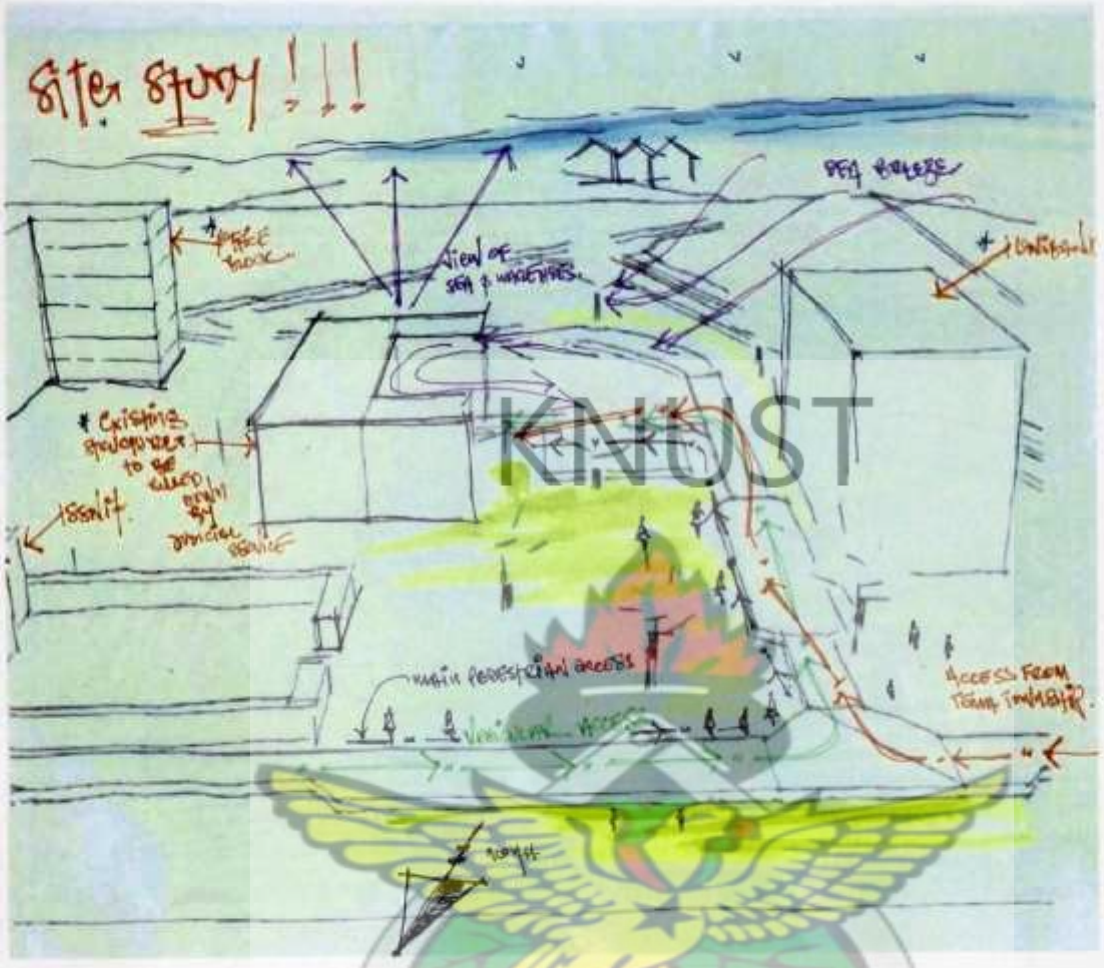

Fig 5.2 Site study

Form the site study it was noticed that the site has good views towards the sea. This can be taken advantage of using large window panes. The breeze blows from the sea on the south of the site.

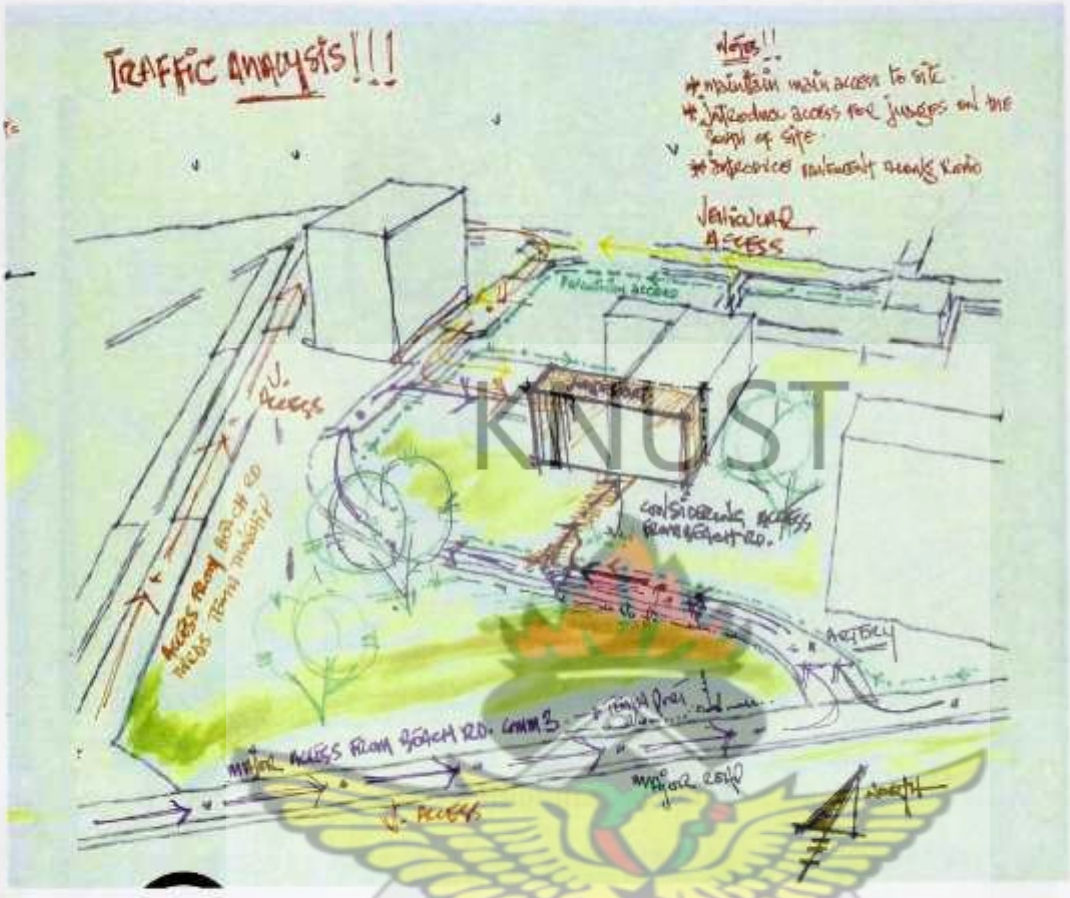

Fig 5.3 Traffic analysis

Form the traffic analysis it was noticed that the predominant access used by the public to the site was from the West it was therefore thought wise to locate the main access to the site here. The judges and accused accesses were taken from a minor road on the south of the site.

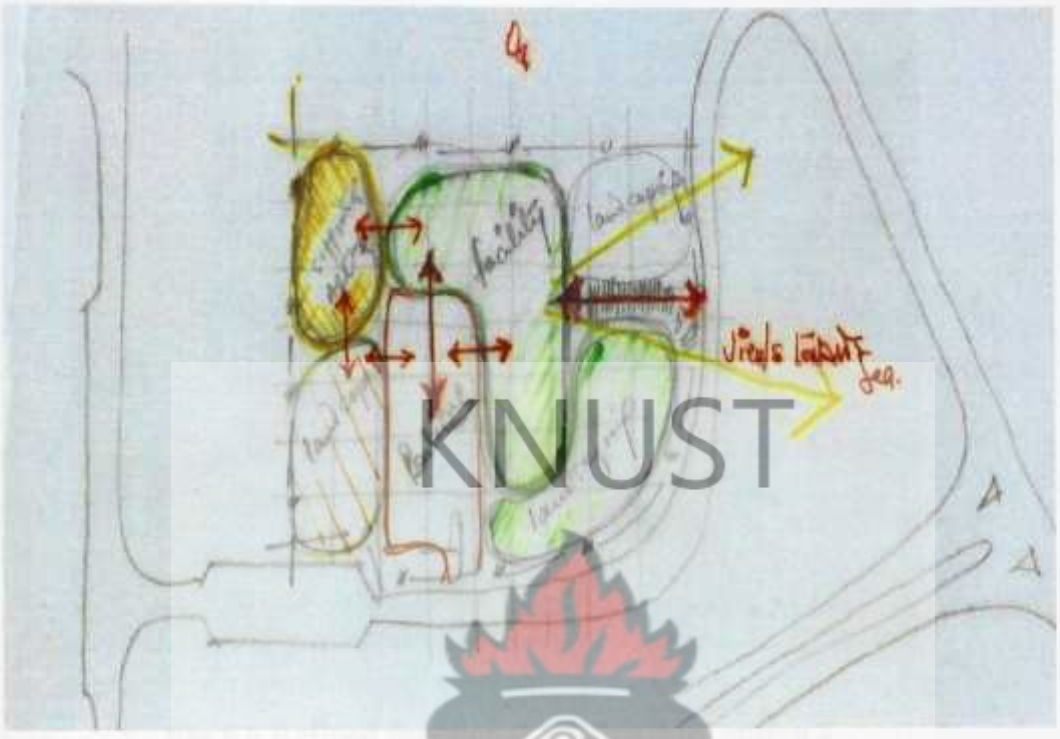

Fig 5.4 Bubbling, option 1

Fig 5.5 Refined functional relationship, option 1

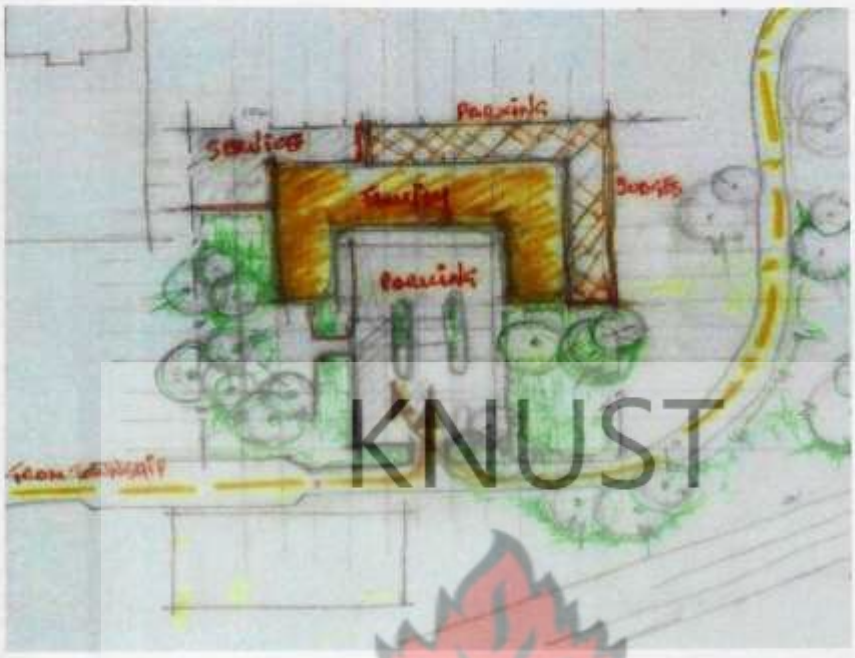

Fig 5.6 Refined functional relationship, option 2

Fig 5.7 Sketch of Initial plan of facility

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Fig 5.8 Some elements employed to admit light into space

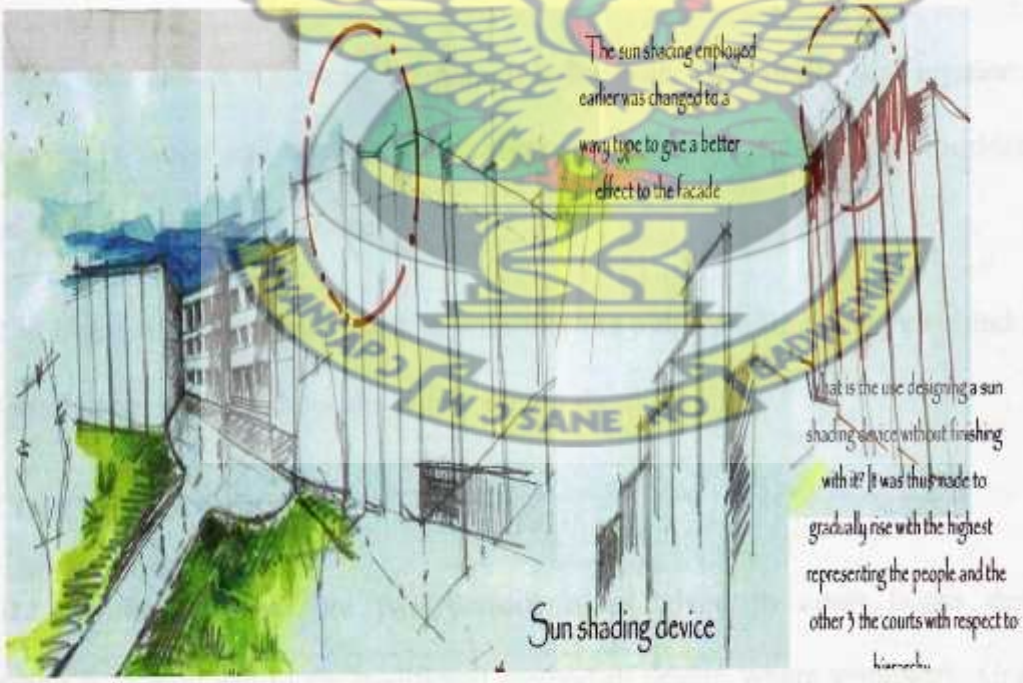

Fig 5.9 Sun shading and to admit light into space

Fig 5.10 Material box

Material box; this shows the choice of materials for both the exterior and interior with much attention given to wood and brick to soften the spaces thus creating a less intimidating feeling associated with institutions of justice

Option 2 in Fig. 5.6 seems better because with that the judge parking is right behind their office which is easily accessible without the public seeing them.

5.4.1 ACHIEVING A DESIGN

As earlier mentioned, there are two considerations given to court house designs. One consideration is to conform to the traditional method of design where symmetry, Greek colums, gable roofs etc. are employed and the second method is the somewhat flexible less symmetrical and thus less intimidating design approach. This can be either modernist or post modernist. In

some cases a combination of the two can be employed. Some elements from the two approaches and blend them together in harmony.

5.4.2 DESIGN CONSIDERATIONS

5.4.3 CHARACTER AND IDENTITY

The proposed court complex was given a distinct identity through design, spaces and choice of materials. The character was one of a post modern Court complex.

5.4.4 DESIGN

The design was influenced by four main factors; the site, the architectural style of the surrounding buildings, the functions and usage and the target group.

The site as earlier mentioned slopes towards the South. From the literature review, a site that allows for basement parking has an added advantage. This is because basements can be employed on sloping sites. In the case of the Kumasi Appeal and High courts, basements have been used for judges parking. The judges chambers can therefore be placed right above the basement. Using elevators, judges can access their chambers.

It was identified from the site analysis that the main pedestrian access is from the West the entrance for the public and staff into the facility will be placed here. This makes the entrance easier to locate.

The Architectural style of the area is modernist. The UBA bank opposite the site for the proposed court has no ornaments hence describing it as such. Since the proposed building will

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make use of some elements of the traditional court and combine it with that of the modern, a postmodern design will be employed. Among some ornamental features which will be

incorporated into the design include colums and horizontal strips on the façade. These vertical elements will make the building seem taller than it really is and is an attempt to make the building seemingly imposing on the surrounding buildings.

The users of the court building were grouped into three; the Judges and their staff, court attendants and the court staff e.g. the administration staff, the Registrar and HFC bank workers.

All of these areas should have separate circulation paths. The building should clearly separate all these users even though signage will be employed. Users should know which areas of the can access. Since justice should be accessible to all including the disabled, the proposed court will have elements such as ramps, hand rails and ample spaces in the toilets and corridors for easy maneuver.

Functionality in every building is very important and should not be down played in any instance. According to the Wikipedia encyclopedia ***"....functionalism, in architecture, is the principle that architects should design a building based on the purpose of that building....."*** The allocation of spaces, corridors and the entire design should be functional.

5.4.5 SPACES

Public information booth

The public information booth is a room where press men and the general public can have access to information on court proceedings by computer. The large numbers of court attendants is

therefore cut down. The media also straying into areas where they are not welcome becomes a thing of the past.

Information Communication Technology (ICT) room

This will be the information centre of the court. Courtroom, the Public information booths, electronic reference library will all receive information on court proceedings and old cases from here.

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Electronic reference library

This is a room where lawyers, court staff and in some cases authorized members of the public can access information on old court case files. This is very necessary in modern courts since sometimes lawyers consult old cases to help them argue out new cases.

Administration

New courts in the United States have an Administration. This office is headed by an administrator who oversees the general maintenance and running of the court complex. This takes some work load off the Judicial Service who has the hard task of overseeing every court in the country. The court administrator may not necessarily be trained legally.

5.4.6 Plans

The plan form which evolved from the conceptual planning was in the form of an H. The building has three storeys with a sub basement.

- **Sub basement**

As has earlier been mentioned the site slopes towards the south. The slope has been taken advantage of to create basement parking for the judges. The sally port for the accused, security offices, holding rooms and general storage rooms are all located in the basement.

- **Ground floor**

Offices for the staff, waiting areas, all districts courts and chambers for the district court judges and their secretaries are located on the ground floor.

- **First floor**

All the Circuit courts and chamber for their judges are located on this floor. The court cafeteria for the staff and other court attendants is also on the first floor. The first floor also has a waiting area and lounge.

- **Second floor**

The High court which is the highest court in Tema and chambers for judges was located on the second floor. The Judges can therefore enjoy unobstructed views of the sea. Offices for the courts administrators and ICT are all on this floor.

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5.5 CONSTRUCTION TECHNOLOGY

5.5.1 MATERIALS

Some materials used for the proposed court building included concrete and brick for the exteriors and wood for the interiors. Brick was chosen as a material to down-play on the intimidating feeling most court buildings have. Wood was chosen for the interior because it transmits less noise as compared to tiles and concrete. The use of wood arguably softens spaces.

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5.6 SERVICES

5.6.1 Ventilation

Artificial ventilation employed in the facility include the use of localized split air condition units however in all the spaces where this form of ventilation was employed, natural ventilation was the primary source of ventilation. The use of large window panes and double volume voids were also employed to facilitate efficient natural ventilation.

5.6.2 Natural Lighting

Both active and passive day lighting or natural lighting systems were employed throughout the design process. As was mentioned earlier, large window panes were employed not only for ventilation, but for admitting light into the spaces.

5.6.3 Artificial Lighting

All the spaces had artificial lighting in them. The type usually employed were wall lamps for the

courtroom and fluorescents for the offices.

- **Street Lighting**

After analyzing the sites, it was noticed that the site was dark at night. To solve this problem, the proposed facility has extensive street lighting employed around the site.

- **Garden Lighting**

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The landscaping around the court also has artificial lighting employed in them. This is to create an effect aesthetically and also to aid in visibility for the night security guards.

5.6.4 Drainage – Waste and Surface Water

Gutters have been provided around the site to drain off water. These gutters have however been covered to prevent to prevent solid waste from blocking them.

Waste is collected into manholes behind the facility and later collected into a septic tank which also joins the main Tema waste drainage.

5.6.5 Water Supply

Water supply is from the Tema mains although supplementary water has been provided in water tanks. These supplementary water supplies have been placed on the highest point of the site to allow gravity to aid n the easy flow of water.

5.6.6 Power

Any modern courts operations depend heavily on electricity. Therefore besides the dependency on the National grid as the main supplier of electricity, alternative power supply has been provided by means of generators.

5.6.7 Fire fighting installation

The entire building will have fire detection systems installed in it. The building specifically will have M Fire Alarm Systems. These will have break glass manual points which can be operated by anybody in the building. This will be placed at escape routes and stair ways. A P Fire System Alarm system will also be employed in the proposed facility. This is the type which protects life and property. When it goes off, it automatically dials the fire brigade who as earlier mentioned are located 5 minutes drive away from the proposed site. This type of fire detection system was chosen because loss of any file in the court will stall the entire court process.

5.6.8 Security

Security will be provided by the Ghana Police Service. The proposed building will have a security post ideally placed in the basement.

5.7 CONCLUSIONS

Court buildings are the most important buildings any country can boast of. This is because they

are envelopes where the laws of any land are enforced. A poorly designed court building which has little consideration given to adequate storage spaces, poor court room planning etc. can therefore stall the administration of justice.

It is my hope that Architects and the country as a whole will get well informed on court design considerations before putting up such institutions of justice for proper and efficient justice delivery.

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APENDIX

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BLOCK PLAN ..

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SUB BASEMENT PLAN

2

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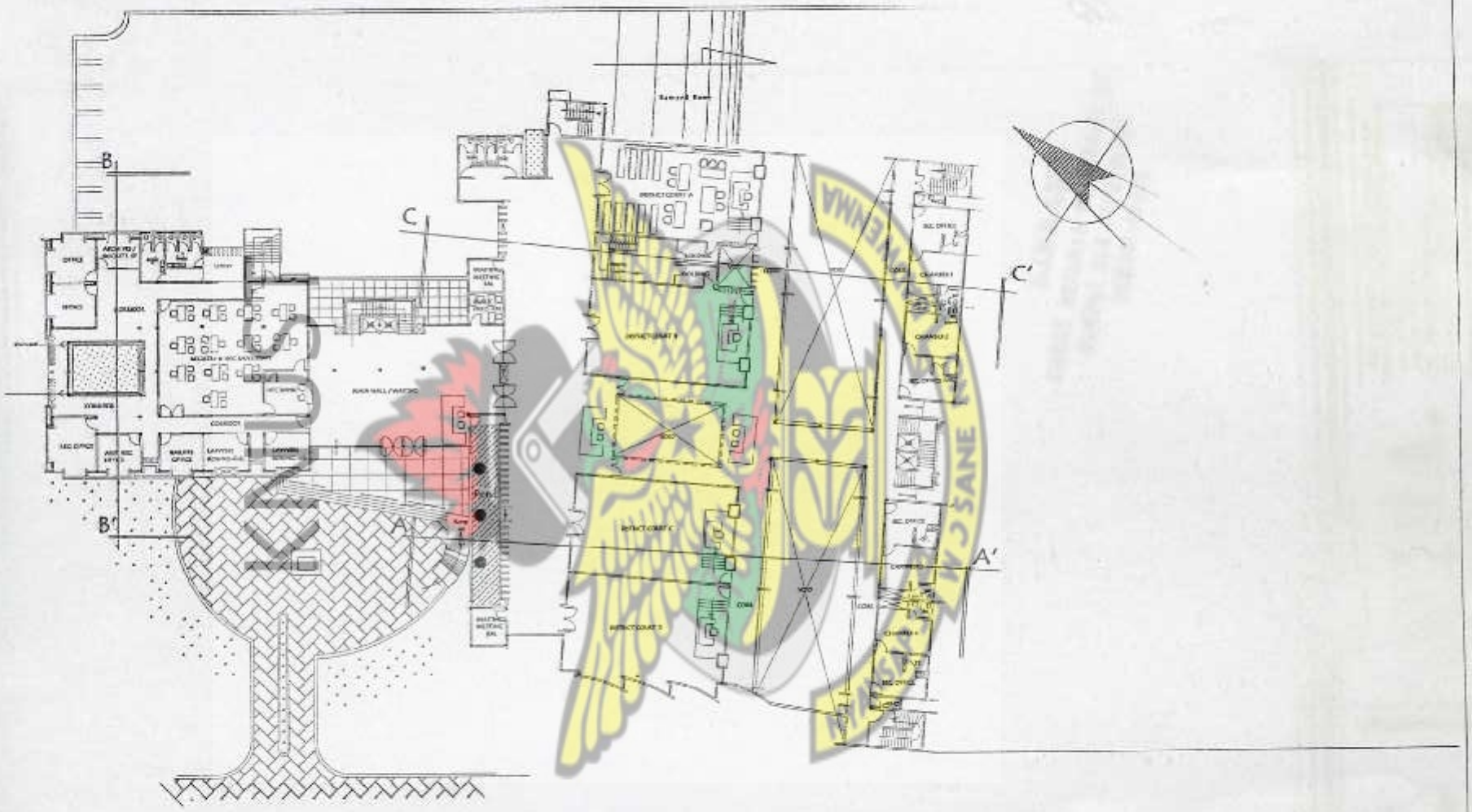

GROUND FLOOR PLAN

3

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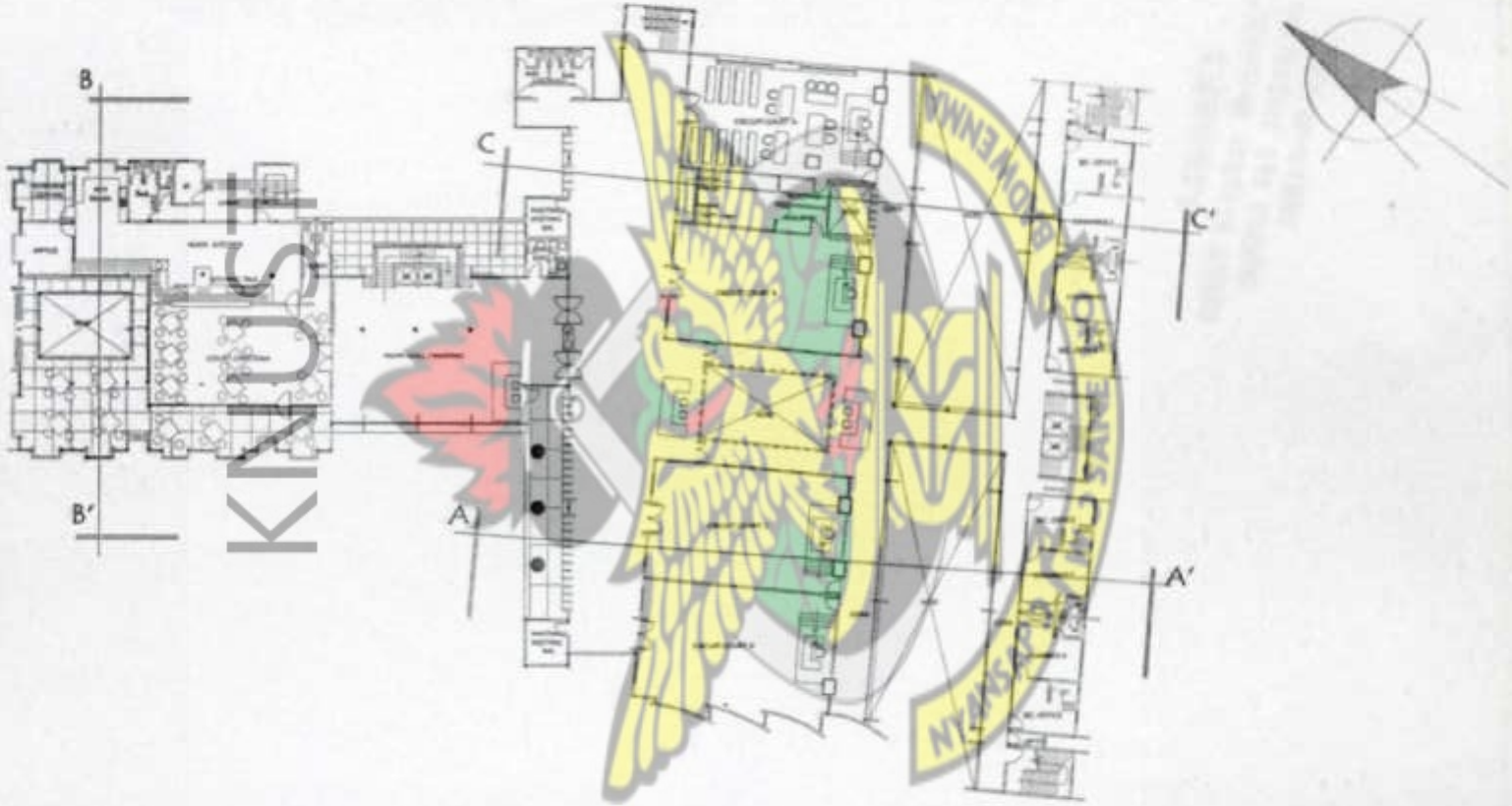
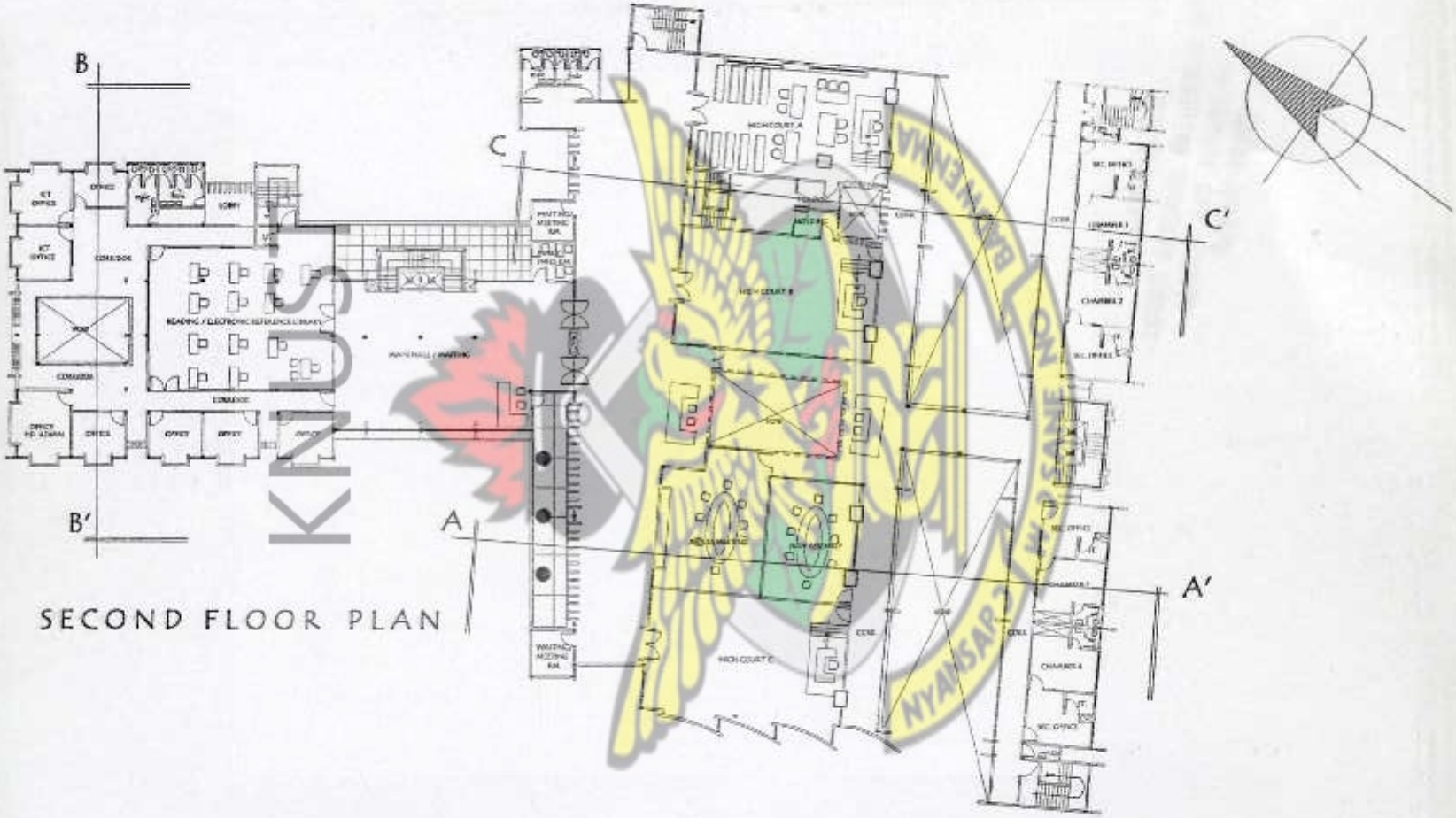


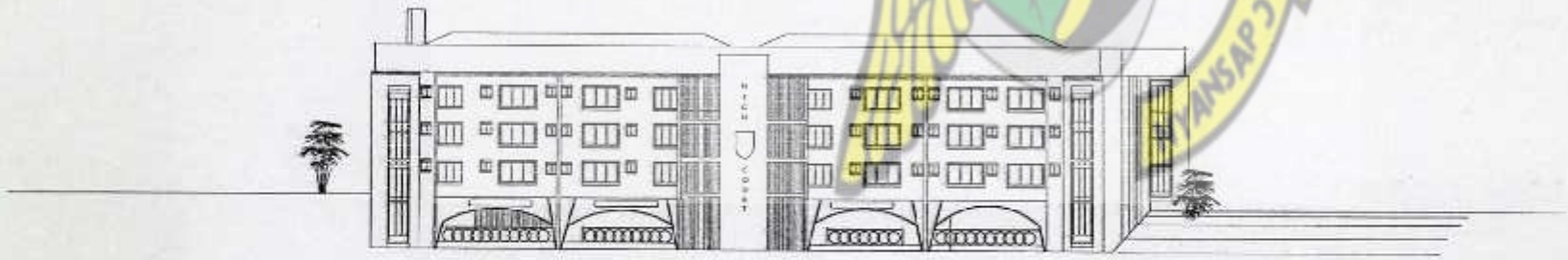
FIRST FLOOR PLAN

REGIONAL COURT COMPLEX - TEMA.


B
B'
C
C'
A
A'
HIGH COURT A
HIGH COURT B
HIGH COURT C
CHAMBER 1
CHAMBER 2
CHAMBER 3
CHAMBER 4
CORRIDOR
CORRIDOR
CORRIDOR
OFFICE
OFFICE
OFFICE

ELEVATIONS....

NORTH ELEVATION



SOUTH ELEVATION

6

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ELEVATIONS....

EAST ELEVATION

WEST ELEVATION

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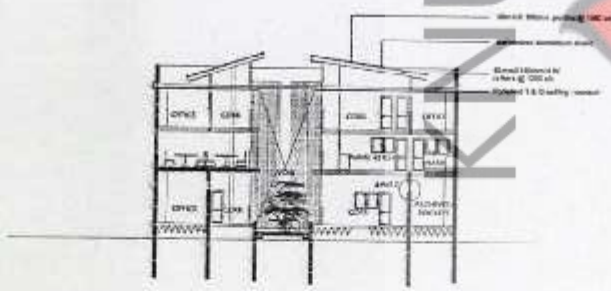
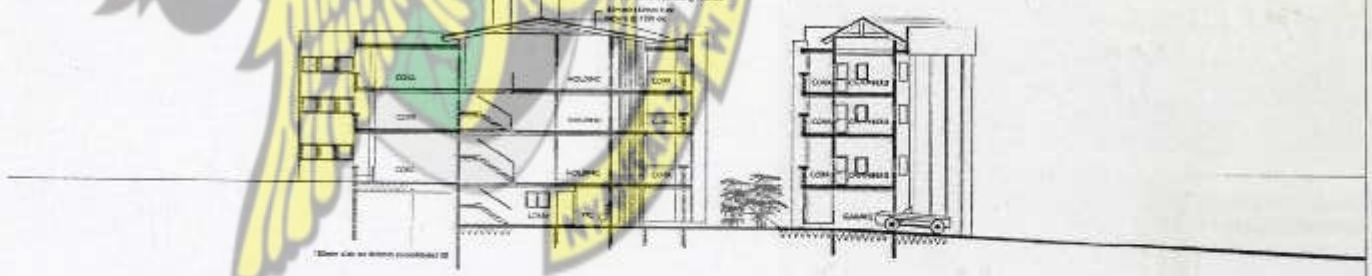
SECTIONS....

SECTION A - A'



SECTION B - B'



SECTION C - C'

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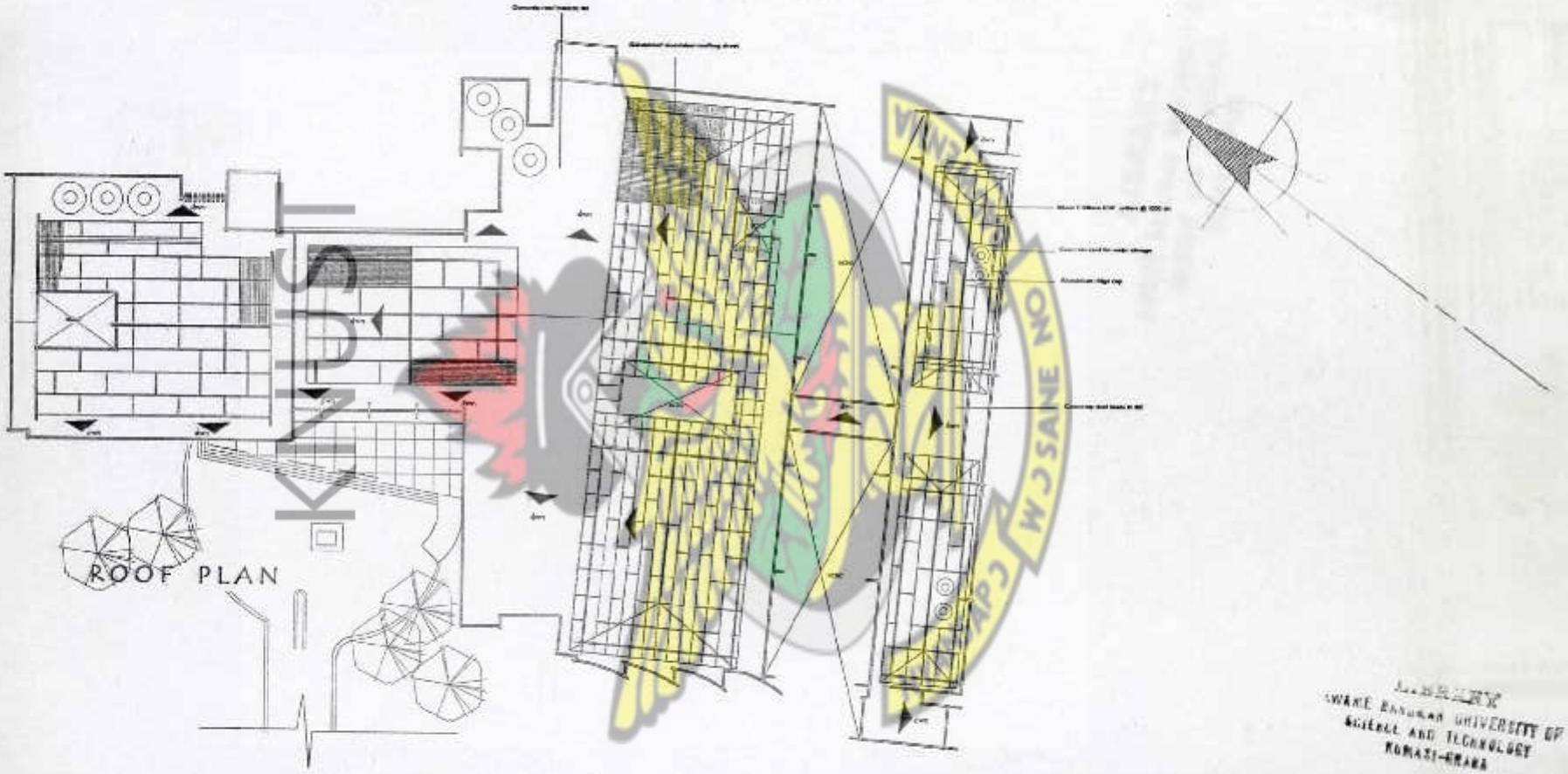
ROOF PLAN...



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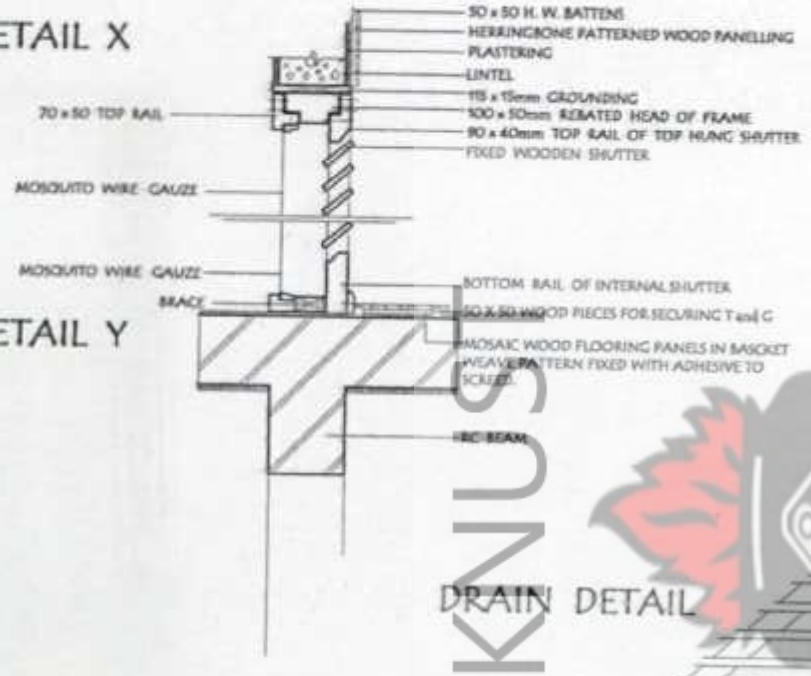
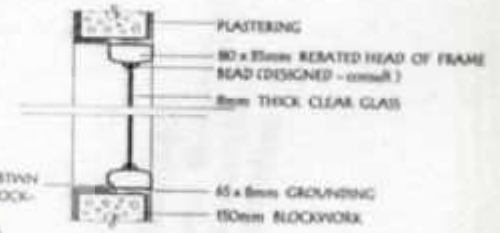
DETAILS ..

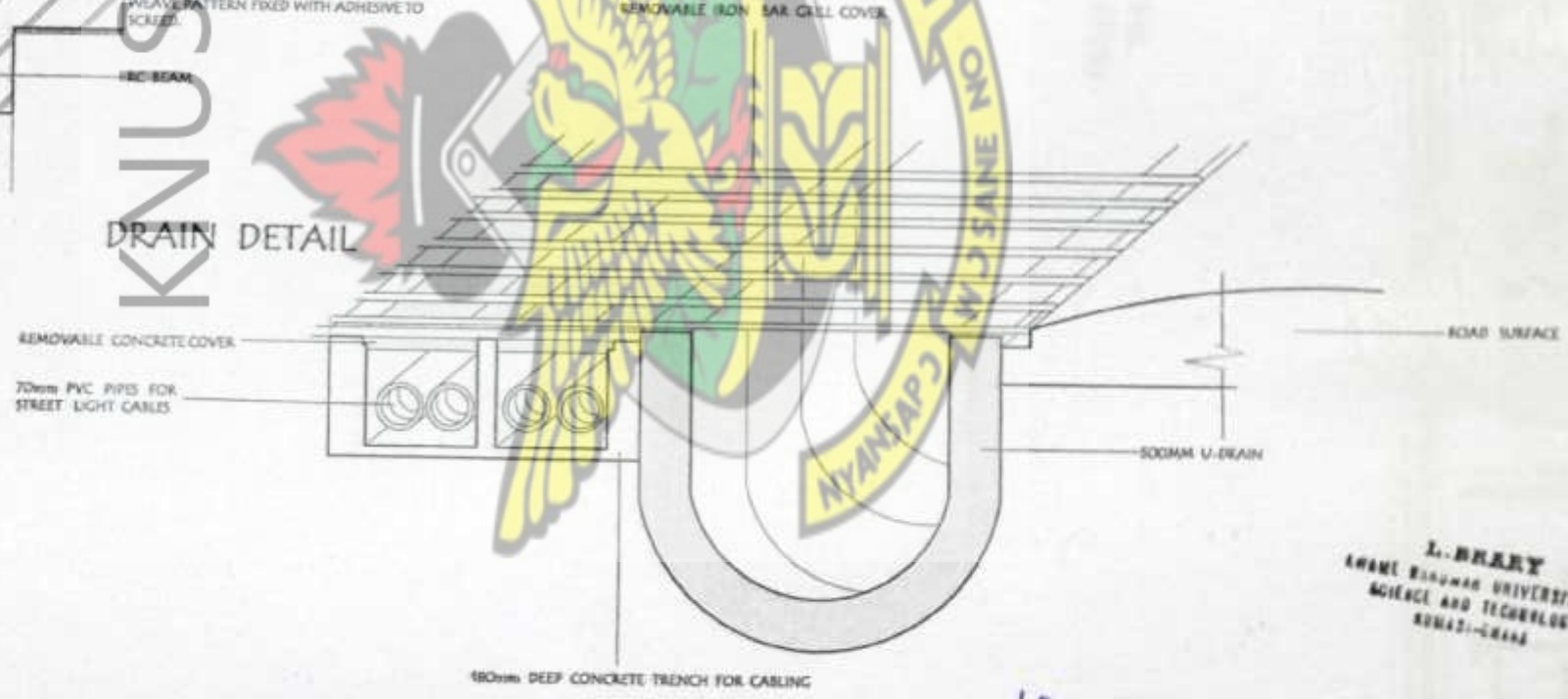
DETAIL X



DETAIL Z



DRAIN DETAIL



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10

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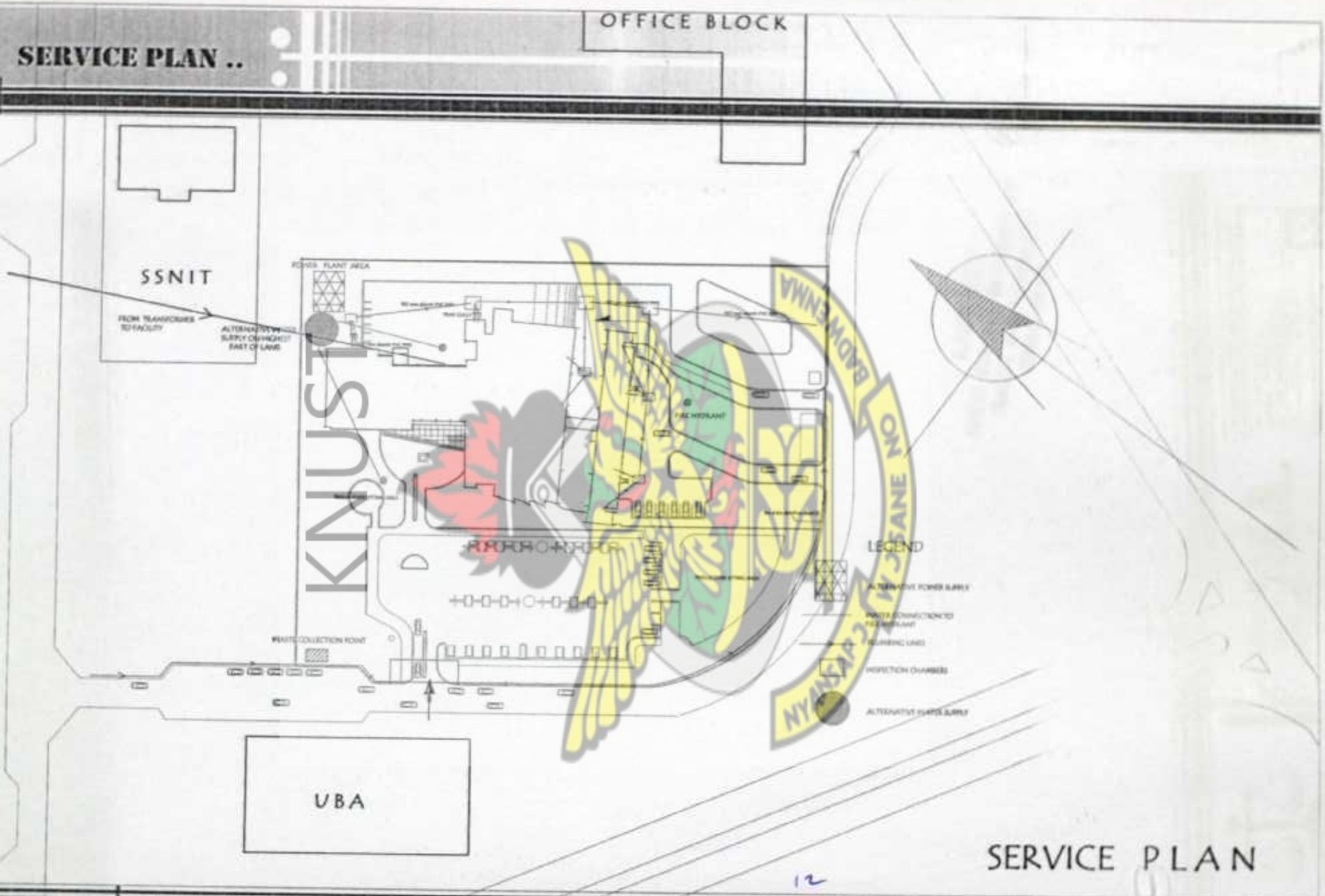
SERVICE PLAN ..



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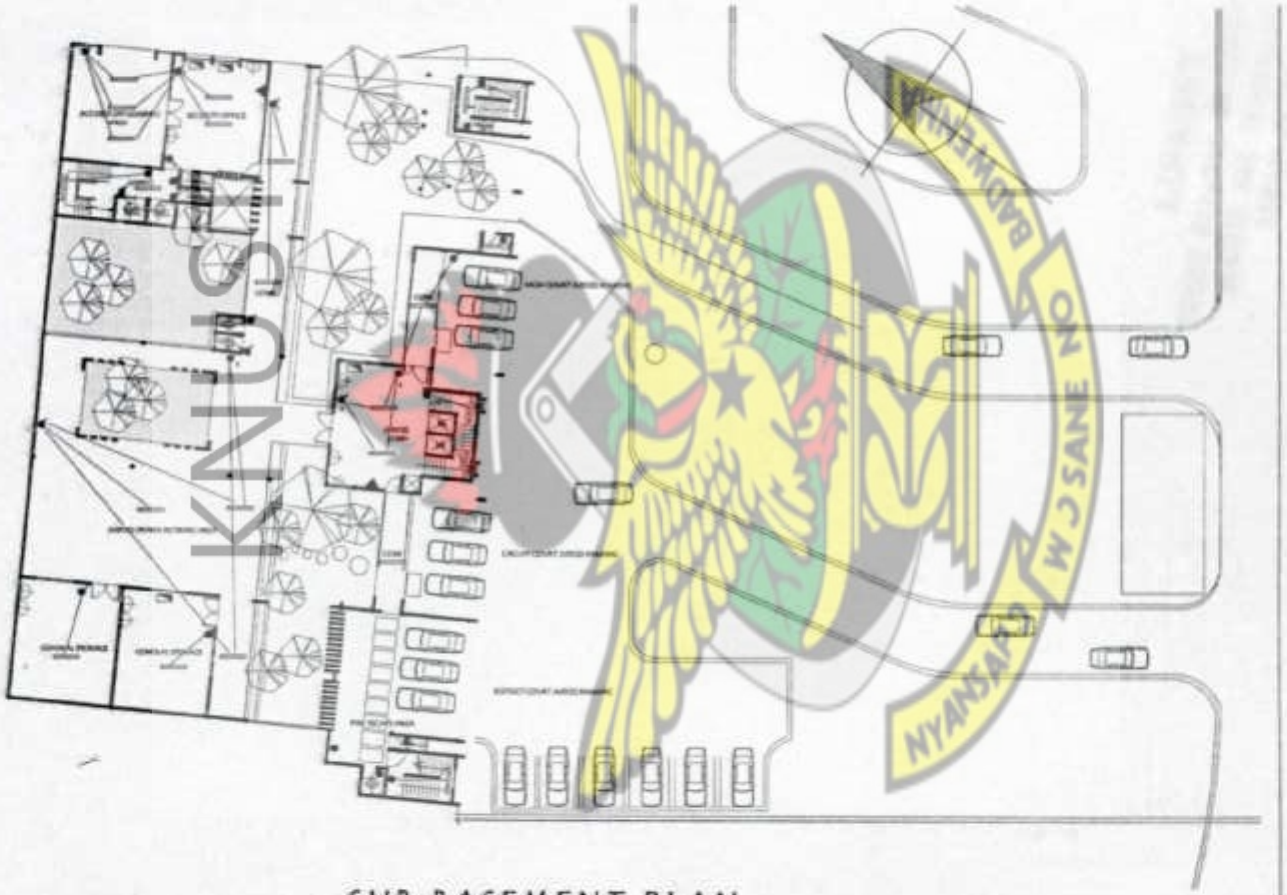
ELECTRICAL LAYOUT..



SUB BASEMENT PLAN

13

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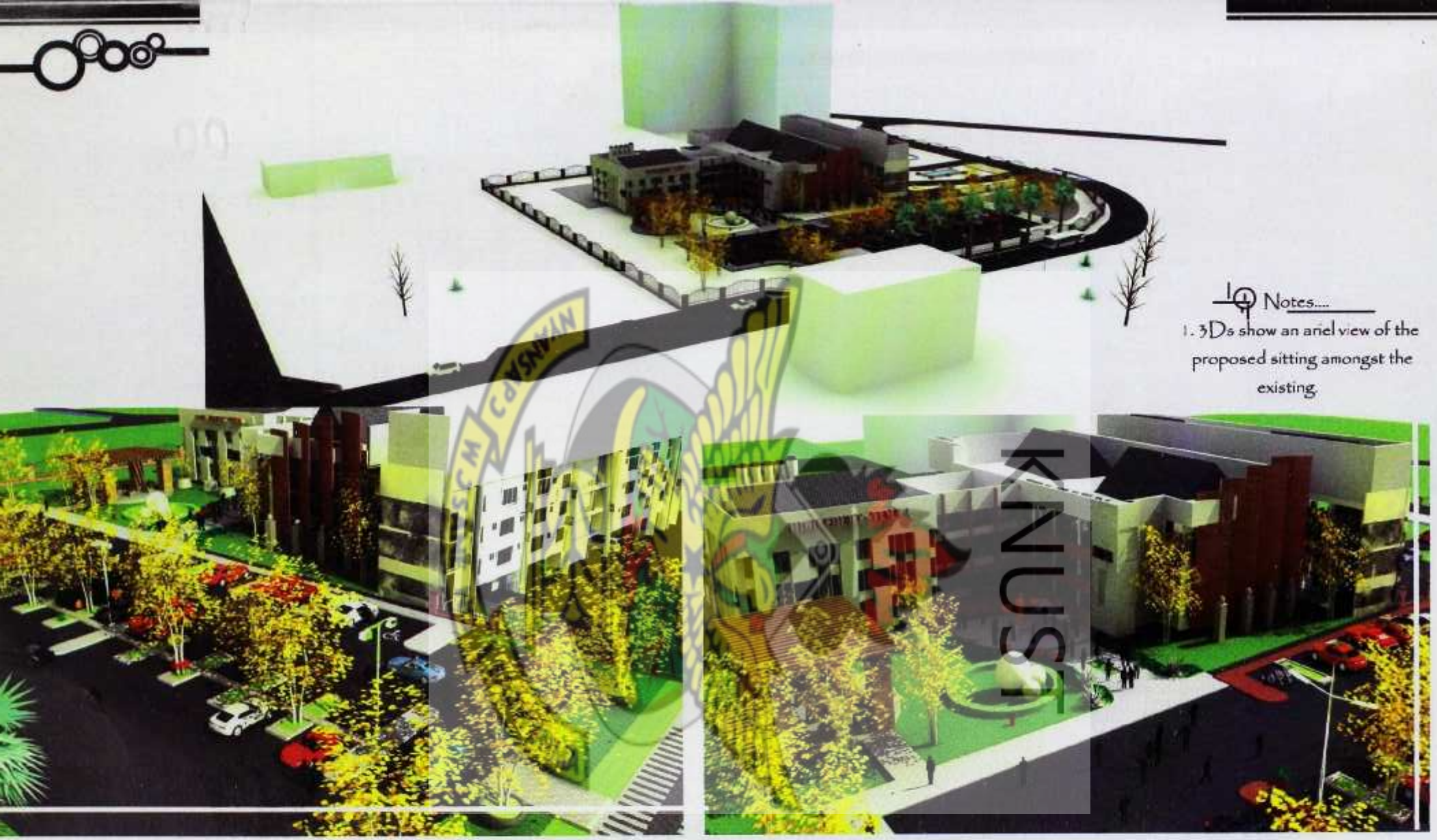
ELECTRICAL LAYOUT..

TYPICAL ELECTRICAL LAYOUT

LEGEND	
	DISTRIBUTION BOARD
	SURFACE MOUNTED CEILING LIGHT
	80 WATTS,1.8m LONG DOUBLE FLUORE -SCENT FITTING.
	80 WATTS,1.8m LONG FOUR FLUORE -SCENT FITTING, STELLATE SHAPED.
	FLEXI SUSPENDED LIGHT PENDANT
	FIRE PUSH
	80 WATTS,1.8m LONG DOUBLE FLUORE -SCENT FITTING.
	1 - WAY SWITCH
	2 - WAY SWITCH
	FILAMENT LAMP
	13 AMP SINGLE SWITCH SOCKET OUTLET
	13 AMP SINGLE SWITCH SOCKET OUTLET
	TELEPHONE POINT
	1.10 M AMUSEMENT/WARNING BELL UNIT



Notes....

1. 3Ds show an ariel view of the proposed sitting amongst the existing.

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Notes....

1. Notice the use of vertical bands to create a building that seems high and imposing.

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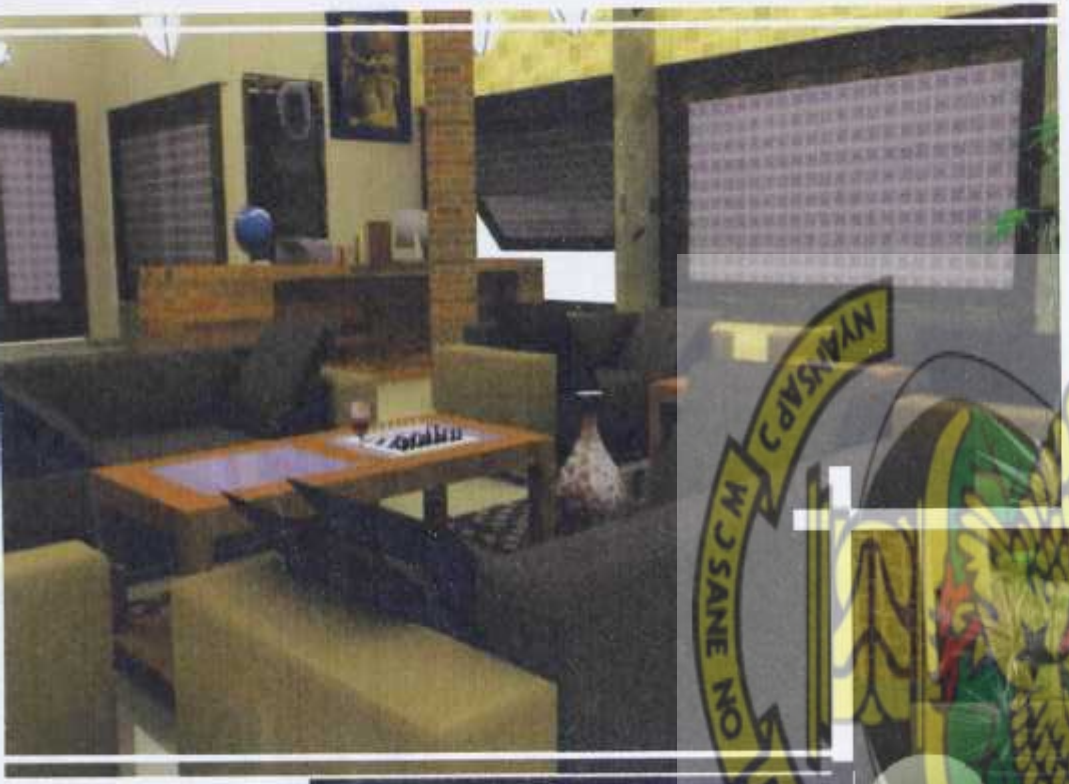
1

The Main Hall / Waiting



Notes....

1. Notice the use of the same materials externally to maintain a particular character.
2. The space should also have very little furniture to prevent court attendants from loitering.

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The High Court

The Circuit Court.....

The District Court...

The Courts....

Notes...

1. Notice the use of different furniture types in the courtrooms. This is because in the lower courts, the status of the attendants are low thus furniture should be hardy to withstand mishandling if it occurs

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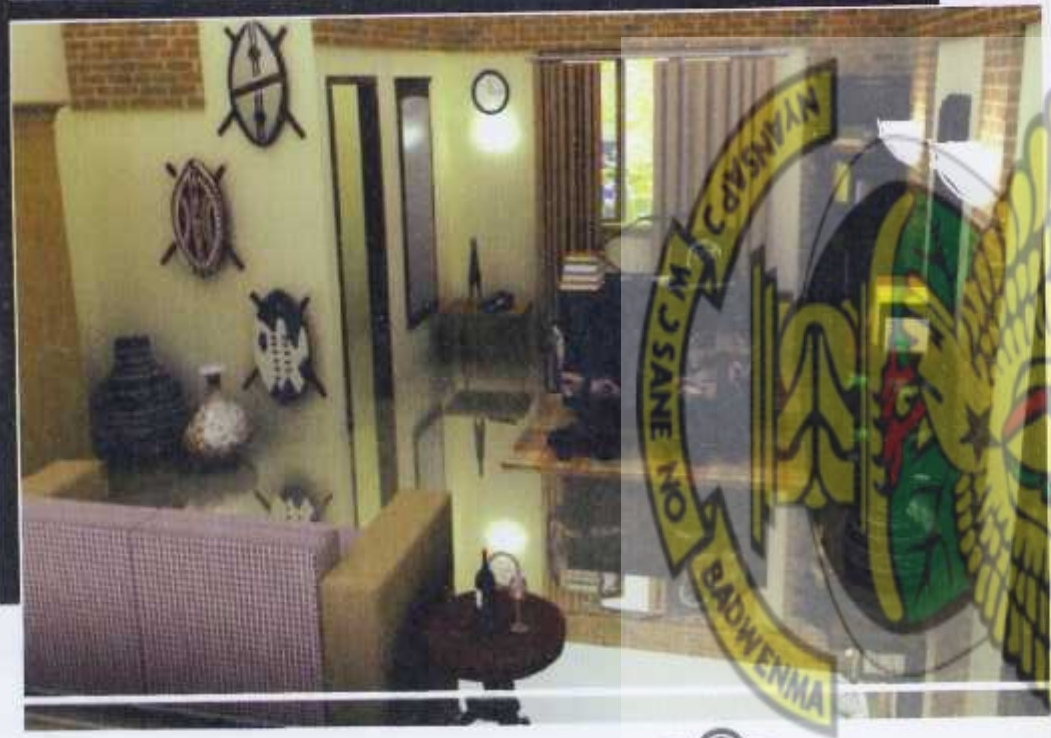
Notes...

1. Pictures 1 & 2 show the interiors of judges chambers.
2. The third picture shows the relaxation area for the drivers of the judges in the sub-basement. (refer to plan)



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1

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