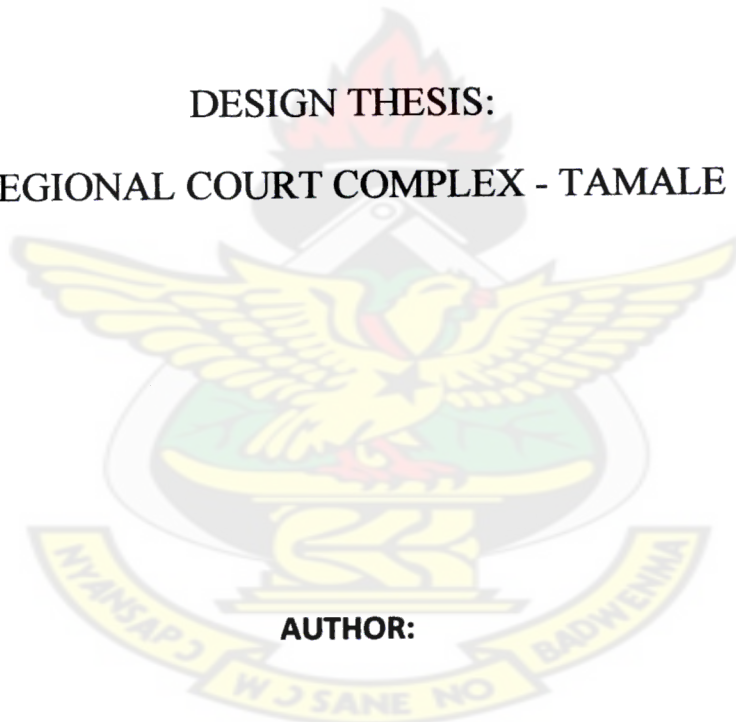


**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND
TECHNOLOGY,
KUMASI**

**COLLEGE OF ARCHITECTURE AND PLANNING
FACULTY OF ARCHITECTURE AND BUILDING TECHNOLOGY
DEPARTMENT OF ARCHITECTURE,**

KNUST

**DESIGN THESIS:
REGIONAL COURT COMPLEX - TAMALE**



**AUTHOR:
KOFI, IVAN GEORGE OSOM**

(Post Graduate Diploma)

JUNE 2009

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DESIGN THESIS:
REGIONAL COURT COMPLEX - TAMALE

A DESIGN THESIS REPORT SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE OF THE KWAME
NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI, IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE POSTGRADUATE DIPLOMA IN ARCHITECTURE.

AUTHOR:

KOFI, IVAN GEORGE OSOM

(Post Graduate Diploma)

JUNE 2009

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DECLARATION

I hereby declare that I have wholly undertaken the study reported herein under the supervision of Mr. Ben G.O Odame. It contains neither material previously published by another person nor material which has been accepted for the award of any degree of the University, except where due acknowledgement has been make in the text.

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KOFI, Ivan George Osom
(Student's Name)


.....
Signature

18/09/09
.....
Date

Certified by:

Mr. Ben G.O Odame
.....
(Project Supervisor)


.....
Signature

19/09/09
.....
Date

Certified by:

Professor G.W.K Intsiful
.....
(Head of Department)

Signature

Date

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ABSTRACT

Over the years courts in Ghana have seen huge increments in cases and caseloads without a corresponding increase in court facilities and staff to effectively handle and manage the situation. Factors contributing to these would be attributed to increase in population, culture of the people, religious inclination just to mention a few and awareness level of the citizenry to the constitution of the land, their rights and responsibilities

These increments in caseloads and the lack of implementing modern methods and applying modern means of arbitration have placed stresses on the judicial service resulting in huge back log of cases and in some circumstances the loss of public confidence in the judicial services competence the to deliver timely judgment and expedient court action.

The judiciary being an arm of government in this sense will have to be seen to be up and doing in with its role in administering and interpreting justice fairly and timely to all citizens to aid in Ghana's development agenda.

In this light it has taken certain initiatives such as the introduction of Alternate Dispute Resolution (A.D.R) mechanisms in arbitration. It has also taken steps to upgrading and modernizing its record keeping and archiving. In a bid upgrading its systems the service has sought to give its old dilapidated court houses and building a face lift and in some instances construct new one's or have a combination of courts were necessary. This is targeted at improving the justice system and removing all bottlenecks in the administration of justice in the country.

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DEDICATION

I dedicate this design thesis is to the Almighty God whose grace and mercies have abound all the years of my life, to my late father S.G.T Kofi and mother Mrs. Mavis Kofi for her support throughout the years of my educational life.

KNUST



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CHAPTER ONE

1.0 Introduction

A court is a body, often a governmental institution, with the authority to adjudicate legal disputes and dispense civil, criminal, or administrative justice in accordance with rules of law. In Ghana these rules of law are enshrined in Ghana's Constitution. In common law and civil law states, courts are the central means for dispute resolution, and it is generally understood that all persons have an ability to bring their claims before a court. Similarly, those accused of a crime have the right to present their defence before a court. Court facilities range from a simple farmhouse for a village court in a rural community to huge buildings housing dozens of courtrooms in large cities. In that regard a courthouse has immense significance as civic spaces.

Courts can be classified as civic building and it's amongst the most important and symbolic public buildings.

Courts are also seen as symbols of liberty and the independence, purveyors of justice in the land of the free and also, they are seen as staunch symbols of the people's faith in their ability to govern themselves. (Almaraz Jr ,2004)

In light of the government of Ghana's aim of bringing justice to Ghanaians and ensuring fairness, efficiency and effectiveness in justice delivery, it has plans of building a five-storey 34 courtroom complex in the 28th February road in Accra. It also recently constructed a Court of Appeal Complex in Kumasi which houses High Courts, Financial Tribunals and a Human Rights Court for the Commission for Human Rights and Administrative Justice (CHRAJ). The aim of this new court of appeal was to handle cases emanating from the Northern Sector of the Country.

In line with the Judicial Services mission statement of improving its output and service delivery, accessibility, user friendliness and cost effectiveness we propose the establishment of a Regional Court Complex (appeal court) targeted at regional capitals because the only Court of Appeal is in Accra is overburdened with cases from all over the country.

For instance, the number of cases concluded in 2007 (145 civil cases) is taken as an average for a year, then with the 1,622 pending cases at the onset of 2008, it will take the court of appeal approximately 11 years to conclude on the all pending cases assuming no new cases are brought forth.

If the number of cases concluded in 2007 (16-criminal cases) by the appeal court is taken as an average for a year then the 99 pending cases at the beginning of 2008 it will take the Appeal Court approximately 6 years to conclude on the all pending cases assuming there are even no more new cases.

1.1 Problem Statement

There is no appeal court to back up cases emanating from High courts. As a result many cases are pending which need prosecution. The administration of Justice therefore becomes frustrating and stalled

Until the establishment of the new Court of Appeal Complex in Kumasi whose core objective is to handle appeal cases for the middle and northern belt of the nation, all Appeal cases in the country had to be resolved in Accra.

Supporting facilities such as offices complex, conference rooms, and library are lacking in most high court building thus hampering the smooth operations of the judicial service.

The absence of court facilities in Kumasi leads to frustrations among lawyers and clients and loss of confidence in the judicial service. The establishment of an Appeal court in Tamale to take care of the three northern regions that is Northern, Upper East and Upper West Regions will reduce the bottleneck in the administration of justice in the three northern regions.

1.2 Justification

The establishment of a Regional Court Complex is imperative for the following reasons.

- The isolation of the three Northern regions from the south makes it imperative for the establishment of the regional court complex.
- There are bottlenecks in the administration of justice and this situation can be mitigated by the establishment of Regional Court Complex in Tamale.

1.3 Objectives

- To make maximum use of technology to enhance court operations and efficiency.
- To enhance the integrity of the judicial process and safety of courthouse occupants and users.
- To design an energy efficient Court building.

This will trim down the increase in case loads that are recorded in the district and overall decrease the quantum of cases at the Appeal Courts in Accra and Kumasi.

1.4 Client

The client is the Judicial Service of Ghana.

1.5 Scope

The design of the Court Complex would include the provision these facilities

- Court rooms
- Registry
- Staff offices
- Administrative Offices
- Library
- H.F.C Bank Payment Points
- Conference Rooms
- Luncheon

1.6 Target Group

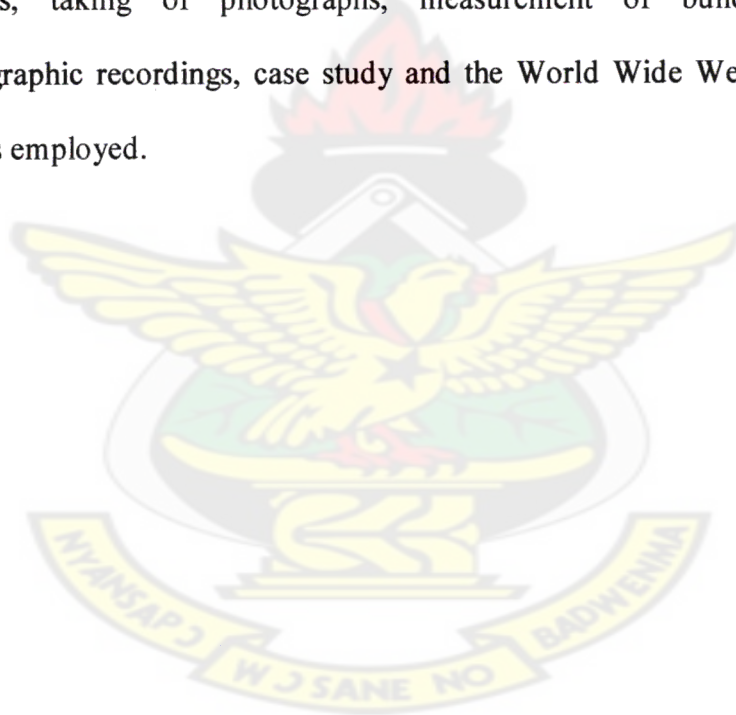
The target group of the design will include cases from the Northern Belt of Ghana and specifically the Upper east, Upper West and the Northern Region of Ghana.

1.7 Location and Site

The site is in the city of Tamale, the Tamale Metropolitan District in the Northern Region, Ghana.

1.8 Research Methodology

The information used to write this thesis was acquired through the adoption of a number of tried and tested research methodologies. The information gathered was carefully evaluated to ensure that only the one that would aid the execution of the task was collected. Interviews, Journals, magazines, taking of photographs, measurement of buildings, personal observations, photographic recordings, case study and the World Wide Web research were the research methods employed.



CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 History of law courts

In ancient Athens, in the Archaic period, when you thought someone had hurt you or stole something from you, you could drag him or her in front of an aristocrat (*if you were strong enough*) and then you could try to convince the aristocrat to order the person to be beaten or killed.

In the time of Solon, people said that they needed to know what the law was really. What could you be punished for? What was the right punishment for each crime? So the Athenian aristocrats wrote down the laws.

During the Athenian democracy, the system changed again. Now instead of having aristocrats be the judges, there would be juries of the people deciding who was guilty and how he or she should be punished.

Athenian juries had 500 people on them. They sat in a big theatre and listened to the accuser make a speech, and then the defendant. When the speeches were over, and witnesses had been called, all the people of the jury voted on whether the accused person was innocent or guilty. Whoever got more votes won. Then each of you would make a speech saying what you thought the punishment should be, and the jury would vote again. The punishment that got more votes would be the one that was carried out.

Under this system, having people like you counted for a lot. Popular people tended to win trials, while unpopular people lost them. It was a trial like this that condemned Socrates to death.

The flaw in this system led to the creation of the modern day institution of courts which involves the use of Judges, Lawyers and other paralegals are involved in the arbitration process. Juries are still used in certain instances and selection is done in an orderly manner.

The court is therefore a specialized building where all professionals in the legal field meet to settle and arbitrate disputes.

2.2 Historical Background of Ghanaian Courts

The Supreme Court was established by the Supreme Court Ordinance (1876) as the highest tribunal in the Gold Coast (now Ghana) during the colonial era.

Appeals from the Supreme Court went to the West African Court of Appeals (WACA) established in 1866. Ghana withdrew from WACA following independence in 1957. After the military coup d'état of February 24, 1966, the National Liberation Council (NLC), by the Courts Decree, 1966 (NLCD.84) abolished the Supreme Court and vested judicial power in two sets of courts: the Superior Court of Judicature and the inferior Courts. This was reversed by Article 102(4) of the 1969 constitution establishing the second republic..

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.

Current Status

The 1992 constitution stipulates that the Supreme court is made up of the Chief Justice and not less than nine other Justices of the Supreme Court. The Chief Justice is appointed by the President of Ghana acting in consultation with the Council of State and with the approval of the country's Parliament.

The other Supreme Court Justices are appointed by the President acting on the advice of the Judicial Council and in consultation with the Council of State. This must also be with the approval of Parliament. The 1992 Constitution abolished all the public tribunals established under the PNDC and created the Regional Tribunal whose chairman was equated with the High Court judge.

2.3 The Judicial System, Ghana.

The legal framework of courts in Ghana can be found in the 1992 Constitution and the Courts Act, 1993 (Act 459) as follows:

2.3.1 The Supreme Court

The Supreme Court being the highest court in Ghana has both original and appellate jurisdictions. This court is the final appellate body of the whole court system of the country, in accordance with Article 131 of the Constitution and has supervisory jurisdiction over all the courts.

It has the original and exclusive jurisdiction in all matters relating to the enforcement or interpretation of the Constitution and all matters arising as to whether an enactment was made

in excess of the powers conferred on Parliament or any other authority or person of the exclusion of the Court of Appeal, to determine matters relating to the conviction of a person for high treason. Appeals from the National House of Chiefs are also heard by the Supreme Court

The Court consists of the Chief justice and not less the nine (9) others Justices of the Supreme Court. For its work, the court is duly constituted by five (5) Justices.

2.3.2 The Appeal Court

The Court of Appeal has no original jurisdiction. It serves as the appellate Court for all the High Courts, Regional Tribunals and the Circuit Courts unless otherwise provided by law.

According to Article 136 of the Constitution, the Court of Appeal shall consist of the Chief Justice, not less than ten (10) other Justices of the Court of Appeal and such other Justices of the Superior Court as the Chief Justice may request to sit in the Court of Appeal. Any three of these Justices duly constitute the court.

2.3.3 The High Court

The High Court is duly constituted by a single Judge unless he/she is required to sit with a jury or assessors. Unless otherwise specified by the Constitution, it has original jurisdiction in all matters, civil and criminal. It has appellate jurisdiction as may be conferred on it by the Constitution of any other law.

Currently, it serves as the appellate body for appeals from criminal judgement of the Circuit Court and all appeals from the District, the Juvenile Court and the Family tribunal.

It has supervisory jurisdiction over all Lower courts in the Country. The High Court also has jurisdiction to enforce the Fundamental Rights and Freedoms guaranteed under the Constitution.

2.3.4 The Regional Tribunal

These are Tribunals with specialized criminal jurisdiction. These have jurisdictions to try offenses against the State and the Public interest as prescribed may by law.

They have the status of the High Court and shall be established in each region as the Chief Justice may determine. A panel consisting of a Chairman and not less than two (2) other Panel members duly constitutes a Regional Tribunal.

2.3.5 The Circuit Court

The Circuit Court has jurisdiction for contract or tort actions or of all liquidated claims not exceeding Ten thousand Ghana Cedis (Gh10,000), jurisdiction in all landlord tenant cases, ownership, possession, occupation and title to land cases.

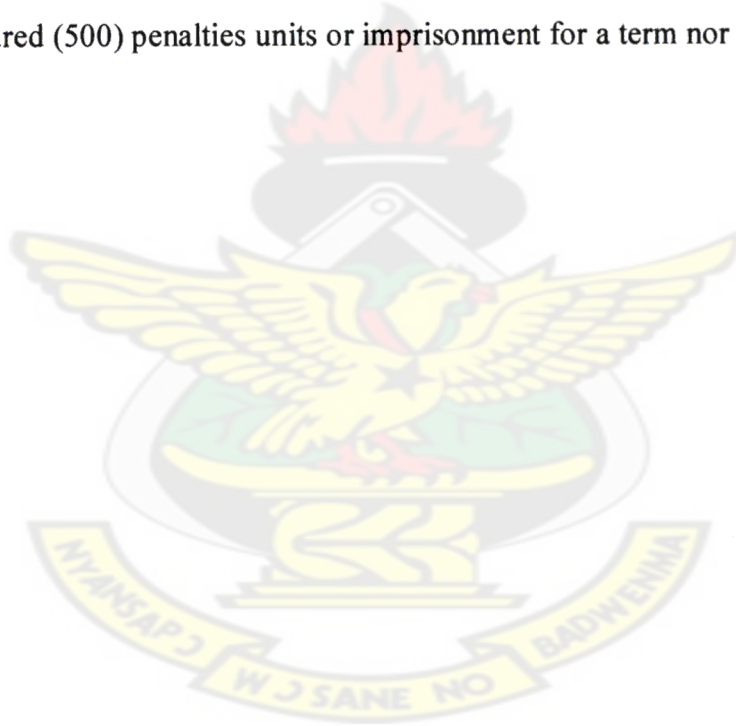
The Circuit Court also has jurisdiction in application for Probate and Letters of Administration in when the value of property does not exceed Ten thousand Ghana Cedis (Gh10, 000). It also has jurisdiction in matters relating to custody of children.

2.3.6 The District Court

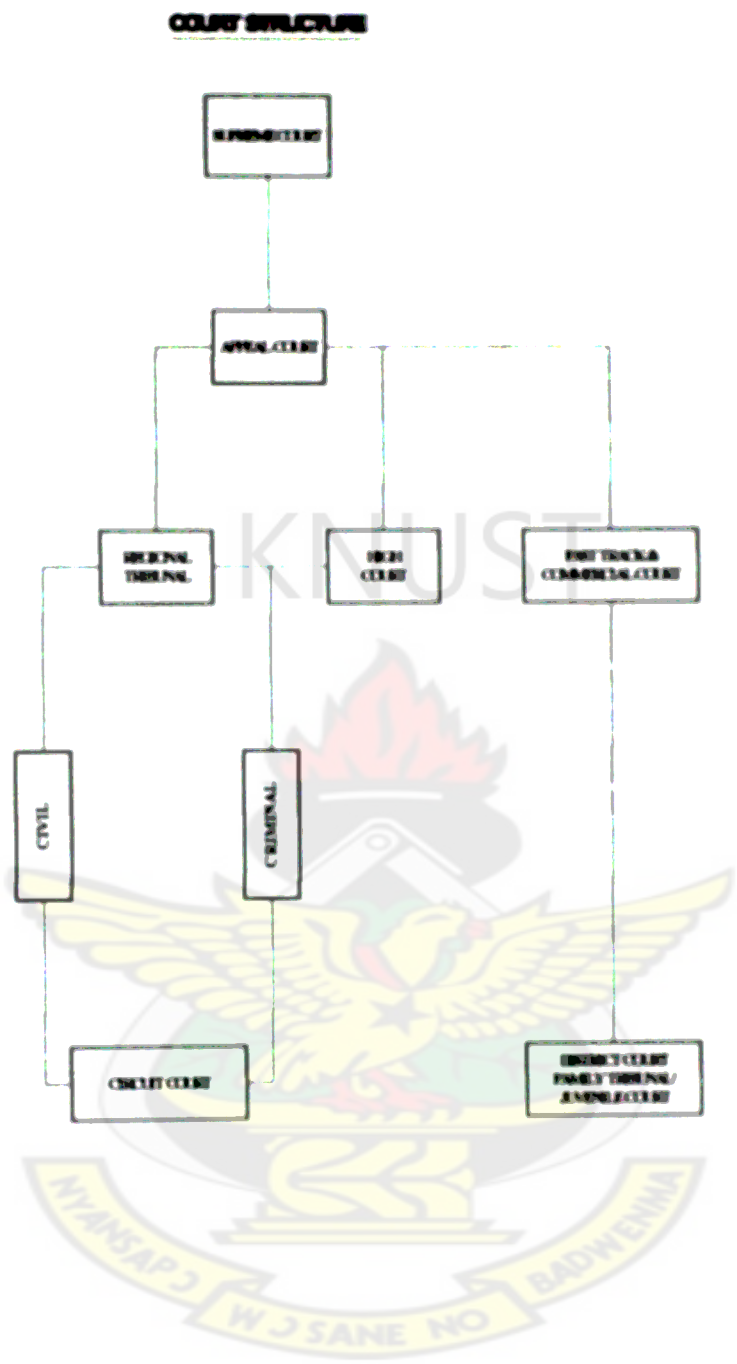
The District Courts make up the largest number of Courts in the country and statistically handles the largest number of cases.

Jurisdiction of this court includes all personal actions under contract or tort of the recovery of any liquidated sum where the amount claimed does not exceed five thousand Ghana cedis (Gh5,000), civil matters relating to landlords and tenants, action relating ownership, possession or occupation of the land where the value of the land does not exceed five thousand Ghana cedis.(Gh5,000).

In criminal matters, they have jurisdiction to try summarily offences punishable by a fine not exceeding five hundred (500) penalties units or imprisonment for a term nor exceeding two (2) years or both.



2.4 The Court Structure, Ghana



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2.5 The Distribution of Courts, Ghana

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-TAKORADI 1 - TARKWA 1 - SEFWI WIAWSO	4	17
CENTRAL REGION	3 - CAPE COAST 1 - AGONA SWEDRU	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



2.6.0 Guidelines for the design of the Courthouse

Planning and designing a Courthouse is a very special process. First, it is special because it is so infrequent. Only occasionally does a community face the necessity or undertake the challenge of providing a Court facility.

The Courthouse is among the most important and symbolic of public buildings and has great community significance. It represents the government of the people and the ideals of system of justice: the rule of law, equal justice and the peaceful resolution of disputes. It is here that important records are kept and made available for public use. It is here that judges and responsible citizens consider together the difficult questions of guilt, innocence, responsibility and equity.

The designer's must create a building that will be practical and functional, meeting the needs of the Courts and agencies that will be in it. It must create an appropriate image: an image that will reflect the honour of the Court and engender respect for its rulings. It must also be economical, making wise use of limited resources, and not be seen as wasteful or extravagant.

The under listed guidelines in this section are intended to support this special process and to further the interest of the development of high quality courthouse facilities that are accessible, functional, flexible, secure, economical and dignified.

2.6.1 Courthouse Sitting

Courthouse sitting is an issue of great public importance and should not be made without careful consideration of all relevant issues including the following:

- Ease of public access
- Availability of public transportation and parking
- Proximity to other government buildings and programs
- Relationship to other services such as restaurants, office supplies, libraries, copy centres' and attorney offices
- Relationship to civic centre
- Impact on surrounding neighbourhoods
- Prominence of site
- Availability and cost of site
- Expansion potential
- Site amenities
- Physical constraints of the site
- Site use restrictions

In sitting Court buildings decisions are made on the basis of a balance of interests rather than on single-issue considerations such as prisoner transport, parking or land cost.

Priority consideration is given to civic centre sites and where possible, local governments and citizens are included in the site selection process.

2.6.2 Courthouse Occupants

If possible, Courthouses include all levels of trial courts including District, Juvenile and Justice Courts. The collocation of Courts allow economies of scale and enable the shared use of courtrooms, judges, and court administrative personnel, clerk of court staff and security personnel.

Courthouses should include all organizational and functional units falling under the administration of the Courts including Judicial Officers and staff, Court Administration, Clerk of Courts, and Court attached mediation and Juvenile Probation.

Courthouses also provide flexible space for the accommodation of Court Program and court annexed initiatives such as those related to Domestic Violence and Alternative Dispute Resolution (ADR). These spaces are designed to allow for multi-use meeting facilities with telephone, teleconferencing, audio recording and visual and sound display equipment.

Other Court related organizations may be considered for location within the Courthouse provided that they have adequate funding resources and their presence in no way infringes on the integrity of the judicial process or the security of the Court facility. The Court retains the right to review and approve all candidates for courthouse occupancy. Occupancies that cannot be accommodated within the Court's security envelope will not be approved.

2.6.3 Courthouse Security

Security is essential to the integrity of the judicial process and to the safety of courthouse occupants and users.

The public entry of each court building is provided for the installation and operation of weapons screening equipment in a way that is as unobtrusive as possible and in a manner that promotes efficiency.

Except under rare circumstances all courthouses should be planned with a single point of public entry to the facility. Under normal circumstances, public parking should not be located under court buildings for security reasons.

Courthouses should provide separate circulation areas as follows:

- Judges and other court personnel should be able to access courtrooms, chambers, jury deliberation rooms and staff offices without interacting with the public.
- While members of the Bar and the public should have access to judges, and court staff, such access should be controlled through checkpoints where visitors can be identified and screened.
- The same principle of separate circulation applies to prisoner movement. Defendants in custody should be transported from their place of confinement to their court destination without passing through any public areas. Shared or intersecting staff/prisoner corridors are advisable only with proper security staffing, training and procedures. Once in the courthouse, prisoners should be kept in secure areas, such as group or individual holding cells, until their appearance in the courtroom is required. Such holding areas must comply with all life-safety requirements, have secure space for attorney/client meetings, and should be sound proofed against prisoner disruptions.
- The principle of separate circulation areas can be best expressed in terms of "zones" which are as follows:

Public Zone - This includes jury assembly areas, attorney/client conference rooms, public corridors, food service areas, as well as spectator seating in courtrooms and waiting areas.

Private Zone - This includes judge's chambers, access to judicial parking areas and the courtroom, jury deliberation rooms, staff offices, copier/work rooms, conference rooms and libraries.

Prisoner Zone - The prisoner zone requires a holding area adjacent to the courtroom, attorney/detainee conference areas, prisoner circulation (including a secure sally port) to and from the jail, and security officer support areas.

Interface Zone - The principle interface zones are courtrooms. These zones also include those spaces where attorneys and the public meet (e.g. public corridor conference rooms), and space where court staff and the public interact. In general, these zones require access from two different kinds of circulation patterns.

Courtroom Security will incorporate the following features:

- A security checkpoint at the entrance. If not provided at the building entrance, courtrooms must have a single public entry from a public corridor. This entry vestibule should accommodate a security checkpoint for spectator identification and metal detection.
- Entrance for the judge should be adjacent to the bench. If jurors have a separate entrance, this should be adjacent to the jury box. Prisoner entrances from holding cells should be directly into the courtroom well near the attorney tables or witness box.
- Additional access to the courtroom should be designed to inhibit unauthorized entry or exit. These include maintenance access, windows, and skylights.

2.6.4 The Courtroom

- The design of a courtroom expresses the serious nature and function of the court. The courtroom should be dignified and business-like, although attractive and in conformance with the building in which it is housed
- The physical dimensions of the courtroom should be sufficient to promote the appropriate formality of the proceedings
- All courtrooms should be adequately lighted, particularly in the well. Lighting should be designed so that the courtroom cannot be completely darkened from access to light switches at public entrances to the courtroom. The judge and court clerk should have access to light switches at their respective entrances to the courtroom
- Air handling equipment must be silent in the courtrooms. All courtrooms should have individual climate controls. This is particularly important with regard to communications and security equipment. No mechanical systems (air handlers or other machinery) will be installed immediately above courtrooms, jury rooms or Judge's chambers, where deliberations occur.
- All courtrooms should be designed to accommodate installation of equipment for audio and/or audio/video recording of court proceedings. At least one courtroom, usually the courtroom(s) to be used as the arraignment courtroom(s), should be designed to accommodate video arraignment equipment.
- Courtrooms in multi-story buildings should be located on upper floors, which can provide quieter and more secure space. Courts, which generate a high volume of fines or probation traffic, should have necessary support offices nearby

2.6.5 Judges Bench

- The judge's bench is the focal point of the courtroom. It is designed and constructed to impart an appropriate sense of authority and dignity to the judicial office. The bench must also facilitate the judge's control of court proceedings and the interaction of the judge with courtroom participants. In that regard the judge should have an unobstructed view of the witness, jury and Counsel. The bench should be situated either in a corner orientation or entered at one end of the courtroom as. The bench is also designed to inhibit direct public access to the judge.
- The height of the bench should be at least three risers, (450mm to 500mm is standard for 167m² and 148m² courtrooms) or at a level so the judge's line of sight is not obstructed.
- Judges must also have sufficient leg room under the bench. The sides of the judge's bench may be symmetrically lowered to facilitate the transfer of documents and verbal communication with the court reporter and clerk. It should also be configured to permit bench conferences out of the hearing of the jury.
- The front of the bench, clerk's station and witness stand should be constructed of bullet resistant materials. Each bench should have a concealed duress alarm for foot or knee activation. The alarm should alert the courthouse security station, or if none exists, an employee station (e.g. in the Clerk of Court's office) that is staffed without interruption by personnel trained in emergency notification procedures.

2.6.6 Judges Chamber

- Judge's chambers must be conducive to efficient work practices. This includes the reception of visitors, legal research, in-chamber hearings and conferences, and

private telephone conversations. This office should be spacious to accommodate a small conference area, shelving for legal texts, filing, an appropriate desk area, a robbing closet, and toilet facilities.

- The location of the chambers should be adjacent to or near the courtroom. All judges' chambers should have extra sound insulation. If the chambers enter directly from the courtroom, the door and adjoining wall should be sound insulated. If on a corridor, the area should not be directly accessible by the public, but be convenient to clerks, secretaries, law clerks and court attaches'.
- If possible, the chambers should have some natural lighting, but not so that the chambers can be directly viewed from the building's exterior. A duress button placed inconspicuously beneath the desk is also recommended. If the chambers are at ground level, one-way observation glass should be used for outside windows, and bullet resistant and shatter resistant glass should also be considered.

2.6.8 Public Waiting Area

It is important that the traffic patterns of the general public and persons having business before the court not be overlooked. When court is in session, persons will typically congregate in hallways by courtroom entrances while waiting for their cases to be called. These include defendants and their families (often with small children), the private bar, law enforcement officers, witnesses, the press and members of the general public. Most courts provide no waiting space for these persons, forcing them to mill about in congested hallways or compete for limited seating

The problems of traffic congestion in narrow corridors, the noise this generates, and the debris which accumulates, can be remedied by providing a waiting area off the hallways.

Waiting areas provide seating to draw this traffic out of the hallway and into a semi-enclosed area. This arrangement substantially reduces noise by removing it from the hard, reflective surfaces of a corridor and placing persons in a space with acoustically deadened walls, ceilings and furniture

2.6.9 Jury Deliberations Room

- Jury deliberation rooms should be near the courtroom in a private or semi-private area. The rooms should be soundproofed to prevent people in adjacent areas from hearing the deliberations. This is particularly true when the room's walls are adjacent to a courtroom or a public area. Long and sometimes emotional deliberations can increase feeling of claustrophobia and general unease, interfering with the decision-making process. If windows are provided they should not allow jurors to view public events outdoors. Because exhibits may be placed on the table, its finish should be scratch resistant and durable.
- A vestibule area with two restroom facilities should be provided, designed for men and women (for reasons of privacy, the jury restroom should not open directly into the jury room)
- A telephone must not be provided, but a telephone jack and electrical outlets should be installed. This permits flexible use of the room during the frequent periods that juries are not using it.

2.6.10 Spectator Seating

- It is recommended that spectator seating be balanced with the size of the well to maintain proper courtroom symmetry. It is suggested that each courtroom have 60 to

70 seats for press and spectators. Padded benches are most desirable since they do not show wear quickly, and accommodate more people per metre.

- As a general rule, trials must be open and public. Persons, who wish to view trials and hearings, whether they are press or ordinary citizens, have a right to both see and hear the proceedings. Seating for spectators, in particular notorious criminal trials usually overwhelms even the largest courtrooms. Generally, the size of juror impanelments should determine the minimum number of spectator seats in a standard courtroom. All prospective jurors should be able to be seated in the spectator area, without overflow into the jury box or other area.
- Seating may either be bench type or theatre type. Moveable or stacking chairs rarely contribute to a sense of decorum or order in the courtroom. Usually bench seating with comfortable padding is preferred over theatre seats because benches can accommodate "more people per metre". They are also comparatively easy to maintain and show wear less quickly.
- The seating building code regulations and allow for disabled movement to the well. The front row of seats should be distanced somewhat from the rail for sound and physical separation.

2.6.11 Prisoner Detention Facilities

- Each facility should provide a secure vehicular sally port for prisoner delivery with immediate and secure access to a centralized detention holding/staging area to accommodate prisoners in transit to and from courtrooms. This area will connect by a secure route to small clusters of holding cells located between pairs of courtrooms from which there will be direct entrance into the courtrooms.

- Each holding cell should have a combined toilet-wash basin and a shelf secured table and chair for writing and study. All fixtures shall be tamper-proof. All cells shall contain floor drains.
- The ceilings and walls should have smooth surfaces that can be cleaned and disinfected easily.

2.6.12 Shared Spaces

It is the intent of the Judicial System to plan and design facilities that are efficient and cost sensitive. For this reason, every project should seek opportunities to develop as much shared or common use space as possible in order to minimize unnecessary redundancies.

The following types of areas should be considered for common use:

- training rooms, conference rooms, staff toilets, vending, food services, break rooms, media rooms and computer server rooms. Any smoking accommodations should be remotely located from the building in accordance with state law.
- Facility programs should reflect this interest and specifically identify where such common use has been planned.
- In each courthouse such spaces as may be needed should be set aside for public access, offices, conference rooms and public accommodation.

2.7.0 Key Elements in Modern Courthouse Design

To enhance efficiency in court houses the outlined points below have been introduced to improve on service delivery in modern court facilities.

2.7.1 Document Reception Desk

Lawyers and members of the public deliver legal documents to the reception desk at the entrance to the courthouse. These documents are officially received, and delivered by messenger to the appropriate court. This system minimizes the time required to deliver papers to the court and reduces people traffic throughout the courthouse.

2.7.2 Automated Case Tracking

Modern courthouses have an integrated, automated case tracking systems. After case documents are received at the Document Reception Desk, they are passed to the Document Entry Desk.

Document Entry Clerks then enter the case information into an automated case tracking system by case number and document type. Case histories are immediately updated to include these new documents. Once a document is entered, it is delivered to the appropriate court. Clerks in the judicial area enter any orders or sentences issued by the judge so that case histories are kept current for both documents received from the parties and decisions and actions taken by the judge. Some courts have also adopted systems that enable lawyers to connect with the case tracking system electronically from their offices to find out the status of cases.

2.7.3 Public Information Booth

A key element to modern courthouse design is the location of an information booth at the public entrance to the court where trained personnel are available to provide information to the users of the court. This service greatly minimizes the number of non-case specific inquiries received by court professional staff and maximizes the professional staff's time to address court proceedings.

2.7.4 Public Computers to Check Case Status

Once an automated case tracking system is installed, members of the public can check the status of a case on computers located in the public entrance area of the courthouse. These computers mitigate requests for case files at the public counters, improving efficiency in the courthouse. Many courts also have developed systems that allow attorneys and the public to access case information via the Internet.

2.7.5 Attorney Mail Boxes

The first floor public area of many courthouses has mailboxes for registered attorneys so official notices can be delivered to them within the courthouse. There are other systems of notification that have been adopted to minimize the problems of non-appearance for hearings such as allowing for notification via fax, and using e-mail for the same purpose. The codes and regulations have to be modified to allow for these new processes to be legally acceptable. The results often have been a dramatic reduction in the number of hearings that are postponed for non-appearance

2.7.6 Modernised Service Desk

Each type of court, e.g., civil, criminal, family, labour, has an individual service counter to address the needs of the public. Public counter clerical staff often employ modern computerized system and case tracking systems to provide the public with up to date case information. At these counters, the public can inquire about their case status, receive support payments in the case of family law matters, and make other miscellaneous inquiries. Each court should have a numbered waiting system and a seating area so that the public can have their matters attended to in a relaxed, private, and professional manner.

2.7.7 Modernised Judicial Chambers

The judges' chambers should be on the upper floors of the courthouse, separated from the clerical and record keeping areas. The chambers should be grouped so that judges considering the same material are in a common area. The public cannot get to the judicial chambers floor without a prior appointment, removing the judge from unscheduled and unnecessary contact with the public.

2.7.8 Trial Courtrooms

Modern trial courtrooms are located on a separate floor and have three different entrances: for judges, the general public, and prisoners. Judges access the courtrooms via a secure judicial circulation area; the public enters the courtrooms via a public corridor; and prisoners enter through a separate secure corridor from the holding cells, which are in the basement of the building. The courtrooms have elevated seating, allowing the public a better view of the proceedings.



CHAPTER THREE

3.0 CASE STUDIES

There are several courts that have been developed across the globe. Few of these have been chosen and studied as the basis for this proposal. The purpose of this case study is to gain insight about the court procedures and I hope to learn about the various concepts involved in court planning

3.1 Supreme Court Building, Ghana

3.1.1 Introduction

The foundation stone of the Supreme Court was laid on 16th day of August, 1929 by late Sir. Philip Crampton Shyly Kt. LLB. Chief Justice of the then Gold Coast (now Ghana). The Governor at that time was Sir Ransford Slater.

3.1.2 The Design

The Supreme Court building was constructed on solid concrete from its foundations to the third floor. The sand and stone used in the construction were thoroughly washed before they were used. Some of the walls are 12 inches to 18 inches thick. The roof was made of iron, wood and tiles. The decorative pillars were all imported.

The building stands on concrete pillars, and there is a basement which can be entered through a small door on its western side. The pillars have been sealed from the outside with concrete material hence one cannot notice the existence of a basement.

Below are the floor plans that show the modifications to the spaces and their current use

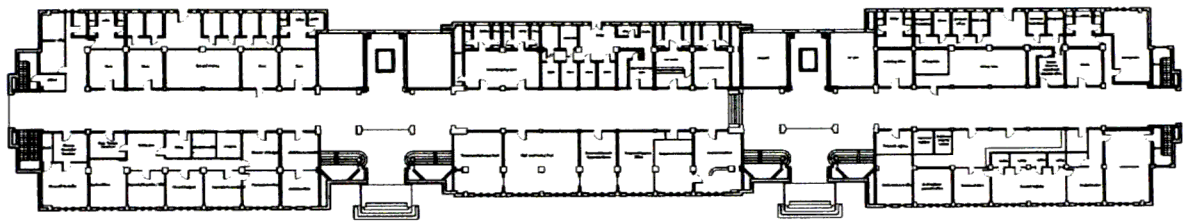


Fig 1. Ground Floor Plan Supreme Court Building, Ghana.

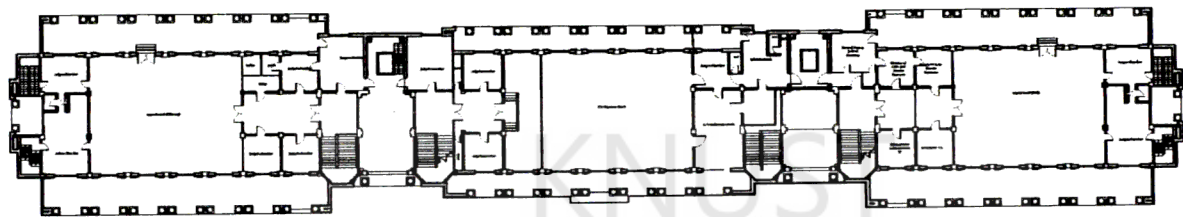


Fig 2. First Floor Plan, Supreme Court Building, Ghana.

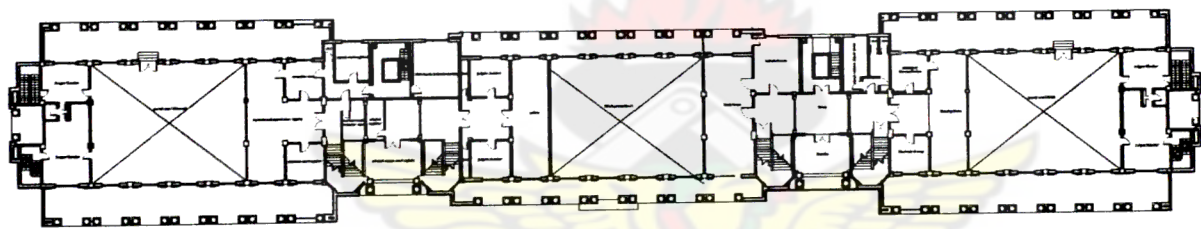


Fig 3. Second Floor Plan, Supreme Court Building, Ghana.



Fig 4. Third Floor Plan, Supreme Court Building, Ghana.



Fig 5 Supreme Court Building, Ghana

3.1.3 Analysis

- 1.0 The ground floor shows a three semi-detached blocks interconnected by stairs and other public utilities. It is double zone layout of room .All the rooms are accessible from a central corridors.
- 2.0 The second floor houses three superimposed on the three semi-detached blocks with ancillary room on the gable of the courtrooms. The courtrooms have a vass and located in he northern and southern ends forming some sort of isles. For tropical country the corridors in the periphery acts as sun-shade devices to facilitate a micro climate ambient conditions of the interior. The three courtrooms are accessible from public staircase located in the ancillary space between courtrooms.
- 3.0 On the second floor however, all the courtrooms assume a greater volume given the impression of an auditorium or void. All the corridors are on the periphery locate in the northern and southern facades. The ancillary rooms contains the Supreme Court library

and chambers of the west African Court of Appeal. There are five divisional courts located in the eastern block, the Chief Justice court is located in the middle of the block and the Chief Registrar.

The Supreme Court building has north-south orientation. The wind direction is south, southwest and this facilitates ventilation in and outside the Supreme Court building.

In the original design, the third floor was occupied by the Western African Court of Appeal, (established in 1928), the Supreme Court Library and Chambers for the President of WACA and two other chambers. There were five Divisional Courts two in the Eastern block, the Chief Justice Court which was Court 1 was in the middle, the Chief Registrar's (Judicial Secretary) office was next to the Chief Justice's chambers and other offices of the C.R. were on both sides of the entrance to Court II. The Western block was occupied by the Senior Magistrate's Court and two other Magistrates Court. There was also a branch of the Department of Social Welfare which helps the juvenile court. The ground floor was used as Registries of the Divisional Court, Land Court, and the Magistrate Courts.

There was also a record office where all the record books were kept and also an Exhibit room, and a store. There was a Caretaker's bungalow which was cited near then the entrance to Law School. This was demolished and a new one was sited at old Parliament House. This was also demolished to give more security to the old Parliament House. Since then the court caretaker has no residence. He has to make do in the Cells in the Supreme Court buildings.

The Supreme Court Buildings also served as offices for the Attorney-General Department, Land Registry, Audit Department, etc.



Fig 6. Aerial View of Supreme Court Building, Ghana.

3.2 Kumasi Court of Appeal, Ghana

3.2.1 Introduction

Until the establishment of the Kumasi court of Appeal in 2009 all appeal cases in the country were resolved by the Court of Appeal in Accra. Due to the huge number of appeal cases already in Accra and those coming from middle and northern belt of Ghana the Chief Justice found it prudent to establish the court of appeal in Kumasi mandated to resolve cases for the middle belt and the Northern Region of Ghana.

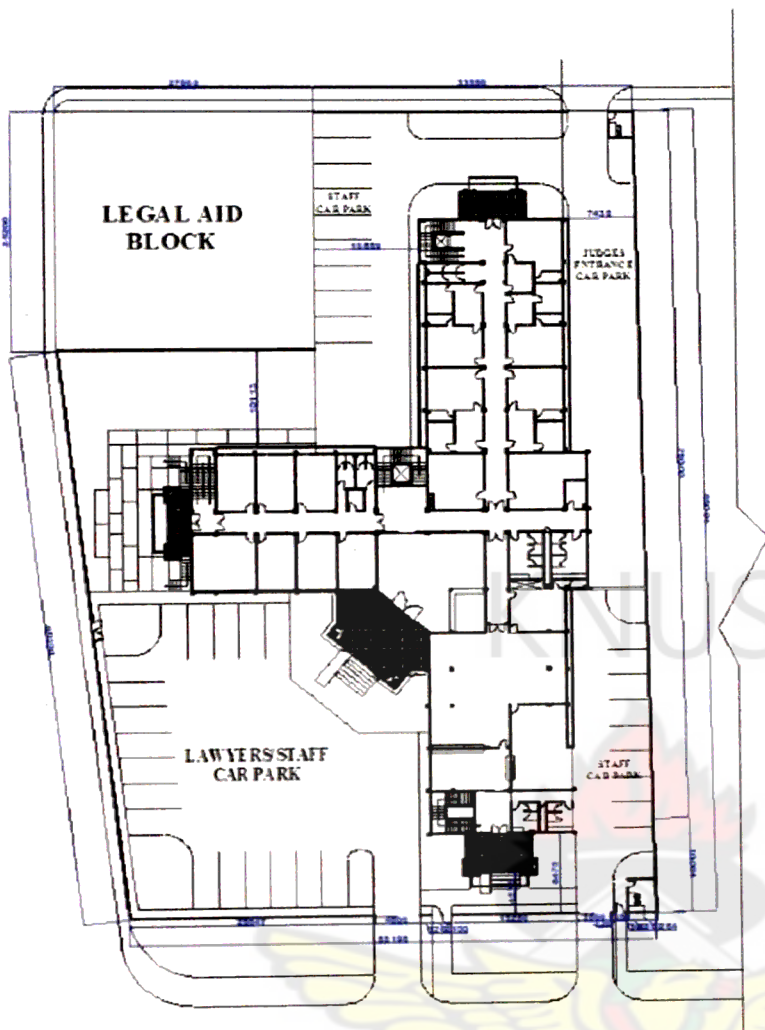
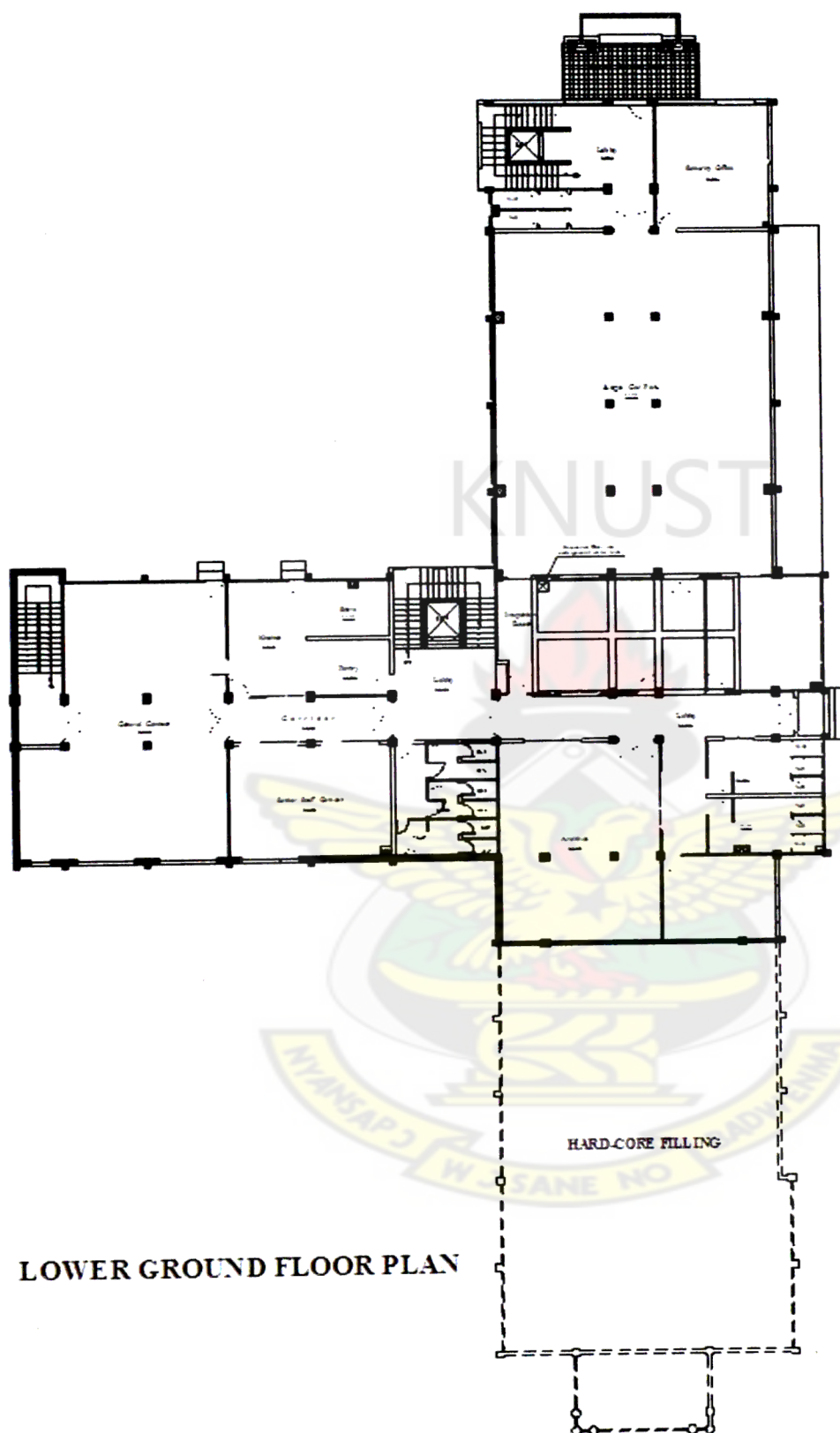


Fig 7. Block Plan, Kumasi Court of Appeal, Ghana.

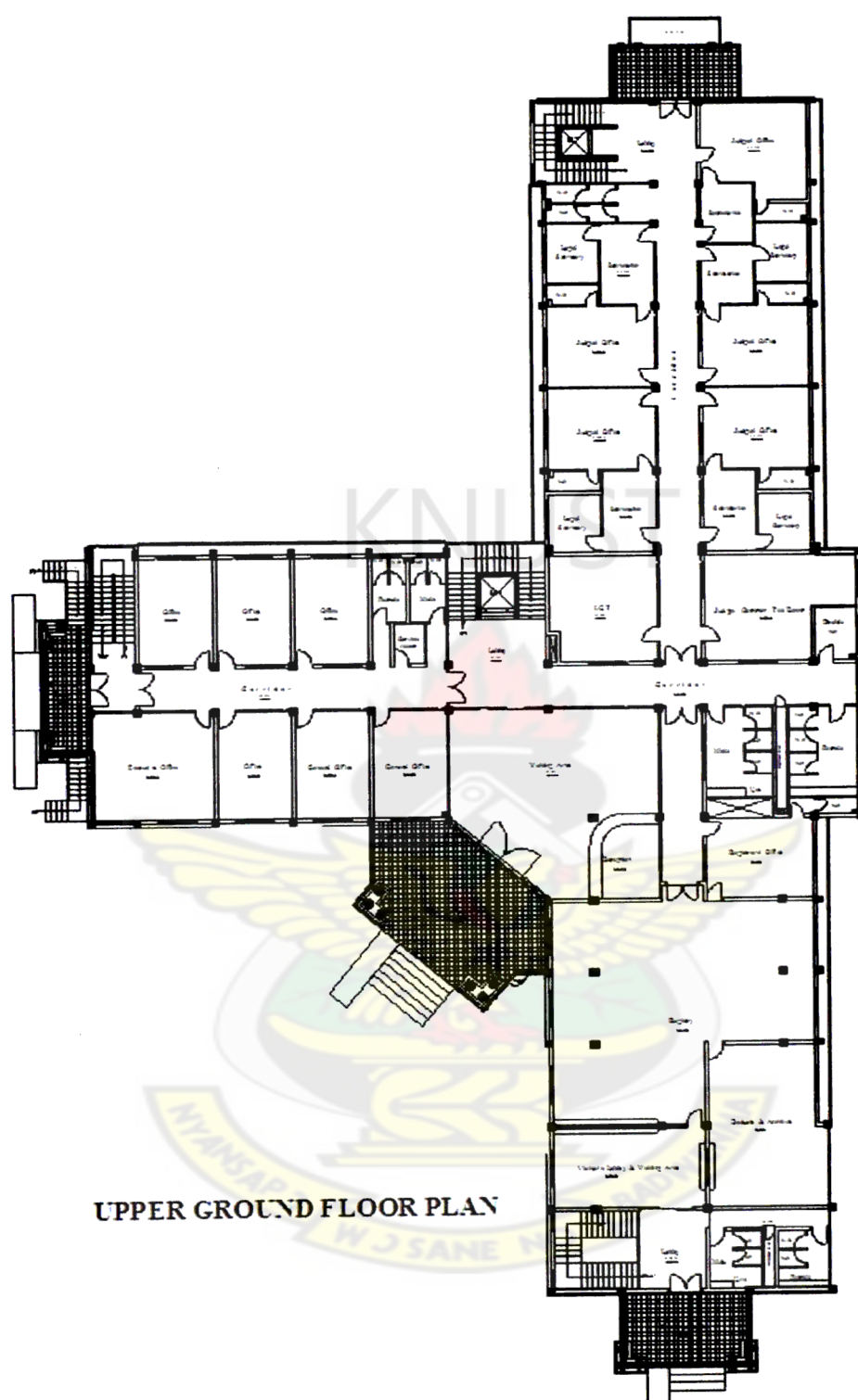
3.2.2 Scope of Scheme

- Judges Chamber
- Appeal Court Rooms
- Executive offices
- General offices
- Registry
- Staff canteen



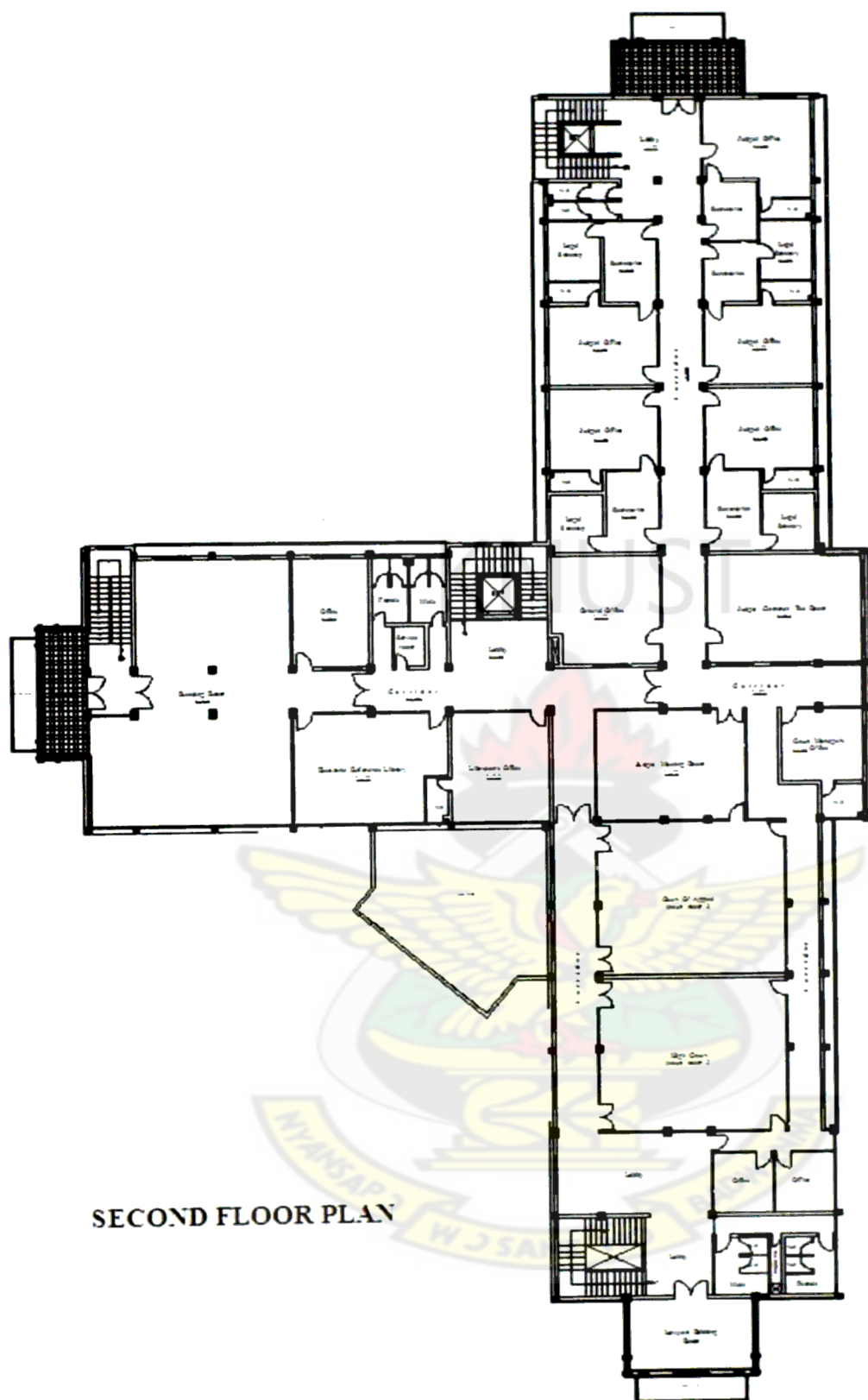
LOWER GROUND FLOOR PLAN

Fig 8. Lower Ground Floor Plan. Kumasi Court of Appeal, Ghana.



UPPER GROUND FLOOR PLAN

Fig 9. Upper Ground Floor Plan. Kumasi Court of Appeal, Ghana.



SECOND FLOOR PLAN

Fig 11. Second Floor Plan. Kumasi Court of Appeal, Ghana.



Fig 12. Kumasi Court of Appeal, Ghana.

Zoning into three parts: Judges zone in red, staff zone in green and public areas in yellow.

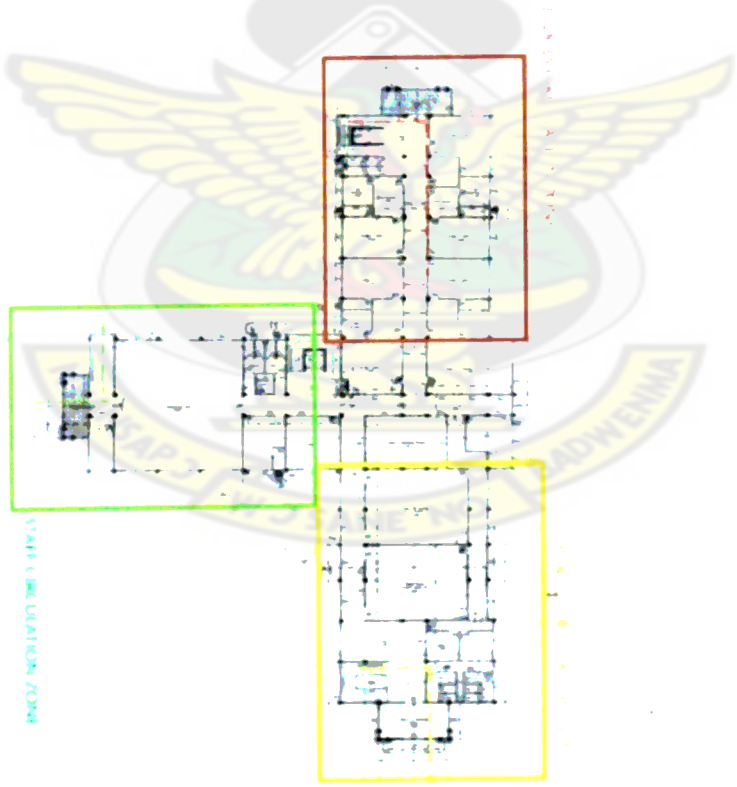


Fig 13. Circulation Plan, Kumasi Court of Appeal

3.1 Manchester Civil Justice Centre, UK.

3.3.1 Introduction

The **Manchester Civil Justice Centre** is a building in Manchester, England. It houses the Manchester County Court and the Manchester District Registry of the High Court, as well as Manchester City Magistrates' Family Courts, the District Probate Registry and the Regional and Area Offices of the Court Service.

It was constructed between 2003 and 2007 and is located in the Spinningfields district to the west of Deansgate. The western side of the 80 m, 17 storey building faces the River Irwell, which marks the border between the cities of Manchester and Salford. It is currently the joint 6th tallest building in the city centre.

It was designed by Australian architects Denton Corker Marshall with engineers Mott MacDonald. The building is notable for the 'fingers' at each end that are cantilevered over the lower levels, on the western side is an 11,000 m² suspended glass wall, the largest in Europe. It is the first major complex of its sort in Britain since George Edmund Street's Royal Courts of Justice in London's Strand, completed in 1882.



Fig 14. Spinningfields District, Manchester, England, UK

3.3.2 Scope of the Scheme

This new £113 million Manchester Civil Justice Centre, dubbed “*the filling cabinet of justice*” because its cantilevered floors resemble pulled out drawers.

The new court has:

- 47 court or hearing rooms
- 76 consultation rooms
- 7 conference rooms
- 6 suites for vulnerable witnesses
- video link facilities
- a purpose built suite for mediation
- Offices for the Children and Family Court Advisory and Support Service and Manchester Advisory and Information Service.

The courts are expressed as long rectilinear forms, articulated at each floor level, and projecting at each end of the building as a varied composition of solid and void. In side elevation, these elements collectively establish a dynamic and distinctive building profile; in end elevation, they form a powerful sculptural interplay of light and shade, depth and complexity. The architectural implication is that the courts are not forbidding or concealed, but open and accessible. The building houses 47 courtrooms, 75 consultation rooms, in addition to office and support space over 15 levels.

Sustainability has been a major consideration from initial concept with natural ventilation to all areas. The use of local and sustainable materials was targeted during construction, helping to achieve a BREEAM (Building Research Establishment Assessment Method) rating of ‘Excellent’.

Architect Denton Corker Marshall's unique design for the Manchester Civil Justice Centre (MCJC) was chosen by the client – HER MAJESTY'S COURT SERVICE – as the international competition-winning design for the Ministry of Justice in the North West of England.

Officially opened by the Queen in March 2008 the Manchester Civil Justice Centre completely fulfils its demanding brief to provide a sustainable building of civic generosity and European significance. The new building is the biggest court complex to be built in the UK since the Royal Courts of Justice in London.

3.4 Antwerp Law Court, Belgium

3.4.1 Introduction

The city of Antwerp, Belgium's second largest city is undergoing massive re-urbanization and this new court complex will be the catalyst for the city's long-term master plan.

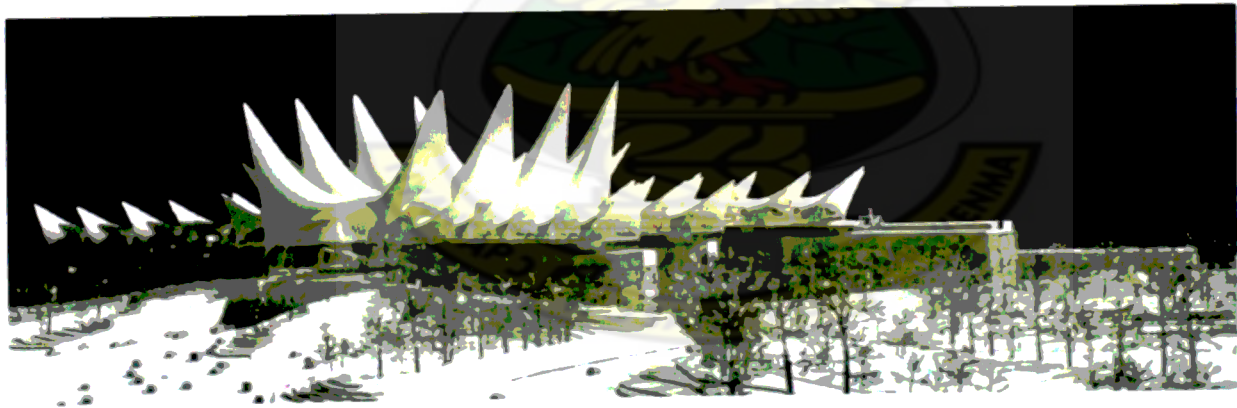


Fig15. Model of Antwerp's New Law Court, Belgium

In 1998, the Belgian legal system was under attack, accused of corruption following the arrest of the paedophile and murderer Marc Dutroux. So the new building offers a clear statement on the part of city and national government that justice, here, is as open as possible.

3.4.2 Scope of the Scheme

A team consisting of Richard Rogers Partnership, Bureau Van Kerckhove and Arup, was selected in 1998 as the finalist of an international open competition to design new law courts for the southern edge of the city of Antwerp

The brief for the new building included housing 7 courts (including civil, criminal, police, family, commercial, juvenile, employment), the provision of 32 hearing rooms of various size, living and dead archive spaces, efficient and flexible office space, public spaces and facilities. The building was to embrace the possibility of future expansion, be sustainable and environmentally efficient, and respond to the demands of the complex security arrangements required by the Justice Department.

As well as the functional and technical requirements, wider objectives of the project included rendering the workings of Justice more 'transparent', giving dignity to the process. In addition, the building was to be the catalyst for the masterplan; to restore 'Bolivarplaats' as an important civic space, to celebrate the prominent site on the axis of 'Amerikalei' at a major entrance into the city, to bring life to the large area of open space surrounding the site, and to repair a damaged part of the urban fabric in this quarter of Antwerp.

3.4.3 Design of the Scheme

It houses eight distinct civil and criminal courts and includes 36 courtrooms plus offices, chambers for judges and lawyers, library and cafeteria, with a great public hall (the space traditionally known as the "Salle des Pas Perdus") linking six radiating wings of accommodation. This space is capped by a striking roof structure, crystalline in form, linking the paraboloid roofs that cover the courtrooms.

Unlike traditional Law Courts, the new scheme creates courts, hearing rooms and public space, all filled with natural light, as well as providing spectacular views across the city. Highly transparent clear-glazed atria, lifts and stairwells provide instant legibility and respond to the initial brief to make the workings of justice more transparent. The design creates 'fingers' of landscaped parkland which extend right into the heart of the building.

When designing the new Law Courts building, Richard Rogers and Partners' (RRP) also focused a great deal of attention on the environmental aspects of this project and on the effective use of energy. Natural light is used to optimum effect, natural ventilation is supplemented by low-velocity ventilation for the hearing rooms and rainwater is recycled. The environmental strategy is based on utilising the thermal mass of the pre-cast concrete frame, the reduction of solar gain by high performance glazing and the use of external glazed louvres.

3.4.4 The Site

The site for the Law Courts is the Bolivarplaats,(plaza) on the southern edge of Antwerp's central area. It houses eight distinct civil and criminal courts and includes 36 courtrooms plus offices, chambers for judges and lawyers, library and cafeteria, with a great public hall (the space traditionally known as the "Salle des Pas Perdus") linking six radiating wings of accommodation. This space is capped by a striking roof structure, crystalline in form, linking the paraboloid roofs that cover the courtrooms.

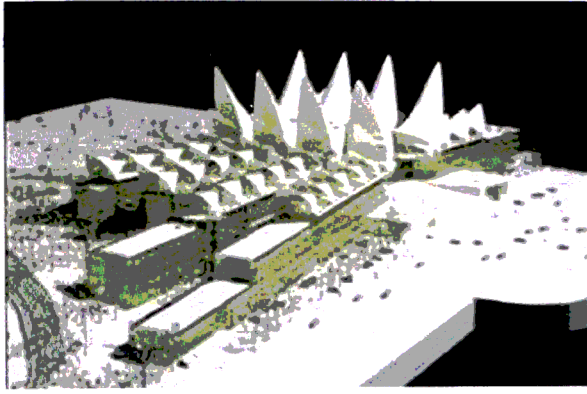


Fig 16a



Fig 16b

Fig16. Aerial View of Antwerp's New Law Court, Belgium

The concept is a gateway response without monumentality, but with a roof form generated from perspective lines and Flemish paintings of barges passing through the countryside. The scheme inverts the traditional arrangement of a law courts by placing daylight to hearing rooms and public space on the top of the building, allowing views across the city. The private spaces below face onto courtyards, which will provide quiet and daylit spaces contributing to a calming environment. It will extend to incorporate connections to parks, bridges and road, allowing clear views from the street and developing the city skyline. This building is a key inspiration to the masterplan for the 'Nieuw Zuid' (New South) which the team have developed with the City of Antwerp.

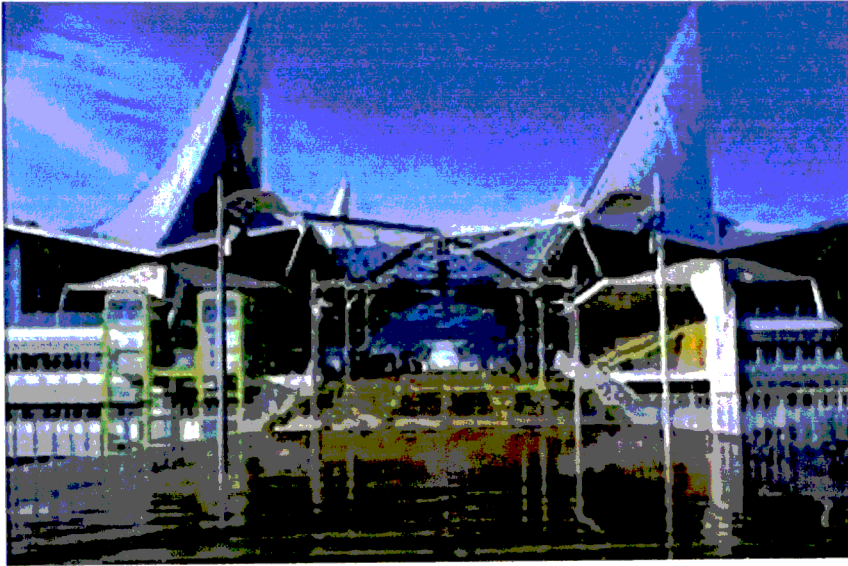


Fig17. View of the entrance from the grand staircase

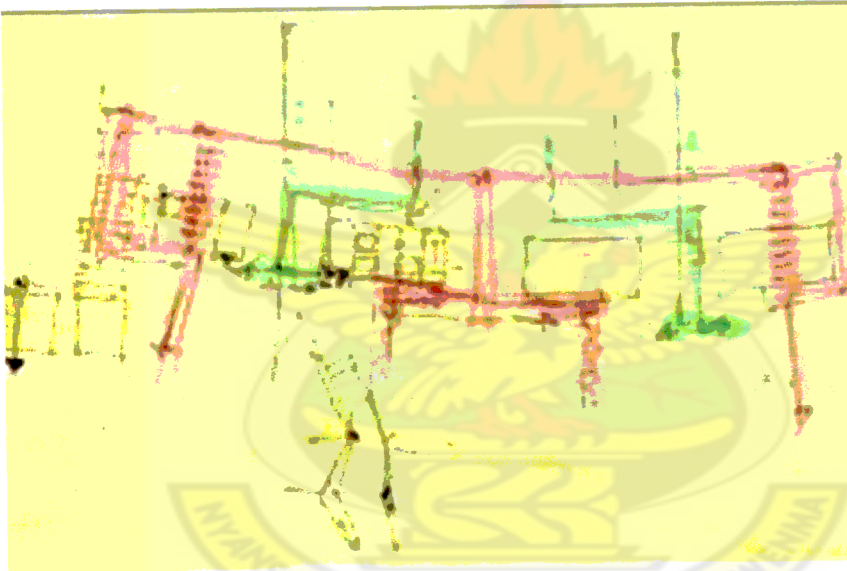


Fig18. Concept Plan, Antwerp's New Law Court, Belgium

The eight law courts within six linear wings are arranged around a central public area known as the Salle des Pas Perdus. The hearing rooms are the formal interface between the judiciary and the public. These spaces are placed above the office fingers and are accessed centrally from the Salle des Pas Perdus so that the hearing rooms and the public space flow over the

top of the building. The principal hearing rooms are grouped around the Salle des Pas Perdus and frame the public space with the tallest of the roof structures.

The smaller hearing rooms are arranged along the fingers under an undulating series of stainless steel roofs oriented to take advantage of north light. Service space for the hearing rooms is sandwiched between the hearing rooms and the offices below responding to a functional need to provide decentralised plant, while architecturally it separates the spaces above and below so that the hearing rooms appear to float over the building. The office wings overlook landscaped courtyards allowing a natural link between the exterior and interior spaces.

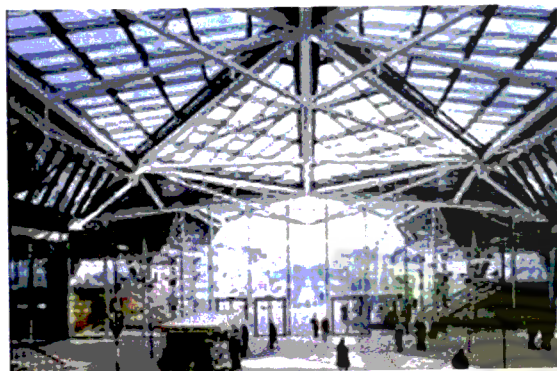


Fig19. Interior view of foyer

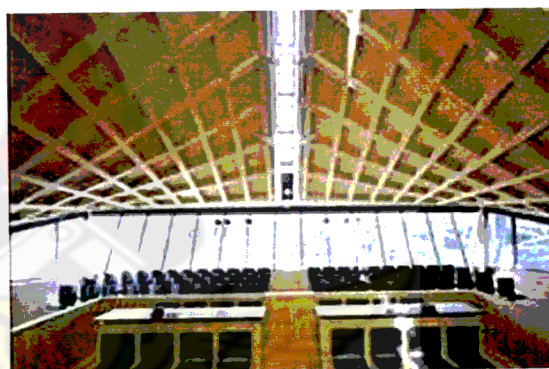


Fig 20. Interior view large courtrooms

Above the pre-cast concrete frame of the superstructure, each courtroom roof is composed of four geometric hyperbolic paraboloid forms. The hyperbolic paraboloid is a double curved surface which on plan consists of a simple rectangular grid with the corners pulled up or down to create a paraboloid curve. In the courtroom roofs, two hyperbolic paraboloids are pulled upwards and cantilevered over the two lower ones creating an aperture in between, which in turn is glazed to maximise natural light in the courtrooms. These rooflights face north, with the overhangs providing solar shading against the high altitude sun. The four roof sections are

designed as individual components and are further separated by strip rooflights between each of the higher and lower roof elements.

The structural solution for the roofs consists of grid beams laminated in full lengths with each layer. This arrangement was progressively built up by screwing together long lengths of timber and connecting them to the perimeter steelwork, allowing the long timber strips to accurately follow the geometry of the hyperbolic paraboloid.

3.4.5 Concept

The concept is a gateway response without monumentality, but with a roof form generated from perspective lines and Flemish paintings of barges passing through the countryside. The scheme inverts the traditional arrangement of a law courts by placing daylight to hearing rooms and public space on the top of the building, allowing views across the city. The private spaces below face onto courtyards, which will provide quiet and daylit spaces contributing to a calming environment. It will extend to incorporate connections to parks, bridges and road, allowing clear views from the street and developing the city skyline. This building is a key inspiration to the masterplan for the 'Nieuw Zuid' (New South) which the team have developed with the City of Antwerp.

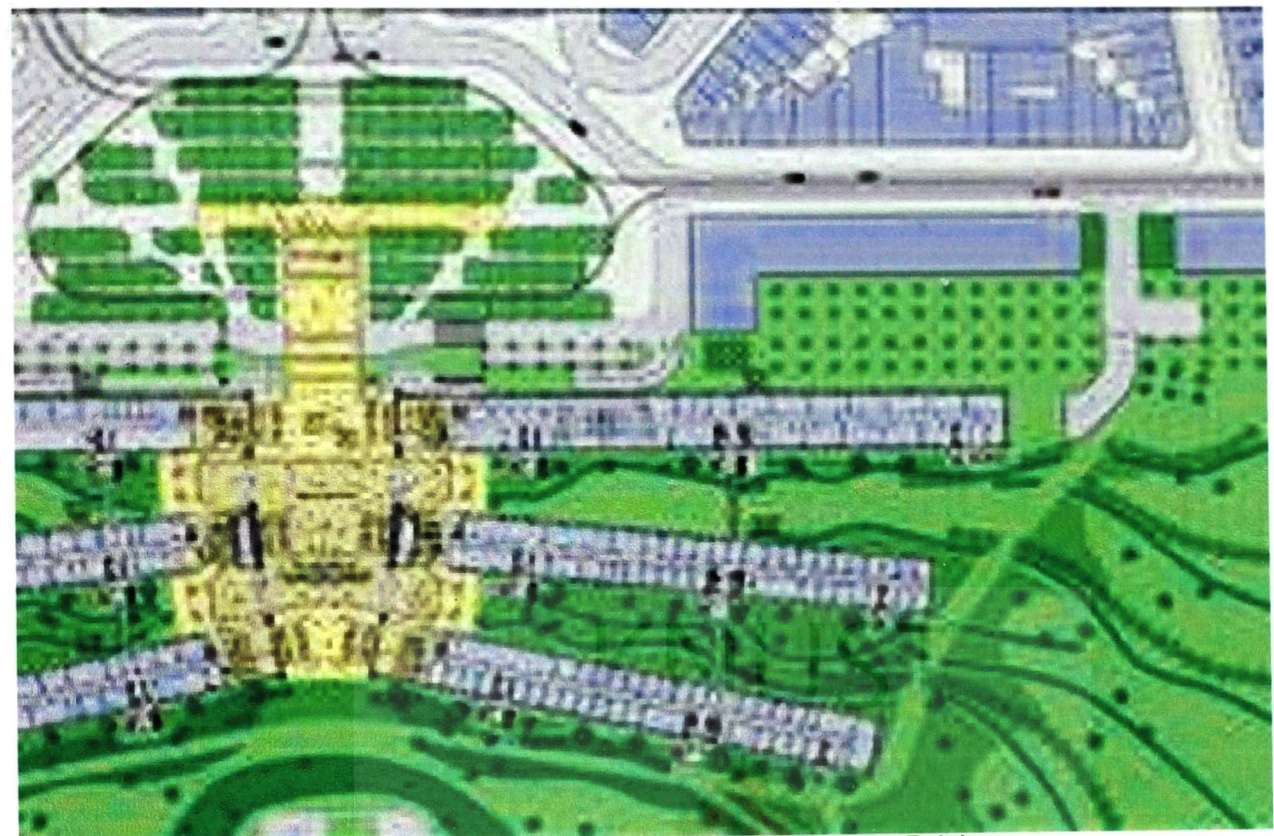


Fig 21. Ground level plan, Antwerp's New Law Court, Belgium





Fig 22. Courtroom level plan, Antwerp's New Law Court, Belgium

The eight law courts within six linear wings are arranged around a central public area known as the Salle des Pas Perdus. The hearing rooms are the formal interface between the judiciary and the public. These spaces are placed above the office fingers and are accessed centrally from the Salle des Pas Perdus so that the hearing rooms and the public space flow over the top of the building. The principal hearing rooms are grouped around the Salle des Pas Perdus and frame the public space with the tallest of the roof structures.

The smaller hearing rooms are arranged along the fingers under an undulating series of stainless steel roofs oriented to take advantage of north light. Service space for the hearing rooms is sandwiched between the hearing rooms and the offices below responding to a functional need to provide decentralised plant, while architecturally it separates the spaces above and below so that the hearing rooms appear to float over the building. The office wings overlook landscaped courtyards allowing a natural link between the exterior and interior

spaces. Public connections consider integrating the building with Konijnenwei Park (to the east) and Bolivarplaats (to the north). These connections will be furthered through the master plan to reintegrate the city by providing east/west feeder roads linking the southern fringes

3.4.6 Construction

Above the pre-cast concrete frame of the superstructure, each courtroom roof is composed of four geometric hyperbolic paraboloid forms. The hyperbolic paraboloid is a double curved surface which on plan consists of a simple rectangular grid with the corners pulled up or down to create a paraboloid curve. In the courtroom roofs, two hyperbolic paraboloids are pulled upwards and cantilevered over the two lower ones creating an aperture in between, which in turn is glazed to maximise natural light in the courtrooms. These roof lights face north, with the overhangs providing solar shading against the high altitude sun. The four roof sections are designed as individual components and are further separated by strip roof lights between each of the higher and lower roof elements.

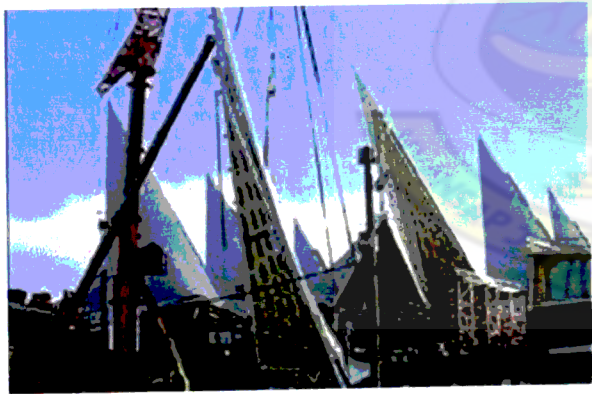


Fig23. Roof sections being lifted into place

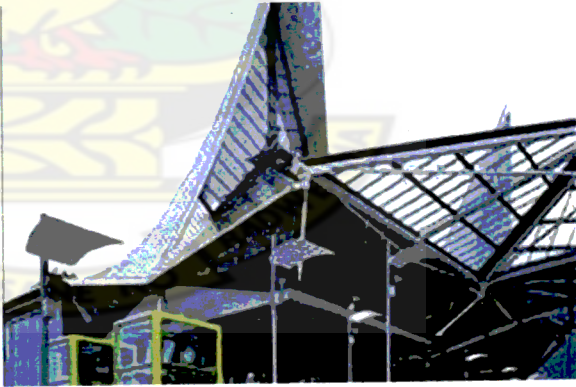
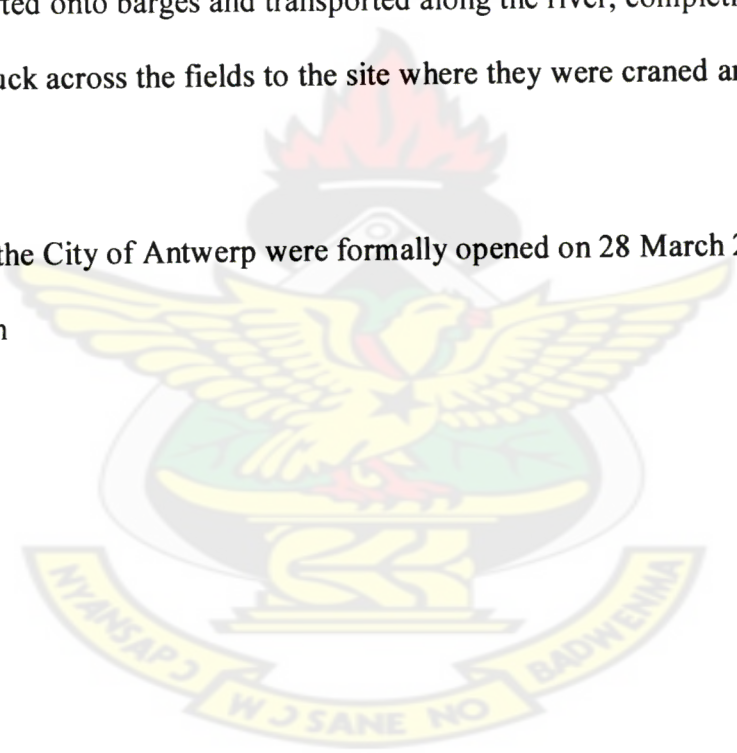


Fig24. Assembled Roof on Site

The structural solution for the roofs consists of grid beams laminated in full lengths with each layer. This arrangement was progressively built up by screwing together long lengths of timber and connecting them to the perimeter steelwork, allowing the long timber strips to accurately follow the geometry of the hyperbolic paraboloid.

The whole of the roof structure was assembled in a large shipyard located several kilometres up river from the site. The shipyard was configured into a production line of separate work areas to deal with welding, painting, timber grid-shell assembly and roofing. Partially prepared materials were delivered to the shipyard then assembled under cover in an efficient and organised manner to ensure a very high quality end product. Once assembled, each of the four roof sections were lifted onto barges and transported along the river, completing the journey on a wide load truck across the fields to the site where they were craned and fixed into position.

The new Law Courts for the City of Antwerp were formally opened on 28 March 2006 by King Albert II of Belgium



CHAPTER FOUR

4.0 THE SITE

4.1 Site Selection Criteria

The sitting of a court building is of great public importance and the choice was made with careful consideration to the guidelines as stipulated in chapter 2 section 2.6.1.

The client is the Judicial Service and the goal is to construct a New Regional Court Complex as justified in section 1.2 of this report.

The choice of site was narrowed down to the current Tamale High Court Site since it already houses the High Court and it has a huge expansion potential.

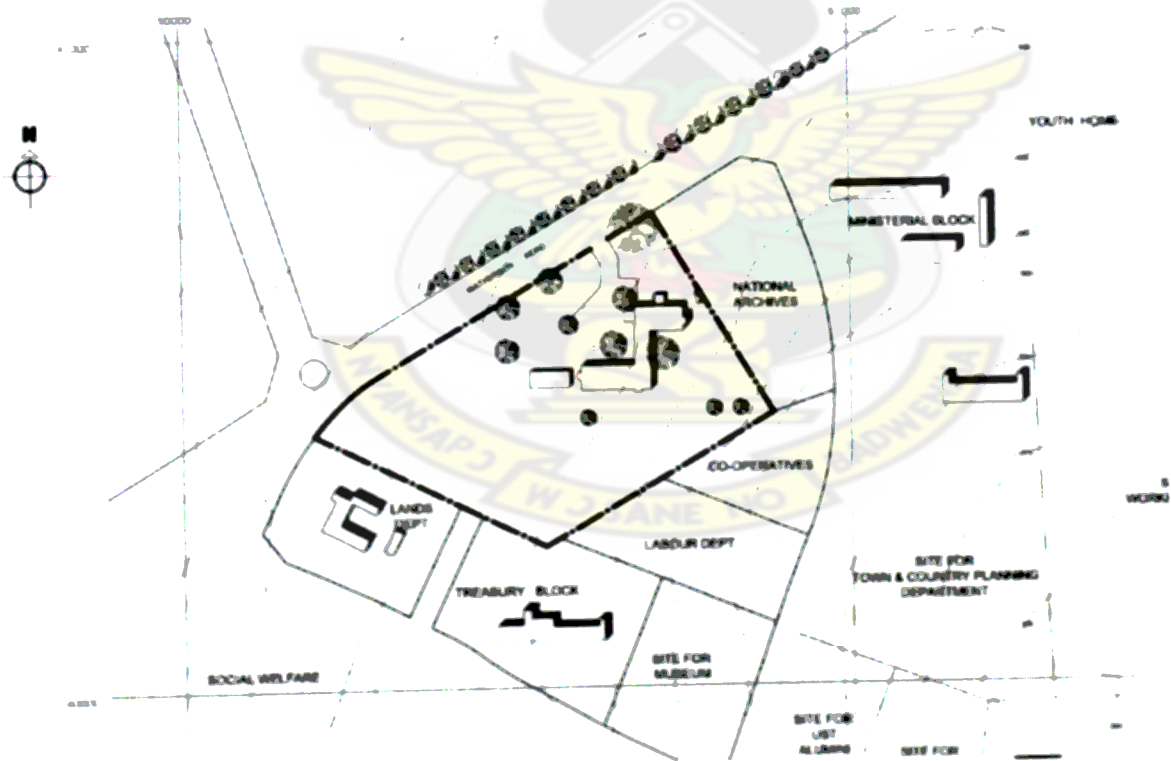


Fig25 Location Map, Tamale High Court

4.1.1 Location

The site is located in the Tamale Metropolitan district of the Northern Region and its currently the site of the Tamale High Court.

The Tamale High Court which is bordered by Government agencies such as the Lands Commission on its west, the watherson road on the north and a number of site’s earmarked for civic buildings such as the site for National Archives on its Eastern boundary, Co-operatives, Labour Department and Treasury Block on the South, and Museum further down south just to mention a few was the site selected for this proposal.



Fig 26 Satellite Photo, Tamale High Court

4.1.2 Size

The size of the plot covers a total area of 18,000 m².The High court structure alone occupies five and a half per cent (5.5%) of the site and the rest is undeveloped with trees and bushes.



Fig27 Tamale High Court



Fig28 Tamale High Court



4.5. As- Built Drawings

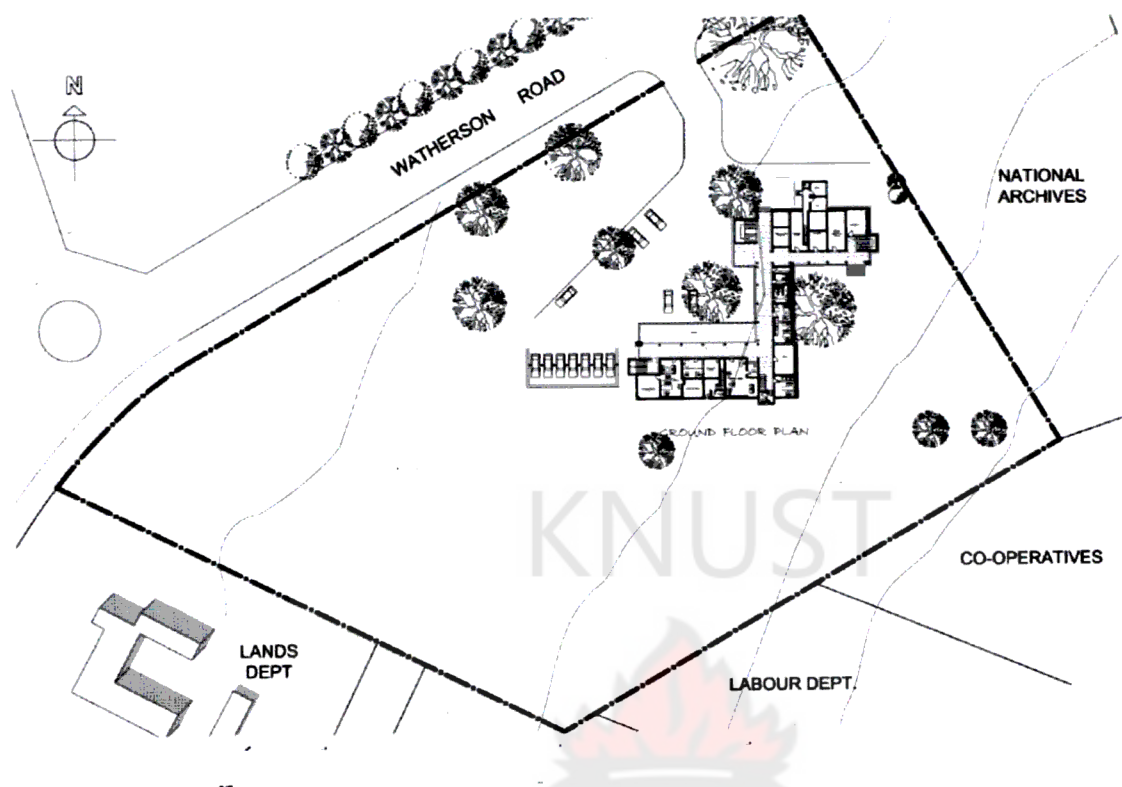
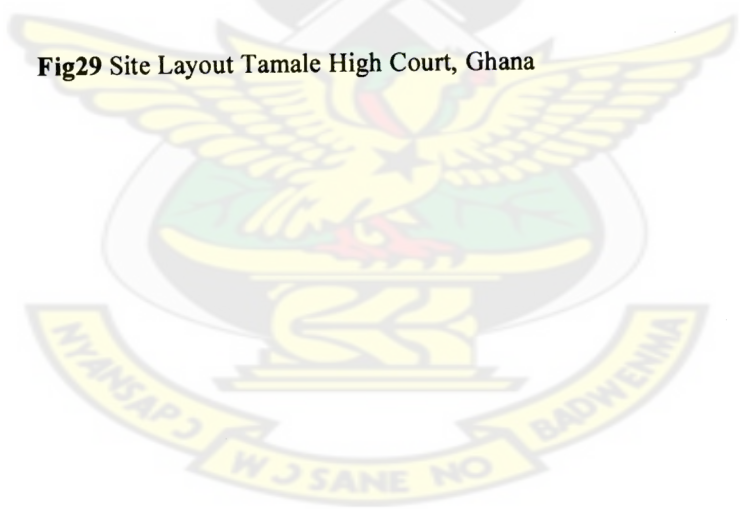
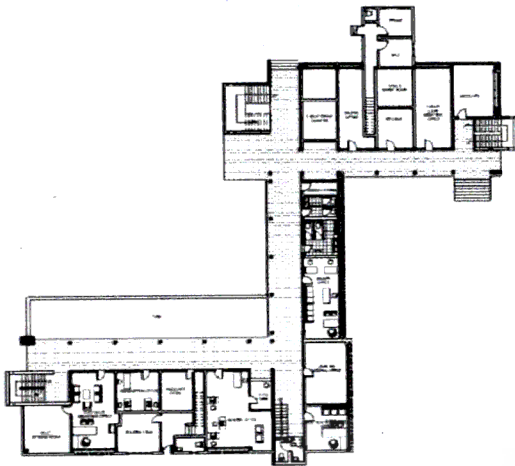
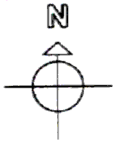
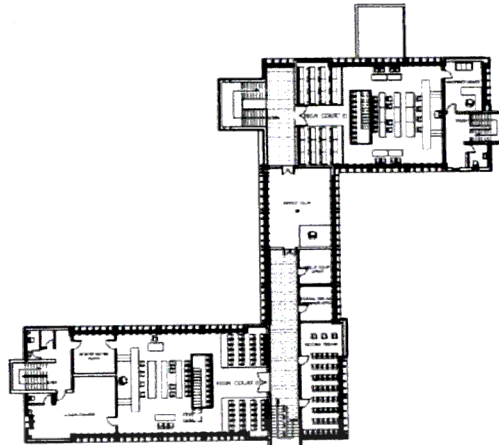


Fig29 Site Layout Tamale High Court, Ghana



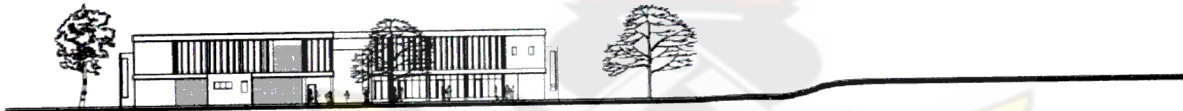


GROUND FLOOR PLAN



FIRST FLOOR PLAN

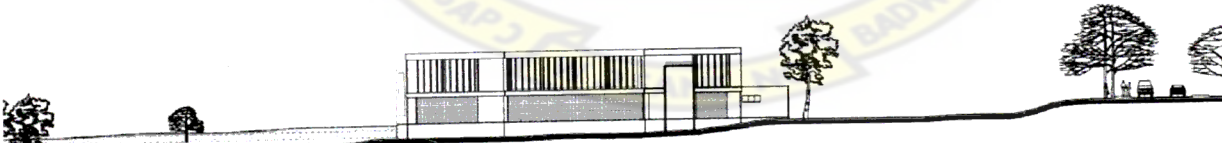
Fig30 As-built Floor Plans Tamale High Court, Ghana



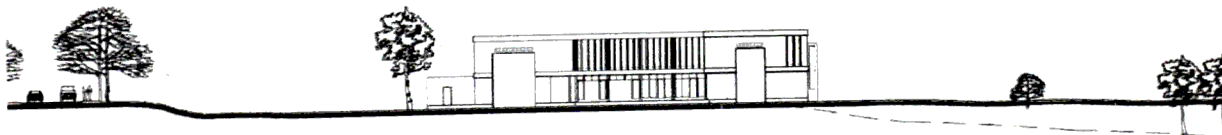
NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION



WEST ELEVATION

Fig31 As-built Elevations Tamale High Court, Ghana

The existing building houses the Tamale High Court and lists the following spaces: two high court rooms, a circuit court and a regional tribunal. Other spaces include registries and offices.

The following Strengths, Weakness, Opportunities and Threats were identified during the research. It provides a sound base for the development of Regional Court Complex in Tamale as a strategic plan for the Judicial Service.

4.1.3 SWOT Analysis of the Site

Strengths (S)

- The site in the civic area.
- It is currently used as the high court site makes it a prominent site.
- The site is quite sizeable covering over 18,000 square metres.
- There is direct access from a major road (watherson road).
- Proximity to Government Agencies.
- It will be the only Regional Court Complex to serve the three Northern Regions.
- Ready availability of land for construction of the construction of the complex.

Weakness (W)

- The site is bounded by only one road which may pose challenges for road accesses.
- Greater percentage of land falls below road level and may pose drainage challenges.
- The existing building on the site will restrict and pose challenges to integration and security.
- The site has moderate soil for landscaping.

Opportunities (O)

- Provides opportunity to merge the existing and proposed building which will save the client some money and resources.
- Positive policy and Judicial environment
- Government recognition of positive correlation between Judicial Services and enforcement of the rule of law
- Capability for extending the Judicial services to the three northern regions
- Linkages and co-operation between the Judicial services and ECOWAS Judicial Systems

4.2. Site Conditions

An appropriate design responds positively to its site and climate. The designer therefore had to inquire knowledge of both the site and prevailing climatic conditions of the region to pursue a good response to the site.

Since the facility is a court building it has to portray traces of balance, fairness, firmness and authority of the judicial process.

4.3 Site Features

The general condition of the site is excellent and good enough to hold up such a project, together with its landscape and vegetation characteristics, topography and soil condition.

4.3.1 Climate

The climate of the region is relatively dry, with a single rainy season that begins in May and ends in October. The amount of rainfall recorded annually varies between 750 mm and 1050 mm. The dry season starts in November and ends in March/April with maximum temperatures occurring towards the end of the dry season (March-April) and minimum temperatures in December and January.

The harmattan winds, which occur during the months of December to early February, have considerable effect on the temperatures in the region, which may vary between 14°C at night and 40°C during the day.

Humidity, however, which is very low, mitigates the effect of the daytime heat.

4.3.2 Topography

The land slopes gently from the North-western end towards the south-eastern end with a contour interval of five (5) meters. The first two-quarters of the site, slopes from the Northwest to Southeast gently and shown on the contours the remaining two quarters slopes steeply and the difference in height there of six meters.

4.3.3 Geology

The soil is compact enough to support such a facility. There are also rocky outcrops on the south-eastern end of the site.

4.3.4 Vegetation

The main vegetation is classified as vast areas of grassland, interspersed with the guinea savannah woodland, characterised by drought-resistant trees such as the acacia, baobab, shea nut, dawadawa, mango, neem.



Fig32 Vegetative Cover, Tamale High Court, Ghana

4.3.5 Other Features

Views, accesses, utilities and services, noise source, security and wind direction were also analyzed to ascertain the correct area to position and direction of expansion of the facility on the site.



CHAPTER FIVE

5.1 DESIGN PHILOSOPHY AND CONCEPT

The Concepts

- Using voids to create maximum lighting and open up the space to give Justice a sense of openness and fairness.
- Recessed court rooms that protect occupants from harsh environmental conditions to elevate comfort conditions during court sessions.
- Rendering judicial process more transparent to the public.

5.1.1 Conceptual Site Planning

Option One

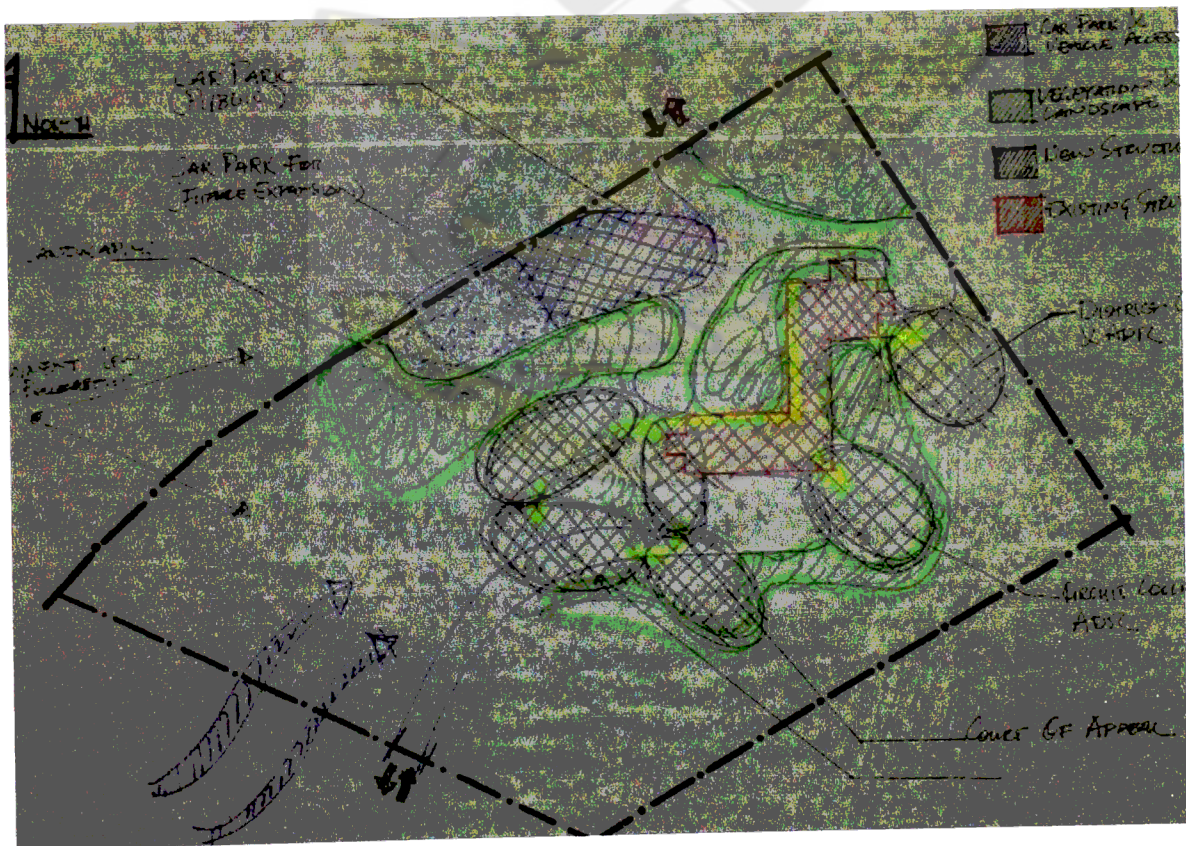


Fig33 Bubble diagram, Option One

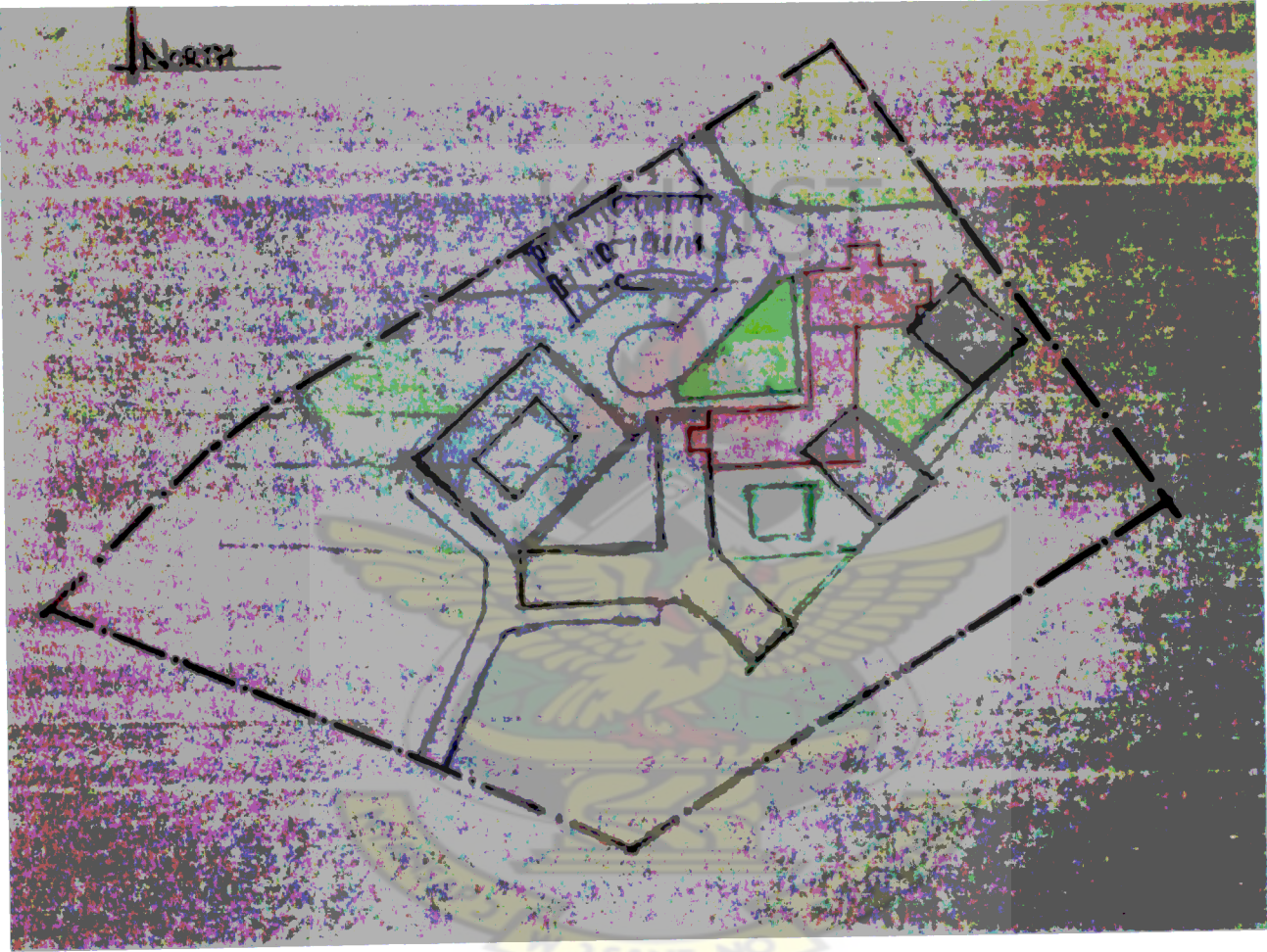


Fig34 Refined Bubble diagram, Option One

Option Two

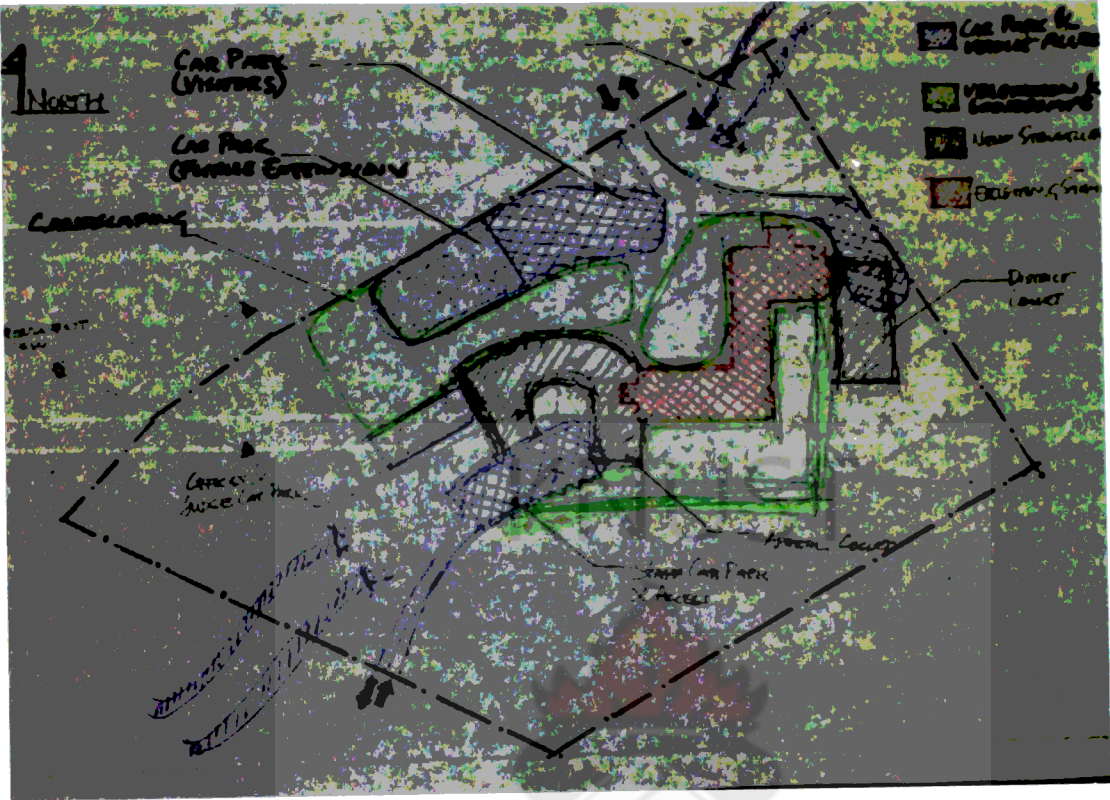


Fig35 Bubble diagram, Option Two

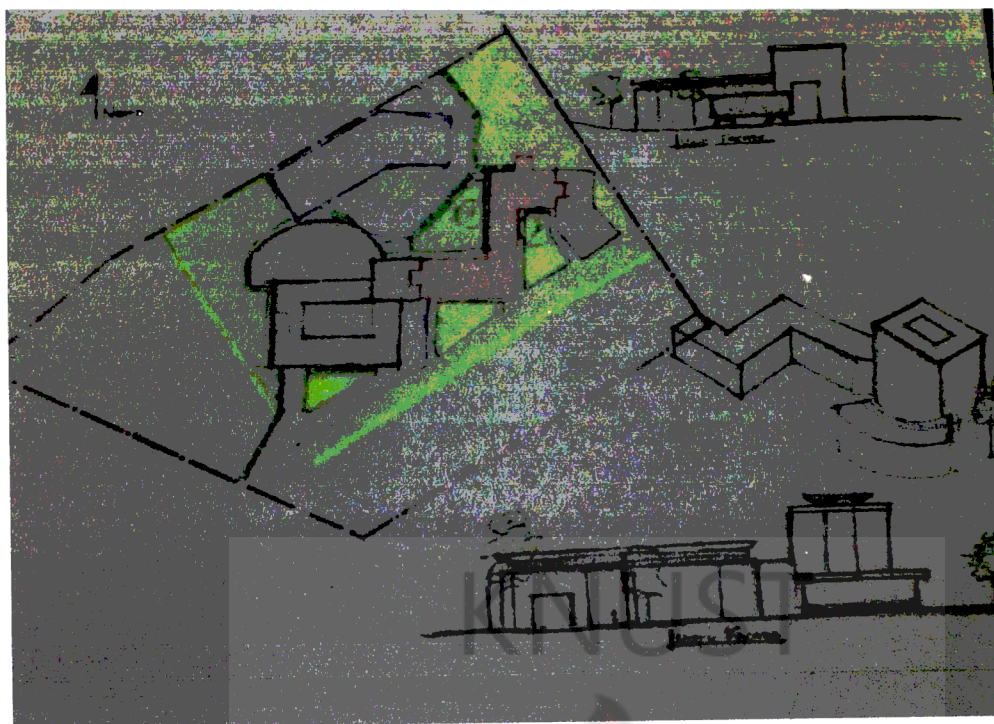
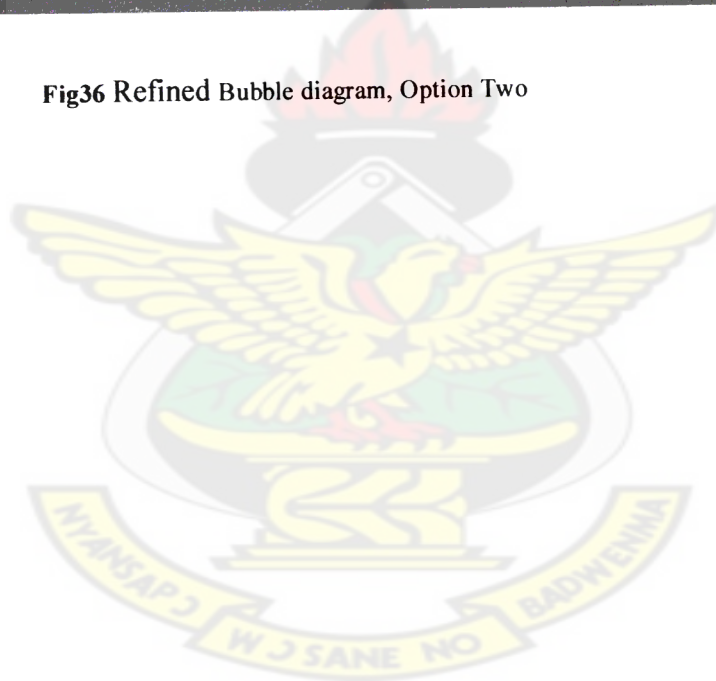


Fig36 Refined Bubble diagram, Option Two



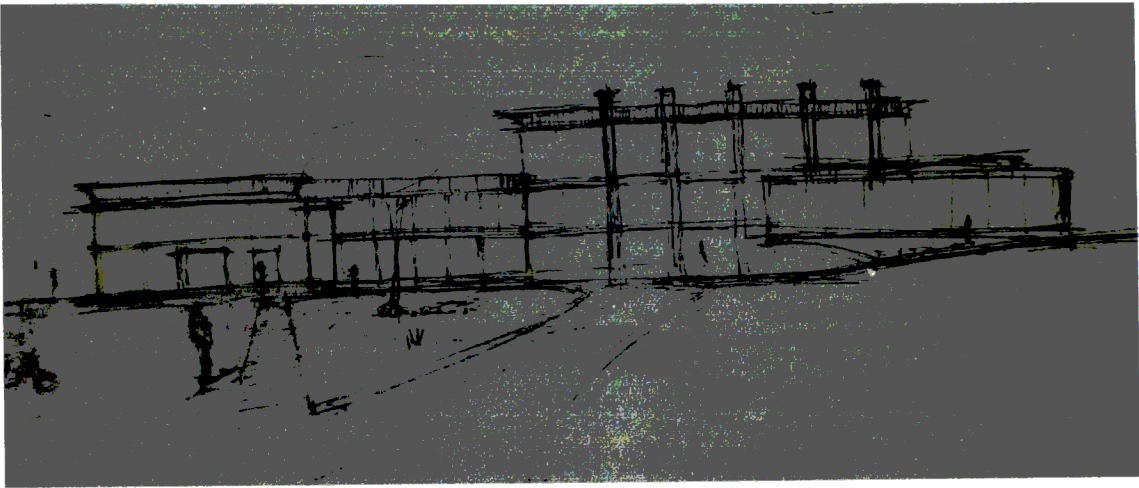


Fig37 Sketch of facade

5.2 The Design

Based on the functional relationship of a courthouse, the philosophy and concept, the design process involved the arrangement and positioning of the desired spaces within an envelope in close proximity or remote from other related and unrelated spaces. As part of the design concepts applied, consideration was also given to the circulation, security, accesses and general views to and from the site (both wanted and unwanted).

At the entrance to the facility design is to carry a sense of hierarchy of the of the courts right from the lowest to the highest. In ascending order; District, Circuit, High and Court of Appeal.

The use of pavements to link the existing entrance to the new entrance to serve as a three dimensional link between the old and new block. This pavement is dotted with trees to provide shade and temporary chatting areas for court users to discuss their cases as they approach and leave the court premises.

In a move to link the old and proposed building the design sought to link the registry's on the ground floor with the regional administration on the third floor via use of a stair and lift for staff only.

5.2.1 The Orientation

The building being an institution of law would be used during office working hours. Its alignment (north-south) and orientation was to minimise solar ingress, maximise viewing and day-lighting from both outside and inside and permit best prevailing wind to create and maximise desired comfort levels. The courtrooms were also recessed between the Judges' offices and the public zone to provide maximum shading for the courts.

5.2.3 Ventilation

A conscious effort was made to cut out the uncomfortable harsh day-time temperatures the use of thick walls, narrower well protected shaded windows. The aim of ventilation is also to cut out dust from outside which is excessive during the dry hamathan (hot dry) season. The courtrooms were also recessed between the Judges' offices and the public zone to harvest the breeze for the courts when outdoor conditions are favourable thereby creating convenient indoor conditions.

5.2.3 Design Considerations

Since we are dealing with integrating an existing court facility with the proposal, the designer's approach sought to employ strategies to merge the building to enable the facility function as one.

A link was formed between all the registries. This was done with the aid of a corridor and the creation of central dockets room, archives and exhibit rooms to merge the two registries.

The courtrooms were all maintained on the first floor in harmony with the existing building. This approach to placing the courts on the first floor is also to minimise the ingress of noise from activities on the ground floor.

The buildings were zoned into parts from west to east starting with the judges' offices wing, courtrooms, interface and public zone.

5.3 Block Plan

The entire facility sits on 25% of the site with the remaining used for landscape. The soft landscaped part of the site provides seating area for interaction before and after court hearings. The car park sits on the Northern end of the site. The eastern block (existing building) of the facility now houses the District and Circuit Court which is linked by a neck to the New High Court Building and finally the Court of Appeal building on stilts.



Fig38 Block Plan, Proposed Court Complex



Fig39 Aerial View, Proposed Court Complex

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Fig40 Ground Floor Plan, Proposed Court Complex

FIRST FLOOR PLAN

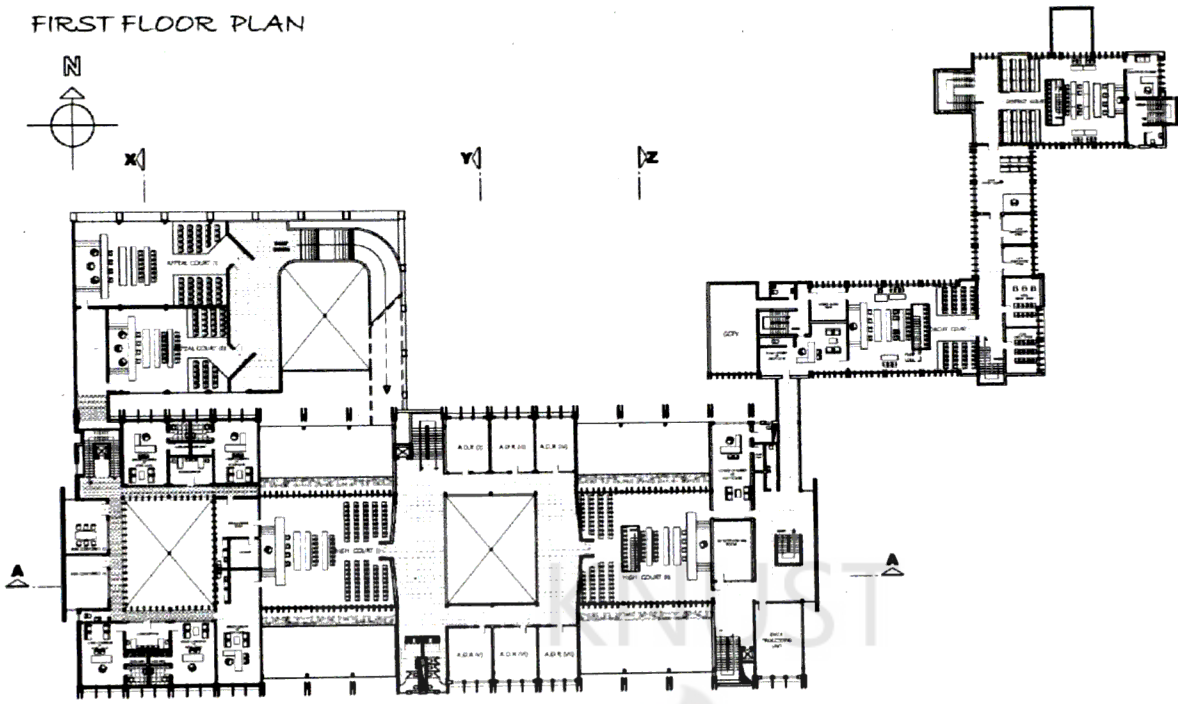


Fig41 First Floor Plan, Proposed Court Complex

SECOND FLOOR PLAN

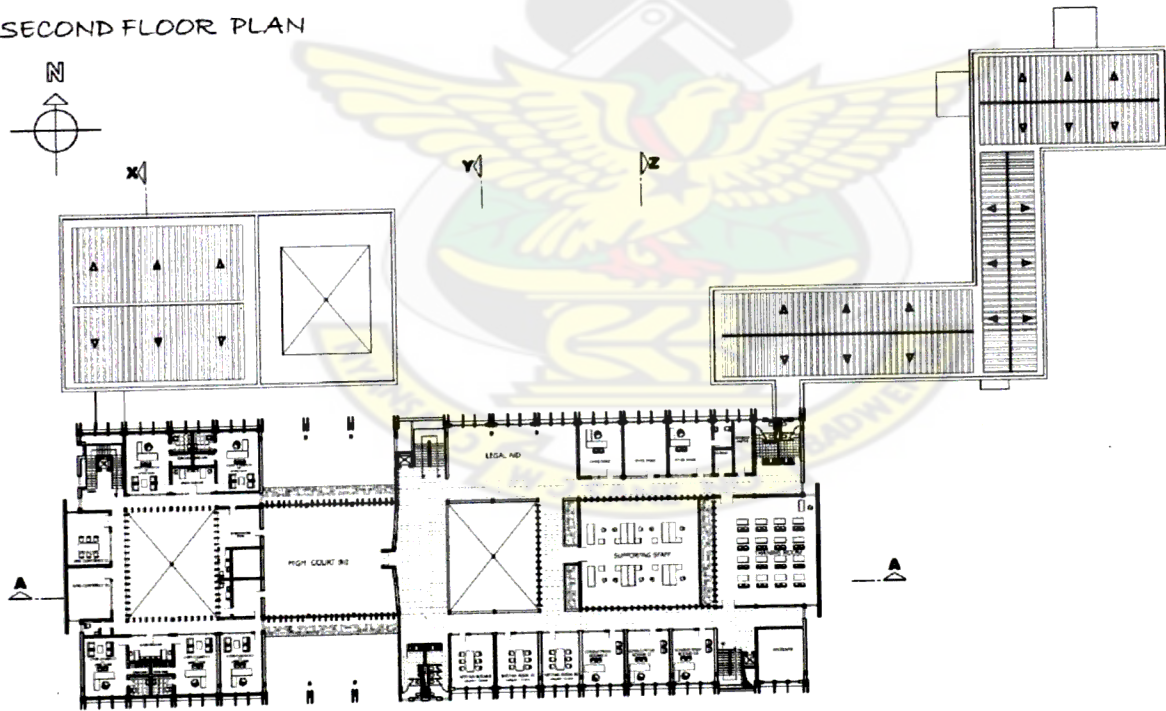


Fig42 Second Floor Plan, Proposed Court Complex

THIRD FLOOR PLAN

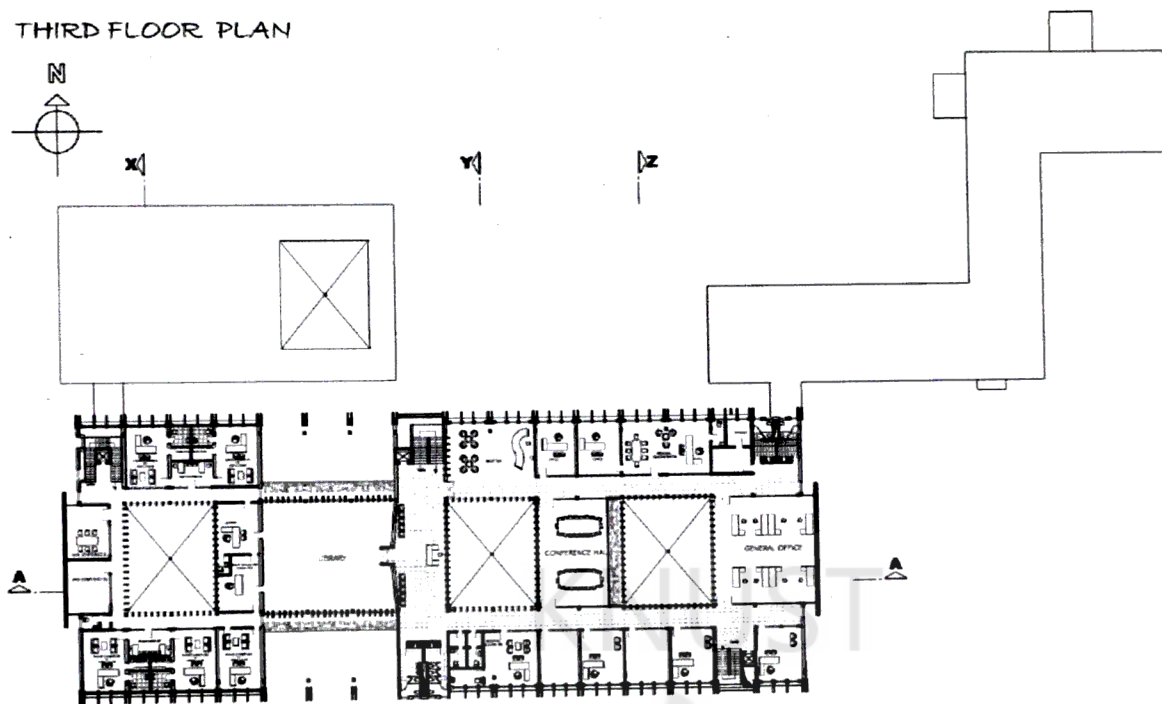


Fig43 Third Floor Plan, Proposed Court Complex

ROOF PLAN

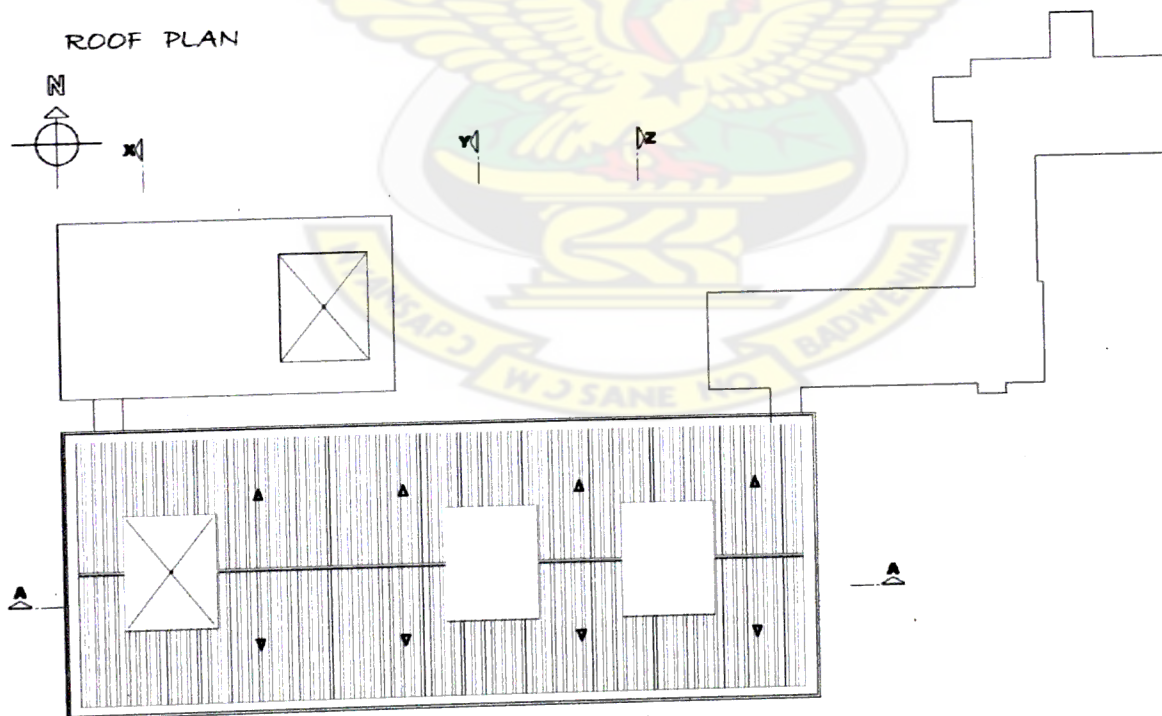
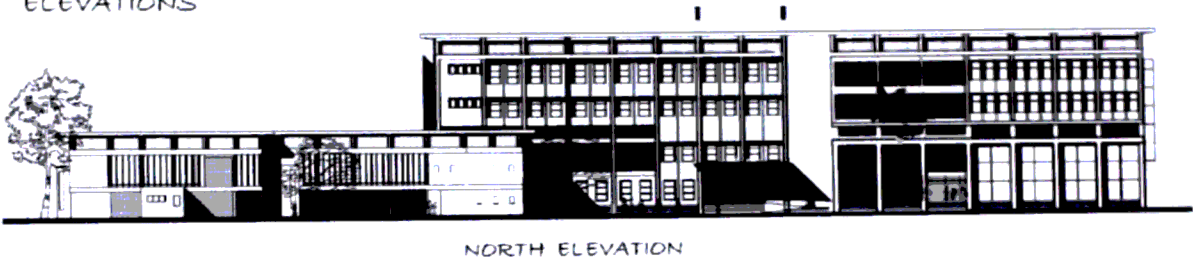
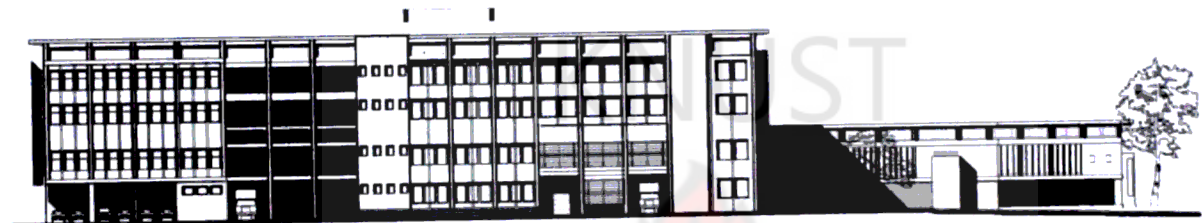


Fig44 Roof Plan, Proposed Court Complex

ELEVATIONS

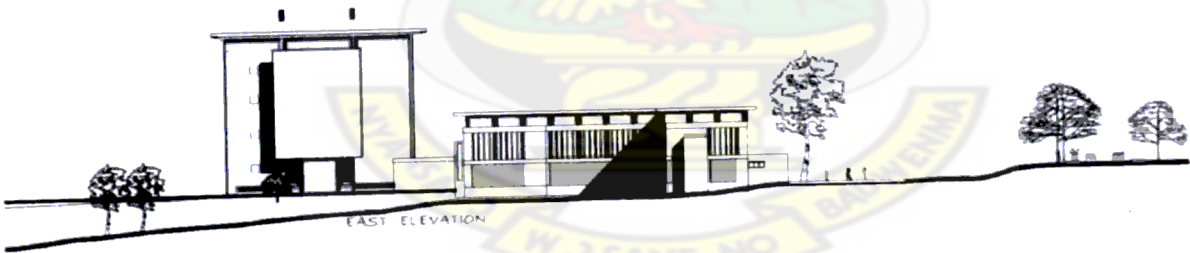


NORTH ELEVATION

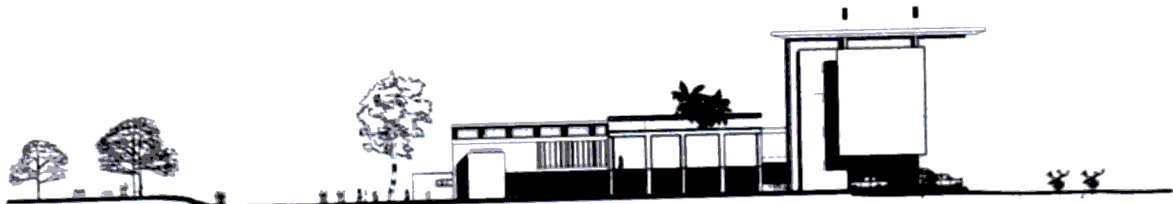


SOUTH ELEVATION

Fig45 North and South Elevation, Proposed Court Complex



EAST ELEVATION



WEST ELEVATION

Fig46 East and West Elevation, Proposed Court Complex

5.4 Structure and Form

The structural system employed here is the ribbed floor system due to the huge spans of 13,000mm in the court hearing chamber. Even though the land is vast a decision was taken not to exhaust it entirely but for allocate some landscaping and future expansion if need be.



Fig 47 Three-dimensional view of the Proposed Court Complex

5.5 Materials (Wall, ceiling and Floor Finishes)

In the courthouse design and construction, interior finishes and treatment are among the important considerations. This is because both interior and exterior, add to the whole environment.

5.5.1 Walls

Exterior

Most of the exterior walls are finished in soothing colored- paints such as the white emulsion paint. This is to portray the psychological impression of fairness and transparency.

As a measure to generally make the space and environment lively, some of the walls have been rendered with beige and fur-faced finishes.

Interior

The choice of finish for interior walls was dependent on the location and use of the space.

Most of the interior walls have been rendered in white washable paints but huge murals of local art works will be hung on the walls especially in the public area leading to the courts. This will help stimulate and sensitize users of the art and culture of the Northern region.

Brightly colored paintings and wall hangings will also be placed on the walls in offices and other public areas like the alternate dispute resolution rooms to make the spaces, friendlier to the public.

5.5.2 Floors

The most critical choice of finishes in a public facility is the choice of floor finish. They are subject to constant abuse and maintenance due to the heavy traffic.

The following criteria of durability, surface weathering, scratch resistance we all factored in the design decision of using unpolished porcelain tiles as floor finish.

Most of the floors in the offices are finished in semi-polished ceramic tiles because of its durability .Spaces that are in constant use such as the foyer and the lobbies as well as

walkways, have been treated with unpolished porcelain tiles which is resistant to wear and tear.

5.5.3 Ceiling

Ceiling of all offices where in Plaster of Paris (P.O.P) except those on the third floor where we have mineral fibre tiles.

5.6 Acoustics

Noise control is very essential in court buildings because respect and order must be given to court proceedings. In the courtrooms acoustic tiles have been recommended for use in the where necessary to keep noise from bouncing off walls. This material was chosen due to its high noise-reduction coefficient ratings.

5.7 Lighting

Natural lighting was employed as much as possible and complemented with artificial lighting where necessary. Large openings in the roof and voids around the public areas leading to courtrooms including areas around the Judge's offices to facilitate natural lighting enhance natural ventilation and aeration was applied.

Services provided for the facility include water supply, electricity, lighting, ventilation, security controls, and telecommunication facilities. Refuse disposal, storm water drainage, waste soil drainage and fire fighting.

5.8 Water supply

Water to the facility would be from the mains along the wathertson road.

5.9 Electricity

Power will be tapped from the mains along the wathertson road and stepped down by a 500KW transformer before being sent to a switchboard and then distributed to the panel boards. A standby generator set with automatic switches will be provided and would be part of the distribution cable which will be loaded.

5.10 Telephone

The private branch exchange (PBX) telephone system is been used to facilitate communication at the centre. The PBX actually handles the processing of all calls within it. It also has all the built in features such as, Forwarding, Conferencing, Call Pick up Groups, Intercoms, and Transferring just to name a few.

5.11 Storm water drainage

Storm water on the roofs would be directed to the underground tanks through drain pipes attached to columns. Surface runoff water would be directed to the tanks through surface drains to be used later to the lawns and flower gardens.

5.12 Landscaping

A serene and environmentally interactive space is necessary for project the image of a law building. Shady trees and seating strategically positioned along the major circulation areas serves as places for congregating and discussing issues. At the entrance are two car parks embanked by a retaining wall in stone cladding .The pond adjacent the old high court registry was maintained to promote a cool environment around the foyer of appeal and the new high court. Greenery such as grass and shrubs were used around the external seating areas.

5.13 Costing

The brief of design shows that the project when is undertaken will require extensive planning and financial management, thus the construction will be done at a go. Work on the vehicular access, car park and fencing would be done. The building has a total floor area of 50,656m²

The project shall cost a total sum of 25,328,000.00 Ghana cedis. This is based upon the cost per unit area calculation of 450-500 Ghana cedis per unit area.

CHAPTER SIX

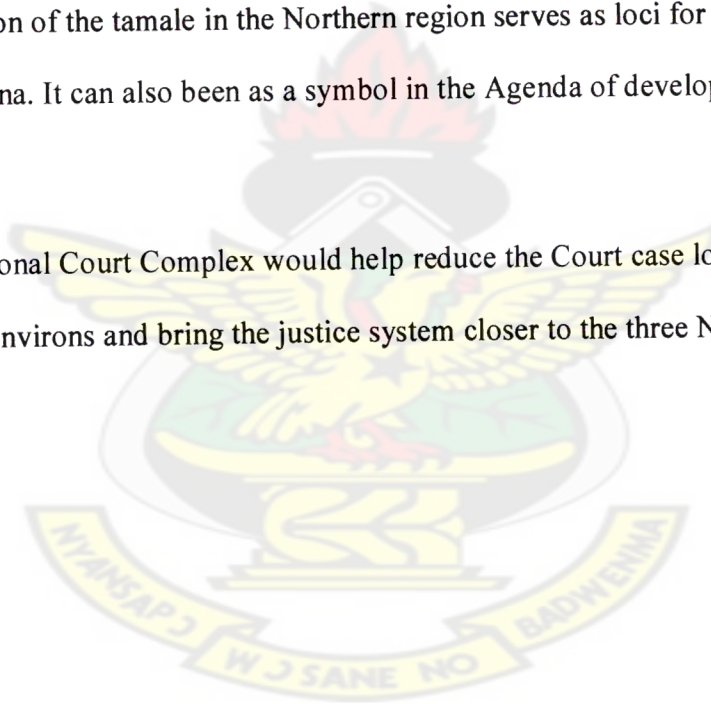
6.0 CONCLUSION

The establishment of a court complex in Tamale will enhance the justice system by first giving the old court premises a face lift. It will also seek to boost the morale of court staff and promote public confidence in the judicial process.

The proposed court of Appeal in Tamale would also assist in reducing time and distance travel with all its challenges and difficulties to the south whether to the Kumasi court of Appeal or the Supreme Court in Accra, for cases on Appeal.

The geographical position of Tamale in the Northern region serves as a loci for the three northern regions of Ghana. It can also be seen as a symbol in the Agenda of developing the three northern regions.

In conclusion, this Regional Court Complex would help reduce the Court case loads in the Tamale district and its environs and bring the justice system closer to the three Northern regions.



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