A THESIS

Presented to the Department of Architecture Faculty of Environmental Design

of

Ahmadu Bello University Zaria

in partial fulfilment of the requirements for the degree of

Master of Science in Architecture

By

AKOMOLAFE, BABAPEMI FOLUSO
(B.Sc. Hons, (Arch)., A.B.U.)

on

FACULTY OF ARTS AND SOCIAL SCIENCE FOR AHMADU BELLO UNIVERSITY - ZARIA
(Extension to the Main Campus : 1980 - 1995)

in

JUNE 1981

THESIS MENTOR : MR. K. URBANOWICZ

THESIS YEAR COORDINATOR:
ARC SHIM ADESINA

HEAD OF DEPARTMENT : PROFESSOR E.A. ADEYEMI

DEDICATION

This thesis is dedicated, with gratitude to God, to mem and dad for their unflinching demonstration of love and affection and for launching me into the world of knowledge right from infant through the accomplishment of this little piece of work.

ABSTRACT

This thesis is on the proposed new Faculty of Arts and Social Sciences for Ahmadu Bello University Zaria under the extension programme contained in the new master plan (1980 - 1995). A brief summary of this report is as follows?

SECTION 1:

This introductory section gives an insight into the thesis, the basis and the logical sequence of events and activities,

SECTION 2:

This is the report of a general study of Ahmadu Bello University, its historical background, geographical location, academic structure and so on.

SECTION 3:

This section analyses the development proposals of Ahmadu Bello University as contained in the 1980 November edition of the new Master Plan, prepared by YUSUF MOHAMMED and associates in association with DAR AL HAWDASAH CONSULTANTS, as it borders on the proposed new Faculty of Arts and Social Sciences.

SECTION 4:

This section is the report of a case study of the existing Faculty of Arts and Social Sciences illustrating the motivations for transfer to a new site.

SECTION 5:

In this section is illustrated some basic design considerations for the realisation of the propped scheme.

h

SECTION 6:

Finally this section exposes the scheme itself whereby the achitect's brief is illustrated together with the schedule of accommodations.

It is my intention that as much as this piece of work is not to be regarded in the least as "being inexhaustive in the subject that it covers it will in no small measure offer some considerable' hints and guidelines primarily to the authorities of Ahmadu Bello University or their representatives in realising the development proposals contained in the Master Plan particularly as regards the Faculty of Arts and Social Sciences buildings in the context of 'Extension to the Main Campus[1], Secondly, any other likely prospective beneficiaries such as university finlanders, university administrators, consultants, etc who might be engaged in campus academic development activities and lastly academicians engaged in research work relating to this subject.

I wish you a happy reading and effortless digest.

AKOMOIAFE, B.F.
MAY, 1981
A. B. U. ZARIA

ACKNOWLEDGEMENTS

I wish to express my gratitude to a number of individuals who by one way or the other have made 'these things' possible.

1. The person who has earned my greatest admiration is the head of department - Professor Ekundayo Adeyinka Adeyemi who, five years ago, effected my transfer from the Faculty of Technology, University of Ife. Ile Ife, and admitted me to the department of Architecture, Ahmadu Bello University, Zaria, at atime when such an action was a priviledge. He had not stopped there, he had monitored my progress from the onset through to the final year. He had been part of the thesis and faithfully, when it appeared the situation was getting rocky he did not desert. His responsiveness to students' needs and problems is unparalleled.

2. To the rest of the academic staff of the department, I express my gratitude especially:

- Mr Urbanowicz, , my thesis mentor with whom I have had a rare and memorable opportunity of sharing my little knowledge with consecutively in the last three years. His hard-line criticisms are better not to be shunned off.
- Arc Shina Adesina, the thesis year coordinator for his personal advices and cooperation in the past years.
- Mr. O. Solanke for his assistance and cooperation.

3. The entire staff of the departmental library especially Dave Gberikon are to be given a pat on the back for their assistance in sieving through the junks in the dataroom from time to time.

I cannot leave out the following:

4. My classmates for the companionship and knoweldge we shared together throughout the tooth-aching years especially co-members of our private crit-group.

- Akinlolu Odeyemi, to whom I am greatly indebted for his invaluable aid and assistance,
- Titus Dele Ojo
- Dokun Odekunle
- Chief Ibitade Mosaku
- Olaniyi Oguntubo
- Jude Onotu Makoju 'alias Ogelente'
- Kayafat, Titilola Abudu
- Florence Afolayan

My special thanks to Mr. Dele Agbelusi, a colleague and well respected friend for his well-timed measures during the desperate hours.

5. Mrs. L. S. Osori, Secretary to Development Office, Ahmadu Bello University, Zaria and Duniya Ismail, Secretary to above for the invaluable materials they have released for my use.

6. Mr. O. Ajayi, Assistant Registrar attached to Faculty of Arts and Social Sciences, Ahmadu Bello University, Zaria.

7. Friends and colleagues in the department including, Biodun Gbadamosi, Dele Odediran, Tunde Oyekanmi, Yinka Gbotoso, 'Dimeji', Lekan Hassan and Sunny Echorio, who have spent sleepness nights with me to bring the work to a conclusive end.

8. Opeyemi Olajide, Toyin Otesanya, Kayode Ajibade and Bisi Adesina though 'outsiders in the profession, but who have contributed by way of dotting, data compilation or model making.

9. Olumide Osikoya for his inspirational companionship from onset through the completion of the course.

10. Mrs. Remi Adeyemi for her gentle words of advice, concern and motherly care during the period of my stay in Zaria.

11. My stay in Zaria for 5 years has been made wonderfully most homely by the invaluable goodness and fondness of Mr. Edmund Olusoga Otesanya and Mrs. Bernadette Otesanya. If only my heart could talk and write. We are all members of one family.

12. My good uncle Professor V. A. Williams, Head of Department of Electronics, University of Ife who reluctantly conceded to my transfer from his department to the department of Architecture, Ahmadu Bello University, Zaria. I had missed for quite long his patronic companionship. Now I am back.

13. The entire staff of the Intermediate and Junior Staff Training Coordinator's office for their cheerfulness togetherness and cooperation in the past years especially Mr. Bashiru Oseni who has taken up the arduous task of typing this work assisted by Mr. Abdulahi Ocheni of the chemistry department.

14. Finally but definitely not the least and short of taking for granted I extend my gratitude to all my relations, brothers and sisters including entire members of the confederation of 'whatzhaps' for their unflinching support, encouragement, incentives, love and affection over the years especially words of thanks to my 'twin' sister Arinade who had encouraged my transfer to Ahmadu Bello University, Zaria and whose companionship

I missed on graduating after 3 years of study here in Ahmadu Bello University. May God bless you all.

Refretfully in an occasion like this thre would be some names that have been left out definitely not by design but due to reasons ranging from poor memory on the part of the author to limitation of space. However, I wish to express my profound gratitude to all and sundry (individuals, parties, organisations etc) who, one way or the other, have promoted or contributed to my welfare and welbeing. Thank you all.

LIST OF TABLES

Table 2.1. - Ahmadu Bello University Facilities

Table 3.1. - Enrolment Projection and F.T.E. 1980 and 1985

Table 3.2. - Enrolment Projection and F.T.E. 1990 and 1995

Table 3.3. - Ahmadu Bello University Staff and Student Projections 1980

Table 3.4. - Enrolments, Usable Area and Location of Teaching Units: Extension to Main Campus 1980 - 1995

Table 4.1. - Future Space Requirements and Projection Levels 1990

LIST OF FIGURES

Fig. 2.1. - location of all Ahmadu Bello University Facilities

Fig. 2.2. - Ahmadu Bello University facilities in Samaru and Zaria Area

Fig. 2.3. - Main Campus and Extension to Main Campus 1980

Fig. 2.4. - Samaru Campus Site Appraisal

Fig. 2.5. - Main Campus Site Appraisal

Fig. 3.1. - Enrolment Growth Trends and Projections

Fig. 3.2. - Enrolments, F.T.E. and Space Requirements 1980 and 1985

Fig. 3.3. - Samaru Campus Master Plan

Fig. 5.1. - Pedestrian, Motorcycle and Cycle Routes

Fig. 5.2. - Sitting Area Details

Fig. 5.3. - Courtyard Details

Fig. 5.4. - Car Parking Details

Fig. 5.5. - Mass Planting and Erosion Control Details

LIST OF APPENDICES

Appendix 1 - Plant Material

Appendix 2 - Staff: Student ratio of departments 1980

Appendix 3 - Ahmadu Bello University Staff and Student Populations 1985

Appendix 4 - Ahmadu Bello University Staff and Student Populations 1990

Appendix 5 - Ahmadu Bello University Staff and Student Populations 1995

Appendix 6 - Faculty of Arts and Social Sciences Staff and Student Populations 1980 - 1995

Appendix 7 - Space Requirements 1980 - 1995 Academic Areas - Faculty of Arts and Social Sciences

Appendix 8 - Space Requirements 1980 - 1995 Aacademic Areas - Faculty of Education

Appendix 9 - Space Requirements 1980 - 1995 Academic Areas - Institute of Education

Appendix 10 - Space Requirements 1980 - 1995 Academic Areas - Centre for Educational Technology (media complex).

TABLE OF CONTENTS

TITLE OF THESIS (i)

DEDICATION (ii)

ABSTRACT (iii)

ACKNOWLEDGEMENTS (iv)

LIST OF TABLES (v)

LIST OF FIGURES (vi)

LIST OF APPENDICES (vii)

1. - INTRODUCTION 1

2. - GENERAL STUDY: AHMADU BELLO UNIVERSITY, ZARIA . . 3

2.1. History

2.2. Location of all facilities

2.3. Main Campus

2.3.1. Location

2.3.2. Layout

2.3.3. Topography

2.3.4. Geology

2.3.5. Soils

2.3.6. Climate

2.3.6.1. Prevailing winds

2.3.6.2. Temperature and Humidity

2.3.7. Site Appraisal

2.3.7.1. Landscape context

2.3.7.2. Views into the Main Campus

2.3.7.3. Views out of the Main Campus

2.3.8. Existing (Natural) Landscape

2.3.9. Existing (Managed) Landscape

2.3.10. Campus Development

2.3.11. Visually Beneficial

2.3.12. Visually acceptable

2.3.13. Visually Detrimental

2.3.14. Elements Detracting from Environmental Quality

2.3.14.1. Buildings of Poor Quality

2.3.14.2. Spaces of poor Quality

2.3.14.3. The Tipping of Rubbish

2.3.14.4. Building Material Dumping

2.3.14.5. Lack of Shade

2.3.14.6. Hard Surfacing

2.3.14.7. Uncatered for Desire Lines

2.3.14.8. Worn Areas

2.3.14.9. Services

2.3.14.10. General Site Maintenance

2.3.14.11. Furniture

2.3.14.12. Lighting

2.3.15. Circulation Problems

2.3.15.1. Vehicular Circulation –

2.3.15.2. Pedestrian Circulation –

2.3.16. Erosion Problems –

2.3.17. Campus Landscape Management

3. ANALYSIS OF AMSTER PLAN FOR AHMADU BELLO UNIVERSITY, ZARIA 20

3.1. Policies and Objectives

3.2. Enrolment Projections and Academic Structure

3.2.1. Enrolment Projections

3.2.2. Academic Structure

3.2.2.1. Present Academic Pattern

3.2.2.2. Future Academic Organisation 1980 – 1995

3.2.2.3. Academic changes 1995

3.2.2.3.1. Extension to the Main Campus

3.2.2.3.2. Collegiate Area

3.3. Extension to the Main Campus

3.3.1. Enrolments, F.T.E.'s and Additional Space Requirements 1980 – 1995

3.3.2. Academic Development Programme

4. CASE STUDY: FACULTY OF ARTS AND SOCIAL SCIENCES 38

4.1. Student and Staff Population: 1980

4.2. Present academic structure

4.2.1. Composition

4.2.2. Academic survey: Departments

4.2.2.1. Departmental Area

4.2.2.2. Lecture Theatres and Classrooms

4.2.2.3. Administration (Dean's office)

4.2.2.4. Communal and Social Facilities

4.2.2.5. Ph.D Research Space

4.3. Future Space Requirements: 1990

4.4. Comments and Conclusions

5. DESIGN CONSIDERATIONS 43

5.1. Landscape Proposals

5.1.1. Outdoor spaces

5.1.2. Hard Surfacing

5.1.3. Desire Lines

5.1.4. Services

5.1.5. Car Parks

5.1.6. Furniture

5.1.7. Erosion Problems

5.2. Acoustic Design of Rooms for Speech

5.2.1. Lecture Halls and Classrooms

6. THE SCHEME: 59
FACULTY OF ARTS AND SOCIAL SCIENCES AHAMDU BELLO UNIVERSITY
ZARIA - 1980 - 1995

6.1. The Site

6.1.1. Location

6.1.2. Analysis

6.1.2.1. Topography

6.1.2.2. Views out of the site

6.1.2.3. Views into the site

6.1.2.4. Good and pleasant view

6.1.2.5. Objectionable view

6.2. Architect's brief

6.2.1. Dean's office

6.2.2. Departmental Areas

6.2.3. Language Laboratories and Geography Laboratories

6.2.4. Lecture halls and classrooms

6.2.5. Balance Areas

6.3.1. Planning the layout

6.3.1.1. Macro scale

6.3.1.1.1. Circulation

6.3.1.1.2. Spatial Distribution of faculty buildings and units

6.3.2. Architecture of the buildings

6.3.2.1. Structural system

6.4. Schedule of accommodation

6.4.1. Administration (Dean and Faculty offices)

6.4.2. Department of Political Science

6.4.3. Department of Economics

6.4.4. Department of History

6.4.5. Department of Geography

6.4.6. Department of Nigerian and African Languages

6.4.7. Department of English

6.4.8. Department of French

6.4.9. Department of Sociology

6.3.10 Department of Archaeology.

1. INTRODUCTION

My thesis is on the Faculty of Arts and Social Sciences (FASS) Ahmadu Bello University Zaria. It is based on the proposals contained in the new 15 year - Master Plan (1980-1975) prepared for the University by Yusuf Mohammed and associates in association with DAR AL HANDASAH consultants (Shair & Partners) both firm of consulting Planners.

In the proposals a new site adjacent to the present central core of the main campus Samaru is to be developed to accomodate some of the university's academic expansion requirements within the period in question. The new site is to be termed "Extension to the main campus." The following are the Faculties and teaching units which will be accomodated within the site viz,

- Faculty of Arts & Social Sciences (FASS)
- Faculty of Education
- Institute of Education Headquarters
- Media Complex
  - Centre for Adult Education
  - Centre for Educational Technology.
  - Mass Communication (audio visual unit)

The development is scheduled to lapse over the 15 year span. For the purpose of this thesis I have narrowed myself down to the Faculty of Arts and Social Sciences (FASS), its development starting from 1980 through 1990 the year it is supposed to accommodate an ultimate student enrolment of 3000 in the extension area; and of course a comprehensive layout of the whole extension area showing vividly how each unit relates to another in terms of spatial

distribution and circulation. All subsequent enrolments into FASS in excess of 1990 enrolment up till 1995, the year corresponding to a projected student enrolment of 4400, will be accomodated in the proposed college of Arts in the collegiate area.

2. GENERAL STUDY

2.0 Ahmadu Bello University

2.1 History

The Ahmadu Bello University was established in 1962 when it incorporated three existing educational institutions - The Nigerian College of Arts, Science and Technology; the Institute of Administration; and the Institute for Agricultural Research.

Since 1962, the university has grown rapidly to become the largest seat of learning south of the Sahara.

The University was named after the late Alhaji Sir Ahmadu Bello (1910-1966) Sardauna of Sokoto and Premier of the defunct 'Northern Nigeria.' Sir Ahmadu bello was the first Chancellor of the University. He performed the opening ceremony of the University on the 4th of October 1962. The University had since been called after him.

A total of 400 studentss were initially registered in 1962. It was then expected that by 1968 the population of undergraduates would have grown to 1,200 with a total students enrolments standing between 4,000 and 5,000. But by 1968, the total undergraduate enrolment stood at 16,000 and by 1972 the total university population had grown eleven times bigger than what it was in 1962. The total student population now stands at about 14,500 with almost 8,000 concentrated on the Samaru Main Campus.

2.2 Location of All Facilities

Ahmadu Bello University has facilities at a total of 19 distributed throughout central and Northern Nigeria, although the majority are concentrated in the Samaru - Zaria area of Kaduna State. Table 2.1 gives the description of each facility while

fig. 2.1 shows the location using the corresponding number as in table 2.1. Fig 2.2. Shows the Location of Ahmadu Bello University Facilities in Samaru and Zaria.

2.3 Main Campus

2.3.1 Location: The main campus is located in Samaru a village, 15Km. west of Zaria in Kaduna State, that grew along with the university.

Zaria town is situated at lalitude 10^{o} 10^{1} North and longitude 7^{o} 38^{1} East. Figure 2.1 shows the location of all Ahmadu Bello University facilities, Samaru inclusive.

2.3.2 Layout: Fig. 2.3 shows the layout of the Samaru main campus.

2.3.3 Topography: The main campus lies at an elevated plain at an altitude of 670m above mean sea level. The plain gently slopes down towards Kubani river in the South cut by numerous valleys and streams.

2.3.4 Geology: The campus area is underlain by igneous and metamorphic rocks. The igneous rocks are mainly Biotite Gneisses and older granites while metamorphic rocks include Quartzites and schists found mainly in stream valleys.

2.3.5 Soils: The soils are lateritic in nature. In this area these tend to be reddish in colour with stable aggregates which ensure reasonably free drainage. Their clays are composed of predominantly Kaolin with iron and aluminium oxides. As Zaria area is relatively dry with averagely low annual rainfall, the laterite soils are only a little acidic and leaching is reduced to a minimum. The soils thus contain some considerable depth of

Table C.1: Ahmadu Bello University Facilities

1. Main Campus, Samaru

Faculty of Science
Faculty of Engineering
Faculty of Env. Design
Faculty of Arts & Social Studies
Faculty of Education
School of Basic Studies
Faculty of Medicine
Faculty of Vet. Medicine
Faculty of Pharm. Sciences
Institute of Health, H. Q.
Centre for Nig. Cultural Stud.
Centre for Adult Education
Centre for Educ. Tech.
Centre for Social & Econ. Research
Computer Centre
Central Admin.
Students Services
University Services

2. Agricultural Campus Samaru

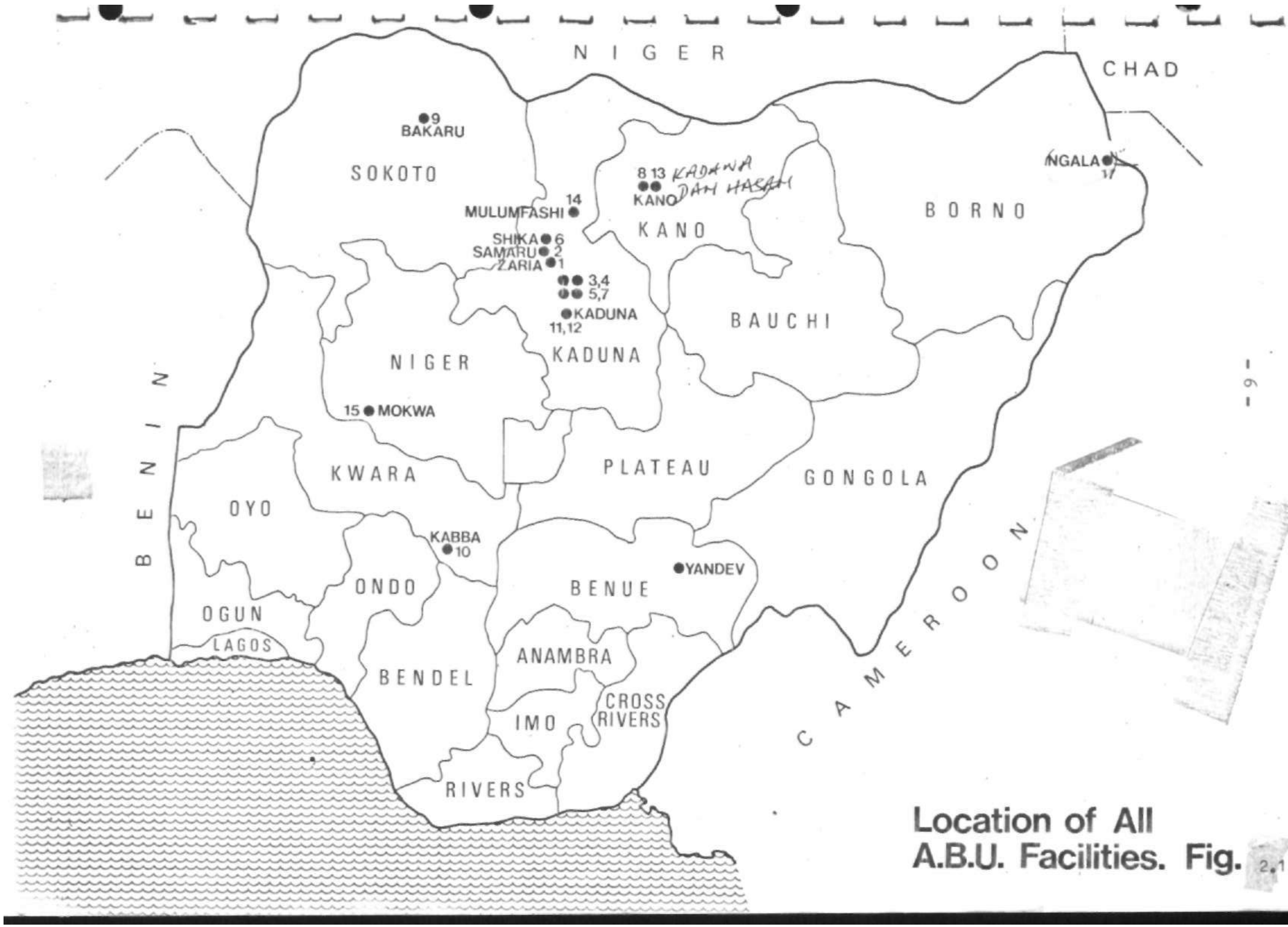
Faculty of Agriculture
Institute for Agricultural Research
Agric. Et. & Reliason Services
Division of Agric. College
College of Agric. (Samaru)
Agric. Eng. (Fac. of Eng.)
Estate Department, H. Q.
Student Services

3. Administration Campus Zaria

Faculty of Administration
Faculty of Law
Centre for Islamic Legal Studies
Inst. of Admin. (Gen.)
University Services

4. Faculty of Medicine (Clinical - Zaria)

5. Institute of Health, Zaria
6. National Animal Production Unit, Shika
7. Advanced Teachers' College, Kano
8. Advanced Teachers' College, Zaria
9. Division of Agric. College, Bakura
10. Division of Agric. College, Kabba
11. Division of Agric. College, Kaduna
12. Inst. of Health, Kaduna
13. Institute of Health, Kano
14. Institute of Health, Malumfashi
15. Inst. for Agric. Research, Mokwa
16. Inst. for Agric. Research, Yandev
17. Institute for Agricultural Research, Ngala
18. Faculty of Medicine, Malunfashi
19. Faculty of Medicine, Kaduna.



Location of All A.B.U. Facilities. Fig. 2.1

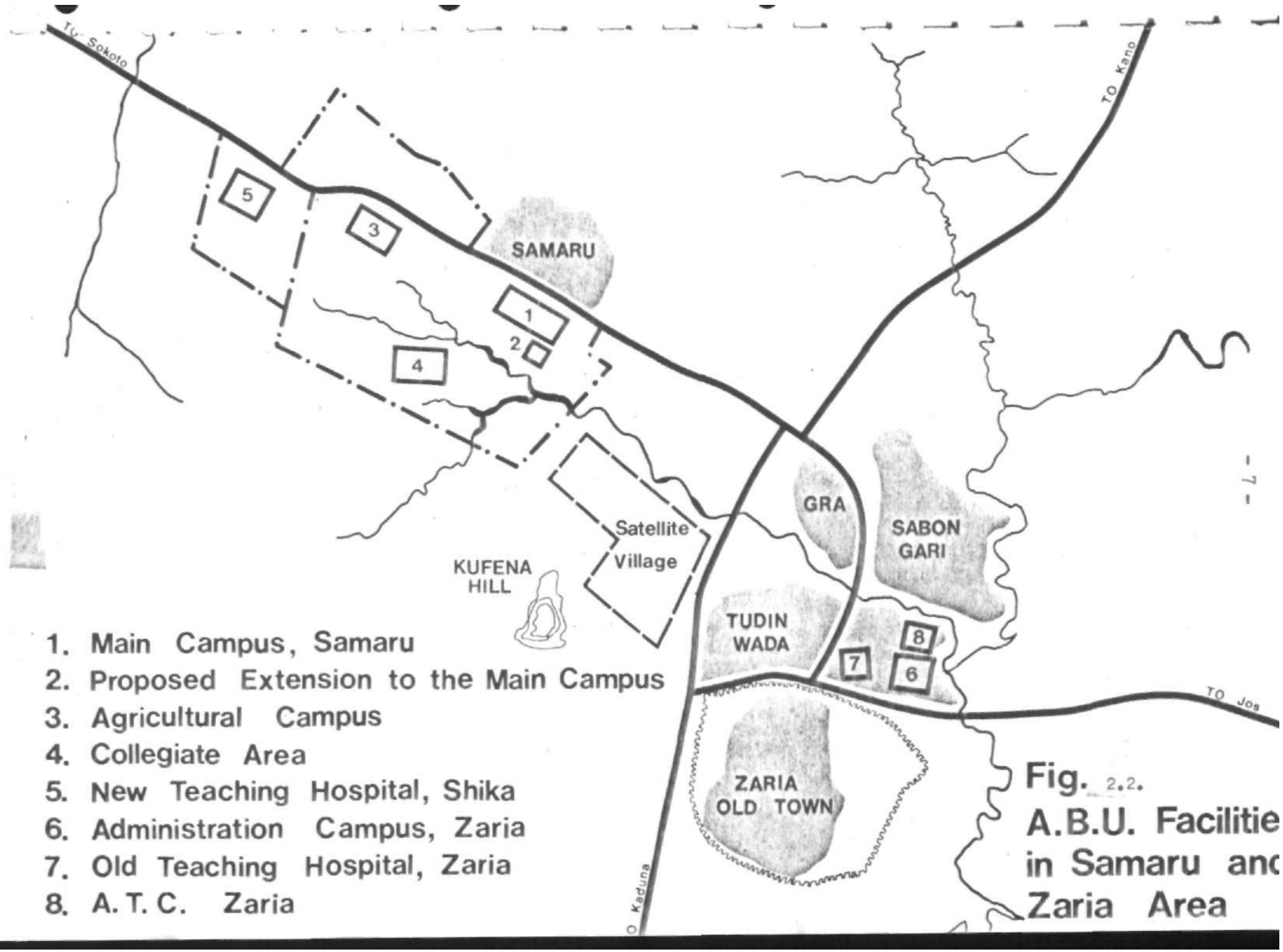


Fig. 2.2.
A.B.U. Facilitie
in Samaru and
Zaria Area

AHMADU BELLO UNIVERSITY
DRAFT FINAL MASTER PLAN

Scale 1:2500

MAIN CAMPUS AND EXTENSION TO MAIN CAMPUS 1980

Veterinary Medicine

Pharmaceutical Science

Human Medicine

School of Basic Studies

Extension Area to be built 1980 – 85

Faculty of Engineering

Faculty of Environmental Design

Faculty of Science

Faculty of Arts and Social Science

Faculty of Education

Institute of Education

Fig. 2.3.

humus and tend to be very fertile. The soils are known to have a covering material of up to 4-2m in depth.

2.3.6 Climate

2.3.6.1 Prevailing Winds: Two opposing surface air masses prevail in West Africa. One blows from the South West Africa carrying humid equatorial maritime air from the ocean. The other is from the north east, and is tropical continental in nature. This air mass, or Hamattan, as it is known, is from the desert and is dry and dusty. These situations are the same for Zaria.

2.3.6.2 Temperature and Humidity: The average diurnal range throughout the year is between 10-15°F depending on the season. The annual average ranges between 55 and 70°F daily; minimum to maximum temperature in the cool season to between 95-105 minimum to maximum in the warm season.

The relative humidity ranges from 30% in the dry season to 95% in the wet season.

2.3.7 Site Appraisal

The university site is located on the eastern edge of Zaria bordening open countryside. This is typical Savannan gently undulating grassland with single isolated tree specimens. To the south and west the campus is bordered by open countryside with occaisional small village development. To the north it is confined by the Zaria - Sokoto road. To the south and east it is the extensive Ahmadu Bello University Reservoir, Zaria airport forms most of the boundary to the east.

Although the campus is mainly flat or gently undulating it is dissected by the river system. The built development of the univer-

sity mainly occupies the terraces of one river. On the open valley floor corn is grown as a crop.

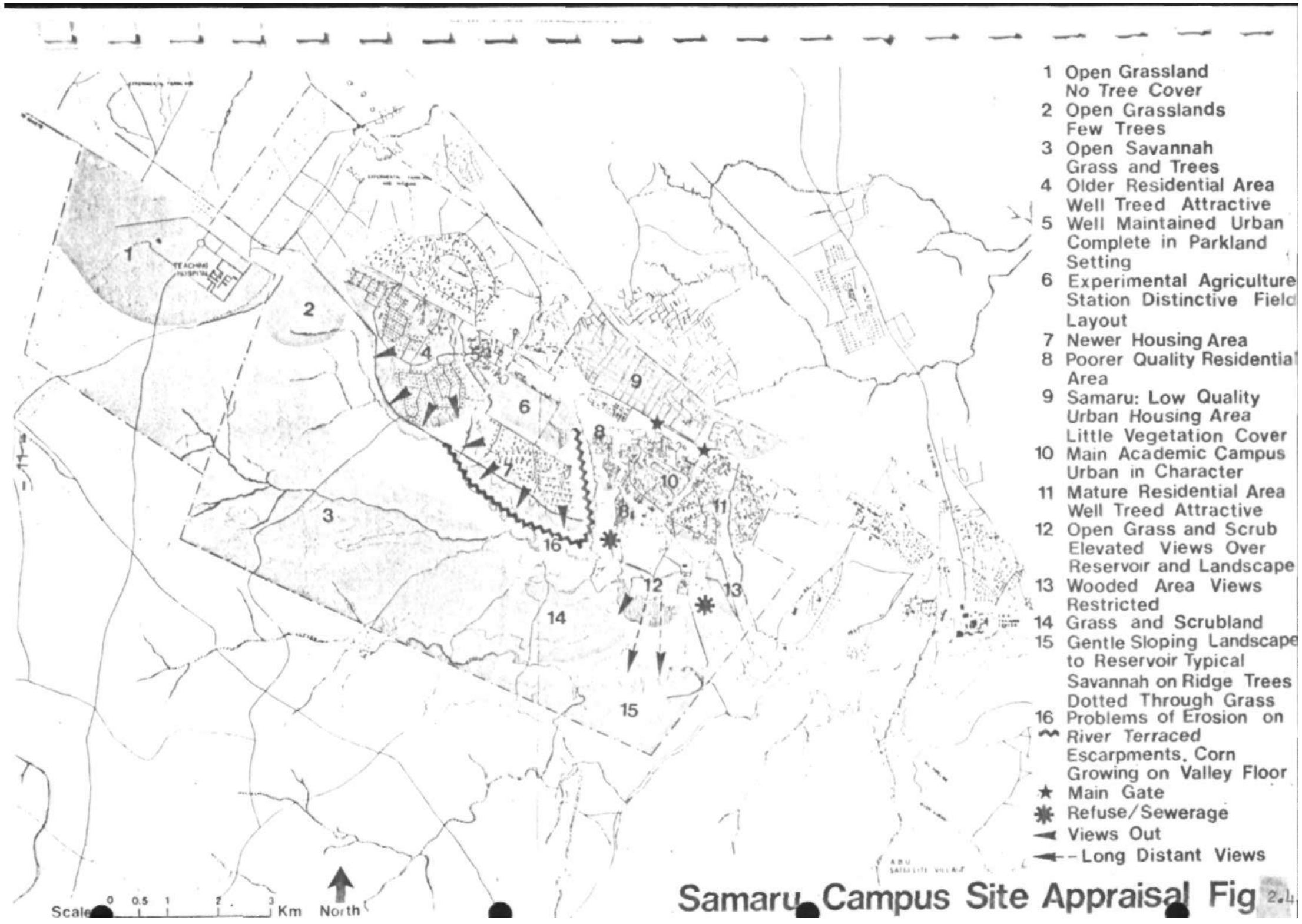
2.3.7.2 Views into the Main Campus: (m.c.) (See Appraisal drawings Figs. 2.4 & 2.5). The campus is viewed chiefly from the Zaria - Sokoto road along the northern boundary. These views are broken by the perimeter tree planting. Views into the campus across the valley and reservoir will be afforded when the road to the south is constructed.

The main campus site line is visable when travelling from the agricultural campus to the main campus. Future building development will change this skyline.

2.3.7.3 Views out of the Main Campus: The flat character of the site and its dense development restricts views from within the campus. It is not until the edge of the developed campus is reached that extensive views are afforded. The chief features are the valleys and the reservoir with rolling Savanna beyond the Kufena Hill. For the most part the housing areas have a strong sense of containment created by the form of the development and the associated tree planting. Again this is restricted to views out. To the west of the main campus the housing area has good views into and over the valley. These views are marked, however, by an unsightly refuse tip located to the north of the A.B.U. reservoir. The principal buildings on the campus provide sufficient elevation from the upper floors for extensive views beyond the campus.

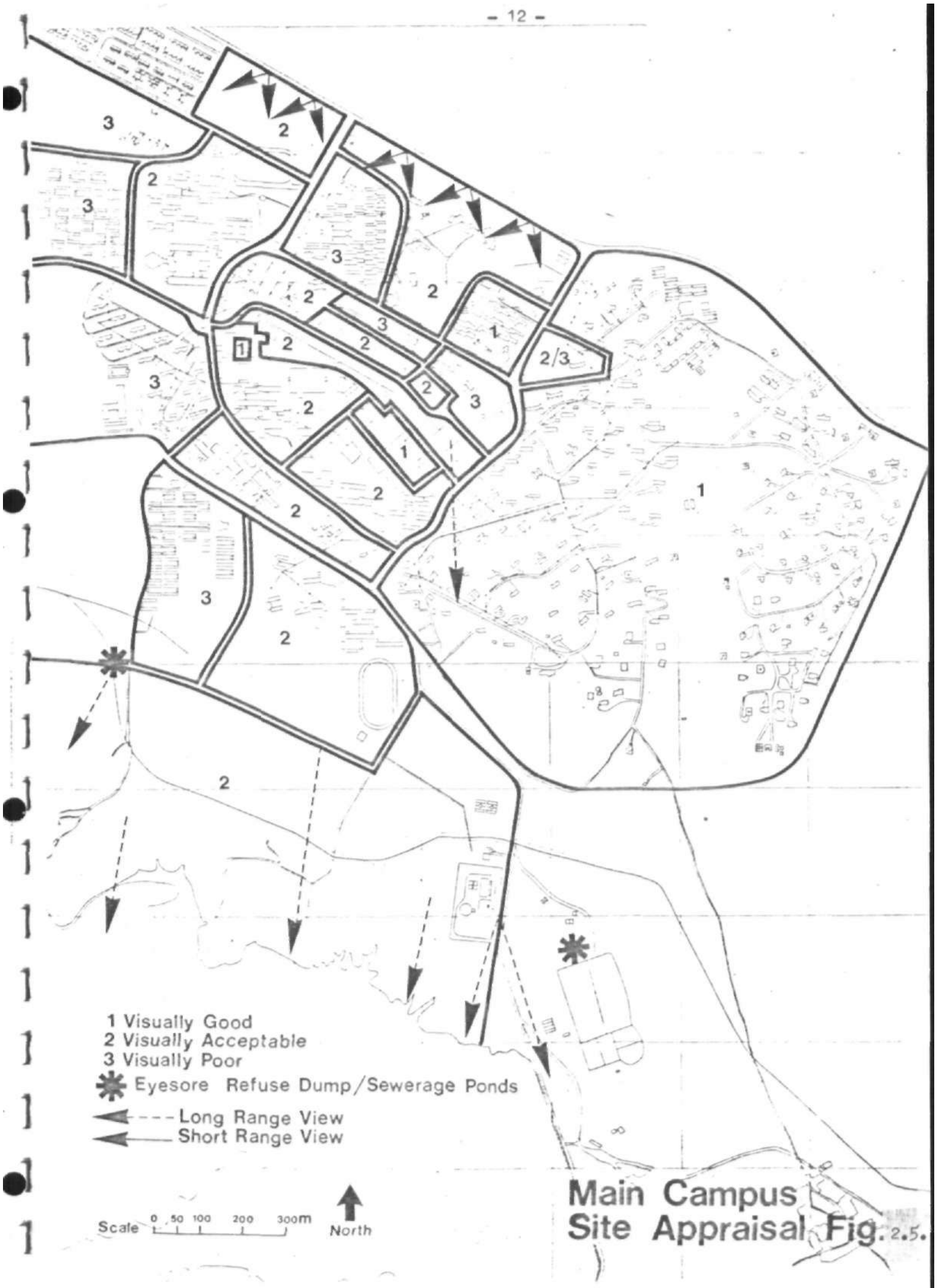
2.3.8 Existing (Natural) Landscape

Mention has already been made of the savanna character of the region. A list of the predominant tree species is given in



1 Open Grassland
No Tree Cover
2 Open Grasslands
Few Trees
3 Open Savannah
Grass and Trees
4 Older Residential Area
Well Treed Attractive
5 Well Maintained Urban
Complete in Parkland
Setting
6 Experimental Agriculture
Station Distinctive Field
Layout
7 Newer Housing Area
8 Poorer Quality Residential
Area
9 Samaru: Low Quality
Urban Housing Area
Little Vegetation Cover
10 Main Academic Campus
Urban in Character
11 Mature Residential Area
Well Treed Attractive
12 Open Grass and Scrub
Elevated Views Over
Reservoir and Landscape
13 Wooded Area Views
Restricted
14 Grass and Scrubland
15 Gentle Sloping Landscape
to Reservoir Typical
Savannah on Ridge Trees
Dotted Through Grass
16 Problems of Erosion on
River Terraced
Escarpments. Corn
Growing on Valley Floor
★ Main Gate
✱ Refuse/Sewerage
◄ Views Out
◄– Long Distant Views

Samaru Campus Site Appraisal Fig 2.4



Main Campus
Site Appraisal Fig. 2.5.

Appendix 1. This indicates tree species which will succeed in specific conditions of A.B.U. and provide the essential characteristics for unity with the landscape. There are four types of Savanna in West Africa:

1. Savanna woodland, where the trees and shrubs form a generally light canopy.
2. Tree savanna, where trees and shrubs are scattered.
3. Scrub savanna where trees are absent
4. Grass Savanna.

The general characteristics of all types of Savanna is the predominance of grass with varying degrees of taller vegetation layers depending on the type of Savanna. The savanna of the Zaria region is tree savanna but other types indicate how Savanna may develop with different limitations and management regimes. The savanna character is most evident around the valley and the reservoir. The topographical character of this zone has earlier been described in this section.

2.3.9 Existing (Managed) Landscape

Most of the trees and shrubs planted on the campus are indigenous to the area. Tree planting can be identified as two types.

1. Formal planting associated with the street tree planting programme.
2. Informal tree planting on the 'left over space between buildings. The general surface treatment between buildings is grass which is difficult to maintain because of low labour force and a lack of mechanisation. The tree species predominantly planted are given in Appendix 1.

The main campus is chiefly urban in character developed as a series of loosely related buildings. However some complexes are more structured and are arranged around courtyards. There seems to be no overall development plan which makes the campus visually less coherent and in certain places climatically inappropriate. It does not have a comprehensive tree planting policy but has evolved shrub areas, though these tend to be poorly maintained. This creates a lack of shade particularly in the male student housing areas of the main campus.

2.3.10 Campus Development

The campus has developed in a seemingly ad hoc manner. The buildings are arranged on the site in an unrelated fashion. The main campus is for the most part pleasant but suffers in places from maintenance problems. The most successful form of development, from both aesthetic and environmental (microclimatic) points of view is that associated with buildings arranged to form courtyards.

There are areas of low quality single storey development, chiefly in association with maintenance materials and storage compounds.

2.3.11 Visually Beneficial

Some of the principal buildings are good quality architecturally. Clearly this is important from a landscape point of view because of the effect of the buildings on the quality of the spaces that they bound. The beneficial effect of the courtyard layout has already been noted. Lush vegetation and particularly trees greatly improve the human environment both visually and from a comfort aspect. The courtyard enclosed by the Civil Engineering block is probably the most pleasant on the campus. This is due,

in large measure to the use of water which like vegetation has a physical and psychological cooling effect.

2.3.12 Visually Acceptable

Most buildings on the campus are of reasonable architectural standard and are fairly well maintained. Many of the principal buildings have grassed areas and planting associated with them which is very acceptable. Within the campus generally the roads associated with pedestrain ways and paved car parks, are of quite adequate environmental standards - functional and tidy.

2.3.13 Visually Detrimental

It is possible to identify reasons for poorer environmental quality. They are present throughout the site to a greater or lesser extent.

2.3.14 Elements Detracting from Environmental Quality

2.3.14.1 Buildings of Poor Quality: Buildings of poor visual quality reduce the quality of the spaces between them. These buildings tend to be service buildings of various kinds, they range from kitchens and food kiosks to food and clothes shops, for students. There are also maintenance buildings and compounds for the estate management staff.

2.3.14.2 Spaces of poor Quality: These are often associated with the poor quality buildings described above. This is aggravated in places by the ad hoc development of the campus, which tends to create ill defined, in determinate spaces. The function and detailing of the areas between the buildings obviously affects their visual and environmental quality.

2.3.14.3 The Tipping of Rubbish: Indiscriminate rubbish dumping left burning, marr the visual amenity of the areas where they are found. They also constitute a health hazard.

2.3.14.4 Building Material Dumping: It appears that building operations on the campus are concluded by leaving surplus building materials on or adjacent to the site. Where this happens an untidy cluttered appearance is created. The problem is chiefly associated with footpaths, planting areas and car parks.

2.3.14.5 Lack of Shade: The Nigerian climate requires the provision of shade for comfortable existence. This includes walking, sitting and car parking areas. In places within the campus this essential provision is lacking, often in the spaces between buildings where desire lines connect them. The tree cover through the campus is limited in extent.

2.3.14.6 Hard Surfacing: This problem can be seen as two separate elements. Firstly there is the inappropriate use of materials in the context of their specific location, for instance the use of limestone blinding in the male student areas which, without shading, produces glare in the sunlight secondly poor detailing aggravates this problem, for example, concrete path edges. Visual confusion is created by the use of too many disparate hard materials.th This is compounded by the choice of materials for which there is little skill available for implementation or maintenance, for example exposed aggregate concrete. Tarmacadam is adequate for its use but can look too harsh. Compacted earth is frequently found but it is a poor finish as it turns to dust readily and gives an air of defiliction.

2.3.14.7 Uncatered for Desire Lines

Many major buildings have base earth tracks worn between them. Besides not being fully satisfactory to walk upon they are unsightly.

2.3.14.8 Worn Areas: Large bare earth patches are frequently found around buildings often as a result of habitual car parking or student access to housing areas.

2.3.14.9 Services: Elements such as overhead power lines, detract from the environmental quality of the campus. Storm water drainage runs have a similar effect but can be acceptable where they are carefully detailed. It may be that alternative methods of handling the drainage problem would be less environmentally damaging.

2.3.14.10 General Site Maintenance: Grass areas pose particular maintenance problems. In places where they are unkempt they grow over long reducing visual quality. The damaging effect of car parking is a common environmental problem. Although the percentage of car ownership amongst students is low there are sufficient cars on the campus being parked in an ad hoc manner, and creating a problem. The parking areas themselves have little environmental quality or comfort being open and with no shading.

2.3.14.11 Furniture: The lack of provision of outdoor furniture means that in door furniture is taken outside for use. As well as making the site untidy it suggests an unsatisfied demand for that sort of amenity.

2.3.14.12 Lighting: The general lack of external lighting reduces the amenity of the campus particularly for pedestrians. The major roads and entrances are though well lit.

2.3.15 Circulation Problems: This can be seen as two separate items:

1. Vehicular circulation: From a design point of view the main entrance from the road lacks the scale and landscape treatment suited to the prestige of A.B.U. Note can be made however to the problem of cyclists and motorcyclists. There is little physical control of their movements and they use both roads and footpaths, and take short cuts across planted areas. Also there is no provision for cycle or motorbike parking or storages.

2.3.15.22 Pedestrian Circulation: Little consideration has been made for pedestrain movement through the site, students and staff use the roads, car parks and service areas to reach their destinations There is little segregation between vehicular and pedestrian circulation, which again reduces the amenity of the campus.

2.3.16 Erosion Problems

The river terraces along the valley and towards the margins of the reservoir are suffering from soil extraction, sheet and rill erosion. This is in part due to the steepness of the slopes (70% +) and the lack of vegetation cover which binds the soil together and protects the surface from abrasion. Particulate pollution of the reservoir by washed down soil is also a problem.

2.3.17 Campus Landscape Management

The landscape management strategy of the main campus is formulated by the campus committee which is made up of personnel

from Biological Sciences, Environmental Design and the Estates Department. This Committee is responsible for campus drainage the re-establishment of vegetation; the provision of landscaping for new projects and the control of animals. The impact of landscape proposals on the installation of electricity water and drainage services is dealt with in conjuction with the Estate Department.

The implementation and physical management of the site is under the control of the chief technical officer who is responsible to the campus committee. He directs several foremen who control teams of gardeners (60 in total).

Grass cutting is the major management problem. Besides shortage of labour and lack of mechanical plant the problem is made worse by the size of some of the grassed areas which have to be coped with. Small area of grass within confined spaces are awkward to know. Consideration should be given to ways of reducing this problem and note taken for future development. Refuse is another problem which is currently receiving attention from the Estates Department. The location and form of new dustbin enclosure, to rationalise the refuse problem is being considered.

3.0 ANALYSIS OF MASTER PLAN (1980-1995)

3.1 Policies and Objectives

Summary: Ahmadu Bello University will continue to expand in order to provide the Educational and Research facilities as required by the people of Nigeria. Emphasis will be changed towards the sciences and specialised departments and also to the output of teachers. The ratio of intake of university students should be 60 science: 40 social sciences as against a reverse situation that obtains presently. In addition to academic expansion, Ahmadu Bello University will continue to provide all necessary facilities required by students and staff in the pursuit of learning particularly cultural, social, religious and housing facilities. The policies and objectives can be outlined as follows.

3.1.1 To provide educational opportunities for the expanding needs of Nigeria and to be able to accept in full the ever increasing, number of applicants attracted to the university by both its facilities and its reputation.

3.1.2 To provide a balanced development of the facilities for students and staff to cater for educational, administrative, cultural and social needs.

3.1.3 To fully utilise all the university's existing facilities - academic, ancilliary and land holdings - in order to obtain maximum use of minimum capital investment.

3.1.4 To fully utilise the existing administrative, academic and course structures oso that increased enrolment can be absorbed with minimum capital investment.

3.1.5 To maintain the Samaru Campus as the administrative headquarters of all university's facilities but at the same time, to expand all other campuses as required.

3.1.6 To expand the Engineering, Science and Medical Sciences facilities in order to establish national centres of specialised learning.

3.1.7 To attain a ratio of university students of 60 science: 40 social sciences as against a reverse situation that obtain presently.

3.1.8 To retain the predigree facilities of the school of Basic Studies in order to ensure a sufficient supply of suitably trained candidates of science and science based disciplines.

3.1.9 To restrict further development in the existing central core of the Samaru Main Campus only to essential projects and to those facilities which are needed for the wider functions of the university as described in item 3.1.5.

3.1.10 The Kongo Campus will continue to house the Institute and Faculties of Administration and Law and will be expanded to fufill the requirements of items 3.1.1 and 3.1.2.

3.2 Enrolment Projections and Academic Structure

3.2.1 Enrolment Projections: As part of Nigeria's national policy of increasing university education, A.B.U. is planned to expand beyond the existing total enrolment of 13,951 students of which 8,419 are enrolled in the faculties.

Factors affecting ultimate size of enrolment and realisation time are:

- the quantity and quality of students
- staff availability
- limitations imposed by financial resources
- Physical limitations e.g. Samaru site.
- problems of construction, management and operation.

These factors are beyond the immediate control of A.B.U. Hence precise enrolment projections are to a large extent a matter of conjecture and can only be regarded as an intent of future policy. The Samaru Campus total population could be restricted due to physical limitations imposed by the present site. Research has indicated that the Samaru Campus could accomodate an ultimate enrolment of approximately 32,000 students. As a result of discussion between the A.B.U. and National Universities Commission (NUC) authorities it was agreed that the faculty enrolment would expand to approximately 15,000 (by 1985) and reach a maximum limit of 32,000 (by 1995). Any further expansion would again depend on the university acquiring more land after 1995. The rate of growth for both faculty and total student enrolment is illustrated in fig. 3.1 while Tables 3.1 & 3.2 outlines the anticipated increase in enrolments for all teaching units of A.B.U. up to 1995. The corresponding Full-Time-Equivalents (F.T.E.) have also been recorded.

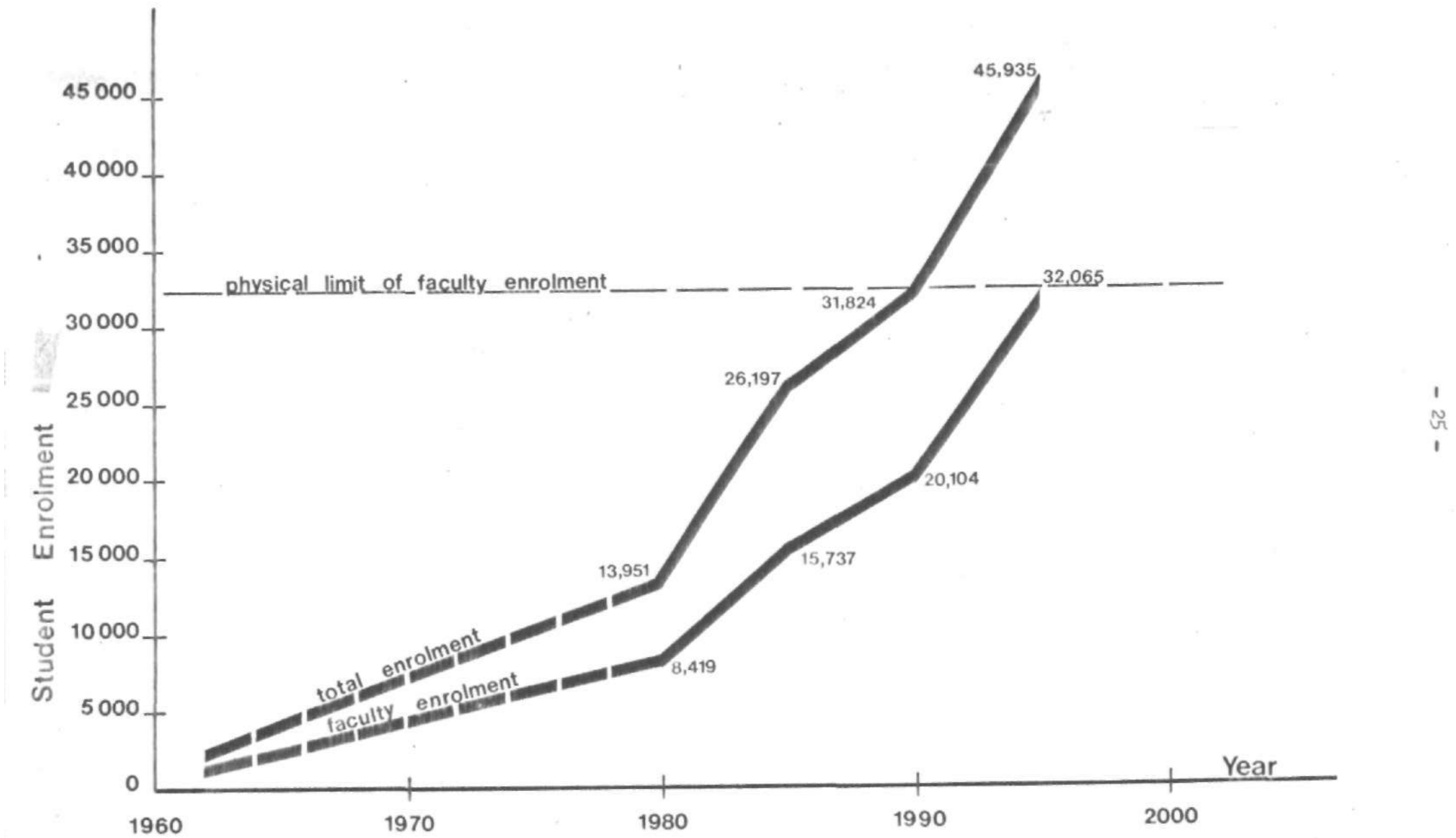
The rate of Growth varies between teaching units. For example, the expansion plans of the Faculties of Science, Veterinary Medicine and Pharmaceutical Sciences are governed by their physical facilities. Consequently the growth rate up to 1985 is in accordance with the maximum student in take the buildings can accomodate. Similarly the Faculty of Human Medicine enrolment projections depend on the availability

TABLE 3.1: Enrolment Projections & F.T.E. 1980 & 85

Unit	Enrolment	F.T.E.	Enrolment	F.T.E.
Science	580	656	1670	1893
Engineering	502	482	1394	1338
Medicine	585	373	1060	1023
Env. Design	830	833	1120	1124
Pharm. Science	227	228	554	557
Vet. Medicine	214	195	591	539
Agriculture	322	339	711	749
Education	1311	1157	3100	2736
Arts & Social Sciences	1887	2027	2547	2736
Administration	1396	1396	1881	1881
Law	765	165	1033	1033
Sub-Total (Faculty)	8619	8451	15661	15609
DAC (Samaru)	584	584	1180	1180
DAC (Bakaru)	80	80	160	160
DAC (Kabba)	240	240	480	480
DAC (Kaduna)	290	290	580	580
Inst. of Education H.Q.	285	285	535	535
A.T.C. Zaria	1201	1201	1800	1800
A.T.C. Kano	1200	1200	1800	1800
S.B.S.	1084	1084	2200	2200
C.N.C.S.	15	15	25	25
Adult Education	30	30	80	80
Educ. Technology	10	10	30	30
Inst. of Health				
(Zaria/Shika)	167	167	860	860
(Kaduna)	280	280	400	400
(Kano)	66	66	100	100
Ind. Training	-	-	300	300
Sub-Total (Non-Faculty)	5532	5532	9950	9950
Total (a + b)	14151	13983	26191	26139

TABLE 3.2: Enrolment Projections & F.T.E. 1990 & 1995

Unit	1990 Enrolment	1990 F.T.E.	1995 Enrolment	1995 F.T.E.
Science	2118	2394	3568	3844
Engineering	2295	2203	3495	3403
Medicine	1500	1454	3000	2936
Env. Design	1340	1344	1740	1744
Pharm. Science	794	796	1594	1596
Vet. Medicine	973	901	1973	1835
Agriculture	969	1020	9969	1020
Education	3100	2736	3300	2936
Arts & Social Sciences	3000	3222	4400	4622
Administration	2540	2540	3429	3429
Law	1395	1395	1883	1883
Sub-Total (Faculty - a)	20024	20005	29351	29248
DAC (Samaru)	1180	1180	1180	1180
DAC (Bakaru)	160	160	160	160
DAC (Kabba)	480	480	480	480
DAC (Kaduna)	580	580	580	580
Inst. of Education H.Q.	535	535	535	535
A.T.C. Zaria	1800	1800	1800	1800
A.T.C. Kano	1800	1800	1800	1800
S.B.S.	2200	2200	2200	2200
C.N.C.S.	25	25	25	25
Adult Education	130	130	180	180
Educ. Technology	50	50	70	70
Inst. of Health:	-	-		-
(Zaria/Shika)	1860	1860	1860	1860
(Kaduna	500	500	600	600
(Kano)	200	200	300	300
Ind. Training Centre	300	300	300	300
Vet. Hospital	-	-	600	600
S.C.S.	-	-	3914	3914
Sub-Total (Non-Faculty = b)	11800	11800	16584	16584
Total (a + b)	31824	31805	45935	45832



Enrolment Growth Trends and Projections. Fig. 3.1.

- 25 -

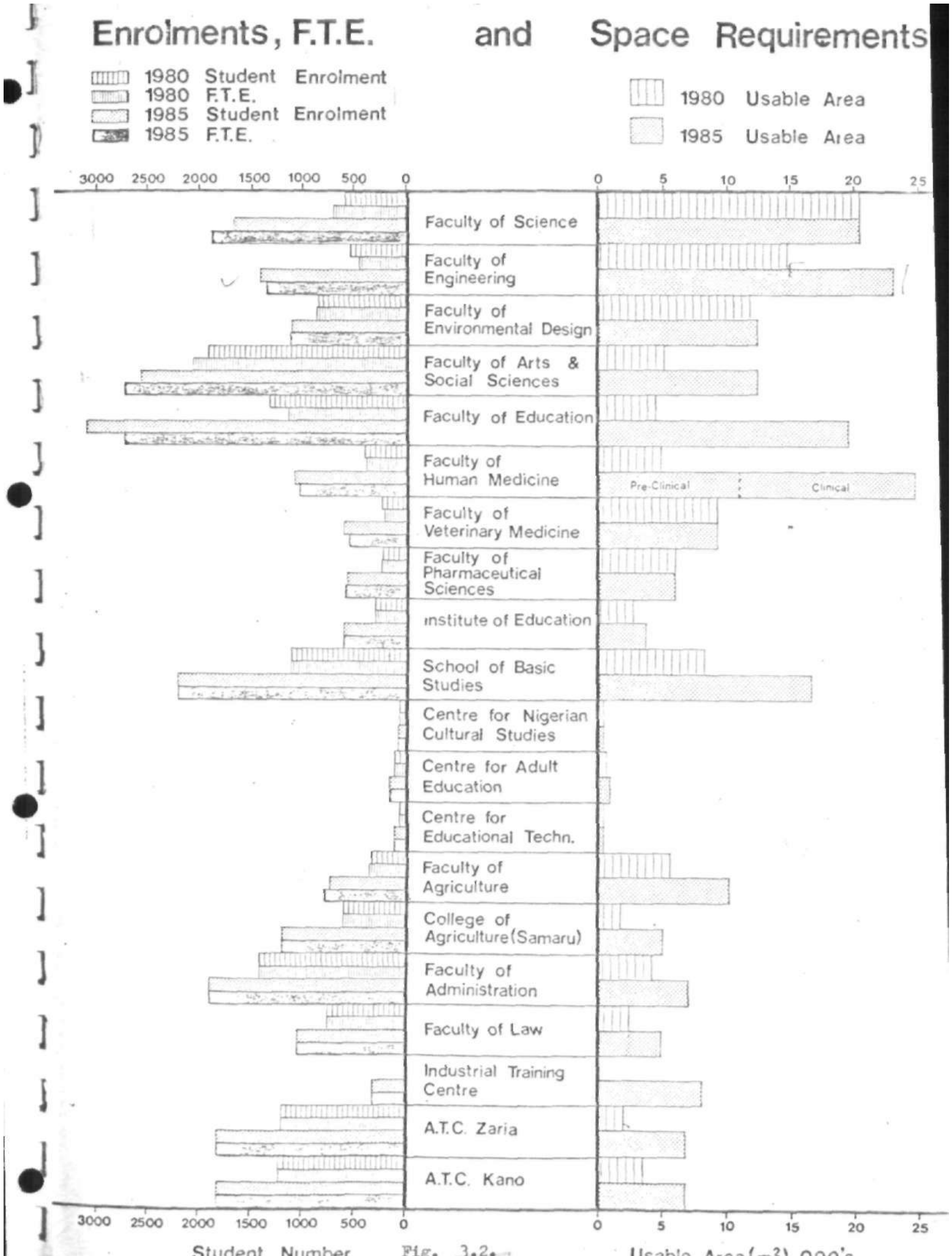

Enrolments, F.T.E. and Space Requirements
1980 Student Enrolment
1980 F.T.E.
1985 Student Enrolment
1985 F.T.E.
1980 Usable Area
1985 Usable Area
3000 2500 2000 1500 1000 500 0
0 5 10 15 20 25
Faculty of Science
Faculty of Engineering
Faculty of Environmental Design
Faculty of Arts & Social Sciences
Faculty of Education
Faculty of Human Medicine
Pre-Clinical
Clinical
Faculty of Veterinary Medicine
Faculty of Pharmaceutical Sciences
Institute of Education
School of Basic Studies
Centre for Nigerian Cultural Studies
Centre for Adult Education
Centre for Educational Techn.
Faculty of Agriculture
College of Agriculture(Samaru)
Faculty of Administration
Faculty of Law
Industrial Training Centre
A.T.C. Zaria
A.T.C. Kano
3000 2500 2000 1500 1000 500 0
0 5 10 15 20 25
Student Number
Usable Area(m²) 000's

Fig. 3.2.

of new clinical facilities. The Faculties of Agriculture and Education projections reflect the A.B.U. policy of expansion for these disciplines in accordance with the national development planning process. All other faculties, including the Faculty of Arts and Social Sciences, have assumed a 35% increase which reflects the growth rate maintained during the 1970 - 80 period. The Division of Agric. Colleges and School of Basic Studies are expected to expand by approximately 100%, whereas all other teaching units will increase enrolment in accordance with the Development office proposals of 1980.

A.B.U. expansion policy after 1985 is aimed ultimately at achieving a 60:40 Science to Arts ratio, and this target in itself, influences the total enrolment levels, if the present arts capability is to be fully utilised.

3.2.2 Academic Structure

3.2.2.1 Present Academic Pattern: The teaching facilities provided by A.B.U. include 11 faculties, 6 colleges, 3 insitutes 3 specialist centres and a School of Basic Studies. Overall there are 68 departments.

Table 3.3 illustrates the breakdown per Faculty and outlines the senior academic staff: student ratio.

The 3 year course is usually divided into three parts, however it is envisaged that future policy will abandon the 3 year degree with each faculty providing 4-year programmes. This has already been introduced by some faculties and by certain departments especially in the professional disciplines such as Agriculture and Chemical Engineering. The 5-year programme is adopted by Human Medicine, Veterinary Medicine and Architecture.

TABLE 3.3: ABU STAFF AND STUDENT POPULATIONS - 1980

Main Campus	Students	Senior Academic Staff	Senior Technical Staff	Senior Administ. Staff	Intermediate & Junior Staff	Total
Faculty of Science	580	163	35	2	243	1023
Faculty of Engineering	442	77	29	-	120	668
Faculty of Environmental Design	830	77	11	3	109	1030
Faculty of Arts &SoSocial Science	1887	.188	.14	.1	.111	.2201
Faculty of Education	1311	90	1	-	50	1452
Institute of Education	285	59	-	-	645	989
School of Basic Studies	1084	112	3	3	88	1290
Faculty of Medicine	160	24	2	1	44	231
Faculty of Vet. Medicine	214	66	20	5	204	509
Faculty of Pharm. Sciences	227	35	6	-	71	339
Inst. of Health H.Q.	-	-	-	12	8	20
Centre for Nig. Cultural Studies	15	41	-	-	52	108
Centre for Adult Education	30	26	-	-	.32	.88
Centre for Educational Technology	10	8	-	-	14	.32
Centre for Social & Econ. Research	-	16	-	-	19	35
Computer Centre	-	-	13	-	29	42
Central Administration	-	-	-	118	431	549
Students Services	-	-		26	2033	2059
University Services	-	-	-	37	1256	1293
Sub-Total	7075	982	134	208	5559	13958

Teaching methods change from faculty to faculty and from Institute to School. These teaching methods may involve student movement between faculties inorder to fulfil the intense course o options available. Certain faculties provide courses for students enrolled in other faculties and various academic relationships between faculties and departments exist. This is particularly true of the Samaru Campus, where students may be taught outside of their faculty of enrolment for a greater percentage of the course. It is clear that the most frequent student movement within the main campus area is concentrated between the faculties of Science-Education, Science-Arts & Social Sciences, Science-Engineering, and Education - Arts & Social Sciences.

Table 3.1 & 3.2 illustrates the 1980 enrolments and F.T.E.'s for each unit of A.B.U. and also lists the anticipated projections for 1985, 1990 and 1995.

. 3.2.2.2 Future Academic Organisation 1980-95:

Samaru/Shika Campus: It is envisaged that the A.B.U. site at Samaru consist of five major academic areas by 1995. The following table illustrates the anticipated organisation.

Samaru Campus - Academic Organisation, 1995

1. Main Campus

To contain - Faculty of Science
Faculty of Engineering
Faculty of Environmental Design
Faculty of Human Medicine
Faculty of Veterinary Medicine
Faculty of Pharmaceutical Sciences
Centre for Nigerian Cultural Studies
Centre for Economic & Social Studies Research

2. Main Campus Extension

To contain: - Faculty of Education
- Faculty of Arts & Social Sciences
- Institute of Education
- Specialist Education Centres (Media Complexs)

3. Agricultural Campus

To accomodate: - Institute for Agricultural Research
- Faculty of Agriculture
- Division of Agric. Colleges H.Q.
- D.A.C. Samaru
- Agric. Extension & Research Liaison Services
- Savannah Research Station
- Department of Agric. Engineering (Faculty of Engineering)

4. Collegiate Area

To consist of - School of Basic Studies
- School of General Studies
- College of Science & Technology
- College of Arts
- Industrial Training Centre

5. Hospital Campus

To accomodate - University Teaching Hospital (including Faculty of Medicine)
- Institute of Health H.Q.
- Nurses Training School.

3.2.2.3 Academic Changes 1995: As a result of the increase in enrolments certain changes in the academic structure will be necessary. The academic changes pro-posed consist basically of two

3.2.2.3.1 Extension to the Main Campus: The existing Faculty based teaching system on the main campus should be extended, because of congestion problems, onto a new campus situated within walking distance of the main campus. This new area will be termed "The Extension to the main Campus" and in terms of teaching and academic administration will be considered an integral part of the main existing Faculty system. Since the most frequent student movement within the main campus area is concentrated between the Faculty of education and Faculty of Arts & Social Sciences and also due to the several academic relationships that exist between the Faculty of Education, Institute of Education Headquarters and media complex it is proposed that the Faculties of Arts and Social Sciences and Education, together with the institute of Education H.Q. and media complex be relocated in the extension area indicated on the Samaru main campus master plan. See fig. 3.3, See also fig. 2.3. This area will contain the following Departments and units.

(i) Faculty of Arts & Social Sciences

- Department of Archaeology
- Department of Economics
- Department of French
- Department of English
- Department of History
- Department of Nigerian and African Languages
- Department of Political Science
- Department of Sociology
- Department of Geography

(ii) Faculty of Education

- Department of Education
- Department of Library Science
- Department of Physical & Health Education
- Department of Vocational & Technical Education

(iii) Institute of Education H.Q.

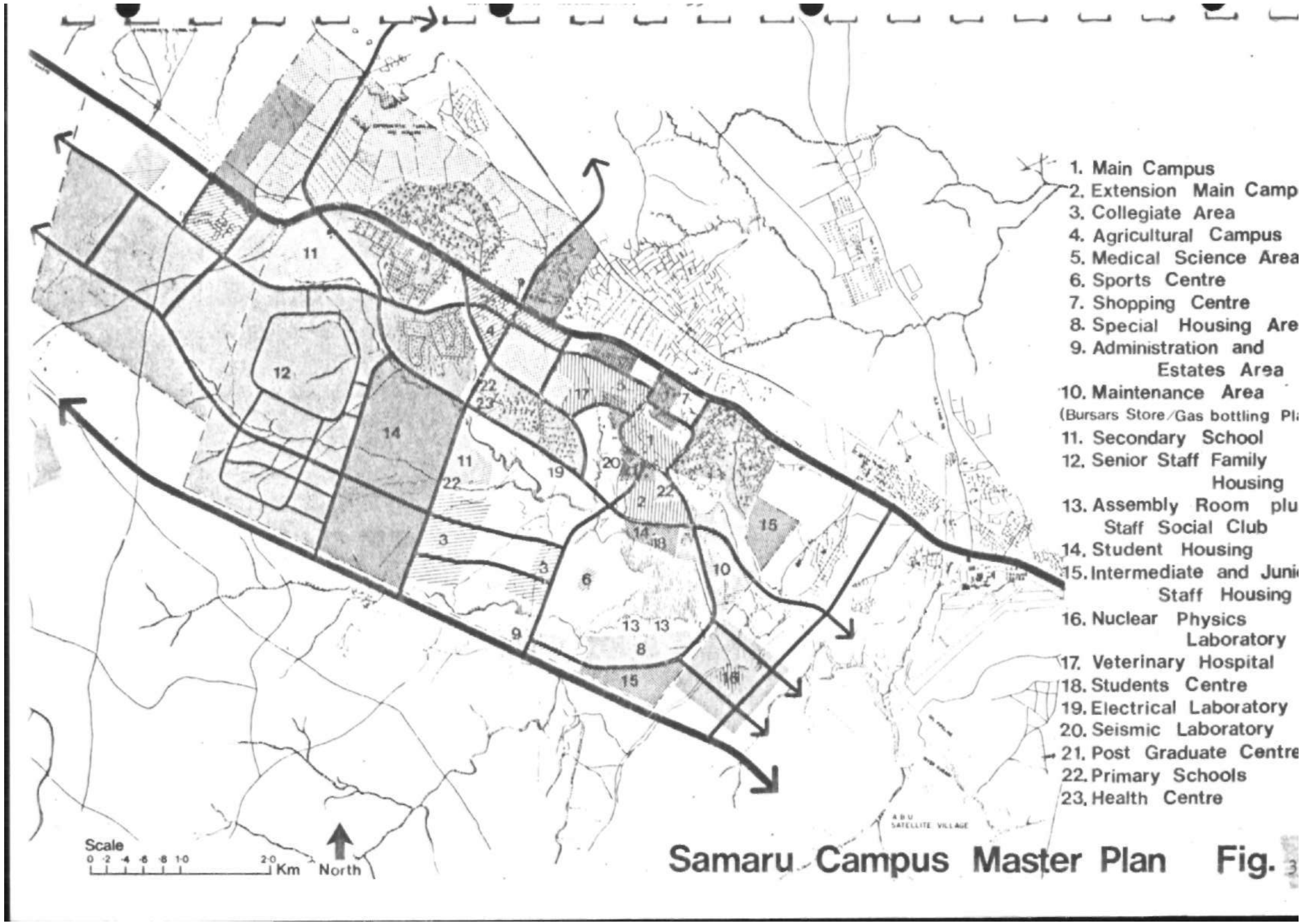
(iv) Media Complex

- Centre for Adult Education
- Centre for Educational Technology
- Mass Communication - Audio-visual unit

The new location of Arts and Social Sciences is central and allows for service teaching to continue without the problems of distance or congestion of the main campus. The Faculty of Arts and Social Sciences will enrol 3,000 students in the Extension area and the Faculty of Education 3,100 students by 1990. Any further expansion up to 1995 will be accomodated in the collegiate area - college of arts.

FThe faculty of Science will take-over the vacated Arts and Social Sciences and Institute of Education H.Q. buildings to accomodate an enrolment of 2,118.

3.2.2.2.3.2 Collegiate Area: It is appreciated that the Faculty system cannot operate indefinitely since increased enrolment may cause physical, academic and administrative congestion. Therefore it is suggested that in order to accomodate growth in the long term, 1995, the university adopt a collegiate system of academic organisation as self-contained academic units so that students will not need to travel between course lectures. The four-year course



Samaru Campus Master Plan Fig. 3

might be introduced and a School of General Studies for first year students will be established. The following is the composition of the collegiate area

(i) College of Arts

- Department of English
- Department of French
- Department of Economics
- Department of Nigerian & African Languages
- Department of Political Science
- Department of History
- Department of Geography
- Department of Sociology
- Department of Fine Arts
- Department of Architecture

(ii) College of Science & Technology

- Department of Biological Sciences
- Department of Biochemistry
- Department of Chemistry
- Department of Geology
- Department of Microbiology
- Department of Mathematics
- Department of Agric. Engineering
- Department of Civil Engineering
- Department of Electrical Engineering
- Department of Mechanical Engineering
- Department of Chemical Engineering
- Department of Surveying
- Department of Textile Science & Technology

(iii) School of General Studies

(iv) School of Basic Studies

(v) Industrial Training Centre.

3.3 Extension to the Main Campus

3.3.1 Enrolments, FTE's and Additional Space Requirements 1980-95

This section evaluates the additional usable and balance areas required to accomodate the expected increases in enrolments. The existing Areas and the NUC recommendations for 1985 have been recorded for all teaching units associated with A.B.U. The academic buildings have been categorised into five accomodation types, viz,

1. Departmental Areas

   - to include: Academic Staff Offices
     Secretarial and Clerical Offices
     Academic Storage space, filing etc
     Intermediate & Junior Staff Office
     Senior Technical Staff Offices
     Seminar space
     Staff Research Space
     Laboratories workshops, etc.

2. Lecture theatres and classrooms

3. Administration areas

   to include: Dean's Offices
   Faculty Registry etc.

4. Communal and Social Facilities

   to include: Libraries
   Common Rooms

5. Ph.D. Research Species

See Appendices G - K for the breakdown of space requirements of the various accommodation types for the Extension to the main campus from 1980 through 1995.

3.3.2 Academic Development Programme

This section describes the future plans for all academic units of the Extension area for the periods 1980-1985-1990-1995. The information presented in tabular form contains the following data: Enrolment levels, usable floor space (in M^2) and location of all facilities over the masterplan time scale.

As part of the programmed academic expansion, the transfer of academic units from existing premises to new premises and the occupation of vacated premises by expanding units, forms a critical part of the development programme. See Table 3.4.

TABLE 3.3g: Enrolments, Usable Area & Location of Teaching Units: Extension to Main Campus 1980-1995

Unit		1980	1985	1990	1995
Arts. & Social Sciences	Enrolment	1887	2547	3000	4400
	Usable area	5113M^2	12389m^2	4590M^2	21268M^2
	Location	Existing space shortage of 4085M^2 Existing buildings on Main Campus	Main Campus 1980 buildings + buildings of 7276M^2 on extension are	Vacate existing buildings and move completely to main campus	As at 1990 plust further expansion within college of arts in the collegiate area
Education	Enrolment	1311	3100	3100	3300
	Usable area	4505M^2	19548M^2	19548M^2	20748M^2
	Location	Existing building on main camp campus	Vacate existing buildings and move to new buildings on the extension to main campus	Extension to main campus at 1985	As at 1990 but further expansion of 1,200M^2 within the college of arts in the collegiate area
Institute of Education	Enrolment	285	535	535	535
	Usable area	2785M^2	3693M^2	3693M^2	3693M^2
	Location	(excluding printing offices) existing building on main campus	As at 1980 plus new buildings of 908M^2 in Extension to main campus	Vacate existing buildings (1985) and move completely to extension to main campus	(all future growth to be at teaching facilities at Zaria, Kano etc) as at 1980
Centre for Adult Education	Enrolment	30	80	130	180
	Usable area	2785M^2	3693M^2	3693M^2	3693M^2
	Location	Main Campus due for demolition	Relocation on Extension to main campus	As at 1985 plus additional new buildings	As at 1990 plus additional buildings
Centre for Educational Technology	Enrolment	28510	30	50	70
	Usable area	301M^2	303M^2	506M^2	707M^2
	Location	Existing building on main campus	Relocated on extension to main campus	As at 1985	As at 1990

4.0 CASE STUDY: FACULTY OF ARTS & SOCIAL SCIENCES, A.B.U.

4.1 Student and Staff Population, 1980

The Faculty of Arts and Social Sciences has the highest student enrolment of all A.B.U. Faculties and teaching units standing at 1,887 in 1980 with a corresponding F.T.E. of 2,027. Correspondingly it has the highest staff population. The following table shows the students and staff population for 1980.

Year	Students	Senior Academic Staff	Senior Tech. Staff	Senior Admin. Staff	Intermediate and Junior Staff	Total
1980	1887	188	14	1	111	2201

Present Academic Structure

The general academic structure described in section 2 for all Faculties of A.B.U. also holds for the Faculty of Arts and Social Sciences.

4.2.1 Composition

There are 9 Departments in all, the Department of archaeoly being a late addition, carved out of the Department of History. The following is a list of the Departments

(i) Department of Archaeology
(ii) " " Economics
(iii) " " French
(iv) " " English
(v) " " History
(vi) " " Nigerian & African Languages
(vii) " " Political Science
(viii) " " Sociology
(ix) " " Geography

4.2.2 Academic Survey: Departments (excluding Archaeology)

This subsection evaluates the actual usable and balance areas for the different accomodation types as against the expected NUC recommendations. The academic buildings have been categorised into 5 accomodation types the same as found in section 3.

4.2.2.1 Departmental Area

- usable area/F.T.E. (NUC) = 5.5, 3.4 or 2.8 M^2/F.T.E.
- Full-time-Equivalent = 2,027
- theoretical usable area = 6,466M^2
- actual usable area = 3,427M^2
- different between actual and theoretical U/A = 3,039M^2
- actual balance area = 1,218M^2
- theoretical balance area = 3,556M^2
- Relationship to 1980 enrolment = +50%

Comments

According to NUC standards the buildings currently occupied are overcrowded by 1,008 F.T.E students or approximately 50% of present enrolment.

4.2.2.2 Lecture Theatres and Classrooms

- usable area/enrolled student (NUC) = 0.4M^2/students
- student enrollment 1980 = 1887
- theoretical admin. area (NUC) = 755M^2
- actual admin. are = 144M^2
- difference between theoretical and actual admin. area. = 611M^2
- theoretical student intake according to present capacity = 360

4.2.2.4 Communal and Social Facilities

1. Library space
   - Area/enrolled student (NUC = 1.35M^2/students
   - Actual student enrolment (1980) = 1887

- theoretical library space = 2,359M^2
- actual library space = 568M^2

2. Staff Common Rooms

- Area/enrolled student NUC = 0.35M^2/student
- Student enrolment 1980 = 1887
- theoretical common room space = 660M^2
- actual common room space = -
- difference between theoretical and actual room space = 660M^2

4.2.2.5 Ph.D. Research Space

- area/Ph.D student (NUC) = 3.2M^2/Ph.D student
- No. of Ph.D students 1980 = 28
- theoretical area for Ph.D. research = 90M^2
- actual area for Ph.D research = (included)
- difference between actual and theoretical = -

4.3 Future Space Requirements 1990

This subsection evaluates the additional usable and balance areas required to accomodate the expected increases in enrolments projected for 1990, the year corresponding to the ultimate students enrolment in the Extension area. (See section 3.3.1).

The existing area have also been recorded. See Tables 4.1 and and 4.2 below.

TABLE 4.1: Future space Requirements and Projective levels 1990

	1980	1990
Enrolment	1887	3000
Equivalent F.T.E.	2027	3222
Department Area (M^2)	3,427	10,248
Lecture rooms and Classrooms (M^2(	1561	1950
Admin. Area	144	1200
Communals and Social (M^2)	-	1050
Ph.D Research Space (M^2)	-	142
Balance area (M^2)	1218	8024
Total area	6350	22754

TABLE 4.2: Additional Space Requirements and Projection Levels (NUC) 19

		1980	1990
(1)	Department Area Additional U/A(M^2)	3,039	6821
(2)	Lecture Rooms Additional U/A (M^2)	-	389
(3)	Admin. Areas Additional U/A (M^2)	661	1056
(4)	Communal and Social Additional U/A (M^2)	660	1050
(5)	Balance Area (55%)	1218	5124
(	Total (1-5)	5528	14440

4.4 Comments and Conclusions

According to NUC standards present facilities (apart from category (2) appear to be inadequate. Inorder to implement projec[illegible] level of 3000 in 1990 a 225% increase in Departmental usable area [illegible] be required for the Faculty of arts and social sciences. It is [illegible] that arts and social sciences be relocated within the main campus extension area inorder to accomodate the proposed increases and satis[illegible] N.U.C. standards.

5 - DESIGN CONSIDERATIONS

5.1. Lanscape Proposals

The landscape character of any development should be determined by the context of its location, nature, and function of the site as well as the maintenance and management capabilities of the client. Financial resources obviously play an important part but often affect the details rather than the principles. The chief features of the Zaria region is the tree savanna. This is the location context. Consideration must be given to how the site meets and relates to its surroundings. For the new campus to sit happily in the lanscape it must be feathered into and be unified with its surroundings. A bold simple large-scale lanscape treatment, especially planting, is recommended. Bold simple lanscapes are easier and cheaper to maintain than fragmented ones.

5.1.1. Outdoor spaces

Spaces should be landscaped to have the following characters:

1. Shade
2. An appropriate hard surface for walking
3. Appropriate soft planting
4. A sense of containment

To achieve these the following principles should be adopted:

1. Tree planting to provide shade and cool
2. Use of shade structures, where appropriate in association with climbers to provide shade and reinforce lines of movement and help contain or subdivide space.

3. Plant up small areas with shrubs and ground cover to improve the visual quality of space and limit to a minimum maintenance.

4. Where bare earth is the 'hard surface' areas should be finished with an appropriate material. Depending on the amount of use and proximity to buildings these could include:

   (a) Crushed gravel (particularly for footpaths and car parking bays)

   (b) Tarmac with a suitable aggregate rolled into the top surface - for roads, car parks and heavily used footpaths.

   (c) Insitu concrete - for same pedestrian areas. Generally the craft expertise is lacking for a good finish so they should only be used where a high standard of quality control can be achieved.

   (d) Unit paving - this includes, precast concrete paving slabs, concrete blocks, stone blocks, and brick paviers.

   Quality control is easier as these materials are produced under factory conditions and laid. They also give an impression of high quality to an area.

5. Lines of trees, shrub planting (unclipped and hedged), structures such as pergolas, walls and fences can be used as measures of achieving the sense of containment in areas, where the space tend to bead out.

6. All footpaths and roads should be planted alongside with an appropriate species of tree which developes a good canopy which can afford shade.
7. All courtyards should have one or more shade trees depending on the size of the space. This will cool the air in the courtyard which then cools the building.
8. All car parks should be planted with a matrix of shade trees - or if that is not always possible then shade structures should be constructed over the parking bays and climbers trained over them.
9. Shade structures with climbers should be used more extensively to connect buildings together and over principallwalkways.

5.1.2. Hard surfacing

1. All car parks should be finished with a proper hard material. These can include:
   (a) tarmac with an exposed aggregate finish rolled into the surface.
   (b) concrete blocks or brick paviers.
   (c) parking bays (in low use areas) can be gravel, of the same type as rolled into the tarmac.
2. Footpaths should be ralinalised and paved.
3. Particular attention should be paid to edging details to prevent cracking up.
4. Generally in larger paved areas precast materials should be used to improve quality control, or where insitu materials are used it should exploit local intent in using a particular material.

5.1.3. Desire Lines

Insistent desire lines should be rationalised to absorb all the pedestrian traffic and paved. Plant materials can be used to divert and channel people, but only if the basic desire line respects the required line of movement.

5.1.4. Services

These should be incorporated into the overall design so as to minimise these visual intrusions. Where appropriate, overhead power lines should be carefully detailed so that they enhance rather then detract from the area. Where possible underground drains, with soak aways should be used. Services should be carefully designed in association with both hard and soft landscape. Where services need to be opened up on occasions this should be taken care of in the design. Adequate inspection chambers or removable duct covers should be incorporated to avoid digging up and repatching hard surfaces. The location of services in relationship to tree planting should also be considered, to prevent tree root activity damaging services and maintenance workers damaging trees when opening up services.

5.1.5. Car parks

Car parks should be located where they are required, and properly surfaced and detailed. Proper footpaths from car parks to buildings should be provided. Car parks should be planted with trees as far as possible to provide shade, or shade structures with climbers constructed over the parking bays.

A policy of shrub planting around all car parks to screen and soften them should be adopted.

In larger car parks incidental bays (say every 8-12 bay) should be planted up with shrubs, to soften and visually break up the car park, reducing its scale.

5.1.6. Furniture:

Purpose built sitting areas should be provided at strategic points on the campus. These generally should be associated with:

1. Main entrances to buildings
2. The crossing of major pedestrian ways
3. In association with the convenience kiosks and shops.

Sitting areas should incorporate, outdoor seating, lighting, shade (either structure or tree) litterbin.

A house 'style' for outdoor seating, litterbins, sign posting etc should be adopted to provide unity and cohesion to the campus.

All roads, car parks, pedestrian ways and piazzas should be adequately lit. It should do more than merely fulfil the utilitarian need to light a space but should be designed to improve the quality of the spaces. Different forms of indirect lighting can be developed for example lighting the underside of tree canopies and the shrub masses and indirect lighting on the buildings.

The light fittings should have the house style throughout the campus to provide unity and cohesion. The scale of the fitting should also be appropriate for the space and use to which it is put.

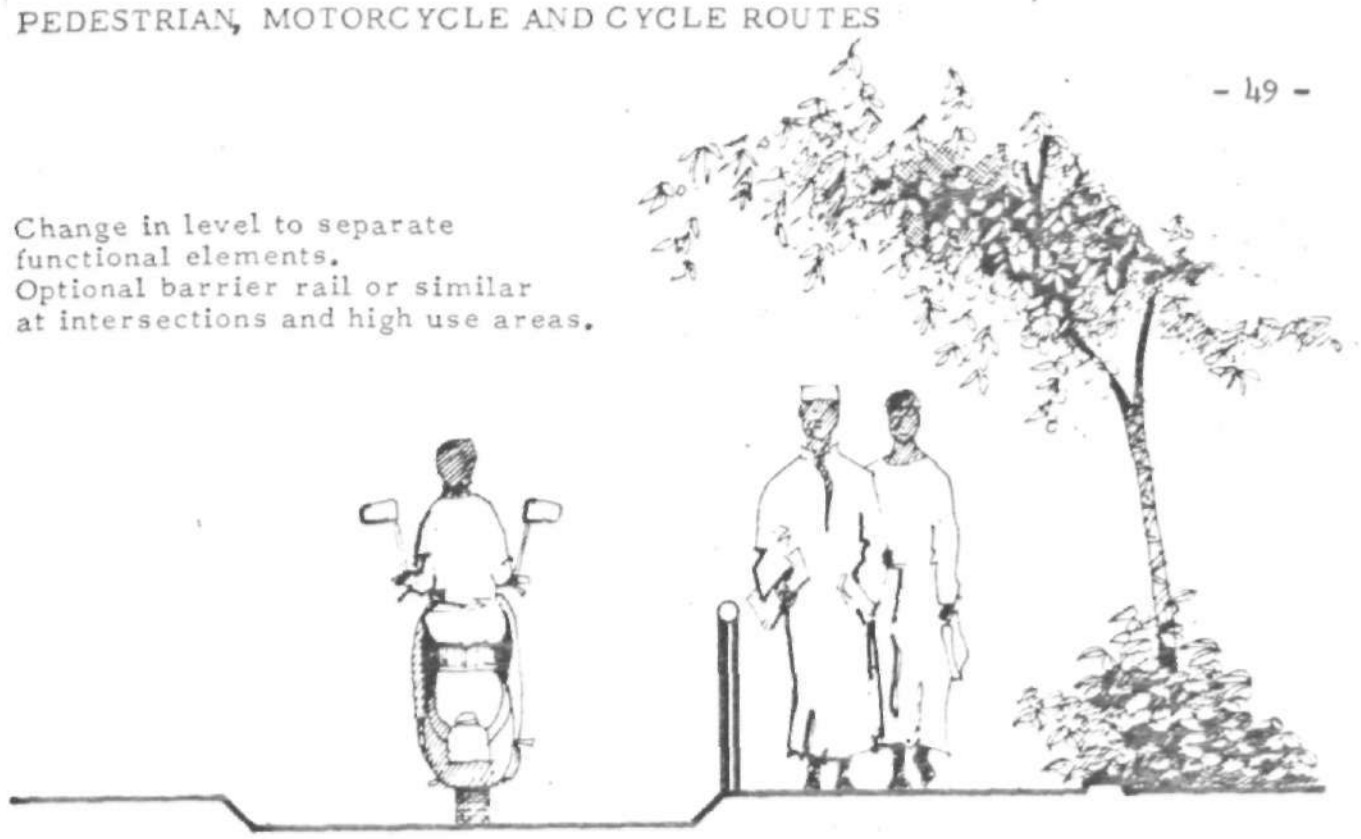
5.1.7. Erosion Problems:

These are generally associated with the escarpments to the river terraces. The major factor causing erosion is the steepness of the slopes. These need to be graded out to a level well below the natural angle of response of the existing clay, so as to facilitate the machanical grip of plant materials to the slopes. Generally the slopes should be graded out to 20% or less and mulched so that soil is protected initially from erosion and is retained until vegetation can be established. Organic and inorganic mulches are easily available including:

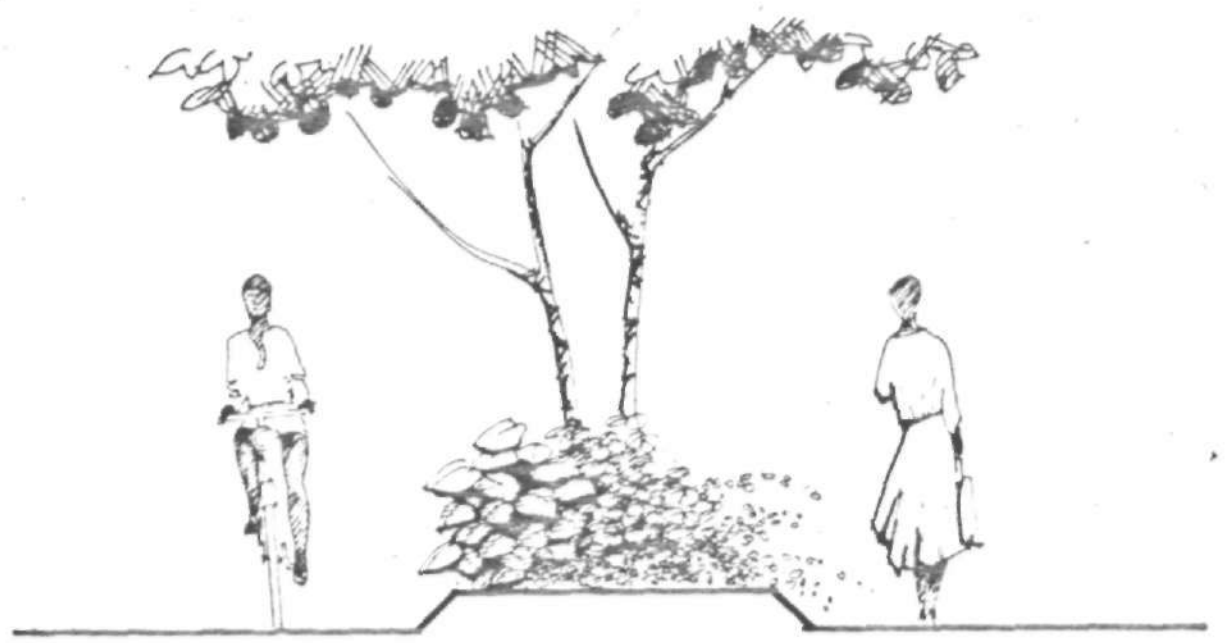
1. Grass cuttings
2. Brush wood
3. Straw
4. Polthene sheeting
5. Car spray.

Grass cutting would probably be most appropriate since it is readily available from cutting the generally grassed areas of the main campus. Plant materials which have a vigorous fibrous root system and quickly colonises a site probably, scrub in nature, (shrubs and small trees) should also be used to form the majority of species in the planting matrix. The matrix should also be made up of longer lived species which will eventually form a mature tree stand. They will then shade the sit, and intercept precipitation at the canopy level, reducing run off and increasing perculation of moisture into the water table. They will also improve the amenity value of the site. (see figs 5.1 - 5.5)

Change in level to separate functional elements.
Optional barrier rail or similar at intersections and high use areas.



Total separation using central barrier of dense planting.

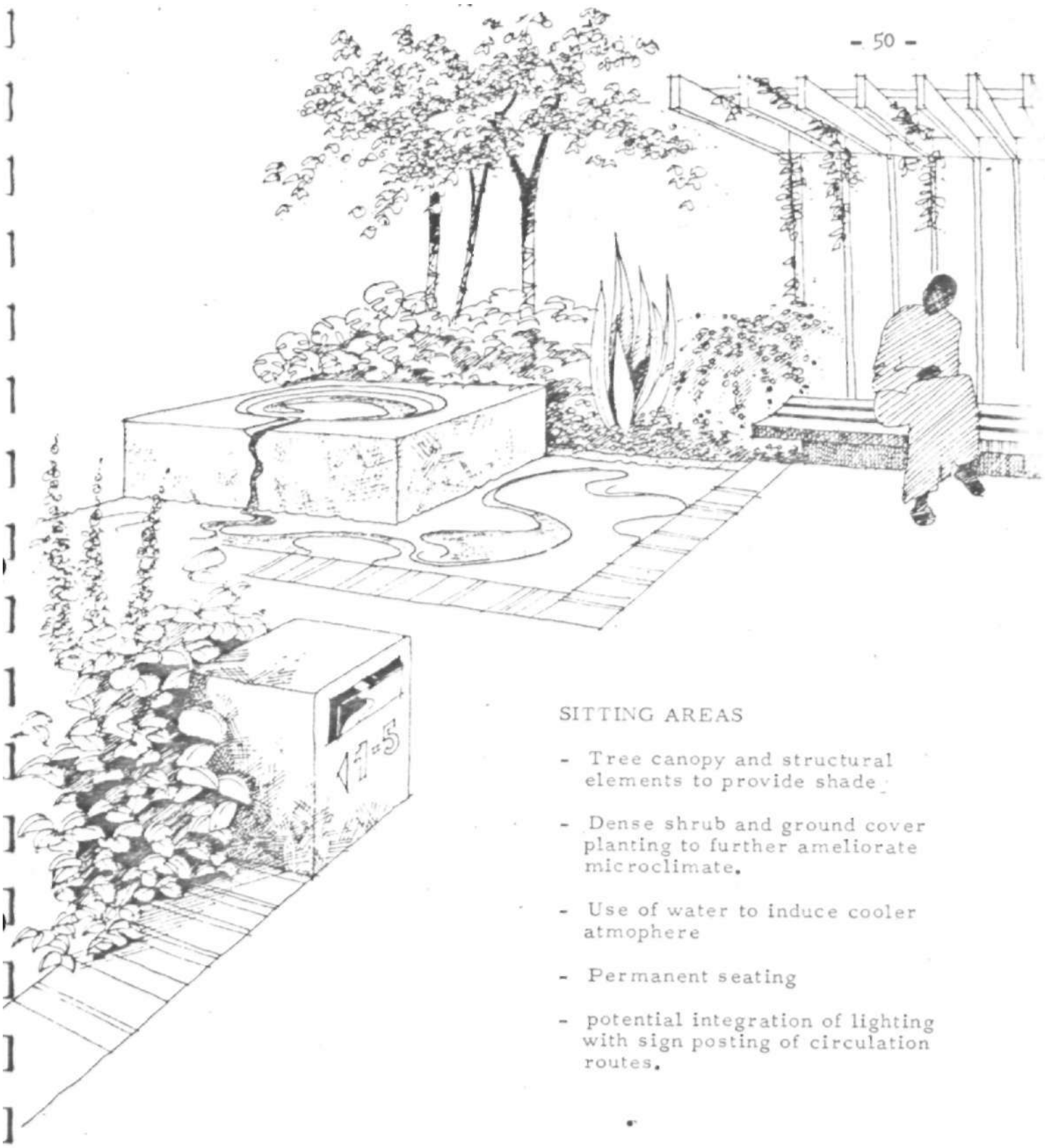


Surface treatment to relate to proposed use

pedestrian - crushed gravel
- tarmac with rolled-in aggregate

vehicular - unit paving
- tarmac

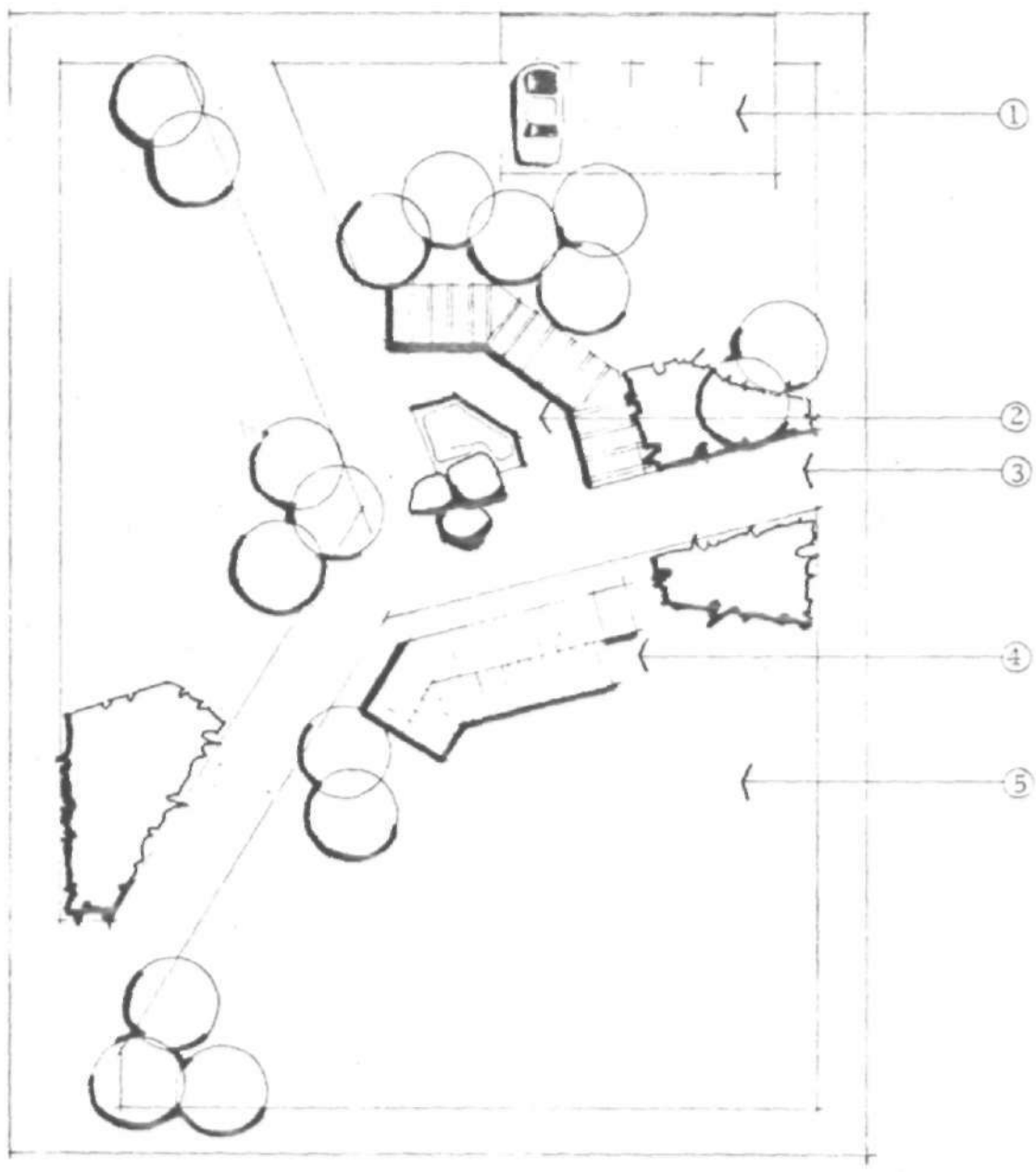
Pedestrian, Motorcycle and Cycle Routes Fig. 5.1.



SITTING AREAS

- Tree canopy and structural elements to provide shade
- Dense shrub and ground cover planting to further ameliorate microclimate.
- Use of water to induce cooler atmophere
- Permanent seating
- potential integration of lighting with sign posting of circulation routes.

Sitting Area Details Fig. 5.2.

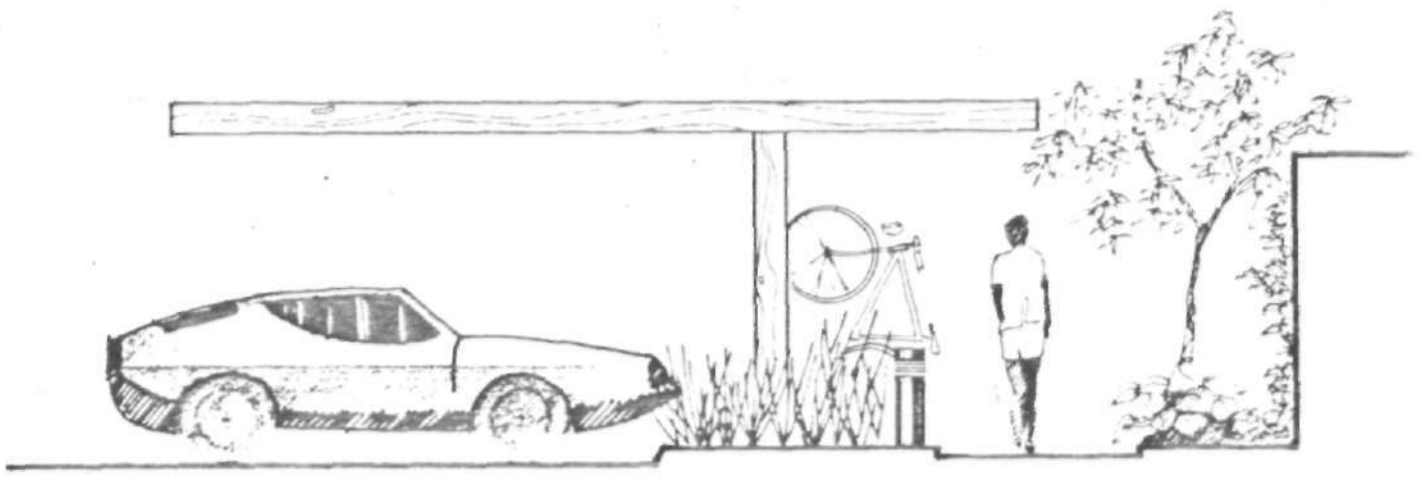


1. Locate and clearly define car parking areas (include motorcycle and cycle storage)
2. Sitting areas located at nodal points
3. Circulation to take account of existing desire lines
4. Purpose built cafe/refreshment kiosk with integral seating and refuse collection points
5. Grass areas to be large enough for easy maintenance

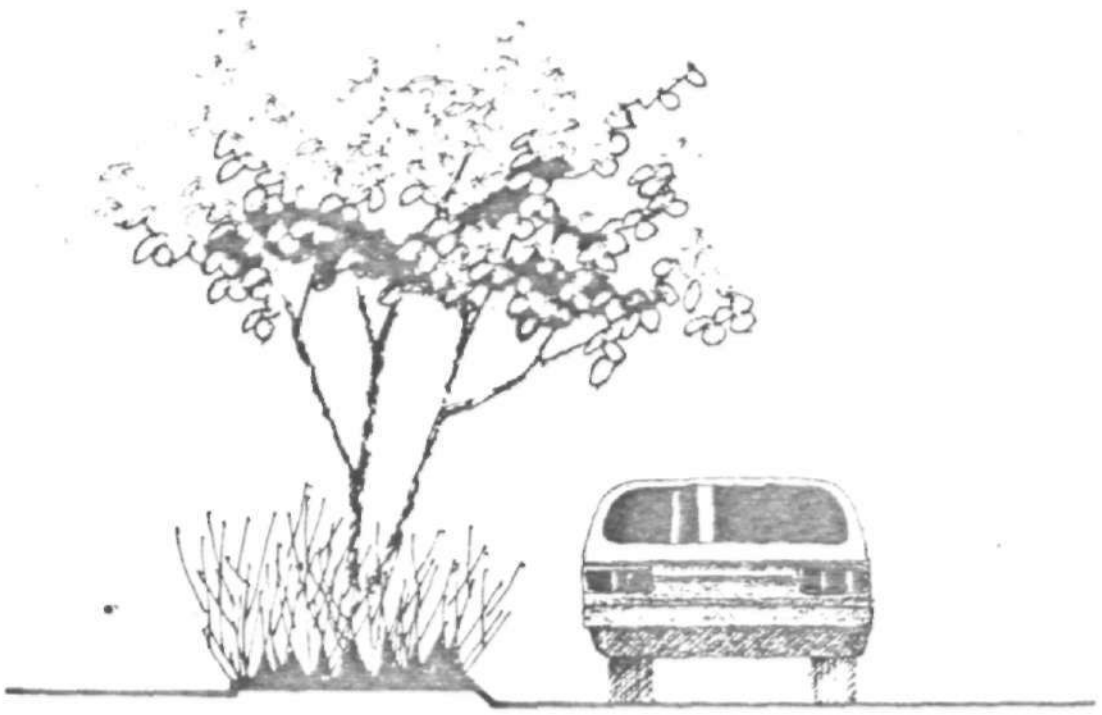
Courtyard Details Fig. 5.3.

CAR PARKING/ PEDESTRIAN ACCESS

STREET LANDSCAPE



Planting and structural elements to provide shade and reduce reflected glare from adjacent buildings.
Adequate lighting to pedestrian areas.
Detailing of surfaces, edging and planting to be in keeping with important arrival points.



Roadside/or median planting to provide shade. Verges to be planted rather than grassed for easy maintenance.

Car Parking Details Fig. 5.4.

MASS PLANTING



SHELTER: Diverse range of indigenous species
Trees, shrub and ground layers to provide
a 'perforated' wind break.



EROSION CONTROL

Mass Planting and Erosion Control Details Fig 5.5

5.2. Acoustic Design of Rooms for Speech:

In the acoustical design of auditoriems used primarily for speech, intelligibility must be given top priority. If a space is used for theatrical performances, the audience rightfully expects to understand every singly word uttered by the performers. Similarly, in lecture halls and classrooms, when, for example, new terminology is introduced or a foreign language is spoken, sometimes by lecturers not trained in diction, listening conditions should obviously be as good as acoustical skill can make them.

Speech sounds contain vowels and consonants, woven into an individual pattern of predominant tones, sometimes called 'formants'. These formants, consisting mostly of vowels, endow a person's voice with distinctive characteristics, contributing to the basic tone of speech. Vowels emphasize the natural qualities of speech. Intelligibility, however, also depends on the proper recognition of consonant sounds, which are often short sounds of very high frequency in rapid succession and with a limited acoustical power compared to vowels. The preservation of both vowels and consonant sounds is therefore important in achieving favourable speech acoustics.

The physical and acoustical features of an auditorium, such as size and shape reverberation characteristics, and prevailing noise conditions, have an influence on the way a speaker will talk and on the transmission and perception of the spoken word in the room.

In the absence of a sound - amplification system the larger an auditorium is, the more effort a speaker must exert in order to make himself understood in every part of the room, particularly at the remote seats. Proper reverberation reinforces the loudness of speech, but excessive reverberation harms intelligibility by blurring and masking newly spoken syllables by the still audible reverberation of previously uttered syllables. Under such reverberant conditions a speaker, besides being annoyed, will also be inclined to speak more softly and slowly and articulate more than he otherwise would.

5.2.1. Lecture Halls and Classrooms:

Lecture halls of educational institutions, sometimes termed 'amphitheaters' and normally seating more than about 100 persons, should be designed in accordance with the relevant acoustical principles discussed above inorder to secure the most favourable conditions for speech intelligibility. The requirements for an optimum room shape and size, for an adequate and correctly directed supply of short-delayed sound reflections, for the provision of a short $R\bar{T}$ (reverberation time) for full elimination of possible acoustical defects, and for efficient noise control should be carefully observed. The optical and acoustical requirements in lecture halls are in complete agreement: suitable room porportion and shape will contribute to good viewing and good hearing. In the $R\bar{T}$ calculation of lecture halls it is reasonable to assume about one-half to two-thirds of the audience

capacity, because of a relatively wide fluctuation in attendance.

In the interest of excluding exterior noise, lecture halls today are seldom designed with natural light and ventilation. This necessitates a complex ceiling, incorporating mechanical and lighting components into the sound - reflective ceiling.

The exact purpose of a lecture hall should be ascertained well in advance because rooms to be used for demonstrations or for audio-visual education require particular care in their acoustical design and detailing. The shape and volume of audio-visual lecture rooms, factors considerably affecting hearing conditions, are influenced by the viewing geometry of the room, that is, the horizontal and vertical envelopes of good sight lines. The viewing geometry, in turn, depends upon the equipment to be used (front vs rear-screen film projector, overhead projector, television projector, sound-recording and reproducing units, television, camera pick-up etc). The additional integration of such typical elements as desk, demonstration table, chalkboard, projection screen, microphone, loudspeakers. and remote-control unit at the front portion of the lecture room enclosures will certainly require the utmost attention from the outset.

Lecture halls with volumes of up to about 15,000 to 20,000 cuft (425 to 570 cum) or for an audience of up to about 150 to 200 will not rquire a sound-amplification system if their acoustical design is based on the principles and

recommendations discussed so far. In any case, use of sound-amplification system in a lecture hall should be avoided as long as the size of the hall enables the lecturer to project sufficient unamplified sound from the front to every member of his audience. Using loudspeakers in a lecture hall pyschologically seperates lecturer and audience because questions and comments raised from the floor (unequipped with microphone) will not be properly understood by the lecturer.

For rectangular lecture rooms with a modest capacity, a diagonal seating layout is particularly recommended. It automatically eliminates undesirable parallelism between walls at the podium and utilizes the splayed front walls as sound reflectors. See Fig 5.6.

Classrooms with rectangular shapes, level floors, and floor areas normally between about 600 and 1000, sq.ft. (56 to 93 sq.m.) seldom create any serious acoustical problems. The rear wall opposite the lecturer, even if acoustically untreated, causes no audible acoustical defeet (such as echo or long-delayed reflection) because the length of the classroom is small and the usual bulletin boards, wall tables, and built-in book shelves and cupboards, dissipate and diffuse a considerable fraction of the incident sound.

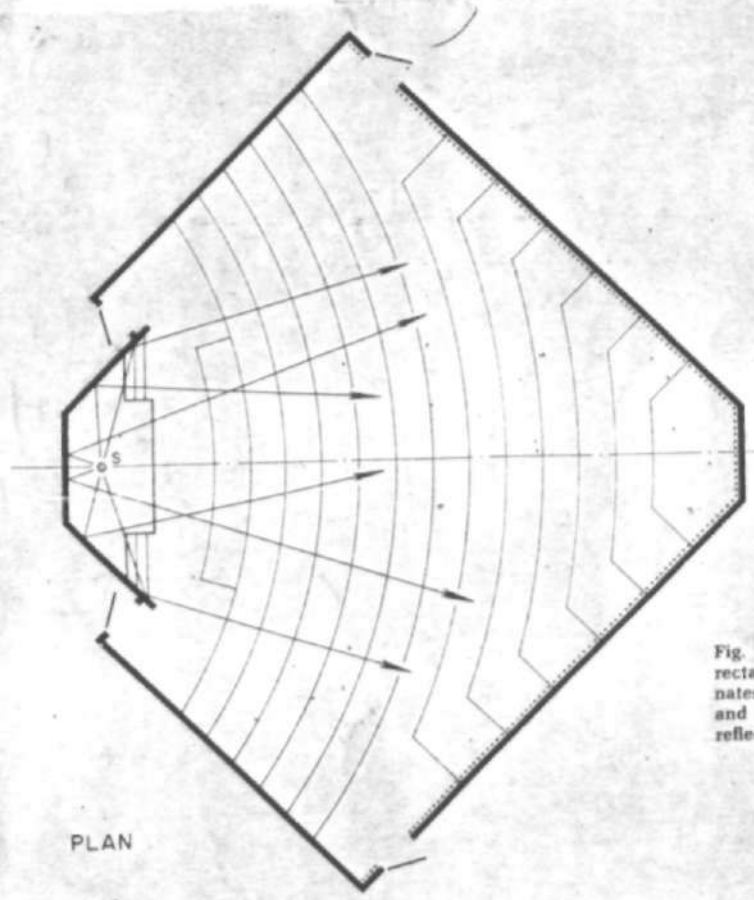


Fig. 5.6 Diagonal seating layout in small rectangular lecture rooms automatically eliminates parallelism between walls at the podium and makes a good use of the splayed sound-reflective surfaces; S, sound source.

6 - THE SCHEME: FACULITY OF ARTS AND SOCIAL SCIENCES

A.B.U 1980 - 1995

6.1. The Site:

6.1.1. Location:

Situated immediate south of the Senior Staff Club and Primary School within the 'Extension to Main Campus' Area - the Faculty of Arts and Social Sciences occupies approximately 28% (including built up area plus landscaped outdoor spaces) of the total Site Area of approximately 5ha of the extension area. The faculty has been designed as an integral unit of the whole extension of the main campus units.

6.1.2. Analysis:

6.1.2.1. Topography:

The site is relatively flat, slopes gently from behind the Senior Staff Tennis lawns down towards the reservoir with a gradient of 3.0% and gently from the west boundary of the senior staff primary school football pitch down towards the west at an average gradient of 2.5% and finally punctuated in the remote areas by a transverse line of gulleys that terminate at the reservoir to the south

75% of the whole site is cultivated leaving a residual land covered with rolling savanna with scattered scrub and lush at the precincts of the reservoir.

6.1.2.2. Views out of the Site:

The site affords a long distant and elevated view from the south end of the tennis lawns over the landscape and reservoir onto the Kufena hill beyond. To the North the Senior Staff Club terminates a short view. To the West the site affords a long distant sunken view over tree savanna and students hostels (ICSA and Ramat blocks) onto Senior Staff Residential areas. However the East view is short broken by dense wood-land and the water works.

6.1.2.3. Views into the Site:

Views into the site are restricted to the premises of the Senior Staff Club in the north and adjacent to the primary school playing grounds in the east. Perimeter views can be afforded when the proposed ring road is constructed.

6.1.2.3. Good and pleasant view:

The Senior Staff Club with the swimming pool and the primary school affords a pleasant view to the north. To the south the prolonged view over the reservoir onto Kufena hill affords a pleasant and mystic view especially during those times when the sky is covered with mist or dow.

6.1.2.4. Objectivable view:

Generally there are no features on the site detrimental to the senses except the Drama Studio theatre in the South-East end which stands miserably dilapidated and isolated within the beautiful landscape.

6.2. Architect's brief:

The developed brief has evolved chiefly from the proposals of the master plan. The master plan proposals called for an ambitious programme which is not likely viable in view of the inadequate supply of fund from the N.U.C. The architect has moderated this paying strict attention to the basic design principles and space requirements without hitting too hard at the N.U.C. recommendations.

6.2.1. Dean's Office:

to include

- Dean's private office
- Secretary to Dean
- Filing room
- Faculty board room/conferenceroom
- Data processing room
- Senior Assistant Registrar's office
- Secretary to above
- Filing room for above
- General office
- Coffee room
- Extra storage space

6.2.2. Departmental Areas.

This area is to be distributed as follows:

1. Academic staff, junior teaching staff offices and secretariat staff offices have been located in the same building. The Head of Department's office is to be well defined and is to accommodate the

departmental secretary, storage space and secretary offices c' :
Professorial offices as well as offices for their secretaries
are to be accommodated.

6.2.3.. Language Laboratories and Geography Laboratories:
These are to be designed within the particular departmental areas.

6.2.4. Lecture halls and classrooms:
Are assumed to be centrally time-tabled but attempts should be made to distribute them evenly among the departments.

6.2.5. Balance Areas:
For each floor is to be calculated at a minimum of 55% for master planning purposes.

6.2.6. The height of buildings will ential a maximum of 3 storeys

6.2.7. Three medium sized lecture theatres are to be provided in addition to a large sized one to be commonly used by all the units in the extension area.

6.3. . Design Concepts:

6.3.1. Planning the Layout:

6.3.1.1. Macro scale:
The faculty has been designed as an integral unit of the whole extension area. Thus it fits in neatly on a macro scale both architecturally and landscape wise, paying good attentions to the basic campus planning principles and criteria, with the other units of the extension area viz Faculty of Education.

Institute of Education and the media complex. In Designing a comprehensive layout of the whole extension area the following principles have been employed:

6.3.1.1.1 Circulation (Vehicular and pedestrian) Access to the site from the main campus area is from two sides one tapped from the road passing in-front of the senior staff club and running north-south beside the catering flats; and the other tapped from the roundabout infront of the staff primary school and running adjacent to the playing field towards the south to link with a transverse road that forms a boundary to the extension area in the south. This transverse road link with the first access road to complete a ring round the extension area.

Direct access to the site from the ring road are from both sides one in the west terminating at a car park located to be central to 3 units FASS, EDUCATION and common lecture theatres. In the south a direct access takes off from the site boundary road and terminates at another car parking lot serving the media complex, Education and the common lecture theatres.

Pedestrian walkways:

In the whole extension area vehicular traffic is non-existent. Internal circulasion is channelled by a network of covered pedestrian walkways that link all the blocks together even across well landscaped open grounds.

6.3.1.1.2. Spatial Distribution of faculty Buildings and units:

The faculty buildings, institute buildings and the media complex blocks have been grouped around a cluster of

common lecture theatres at the centre for easy access and close proximity in respect of each of the units concerned.

The existing staff primary school posed a stumbling block initially. Without it a perfect ring would have formed round the lecture theatres. However the optimum solution has been provided within the prevailing constraints. Thus the media complex which has least to do with the lecture theatres in terms of the expected students enrolment has been relegated to the exterior. However it still has a proper link with the complex.

6.3.1.2. Micro scale:

Like any other faculty or unit in the extension area, the faculty of Arts and Social Sciences have been designed to have its blocks half enclosing a well landscaped and shaded courtyard prouded with permanently fixed concrete seats to absorb the trains of students between lecture hours. These courtyards also provide shade and cooling to the buildings. Thus maintaining an atmosphere conducive to teaching and learning.

6.3.1.3. Advantages of the Planning Layout Principles:

1. Separation of vehicular and pedestrian traffic thus averting a situation whereby traffic flow is obstructed in either cases.
2. Separation of noisy zones from quiet zones thus to providing conditions conducive to teaching and learning.

3. Provision of landscaped grounds between parking lots and blocks to serve as buffer zones for noise isolation.
4. Planting of open spaces with shrubs and ground cover thus promoting their visual quality.
5. Planting shrubs around car parks and within incidental bays to screen, soften and visually break up into segments and reduce the scale.
6. Provision of landscaped shaded and seated courtyards for relaxation in-between lecture hours.
7. Provision of plaza for relaxation and sight seeing during leisure hours.

6.3.2. Architecture of the buildings:

6.3.2.1. Structural System:

Grid-dock flooring has been employed for all the floor of the departmental buildings including the faculty block. This has enabled a comfortable spanning of 14 or 15 m along the width of the buildings. Generally there are two types of accommodation in each departmental block, lecture halls and classrooms on one hand and residual departmental areas i.e. lecturers offices etc on the other hand. The former case called for provision of proper corss ventilation. Hence the corridor has been placed on one end of the openings whereas in the latter a central corridor subdivided the space longitudinally into lecturers' offices and other departmental accommodation types.

In either case the use of grid-deck flooring has afforded the placing of partition walls to demarcate corridors free of the structural system. Columns have been placed along the external lines of walls or balustrades as the case may be. Transverse partition walls subdividing spaces into offices or lecture halls and classrooms have also been placed free of the structural system.

6.4. Schedule of accommodation:

6.4.1. Administration (Dean and Faculty offices)

- Dean's office	@	$40m^2$	=	$40m^2$
- Secretary to Dean	@	$25m^2$	=	$25m^2$
- Faculty boardroom/Conference room	@	$75.5m^2$	=	$75.5m^2$
- Assistant Registrar's office	@	$32.5m^2$	=	$32.5m^2$
- Secretary to above	@	$25m^2$	=	$25m^2$
- General office	@	$87.75m^2$	=	$87.75m^2$
- Filing room	@	$25m^2$	=	$25m^2$
- Data processing room	@	$40m^2$	=	$40m^2$

6.4.2. Department of Political Science:

6.4.2.1. Departmental Area:

6.4.2.1.1 Academic Staff offices:

- 6 offices to accommodate 1 head and 5 professors	@	$25m^2$	=	$150m^2$
- 6 Secretries offices	@	$19.25m^2$	=	$115.5m^2$
- General office	@	$57.75m^2$	=	$57.75m^2$
- Filing room	@	$19.25m^2$	=	$19.25m^2$
- Store room	@	$19.25m^2$	=	$19.25m^2$
- Coffee room	@	$19.25m^2$	=	$19.25m^2$
- 50 offices to accommodate 50 lecturers	@	$49.25m^2$	=	$962.5m^2$
- 5 Secretaries offices for above	@	$19.25m^2$	=	$96.25m^2$
- Storage space	@	$19.25m^2$	=	$19.25m^2$

6.4.2.1.2.	<u>Staff Research Space:</u>			
	- 2 rooms (libraries)	@	$57.75m^2$	= $115.5m^2$
	Storage	@	$2x19.25m^2$	= $38.50m^2$
6.4.2.1.3.	<u>Junior Teaching Staff offices:</u>			
	- 5 rooms	@	$19.25m^2$	= $96.25m^2$
6.4.2.1.4.	<u>Seminar Space:</u>			
	- 4 rooms	@	57.75	= $231.25m^2$
6.4.2.1.5.	<u>Ph.D Research Space:</u>			
	- 2 rooms	@	$19.25m^2$	= $38.50m^2$
6.4.2.1.6.	<u>Departmental Library:</u>			
	- 1 room	@	$165m^2$	= $165m^2$
6.4.2.1.7.	Staff common rooms:			
	- 2 rooms	@	$82.5.m^2$	= $165m^2$
6.4.2.2.	<u>Lecture Halls and Tutorial rooms:</u>			
	- 1 lecture hall (raked) to sit 192 students	@	$220m^2$	= $220m^2$
	- 3 lecture halls to sit 128 student each	@	$165m^2$	= $495m^2$
	- 3 lecture halls or 6 tutorial rooms for 50 students each	@	$82.5m^2$	= $495m^2$
	TOTAL USABLE AREA B/F			= $3480.25m^2$
6.4.2.3.	BALANCE AREA (+55% u/A) include			= $1914.14m^2$
	(i) Corridors			
	(ii) General stores			
	(iii) Staircases			
	(iv) Lavatories (Male and Female)			
	GROSS AREA			= $5394.39m^2$

6.4.3. Department of Economics

6.4.3.1. Departmental Area:

6.4.3.1.1. Academic Staff Office:

- 4 offices to accommodate 1 head of department and 3 professors	@	$25m^2$	=	$100m^2$
- 4 Secretries offices	@	$19.25m^2$	=	$77m^2$
- 1 General office	@	$57.75m^2$	=	$57.77m^2$
- 1 Filing room	@	$19.25m^2$	=	$19.25m^2$
- 1 Storage room	@	$19.25m^2$	=	$19.25m^2$
- 1 Coffee room	@	$19.25m^2$	=	$19.25m^2$
- 36 Offices to accommodate 36 lectures	@	$19.25m^2$	=	$693.25m^2$
- 3 Secretaries offices for above	@	$19.25m^2$	=	$57.75m^2$
- Storage space	@	$19.25m^2$	=	$19.25m^2$

6.4.3.1.2. Staff Research Space:

- 1 room	@	$57.75m^2$	=	$57.75m^2$
- Storage	@	$19.25m^2$	=	$19.25m^2$

6.4.3.1.3. Junior Teaching Staff Offices:

- 4 offices (2 persons/room)	@	$19.25m^2$	=	$77m^2$

6.4.3.1.4. Seminar Space:

- 2 rooms	@	57.75	=	$115.5m^2$

6.4.3.1.5. Ph.D Research Space:

- 1 room	@	$19.25m^2$	=	$19.25m^2$

6.4.3.1.6. Staff Common Rooms:

- 2 rooms	@	57.75	=	$115.5m^2$

6.4.3.1.7.	Departmental Library:				
	1 room	@	$115.5m^2$	=	$115.5m^2$
6.4.3.2.	Lecture Halls and Tutorial Rooms:				
	- 1 lecture hall (raked) to sit 192 students	@	$220m^2$	=	$220m^2$
	- 2 lecture halls to sit 128 students each	@	$165m^2$	=	$330m^2$
	- 3 lecture Halls or tutorial rooms for 50 student each	@	$82.5m^2$	=	$495m^2$
	TOTAL USABLE AREA B/F			=	$2527.25m^2$
6.4.3.3.	BALANCE AREA (+55% U/A)			=	$1389.99m^2$
	GROSS AREA			=	$3917.24m^2$
6.4.4.					
6.4.4.1.	Departmental Area:				
6.4.4.1.1.	Academic Staff Offices:				
	- 2 offices to accommodate 1 head of department and 1 professor	@	$25m^2$	=	$50m^2$
	- 2 Secretaries offices	@	$19.25m^2$	=	$38.50m^2$
	- 1 General office	@	$57.75m^2$	=	$57.75m^2$
	- 1 Filing room	@	$19.25m^2$	=	$19.25m^2$
	- 1 Storage room	@	$19.25m^2$	=	$19.25m^2$
	1 Coffee room	@	$19.25m^2$	=	$19.25m^2$
	- 23 offices	@	$19.25m^2$	=	$442.75m^2$
	- 2 Secretaries offices	@	$19.25m^2$	=	$38.50m^2$
	- Storage space	@	$10m^2$	=	$10m^2$
6.4.4.1.2.	Staff Tesearch Space:				
	- 1 room	@	$41.25m^2$	=	$41.25m^2$
	- Storage	@	$10m^2$	=	$10m^2$

6.4.4.1.3.	Junior Teaching Staff Offices:				
	- 3 rooms to accommodate 6 assistants	@	$19.25m^2$	=	$38.50m^2$
6.4.4.1.4.	Seminar Space:				
	- 2 rooms	@	$57.75m^2$	=	$115.5m^2$
6.4.4.1.5.	Ph.D Research Space:				
	- 1 room	@	$19.25m^2$	=	$19.25m^2$
6.4.4.1.6.	Staff Common Rooms:				
	- 1 room	@	$82.5m^2$	=	$82.5m^2$
6.4.4.1.7.	Departmental Library:				
	- 1 room	@	$115.5m^2$	=	$115.5m^2$
6.4.4.2.	Lecture Halls and Tutorial Rooms:				
	- 1 lecture hall (raked) to sit 192 students	@	$220m^2$	=	$220m^2$
	- 1 lecture hall to sit 128 students each	@	$165m^2$	=	$165m^2$
	- 3 lecture halls or 6 tutorial rooms for 50 students each	@	$82.5m^2$	=	$495m^2$
	TOTAL USABLE AREA B/F			=	$1997.75m^2$
6.4.4.3.	BALANCE AREA (+55% U/A)			=	$1098.76m^2$
	GROSS AREA			=	$3096.51m^2$
6.4.5.	Department of Geography:				
6.4.5.1.	Departmental Area:				
6.4.5.1.1.	Academic Staff Offices:				
	- 3 offices to accommodate 1 head of department and 2 professors	@	$25m^2$	=	$75m^2$
	- 3 Secreteries offices	@	$19.25m^2$	=	$57.75m^2$
	- 1 General office	@	$57.75m^2$	=	$57.75m^2$
	- 1 Filing room	@	$19.25m^2$	=	$19.25m^2$

	- 1 Storage room	@	19.25m^2	=	19.25m^2
	- 1 Coffee room	@	19.25m^2	=	19.25m^2
	- 34 Offices to accommodate 34 lecturers	@	19.25m^2	=	65.45m^2
	- 3 Secretaries offices	@	19.25m^2	=	57.75m^2
	- 1 Storage Space	@	19.25m^2	=	19.25m^2
6.4.5.1.2.	Staff Research Space:				
	- 1 room	@	57.75m^2	=	57.75m^2
	- Storage	@	19.25m^2	=	19.25m^2
6.4.5.1.3.	Junior Teaching Staff Offices:				
	- 4 offices	@	19.25m^2	=	77m^2
6.4.5.1.4.	Seminar Space:				
	- 3 rooms	@	57.75m^2	=	173.25m^2
6.4.5.1.5.	Ph.D Research Space:				
	- 2 rooms	@	19.25m^2	=	19.25m^2
6.4.5.1.6.	Staff Common Rooms:				
	- 2 rooms	@	57.75m^2	=	115.5m^2
6.4.5.1.7.	Departmental Library:				
	- 1 room	@	115.5m^2	=	115.5m^2
6.4.5.2.	Lecture Halls and Tutorial Rooms:				
	- 1 lecture hall (raked) to sit 192 students	@	220m^2	=	220m^2
	- 1 lecture hall to sit 128 students	@	165m^2	=	165m^2
	- 3 lecture halls or 6 tutorial rooms for 50 students each	@	82.5m^2	=	495m^2
6.4.5.3.	Laboratories and Workshop:				
6.4.5.3.1.	- 2 Laboratories/mapping centre	@	115.5m^2	=	231m^2
	- 2 Storage rooms	@	25m^2	=	50m^2

TOTAL USABLE AREA B/F			=	$2263.95m^2$
BALANCE AREA (+55% U/A)			=	$1245.17m^2$
GROSS AREA			=	$3509.12m^2$

6.4.6. Department of Nigerian and African Languages:

6.4.6.1. Departmental Area:

6.4.6.1.1. Academic Staff offices:

- 1 office to accommodate 1 head of department/ professor	@	$25m^2$	=	$25m^2$
- 1 Secretary office	@	$19.25m^2$	=	$19.25m^2$
- 1 General Office	@	$57.75m^2$	=	$57.75m^2$
- 1 Filing room	@	$19.25m^2$	=	$19.25m^2$
- 1 Storage room	@	$19.25m^2$	=	$19.25m^2$
- 1 Coffee room	@	$19.25m^2$	=	$19.25m^2$
- 4 offices to accommodate 4 senior lecturers	@	$19.25m^2$	=	$77m^2$

6.4.6.1.2. Staff Research Space:

- 1 room	@	$38.50m^2$	=	$38.50m^2$
- Storage room	@	$12.5m^2$	=	$12.5m^2$

6.4.6.1.3. Junior Teaching Staff Offices:

- 1 office (2 persons/room	@	$19.25m^2$	=	$19.25m^2$

6.4.1.4. Seminar Space:

- 1 room	@	$38.50m^2$	=	$38.50m^2$

6.4.6.1.5. Ph.D. Research Space:

- 1 room	@	$38.50m^2$	=	$38.50m^2$
- 1 storage	@	$12.5m^2$	=	$12.5m^2$

6.4.6.1.6. Staff Common Room:

- 1 room	@	$38.50m^2$	=	$38.50m^2$

6.4.6.1.7.	Departmental Library:				
	- 1 room	©	115.5m^2	=	115.5m^2
6.4.6.3.	Language Laboratories:				
	- 1 laboratory	@	42.5m^2	=	42.5m^2
	- 7 office for tecaching staff	@	22.5m^2	=	22.5m^2
	- storage space	@	22.5m^2	=	22.5m^2
	TOTAL USABLE AREA B/F			=	1183m^2
6.4.6.4.	BALANCE AREA (+55% U/A)			=	650.65m^2
	GROSS AREA			=	1833.65m^2

6.4.7. Department of English:

6.4.7.1.	Departmental Area:				
6.4.7.1.1.	Academic Staff Offices:				
	- 3 offices to accommodate 1 head of department and 2 professors	@	25m^2	=	25m^2
	- 3 Secretarics offices	@	19.25m^2	=	19.25m^2
	- 1 General office	@	57.75m^2	=	57.75m^2
	- 1 Filing room	@	19.25m^2	=	19.25m^2
	- 1 Storage room	@	19.25m^2	=	19.25m^2
	- 1 Coffee room	@	19.25m^2	=	19.25m^2
	- 26 offices to accommodate 26 lecturers	@	19.25m^2	=	5005m^2
	- 2 Secretaries offices	@	19.25m^2	=	38.50m^2
	- 1 Storage room	@	12.5m^2	=	12.5m^2
6.4.7.1.2.	Staff Research Space:				
	- 1 room	@	57.75m^2	=	57.75m^2
	- 1 storage room	@	12.5m^2	=	12.5m^2
6.4.7.1.3.	Junior Teaching Staff Offices:				
	- 3 rooms	@	19.25m^2	=	57.75m^2
6.4.7.1.4.	Seminar Space:				
	- 2 rooms	@	57.75m^2	=	115.5m^2

6.4.7.1.5.	Staff Common Room:				
	- 2 rooms	@	$57.75m^2$	=	$115.5m^2$
6.4.7.1.7.	Departmental Library:				
	- 1 room	@	$115.5m^2$	=	$115.5m^2$
6.4.7.2.	Lecture Halls Tutorial Rooms:				
	- 2 lecture halls to sit 128 students each	@	$165m^2$	=	$330m^2$
	- 3 lecture halls or 6 tutorial rooms for 50 students each	@	$85.5m^2$	=	$495m^2$
6.4.7.3.	Language Laboratories:				
	- 2 Laboratories	@	$55m^2$	=	$110m^2$
	- 1 Technical Staff room	@	$19.25m^2$	=	$19.25m^2$
	- 1 Storage space	@	$125m^2$	=	$125m^2$
	TOTAL USABLE AREA U/A B/F			=	$6708m^2$
	BALANCE AREA (+55% U/A)			=	$3689.4m^2$
	GROSS AREA			=	$10397.4m^2$
6.4.8.	Department of French:				
6.4.8.1.	Departmental Area:				
6.4.8.1.1.	Academic Staff Office;				
	- 1 office to accommodate 1 professor/head of Dept.	@	$25m^2$	=	$25m^2$
	- 1 secretary office	@	$19.25m^2$	=	$19.25m^2$
	- 1 General office	@	$19.25m^2$	=	$19.25m^2$
	- 1 filing room	@	$19.25m^2$	=	$19.25m^2$
	- 1 storage room	@	$19.25m^2$	=	$19.25m^2$
	- 1 coffee room	@	$19.25m^2$	=	$19.25m^2$
	- 4 offices to accommodate 4 lecturers	@	$19.25m^2$	=	$77m^2$
6.4.8.1.2.	Staff Research Space:				
	- 1 room	@	$38.5m^2$	=	$38.5m^2$
	- 1 storage room	@	$12.5m^2$	=	$12.5m^2$

6.4.8.1.3.	Junior Teaching Staff Offices:				
	- 1 office/2 persons	@	$19.25m^2$	=	$19.25m^2$
6.4.8.1.4.	Seminar Space				
	- 1 room	@	$57.75m^2$	=	$57.75m^2$
6.4.8.1.5.	Ph.D Research Space:				
	- 1 room	@	$38.5m^2$	=	$38.5m^2$
	- 1 storage room	@	$12.5m^2$	=	$12.5m^2$
6.4.8.1.6.	Staff Common Room:				
	- 1 room	@	$38.5m^2$	=	$38.5m^2$
6.4.8.1.7.	Departmental Library:				
	- 1 room	@	$115.5m^2$	=	$115.5m^2$
6.4.8.2.	Lecture Halls and Tutorial Rooms:				
	- 3 lecture halls	@	$165m^2$	=	$495m^2$
	- 2 lecture halls or 4 tutorial rooms for 50 students each	@	$82.5m^2$	=	$330m^2$
6.4.8.3.	Language Laboratory:				
	- 1 laboratory	@	$82.5m^2$	=	$82.5m^2$
	- 1 technical staff office	@	$19.25m^2$	=	$19.25m^2$
	- 1 storage room	@	$19.25m^2$	=	$19.25m^2$
	TOTAL USABLE AREA			=	$3639.19m^2$
6.4.8.4.	BALANCE AREA (+55% U/A)			=	$2001.55m^2$
	GROSS AREA			=	$5640.74m^2$

6.4.9. Department of Sociology:

6.4.9.1. Departmental Area:

6.4.9.1.1. Academic Staff Offices:

- 8 offices to accommodate 1 head of department and 7 professors	@	$25m^2$	=	$200m^2$
- 8 Secretaries offices	@	$19.25m^2$	=	$154m^2$
- 1 General office	@	$68.5m^2$	=	$68.5m^2$
- 1 filing room	@	$25m^2$	=	$25m^2$
- 1 storage room	@	$25m^2$	=	$25m^2$
- 1 coffee room	@	$19.25m^2$	=	$19.25m^2$
- 75 offices to accommodate 75 lecturers	@	$19.25m^2$	=	$1443.75m^2$
- 7 Secretaries offices	@	$19.25m^2$	=	$134.75m^2$
- 1 storage room	@	$19.25m^2$	=	$19.25m^2$

6.4.9.1.2. Staff Research Space:

- 2 rooms	@	$82.5m^2$	=	$165m^2$
- 2 storage rooms	@	$19.25m^2$	=	$38.5m^2$

6.4.9.1.3. Junior Teaching Staff Offices:

- 10 offices (2 persons per room)	@	$19.25m^2$	=	$192.5m^2$

6.4.9.1.5. Ph.D Research Space:

- 2 rooms	@	$38.5m^2$	=	$77m^2$

6.4.9.1.6. Staff Common Rooms:

- 3 rooms	@	$68.5m^2$	=	$205.5m^2$

6.4.9.1.7. Departmental Library:

- 1 room	@	$165m^2$	=	$165m^2$

6.4.9.2. Lecture Halls and Tutorial Rooms:

- 1 lecture hall (raked) to sit 192 student	@	220m^2	=	220m^2
- 3 lecture halls to sit 128 students each	@	165m^2	=	495m^2
- 4 lecture halls or 8 tutorial rooms for 50 students each	@	82.5m^2	=	660m^2
TOTAL USABLE AREA			=	70539m^2

6.4.9.3. BALANCE AREA (+55% U/A) = 38796.45m^2

GROSS AREA = 109335.45m^2

6.4.10. Department of Archaeology:

6.4.10.1. Departmental Area:

6.4.10.1.1 Academic Staff Offices:

- 1 office to accommodate 1 head of department	@	25m^2	=	25m^2
- 1 Secretary office	@	19.25m^2	=	19.25m^2
- 1 General Office	@	55.7m^2	=	55.7m^2
- 1 filing room	@	19.25m^2	=	19.25m^2
- 1 storage room	@	19.25m^2	=	19.25m^2
- 1 coffee room	@	19.25m^2	=	19.25m^2
- 6 offices to accommodate 6 lecturers	@	19.25m^2	=	115.5m^2

6.4.10.1.2 Staff Research Space:

- 1 room	@	19.25m^2	=	19.25m^2

6.4.10.1.3 Junior Teaching Staff Offices:

- 1 office (2 persons per room)	@	19.25m^2	=	19.25m^2

6.4.10.1.4 Seminar Space:

- 1 room	@	25m^2	=	25m^2

6.4.10.1.5 Ph.D Research Space:

- 1 room	@	38.5m^2	=	38.5m^2
- 1 storage room	@	12.5m^2	=	12.5m^2

6.4.10.1.6	Staff Common Room:				
	- 1 room	@	$55.7m^2$	=	$55.7m^2$
6.4.10.1.7	Departmental Library:				
	- 1 room	@	$68.5m^2$	=	$68.5m^2$
6.4.10.2.	Lecture Halls and Tutorial Rooms:				
	- 3 lecture halls	@	$82.5m^2$	=	$247.5m^2$
	- 2 lecture halls or 4 tutorial rooms to sit 50 student each	@	$82.5m^2$	=	$165m^2$
6.4.10.3.	Working museum and workshop:				
	- 1 room	@	$115.5m^2$	=	$115.5m^2$
	- 1 workshop room	@	$75.5m^2$	=	$75.5m^2$
	- 1 storage room	@	$25.5m^2$	=	$25.5m^2$
	TOTAL USABLE AREA B/F			=	$1171.65m^2$
6.4.10.4.	BALANCE AREA (+55% U/A)			=	$644.41m^2$
	GROSS AREA			=	$1816.06m^2$

Appendix 1

PLANT MATERIAL

The following list of plant materials are either indigenous or naturalised plants which are commonly found on or around the University Campus.

Trees:

Poincina regia

Xyamaria Americana

Khaya senegalensis

Bauhinia manandra

Bauhinia acuminata

Callitris sp

Anacardium shevenfortii

Eucalyptus camaldulensis

Pinus caribaea

Eucalyptus torrelina

Mangifera indica

Carica papaya

Spathodea campanulata

Cassia siernia

Alibizzia sp

Cocos nucifera

Borassus dethiopiea

Casuarina equisetifolia

Annona squamosa

Plumeria alba

Cassia sp

Terminalia catappa

Causuarina equisetifolia

Raphia hookeri

Phoenix canariensis

Gmelina arborea

Hibiscus mutabilis

Shrubs

Sanserieria indica

Brugmansia suaveolens

Lamanda sp

Hibiscus sp

Codiaeum sp

Codiaeum variegatum pictum

Ananas salivus

Cycas circinnalis

Bixa Orllana

Dodonaea sp

Caesal pinia pulcherrima

Psidium guajava

P. cattleianum

Quisqualis sp

Thevetia neroifolia

The vetia peruviana

Cactus sp

Lantana camara

Acalyphia wilesiana

Acalypha sp

Ixora coccinea

Jatropha multifida

Bauhinia sp

Quisqualis indica

Breynia nivosa

Casuarina equisetifolia

Plumbago capensis

Euphoribis sp

Groundcovers:

Desmodium triflorum

Iresine sp

Canna indica

Portulaca sp

Alpinia speciosa multica

Tradescantia Zebrina and sp

Dichondra sp

Sansevieria sp

Zebrina sp

Caladium sp

Episcia cupreata

Cymbopogon nardus

Mentha sp

Tagetes sp

Climbers:

Jacquemontia penculatá

Boagainvillea sp

APPENDIX 2

STAFF: STUDENT RATIO OF DEPARTMENT, 1980

	Departments	Students	Senior academic staff	staff student ratio
Administration	4	1396	101	1 : 14
Agriculture	4	322	45	1 : 7
Arts & Soc. Science	8	1887	188	1 : 10
Education	4	1311	90	1 : 15
Engineering	8*	502	91	1 : 6
Environmental Design	5	830	77	1 : 11
Law	3	765	47	1 : 16
Human Medicine	15	385	124	1 : 3
Pharmacuetical Science	2	227	35	1 : 6
Science	8	580	163	1 : 4
Veterinary Medicine	5	214	66	1 : 3
TOTAL	68	8419	1027	1 : 8

*Includes metallurgical Engineering and other Resources and Environmental Engineering.

ABU STAFF AND STUDENT POPULATIONS - 1985

EXTENSION TO MAIN CAMPUS	STUDENTS	SENIOR ACADEMIC STAFF	SENIOR TECHNICAL STAFF	SENIOR ADMINISTRATIVE STAFF	INTERMEDIATE AND JUNIOR STAFF	TOTAL
FACULTY OF EDUCATION	3 100	207	41	-	1 550	4 898
CENTRE FOR EDUC. TECH. *	30	16	-	-	14	60
CENTRE FOR ADULT EDUC. *	80	26	-	-	32	138
ARTS & SOC. SCIENCES	1 603	125	-	-	802	2 530
SUB-TOTAL	4 813	374	41	-	2 398	7 626

* Including Mass Communication Centre.

APPENDIX D

A.B.U. STAFF AND STUDENT POPULATIONS - 1990

EXTENSION TO MAMIN CAMPUS	STUDENTS	SENIOR ACADEMIC STAFF	SENIOR TECHNICAL STAFF	SENIOR ADMIN. STAFF	I&J STAFF	TOTAL
EDUCATION	3100	207	41	4	1550	4902
FACULTY OF ARTS & SOC. SCI.	3000	200	-	7	1274	4481
INST OF EDUCATION H.Q.	535	60	-	-	645	1240
CENTRE FOR ADULT EDUC*	130	26	-	-	32	188
CENTRE FOR EDUC. TECHNOLOGY*	50	16	-	-	14	30
SUB-TOTAL	6815	509	41	11	3515	10891

* Including Mass Communication

ABU STAFF AND STUDENT POPULATIONS - 1995

EXTENSION TO MAIN CAMPUS	STUDENTS	SENIOR ACADEMIC STAFF	SENIOR TECHNICAL STAFF	SENIOR ADMINISTRATIVE STAFF	INTERMEDIATE AND JUNIOR STAFF	TOTAL
FACULTY OF EDUCATION	3 100	207	41	4	1 550	4 902
FACULTY OF ARTS & SOC. SCI.	3 000	200	-	7	1 274	4 481
INST OF EDUCATION H.Q.	535	60	-	-	645	1 240
CENTRE FOR ADULT EDUCATION*	180	26	-	-	32	238
CENTRE FOR EDUC. TECHNOLOGY*	70	16	-	-	14	100
SUB-TOTAL	6 385	509	41	11	3 515	10 961

* Including Mass Communication

APPENDIX 6

FACULTY OF ARTS AND SOCIAL SCIENCES STAFF AND STUDENT POPULATIONS : 1980 - 1995

YEAR	STUDENTS	SENIOR ACADEMIC STAFF	SENIOR TECHNICAL STAFF	SENIOR ADMINISTRATIVE STAFF	INTERMEDIATE & JUNIOR STAFF	TOTAL
1980	1887	188	14	1	111	2201
1985	2547	188	14	1	1274	4024
1990	3000	200	14	7	1274	4495
1995	3000	200	14	7	1274	4495

Space Requirements 1980-85 Academic Areas -
Faculty of Arts & Social Sciences

	1989		1985	1990	1995
Enrolment	1,887		2,547	3,000	4,400
F.T.E.	2,027		2,736	3,222	4,622
	Actual 1980	NUC Standard 1980	NUC Standard	NUC Standard	NUC Standard
Departmental Areas (M^2)	3,427	6,466	8,702	1,950	14,934
Lecture/Class (M^2)	1,542	1,227	1,656	1,950	2,860
Administration (M^2)	144	755	1,019	1,200	1,760
Communal/Social (M^2)	-	660	891	1,050	1,540
Ph.D Space (M^2)	-	90	121	142	174
Usable Area (M^2)	5,113	9,198	12,389	14,590	21,268
Additional Usable Area (M^2) After 1980	-	4,085	7,276	14,590	16,155
Balance Area (55% of Additional U/A)	-	2,247	4,002	8,025	8,885
Total Additional Area (M^2)	-	6,332	11,278	22,615	25,040

Space Requirements 1980-95 Academic Areas - Faculty of Education

	1980		1985	1990	1995
Enrolment	1,311		3,100	3,100	3,300
F.T.E.	1,157		2,736	2,736	2,936
	Actual 1980	NUC Standard 1980	NUC Standard	NUC Standard	NUC Standard
Departmental Areas (M^2)	3,637	6,364	15,048	15,048	15,598
Lecture/Class (M^2)	1,708	852	2,015	2,015	2,145
Administration (M^2)	-	524	1,240	1,240	1,320
Communal/Social (M^2)	160	459	1,085	1,085	1,155
Ph.D Space (M^2)	-	122	160	160	160
Usable Area (M^2)	5,505	8,321	19,548	19,548	20,928
Additional Usable Area (M^2) After 1980	-	8,321	19,548	19,548	20,928
Balance Area ((55% of Additional U/A)	-	4,577	10,751	10,751	11,510
Total Additional Area (M^2)	-	12,898	30,299	30,299	32,438

Space Requirements 1980-95 Academic Areas - Institute of Education

	1980		1985	1990	1995
Enrolment		285	535	535	535
F.T.E.		285	535	535	535
	Actual 1980	NUC Standard 1980	NUC Standard	NUC Standard	NUC Standard
Departmental Areas (M^2)	2,022	1,568	2,943	2,943	2,943
Lecture/Class (M^2)	232	185	348	348	348
Administration (M^2)	468	114	214	214	214
Communal/Social (M^2)	63	100	188	188	188
Ph.D Space (M^2)	-	-	-	-	-
Usable Area (M^2)	2,785	1,967	3,693	3,693	3,693
Additional Usable Area (M^2) after 1980	-	-	908	3,693	3,693
Balance Area (55% of Additional U/A)	-	-	499	2,031	2,031
Total Additional Area (M^2)	-	-	1,407	5,724	5,724

Space Requirements 1980-95 Academic Areas - Centre for Educational Technology (Media Complex)

	1980		19851985	1990	1995
Enrolment	10		30	50	70
F.T.E.	10		30	50	70
	Actual 1980	NUC Standard 1980	NUC Standard	NUC Standard	NUC Standard
Departmental Areas (M^2)	301	55	165	275	385
Lecture/Class (M^2)	Included above	7	20	33	46
Administration (M^2)	"	4	12	20	28
Communal/Social (M^2)	"	4	10	18	24
Ph.D Space (M^2)	"	32	96	160	224
Usable Area (M^2)	301	134	303	506	707
Additional Usable Area (M^2) After 1980	-	-	303	506	707
Balance Area (55% of Additional U/A)	-	-	167	278	389
Total Additional Area (M^2)	-	-	470	784	1,096

BIBLIOGRAPHY:

Standards Guide For Universities - N.U.C.

Ahmadu Bello University Master Plan
Volums I,II & III (November 1980)
- Yusuf Mohammed and associates,
Dar Al Handasah Consultants

Planning Buildings and Facilities for Higher Education - UNESCO

Campus Planning and Design - Schmerz, M.F.

Guidelines for Planning in Colleges and Universities - Pinell C

The Nature of Landscape Design - Nan Fairbrother

Land and Landscape - Brenda Colvin

Environmental Acoustics - Leslie L. Drelle