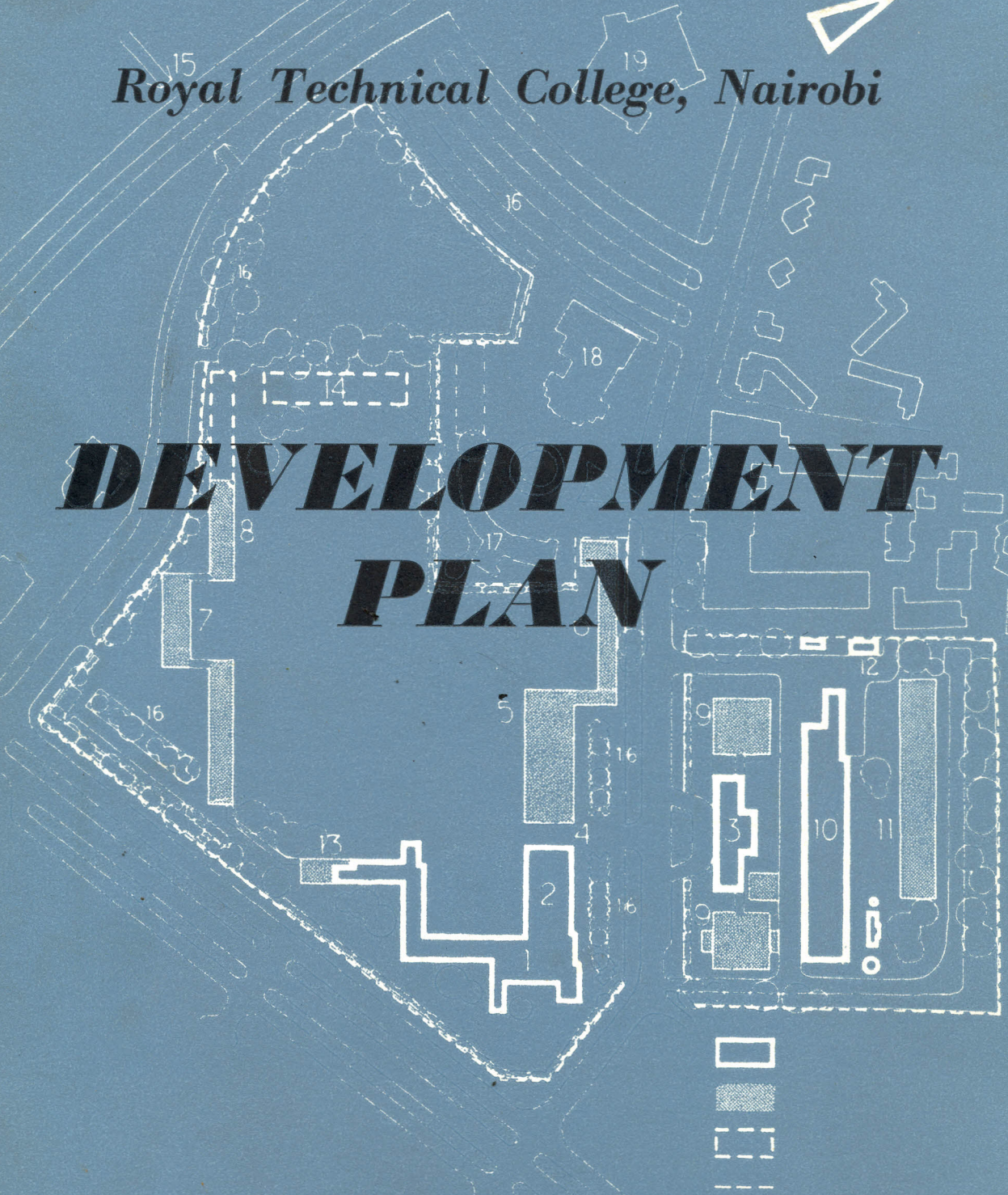




Royal Technical College, Nairobi

DEVELOPMENT PLAN



A New East African University College at Nairobi

1911

REPORT ON THE DEVELOPMENT PLAN

Prepared for the Royal Technical College, Nairobi

for a

NEW UNIVERSITY COLLEGE at NAIROBI

by

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NOTE: Development Plans are reduced from the original full scale drawings submitted with this Report and are therefore diagrammatic only.

TERMS OF REFERENCE

1. No precise terms of reference were laid down but they are broadly contained in the following paragraph taken from correspondence with the College:

“ . . . to get from the College Council clear and precise instructions, including details of land available, of accommodation required and of budget available; prepare a layout scheme, report, estimates and recommendations—all this after studying the Working Party's Report.”

INTERPRETATION

2. The pattern for development of courses and for new buildings at the Royal Technical College of East Africa will follow the lines laid down in the Working Party Report (1958) and the present survey is based on the functional requirements suggested in that report and its appendices. Since its publication, however, College Council has devoted much time to developing and clarifying the material and this report incorporates the results of that work. Appendix 1 for example gives Council's ideas on priorities and first guess at approximate costs. The minute of 4.11.59 gives suggested floor areas for departments.

3. The chief objective of this survey has been to take a very quick look at all aspects of College problems for the next six years, and make recommendations upon:—

- (i) land needs for all College purposes;
- (ii) the location of the main buildings in relation to those that exist;
- (iii) siting of important individual buildings which are urgently required, with an assurance that no conflict will result later. These essential buildings are listed in Appendix 1.

ASSUMPTIONS

4. The Development Plan is based on Council's programme to build the College up from the present 290 students to 855 students in 1966. Staff numbers by that date are expected to be 120.

5. Though 1966 is the limit of College vision today, it is clear that educational development in East Africa will continue to expand. Space has therefore been left on College grounds for yet further extension of buildings after that date.

6. To prepare a development plan it is necessary to have an idea of the size, shape and floor areas and extension needs of the various buildings. An excellent clear brief was given by each of the present heads of departments and from these briefs very rough sketch plans were made. These plans and notes can, of course, be made available later on for discussion when more detailed briefing is given after substantive appointments have been made in each department (see W.P.R., para. 58).

7. The floor areas indicated by College appeared in some cases insufficient to carry out the intentions of the Working Party Report; especially was this so in the case of the Library, Science buildings and Arts. Site elbow room has therefore been provided in these cases until a more precise brief is available.

LAND ACQUISITION

(a) LAND AT COLLEGE SITE

8. The Working Party Report (see paragraphs 56, 57) hints at some of the inadequacies of the College site. Further investigation showed these to be considerable: the tongue of land adjacent to Princess Elizabeth Way proved to be virtually useless for building owing to aspect, building lines, and soil conditions; proposed road improvements would interfere with siting and privacy of new College buildings; car parking arrangements for the National Theatre and the proposed siting of new cultural buildings would interfere with the proper grouping of the academic buildings. With the help of the Commissioner of Lands, the Government Town Planning Adviser and the Nairobi City authorities, a useful re-arrangement of boundaries has been effected as shown upon Plan A. The Faculty of Engineering site remains very tight however for ultimate developments, and should adjacent land later become available, it should be acquired.

9. It is important to the College that the City's road proposals in this area be finalised as soon as possible. It is recommended that the City Surveyor be asked at the same time to consider the provision of safe pedestrian access to the College under or over Princess Elizabeth Way.

(b) LAND FOR STUDENT ACCOMMODATION

10. The land held by the College in Protectorate Road and now used for staff flats and halls of residence for women students has room for a good deal of further building.

11. The land abutting upon Hospital Road with its steep gradients and growing traffic problems can accommodate further halls of residence for men but not to the numbers ultimately required (see Working Party Report, paragraph 59). A case was

made (at meetings on January 21st and 22nd) for a further 15 acres across the road. The authorities again came to the assistance of the College with permission to develop 6 acres immediately (and perhaps more later) upon certain agreed conditions as to traffic safety and height of buildings. Plan B shows the next stage of development here—a group of halls of residence with dining room facilities. This is intended to be diagrammatic only, as careful thought must be given to the height and siting of these halls. (For proposals in more detail see paragraphs 34 to 36.)

(c) LAND FOR STAFF ACCOMMODATION

12. Whilst the Protectorate Road site has room for further building, flats are not popular with staff. It appears, however, that they are economic, useful for small family units, and provide a “transit camp” for staff awaiting houses.

13. If further flats are to be built it is suggested that the steep gradients might enable “two up, two down” blocks to be considered, each provided with a garden. It is suggested that College acquire individual plots for senior staff houses, not necessarily in one district, and proceed now to build further houses. The provision of 18 staff houses within the next 20 months is urgent (see Appendix 1), and a further 50 housing units within the quinquennium. One or two further staff houses (possibly for Wardens) could be sited on the spur above the playing fields, with access and services from Milne Drive. A new Warden’s house adjacent to the women’s halls of residence has been located.

(d) LAND FOR RECREATION

14. The present sports ground in the Maigiri Wai River valley is far from perfect: dusty, not too well drained, nor properly aligned to sun angles, and too small even for the student numbers projected for 1966. It has one major virtue—its proximity to the halls of residence which enables students to use to the full on weekdays the short hour between work and darkness. These factors suggest that it is important for the College to open up the 400 acres of the Karura Forest area as soon as possible for week-end sporting events and for organised games throughout the week when student numbers grow too large for the valley site. Meanwhile the latter could be improved with drainage, more grass and additional pitches to serve up to 600 over the next three years. The diversion of Clement Road should be pressed on with, and the City Council should be asked to settle now the exact position of the Milne Drive link to Ainsworth roundabout. Though the purchase at high cost of additional land beyond the stream could hardly be justified for this short-term programme, a five-year lease on short notice of the adjacent 10 acres of level ground towards Chiromo might be explored. A swimming pool (to Olympic Games standard) is included in the budget.

15. The early opening up of the Karura Forest land is recommended for another reason—the provision of staff housing and a tentative position for this is shown on

Plan C. The letting off of some 50 acres at the north-west side (part of which has recently been clear-felled) to one or two academic institutions whose character and needs accord with those of the College is recommended. The existing murrum road could be regraded and topped and limited services brought in for (say) £20,000. Alternative access from the south is possible.

THE PLANS

(a) COLLEGE SITE IN GOVERNMENT ROAD

16. The existing buildings which at present house most of the teaching accommodation, library, assembly hall and common rooms (referred to in this report as College Buildings) will remain the focus of College life and an attempt has therefore been made to place new blocks as close as possible to this nucleus and to create something of the courtyard feeling which is so strong a factor in the College atmosphere of the older universities in Europe. A sense of enclosure has been sought by building up a continuous façade on Government Road; by a conscious link with the new conservatoire and ballet building; by creating small open courts within the new Science group and the new Arts block; by heavy tree planting suggested at open corners, at the junction of buildings and in places where later buildings will serve to close vistas. The central green plot, some seventy yards long by fifty yards wide, could be the finest and most spacious garden in Nairobi, with simplicity as its keynote. At the north-western end, approached under a future teaching block, will be the College Garden, a space of smaller scale where students can stroll or meditate or read. A part of College Garden could be laid out as a tiny open air theatre (served perhaps from the green rooms of the National Theatre). Simple names have been suggested for the various courts: Great Court, Old Court, Fountain Court and Science Court. A covered colonnade is indicated to provide a weatherproof link between teaching areas, the Library and the College offices.

17. An attempt has been made to link the outlying American Wing to College Buildings by the creation of an axis with the new College Gate, by careful handling of the design and scale of the new engineering blocks and by appropriate tree planting.

Access, Traffic, Car Parks

18. The principal entrance to the College will be through College Gate, a fine archway some 50 ft. wide through which the Great Court is seen from the road, giving entry (for vehicles on state occasions only it is suggested) to the administrative College Offices. Secondary entrances are behind the Science Buildings, to the north of the

Arts Buildings (shared with service to the cultural centre building now under erection); and at two further points on the north-west boundary.

19. It is important to the College that the new road proposed by the City on the west of the site should be for two-way traffic and not for the one-way slip traffic spoken of earlier. This road will take the place of the present extension of Sadler Street. The boundary to widened Kingsway must, of course, be kept imperforate and substantial planting up will be required here against noise, illicit parking and unauthorised entry.

20. Car parking, a problem that is bound to grow, has been broken into small units of not more than 80/100 cars placed near the buildings they serve and should be carefully planned with special planting to give shade and to prevent glare. Interesting car parks of this kind are at present in hand in other parts of Nairobi. Use by College members of the large car park to be provided for the National Theatre should be encouraged, as this will not otherwise be fully used by day.

The Library

21. This most important building, to be afforded building priority and "particularly careful and generous treatment" (W.P.R., paragraph 54) has been sited in close relation with teaching areas, service from Government Road and with proper regard to sunlight and silence. The points made at preliminary talks (in December 1959 and January 1960) with members of the Inter University Council Library Advisory service were reported to the Library Committee on January 28th and the broad outline of a sketch plan was agreed so as to enable first estimates to be prepared. Details of proposals for size, number of readers and staff will be seen in Appendix 2. The Library Committee decided that the ultimate size required for use in 1966 should be provided now in one operation and not in stages. Space has, however, been left in the plan for yet further extension of both stack and reading areas if required after 1966.

The Faculty of Arts

2. A new building adjoining the Library is provided with some 5,000 square feet on each of three floors. Since the Departments of Architecture and Mathematics will, for the time being, be housed in College Buildings the new space will be adequate for Economics, English, History and Geography. This building should however be designed to carry further floors, its ultimate height to be no greater than the Library.

The Faculty of Science

23. The present 12,000 square feet of teaching space in College Buildings is likely to grow to at least 50,000 square feet, with room for yet further additions after 1966 to take care of degree and research work. Space for this is provided in new buildings four or five floors high on the south side of the Great Court close to the existing

Science floors and where they will have ample room for extension to the north-west as time goes on. As this faculty often has problems of unloading direct into a goods lift, ample space is provided at the rear for parking and turning. Here also are the animal house, herbarium and botany gardens, with car parking for at least 100 cars. In this block (as in others) removable partitions and other devices should be carefully thought out to enable changes in teaching requirements to take place as the years go on.

The Faculty of Engineering

24. Engineering is firmly established on the north-east side of Government Road with the American Wing and the Workshop Block and as far as can be seen there will just be room on this 5-acre site for the additional buildings needed for civil engineering and the many other requirements listed in the brief (see Appendix 2). The priority and staging of these buildings has also been considered. The urgent Stage 1 will be met by a hydraulics laboratory 80 ft. long by 35 ft. wide (and ancillary rooms) built at ground level to the south-east of the American Wing, being straddled later by a Stage 3 high block giving the 23,000 square feet shown in the brief. The Stage 1 two-storey laboratory block is placed on the other side of the American Wing and could provide a caretaker's flat on a third floor. Both blocks would ultimately be linked by corridor bridges to the existing buildings. At the rear of the American Wing are shown the various small detached rooms needing special conditions for X-ray diffraction, radiography equipment and for photogrammetry.

25. The present arrangement for access to a long narrow courtyard between the Wing and the Workshops, though not perfect, is adhered to and provision should be made for security gates at either end. The principal traffic entrance to this site should be at the eastern end as the gradient is easier here to give access past the gas plant to the rear of the site where excavation can provide space for three hangar-type buildings of lightweight construction for airflow and structural testing (Stage 2). These can be partially built into the hillside to reduce noise nuisance.

26. On the north boundary of this site there is room if need be for extension of the electric sub-station and beyond for 2,000 feet on two floors for efficiently planned College bulk storage, maintenance shop, and beyond a yard for the repair of transport vehicles including buses when the Karura Forest site is in use. Substantial tree planting should line the north, north-east and north-west boundaries. Special care and advice should be taken over planting on the Government Road frontage as this can help to lessen the noise defects of the American Wing.

Faculty of Special Professional Studies

27. With the exception of Domestic Science, this faculty will be housed in College Buildings when Arts, some Science and Engineering have gone to their new buildings. Domestic Science (some 9,000 square feet) will be provided with a new block (on

two floors and capable of lateral extension) beyond the Science group and facing into the Great Court.

Administration

28. College Offices will require 12,000 square feet of floor space including Council Chamber, conference room, accommodation for Principal, Vice Principal, Registrar and Bursar; general offices, etc. These have been planned over College Gate with access directly therefrom. The sketch plans for the Library indicated an area at second floor level lying between the College Offices and the Library which could be used for expansion by either department.

Old Court and College Buildings

29. The provision of new buildings for Arts, Science, Engineering and Domestic Science and for a new Library will free some 20,000 square feet of teaching space in College Buildings which will be re-arranged for the following functions:

Ground Floor Tutorial rooms, Commerce, Accountancy, general stores and three lecture rooms for classes of 60 each.

First Floor Tutorial rooms, lecture rooms (for classes of 20 each), Science (as existing now) and one large lecture room (60) and space for general service English classes.

Second Floor Staff Rooms, Mathematics, Science (as existing now) and one large lecture room (60) and a smaller lecture room (20).

Third Floor Graphic Art, etc., and Science (as existing now).

Fourth Floor Architecture (including Building Science).

30. When the present Library moves into its new home a remodelling of this area can give the long overdue requirements of good Senior Common Room, Quiet Room and extended Refectory facilities. It is hoped that this will enable fuller use to be made of the adjoining terrace and balconies.

Occasion can also be taken to amend some of the minor defects of the present buildings as follows.

Gloucester Hall

31. That so fine a hall should have such inadequate stage arrangements can no longer be borne. It is suggested that when the Library and College Gate plans are prepared a further 10 to 15 feet be added backstage which will enable better green rooms, prop stores and workshops to be provided. The structure lends itself to this and at the same time a proscenium arch, grid and gear for lighting and stage curtains could be provided.

32. When the College stores are removed from the temporary position at the back of the Hall to the new site suggested behind Engineering, some thought should be given to a College Shop, possibly located near College Gate. Some revisions too in the Entrance Hall are needed to make more efficient the activities of porters, reception and telephone staff. The Rootes show model would now be more suitably housed in Engineering and should be planned for in the new buildings.

(b) OTHER ACADEMIC BUILDINGS

33. Should other educational establishments associated with the College require land on which to build, a place could be found for small units upon the terrace immediately below the student halls of residence overlooking the valley sports ground. Larger institutions or those requiring rather more land (such as, for instance, agricultural research) could be accommodated upon the Karura Forest site at the north-western corner.

(c) RESIDENTIAL BUILDINGS (MEN STUDENTS)

34. The three halls of residence built beside Hospital Road can house 300 students and the dining room and kitchen linked to them can cater for this number. The most recent hall of residence shows improvement over the earlier ones in design, efficiency, detail and appearance. Nevertheless new ideas on planning, grouping and especially on dining arrangements might be tried out upon the new and attractive site across the road, where an imaginative scheme is called for. If three or more halls are to be built here there might be a case for three individual dining halls each with its own family character but all served directly from the same kitchen.

35. This new site should be connected by pedestrian tunnel under Hospital Road to the existing halls of residence. The levels permit of this at the Police Mess end of the site.

36. Space permits the building of further halls later to the north-west of the Warden's house, but the problem of catering for these would need very careful thought. At the extremity of the site (beyond the gully) there is room for one or two houses for wardens or catering staff.

Students Union

37. This building should now be planned as a further storey upon the large dining room. In this position it would have an ideal position in relation to other student activities. In planning the Union, reference should be made to numerous Student Union buildings now going up in the United Kingdom and elsewhere.

(d) RESIDENTIAL BUILDINGS (WOMEN STUDENTS)

38. The two present halls of residence can together house 48 students. As each of the halls can carry two more upper floors, a total of 96 women can be accommodated without difficulty. The interesting suggestion has been made that when the staff housing situation eases one or more of the adjoining flats should be used experimentally as living space for a group of women students, their communal life there being closely linked to the Domestic Science course.

39. A further building experiment might be the erection of a small block of bed-sitting rooms upon the Protectorate Road site so planned and detailed as to be easily converted from use by women to use by men or *vice versa* and thus help to solve the problem of uncertain proportions of men and women students during the build-up period.

ARCHITECTURE, PLANTING AND SERVICES

40. With the heightened status of a University College it is important that the architectural quality of the new buildings should be fine, dignified and expressive of the academic virtues, though of course in the modern idiom. The face of Nairobi has changed remarkably of late and the choice of materials for the college should be at least as good as for the many fine new commercial blocks to be seen throughout the City.

41. The achievements of the Nairobi City Council in the field of landscape and planting are notable and the charming little rock and cactus garden beneath the latest hall of residence echoes the major achievements of Mr. Peter Greensmith elsewhere. It is recommended that an approach be made to the City authorities to see if their skill and experience could be made available in some form when the new College buildings are being planned. The proper landscaping of the Great Court (and indeed of all College sites including Engineering), the choice of trees and their exact placing, the scale and colour of shrubs and garden plants—all these will be a vital and important part of the ensemble and should be well considered at the outset rather than as an afterthought. The creation of a visual link between College Buildings and the American Wing will depend largely on thoughtful planting.

42. It is uncomfortable to see how often flooding takes place near and upon the College Buildings site. It is recommended that at a very early date the appropriate authority should prepare a proper drainage scheme. There is a growing nuisance from dust which at times even interferes with academic studies (e.g. in the Electrical Department): cure of this situation could be considered when planting and road surfaces are being settled. It is suggested also that in designing the new buildings much more

attention should be paid to acoustics and to the reduction and deflection of outside noise.

APPOINTMENT OF PROFESSIONAL ADVISERS

43. The amount of building work ahead, probably running into seven figures, is substantial and the success of the College plans will depend on a careful programme, good time-keeping and a strong hand upon the contractual and financial side of the work. It will be wise to allot the design and execution of the buildings to two or three trusted firms of Architects, in which case the appointment of a co-ordinating Architect is recommended whose function would be:

- (a) to assist and advise Council to programme the building work; to advise on the selection of Architects and other professional firms, and to help in preparing precise College briefs for the individual buildings in collaboration with the various advisory services in London,
- (b) to set the broad pattern of design, grouping and choice of materials, agreeing these with the Architects concerned so as to achieve unity and harmony between the various buildings,
- (c) to be responsible to Council for the progress, cost, and contractual aspects of the work, and for co-ordinating the work of these firms,
- (d) to deal with matters of overall importance such as drainage, foundations, roads and services, planting and matters requiring contact with Government and local authorities.

44. It is recommended that College appoint a firm of Quantity Surveyors to assist with the preparation of the overall budget of the new buildings. A similar appointment would be appropriate to advise generally on structures and sub-soil conditions.

FINANCE

45. At Appendix 1 is a summary of College estimates for the capital cost of building items to bring the student numbers up to 855 by 1966. However, some margin of extra cost ought to be allowed to meet proposals such as the larger size of the Library (suggested by the Library Adviser to the Inter University Council) and something for drainage, planting, road works and other general items. This increases

the College figure of £904,000 to £1,344,000 as a very approximate budget. It will be understood that though the development plan leaves room for reasonable floor areas for each department and for later expansion, an assessment of departmental cost requirements cannot be more than a guess until accurate and final briefing is available. After Council's consideration of this Report time should be given to a closer assessment of costs required, jointly with the Quantity Surveyor suggested in paragraph 44, so that a realistic picture can be placed before the Quinquennial Advisory Grants Committee in July.

ACKNOWLEDGEMENTS

46. Thanks are due for the great help given by the Chairman of College Council, and by many officials of the College, especially the Acting Principal, Registrar and other members of the Building Committee; to Mr. Strongman of the Ministry of Works for information on soil conditions; on matters of general layout to the Government Town-planning Adviser, the Commissioner of Lands and officers of the Nairobi City Council.

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10th February, 1960.

APPENDIX 1

APPROXIMATE ESTIMATE OF COST (Draft)

<i>Building</i>	<i>Approx. Cost (Council)</i>	<i>Suggested Cost (A.M.C.)</i>	<i>Occupation Date</i>	<i>Start of Building</i>
	£	£		
Library	175,000	226,000	Oct. 1961	Mid. 1960
Administrative Block	30,000	30,000	Oct. 1961	Mid. 1960
Workshop and Store	8,000	8,000	Oct. 1962	Mid. 1961
Science Block	120,000	200,000	Oct. 1961	Early or Mid. 1960
Hall of Residence (Men) No. 4	70,000	70,000	Oct. 1962	Mid. 1961
Wardens Houses (3) and subordinate housing	15,000	15,000	Oct. 1962	Mid. 1961
Halls of Residence (Women)	50,000	50,000	Oct. 1963	Mid. 1962
Hall of Residence (Men) No. 5	70,000	70,000	Oct. 1964	Mid. 1963
Students Union Building	10,000	15,000	Oct. 1961	Mid. 1960
Engineering Buildings	100,000	200,000	Oct. 1961	Mid. 1960
Arts Building	50,000	50,000	Oct. 1962	Mid. 1961
Domestic Science	24,000	24,000	Oct. 1962	Mid. 1961
Alteration of existing Library, to Senior Common Room	2,000	10,000	Mar. 1962	Dec. 1961
Sports Facilities	5,000	10,000	Oct. 1961	Early 1961
Swimming Pool	—	150,000		
Staff Housing (18 in 2 phases: 6 by end 1960 and 12 by end 1961)	105,000	105,000	{ Dec. 1960 Dec. 1961	{ July 1960 July 1961
Junior Staff Housing (50 units)	—	200,000		
Hall of Residence (Men) No. 6	70,000	70,000	Oct. 1965	Mid. 1964
Hall of Residence (Men) No. 7	—	70,000		
Special Student Unit	—	40,000		
Dining Room and Kitchen (for 300)	—	24,000		
Karura Forest Site (First Stage)	—	20,000		
Removal of road on College Site	—	10,000		
Drainage, planting, roads, etc.	—	55,000		
Pedestrian tunnels	—	10,000		
Equipment (say)	—	100,000		
Contingency sum including rising costs	—	50,000		
TOTAL	£904,000	£1,882,000		

DETAILS OF BRIEFS FOR NEW DEPARTMENTS**(1) Faculty of Engineering***(Approx. teaching area 50,000 sq. ft.)*

The following proposed development anticipates considerable increase in Student numbers in Stage III.

Since the lines of future development are not definite, it is suggested that where possible plans are made for multi-storey buildings, even if the initial building programme is for single or two storeys. Certain developments will require noisy laboratories, and these should probably be sited away from town or residential areas. (Such developments would be Agricultural Engineering, Aerodynamics laboratory, test beds for high powered internal combustion engines).

First Stage—Urgent

Requirements are as follows:—

- (a) Hydraulics laboratory: 3,000 sq. ft. floor area with minimum length of 70 ft. Provision for water head of 50 ft. Associated with the laboratory should be an office/workroom, and a storeroom (each 250 sq. ft.)
- (b) Laboratory block, which can be attached to or separate from above, as required, and should include:
 1. Concrete laboratory: 750 sq. ft. Ground Floor, with direct access from outside.
 2. Soil Mechanics laboratory: 750 sq. ft. Ground Floor, with direct access from outside.
 3. Drawing offices: 1,000 sq. ft.
 4. Theory of Machines laboratory: 750 sq. ft.
 5. Four Offices: 250 sq. ft. each.
 6. Two Storerooms: 250 sq. ft. each
 7. Two Tutorial rooms: 250 sq. ft. each
 8. One Lecture room—flat floor: 500 sq. ft.
- (c) Caretaker's Flat: two bedrooms and small dining room/lounge.

Second Stage

Three large single storey hangar type buildings for the following purposes:—

1. Air flow laboratory.
2. Structural testing of full scale models.
3. General purposes.

The floor area should be about 4,000 sq. ft., free from pillars or other obstructions, and each building should have open access, with offices and storerooms on one side.

Third Stage

(a) Large multi-storey building containing the following:—

1. Lecture theatre holding 200.
 2. Two lecture rooms holding 100 each.
 3. Four lecture rooms holding 50 each.
 4. Large Principles of Electricity laboratory: 2,000 sq. ft.
 5. Large Applied Mechanics laboratory: 2,000 sq. ft.
 6. Two Drawing Offices: 2,000 sq. ft.
 7. Standards Room: Air conditioned, and vibration and sound insulated. 800 sq. ft. approximately.
 8. Metrology laboratory: 400 sq. ft. approximately.
 9. Fifteen offices and research laboratories (each 250 sq. ft.)
 10. Photogrammetry Room on ground floor (800 sq. ft.) (vibration insulated floor).
 11. Six Storerooms. 250 sq. ft.
 12. Two Students' common rooms: 400 sq. ft.
- (b) Two isolated rooms, free from radiation hazards, for X-ray diffraction and radiography equipment: 400 sq. ft. each with storeroom 200 sq. ft.

NOTE: Occupation of part of Third Stage accommodation could be deferred until early in the second quinquennium.

Car Park

At some suitable stage a car park for 100-150 cars will be required.

(2) Domestic Science

(Approx. teaching area 9,000 sq. ft.)

	<i>sq. ft.</i>
1. Practical Rooms	
Cookery with stores for Equipment, Food and Fuel	828
General Purpose with stores for Equipment and Food	816
Home Management	756
Needlework with Changing Room and Wardrobe store	810
Studio for Arts and Crafts with Store	690
2. Laboratory	
General Laboratory with weighing Room and Store	1,002
3. Demonstration Room	
with Store	816
4. Lecture Room	756
5. Departmental Library	300
6. Office Accommodation	
Head of Department }	
6 Staff rooms }	960
1 General office }	
TOTAL	<u>7,734 sq. ft.</u>

In addition two residential flats will be required one of which can well be of the College Flats but the other should be in the Department. This it is estimated will add about 650 sq. ft. making the total for the Department 8,384 sq. ft.

This allows only one laboratory for general work but if more specialised work were necessary in the future some additional laboratory space would be necessary unless the Science building could be used under internal departmental arrangements.

(3) Administration

(Approx. 12,000 sq. ft.)

	<i>sq. ft.</i>
1. Offices	
Principal	400
Secretary to Council	200
Vice-principal	200
Registrar	200
Bursar	200
Assistant Bursar	200
Accountant	200
Salaries and Finance Clerk	200
Admissions Secretary	200
TOTAL 9	<u>2,000 sq. ft.</u>
2. Offices for Secretaries	
Principal	150
Vice-principal	150
Secretary to Council	150
Registrar	150
Bursar	150
TOTAL 5	<u>750 sq. ft.</u>

Appendix 2 (continued)

3. Main and Typing Offices										<i>sq. ft.</i>	
Main Office	..	..	..	..	..	..	..	..	..	500
Bursars Main Office	..	..	..	..	..	..	..	..	..	500
Admissions Main Office	..	..	..	..	..	..	..	..	..	500
TOTAL 3										<u>1,500</u> sq. ft.	
4. Other Small Rooms											
Files	}									TOTAL 5	800 sq. ft.
Machine Room											
Porter											
Caretaker											
Stores											
5. Toilets											
Principal, Men, Women	}									TOTAL 4	700 sq. ft.
Registrar											
6. Conference Rooms											
Main Committee Room	..	..	..	..	..	..	..	..	..	1,000
Small Conference Room (total area without circulation space)	..	..	..	..	..	..	..	..	..	500
TOTAL										<u>7,250</u> sq. ft.	
7. Faculty Offices —If these are included add a further 1,200 sq. ft. floor space.											

(4) Science

(Approx. teaching space 50,000 sq. ft.)

Chemistry	..	..	..	..	..	..	..	..	..	..	<i>sq. ft.</i>
Physics	..	..	..	..	..	..	..	..	..	..	10,000
Botany	..	..	..	..	..	..	..	..	..	..	10,000
Zoology	..	..	..	..	..	..	..	..	..	..	6,000
Geology	..	..	..	..	..	..	..	..	..	..	6,000
General	..	..	..	..	..	..	..	..	..	..	6,000
											12,000
TOTAL										<u>50,000</u> sq. ft.	

Plus herbarium, animal house 30 ft. by 15 ft., working museum and acid store.
 Expansion to be laterally not vertically.
 Access by lorries to 4 ft. 6 ins. wide goods lift.
 Car park for 100 adjacent.

(5) Library

Approximate area	..	..	..	..	..	..	..	..	..	..	47,000 sq. ft.
Readers	..	..	..	..	..	..	..	..	..	..	350
Books (ultimate 500,000)	..	..	..	..	..	..	..	..	..	..	370,000

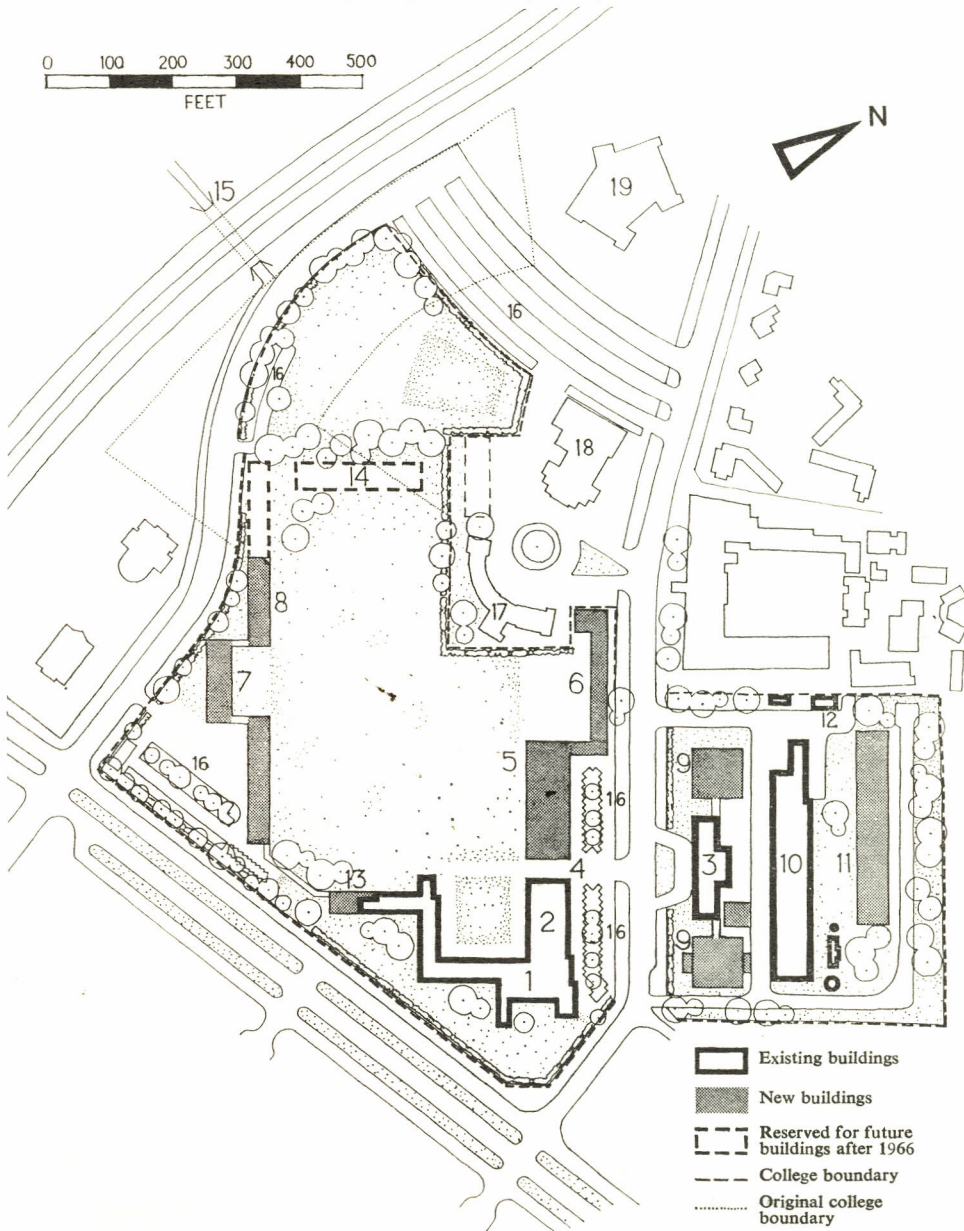
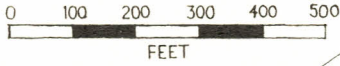
PHASED BUILDING PROGRAMME (Draft)

(Note: solid line for building contract; dotted line for preliminary work)

	1960	1961	1962	1963	1964	1965
Library	-----		-----			
Administrative Block	-----		-----			
Workshop and Store	-----		-----			
Science Block	-----		-----			
Hall of Residence No. 4 (Men)		-----		-----		
Dining Room (for 300) ..		-----		-----		
Wardens' Houses (3)		-----		-----		
Hall of Residence (Women) ..			-----		-----	
Hall of Residence No. 5 (Men)				-----		-----
Students Union Building ..	-----		-----			
Engineering Buildings	-----		-----			
Arts Building		-----		-----		
Domestic Science		-----		-----		
Library Conversion		-----		-----		
Sports Facilities		-----		-----		
Staff Housing: Phase 1 ..	-----		-----			
Phase 2 ..	-----		-----			
Hall of Residence No. 6 (Men)				-----		-----
Karura Forest Site		-----				-----
Drainage, Planting and Roads	-----		-----			

DEVELOPMENT PLAN "A"

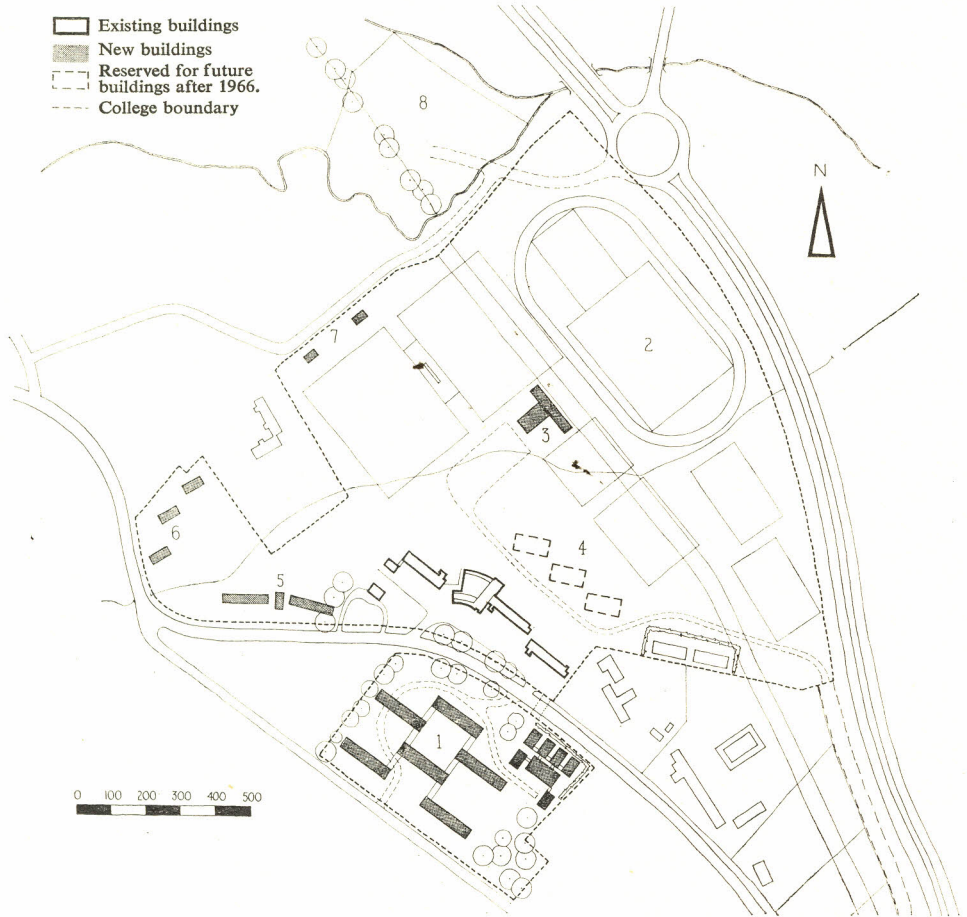
(College Buildings Site)



- | | | | |
|----------------------|---------------------------|----------------------------------|------------------------|
| 1. College Buildings | 7. Faculty of Science | 12. Maintenance and Transport | 16. Car Parks |
| 2. Gloucester Hall | 8. Domestic Science | 13. Future Classrooms | 17. Cultural Centre |
| 3. American Wing | 9. Faculty of Engineering | 14. Future Teaching Block | 18. National Theatre |
| 4. College Gate | 10. Workshops | 15. Pedestrian Tunnel to Hostels | 19. Broadcasting House |
| 5. Library | 11. Test Labs. | | |

DEVELOPMENT PLAN "B"

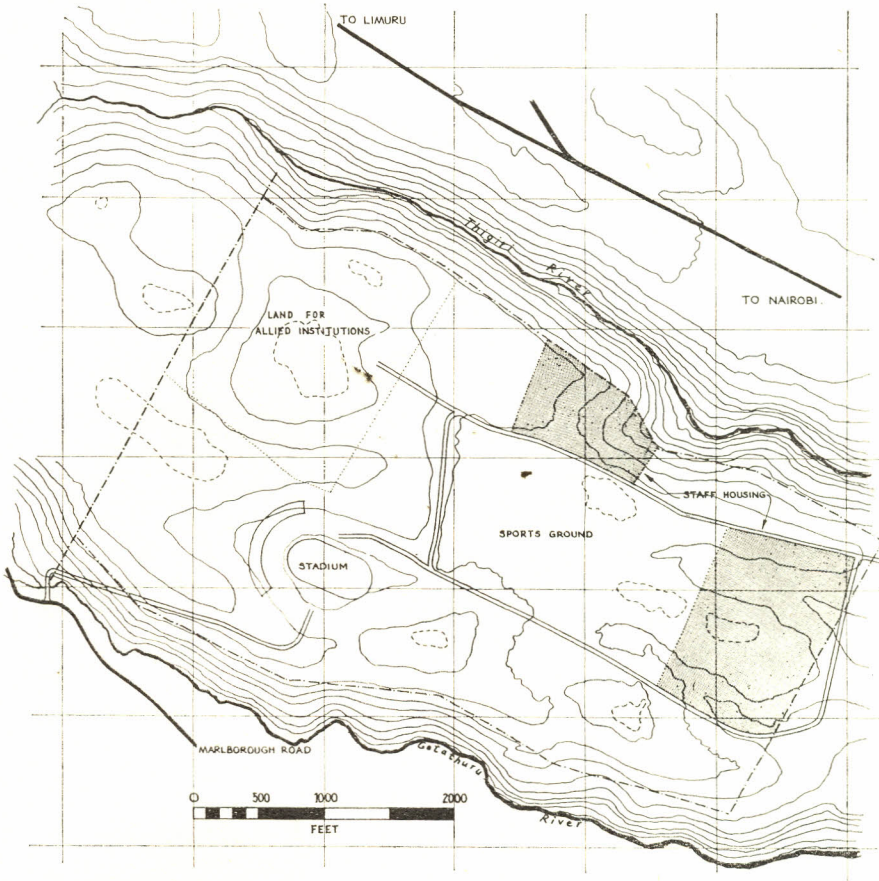
(Valley Sports Site)



1. New Halls of Residence (stages 1 & 2) and tunnel.
2. Sports ground improved for 600 students.
3. Sports pavilion.
4. Possible site for allied institutions.

5. New Halls of Residence (stage 3).
6. Staff houses, wardens etc.
7. Groundsmen.
8. Additional Chiromo land for sports.

DEVELOPMENT PLAN "C"
(Karura Forest Site)



Diagrammatic plan of about 400 acres in Karura Forest area showing proposed bridge, roads and sports ground development including possible alternative sites for staff housing and land for allied institutions.