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UNIVERSITY COLLEGE NAIROBI

Report on A.I.D. Programme

by

Anthony M. Chitty

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REPORT OF ADVISORY ARCHITECT PLANNER ON A. I. D. PROGRAMME.

(for Mr. C. T. Henfrey's Sub-Committee on Thursday 10th September, 1964)

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TERMS OF REFERENCE

1. The terms of reference are contained in the correspondence between the Registrar and the Architect Planner dated 5th May, 13th May and 2nd June, 1964 and cover acting as "architectural adviser in respect of the A. I. D. programme" and "advising on general architectural style of each building having regard to site layout and to the future overall development programme".

PRELIMINARY REPORT

2. On receipt of preliminary drawings, reports and the Registrar's letter of 11th July covering all the proposals then known of, an advance report dated 12th August was sent to the College indicating the sort of difficulties that might be met on some of the buildings. This report was circulated to the Committee and was discussed by the Committee and the Architect Planner on Monday 7th September and finally on 10th September.

3. A series of meetings with the sub-committees responsible for individual buildings took place during the subsequent week, site inspections were made and various aspects of the programme were discussed with College Officers.

GENERAL

4. The present programme covers 4 buildings costing £455,000. In general it can be said at the outset that no insuperable difficulties or planning objections can be foreseen to this programme. The buildings proposed are:

- (i) Civil & Mechanical Engineering building £210,000
- (ii) Physics Building £147,000
- (iii) Hall of Residence No. 6 £76,000
- (iv) Lecture Theatre and Library Chiromo £22,000

LAND ACQUISITION

5. The redrawing of the main college boundary at the north west corner is an improvement (see City of Nairobi drawing 12/1/133). Although it does not give more land capable of development with large buildings the new area is more compact and more of it is accessible without crossing roads. The detached area as now outlined in blue is however not very useful for substantial buildings as only one third to one half of it can economically be built upon. On the bulk of this site foundation tuff can only be found at depths down to 30 feet. All future drawings of this kind ought to show the agreed point for students crossing Uhuru Highway as this will be a factor in the placing of future buildings. If any further land becomes available in this area at a reasonable figure the College should acquire it.

6. At Chiromo the College has begun to purchase surrounding property and this policy is sound and should certainly be continued especially where property with road frontage can be had (e.g. Riverside Drive and Kenton Drive). The acquisition of Kerrs' land would be an asset. Such enlargements will not only be useful but will enhance the value of the whole site. Purchase on mortgage from a national source might be explored and property thus acquired leased out until actually required. It must not be forgotten however that these enlargements bring nearer the day when the College may have to face a substantial contribution to the City Council's improved sewerage in this residential area. A written understanding now, might be of advantage later on.

7. The 5 acre Engineering site may be inadequate in future years and the possibility of eventually acquiring adjoining land to the northeast should not be lost sight of.

8. Perhaps the most cramped site of all is going to be that lying between Protectorate Road and Hospital Hill Road. In 1960 we asked the Lands Department for 15 acres here - we got a bare 5 acres. It is understood that the Commissioner of Lands has undertaken to consult the College before redeveloping the plots across Protectorate Road. It is already clear that more hostel land will be needed and the College should continue to remind the Department of Lands of its need for additional space in this area and especially for the spur between the new dining hall and the junction of the two roads as well as land adjoining the site to the south east. With 400 students accommodated on this site the nett residential density is only 50 persons per acre, a very low figure compared with hostel densities in the United Kingdom and elsewhere which can be as high as 260 persons per acre. Further comments on the denser development of this site are given in paragraph 28.

ENGINEERING SITE

9. The layout of lecture theatres, computer room and laboratories on the architects' drawing 565/1A is in keeping with your Consultant's previous recommendation to develop the College Road frontage to maximum height. Further buildings here should include (if possible in this order) two additional floors on the American Wing, a five to seven storey block straddling the Civil Engineering Wing and later a three storey block in place of the (Technical College) Workshops.

10. The arrangement and location of the high voltage and structures laboratories are appropriate provided that the College is satisfied that the space occupied by these functions will not ultimately increase by more than 50%. If there is any chance of larger growth an alternative site ought to be considered from the outset. In any case it will be wise to move these buildings a little to the south to spare the large tree now and give room for expansion later. Soil tests should be made here.

11. As soon as work starts on the lecture theatre and computer blocks all vehicle access to the Stores and Workshop building should be restricted to the road that runs along the east and northern boundaries. This road was put in to a medium specification in 1961 but has never been used: with very little work at the north west end it can be made serviceable.

12. In view of the likely shortage of space on this site for the ultimate development of the engineering schools (see paragraph 7) the College is recommended to weigh up carefully the ultimate stores and workshop needs of an establishment whose student numbers may well rise to 3,000 and beyond. Experience at other colleges suggests that these functions could be separate and might each need three times the present accommodation. If this is likely here alternative sites should be reviewed now and a changeover planned before the present building becomes an embarrassment to the engineering schools. Even now lorries, buses and other vehicles cause danger and nuisance in this area.

CARETAKERS ACCOMMODATION

13. The earlier proposal to site caretakers' quarters at the south east corner of the engineering site was bad. This valuable land should not be used for low density units of this kind. It would however be satisfactory to build these quarters on top of the stores building though the dwellings would be better used by staff without children. Should the College decide to move the stores and workshop functions elsewhere this building (with the flats over) would of course be useful accommodation for the engineering departments. It would be useful to acquire two vacant lots in Grogan Road that adjoin College land and these could be revenue producing.

E. A. P. & L. TRANSFORMER HOUSE

14. The architect for the lecture theatre block should be fully briefed by the College on the agreements made earlier between College and Supply Company. The company has access and way leave rights in this area and it is important to verify the exact position and depth of cables along the Norfolk Hotel boundary. The cost of rehousing this substation within the new buildings should be explored.

15. PHYSICS BUILDING

The site for these buildings is by no means ideal being subject to noise, vibration and rather cramped surroundings. The sub-committee thought that it was conceivable that at some future date removal elsewhere of some physics department functions might occur and the proposed buildings should therefore be as normal and flexible in their use as possible so that a department other than physics could take them over with little adaptation.

16. In the light of the above the architect offered to show the sub-committee by 20th September plans for a building of less width and greater height to save ground space and increase the distance from the road and of a construction to enable blind laboratories to be naturally lit later.

17. Though it may be useful against noise it seems questionable on more general grounds to make all the major laboratories without windows. This implies considerable extra cost for ventilation plant and continuous artificial lighting. The College should consider very carefully in the light of experience elsewhere whether this is really desirable or necessary. The Finance Officer's rules call for an estimate of running costs with such a project. Electric consumption will be high and should be closely assessed.

18. Your Consultant has already criticised the proposed large lecture theatre as extravagant especially the non-functional covered areas surrounding it, and not best placed for access by the public. It is understood that this will not be built in the foreseeable future. The sketch elevations of the physics block as indicated at present appear somewhat alien to existing buildings and much closer consideration will need to be given to them and to choice of materials before they are acceptable.

19. The College is recommended to give further consideration to the proposed location of a radio-isotope building. Is it right to put this so close to the main teaching buildings and in an urban area? How will waste material be disposed of? What will be the ultimate storage capacity of isotope material? Recent codes of practice against radiation hazard suggest that the proposal needs a specific and detailed study before accepting this siting or showing the building on any drawings.

LECTURE THEATRE AND LIBRARY AT CHIROMO

20. After confused discussion in the sub-committee for this building the impression was gained that (a) the use of this building was uncertain or different from that originally put forward (b) the siting proposed was objected to by the Dean of Faculty and by Dr. Harthorn (c) the case for a 215 seat lecture theatre, common room and library for 17,000 books to serve only Botany and Zoology hardly seemed proved.

21. In view of this uncertainty your Consultant can only repeat his earlier recommendation that this block (when its exact function and justification are agreed) be sited to the east of Green Court and as part of a development to link eventually the Physiology and Botany blocks. No undue structural or design difficulties arise, the levels are suitable and this position makes possible the extended use of the lecture theatre and library by future departments which are likely to be built at this end of the court in the not very distant future. This arrangement was favoured by the Assistant Dean, by Dr. Harthorn and by Professor Kettle. Other positions suggested are likely to inhibit the siting of future major teaching buildings.

22. Before any detailed scheme is prepared subsoil investigation should be made to establish foundation depths and loadings here.

SERVICES

23. The College is reminded that in 1961 and 1962 the existing and future provision of gas, water, electricity and sewage disposal services was carefully reviewed and future loadings were estimated and in the case of electricity and water, mains were laid in to a pattern capable of serving all those future buildings shown on the 1960 Development Plan. A similar study was made for the Chiromo Report (March 1962). These records are in the College files and the requirements of new buildings proposed from time to time should be checked against the figures provided.

24. No special difficulties exist for the four groups of buildings proposed but the following points should be investigated:

(a) Chiromo:

electric mains to the site are probably adequate for the small block proposed but present loading on the temporary pole transformer should be checked for this additional capacity. A decision must be made as to which of the two 300 kva switchboards will most conveniently serve this building.

Sewerage proposals however small may cause the City Council to renew their request for an £8,000 contribution to the new sewer they propose. A strong case must be made to show that despite the extra connection to the septic tank system no additional sewage is involved.

(b) Great Court:

The physics block and future radio isotope building appear to your Consultant to raise considerably the College's present electric

loading and consumption figures (Professor Hunter's note of 26.8.64 on file D.4 does not fully cover this) and accurate forecasts should be made of installed kva, estimated kva, and estimated annual current consumption, tariff and costs and these checked against the existing transformer and switchboard capacities. (The Finance Officer's rules call for these estimates to be provided with any new capital scheme).

Gas: in 1962 the College was made aware that the present producer plant had a life of at least 10 years and was only used to a third or half of its potential output. Accordingly the 3" main was extended to the Chemistry Wing with a view to an ultimate balanced ring main surrounding Great Court. It will undoubtedly be economic to serve the new Physics buildings from a short extension of this main rather than to instal bottle gas.

(c) Halls of Residence:

A detailed investigation of future loadings for all services will be required here in the light of the proposed density changes.

CAR PARKING:

25. The attention of the College is drawn to the need for an overall policy for car parking as this problem will greatly and quickly increase. As far as immediate domestic needs are concerned there is no serious problem as small areas of unbuilt on land exist near most College buildings and informal parking is possible. Near College Gate however the more formal parking provision is already crowded and further organised parking places will soon be needed on the Engineering site and elsewhere. The College has already given undertakings to the City Council (as conditions of some town planning approvals) to provide 250 parking spaces on or near the main College site. Before you provide any additional formal (tarmac as against murram) spaces such as you now propose beside the Estate Office, the College should try to clarify the issue with the City Council. In Europe and America the idea is dying that developers should be compelled to house their own cars on congested and valuable sites. More and more local authorities are accepting (as a condition of planning approval) contributions towards the construction of municipal parking places.

HALLS OF RESIDENCE: Nos. 5, 6 and 7.

26. Though Hall No. 5 is not part of the A.I.D. programme and therefore not within the terms of reference of this report, it will be convenient to consider both Halls 5 and 6 together with the future Hall 7.

27. In paragraph 8 reasons have been given for acquiring extra land and for increasing density on this site. Your Consultant approves in principle the sketch plans by Norburn (Drawing for Hall 5) and by Marshall (Drawing UC.1A) for Hall 6, subject to the following amendments discussed in the sub-committee on 7th September:

- a. The land adjoining Protectorate Road to a depth of 100 feet to be kept free for a future high building (eight to ten floors with a lift). This will be achieved by re-siting Norburn's bachelor block near Hospital Hill Road and by placing Marshall's westerly block No. 7 down the hill from Hall 6.
- b. Marshall's Hall 6 and the future Hall 7 now indicated below it to be moved as near to the boundary as possible to give the maximum open space in the centre of the final built-up site.
- c. Materials for Hall 6 were discussed with the architect and his proposal to use stone for the most part with dark and textured materials elsewhere is acceptable.

- d. Hall 5 needs much further thought on choice of materials and elevational treatment before it is acceptable. The architect should be asked to use stone with other dark and textured materials as in Hall 6. The older Halls 1, 2 and 3, suffer from the use of too much light coloured finishes which are glaring and expensive to maintain. The treatment of Hall 4 with its dark panels was a step in the right direction.
- e. Norburn's Hall 5 to be moved back to its first outline.
- f. The sub-committee felt and your Consultant agrees that Hospital Hill traffic is a growing danger to students and that the tunnel planned (and tendered for) earlier should be built with these two halls.

JUNIOR STAFF HOUSING, CHIROMO

28. The proposal to build twelve (and no more) family quarters at the south-west corner well down towards the river is recommended (see also Consultant's letter of 12th August 1964 for more details). This is part of the land originally zoned for good quality house plots (professors etc.) and the College should consider how far they will use it for this before allocating an area for the junior staff houses. (See Consultant's report accepted by Council March 1962).

BOTANY GARDEN, CHIROMO:

29. There is no difficulty about this proposal (it is noted that the area required is three times that proposed in 1962). The reference to 'small buildings' to the south of the Botany block should be reviewed in the light of the need to keep the Seismograph Station free of vibration.

ANIMAL HOUSE, CHIROMO:

30. Your Consultant repeats the warning that this building is wrongly sited. Other animal houses inspected cause serious nuisance from smell, flies, noise and manure handling. The department has said that the house may need eventually to be three times the size now proposed. Where shewn the building will be within 60 feet of an important teaching block: vehicles to serve it will also come within 100 feet of the Seismograph Station.

LARGE ANIMAL OBSERVATION UNIT: (Ruminant Physiology).

31. This addition to the north of the Physiology Block is satisfactory and should be put in hand when funds are available. (N.B. this project should not be confused with the Field Unit).

32. In the case of all the above buildings attention should be paid to the core results from the 64 boreholes driven by the Ministry of Works in 1962 for the College. Where these are no guide further investigations should be made and the results added to the College boreholes summaries.

APPENDICES:

33. Attached to this report are the following appendices:

Appendix 1: Sketch of recommended position for Lecture Theatre, Chiromo.

Appendix 2: Sketch of new boundaries

10th September, 1964.

ANTHONY M. CHITTY,
M. A., F.R.I.B.A., A.M.T.P.I., AA. Dipl.
30, Percy Street, London, W.1.

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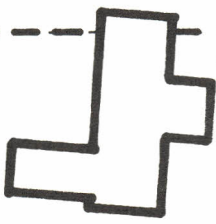
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PHYSIOLOGY

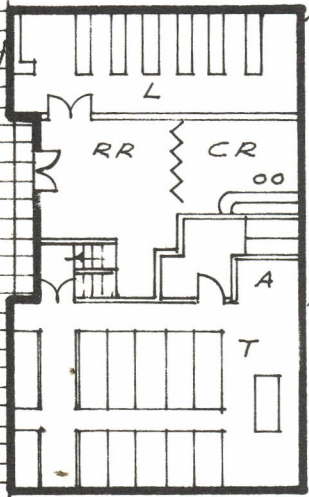
PHYSIOLOGY EXTENSION AREA



GARAGE



LIBRARY EXTENSION AREA



PEPPERS

105'

HUT

68'

66

64

65

5584

58

BOTANY

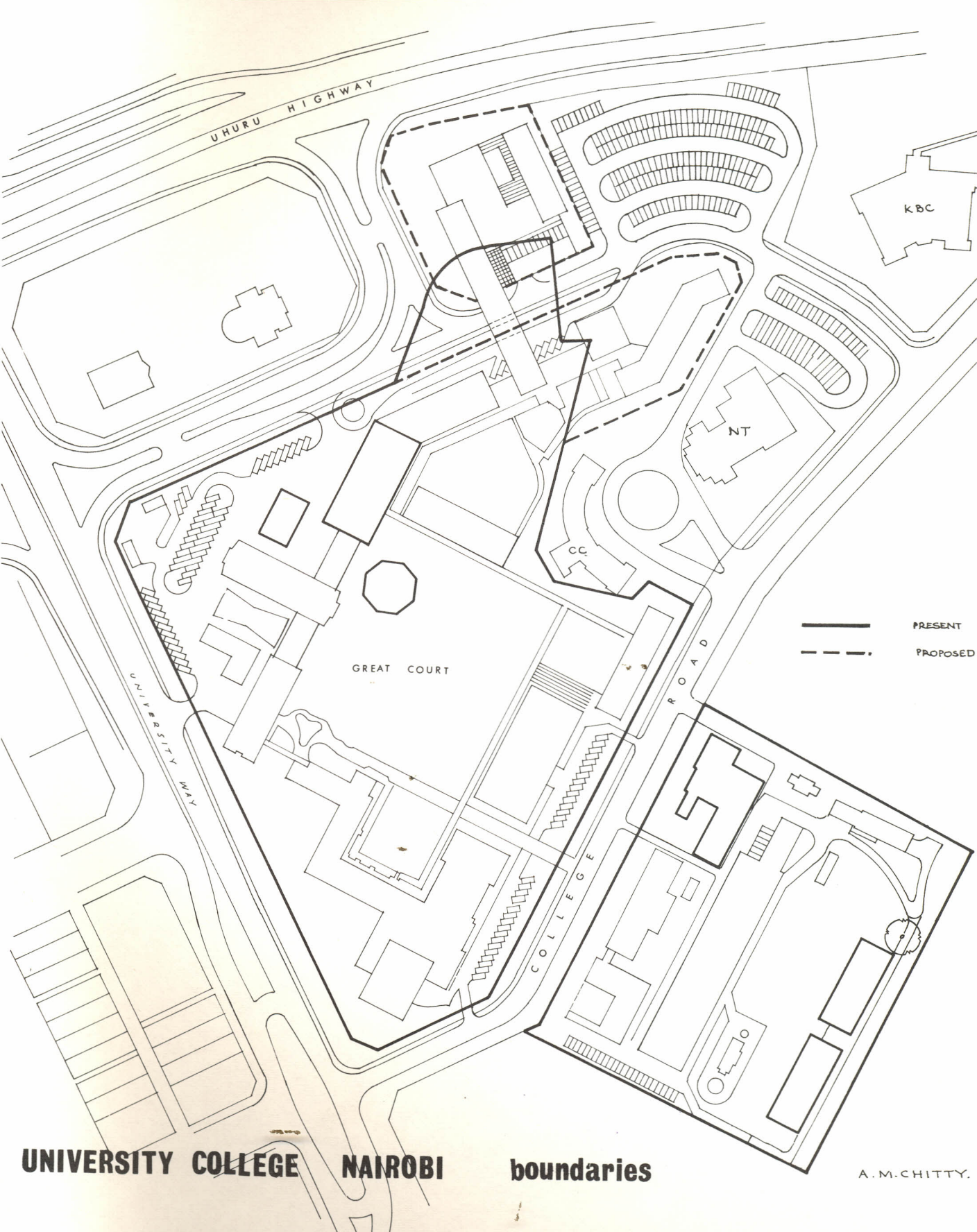
BOTANY EXTENSION AREA

SCALE



LECTURE THEATRE

CHIROMO



UNIVERSITY COLLEGE NAIROBI boundaries

A.M. CHITTY.