

Rutherford Laboratory Building Committee

Minutes of the meeting held in No.4 Conference Room, Building R.1 on Monday,
6th May, 1963

Present: Mr. P. Bowles - Chairman
Mr. G. W. Dixon
Mr. J. C. Louth
Mr. A. Miller
Mr. M. Snowden
Dr. J. M. Valentine
Mr. G. N. Venn

In Attendance: Mr. K. H. Choate
Mr. A. L. Cuthbert
Mr. A. H. Fryer
Mr. J. A. Goode
Mr. H. Hadley
Mr. A. Hancock
Mr. G. M. Harbert
Mr. D. A. Harrison
Mr. J. A. Nott
Mr. G. E. Simmonds
Mr. E. W. Young - Secretary

In opening the meeting the Chairman said that Mr. G. E. Simmonds was to replace Mr. G. N. Venn as a member of the Committee, since current projects and those of the foreseeable future were of more direct concern to Mr. Simmonds. It was, also, the policy of the Laboratory to "ring the changes" of membership of this Committee among the senior staff.

ACTION

1. The Minutes of the Previous Meeting. The minutes of the previous meeting were confirmed.
2. Matters Arising. There were no arisings outside the present agenda.
3. Link Road from NIMROD Experimental Hall to Parasitic Area (PI08). The Chairman said that this project had been further considered since the previous meeting, and that the siting of the toilet block was not yet agreed. Mr. Venn felt that with the new toilet facilities included in the project the total of such facilities in the area would still be inadequate. He deplored the fact that there was an intention to reduce an existing toilet block in this area from 4 cubicles to 3, in connection with a scheme, to be introduced later by Mr. Snowden, for a helium bubble chamber plant room. Mr. Choate explained that this modification of the toilet block was essential to provide the access required and the reduction of toilet facilities therefore had to be accepted.

Mr. Nott mentioned that this link road project involved demolition of a temporary toilet block, and said that it would be advantageous to progress of the work if this demolition was carried out at once. He suggested that if necessary he could have a number of Elsan units erected for use pending completion of the low level toilets adjacent to the parasitic area included in this scheme.

Mr. Venn
Mr. Choate
Mr. Nott

The Chairman asked Mr. Venn, Mr. Nott and Mr. Choate to look into the whole matter of toilet facilities and report at the next meeting.

Mr. Choate then said that in considering the excavation work involved in this scheme he would wish to examine two other schemes which also involved much excavation, namely

the proposed new access tunnel to the Injector Room and a project for provision of a Helium Bubble Chamber Plant Building, both of which schemes were to be introduced later in the meeting.

He felt that it would be advantageous to treat all excavation work in these schemes as one job and make contract provision accordingly. After some discussion the Chairman agreed that this be done, but only if it was quite certain that this link road project was not in any way delayed as a result.

4. Heavy Plant Store. Mr. Simmonds said it had been decided to restrict the 30-Ton crane sweep to 7000 sq.ft. and tabled a sketch (No.1129 "A") showing the revised scheme. The Chairman said it was important to ensure that the floor area of this store, when complete, was as great as could be procured for the money available; to this end he asked that tenders were invited for alternative floor plan dimensions. Mr. Choate agreed, and said this would be written into the invitations to tender.

Mr. Goode ✓

The Chairman asked the project officer to re-check the siting of this new store (Building R.40) in relation to Building R.24. It was not clear why the ends of these two buildings were out of alignment with each other. It transpired that the westerly ends were sited in such a way that when future foreseeable building operations in this area, and extensions of R.40 already allowed for in this present scheme, materialized the effect would be that the line of buildings would follow the line of Road 8. The Chairman said it was important to ensure that future development at this point could be controlled in a tidy manner. Mr. Dixon and Mr. Choate undertook to examine the current scheme, and the area generally, with this in mind.

Mr. Dixon
Mr. Choate

5. Low Background Laboratory for Radiation Protection. Mr. Snowden tabled a revised estimate for this scheme and an amended sketch. The project now provides for a break in the line of the access steps - with landing, and a resiting of the escape hatch to the end of the cellar furthest from Building R.20. These measures were designed to minimise danger from radiation and possible fire in R.20. The increase in the estimate had arisen from these and from the need to use special aggregate in the concrete work.

After some discussion on the siting and alternative methods of construction it was agreed that the project as tabled offered the best compromise and the Chairman asked for the I.T.P. to be issued as soon as possible.

Mr. Miller ✓

6. Cooling Water Plant for R.25. Mr. Nott said that the Handing Over/Taking Over notice had been issued for the week commencing 13th May, 1963.
7. D.C. Power Supplies for R.25. Mr. Hadley tabled Paper III which refers to Papers 97 and 77. The last mentioned set out a composite development in 8 phases which would be invoked as power loads built up on the site. The work set out in P.III is a modified version of Phase 8 as first tabled in P.77. He said that Sub Station 13 will not meet all power requirements arising in the next two months or so and that by the end of the year the load will exceed 2 megawatts. Paper III calls for a scheme which will meet these conditions but it involves some re-adjustment of the schemes previously implemented under P.77 and P.97 and is more costly than the first estimates quoted. This was because of the need to "shuffle" major components already installed in previous phases, because the transformer is bigger than at first envisaged, because the scheme

uses isolators instead of circuit breakers and because costs generally are 10% higher now than when P.77 was first worked out.

The Chairman asked when expenditure on this phase would occur. Mr. Dixon said about £10,000 in the current financial year and the remainder in 1964/65.

Dr. Valentine
Mr. Hadley ✓
Mr. Miller

The Chairman asked that the scheme be put forward to the Chairman of the Institute for approval, and pointed out that this meant the paper being prepared for inclusion in the agenda for the meeting of the General Purposes Committee on 13th May.

There was some discussion on whether or not estimates in this type of scheme were intended to cover the cost of making good roads, verges, and other properties disturbed during work on the schemes, and Mr. Herbert said they did.

8. ✓ Electronics Laboratory and Office Block R.33.

Dr. Valentine reported that the transfer of land had not yet been effected. Mr. Choate said he was awaiting the I.T.P. before making any recommendations on the tenders. Dr. Valentine said that a paper had been prepared for consideration by the General Purposes Committee on 13th May, seeking approval for this project at a cost not exceeding £216,000, and also asking that authority to recommend award of the contract be vested in the Chairman of the Rutherford Laboratory Building Committee instead of the G.P.C.

Dr. Valentine

Dr. Valentine undertook to press for the early completion of the formalities of land transfer.

9. Steam Meter Chamber. Mr. Dixon reported that A.E.R.E. had agreed the siting and the financial arrangements for this project.

10. Mercury Maintenance Block. Mr. Louth reported that further consideration had been given to this scheme, both as to the basic requirements for servicing of mercury equipment and as to the best means of procuring these facilities.

There was no doubt that the mercury arc rectifiers must be serviced on site, but efforts were still being made to find an alternative in the case of the pumps.

Mr. Louth produced a sketch (No.1157) showing modifications of the original scheme, with amended estimates but explained to the committee that if it proved possible to get the pumps serviced externally the facilities for dealing with the rectifiers could be created by an extension of Building R.4 - illustrating this on the blackboard. Mr. Choate agreed to examine this latter proposal in more detail.

Mr. Choate

The Chairman asked Mr. Louth if the possibility of dispensing with mercury diffusion vacuum pumps had been considered, and Mr. Louth agreed that it might well be possible to change over to another type of pump, but said that the question of obtaining servicing facilities off-site was still being pursued.

Dr. Valentine asked what proportion of the cost involved would be saved if the pumps were changed and the R.4 modification was invoked to provide for servicing of the rectifiers. Mr. Choate said this question would be resolved at the next meeting when a first estimate would be produced.

Mr. Choate

Mr. Bowles
Mr. Louth
Mr. Choate
Dr. Valentine

The Chairman then summed up the situation and said that the project must not go forward for approval until all alternatives had been thoroughly investigated. It was agreed that all concerned should endeavour to resolve the outstanding questions and report back at the next meeting.

11. Experimental Area Extension, - Helium Bubble Chamber Plant Building. Mr. Snowden tabled drawing (Reference 1139) and briefly explained the scheme to the meeting. He said that the estimated cost was now £8,500 plus fees, which included £1,200 for extension of the service tunnel. It transpired that this latter cost works out at £60 per foot and Mr. Choate felt this was very high. The Chairman asked the project officer to look again at this costing.

Mr. Snowden

The committee again discussed toilet facilities in the light of this scheme, since they were further strained by the intended employment of additional staff in this area. Mr. Venn undertook to include this scheme in his review of toilet facilities called for in Min.3 above.

Mr. Venn

12. Minor Works Orders (P.109). Mr. Simmonds informed the committee that in future minor works order schedules would relate items to the project numbers concerned. For requisitioning purposes Form NI.12 would be used for requisitions on Construction Group and a Minor Works Order Form for work allocated to S.W.O., Tadley. The Chairman said that an executive notice would soon be issued on this change in procedure.

~~Dr. Valentine
Mr. Harrison
Mr. Woodall~~

BOWLES.

The Chairman commented on the multiplicity of signs on the south side of R.1, saying that some were in fact no longer necessary, or were ignored by the transport staff in parking Institute vehicles. He asked that Dr. Valentine, Mr. Harrison and Mr. Woodall make a survey of these signs and take appropriate action.

13. Progress on Existing Schemes. See notes on Schedules A-C attached.

14. Any Other Business.

(1) Proposed New Access Tunnel to Injector Room R.5.

Mr. Louth introduced Sketch No.1131 and explained this requirement. He said it was necessary to provide for large and heavy components to be moved in and out of the injector room, and that this would no longer be possible via the magnet hall and existing access tunnels when the machine is commissioned and all screening blocks are in position. It was intended that this project should make possible, if it ever became necessary, the extraction of the tank and liner but meanwhile there was a known recurring need for such an access tunnel.

The Chairman asked about radiation hazards, and Mr Snowden said that any difficulties arising out of tunnelling at this point could be overcome and controlled.

There was considerable discussion on methods of excavation, cutting through the concrete wall - about 4 ft thick at the point indicated in the sketch - and on the dimensions of the proposed tunnel, and the Chairman said that firstly the method of tunnelling

Mr. Choate
Mr. Louth

and cutting through the concrete wall must be decided, then a very careful check of costs must be made. He asked that S.W.O. make this appraisal and report back in the next seven days. The scheme was approved in principle.

- (2) Proposed Access Tunnel to Magnet Room. This project was explained by Mr. Louth as being necessary for the same reason as the foregoing scheme - i.e. when NIMROD is fully operational it will no longer be possible to use the present routes of transport of components into and out of the magnet hall. It was known that vacuum vessels would frequently have to be moved in and out of the hall and the only feasible provision for this would be a new tunnel of the order of that set out in this scheme. It was not, however, envisaged that this would be necessary until after NIMROD is commissioned and the Chairman said it could wait until the Spring of 1964, but it was right that the Committee should consider the scheme now, especially in the light of several other current projects involving excavation and other heavy work.

Mr. Simmonds reminded the committee that consideration would have to be given to the effect of this type of disturbance on the structure of the machine room, and said that he had records from which an estimation of these effects might be possible.

The Chairman said that all concerned were to look again at the height and width of the proposed entrance to ensure as far as possible that these would cope with any likely requirement of the future, to consider methods of carrying out the work, and to be ready with the final decisions on these points by the end of July.

Mr. Louth
Mr. Choate

- (3) Irradiation Building for Radiation Protection Group. Mr. Snowden introduced this new project with Sketch (Reference 1134) and explained that the building was needed for use in the activation of specimens and the calibration of instruments - to replace the open-air fenced site near Building R.20 where this kind of work was currently performed. Obviously inclement weather made desirable the acquisition of a covered area for this work, but there was no immediate urgency since the present facilities could continue in use at least through the summer months.

After some discussion on the design, specification and siting of this building the Chairman asked Mr. Choate and Mr. Snowden to investigate the possibility of using a plastic building - of which many types were now available. In addition they were asked to review the suggested sites and report back on both aspects at the next meeting.

Mr. Choate
Mr. Snowden

- (4) Treatment of Site of Ancient Well. The Chairman asked Mr. Choate to draw up a scheme for a permanent treatment of the site of the ancient well near the west end of R.20.

Mr. Choate

15. Next Meeting. The next meeting is to be held at 9.0 a.m. on Monday, 10th June, 1963 in Conference Room No.4, Building R.1.

Rutherford Laboratory.
14th May, 1963.

E. W. Young
Secretary.

Distribution: As in list attached.