

Mr P. Bowler
from J. A. V. Willis
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NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCE

GENERAL PURPOSES COMMITTEE

Rutherford Laboratory: Nimrod Magnet Room North Access

Covering Note by the Secretary

Paper NI/GP/64/11 is circulated herewith. As will be seen from paragraph 5 an early start on the scheme is urgently needed so that it may be finished by the end of September, 1964.

The paper will be on the agenda for the G.P.C. meeting on 13th April. In view of the urgency of the scheme it will be appreciated if Members will let me know of any points on which they would like further explanation, so that this may be given before the meeting.

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NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCEGENERAL PURPOSES COMMITTEERutherford Laboratory: Nimrod Magnet Room North Access

Note by L. C. W. Hobbis

1. Introduction

An access is required into the Nimrod magnet room for the day-to-day passage of equipment, and less frequently, but equally important, for the transfer of machine and beams components, many of which are heavy or bulky. This need for a special entrance was recognised some time ago and it was dealt with initially as a minor building work as explained below, but tenders just received necessitate its unexpected consideration by the General Purposes Committee.

2. History

At the time of the original building design it was thought that such an access would normally be available from one or both of the experimental halls by having a section of shield wall readily removable. However, subsequent experience in planning the use of Nimrod and of detailed beam and shielding construction has shown that it would be quite unrealistic to rely upon a suitable way through at all times except by maintaining certain areas completely clear of experimental equipment. The effect of this restriction would be to reduce permanently the number of experiments which could be mounted by some 10-15% and it could altogether exclude the availability of certain kinds of beam.

Two possible entrances were therefore considered

(i) An entrance into the magnet room (the North Access) as shown in Appendix I.

(ii) An entrance into the injector room which would avoid the difficulty of direct transfer of equipment between injector and magnet rooms arising from the presence of a shield wall near the inflector.

Both these schemes were considered by the Rutherford Laboratory Building Committee in May 1963. At that time the token estimate made for the injector room entrance was £5,000 plus fees while that for the magnet room entrance was £10,500 plus fees. As a first step it was decided to proceed with the injector room entrance and approval to do so was obtained from the Chairman. Scheme (i), the magnet room entrance, was deferred due to the possible effects of disturbance to foundations affecting the commissioning of Nimrod.

However, before the injector room entrance could be started the financial crisis of last summer had become apparent and this scheme, along

with others, was deferred. Later in the year it was reconsidered for spend in 1964-65. It was put out to competitive tender and the lowest tender was £8,500 which, together with allowances, meant that the original token estimate was nearly doubled. Since the commissioning of Nimrod had by that time taken place the magnet room entrance was also reconsidered and it was then possible to see more clearly how the entrance construction would have to be executed so as to avoid interruption of the High Energy Physics programme which would be running at the same time. This led to a new token estimate for the magnet room entrance of £25,000. Competitive tenders confirmed the later implication that the magnet room entrance was in the category of schemes costing more than £25,000. Four out of ten firms approached submitted tenders. The lowest tender was £29,754 and the range of price approximately £3,000.

Faced with the high estimates for both the injector and magnet room entrances the Laboratory was forced to review its priorities. It has been decided that the magnet room entrance is the first priority and that the injector room entrance should be deferred indefinitely.

3. Estimate

Project estimate of whole scheme for magnet room entrance based on lowest tender

	£30,000
Allowances	3,000
Total	33,000
+15% Fees	5,000
Grand Total	<u>£38,000</u>

4. Provision of Funds

Of the total cost, £28,000 is expected to fall in 1964/65, the remainder in 65/66. £7,000 was allotted for this purpose in 64/65; the balance of the expenditure is available within the grant but transfer from non-capital to capital is involved.

5. The Committee are asked to give approval to the construction of the magnet room entrance at a cost not exceeding £38,000 including fees. The entrance will be needed at the end of September, 1964 and construction will take about 6 months from the date of placing a contract. It is therefore important that approval for this scheme be obtained as soon as possible.

