

28th September, 1960

NI/GP/60/41

NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCE

GENERAL PURPOSES COMMITTEE

Arcon Building Extension - "Heavy" Laboratories

Note by T. G. Pickavance

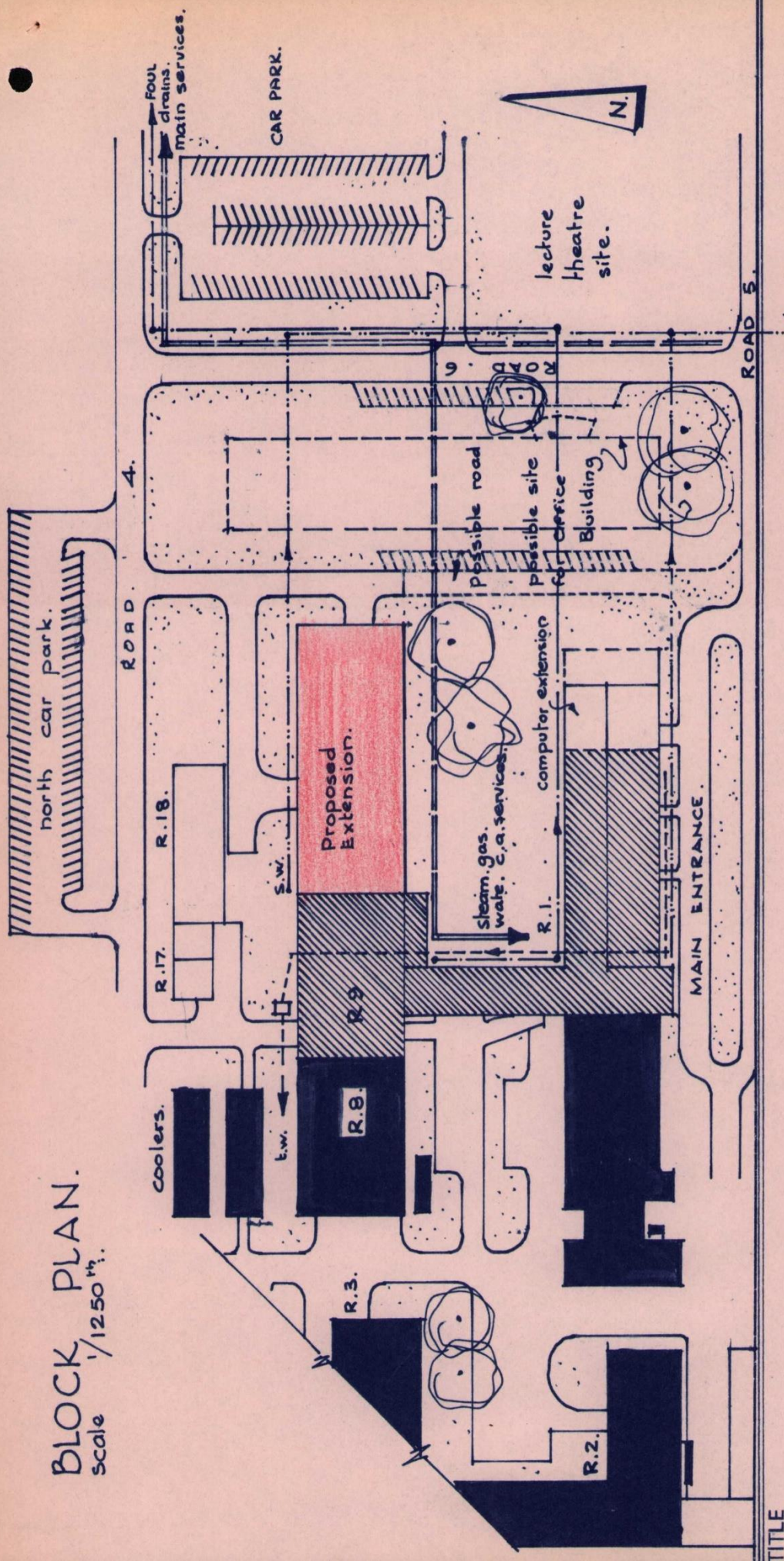
1. Additional provision of heavy laboratories at the Rutherford Laboratory is necessary for two main purposes:-
  - (a) for the development and testing of nuclear equipment for Nimrod such as high-voltage particle separators, quadrupoles and bending magnets. Provision for this laboratory has been included in our forecast estimates for the past two years under the heading "high voltage test facility".
  - (b) for accelerator research; a responsibility which has been taken over from the A.E.A. since estimates were prepared a year ago. Equipment for this work is at present occupying space which was provided for work on Nimrod, and is required for that purpose.
2. After consideration of the requirement by the Rutherford Laboratory Building Committee, it is concluded that the Arcon type building which already exists at the Rutherford Laboratory is well suited to research and development work on large and (or) heavy equipment. It is largely a standardised prefabricated structure, which makes it economical and quick to erect on the site. An extension of about 210 feet is proposed in the position shown on the attached plan: an additional floor area of about 17,000 sq.ft. Crane facilities will be provided over the whole of the area for loads of up to ten tons, whilst the steel work over a half of the area will be made capable of supporting 20 tons on two ten ton cranes if this is later found to be necessary. By direct comparison with the sections already constructed the cost is estimated at £140,000 inclusive of fees. *Cost 1/29 ft £8-5-0*  
*£100,000 Building £40,000 HPE*
3. The estimate of £140,000 includes the cost of the building, the electrical and mechanical services (including cranes), and fees. In addition, associated road work and extension of site services to the building would cost approximately £5,000 approval for which will be sought separately out of the provision in estimates for these items.
4. Provision in estimates (Paper NI/GP/60/36)

In the 1961/62 estimate the provision previously made for a high voltage test facility has been absorbed into the provision for "future schemes" (page 3 A 17) and "minor plant items" (page 2 plant item (e)). Moreover at the time of drafting the estimate the urgency of the scheme now put forward and the desirability of combining the test facility and the accelerator research building into one scheme were not fully appreciated. The sum included under "future schemes" in 1961/62 may therefore be inadequate, but if so the higher priority accorded to this scheme is expected to cause corresponding delays elsewhere. In other words this work was fully provided for in total in the estimates, but is now being put forward as a single scheme and rather earlier than was expected.
5. With the advice of the Rutherford Laboratory Building Committee, I request the Committee's approval for the scheme detailed above at an approximate total cost of £140,000.

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# BLOCK PLAN.

Scale  $\frac{1}{1250}$ "



## PROPOSED EXTENSION TO R.9. N. I. R. N. S.

G.W. DIXON. A.R.I.B.A. Chief Architect. Southern Works Organisation.. U.K.A.E.A.