

Rutherford Laboratory Building Committee

Accommodation Requirements for  
Industrial Chemistry Department Staff at NIRNS

1. Introduction

The Industrial Chemistry Department (AERE) subdivides into four sections.

One of these is Reactor Chemical Services which has laboratories in B447 (serving DIDO, PLUTO and LIDO, etc.) and in H10 (serving the BEPO area) plus temporary accommodation in the Parasitic area of NIMROD.

This latter accommodation must perforce be temporary and permanent accommodation is required.

2. Duties of NIRNS Section

- 2.1. The section will be responsible for supplying chemical service to the NIRNS staff and advising on chemical matters such as corrosion, water treatment, ion-exchange, cleaning problems, etc.
- 2.1.1. In particular the section will be responsible for the chemical aspects of the commissioning and operation of various water treatment plant and circuits on NIMROD, the PLA and the Neutron Project B418\*.
- 2.1.2. This entails being responsible for:-
- 13 Cooling Tower systems.
  - 32 Demineralised Water systems.
  - 17 Ion-exchange columns operated as 10 water treatment plants.

Approx. 1500 routine tests will be carried out each month exclusive of any repeat analyses or special samples.

3. Location and Size of Accommodation

- 3.1. It could be postulated that samples could be analysed at B447 or H10. This however has several disadvantages:-
- (i) The difficulties of transporting samples.
  - (ii) Space limitation at B447 and H10.
  - (iii) For efficient and close liaison it is virtually essential that the section is close to the plant and personnel that it serves. The work of the section involves, as well as an analytical service, practical advice and assistance; often a compromise is necessary between chemical and mechanical considerations. It is essential that we are on site in order to assist with the problems being dealt with, especially with the water treatment plants. There has been a very pronounced increase in collaboration and requests for service and advice since the section took up residence in the parasitic area, and it is very obvious that both sides have benefited from the move.
- 3.2.1. Laboratory space in H10 has expanded twice during the last five years. The 447 laboratory and office space has also expanded twice in that period and at the moment further office space is being negotiated.

Total space occupied is:-

B447 - ca 1200 sq.ft.  
H10 - ca 1000 sq.ft.

A reasonable requirement would be ca 750 sq.ft. of laboratory space and two offices.

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\* The latter does not form part of the Rutherford Laboratory, but is covered by this section for geographical reasons. The extra work load is very small.

3.2.2. The laboratory space would preferably be as one main room with a small inner room for balances and instruments.

If this was situated at the end of a wing the corridor would be unnecessary and could be used as part of the laboratory.

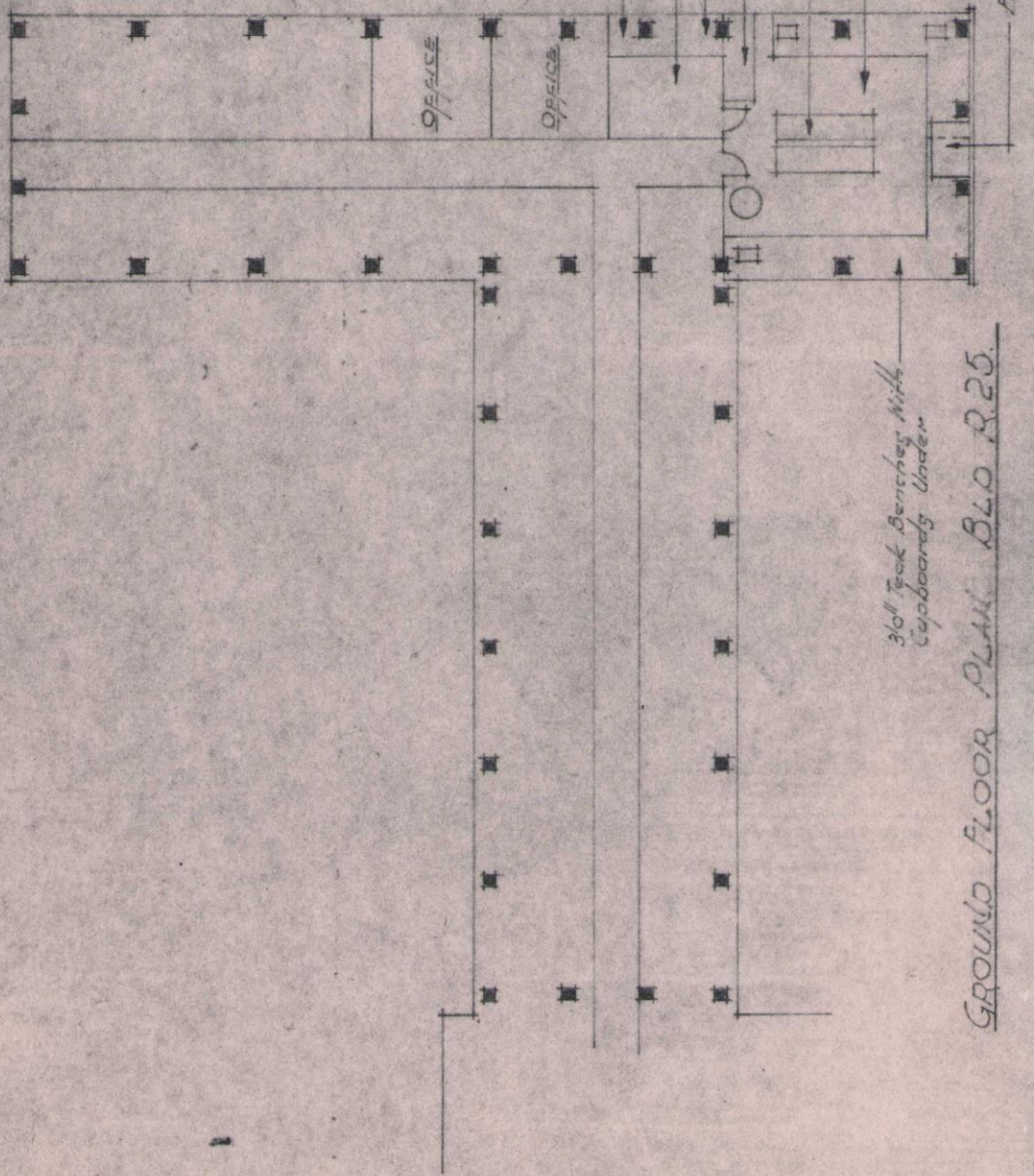
Accommodation on the ground floor would be preferred. The attached sketch shows a suitable lab layout in the proposed Building R.25.

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Industrial Chemistry Div.  
Building 447

4th October, 1961

R.L.B.C. / P.66



DRAWING N°  
R.L.A./R.25/58.

GROUND FLOOR PLAN BLD. R.25.