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NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCE

GENERAL PURPOSES COMMITTEE

Surface Water Drainage Scheme for the Rutherford Laboratory

Note by the Chairman of the Rutherford Laboratory Building Committee

The following paper outlines the civil engineering work associated with the surface water drainage of the Rutherford Laboratory site. The original scheme although just about acceptable for the NIMROD buildings, is quite inadequate to deal with the present development of the site.

1. The surface water drainage scheme constructed during Phase I of the Rutherford Laboratory utilised an existing A.E.R.E. drain running northwards along the road from the Dido area, through the A.E.R.E. to an outfall into East Hendred brook. The surface water drainage scheme which was proposed for construction in Phase II is only partially completed at present, the new low level outfall from the magnet room being temporarily utilised for part of the length to the outfall at Chilton Pond.
2. The existing drain from the Dido area is of small capacity, and though considered suitable in the initial stage of Phase I, is now considerably overloaded and in heavy rain flooding occurs at points along its route and water surcharges the Rutherford Laboratory drains. The Phase II drainage scheme although adequate for Phase II buildings is of insufficient capacity to drain all the approved building areas.
3. It is proposed to lay a new surface water drain to run eastwards from the western end of Fermi Avenue, which would take the water flowing from the Phase I drains, the drains from Fermi Avenue, the new Rutherford Laboratory approach road, then connect with the end of the existing Phase II drain and thence through the A.E.R.E. prefab. estate to an outfall at Chilton Pond. Sufficient connections would be left in the drain to cater for future developments in the Rutherford Laboratory area. In this way a unified scheme would cater for all surface water from the Rutherford Laboratory site; the size of the pipes to be laid being large enough to provide for reasonable development in the Rutherford Laboratory area.
4. The A.E.R.E., its successors and assigns, have a permanent right to discharge surface water into Chilton Pond which acts as a reservoir and soakaway. There is an existing 24" diameter pipe leading from Chilton Pond to another soakaway; this pipe and soakaway are the property of A.E.R.E. We are advised that these soakaways, probably without extension, are of sufficient capacity to deal with the increased flow arising from the new developments. It is intended to instal a flow meter adjacent to each of the ponds so that as the Rutherford Laboratory site develops the run off rate can be determined. As the outfall is in the Thames catchment area it is proposed to instal a sampling device near to Chilton Pond so that samples of the effluent can be analysed.

