

11th June, 1959

N.I.(G.P.) (59) 19

P.S.P.C/P.49

NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCE

GENERAL PURPOSES COMMITTEE

THE MAIN SURFACE WATER DRAINAGE SCHEME
FOR THE PROTON SYNCHROTRON AREA OF THE
RUTHERFORD LABORATORY

NOTE forwarded by the Chairman of the Project Committee

1. The main surface water drainage scheme has been under consideration for some time and the final proposals had to be delayed until the Consulting Engineers, Messrs. Merz & McLellan, had completed investigation work, including long-term observations of the behaviour of experimental soakaways on the site. In the original estimates, a provisional sum of £30,000 was included as a token estimate. The proposals now recommended shew that a scheme adequate for the present buildings and future development of the Experimental Area will cost £55,000.
2. In considering the drainage scheme, the area concerned, on which are buildings having a roof level below the surface of the ground, is delineated in pink on Fig. 1. This scheme also caters for the logical development of the Experimental Area. Although no approval has been given for such extensions, it is necessary to ensure that the drains are adequate in capacity and buried at such a depth so as not to prohibit development in the Beam area.
3. To assess the capacity of the drains, the Meteorological Office and Geological Survey Departments have been consulted and provision has been made for the worst recorded storms in England which are $1\frac{1}{4}$ inches in five minutes, 3 inches in thirty minutes, 4 inches in sixty minutes and 8 inches in five hours.
4. In studying the problem, Messrs. Merz & McLellan have put forward twelve schemes and the one recommended comprises a combined soakaway and drain to Chilton by direct route. The main tunnel will require to be 6' 3" nominal diameter, communicating with a 27" run-off pipe to the pond. The direct route preferred is as shewn in red on Fig. 1; an alternative longer route, shewn in green, would cost an additional £5,000.
5. The question of easements for the discharge into Chilton Pond has been discussed with A.E.R.E., which has the necessary right of discharge. Such rights may require to be transferred to the National Institute.
6. The Building and Civil Engineering works for the machine are rapidly nearing completion and mechanical and electrical plant will be installed from the Autumn of 1959 onwards.

Completion of the proposed drainage scheme is therefore one of some urgency, since protection against flooding conditions is essential.

7. Messrs. Chivers, the main Contractors for the building and civil engineering work, have priced a supplementary Bill of Quantities at rates considered fair and reasonable by the Quantity Surveyors.

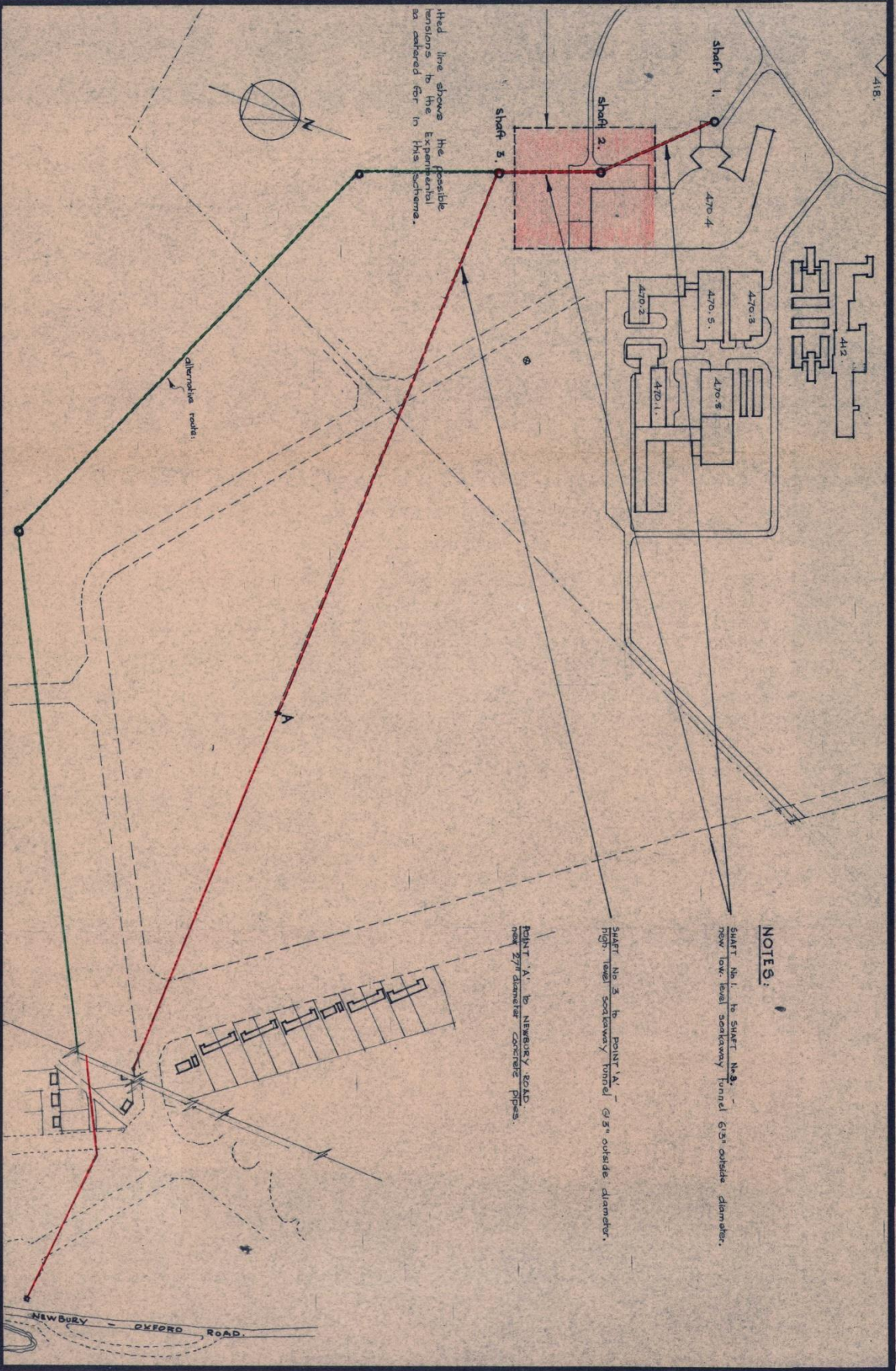
8. It is recommended that authority be given :

- (1) To proceed with the scheme as outlined.
- (2) To instruct Messrs. Chivers to proceed with the work as an extension to their existing contract.
- (3) To increase the Civil Engineering estimates by a further £25,000 to cover the cost of this scheme.

P. BOWLES

G. W. DIXON

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NOTES:

SHAFT No. 1. to SHAFT No. 2. - new low level soakaway tunnel 615" outside diameter.

SHAFT No. 3. to POINT 'A' - 93" outside diameter. High level soakaway tunnel 615" outside diameter.

POINT 'A' to NEWBURY ROAD. new 27" diameter concrete pipes.

REVISIONS:

A. 10.6.59. alternative route added.

DRG. No: 470/HAL/29.A

SCALE: 1/2500 ft.

DATE: 10.6.59

DES: DELT: TRCD: CHKD:

ATOMIC ENERGY RESEARCH ESTABLISHMENT—HARWELL. PROPOSED LINE OF STORM-WATER DRAINS. to CHILTERN POND. 7 ccy.

G. W. DIXON. A.R.I.B.A., CHIEF ARCHITECT, NEW WORKS DIVISION, A.E.R.E., HARWELL, BERKSHIRE.