Alan W. Bishop 1920–1988

Professor Alan Bishop died suddenly at his home in Whitstable, on 30 June 1988, while recovering from major cardiac surgery. He will be remembered especially for his work on embankment dams and for his flair in instrument design which enabled him to become perhaps the foremost experimentalist of his time.

Alan Wilfred Bishop was born at Whitstable on 27 May 1920. He was educated at King's College School, Wimbledon, and at the University of Cambridge, where he was a senior scholar at Emmanuel College and took the Mechanical Sciences Tripos in 1942. His first appointment was as an engineer with the Metropolitan Water Board. At that time, the designs for the Walton Reservoir were being reassessed in the light of the experience gained from studies into the causes of failure of the Chingford dam. These studies were conducted at the Building Research Station, and Alan Bishop was seconded to work there with the soils group. While at the BRS, he designed and built his own equipment for testing foundation soils, and for taking soil samples. This early work typified the approach used by Bishop, in that he always insisted that the best possible soil test data should be used in any analysis. If the apparatus available could not give the quality of data he required then he simply devised and built equipment that would. Usually the apparatus produced was so much better than that currently available that the commercial manufacturers switched to his designs.

Alan Bishop was equally at home with analytical studies and, combining this with his practical ability, he was the obvious choice as the first member of the soils team Professor Skempton set up at Imperial College. Bishop moved to take up an appointment as an assistant lecturer in October 1946. At Imperial College he continued to design and develop new soils test and sampling equipment, but now the equipment was used to study fundamental properties of soil behaviour as well as to obtain results required for engineering problems. Theory and practice, welded together by continually checking one against the other: this was the formula used so successfully by Bishop.

Academic distinctions followed—promoted to lecturer in 1947, PhD in 1952, Reader and DSc in 1957, Professor of Soil Mechanics in 1965. Honours were also conferred by the profession in recognition of his contributions. Premiums and

prizes were awarded by the Institution of Civil Engineers and the British Geotechnical Society.

Alan Bishop's first experience in soil mechanics was with earth retaining structures, and he used this branch of study as a vehicle for his research work.

Because of his deep understanding of soil behaviour, Bishop was always in demand and his advice was sought by many firms of consulting engineers. He was also asked to investigate the causes of engineering failures, perhaps the most notable being that of Aberfan in October 1966. Bishop led the team of investigators at the tribunal and the outcome was to have a profound effect on the mining industry in terms of the statutory provisions with regard to safety.

Alan Bishop was an international figure and regularly travelled abroad to lecture. Bishop's public lectures were notable in that they were always crowded. Two halls were needed for his Rankine Lecture in 1966 on 'The strength of soils as engineering materials'; engineers coming from far and wide. All of his lectures were invariably packed with interest and incisive comment and it paid to be early in the lecture hall so as to secure a seat close to the front, because this famous man was intensely shy and spoke very softly.

Imperial College was fortunate when Professor Skempton asked Alan Bishop to join the staff, not only because of the reasons highlighted above, but because he took a great interest in the development of the soils section and in the welfare of the staff and students. He was Dean of the City and Guilds College for three years from 1970 to 1973.

Alan was a keen sailor, and kept a converted lifeboat at Faversham. When time permitted, he would sail in the Thames estuary and up-river, his crew recruited from the current group of research students.

Unfortunately, Alan Bishop was not blessed with robust health and he had to retire in 1980. After this time he became a Senior Research Fellow from 1980 to 1983 and the title of Emeritus Professor was conferred. Single throughout his college life, Alan was now fortunate to meet and marry Myrtle. Myrtle and Alan embarked on a new life which was spent in Scotland during the spring and summer, returning to their home in Whitstable for the winter. These last five years were short but happy ones.

Angus Skinner

Professor A. W. Skempton adds:

'It was a great privilege and the best of good fortune to be associated for nearly 40 years with one of the finest intellects in our subject. In no respect was his intellectual power seen more clearly than in his continued study of Terzaghi's principle of effective stress and its application in all branches of geotechnical engineering; his work in this field brought about a highly beneficial revolution in soil mechanics.

As for his skill as an experimentalist, Albert Caquot, the distinguished French academician, exclaimed after a visit to the laboratory at Imperial College, 'this is the country of Michael Faraday'. Bishop was totally and very seriously devoted to soil mechanics, both as a scientist and an engineer.

Though reserved in a manner compatible with his Quaker faith, he appreciated a good sense of humour. He was loved and respected by his numerous research students, who came from all parts of the world. Through them and the strict but friendly criticism of his colleagues' work, and his own important contributions, he exerted a unique influence.'

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