



GUDTHLAC WILSON

D.Sc., S.M., M.I.C.E., M.A.S.C.E.,
M. Soc. C.E. (France)

1902 - 1953

LIST OF PAPERS BY DR GUTHLAC WILSON

- " A Method of Calculating the Stability of Braced Pile Piers " Paper No. A(1)—*Fourth Indian Roads Congress*—January 1938.
- " The Calculation of the Bearing Capacity of Footings on Clay "—*Journal Inst. Civil Engineers*, Vol. 17, November 1941.
- " Some Applications of Soil Results to the Design of Simple Foundations " *Inst. of Civil Engineers*, Paper No. 15, 1946.
- General Report on Section VIII of the 2nd International Conference on Soil Mechanics, "Problems in Road and Runway Construction"—1948.
- General Report on Section IX of the 2nd International Conference on Soil Mechanics, "Improvements of the Mechanical Property of the Soil"—1948.
- " Some Laboratory Tests on Chalk "—*Proceedings 2nd International Conference on Soil Mechanics*, Vol. III, page 183—1948.
- " A Relaxation Method for the Solution of Problems Concerning Axially Symmetrical Distributions of Load in an Elastic Medium "—*Journal Inst. Civil Engineers*, April 1948.
- " The Bearing Capacity of Screw Piles and Screwcrete Cylinders "—*Journal Inst. Civil Engineers*, Vol. 34, March 1950.
- " Foundations and Earthworks "—Chapter in "Civil Engineering Reference Book"—edited by E. H. Probst and J. Comrie, page 597-673, London, 1951.

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- " A Contribution to the Study of the Elastic Properties of Sand," Guthlac Wilson and J. L. E. Sutton—*Proceedings 2nd International Conference on Soil Mechanics*, Vol. I, p. 197, 1948.
- " Pavement Bearing Capacity computed by Theory of Layered Systems," Guthlac Wilson and G. M. J. Williams—Separate No. 16, Vol. 76, *Proceedings American Society of Civil Engineers*, May 1950.



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NEW HOWRAH BRIDGE OVER THE RIVER HOOGHLY AT CALCUTTA
CONSTRUCTED ~ 1936



ROYAL FESTIVAL HALL
& SHELL CENTRE LONDON



KAI TAK
Hong Kong 1947

The Japanese
Airport.



KAI TAK
1960



KAI TAK
AIRPORT
Hong Kong
in
the 1980's

Obituary

DR. GUTHLAC WILSON

MANY civil engineers, particularly those connected with soil mechanics and with structural engineering, will have learned with regret of the death of Dr. Guthlac Wilson. Dr. Wilson and his wife were passengers in the "Viking" aircraft which crashed last Sunday during a flight from Nairobi to Blantyre, along the Tanganyika coast, with the loss of all the passengers and crew. Dr. Wilson was the senior partner in the consulting firm of Scott and Wilson, and was well known as an authority on soil mechanics and foundation engineering.

Dr. Wilson was born in London in 1902 and received his engineering education at East London College, which is now Queen Mary College, obtaining his degree in 1921. He was then employed by Sir Robert McAlpine and Sons, Ltd., for about two years, after which he went to India with Braithwaite and Co. (India), Ltd. His career with this firm, and with the Braithwaite, Burn and Jessop Construction Company, continued in positions of increasing responsibility until 1938, when he went to Harvard University for a course of study; he was

awarded a fellowship at Harvard in the session 1939-40, but he discontinued his studies to return to this country on the outbreak of war. However, his work at Harvard earned him a Master of Science degree (S.M.), and was doubtless valuable in promoting his knowledge of soil mechanics. From 1939 to 1945 Dr. Wilson held the post of Director of Constructional Design at the Ministry of Works. At the end of the war he became a partner with the late Mr. W. S. Scott in the firm of Scott and Wilson, becoming senior partner on Mr. Scott's death in 1950.

During the course of his career Dr. Wilson obtained a very wide experience of foundation problems and soil mechanics, and in the design of numerous engineering structures. Much of his work was embodied in papers presented to various learned societies, principally to the Institutions of Civil and of Structural Engineers, which were largely concerned with various aspects of soil mechanics and its applications. Of recent years his firm has shown a tendency to participate more in heavy civil engineering work, and in civil engineering schemes in overseas territories, trends which were doubtless accelerated by Dr. Wilson's influence. Of the many works carried out during the past few years by his firm, one or two examples may be given of constructional schemes in which he was particularly interested. They include, in this country, such works as the design of the British Nylon Spinners factory and extension at Pontypool, and the Churchill Gardens housing estate of the Westminster Council at Pimlico, to mention only two; overseas, the development in Nyasaland of roads, airports and water supply may be mentioned, as well as the project for Kai Tak airport in Hong Kong.

Dr. Wilson served on a number of important committees and governing bodies, of which membership of the Road Research Board and of the Ministry of Works National Consultative Council of the Building and Civil Engineering Industries may be mentioned. He was a member of council of the Institution of Civil Engineers and of the Association of Consulting Engineers. He was awarded a doctorate of engineering by London University in 1951.

GUTHLAC WILSON, D.Sc.(Eng.), S.M., who was killed in an air crash near Dar es Salaam on the 29th March, 1953, was born in London on May 21st, 1902, the son of the late Henry Wilson, architect, sculptor, and art metal worker. He was educated privately and at East London College (now Queen Mary College), London.

From 1921 to 1923, he served under articles as Junior Assistant Engineer with Sir Robert McAlpine and Sons. He then worked for a number of years in India, starting in the Bombay office of Braithwaite and Co. (Engineers), Ltd. As an Assistant Resident Engineer, and later as a Resident Engineer, with this firm, he was responsible for the design and construction of a number of bridges and other works.

In 1935, he was placed in charge of the Design and Estimating Department of the Braithwaite, Burn and Jessop Construction Co.

In 1938, Dr Wilson resigned from Braithwaite & Co. and went to Harvard University, where he spent a year studying soil mechanics and obtained his Master of Science degree. He was awarded a fellowship at Harvard which he subsequently resigned at the outbreak of war in order to return to England. He was the outstanding student of the year and was selected by Professor Terzaghi to act as his personal assistant on consultant work that the Professor was undertaking at the time in connexion with rolled-fill earth dams.

After his return in 1939, he was employed by Sir Alexander Gibb and Partners as a Divisional Superintendent, Designs Division, and was engaged on the design of a Royal Ordnance Factory. Subsequently, in November 1940, he became Director of Constructional Design for the Ministry of Works and Buildings, and represented the Ministry on numerous Research Boards and Committees.

From 1944, he practised privately, specializing in soil mechanics and foundation design. A year later he joined the late W. L. Scott, M.I.C.E., to form the firm of Scott and Wilson, Consulting Engineers, Westminster, and became the senior partner after the death of Mr Scott in 1950.

In the course of his practice, Dr Wilson was responsible for the design of many large structures in Great Britain, for a number of interesting works in Nyasaland comprising roads, airfields, and earth dams, and for other works in Cyprus, the Middle East, and India. During the last few months of his life he had twice visited Hong Kong in connexion with the scheme for a new airport at Kai Tak. He was consulted on many difficult problems in connexion with foundations and by the time of his death had achieved international recognition as an authority on the science of foundation engineering.

Dr Wilson was elected an Associate Member of the Institution in 1928, transferred to the class of Member in 1938, and became a Member of Council in 1949.

He was awarded a Telford Premium in 1942 for his Paper on "Calcula-

tion of the Bearing Capacity of Footings on Clay,"¹ and another, in 1943, for a Paper written in collaboration with Mr Henry Grace, A.M.I.C.E., on "The Settlement of London due to Underdrainage of the London Clay."² The most recent Paper that he presented to the Institution was on "The Bearing Capacity of Screw Piles and Screwcrete Cylinders."³ Dr Wilson was the Author of many other Papers on soil mechanics and foundation engineering.

He was also a member of the Institution of Structural Engineers, and of the American and French Societies of Civil Engineers.

¹ J. Instn Civ. Engrs, vol. 17, p. 87 (Nov. 1941).

² J. Instn Civ. Engrs, vol. 19, p. 100 (Dec. 1942).

³ J. Instn Civ. Engrs, vol. 34, p. 4 (Mar. 1950).

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OBITUARY

GUTHLAC WILSON

D.Sc., S.M., M.I.C.E., M.ASCE., M.Soc.C.E.(France)

It is with the deepest regret that we record the death of Dr Guthlac Wilson, and his wife, in an air crash on the 29th March, 1953. Dr Wilson was the most distinguished of those consultants in Great Britain who combine a wide experience of civil engineering work with a detailed knowledge of soil mechanics. He had made important contributions to soil mechanics as a science and had achieved an international reputation for his bold, imaginative and successful application of the principles of that science in civil engineering design. In addition, he was a delightful companion with an exceptionally wide range of interest and accomplishment. His death is a very great loss to his friends and to the engineering profession.

Dr Wilson was born in London on the 21st May, 1902, the son of Henry Wilson, architect and sculptor. He was educated privately in Paris where his father worked for several years, and at Queen Mary College, University of London. After serving articles with Sir Robert McAlpine & Sons he joined the firm of Braithwaite & Co. in their Bombay office, and, after a period of bridge construction on the North West Frontier, was responsible for the design of a number of bridges and other works throughout India.



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GUTHLAC WILSON : OBITUARY

In 1938, at the age of 36, he decided to undertake a formal course of study in soil mechanism, and resigned from Braithwaite & Co., in order to enter Harvard University. He spent a year under Professor Terzaghi and Professor Casagrande, obtaining the S.M. degree, and was then awarded a fellowship at Harvard which he subsequently resigned at the outbreak of war in order to return to England. In the summer of 1939 he worked for a few months as a private assistant to Dr Terzaghi.

On his return Dr Wilson was engaged with the design of a Royal Ordnance Factory, on the staff of Sir Alexander Gibb and Partners, and later became Director of Constructional Design for the Ministry of Works and Buildings. In 1945 he joined Mr W. L. Scott to establish the firm of Scott and Wilson, Consulting Engineers, Westminster, and became the senior partner after the death of Mr Scott in 1950. He was elected a member of Council of the Institution in 1949.

In the realm of structural engineering, perhaps his greatest achievement was the design, with his partners, W. L. Scott and E. O. Measor, of the Royal Festival Hall, London (1951). In works involving soil mechanics, Dr Wilson's most recent design was that for the new airport for Hong Kong at Kai Tak. In Nyasaland he had been responsible, during the past three years in conjunction with his partner, Mr Henry Grace, for the construction of the Blantyre-Zomba and the Blantyre-Luchenza roads, the Chileka airport, and the New Mudi dam which involved interesting features concerning the construction of an earth dam on a semi-permeable foundation. Notable works, involving foundation problems for which Dr Wilson had been responsible included the oil tanks at Coryton in 1950, the New Maelor Gas Works in 1951 and, in the same year, a large warehouse in Valetta, Malta. In the past year Dr Wilson had, together with Dr A. W. Skempton, been concerned with the problems arising from difficult soil conditions, in the design and construction of the earth dam at Sasumua for Nairobi City Council.

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