OBITUARY

DOUGLAS HAROLD GREEN, *O.B.E.*, *M.C.*, B.Sc., who was born on 3 May, 1890, died in May 1963.

Educated at Bishops Stortford College, he studied engineering at the City & Guilds Central Technical College, and received the degree of B.Sc.(Eng.) in 1910. He gained practical experience in India from 1910–1914 as Assistant Engineer to the Public Works Department, Bengal.

Throughout World War I he was on active service in France with the Royal Engineers, with the rank of Major, and served with distinction, at one time commanding the 59th Field Company. Later he was Staff Officer to the Chief Engineer, First Corps, B.E.F. He was awarded the O.B.E. (Military Division) and the M.C., and was five times mentioned in despatches.

In 1920 he joined the Trussed Concrete Steel Company as Engineer on special duties, and in 1923 became Managing Director, responsible for all the Company's structural engineering designs and controlling some 120 engineers and draughtsmen. He relinquished this position in 1946 and went into private practice, working from his London home.

Expert in structural engineering problems, particularly regarding reinforced concrete, Mr Green was for some years Hon. Secretary to the Institution of Structural Engineers. He was an Associate of the City & Guilds Institute.

Elected an Associate Member in 1919, he became a Member in 1941.

He is survived by his widow and four children.

ALEXANDER McMENEGAL TELFORD, B.Sc., who was born on 20 April, 1895, died on 7 September, 1963.

Educated at George Watson's College, Edinburgh, he studied engineering at Edinburgh University and received the degree of B.Sc.(Eng.) with first-class honours in 1915.

In World War I he served from 1915 to 1918, first as an officer in the Royal Engineers, 51st Highland Division, later as Adjutant, C.R.E.

After three years' general practice in Edinburgh with Messrs Leslie & Reid, he became in 1922 lecturer in surveying at Edinburgh University, and in the same year was engaged by Charles Brand & Sons, Contractors, on the reconstruction of the City and South London Underground Railway between Kings Cross and the Angel.

A turning point in his career came in 1923, when he left England for the Sudan to become Chief Engineer to the Kassala Cotton Company, which aimed to develop 30 000 acres of the River Gash delta for cotton and food crops by canalization. For the next four years he was solely responsible for the design and construction of all the canals, houses, and water supplies involved in this project. From 1927 to 1928 he laid out a new irrigation scheme for the same company in the Gezira, covering some 45 000 acres, then at the Government's request went to Tanganyika to report on the engineering and agricultural possibilities of two large areas in the southern territory for which a government Commission had suggested a railway.

For the next two years Mr Telford worked as chief engineer to the Sudan Plantations Syndicate, developing and canalizing a million-acre irrigation

scheme in the Sudan (as a result of which the 1951 cotton crop sold for £54 000 000), and in 1930 he was asked to redesign the entire salt field of the Sudan Salt Company—a massive project in which he was given an entirely free hand. From 1931 to 1934 he reconstructed an abandoned salt works at Port Sudan on the Red Sea, and over the next six years developed various concessions in the Near East, Africa, and South America, building up an organization to classify and market annually some £60 000 000-worth of cotton.

In World War II he served from 1940 to 1941 with the 5th Indian Division in Abyssinia and Eritrea, and for the next five years was Controller of Stocks and Distribution (later Controller of Industrial Commodities) in the Sudan Government. He was transferred in 1946 to the Department of Economics and Trade to handle emergency food supplies. After the Nile floods of 1946, he reconstructed the smashed works and protection banks.

Returning home from overseas, he became in 1948 managing director of a firm producing electrical equipment, later visiting Nyasaland as consultant on land development schemes. From 1949 to 1952, as divisional engineer (agriculture) to the Colonial Development Corporation, he initiated companies in the West Indies, East and West Africa, Nyasaland, Swaziland, Malaya, and Borneo—firms whose products varied from food crops to vegetable oils and tobacco. From 1952 to 1953 he represented the United Nations (Relief and Works) in Jordan and was responsible for 465 000 Arab refugees—their housing, food, education, and welfare generally.

From a crowded life Mr Telford was forced by ill health to retire in his late fifties.

Elected an Associate Member in December 1922, he became a Member in January 1932.

He is survived by his widow, a son, and a daughter.

PROFESSOR KARL TERZAGHI, who was born in Prague on 2 October, 1883, died in Winchester, Mass. on 25 October, 1963.

Austrian by birth, he showed no interest in the military career planned by his family and was transferred from a military to a civilian school before studying engineering at the Technische Hochschule in Graz, Austria. Although in 1904 he received a degree in mechanical engineering, his chief interest was geology, and early in his career he determined to study the scientific principles of soil mechanics and to replace by scientific procedures the hit-or-miss methods of earthwork engineering practised at the time. When the results of his intensive research became available in 1925, they produced widespread interest and controversy, and from obscurity Terzaghi, at 42, rose to fame in the civil engineering profession. From then on his services as the leading expert in foundation engineering were in increasing demand in several continents, and he was free to choose the most challenging assignments.

After early experience in Vienna, St Petersburg, and the United States, he served in World War I from 1914–1916 as 1st Lieutenant in the Austrian Army. He was appointed to a teaching post at the Imperial Ottoman School of Engineering in Istanbul in 1916 and two years later became a Lecturer at the American Robert College, Istanbul. In 1925 he went to the Massachusetts Institute of Technology, Cambridge, Mass. where, during the next four years, he extended his early research work and established the subject of soil mech-