



Marcus Gordon Bull, BE who was born on 25 June, 1914, died on 31 August, 1970.

Educated at Canterbury Boys High School, he studied engineering at Sydney University, taking his BE degree with first class Honours in 1936. He won the Murray Rainsford Smith Prize for Materials and Structures and the James Vicars Prize for Road Engineering.

Mr Bull was to become a distinguished civil engineer in the consulting field in New South Wales and New Guinea. His early experience was with the Department of Main Roads, NSW (Bridge Design Section), where under Mr Spenser Dennis, Bridge Engineer, he carried out an

investigation in connexion with a large concrete arch bridge (350 ft span) at Northbridge.

In 1937 he was engaged by a consulting civil engineer in Sydney, Mr R. E. McMillan, on the design of buildings in steel, concrete and timber, after which he worked briefly with the Clyde Engineering Company, Granville, NSW, on the design of a structural steel ore bridge for Whyalla, S. Australia.

He changed course in 1940, accepting a post as Senior Lecturer in Civil Engineering at Sydney University, where he taught students at each stage of their 4-year course. This continued until 1947, when he set up in private practice as a consulting civil engineer.

Commencing first of all in Sydney, he later extended the scope of his activities to the Territory of Papua and New Guinea, and to North Queensland. At the time of his death his practice had tackled over 3000 projects in both design and supervision of construction, including residential, hotel, factory, hospital and university buildings, industrial and mining works, roads and bridges, water supply and sewerage. For a large chain store in Australia he designed structures costing over \$3 m., and for the University of North Queensland he undertook structural work for the School of Engineering and Physics to the value of over \$1½ m. The Engineering and Physics Laboratory for the School included a prestressed floor slab capable of taking concentrated loads up or down of 120 tons—the largest of its kind in Australia.

Among the many bridges designed by Mr Bull's organization was a 750 ft long steel girder bridge over the Orara River in Northern NSW, with piers over 80 ft high to allow for abnormal flood rises (\$400 000): another, a steel bridge, 640 ft long, over the Murrumbidgee River at Hay (\$650 000).*

* Several notable bridges were in prestressed concrete—one 600 ft long at Deniliquin (value \$½ m.), another over the Hunter River at Raymond with elliptical-shaped pier columns, 700 ft long (cost \$550 000), a third over a deep gorge in North Queensland, 400 ft long (cost \$½ m.), and four over the Southern Expressway at Wollongong, NSW—total cost over \$1 m.

OBITUARY

Marcus Bull was a Fellow of the Institution of Engineers, Australia, and contributed papers to their Journal. At one time he was Chairman of the IEA Civil Engineering Branch. He was a past President of the Association of Consulting Structural Engineers of New South Wales, and past Chairman of the Association of Consulting Engineers, Australia. He was a Fellow and past Chairman of the NSW Branch of the Australian Prestressed Concrete Group, recently Chairman of the NSW Research Committee, Water Research Foundation of Australia, and a member of the Building Industry Advisory Council. He was a Fellow of the American Society of Civil Engineers and of the American Concrete Institute. Up to the time of his death he was a member of the New South Wales Advisory Committee and one of ICE's regular Interviewers in Sydney.

He was elected to corporate membership in 1949.

He is survived by his widow, a son, and three daughters.

Publications:

'Model Analysis of an Arch Span of 344 feet', *J.I.E. Aust.*, vol. 9, p. 58, 1937.

'Hardwood Columns Subjected to Loads of Short Duration', *J.I.E. Aust.*, vol. 17, p. 50, 1945.

'Standardisation of Bridges and Bridge Units'. Advanced Course in Bridge Design, Sydney and Melbourne, 1966.