

Dr Graham Lindsay Drury Ross

1924 to 2015

Dr Graham Ross, doyen of South African road engineers and transportation historians, passed away in December after a short illness.

He was born in Cape Town and attended Christian Brothers' College, Green Point (a school which has produced several other notable engineers). Within a few days of matriculating in 1942, he volunteered for active service and was delighted to find his classmate John Clark (later chief engineer of the Western Cape Regional Services Council) next to him in the recruitment queue. Together they were posted to the navy and Graham saw action in minesweepers off the Cape coast, and later around the Indian Ocean islands and the Bay of Bengal, reaching the rank of sub-lieutenant.

After the war he enrolled at the University of Cape Town – he would become one of the last surviving students of the renowned and beloved Professor Snape – and joined the Cape Provincial Roads Department on graduating in 1948. His first job was to help put the finishing touches to Du Toitskloof Pass, which was the beginning of his long love affair with the routes through the Cape mountains.

Early in his career he was sent to Namaqualand to take charge of a special construction unit which had been formed to build a unique, ultra-heavy-duty road between the copper mines at Okiep and the smelter at Nababeep. Controlling a disparate group of rough and ready *padmakers* in a remote location on a new type of construction could have been a considerable challenge to a young man in his twenties, but Graham's naval experience in dealing with equally tough trawlermen stood him in good stead. Despite the demanding workload – besides being resident engineer, he acted as surveyor, unit clerk, typist, stores superintendent and headmaster – he found time to be fascinated by the old transport systems, engineers and roads of the district, which he would later put to good advantage.

He really earned his spurs while serving as acting district engineer at Oudtshoorn, when he was tasked with finding a feasible new route for the Huis River Pass through the very tricky geology of the local mountain range. It was a torrid experience, and eventually he had to report that an alternate location would not be possible. Some 15 years later, the present pass was built approximately along the line of the old road.

He decamped in 1963 with his wife and young sons to attend Northwestern University in Illinois, where he obtained an MSc and formal skills in the emerging discipline of transportation engineering under the formidable Professor Jack Leisch, and on his return was appointed a geometric design engineer. He came back fired with enthusiasm and poured his new-found knowledge into producing a geometric design manual for South African conditions. It became the bible of local road designers and is arguably his most important professional achievement. He was an excellent teacher and inspired, taught and mentored a generation of South African highway engineers with his expertise, usually leavened by his keen sense of humour.

In those days there was no computer-aided design – everything was done the manual way. Road alignments were drawn on long rolls of drawing and graph paper, which were rolled out on two or three drawing tables. Graham would climb up onto the tables in his stockinged feet, bend down and peer along the alignment, pointing out improvements to be made – his Google Earth option!

A minor incident in this period had a lasting outcome and Graham was always amused at his role. He accompanied the provincial roads engineer, the feisty Freddie Hugo, to a meeting of the Provincial Executive Committee where the route of a proposed freeway through the Constantia Valley was being discussed. Graham presented a plan on which he had marked three possible alignments in red, blue and green. The politicians opted for the blue line – and 50 years on, although the official title is *The Simon van der Stel Freeway*, the main highway to the South Peninsula is still invariably known as *The Blue Route*.

In 1967 Graham was recruited by Ninham Shand to establish and head up the Roads and Transportation Department in his firm, and within a year he was offered a partnership (which turned into a directorship when the firm became a company). He soon brought his former colleagues, Peter Thomson and Charlie Glick, into the fold and Shands became a formidable player in the field. In time he passed the roads function on to Peter while he concentrated on transportation.

When he finally retired in 1993, Graham and his wife, Eileen, caravanned many thousands of miles around the country, revisiting old haunts and documenting information on the mountain passes of the Cape. Initially his notes were published as a series of articles in the SAICE magazine, which were collated into a booklet sponsored by the SAICE Transportation Division. He then went a step further and collected all the information of his research into a marvellous database, titled *Mountain Passes, Roads & Transportation in the Cape: a Guide to Research*. This enormously useful document has been updated several times and is the most comprehensive and authoritative collection of facts, figures and references about the history of road transportation in the Cape.

Not resting on his laurels, he enrolled at the University of Stellenbosch and drew on his early Okiep experiences – and much further research – to produce a dissertation titled “The Interactive Role of Transportation and the Economy of Namaqualand”, for which he was awarded a PhD at the age of 74.

When SAICE approached its centenary in 2003, it was suggested that Graham’s articles and notes could be expanded into a book which would emphasise the benefits that civil engineering had brought the country. Graham was willing to give it a go, but the SAICE management felt that the project was financially too risky for the institution to support. Brenda Sudano and Ross Parry-Davies had other ideas, however, and raised sponsorship from SANRAL and the Western Cape Roads Department to make the project more attractive to a commercial publisher. Graham responded by taking himself and Eileen off in his caravan to a remote spot on the Garden Route where he spent an intense three weeks putting the finishing touches to his manuscript. Graham had presumed that the book would be issued under his working title *Reminiscences of the Cape Mountain Passes*, but wily old contractor Parry-Davies insisted that a more imaginative name would be needed to catch the interest of the general public, and so *Romance of the Cape Mountain Passes* it became. The public responded by snapping up the copies, enjoying the easy prose style and the detailed anecdotes about places they might have passed by without appreciating the background to their travels. The beautifully produced book is now in its seventh printing and remains the leader in its field, despite having spawned several imitations.

From the point of view of the profession, the book did a wonderful job in raising public awareness of civil engineers and engineering at a time when the achievements and intricacies of the profession were not always appreciated and understood by decision-makers.

He was for a number of years the influential national president and later honorary life fellow of the South African Road Federation, which drew its membership from all those interested in a business sense with the wellbeing of the South African road system, as well as in legislation and governmental

policy. Graham received accolades and honours from several other professional bodies, including SAICE (honorary fellow), ASCE (life fellow), ITE (Institute of Transportation Engineers) (life fellow) and he was proudly a life associate member of the Sigma Xi Society. He was also very gratified to be elected to the membership of the Royal Geographical Society.

Graham married Eileen Reade in 1951 and they had two sons, Douglas and Alan. In recent years Eileen's health deteriorated and Graham supported her with great care and devotion until she passed away in 2013.

He was a very high-ranking dinghy sailor. Despite his relatively light weight, he was in the front rank of Western Cape (and indeed South African) competitors at various times in Finn, Tempo, Extra and Sonnet classes. Eileen crewed for him in Tempos and Sonnets, although he also sailed competitively and successfully at provincial level in single-handed Sonnets. Water and the sea appear to be in the Ross family blood, as Graham's father was a keen member of the Royal Cape Yacht Club, while both sons have maritime interests.

Graham's research documents and extensive collection of transportation and historical references are housed in the Jagger Library at UCT.

Graham's magnum opus concludes with a quote he found on a bridge across the Keiskamma River in the Eastern Cape:

*The tree shall grow, the brook shall glide
The hill shall stand, the bridge shall bide
The builders like the fading ray
Of summer's sunset pass away*

But Graham's inspiring example and legacy of knowledge will not pass away for many a year. Farewell old *padmaker*, you travelled a long and splendid road.

By Tony Murray with contributions from Tony Abrahamson, Brian Alexander, Colin Carter, Steve Fanner, Peter Thomson, Mike Shand and Brenda Sudano

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