

VicRoads Association Newsletter No 184



Major road works - Warragul Rd

Membership of the Association is available to all who have been members of VicRoads or forerunner organisations or the spouse of deceased members and bestows on them all the rights of the Rules of Association. Current cost of membership is a once only fee of \$30 plus a joining fee of \$5. Enquiries about membership or receipt of the Newsletter by e-mail should be directed to the Secretary at 60 Denmark Street Kew 3101 or by phone or e-mail as shown in the footer below. An application for membership of the Association can be found at the end of the Newsletter.

Dear Members,

The passing of the centenary of Anzac Day affected us all in one way or another. Whether you agreed with the commemorations – some called them celebrations – or not, I think we would have all spared time to contemplate the horror that the boys and young men of all nations experienced both during the battles they fought and in their dreams thereafter.

Quite a few years ago I wrote in a newsletter about my uncle who enlisted as a nineteen year old. He pledged:

"I, George Rankin, swear that I will well and truly serve our Sovereign Lord the King in the Australian Imperial Force from 11th January 1915 until the end of the War, and a further period of four months thereafter unless sooner lawfully discharged, dismissed or removed therefrom; and that I will resist His Majesty's enemies and cause His Majesty's peace to be kept and maintained; and that I will in all matters appertaining to my service, faithfully discharge my duty according to law. So Help Me God."

No one at the time realized what it would be like. George was one of the lucky ones. After fighting at Gallipoli he went to France where he was injured in the Battle of Pozieres at Mouquet Farm. The ANZACs called it Moo Cow Farm.

During the part of the battle in which George fought (between 29 July and 16 August 1916) the Australian Division had 4,761 losses. He was evacuated to England for treatment and after his recovery he was sent back to the front. However his commander deemed that he was not fit for duty and possibly saved his life by recommending he be repatriated back to Australia.

George was a farmer and he loved the French countryside away from the battle zones. He wrote home to my grandmother from "somewhere in France," saying: "I have just received this morning your ever-welcome letter, dated March 3, and also the lovely big parcel you sent by the same mail. My word you make a "cert" of the parcels, as they take a great deal of undoing. Well, we came out of the trenches a couple of days ago, after doing another turn in, and are camped in reserve billets. We spent all the Easter holidays in the trenches and had a very quiet time although it was very wet and miserable most of the time. This last two days have been lovely days, in fact, it reminds me of Australian spring weather. It was lovely marching along the road yesterday on our way for a bath to see the lovely green grass and the young crops just coming through. The roads were all lined with dandelions and other wild flowers. It was grand to be out of the trenches."

This newsletter contains some of the history of VicRoads (and its predecessors) and the armed services.



Dates For Your Diary

Please note that we have made another amendment to the program shown in the last newsletter. In November, we propose to visit the Desalination Plant in Gippsland. Details will be provided in future newsletters.

| DATE | | TIME | EVENT |
|-----------------|-------------|---------|---|
| June | Monday 15 | 12 noon | Occasional Lunch, Shoppingtown Hotel |
| July | Thursday 9 | 6 pm | Drinks and dinner at Waverley RSL |
| August | Monday 10 | 12 noon | Occasional Lunch, Shoppingtown Hotel |
| September | 17 – 18 | | Delegation to visit Western Region (Ballarat and Horsham) |
| October | Monday 12 | 12 noon | Occasional Lunch, Shoppingtown Hotel |
| | Thursday 29 | | Visit – yet to be decided |
| November | Monday 9 | 12 noon | Occasional Lunch, Shoppingtown Hotel |
| | Thursday 12 | 11 am | Visit to the Desalination Plant, Gippsland |
| December | Monday 7 | 12 noon | Christmas lunch at Head Office |
| February (2016) | Monday 8 | 12 noon | Occasional lunch, Shoppingtown Hotel |

Please remember too that family and friends are always welcome to attend our functions.



News About Our Members

Hepplewhite of the CRB – Ted Barton

George Hepplewhite was one of the “big three” English furniture makers of the 18th century – the other two being Thomas Sheraton and Thomas Chippendale. Their furniture styles appear in all the stately homes of England – and elsewhere – and in all the period films. Downton Abbey is dripping with them! But the CRB has a Georgian master of its own. He is our esteemed committee member – Edward V (Ted) Barton.

Now I know that Ted will be embarrassed by what I am about to say in this story but I’m going to say it anyway. Ted will be familiar to most of you, but I thought the citation given by the Institute of Transportation Engineers (USA) when he was made an honorary member in 1998, was an excellent description of his personality as well as acknowledging his formidable knowledge and skills. The highest recognition of notable and outstanding professional achievement presented by the ITE is election to Honorary Membership. Since 1933 when the first Honorary Member was selected, only 55 individuals had been so honoured to that time.

The citation said:

“Ted is acknowledged within the profession as Australia’s premier Traffic Engineer and is highly regarded for the dedicated service he gave to the traffic engineering profession and the road users of Australia. A tireless worker for safe and consistent traffic engineering standards and practices throughout the Roads Corporation of Victoria (VicRoads), and throughout Australia, Ted is credited with significantly contributing to the reduction of Victoria’s road toll. He has been a mentor for traffic engineers within VicRoads and an enthusiastic leader of professional training for engineers.

Ted retired in 1993 as Principal Traffic Engineer from VicRoads after three decades of outstanding service to the profession. Previous to that position, he held a variety of traffic engineering positions with the Country Roads Board of Victoria (VicRoads’s predecessor). Early in his career, he was a Project Construction Engineer and Survey Crew Supervisor in Canada and became a Registered Professional Engineer in the Province of Ontario.

A measure of success of traffic engineering is that the service is naturally accommodating to users to the point where it becomes unnoticed. Over his period at the core of development and extensive application of traffic engineering in Australia, Ted’s sustained insistence on meaningful and consistent standards created a legacy of quality and predictable service for travel throughout the State of Victoria.

Ted contributed to several Australian standards, namely the *Australian Manual of Uniform Traffic Control Devices*; *Lighting of Urban Traffic Routes*; and *Parking Facilities*. He was an author of six parts and the technical editor of all other parts of the 14-part AUSTRROADS *Guide to Traffic Engineering Practice*, considered the Australian bible of traffic engineering practice. He gave extensive input in national committees and working groups on uniform traffic control devices, parking facilities, street lighting, traffic engineering training, safe intersection design requirements, speed limits, standard heavy vehicle dimensions and traffic regulations. Of particular significance has been his provision of advice to the Victorian Parliamentary Road Safety Committee throughout the 1980s. Ted also participated in the planning and execution of a large number of short courses and workshops on traffic engineering and road safety at both Monash and Melbourne Universities, insisting that the content of these courses was always rigorous, current and correct.

Ted is a Member of the Institution of Engineers Australia and now an Honorary Member of ITE. He was a Member of the Association of Professional Engineers and Scientists Australia throughout his career at VicRoads. In a National Honours list he received the Public Service Medal in recognition of his work for the State of Victoria. He also was presented with a special Certificate of Recognition from the Australian Section of ITE in 1994. During the 1970s Ted was involved in the Australian Section of ITE as Secretary/Treasurer and as Newsletter Editor. After a dormant period for the section, he served as President of the reactivated section from 1981 to 1984.





When Ted retired from VicRoads, his contributions to the community did not end. He worked in Kuala Lumpur assisting the Malaysian government in developing its road safety practices. One of the results of this project is the *Malaysian Road Safety Audit Guidelines*. Ted epitomizes the saying, "If you want something done, seek out a busy person." Ted is never too busy to help—particularly if it involves the passing on of knowledge to others or helping others search for knowledge.


One personal observation is that Ted, like many of the others who have been elected Honorary Members is committed to discharging his duties as a professional... his objective has not been to garner honors or to be in the spotlight. The neat thing about our profession is that we have been able to ferret out those that are deserving and overlook those that are self-aggrandizing and spotlight hogs. And for those that know Ted realize that he is a wonderful person. Those who toil and dedicate themselves to doing the best job possible can only do so with the support of their mate. I would like to recognize Ted's wife Mary and acknowledge that she has helped Ted to fulfill his most successful and ongoing career.

Ted is only the third person from outside the North America and the first from Australia so honored in ITE's 68 years."

I could not have put it better myself. Not bad for a kid from the Kiewa Valley! Ted is wise, self-effacing, humble, generous and patient – but he also possesses a firm determination to express his views and I am sure that during his career he would have stood his ground against others with different views.

Ted was born in the middle of a family of 12 children and was raised in the Kiewa Valley on a mixed dairy farm. His father was a builder in Albury when he was called back to the valley to rehabilitate his father's farm after the house and sheds were swept away in a flood. Ted's father rebuilt all the structures and decided to stay on to give his father a hand. Eventually the house became his. Ted was told fairly early that, because of the large size of his family, there was no opportunity for him to stay on the farm so he was sent to technical school in Wangaratta with the aim of him going into the building trade – sort of following his father's footsteps. There he did well and the principal of the school thought that Ted would be better served following a profession rather than a trade.





This advice was heeded and Ted initially started doing a Diploma of Mechanical Engineering but then transferred to Civil Engineering – much to Australia’s benefit.

The citation above says it all – an immense achiever with a modest demeanour. Ted has been a loyal committee member of the VicRoads Association but, despite this loyalty, his real passion is furniture making as displayed in the following photographs of a reproduction Georgian secretaire bookcase. Ted told me that he built most of the furniture in his home – beds, tables, kitchen cupboards – the lot. He still uses his father’s hand tools so some of the skills obviously have been absorbed through the handles from father to son.

The design of the secretaire was scaled from a photograph in an antiques magazine. The main part of the piece is Fijian mahogany and the drawers are pinus radiata.

However the bottom of the drawers are of oregon sourced from the old goal posts at Waverley North Primary school. The inside of the drawers are lined with recycled timbers from old engine pallets – North American pine – and the banding of lighter coloured timber at the top and the internal drawers are Huon pine from Tasmania.

The glass was quite expensive. Although modern, it is called French antique glass. It is the closest you can get to the glass that was used back in Georgian times. The delicate Gothic arches on the door are cut from timber and not, as some might think, bent using steam.

So there you have it. Would you describe him as an eminent engineer or as a master craftsman? Nowadays I think I would lean towards the latter – mainly because Ted mentioned that he was reading an interesting book called ‘History of Metal Wood Screws’.

What’s Been Happening

Lunch with Geelong with local retirees – 22 April 2015

Peter Lowe, Ted Barton, Jim Webber and I had a very enjoyable lunch in Geelong with a local group. John Cunningham assisted us with the arrangements. This group meets for lunch every month and they are great company and were very welcoming to us. We were also joined by some local members of VicRoads Association thanks to the efforts of Alastair Robinson in rounding them up.

Visit to South East Projects Office – 11 May 2015

A small group of members were given a briefing of South East Projects managed in the Hallam office. We were very fortunate to have Charlie Broadhurst, Project Director South East Projects leading the group throughout the morning. The Eastern Region has a unique arrangement as far as Vicroads is concerned with offices in Traralgon and Hallam.

Charlie opened his very comprehensive presentation with background information on the Eastern corridor extending to Drouin/ Warragul. The corridor is growing at an impressive rate - the City of Casey, Victoria’s largest municipality, is also Victoria’s third fastest growing municipality. This growth rate creates significant road and rail problems. The Project appears to have funding for a significant works program, not surprising given the growth rate of the corridor.

Charlie then discussed the wide spread of projects undertaken by the Hallam office - ranging from the Koo Wee Rup Bypass, numerous arterial road duplication and intersection improvements, to public transport projects including the upgrading of Warragul station and advice on the Regional Rail Project. Some interesting aspects of the projects included an intriguing environmental initiative involving the restoration of habitat for the Southern Brown Bandicoot, undertaken in conjunction with the University of Melbourne; the successful relocation of substantial oak trees in Clyde Road (seven out of eight have survived); and a campaign to encourage locals to continue to shop in Clyde Road during the roadworks.

This was followed by a coach tour of many of the recent and proposed works.

The morning finished with lunch with Project staff being provided at the Office. The opportunity to mingle with the staff was greatly appreciated - they came across as highly motivated with a great deal of pride in their achievements. During lunch Peter Lowe thanked Charlie for his considerable efforts to make the morning such a success.

The only disappointing aspect of the morning was that so few members were able to attend.

We also apologise too for the late notice about this visit. After making our initial enquiries, VicRoads’ response was too late to include details in the last newsletter. As a consequence we were only able to contact those on our e-mail list. By the way, the visit was so successful we have decided to go back again next year.



Vale

Bruce Watson

I made mention of Bruce's death in the last newsletter, but June, his wife, sent me the following note which fills in a lot of the gaps. June is in her nineties and her letter was clearly written and in wonderful detail. I think it is an excellent record written by a lady with no engineering experience. I have not edited it at all.

"Bruce was born on 22 July 1919 in the country town of Northam in Western Australia. About 1930 the family moved to Claremont – a suburb of Perth. In 1931 while in Standard 6, he sat for a scholarship for entrance to Perth Modern School. He was successful in winning an "Entrance" and commenced studies at "Mod" in 1932. He passed his Leaving in 1936 in English and French and gained Distinctions in Physics, Mathematic A, Mathematics B, Applied Mathematics and Drawing B. These results were adequate to be awarded a Matriculation Certificate in April 1937 and acceptance in the Faculty of Engineering at the University of Western Australia.

He was awarded a Government University Exhibition. As a result of that, St George's College at the university approached Bruce and offered him reduced fees, so Bruce was enrolled at St George's College. In 1938 the Civil Engineering Branch of the Railway Department offered Bruce an Engineering Cadetship, which he was very happy to accept.

At the outbreak of the Second World War, Bruce was nearing the end of the third year of his engineering course. He tried to join the RAAF but experienced difficulties arising from the fact that he was in a "Reserved Occupation". Nevertheless he twice applied to join the RAAF but failed each time. He continued his engineering studies and gained distinctions in 12 subjects and was awarded the Degree of Bachelor of Engineering with Honours in Structural Engineering in April 1942.

After completing his course at Uni – he was mainly engaged in design, preparation of plans, quantities and estimates for structures in steel, concrete and timber. His work included the inspection and determination of stresses in existing structures and strengthening when necessary.


From Western Australian Railways he changed jobs. In 1948 he started working for Tasmanian Railways as a District Engineer, initially at Launceston, then Hobart and later on, Devonport. It was in Devonport he met June Eagling and they were married on 4th March 1951.

Bruce joined the CRB in 1950. His employment started off in the Exhibition Buildings. The conditions there were very cramped, as this building was not designed for office accommodation. There was very little ventilation – poor lighting and very hot in summer and very cold in winter. These were immediate post-war years – still suffering from a severe shortage of materials. After the War they were particularly short of steel and cement. Cement was under government control. This was a very important time for the Board in tackling the backlog of urgent work to be done.

Bruce said they were a close knit team, and very committed to doing a good job and to enhance the public image of the Board. They had great respect for each other. It was a genuine pleasure to go to work each day in this environment. Bruce's impression was that everyone arrived early to work to sign in before 8.45 am as a red line was always drawn across the page on the dot of 9 am. After working in these cramped conditions at the Exhibition buildings, the Bridge Design Section run by Cec. Wilson, Keith Opie and himself moved to a Richmond office – a building rented from the SEC in Church Street, Richmond.

About 1955 Bruce wanted some practical experience in the construction part of the work, so he applied for the Bonnie Doon Project as he had been involved in the design stage. He stayed up there all the week and came home at weekends. In 1957 the Board bought an old, decrepit building at Hoadleys' Chocolate Factory and restored it. The Bridge Design Section took over the upper floor. There was Gerry Masterton, Cec. Wilson, Marj. Robertson (tracer), Raleigh Robinson and Bruce Watson.

The CRB's new headquarters in Denmark Street, Kew officially opened in February 1961. It was built on the site of the old Kew Railway station. It was thought that it was quite unnecessary to have air-conditioning because Melbourne only had 10 days maximum exceeding 100 degrees. Later on the Board suite was air-conditioned. Kew was not a convenient site for many workers and Bruce thought the Board forgot that the railway did not exist. There was a tram to Kew junction but still transport to Kew was very awkward for many. However working conditions were a great improvement on what they had. In 1960 the CRB bought land at Syndal and built the steel fabrication and precast yard for which Bruce was responsible. Bruce particularly remembered Ron Geisemann who was an excellent foreman of the steel fabrication workshop – which fabricated girders and other components for bridges. He was someone you could rely upon to do a good job.



In 1961 Bruce was appointed Senior Construction Engineer at the CRB. In this role he was responsible for all major bridge construction in Victoria. In 1963, New South Wales University introduced a new course in Administration especially for engineers. The Board sent Bruce up to try out this new course to see if it was beneficial for their engineers. It was quite an intensive course of 12 weeks. This was probably the forerunner of the MBA today. In April 1973 Bruce's new title was changed to Bridge Construction Engineer.

In 1973 Bruce was sent overseas for nine weeks visiting the USA, UK, West Germany, France and Italy to study bridge construction practices, including recent trends in developments in planning and organization of construction methods. This was certainly an interesting experience although it often meant very long days – often 5 am to midnight. Italy was an interesting experience as the Chief Engineer there could not speak English and Bruce could not speak Italian. They compromised by employing a French speaking lady interpreter but Bruce could only speak schoolboy French. The engineer loved SPEED – along the Autostrada at 160 – 180 kph. While travelling Bruce used a tape recorder to record the information – then at night he had to write it up in his journal.

Bridge Division moved to a new office in 1970 to a new building on the corner of Princess Street and High Street Kew. In 1975 the Chairman of the Board, Mr. Donaldson, presented Bruce with CRB cufflinks in recognition of 25 years service. Bruce retired in April 1980. The Chairman, Tom Russell, presented Bruce with a photo album showing some of the bridges Bruce had worked on.

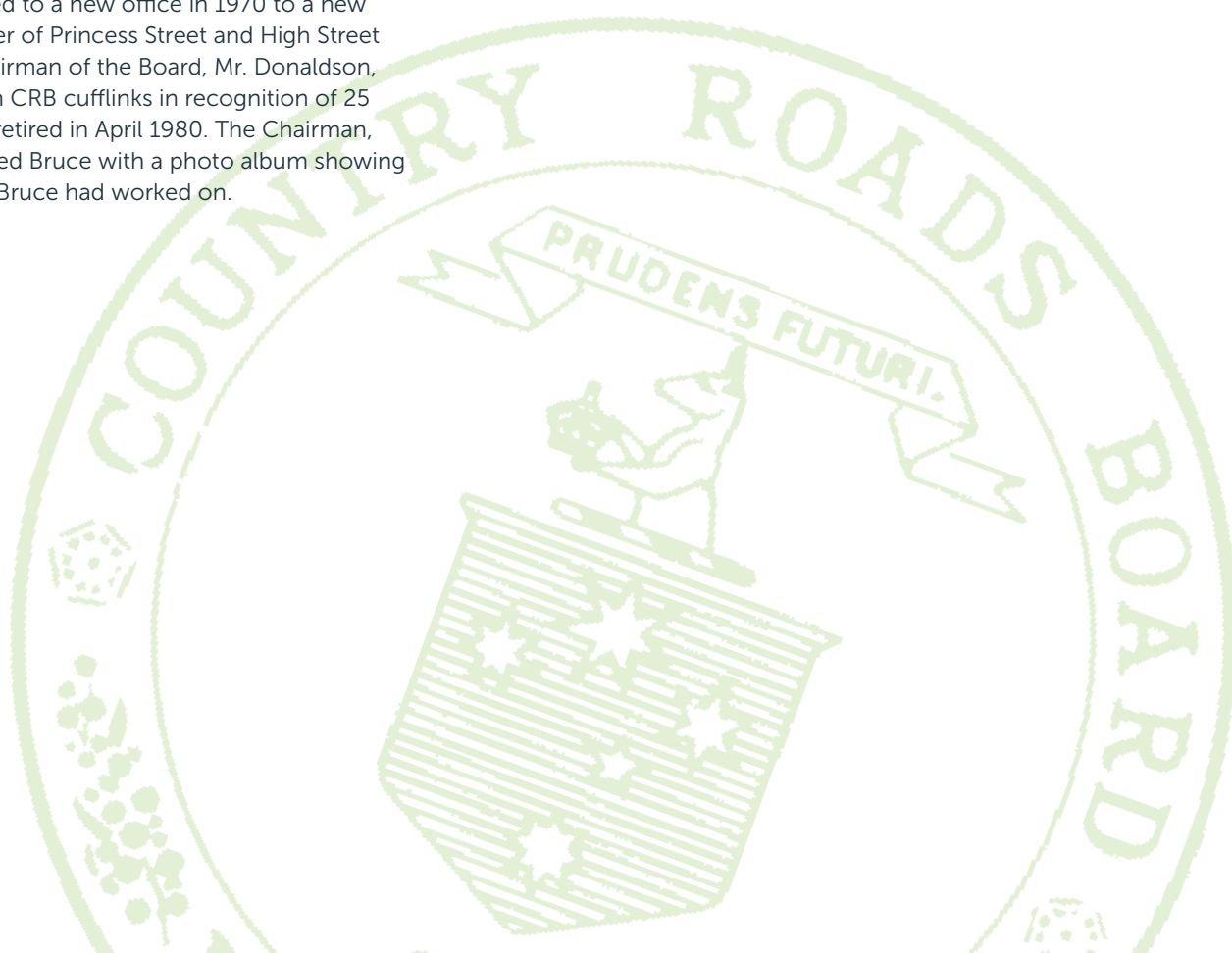
What's Coming Up

Occasional Lunches – Shoppingtown Hotel – Monday 15 June 2015 and August 10

Bookings are not essential, but it would help with arrangements if you can let Kelvin York know on 9438 1028 if you can attend. We hope to see you there.

Drinks and Dinner at Waverley RSL – 9 July 6 pm

This is an opportunity for old friends and colleagues and their partners to get together in very pleasant circumstances to enjoy dinner together- at a very reasonable price. It is a good opportunity to get your old work groups together for a bit of fun. If you can make it, please contact Ken Vickery on 0409 561 618 or kenvickery@tppgg.com.au or Peter Lowe on 9818 7009 or ros.peter@bigpond.com so that we can arrange the catering. I remember how everyone enjoyed it last year so if you haven't been before come and join us.



News From VicRoads

The following story appeared in VicRoads' internal newsletter – called Frog and Toad.

VicRoads and the Country Roads Board (CRB) have a long history with the armed forces. From serving in conflicts to designing and constructing Victoria's roads, many of VicRoads staff, both past and present, have been service men and women.

When William Calder first chaired the CRB in 1913, little did he know that one year later the "War to end all wars" (WW1) would begin. The following four years meant shortages of money and manpower for road-building as a consequence of the Great War. Thirty-four CRB staff members were enlisted for active duty and three failed to return from the battlefields.

Although Calder didn't serve in the military himself, he was known as a 'champion shot', and contributed by assisting with military training in the Moorooduc area during the war. Despite a strain on resources, Calder campaigned successfully for more funds, especially for arterial roads, and as such, shaped the early beginnings of VicRoads.

Calder's successor was William T.B. McCormack, who himself enlisted, and fought on the Western Front (under his mentor fellow Civil Engineer and renowned Major General Sir John Monash) in 1916 and commanded the 10th Field Company of Engineers. In 1918 he was awarded the French Croix de Guerre for his involvement in the battle of Messines.

McCormack's time as CRB Chairman was as difficult as Calder's as he struggled with the Great Depression era between 1929 and 1932. McCormack remained chairman until his death in 1938. Major McCormack was succeeded as Chairman by F. W. Fricke, the last surviving founding member of the CRB. Fricke was given little time to settle into his new office before the Second World War presented the CRB with a new set of problems and challenges.

Materials and manpower were once again strained as the Board had to divert most of its resources to defence works. Bitumen was hard to come by and the Board sourced enough to fulfil only 62% of projects. A petrol ration was put in place in 1940 which added further pressure on the Board. Many CRB staff enlisted for service with over 140 employees enlisting in the services in 1940, 235 by 1941, and 536 by 1942. In 1943 the Board estimated a third of its employees were serving in the forces either fighting in the war or building defence related infrastructure. Sadly, nine staff lost their lives fighting abroad.

The CRB made some important contributions to defence infrastructure. Across Victoria at a number of military sites and aerodromes, works included widening and sealing roads, constructing footpaths, strengthening bridges and reconditioning roads to accommodate defence traffic. In 1943, they travelled north to the Northern Territory to work on a number of aerodrome projects for the R.A.A.F and completed surfacing works on a several locations across the Territory including Alice Springs—Larrimah Road and the North-South Road (now the Stuart Highway).

In recognition of the important contributions the CRB made during both world wars, and the importance of the engineering and transport skills, in 1950 the Department of the Army asked the CRB to raise three special CRB-based army reserve units: a regimental headquarters, a construction squadron and a plant squadron. While managed entirely by the Army Reserves these units still exist today.

Geoff Hunt – who identified the officers – was not sure of the significance of this particular grouping of regimental officers. It was taken in the early 1960s. The two non-CRB officers were members of the SR&WSC sponsored squadron of 22 Const Regt.



Construction Regiment officers:

Back row (L to R): Lt Jack Sterkenberg, Lt David Nicholson, Lt Les Malseed, Capt David Freeman, Lt Jack Lowery (non-CRB), Lt Doug Boyle

Front row (L to R): Capt Geoff Hunt, Capt Graeme Marshallsea, Maj Bruce Addis, LtCol Bob Handley, Maj David Hewson, Lt Howard Menz (non-CRB)



CENTENARY STORIES

Introduction of a Pavement Management System (PMS) to Victoria:

The following story was written by David Anderson not long after he retired as the Chief Executive Officer of VicRoads. He subtitled it as *"How computers were invited to compete with age old engineering experience and intuition"*.

Technology on the Edge

During the 1980s, one of VicRoads' predecessors, the Road Construction Authority, and before it the Country Roads Board (CRB), became involved in the introduction of new technology that was designed to assist in developing maintenance budgets and programs for keeping Victoria's road surfaces in acceptable condition.

In effect, this was an unforeseen consequence of the troubles that had been experienced with the performance of new pavements on some of the Hume Freeway projects during the later years of the 1970s. Although the failures of the Hume pavements had been thoroughly investigated by an international pavement expert, and the remedies successfully put in place, there remained the need for the Government of the day to demonstrate that its principal road manager, the CRB was up to date with the World's best knowledge of road pavement design, construction and maintenance.

In 1977, the then CRB Chief Engineer Dr Keith Moody, had approved the appointment of David Anderson to develop a new pavement technology group within the Materials Division. So, in 1979, with a State Government election planned for March of that year, the Premier of the day agreed that David Anderson should be sent

to work and study with one of, if not the most eminent pavement experts in the World, Professor Carl Monismith of the University of California at Berkeley, for a period of at least 12 months. The brief was to ensure that Victoria through the CRB, had access to the most up to date pavement technology.

In November 1980, following completion of the study period, an extensive report was presented to the CRB. It contained many recommendations covering topics ranging from materials design and testing, the structural design of road pavements, and the assessment and management of existing roads. It also included information about new systems being developed, mainly in the United States of America, for the purpose of evaluating large pavement networks, and determining the optimum maintenance program (cost and detailed treatment works) for achieving a required operating condition. It concluded (inter alia) that the development of such a pavement management system (PMS) for Victoria would have a number of major economic benefits, and that the time was appropriate for its development.

A New Set of Values

However, it was not until 1986, that the decision was made (by the newly established Road Construction Authority) to develop a PMS. The factors having the greatest influence on this decision included:


- A new Chief Executive determined to introduce modern commercial management into what was otherwise a very strong technically oriented organization.
- Increasing decentralization of authority, which improved efficiency and customer service, but sometimes at the expense of statewide consistency.

- Rapidly developing computer literacy and capability.
- Major attempts to direct staff attention to customer oriented outcomes rather than internal processes controlling input management.
- Significant loss of experience and skills because of the retirement of a number of senior engineers.
- A road network that had a significant proportion of pavements approaching 20 to 30 years of age.
- A change in emphasis from new road construction to road maintenance, and
- The existence of many years of data about the physical condition of the principal road pavements throughout Victoria.

A set of objectives for the PMS was adopted by the RCA Board. These covered the ability to predict future pavement conditions and user costs for a given budget, the ability to assess the effect of different management strategies and past investment levels, and the ability to identify how to provide road users with optimum road conditions for a given budget. These objectives were used to steer the development of the system, to ensure that it met the perspective of stakeholders, including those represented on the Authority Board.

The System and its Development

One of the major lessons learned in the USA was the importance of gaining ownership of and commitment to the PMS by senior decision makers in the road management organization and in Government. A key strategy was to ensure that decision makers were closely involved with the development of the PMS, and users could understand how it worked and that it was based on "credible experience".



Consequently, in the RCA, the Chief Executive appointed the Director Operations to take responsibility for the development of the PMS. In turn he formed a steering committee consisting of four of the five Directors who reported to the Chief Executive, representatives of local government engineers, and a senior pavement research manager from the Australian Road Research Board.

The responsibility for detailed development was given to the Central Highlands Region of the RCA. The project group was led by David Anderson, who by that time had been appointed as Regional Manager, Andrew Wall (a young engineer with strong skills in systems thinking and innovation, and who later went on to develop award winning road network management approaches for VicRoads), Colin Kosky, the Assistant Regional Manager and expert in road maintenance, and Garth Stevens an early computer systems expert based in the corporate centre of the RCA with involvement in the development of state wide road programs.

The core of the computer software was obtained free of charge from the Department of Transport in Arizona, USA, in accordance with a provision of the US Constitution.

Arizona was one of the first jurisdictions to develop and use PMS in the World, and was extremely generous in providing much expert advice over many months to those in Victoria charged with introducing PMS. The software was quite crude compared with today's computer technology but was made to work and deliver against the objectives mentioned previously. Today it may well be able to run on a mobile 'phone.

Building Credibility

Without going into too much technical detail, a key module of the system required a set (matrix) of predictions to be included about future pavement condition. For example, if a section of pavement was currently in a given condition (roughness, degree of cracking etc), what was the probability of it being in the same, worse, or better condition in 12 months time? This was further refined according to the treatment applied in that 12 months; doing nothing, resurfacing or whatever.

Although with use, the PMS could refine these condition predictions, their initial values were derived using a "Delphi" questionnaire technique. The participants in this exercise were expert pavement managers who were or had been involved in maintenance programming and operations for many years.

This approach helped to strengthen the PMS's ultimate credibility within the RCA and local government.

Impacts of the PMS

The PMS was first used for maintenance investment decisions in about 1988. Its main effect was in the distribution of the overall maintenance budget between regions and local districts in the State. It had limited effect on the overall allocation of road funding by the State and Federal Governments, because of other political imperatives.

Later, a newer PMS known as HDM (Highway Design Model) replaced the original "Arizona" model. HDM had been developed by the World Bank and was more compatible with contemporary information technology.

Typically PMS suggested that about 9% of the road network should be resurfaced each year, in order to maintain its condition. In 2012, in Victoria, it is understood that only about 2% of the network is being treated due to severe budget constraints. This is similar to the levels of investment in several other states. Either PMS analyses are being ignored by government decision makers in Australia, or the technology needs to be invigorated to make it more influential.

Trivia and Didactic Whimsies

A few more lessons about health

You may remember that I included a few tips last year in earlier newsletters. Well here are a few more.

Does olive oil prevent heart disease?

Yes. The health benefits of olive oil come from the presence of polyphenols and antioxidants that reduce the risk of heart diseases and cancers. But to get these healthy compounds, consumers should buy good-quality, fresh "extra-virgin" olive oil, which has the highest polyphenol content. Most commercially available olive oils have low levels of polyphenols associated with poor harvesting methods, improper storage, and heavy processing.

Do I need sunscreen with more than 30 SPF?

No Sunscreens with an SPF (sun protection factor) of 30 block about 97% of ultraviolet rays, while sunscreens with an SPF of higher than 30 block 97%-98%. It's more important that you choose "broad-spectrum" sunscreen, meaning it protects against both UVB and UVA rays. Sunbathers also need to apply a generous amount of sunscreen in order to get the full benefit of the SPF.

Is drinking fruit juice as good for you as eating fruit?

No. Calorie for calorie, whole fruit provides more nutritional benefits than drinking the pure juice of that fruit.

That's because when you liquefy fruit, stripping away the peel and dumping the pulp, many ingredients like fibre, calcium, vitamin C, and other antioxidants are lost. For comparison, a five-ounce glass of orange juice that contains 69 calories has 0.3 grams of dietary fibre and 16 milligrams of calcium, whereas an orange with the same number of calories packs 3.1 grams of fibre and 60 milligrams of calcium.

Is walking as effective as running?

Yes. Studies have shown that how long you exercise — and thus how many calories you burn — is more important than how hard you exercise. Running is a more efficient form of exercise, but not necessarily better for you. A six-year study published in the journal *Arteriosclerosis, Thrombosis, and Vascular Biology* in April found that walking at a moderate pace and running produced similar health benefits, so long as the same amount of energy was expended.

Ernst Leitz II

I think all of you have heard of the Leica camera. I have friends who are keen photographers and they speak almost reverently about the precision of its lenses. The Leica is the pioneer 35 mm camera. It is a German product - precise, minimalist, and utterly efficient.

Behind its worldwide acceptance as a creative tool was a family owned, socially oriented firm that, during the Nazi era, acted with uncommon grace, generosity and modesty. E. Leitz Inc., designer and manufacturer of Germany's most famous photographic product, saved many of its Jews.

Ernst Leitz II, the steely-eyed Protestant patriarch who headed the closely held firm as the Holocaust loomed across Europe, acted in such a way as to earn the title "the photography industry's Schindler."

As soon as Adolf Hitler was named chancellor of Germany in 1933, Ernst Leitz II began receiving frantic calls from Jewish associates, asking for his help in getting them out of the country. As Christians, Leitz and his family were immune to Nazi Germany's Nuremberg laws, which restricted the movement of Jews and limited their professional activities. To help his Jewish workers and colleagues, Leitz quietly established what has become known among historians of the Holocaust as "the Leica Freedom Train," a covert means of allowing Jews to leave Germany in the guise of Leitz employees being assigned overseas.

Employees, retailers, family members, even friends of family members were "assigned" to Leitz sales offices in France, Britain, Hong Kong and the United States. Leitz's activities intensified after the Kristallnacht of November 1938, during which synagogues and Jewish shops were burned across Germany.

Before long, German "employees" were disembarking from the ocean liner Bremen at a New York pier and making their way to the Manhattan office of Leitz Inc., where executives quickly found them jobs in the photographic industry. Each new arrival had around his or her neck the symbol of freedom - a new Leica.

The refugees were paid a stipend until they could find work. Out of this migration came designers, repair technicians, salespeople, marketers and writers for the photographic press. Keeping the story quiet, The "Leica Freedom Train" was at its height in 1938 and early 1939, delivering groups of refugees to New York every few weeks. Then, with the invasion of Poland on September 1, 1939, Germany closed its borders.



Olive Oil



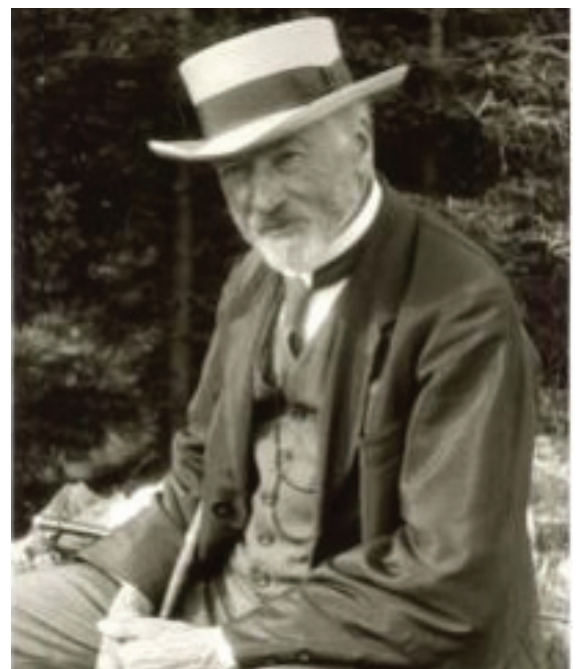
Sunscreen



Fruit Juice



Running



Ernst Leitz II

By that time, hundreds of endangered Jews had escaped to America, thanks to Leitz's efforts.

How did Ernst Leitz II and his staff get away with it? Leitz, Inc. was an internationally recognized brand that reflected credit on the newly resurgent Reich. The company produced range-finders and other optical systems for the German military. Also, the Nazi government desperately needed hard currency from abroad, and Leitz's single biggest market for optical goods was the United States.

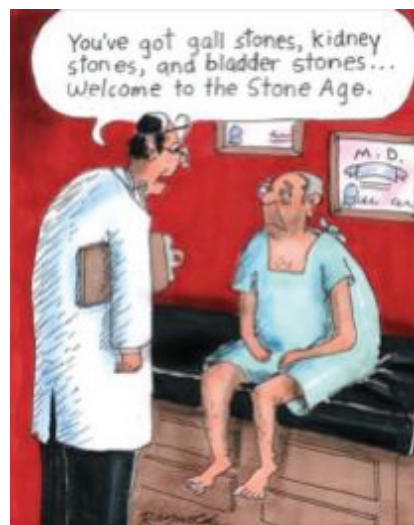
Even so, members of the Leitz family and firm suffered for their good works. A top executive, Alfred Turk, was jailed for working to help Jews and freed only after the payment of a large bribe.

Leitz's daughter, Elsie Kuhn-Leitz, was imprisoned by the Gestapo after she was caught at the border, helping Jewish women cross into Switzerland. She eventually was freed but endured rough treatment in the course of questioning. She also fell under suspicion when she attempted to improve the living conditions of 700 to 800 Ukrainian slave laborers, all of them women, who had been assigned to work in the plant during the 1940s. After the war, Kuhn-Leitz received numerous honors for her humanitarian efforts, among them the Officier d'honneur des Palms Academic from France in 1965 and the Aristide Briand Medal from the European Academy in the 1970s.

On Turning Eighty

In the next newsletter I propose to include an essay written by the acclaimed neuroscientist and author, Oliver Sacks, on the occasion of his eightieth birthday. In the meantime, I will leave these impressions with you.

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