

Vicroads Association

Newsletter no.204



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 email should be directed to the Secretary at 60 Denmark Street Kew 3101 or by phone or email as shown in the footer below.

Dear Members,

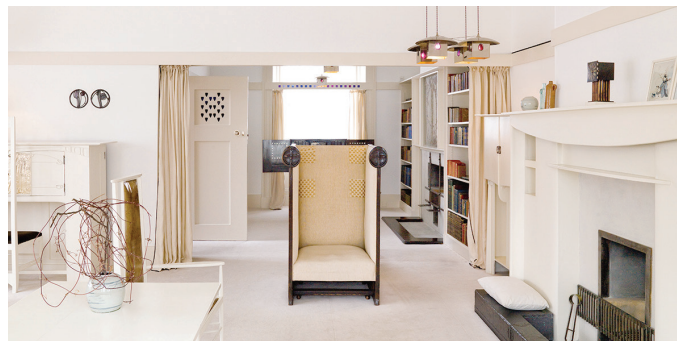
This year is going to be a busy one for me with regard to international travel. I will be away most of August and most of October which means I will miss the visit to VicRoads (we leave that day) and the Waverley soiree.

In August we are going on one of the tours organized by our secretary, Jim Webber. It is an architectural tour of London, Manchester, Glasgow, Reyjavik, Oslo, Aalborg and Copenhagen. Most of it will be modern architecture but in Glasgow we were going to indulge in the Art Nouveau world of Charles Rennie Mackintosh and his wife, Margaret, by visiting the famous Glasgow Art School. You may recall, it was partially burnt a few years ago but just last week we learnt that there had been another fire which completely gutted the building. It was a building of historic importance. I visited it about ten years ago and it left an indelible impression on me. Heritage can be incredibly fragile.



The library – Glasgow School of Art

However there are other sites in Glasgow that pay homage to Charles and Margaret so that is a minor consolation. I think it is fair to say that they were the British equivalent to Frank Lloyd Wright in America and to Walter Burley Griffin and Marion Mahoney in Australia.



Home of Charles Rennie Mackintosh

I have never been to Iceland so this will be an entirely new experience for me. I saw an Icelandic comedian at the Comedy Festival recently and he was hilarious in poking fun at his tiny country and the habits of its people. He said he knew nearly all of them by name but that is an exaggeration because there are 330,000 of them. Iceland is a hotbed of volcanoes, hot springs and lava fields and Reykjavik, the main centre of population runs on geothermal power so their carbon footprint must be pretty low.

By the way, Jim is also involved in an architecture tour for architects and non-architects to the USA in October. Two of our members and their wives (John & Rosslyn Wright and Russell and Sharon Fairlie) will be on the tour. There are still three or four vacancies – contact Jim if you'd like a brochure.

Dear Members continues over page

In October we are joining my painting colleagues on a trip to Japan – visiting Hiroshima, Kyoto and Tokyo. We kid ourselves a bit by telling everyone that the prime purpose of the trip is to paint Japan in autumn tones. I think I'll take a few photos and perhaps do a sketch but for the rest of the time I'll be trying my hardest to immerse myself in Japanese history, culture and food. I travelled extensively through eastern Asia in the 1990s when I was working with the Overseas Projects Corporation and there were only four countries I didn't visit – Japan, Mongolia, Korea and Brunei. By the end of the year I will have ticked off another one.

I doubt if I will tick off the other three, but Peter Lowe lent me an excellent book recently called 'Korea – Where the American Century Began' by an Australian, Michael Pembroke. Pembroke is an historian but is best known as a judge of the Supreme Court of NSW. His father fought during the Korean War and it was this connection that aroused his interest to write the book. Pembroke also wrote an interesting book that gained much acclaim entitled 'Arthur Phillip: Sailor, Mercenary, Governor, Spy'.

'Korea' is especially relevant today – unless you know the history you cannot see the future. Readings summarises the book thus:

'The failed invasion of North Korea by US-led forces in late 1950 and the unrelenting three-year long bombing campaign of North Korean cities, towns and villages – 'every thing that moved [and] every brick standing on top of another' – help explain why the Pyongyang regime is, and always has been, determined to develop a credible nuclear deterrent. As Alistair Horne once said so wisely: 'How different world history would have been if MacArthur had had the good sense to stop on the 38th parallel.'

The first Korean War became the first of America's failed modern wars; and its first modern war with China. It established the pattern for the next sixty years and marked the true beginning of the American century – opening the door to ever-increasing military expenditure; launching the long era of expanding American global force projection; and creating the dangerous and festering geopolitical sore that exists in Northeast Asia today.

Washington has not learned the lessons of history and we are reaping the consequences. Michael Pembroke's timely book tells the story of the Korean peninsula with compassion for the people of the North and South, understanding and insight for the role of China and concern about the past and present role of the United States.'

On that sombre note, I will let you ponder.

David Jellie
Editor

Dates for your diary

July	Monday 30	2.00 pm	Visit to VicRoads R & L, Traffic Centre, Intelligent Eng.
August	Monday 13	12 noon	Occasional lunch, Shoppingtown Hotel
September	12 and 13	11 am	Visit to Bendigo Regional office and attractions
October	Monday 8 Thursday 11 Monday 29	12 noon 6.00 pm TBA	Occasional lunch, Shoppingtown Hotel Drinks and dinner at Waverley RSL Visit to West Gate Tunnel Project
November	Monday 26	12 noon	Occasional lunch, Shoppingtown Hotel
December	Monday 3	12 noon	Christmas luncheon
2019			
February	Monday 11	12 noon	Occasional Lunch, Shoppingtown Hotel
	Friday 22	TBA	Golf Day at Green Acres Golf Club

What's coming up

Occasional Lunch – Shoppingtown Hotel – Monday 13 August 2018

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.

Visit to VicRoads R & L, Traffic Centre and Intelligent Engineering Technology – Monday 30 July.

We will be visiting three areas at VicRoads in Kew as follows:

- 2pm – 3pm Intelligent Engineering Technology– John Gaffney, Manager Network Optimisation & Con Stasinios Director, Network Design Services (in Theatre)
- 3pm – 3:30pm Traffic Management Centre Keith Weegberg Manager Real Time Operations, Journey Services (in TMC)
- 3:30 – 4pm Registration & Licensing, TBA (in Theatre)

It will also be possible to have lunch at the cafeteria beforehand at your own cost. For those of you who would like this I suggest we meet in the foyer at 1.00pm and go up as a group. We will send an email message to members as a reminder.

If you propose to come, please let Jim Webber know by Tuesday 24 July. His contact details are on the front page.

Visit to Bendigo Region – Wednesday 12 and Thursday 13 September

Jim Webber, Lindsay Clay and I met with VicRoads Acting Regional Manager, Brian Westley, to plan this trip. We propose to meet at the regional office at 11am. where we will have a briefing on current programs and issues and then join a bus to tour local projects including the new Ravenswood Interchange. If the weather is fine, we will probably have a light lunch on site. If it is ordinary, we will lunch at the office. The proposed program is shown below.

Wednesday 12 September

Item	Location
11am Welcome tea/coffee	Regional Office (61 Lansell St, East Bendigo) Leave cars at office
11:30 Current issues and works program	Regional Office
12.30 Board bus and travel to Ravenswood	
1pm Light lunch	Ravenswood rest area (Regional Office if poor weather)
2pm Tour of area around Bendigo	
1. Ravenswood project, 2. other VicRoads works or issues 3. \$30M Coliban Water project 4. Ceramet Solar at Bridgewater	1. Ravenswood project 2. Other VicRoads issues and works 3. Napier St Upgrade, Bendigo 4. 3pm Ceramet Solar, 11 Cemetery Rd, Bridgewater
7pm Dinner	National Hotel, 182 High St, Bendigo

Thursday 13 September

Item	Location
9:30m Thales, Finn St, Bendigo – Military vehicles manufacture	Take own cars
Vintage Talking Tram– round trip (if time available)	
Lunch at Art Gallery	42 View St, Bendigo
Those interested can tour Gallery after lunch	

If you wish to come please let Ted Barton know on 9802 3104 or edbarton@optusnet.com.au and also whether you would like a lift. We will send a reminder of this trip closer to the time to all those people who are on our email list.

What's been happening

Visit to the Sky Rail Project on Monday 7 May 2018

The Dandenong to Caulfield line contains three elevated rail sections, one of which we visited. This section covered the crossing of Koornang Road, Carnegie, Murrumbeena Road, Murrumbeena, and Poath Road Hughesdale.

This was our best ever attended visit with 43 members and friends gathering on a chilly morning at Poath Road near Hughesdale Station. Tim Griffin from the Level Crossing Removal Authority (LXRA) was our leader charged with the task of looking after us for the morning and everyone agreed that he did an excellent job. We boarded a bus at Hughesdale and then drove along the route, stopping at a strategic location near the Murrumbeena Station under construction, to Carnegie Station. We caught public transport back to the Rosstown Hotel at Hughesdale, where Tim gave us an excellent presentation on the project. We were not able to enter any of the site-works because of safety considerations.

Over the section we inspected the Sky Rail bridges were separated to allow the rail services to operate at ground level without significant interruption to services but where there is room, the two bridges merge to form a narrower facility.



Poath Road showing rail services operating while construction proceeds above. Photograph by Alan Mackinlay.

The rail over solution has been designed to minimise impact to local utilities. A major gas transmission main runs directly across the rail corridor next to Grange Road – meaning that this level crossing had to be removed by elevating the rail over the road. Relocating the gas main would have been incredibly disruptive to gas supply to a large part of Melbourne and would have taken many years to complete at significant cost.

An extended open cut trench solution would effectively cut off or redirect natural overland flood paths which impacts the viability of existing vegetation and risks flooding of the trench and tracks (and significantly disrupts rail services).

The presence of a high water table along the corridor presents significant engineering challenges. An extended open cut trench solution would cause temporary and possibly long-term changes to ground water conditions. Impacts of changing the groundwater conditions can result in settlement and potential damage to surrounding residential properties and vegetation.

Additionally, a high water table along the corridor means water needs to be removed to construct an extended open cut trench solution. This would present significant delays to construction and includes the need to pump out and treat contaminated groundwater.

An open cut trench design would also require the relocation of substantial existing in-ground utilities which cross the corridor, including the Murrumbeena water main, the 66kV transmission line at Poath Road, and telecommunications services at all road crossings along the 20km rail corridor.



The last beam being lowered into place at Poath Road using the straddle carrier.

One of the most innovative applications on the project was the use of straddle carriers to erect the beams.

Two gantry cranes, 30 metres high and 40 metres wide, were based next to Murrumbeena Station. These cranes assembled concrete segments into horizontal spans of up to 40 metres and also did all the heavy lifting of these spans onto the elevated rail deck.

The gantry cranes moved backwards and forwards on purpose-built tracks, which ran parallel to the existing train tracks. Each gantry crane could carry up to 230 tonnes. The gantry cranes placed the first eight spans on top of piers, which formed the first section of the elevated rail deck at Murrumbeena Station.

Once this section was complete, the cranes lifted spans onto the elevated rail deck. Then a straddle carrier picked up the beams, one at a time, and travelled between Caulfield and Hughesdale to lay them onto support piers to form the new elevated rail line.



The straddle carrier used a 94 metre long steel support beam that travelled ahead to ensure the straddle carrier was in the correct position to lower each span into place.

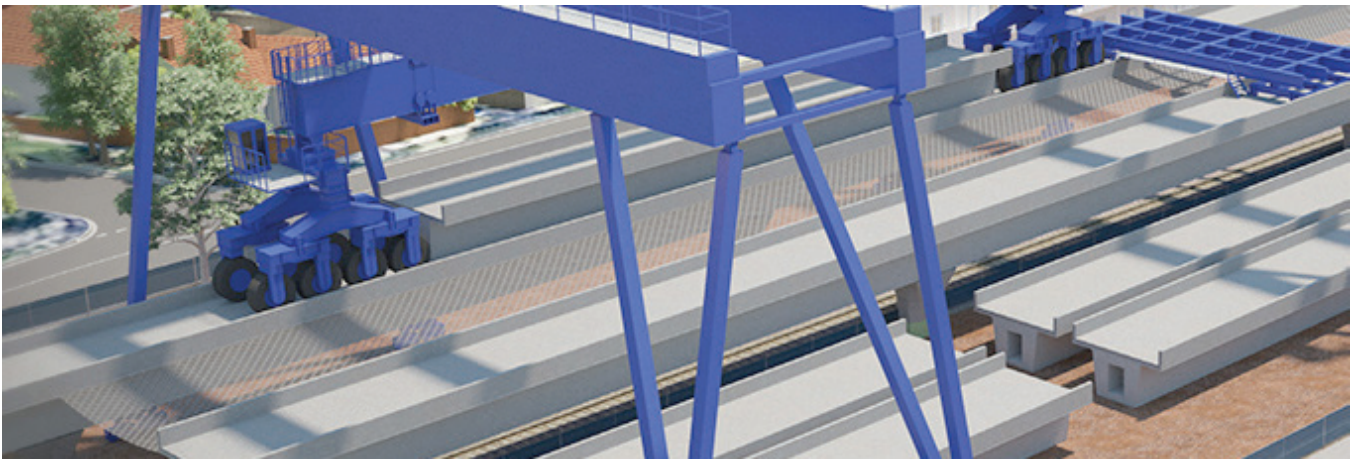
The beams were match cast off site and delivered to site as segments. They were then assembled in the correct order and prestressed together to form the beam.



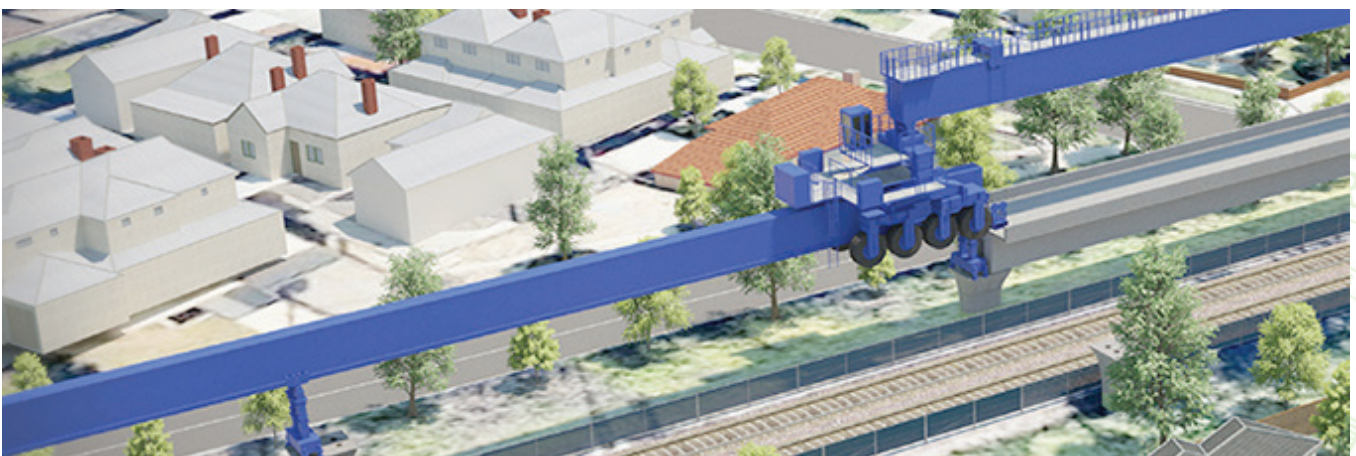
Assembling a beam of match cast segments to form a bridge beam.



Murrumbeena Station under construction.



Aerial view of beam assembly area with existing rail services running through the site beneath the protective mesh.



The straddle carrier in operation – supported from the bridge piers





View looking along the existing tracks with Hughesdale Station overhead Photographs by Alan Mackinlay

Another interesting aspect that attracted a lot of discussion was the use of the space under the bridges.

Final designs for a linear park and a 17-kilometre walking and cycling path occupying the space underneath a new elevated rail lines have been released. The park includes the sections under the suburban Cranbourne-Pakenham rail line. The proposed parkland involves the planting of more than 30,000 new trees and shrubs, with \$15 million set aside for the ongoing maintenance of the new park.

The pictures below are artistic impressions of the proposed facilities for the space that will be opened up as a result of elevating the railway line.



An RSL memorial and ceremonial space at Noble Park.



Linear park at Murrumbena



Parking areas, cycle and pedestrian paths and landscaping

News from our members

Norm Butler

Norm was the Explosives Officer in Benalla Division in prehistoric times and he recalls some stories about explosives in the Wild East of the CRB.

'In the days before mechanical rock-breakers, explosives were an every day item in road building and the ubiquitous 'Powder Monkey' produced some dramatic results.

My first contact with explosives was in Bairnsdale division in the 60s when my supervising Engineer, Leo Russell, said that he would like to go to the 'Mountain Maid' to observe a large tree being removed. "I haven't seen any explosives used for a while," he said.

The 'Mountain Maid' is one of those picturesquely name locations on the Great Alpine Road (then the Alpine Road) east of Omeo. The job was a 2-mile deviation running from 'Mountain Maid' to 'Powerline Gully'. I have no idea who the 'Mountain Maid' was but 'Powerline Gully' was so named because of the power lines that used to run from the Hydro Power Station on Jim and Jack Creek to supply Omeo. They were later dismantled when the diesel power plant took over later on.

The Alpine Road deviation at the 'Mountain Maid' required that the land be fenced (two top barbs, a plain wire, and wire netting) to keep out the rabbits and wild dogs. Unfortunately at the location of one of the corner posts for the fence there was an old majestic gum tree, about 8 or 10 feet through at the base and a clean trunk rising about 20 feet to a spreading top. Our task was to remove the obstacle.

Leo drove us in the Board's Holden from Bairnsdale to about 30 miles beyond Omeo where the CRB had the Anglers Rest Construction camp. There we met Overseer Jim Hendricks. Jim climbed aboard and directed us to the CRB explosive magazine where he picked up about 12 sticks of gelignite, half a gelignite case of prilled ammonium nitrate, some safety fuse and some detonators. We then drove back to the camp where Jim liberally doused the ammonium nitrate in distillate and put it in the boot of the car.

From Anglers Rest we then drove back into Omeo and up the Alpine Road to the 'Mountain Maid' (about 45 miles all up). The trip was uneventful, thankfully, considering the amount of explosives we had on board.

After a bit of a walk through the bush (mainly snow gums) we finally arrived at the offending tree where the dozer driver, Allan Mackisson, had tried again to push it over with no result. Allan and Jim conferred and concluded that the hollow in the tree meant that we only had one chance to blow it out. If a hollow tree is partly blown then the remnants are very hard to get out.

Jim got to work with a crowbar and worked a hole out below the tree. He then made up a primer of one stick of gelignite with a detonator and a short length of safety fuse. The primer was put down the hole, Jim lit the fuse and we retired to a safe distance. BOOM!! Lots of dirt came out and Jim had a big hole to put in the main charge.

Jim firstly put into the hole under the tree, three sticks of gelignite and then half the ammonium nitrate fuel oil (ANFO) mix. He then put in another three sticks of gelignite and a primer, then the rest of the ANFO and three more sticks to finish it off. He then backfilled the hole and lit the fuse.

Leo said to me "I think that we had better take cover" and we retreated about 30 yards up the hill and hid behind a large gum tree.

The fuse seemed to take an eternity to burn down, then "WHAM!!" there was an almighty noise and concussion. It felt as though someone had belted both my ears at the same time.

Then it was quiet.

"That's it", I thought and stepped out from behind our tree shelter. Suddenly it began to rain bits of gum tree and I ducked back for cover until all was quiet again.

When we walked back to the site of the big old tree, all that was left were some branches lying on the ground. The eight to ten foot thick trunk which went up at least 20 feet was totally gone – all that was left were shards of wood scattered over a large area. Jim and Allan were happy with a job well done, making sure to hit hollow trees hard, first go.

Leo was also very happy on the way back to Bairnsdale – he had had his explosive fix for another few years

There were a lot of lessons learnt by me that day about transport of explosives and overloading explosives for instance, but the main lesson was to be very wary of Powder Monkeys, no matter how good they say they are. They did not know at the time, but I am sure that they were leaders of the world in the Big Bang Theory.

Noel Osborne

I saw Noel at the last lunch at Shoppingtown after which he sent me the following note.

'G'day David

A good catch up with friends and "old colleagues" yesterday. I went on line to read the last newsletter before setting off for Doncaster as it seemed a bit early in the month and I was somewhat shocked to hear of the passing of Roger Plumeridge.

He and I started at the CRB on the same day in the same office in Benalla and went off to the CRB Regiment as budding recruits on the same day in 1966 as well. Reading the notice in the newsletter certainly made us recall a few stories with Roger and so this morning I went searching in a box of old photos and found the photo I was looking for. Yes he wore his new uniform better than I did. The young chap on the left is Cliff Lees from the Horsham office.

Cheers Noel'



Cliff Lees, Roger Plumeridge and Noel Osborne – 1966

John Wright's departure from the CRB

We are fortunate to be able to publish more of John's saga – which because of its length, I will have to split it into episodes over three or four newsletters. This is the first of his Odyssey.

'In June 1963 I was 23, working as a draftsman in Dandenong Division at Kew, living at home with my parents and engaged to be married in January the following year. Then, an event that was to transform our lives occurred.

My fiancé Sylvia discovered she was pregnant.

In today's world this news might be warmly received by all, but in 1963 it was a social catastrophe. Mum was scandalised, and Dad was sympathetic, telling me his parents had only just made it into wedlock with him. Sylvia's widowed Dad also gave his blessing. Few of our friends knew we were getting married, so our wedding was a very small occasion indeed.

My parents held a modest reception for us at their McKinnon home. Mum put on a buffet dinner of sandwiches, cold chicken and salads, but seriously underestimated the required quantity. Entering the kitchen a few moments after the dinner call, Sylvia and I discovered the guests had already denuded the table and we were lucky to manage a small sandwich. There was no shortage of beer (obviously, this had been Dad's area of responsibility) and the reception became progressively livelier as the alcohol worked its magic on mainly empty stomachs.

As neither of us had eaten much all day, we were happy to say farewell and depart, purchasing two large hamburgers – our wedding breakfast, on the way to our motel. The next day we set off for Surfer's Paradise in my much-repaired Fiat 600.

With a baby on the way, I knew we couldn't live on my current salary. I recalled a recent chat at work with a window cleaner who was earning £25 a week as an unskilled labourer. He was sceptical when I told him I was clearing only £16 per week. Renting even a modest flat would consume half my weekly wage, so our honeymoon was also aimed at finding a better-paying job.

In Brisbane, we met Robert E Lee, ex-CRB Traffic and Location, at the Department of Main Roads. The DMR had no vacancies but he knew a firm of consultants who needed an experienced designer. He phoned them, and they agreed to see us immediately. At their Auchenflower office about 2 km away, I was interviewed by a senior partner who seemed more taken with Sylvia than me. Within 2 weeks of our return home I was offered a position there as a design draftsman at £27 per week.



I accepted the job which was to commence in three weeks. Because I'd taken my honeymoon leave on credit I had to work two weeks without pay – finishing on a Friday before starting in Brisbane the following Monday. Our car wouldn't survive a second journey to Brisbane – much less get us there in two days, so our only option was travel by train at a cost of £48. With very little cash I was fortunate to be able to quickly sell my car for £50, which at least covered the train fares.

After a long journey, including a day wandering about Sydney waiting for the evening Brisbane Limited, we arrived at South Brisbane on Sunday afternoon. In a slight drizzle, we lugged our suitcases (no wheeled luggage in those days) across the old Victoria Bridge, with its wrought iron lacework (now long-gone) and booked into a guest house near Roma Street. While I was at work the next day, Sylvia would try to find us a fully furnished flat close by.

Commencing work in Brisbane

I was briefed on the firm's business role and introduced to Sid, my supervisor. The firm had offices on the Gold Coast, Townsville and Port Moresby. They had designed much of the sub-divisional development between Coolangatta and Southport and were heavily involved in similar work on the Sunshine Coast. They also provided engineering services to many remote rural shires. A major client was the Department of Main Roads, and I was told I would be working on their projects.

The firm's three office buildings in Auchenflower included a very old, elevated Queenslander with a great view over the Brisbane River and accessed by a long staircase at the front. I started work with four other draftsmen, one of whom told me I would need to comply with the firm's drafting template, in which all drafting work had to look the same, irrespective of who had carried out the work.

There was an odd quietness about the other draftsmen. They were polite and provided answers to my questions, but otherwise had very little to say or do with me. In the days that followed I found this quite unsettling. There was no "Welcome to our team" or "How are you finding Brisbane". It would be 18 months before I discovered that these draftsmen had decided to 'send me to Coventry' because management had appointed me instead of a previous employee they all knew and liked.

Like many old timber buildings in Brisbane, the Queenslander was prone to termite attack. Months after I arrived I discovered this walking from the washroom to the toilet. Suddenly, the floor gave way and it was only my outstretched arms coming to rest on what remained of it that saved me from plunging 12 feet to the concrete ground floor below. Nobody was game to pull me out of the hole – lest we all plunged to our doom below. Eventually, somebody dragged a tall step ladder into the room below and I was able to descend in safety.

Our flat

By the end of my first day, Sylvia had secured a furnished flat less than 5 minutes' walk away. It was one of five flats in a huge old Queenslander, sited high on a hill overlooking Brisbane and facing Dunmore Terrace. It was surrounded by tropical plants and was very cosy. When we visited the site in 1979 the entire building was gone. It had been replaced by a tall, multi-story block of units. However, part of the original walkway connecting to Coronation Drive remained.

We loved Brisbane, which, unlike Melbourne was always warm. It was full of lovely flowering and scented tropical trees, including Frangipanis and Flame Trees and many beautiful, old buildings from its early days. The city had yet to acquire ugly riverside freeways and high-rise canyons and possessed a delightful, languid atmosphere – living up to its name as the "branch office city". Amazingly, Brisbane still operated steam trains on its suburban lines, and from our kitchen we often saw their smoke and steam as they passed through the valley near Milton.



On 22 November 1963 I was listening to the radio in our kitchen when I heard that President Kennedy had been assassinated in Dallas. It was as if a friend had been murdered. Because the media so constantly reported the minutiae of the Kennedy's daily lives we felt we knew him as well as any of our friends. While this level of personal coverage is common now, it wasn't then. Also, Kennedy himself had offered so much hope for a brighter future for the world after all of the cold war gloom; it was as if a beloved king had died. We knew nothing about his marital indiscretions with Marilyn Monroe or his father's dealings with organised crime.

My work

I began preparing plans for 40 miles of Commonwealth-funded Beef Road immediately south of Normanton in the Gulf of Carpentaria. The Federal Government feared Indonesia and/or China would invade Australia and had decided to upgrade both the Normanton-Cloncurry and the Normanton – Julia Creek Roads from gravel tracks to high-speed, all-weather sealed roads capable of carrying heavy tank transporters. Ostensibly, the new roads were to facilitate increased exports of beef cattle.

The DMR provided a thick data book containing survey information, such as levels, bearings and distances, descriptions of the underlying soil, recommended pavement depth and composition, and vegetation and waterways on either side of the road. I was to plot this up on paper sheets and design the vertical geometry. The horizontal alignment had already been fixed by the DMR.

The firm used terms unfamiliar to me, such as "surface formation" – the way outback roads are formed by excavating wide, shallow trenches on both sides and using the excavated material to raise the paved area above the surrounding countryside. For some reason, an open earth drain was called a "water table", which in Victoria referred to the subterranean groundwater level.



The road south to Cloncurry mainly traversed vast flat, black soil plains, which became impassable in the wet. I was told building a bridge over the Flinders River near Normanton would be pointless because the entire region became an inland sea during the monsoon floods. The maximum flood level was 40 feet above road level at the current floodway crossing.

The design process for this remote road involved considerations that were new to me. I had to assess the form of almost every culvert to decide whether it should be a concrete pipe or a 'nestable' Armco steel pipe. The decision was based on how much it would cost to purchase and transport the components to the culvert site. Concrete pipes were cheaper to buy but were heavy and expensive to transport. They came 650 km by rail from a plant in Townsville to Julia Creek and were then trucked from there up to 440 km to the site. Nestable Armco steel culvert sections, that were bolted together on site to form a large pipe, were expensive to buy but were much lighter and cheaper to transport – especially by road. They generally came by ship from Brisbane to Normanton and were trucked south.

When the design was completed for the first 42-mile section from Normanton to the turnoff to Julia Creek, all the A1 sized paper plans were sitting on a bench in the Queenslander, following a final check before being forwarded to the DMR. That night, a possum in the ceiling unleashed a huge stream of pee directly onto the plans, badly staining them. They stank but were still readable.

The following section of beef road crossed a vast, swampy area known as The Dismals and was a real design challenge because of the large number of creek crossings and concrete floodways involved. The work was urgent and the DMR agreed to pay my overtime. A major challenge was to design a downstream flow retarding structure that would prevent high water velocities through the culverts from creating massive downstream erosion on the black soil stream beds. In some cases, huge crown unit culverts had been undermined and toppled into the downstream hole. I spent time in the company library researching reservoir spillway designs before coming up with an appropriate design, which was eventually incorporated into the roadworks. When Sylvia and I visited the Dismals in 2003 I was pleased to discover that all the culverts I designed were still in place and operational.

We rarely saw the senior Partner, but his associate would occasionally appear in the design office and buttonhole some poor draftsman with questions about what he was doing. There were no draftswomen. He was a short guy with thick glasses and I was wisely cautioned by a workmate not to stand up when he came around, as I was at least as tall as him – even when I was sitting at my desk. When the State and Brisbane council elections came around, he would remind the staff about which political party they should be voting for. The consulting business was absolutely cut-throat and was strongly dependent upon governments who were prepared to outsource the design of major government works.

During the Dismals project I was introduced to computerised road design for a section of the project that involved reasonably heavy earthworks. The newly installed IBM 360 computer at the Queensland University was used to calculate mass-haul diagrams and plot longitudinal and cross sections on fan-fold tracing paper. I was kept busy marking up hundreds of computer cards with a soft pencil to digitise the natural surface and design details. These cards were then fed through a special machine that punched holes on them so that they could be fed through the IBM360. It was cutting-edge stuff at the time and I felt quite privileged to be involved.

There was also an Investment Club, which was initiated by a city stockbroking firm. I sat in on the group's meetings after work once a month. Some members of the group bought shares in and followed the fortunes of the Mt Isa Mining Company. The shares steadily rose in value and were looking really promising until an incident arose in which a miner, Pat Mackie led workers in a major strike against proposed pay conditions, after which the shares plunged considerably.

To be continued.



News from VicRoads

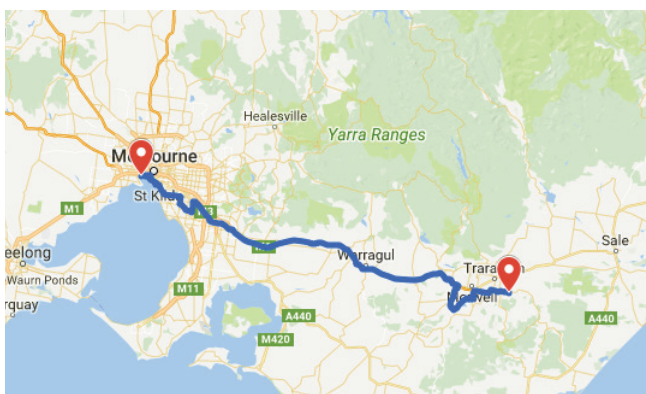
Superload Shift on 26 May 2018

A 558-tonne load was successfully transported from Webb Dock in Port Melbourne to Loy Yang B in the Latrobe Valley. The delivery of the stator (a component of an electrical generator) was a complex and time-consuming operation due to its size and weight. The load was 7.3 metres wide, 5metres high, 108 metres long and weighed 558 tonnes.

Its journey took three days travelling at 15-20 km per hour. It caused delays to other traffic along the route but Emergency Services were given priority to pass the load, as required.

On Saturday 26th the first leg of the journey commenced from Port Melbourne at 10 pm and arrived at Officer at 5am. The convoy travelled through Melbourne's south-east via Beaconsfield Parade, Nepean Hwy, North Rd, and Dingley Bypass, and then along the Princes Hwy through Dandenong and Fountain Gate. It resumed again on Sunday night leaving Officer at 10 o'clock and travelled to Yarragon along the Princes Highway. The final leg again commenced at 10 pm and the load travelled further East along the highway to the Yinnar-Driffield Road and then Hazelwood Road to the Loy Yang B power station.

Yarra Trams and Public Transport Victoria had to provide tram/bus replacement services at locations where the load affected those services.



Diverting traffic in real time

With Victoria's long list of events running throughout the year, the Planned Disruptions, Permit and Events and Real Time Signal Operations teams work hard to ensure the community is provided with up-to-date information during these periods to help them plan their journeys.

Once an event is approved by the Permit and Events team, the community is informed through real time updates and Variable Message Signs of any alternate routes, whilst the Real Time Signal Operations team modify the operation of the traffic signals to accommodate increased traffic along these roads. VicRoads handles more than 10 planned works and events each week. It is critical to take into account other roadworks happening before informing the community about alternate routes due to an event.

Leading up to the recent 'Wings for Life' charity event in May, VicRoads expected a high number of people would be participating in this global run and the need to keep traffic moving around this popular event was imperative.

The team spent weeks planning for travel safety and managing congestion along Toorak Road and Monash Freeway and on top of that, had to factor in resurfacing works happening at the same time on Warrigal Road. By finding suitable roads to accommodate drivers and manually intervening in the signal operation across the affected road network, the team were able to minimise disruption to the community.

School holiday periods are among some of the busiest times for the teams, where regions and projects take the opportunity to carry out significant road works such as during the January summer construction blitz.

Vale

Kerras Burke

Kerras died recently at the age of 92. His career spanned the MMBW, the CRB, and the RTA.

I have received many tributes to him all of which comment on him as a team player and his calmness and decency. Maurice Burley wrote about him as follows:

'I worked for Kerras for two or three years in the early 1970s at the MMBW then later at the CRB after the merger. He had an understanding of traffic and technology that was well ahead of his time, including traffic signal linking as well as freeway ramp metering.

If you have a copy of the VicRoads Ramp Metering Handbook (available on the website), you will notice in an attachment to Appendix B (page 129), there is a copy of paper about an early application of ramp metering on the old South Eastern Fwy at Gibdon St that he presented to a computer conference in 1972.'

Ted Barton and Brian Negus provided the following details about Kerras' career:

'Kerras came to the Traffic Engineering Division in the CRB with two other senior engineers (Shaun Cribbin and Brian Negus) along with a number of other traffic and transport engineers at the time of the transfer of the MMBW Highway's functions to the then Country Roads Board in July 1974. At that time Kerras was the most experienced and knowledgeable Traffic Signals engineer we had and that group formed the nucleus of the (ultimately) large traffic signal systems group that evolved in the Traffic Engineering Division. Prior to coming to the CRB, Kerras had been much involved with the signalisation work at the St Kilda Junction project (amongst other works) being undertaken by the MMBW.

In those early years at the Traffic Engineering Division Kerras, Brian and Shaun were deeply involved with traffic signal design at the main interchanges on the Westgate Freeway west of the bridge, especially at Williamstown Road where we were trialling new diamond Interchange signalling utilising overlapping phases. The team was also instrumental in the "ramp metering" signals installed at the Burnley Street Ramp onto the then South Eastern Freeway (the first ramp metering system we had seen). This was prior to the introduction of micro-computer traffic signal controllers and Kerras was very experienced with the design and operation of these old electro-mechanical type controllers.

Kerras was always an excellent 'team member' and contributed considerably to the practical side of discussions and in the development of the newly evolving systems centred around the transition from the electro-mechanical type controllers to the micro-processor types. These were a necessary part of our adoption of the 'SCATS' technology, from NSW in the 'SCRAM' Program for Melbourne", that was commenced in the CRB and became a central core of the traffic signal coordination programs implemented by the Road Traffic Authority.'

John Gaffney visited Kerras in 2014 and provided the following photograph of he and Kerras.



John Gaffney and Kerras in 2014

He wrote:

'Attached are a few photos I took in my iphone when Maurice Burley and I visited him in Oct 2014. This was a very memorable experience as we wanted to thank Kerras for his pioneering work and the technical paper he published in 1971 on Australia's first ramp meter at the Computer Society of Australia conference.

Suffice to say Kerras' mind was still very sharp – he remembered the work he had done introducing Australia's first ramp meter at Gibdon St. on the now Monash Freeway before the freeway was eventually upgraded and the meter was removed. He remembered how he configured the old signal controllers and had an excellent grasp of traffic engineering and theory – sadly these are skills which now substantially lost in today's generation.'

We extend our sympathies to Kerras' family.

Trivia and didactic whimsies

Reservoirs and Pipes

Naturally I include a lot of information about roads and road transport in our newsletter, so I thought it was appropriate to look at other infrastructure for a change. The story below is about Melbourne's water supply. It was written by Professor Don Garden, OAM – a member of the Australian Heritage Council. It was published in the newsletter of the Kew Historical Society. The Society and Don have kindly given their consent to publish it here.

The supply of potable water to Australian towns and cities has been one of the great challenges in our dry country. Melbourne is fortunate in having mountain ranges to our north and north-east where rain is relatively reliable and there are valleys that can be dammed to capture the run-off.

Melbourne's first European settlers (like their Indigenous predecessors) could draw upon the fresh water in the Yarra River that stretched from about Elizabeth Street upstream and past Kew. However, the influx of colonists in the 1840s, and especially in the goldrush 1850s, brought a human population far greater than the land had ever been required to support. The Yarra and its creeks, springs, rainwater tanks and water carriers could supply only so much fresh water, especially as seepage from privies, animal waste, industrial waste and town rubbish trickled into the river. Not surprisingly, intestinal diseases such as dysentery were endemic and there was constant fear of cholera.

Various solutions were proposed from the 1840s, including a pipeline from Dight's Falls near Kew, but by 1852 it was generally accepted that to supply Melbourne with water it would need to be brought by gravitation from well beyond Melbourne's fringe. Investigators looked at the southern face of Macedon Ranges, at Mount Disappointment, and at the Plenty Marshlands in the upper regions of Plenty River near the present town of Whittlesea. It was this last that was chosen.

James Blackburn, an ex-convict engineer, designed the project and supervised its construction. The scheme cut a drainage channel through the southern end of the marshlands to divert the water from flowing into the Plenty River and redirect it into a new reservoir, Yan Yean. Work began in 1853 and the first piped water reached Melbourne in December 1857, at first to standpipes and then gradually reticulated to private properties.



A photograph of Yan Yean Reservoir taken in 1859.

No consideration was given in those times to the environmental damage to ecosystems caused by the destruction of the wetlands, nor to the Plenty River which no longer lived up to its name once its natural flow was diverted. The Plenty was reduced to a chain of muddy ponds except during the height of winter and spring rains.

This was an early major example of the impact of Melbourne's ecological footprint as we have truncated, diverted or dammed nearly all the water systems in Melbourne's vicinity.

Yan Yean was the first large dam to be constructed in Australia and without it Melbourne would have ground to a halt in the late 1850s. However, it by no means solved Melbourne's water problems as the quality and pressure were often poor, and the system was plagued by technical problems over the next several decades, especially in summer months.

Yan Yean water was considered a mixed blessing because of these problems – and because it was expensive to build the reticulation infrastructure and to purchase the water it would supply. Nevertheless, there was substantial competition between Melbourne's emerging suburbs to be connected. Distribution in the immediate vicinity of the city was not a major technical problem, but to suburbs to the south and east there were two extra challenges. First, pipelines had to be built across the river, and second there was often insufficient pressure in the system to provide a supply to the higher areas in these undulating suburbs.

The residents of Kew waited, probably impatiently, and the Borough Council periodically pestered the government to build the pipelines. In the meantime residents had to rely on rainwater tanks or the inconvenience of bringing water from a pump on the Yarra at Hawthorn Bridge (Victoria Street), or the expense of having it carried.

An El Nino in 1865-66 resulted in a significant drought in south-eastern Australia, and this may have given motivation to the Government agreeing in January 1865 to extend a pipe across the Hawthorn Bridge and erect a standpipe to provide Yan Yean water. The benefits to Kew were limited, but finally in October 1865 it was announced that water would be piped from the bridge to a standpipe at Barnard's corner at the junction of High Street and Cotham Road.

Strangely, there seem to be no accounts of the opening of the standpipe in Kew, and the date is uncertain.

While quality and pressure issues plagued the system for many years, especially in the elevated areas, gradually piped water was extended through Kew and its homes and businesses were reticulated.'



Yan Yean Reservoir, 1877, photographed by Fred Kruger.

Nothing much has changed

If you don't read the newspaper you are uninformed.
If you do read the newspaper you are misinformed.

Mark Twain

A Heart-warming Tale

A husband and wife who worked in a circus had been trying to start a family but had no success. In the end they decided to go to an adoption agency.

The social worker raised doubts about their suitability. The couple then produced photos of their 15-metre motor home, which was spotlessly clean and well maintained. It was even equipped with a beautiful nursery.

The social worker then raised concerns about the education a child would receive while in the couple's care. "We've arranged for a full-time tutor who will teach the child all the usual subjects along with French, Mandarin, and computer skills."

Then the social worker expressed concern about a child being raised in a circus environment. "Our nanny will be a certified expert in pediatric care, welfare, and diet.

The social worker was finally satisfied and asked, "What age of child are you hoping to adopt?"

"It doesn't really matter... as long as the kid fits in the cannon."

Not quite a baker's dozen

Two men walked into a bakery and one of them – as quick as a flash – stole three small cakes and put them in his pocket. He said to his mate, "See how smart I am? You could never beat that." His mate rose to the challenge. He said to the baker, "If you give me a cake, I will show you a magic trick." The baker agreed and handed over a cake and the customer ate it.

The customer then asked for another one and, although the baker was suspicious, he handed over another only to see it too eaten by the customer. The customer said, "I need another one to complete the trick." The baker was getting very angry by this stage but he handed a third cake over which immediately disappeared.

The baker screamed, "OK. Where is your magic trick?"

The fellow reached into his friend's pocket and pulled out three cakes.

A Well-run Business

I was having an overnight stay at a hotel once. I took my iPad down to the bar to read the paper. I sat down at the bar and I asked the bartender, 'What's the wi-fi password?'

He said, 'You need to buy a drink first.'

I said, 'Okay, I'll have a beer.'

He said 'We have Wild Yak on tap.'

'Sure. How much is that?'

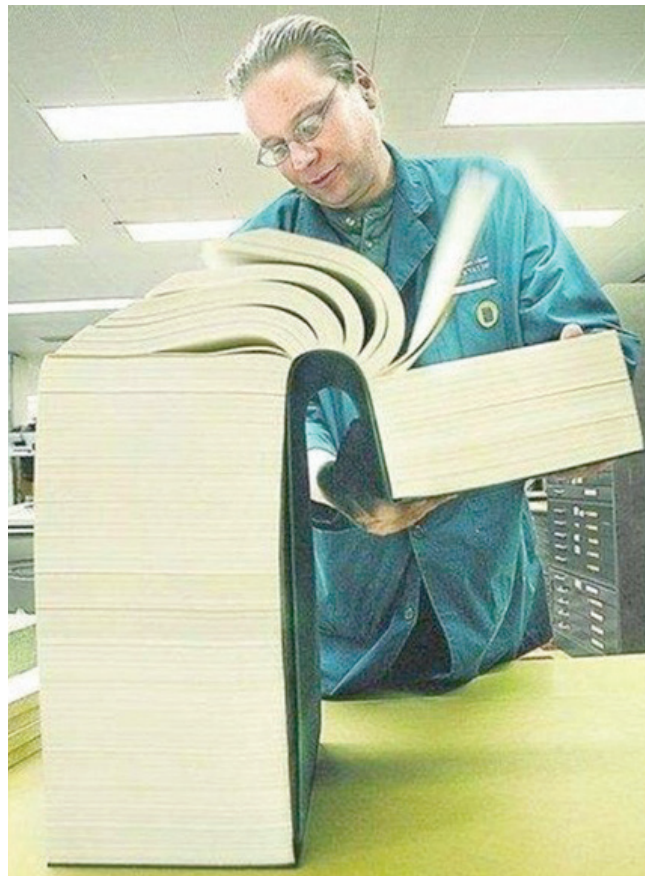
'\$8.00.'

I said. 'Here you are. OK now, what's the wi-fi password?'

The bartender said: ' "youneedtobuyadrinkfirst"; no spaces and all lowercase.'

Guidelines for comparing package deals of electricity suppliers

Choice has just released new guidelines to assist customers in comparing deals between the various managing companies.





Construction of the Kingsway Off Ramp



Yan Yean Reservoir, 1877, photographed by Fred Kruger.



Construction of the East-bound Carriageway

DEDUTR1126/381 06.18 Authorised and published by VicRoads, 60 Denmark Street, Kew, Victoria, 3101.