

VicRoads Association

Newsletter No 187



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,

You might be surprised to receive this newsletter so soon after the previous one but we always publish a shorter one in November – mainly to draw your attention to our Christmas lunch scheduled for Monday 7 December. This is our most popular function and we invite you and your partner or friends to join in the fun of catching up with your colleagues in the tradition of Yuletide.

The location and arrangements for the lunch will be the same as for the last two years. Drinks will commence at 12 noon for lunch being served at 12.30 p.m. The cost will again be \$35.00 per head and we require prepayment either by cheque or bank transfer. If you propose to come, please fill out the acceptance form attached to the flyer enclosed with this newsletter, and post it – together with your cheque – to Jim Webber, Secretary VicRoads Association, c/o Asha Pask, 60 Denmark Street Kew, Vic 3101. Cheques should be made out to VicRoads Association. Direct bank transfers should be made to VicRoads Association BSB 083323, Account Number 170934017 and you should include your name as a reference – so that we know who has made the payment. If you choose to pay by transfer, we would appreciate it if you ring or e-mail Jim just to let him know that you are coming. Please respond by Wednesday 2nd December to allow sufficient time for catering arrangements.

Please also note that lunch will be again served on the mezzanine floor of the cafeteria (first floor, north east wing).

Put this date in your diary straight away.

David Jellie - Editor



Dates For Your Diary

DATE	TIME	EVENT	
November	Monday 9 Thursday 12	12 noon 11 am	Occasional lunch, Shoppingtown Hotel Visit to Desalination Plant, Wonthaggi
December	Monday 7	12 noon	Christmas lunch at Head Office
February	Monday 8, 2016 Friday 26, 2016	12 noon	Occasional lunch, Shoppingtown Hotel Annual Golf Day at Green Acres Golf Club

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

Our tentative program for 2016 is shown below. Some of the highlights include:

- Due to the popularity of the dinner and drinks at Waverley RSL we have decided to have two dinners rather than one.
- The regional visit in 2016 will be to Geelong. We propose to travel by train for this trip.
- We have scheduled four visits this year – three with a transport flavour and the other relating to recycling.
- We have changed the AGM to a Monday rather than Thursday and rescheduled it to start at 11.30 a.m. rather than 11 a.m. It is also slightly later than usual because of booking difficulties.

DATE	TIME	EVENT	
March	Monday 21	11.30 am	AGM, Theatrette – 12 noon buffet lunch in the cafeteria
April	Monday 11	12 noon	Occasional Lunch, Shoppingtown Hotel
May	Monday 9 Thursday 26	TBA 6.30 pm	Visit to Level Crossing Removal Authority Drinks and dinner at Waverley RSL
June	Monday 20	12 noon	Occasional Lunch, Shoppingtown Hotel
July	Thursday 21	TBA	Visit to Vizy Recycling Centre, Heidelberg
August	Monday 8	12 noon	Occasional Lunch, Shoppingtown Hotel
September	Wed 14 and Thur 15		Delegation to visit Geelong Regional Office
October	Monday 10 Thursday 13 Thursday 29	12 noon 6.30 pm 2 noon	Occasional Lunch, Shoppingtown Hotel Drinks and dinner at Waverley RSL Visit to VicRoads western metropolitan projects
November	Monday 7 Thursday 24	12 noon TBA	Occasional Lunch, Shoppingtown Hotel Visit to Melbourne Metro Rail Authority
December	Monday 5	12 noon	Christmas lunch at Head Office
February	Monday 6, 2017	12 noon	Occasional lunch, Shoppingtown Hotel

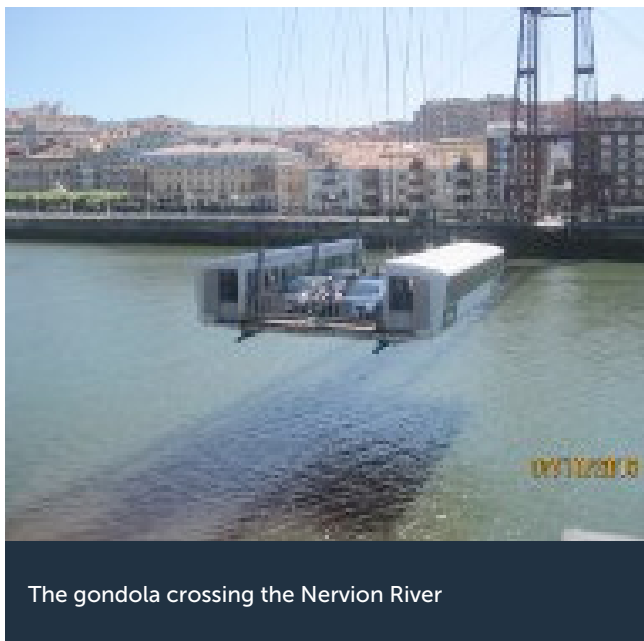
News From Our Members

Jim Webber on two European bridges - Vizcaya Bridge and the Millau Viaduct

Many of you are no doubt aware that Jim has been arranging contemporary architecture tours to Europe, USA, Japan and China since 2000. Initially the tours were led by Adjunct Professor Dimity Reed and, since 2010, by Sydney architect Malcolm Carver. Jim visited these two bridges in July 2015. His next tours are to Prague, Graz, Venice, Florence, Rome and Athens in October 2016; and Pittsburgh, Washington, New York, Tampa, New Orleans, Havana and Cancun in April 2017. He writes:

"These are two remarkable but completely different bridges within 700km of each other. The Vizcaya Transporter Bridge is in northern Spain and the Millau Viaduct is in southern France. The Vizcaya Bridge, designed by Basque architect Alberto de Palacio in conjunction with the French engineer Ferdinand Arnodin, was opened in 1893. The Millau Viaduct, designed by British architect Norman Foster and French structural engineer Michel Virlogeux, was opened to traffic in 2004.

The Vizcaya Bridge (Bizkaia Bridge in Basque) has a gondola, 15 metres long and 10 metres wide, which carries passengers and vehicles over the mouth of Nervion River, downstream from Bilbao, the largest city in the Basque country. The gondola, which is strung by cables from a crossbeam 50 metres above the river, operates 24/7. The crossbeam was destroyed during the Spanish Civil War, but was rebuilt in 1941. The bridge was declared a World Heritage Site by UNESCO in 2006.



The gondola crossing the Nervion River

The spectacular Guggenheim Museum, designed by the Canadian-born American architect Frank Gehry, is located adjacent to the Nervion River in upstream Bilbao.

Fewer than two dozen transporter bridges were built around the world, the Vizcaya Bridge being the first. Sadly many have been demolished; just twelve continue to be used today.

The 2.46km Millau Viaduct resulted from a brilliant collaboration between the client (French Ministry of Transport), financiers, architect and engineers. The Viaduct, which took 38 months to build, is a cable-stayed 4 lane bridge that spans the valley of the River Tam near Millau. It is the tallest bridge in the world, the deck being 270 metres above the ground. The Eiffel Tower could almost fit under the deck as it is only 30 metres higher. The height of the deck is nearly 3 times the height of the West Gate Bridge towers! The pylons are another 87 metres above the deck. There are 8 spans - one of Foster's initiatives was to have a steel box girder rather than a concrete deck, resulting in a more slender deck, reduced cost and greater spans. The dimensions are just staggering - there are 8 spans (including six at 342 metres).

Traffic volumes are not particularly high for such an iconic and expensive (400 million Euros) bridge - 4,500 vpd in the winter, rising to 50,000 vpd in summer. Tolls are very reasonable - 34 Euros for trucks and 7 Euros for cars (9 Euros in summer).

If you ever go there, allow about 3- 4 hours for a guided tour and a drive over the viaduct. A guided tour is a must they have a brilliant exhibition centre where guides explain the planning, design and construction process, aided





by several elements of the bridge and the construction process at ground level. Equally important is to travel over the bridge - the slight Foster-inspired curve (20,000 metres radius) was another brilliant initiative as the bridge opens up as you cross, not unlike the effect of the sweeping curve on the Royal Crescent in Bath in England.

On our many overseas tours there are several structures that stand out; Santiago Calatrava's Milwaukee Art Museum (my absolute No.1, comparable to Sydney's Opera House), Frank Lloyd Wright's Fallingwater near Pittsburgh and the Wax Factory near Chicago, Frank Gehry's Guggenheim Museums in Bilbao and New York and Gensler's Shanghai Centre Tower. The two bridges are right up there - definitely two structures for the bucket list.

Editor's note: I wrote about the Millau Viaduct in Newsletter 158 September 2010. I think the method of construction is worth repeating. The piers were first built to deck level together with intermediate temporary piers. The steel superstructure (the bridge deck itself) was built at ground surface at each end and jacked into position using hydraulic rams that moved the deck about 600 mm every 4 minutes - from both sides. As the bridge deck was being slid into its final position, it was supported on both the final piers and the temporary piers.

Only after the roadway was completely slid out in to the final position, were the steel masts erected on top of the deck (that is to say, over the permanent concrete piers). To be clear, the masts on top are not continuous elements of the pylons underneath, although they appear to be. The masts are separate structural elements that were built on land, wheeled out on the deck only after the piers and superstructure were complete, and then raised into position. The construction of the massive cable-stay system between the masts and deck then followed. Finally, the temporary piers were demolished.

What's Coming Up

Occasional Lunches – Shoppingtown Hotel – Monday 9 November and Monday 8 February 2016

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.

Annual Golf Day – Friday 26 February 2016

Our third annual golf afternoon will be at Green Acres Golf Club in Kew. Please contact Jim Webber on 9817 4182 or 0412 064 527 or jimwebber@optusnet.com.au if you are interested.



VALE

I have been informed that Olly O'Flynn died recently. In the early days of his career Olly worked for the CRB in the Materials Division Chemistry Laboratory before joining Albion Quarries which was later taken over by Boral.

In the 1970s Olly was Boral's Victorian specialist on quality management at their quarries and asphalt plants. A big issue for Boral at the time was that the CRB specifications for basaltic crushed rock knocked out acceptance of materials from a new quarry Boral was developing at Deer Park. The basalt failed to meet the specification because of unacceptable high quantities of secondary minerals which potentially could quickly weather into clays. Based on observations and experience the company was sure the rock was sound (i.e. durable) and could be used in crushed rock pavement construction and in asphalt. Olly was

tireless in his pursuit of a review of the matter by the CRB. Following research undertaken in the Board's Materials Division by Geologist Barry Fielding the rock was found to be sound, specifications modified and the use of Deer Park quarry materials allowed.

Some other issues that Olly interacted with the CRB on during the 1970s were the introduction of nuclear density meters for compaction testing of pavement materials and the adoption of statistically procedures for the assessment of pavement and earthworks compaction. Olly made a significant contribution to the management of pavement material supply and road construction standards in his working life and always presented his arguments in a considered manner and with a smile on his face.

NEWS FROM VICROADS

Future level crossing removal projects

The Government has doubled the level crossing removal work packages at Burke Road in Glen Iris, Main Road in St Albans, North Road in Ormond, and Blackburn Road in Blackburn. The expanded packages include level crossing removals at:

- Furlong Road, St Albans (in addition to Main Road, St Albans)
- Centre Road, Bentleigh, and McKinnon Road, McKinnon (in addition to North Road, Ormond)
- Heatherdale Road, Mitcham (in addition to Blackburn Road, Blackburn).

The sites at McKinnon Road, Centre Road, Furlong Road and Heatherdale Road are being combined with existing packages to drive down costs, reduce disruption to rail and road users by combining line closures, and accelerate the delivery of the overall level crossing removal program.

The first package of works was awarded in May 2015 and includes the projects at North Road in Ormond, Centre Road in Bentleigh and McKinnon Road in McKinnon.

At each location, the rail line will be lowered under the road, with Ormond, Bentleigh, McKinnon and Gardiner stations rebuilt to provide street level access down to the platforms. Construction on all three projects started in mid- 2015.

At Burke Road in Glen Iris, where significant community consultation has already taken place, major construction will start in mid 2015. The contract for the next four level crossing removals, covering Main Road and Furlong Road in St Albans, Heatherdale Road in Mitcham, and Blackburn Road in Blackburn, will be announced shortly.

In March/April 2015, VicRoads invited interested community members to share their views via an online

survey to help them understand the thoughts and experiences of people who work, live and use these level crossings and their immediate surrounds. This information was subsequently provided to Government and is being used to consider potential designs.

There will be additional opportunity for the community to have input into these projects, particularly in relation to urban design features. The Level Crossing Removal Authority (LXRA) is also working with State Government bodies including VicRoads and Public Transport Victoria, along with local councils and public transport operators.



Resources & recycling

One of VicRoads' priorities is to maximise the level of recycled products used during road maintenance and construction, while still maintaining the quality of the roads constructed.

Sustainable Procurement Guidelines have been developed to promote the uptake of recycled materials or those materials with a reduced eco-footprint, such as water, waste, energy and greenhouse and/or reduced production of hazardous chemicals.

VicRoads has implemented the use of sustainable procurement to ensure value for money is achieved for specific sustainability outcomes. Sustainability attributes, where suitable are valued for pavement options as well as other sustainability options such as:

- use of drainage infrastructure with lower environmental footprint
- use of renewable energy options such as solar or wind
- operational energy initiatives such as LED lighting, or power regulating devices that improve the efficiency of the lighting
- use of geopolymer concrete.




VicRoads already supports the use of recycled materials in the construction and maintenance of the road network. This includes recycled asphalt product, the recycling of crushed rock and concrete, crushed brick and recycled rubber in road sealing.

Currently, a number of recycled materials or more sustainable options are used. These include but are not limited to:

- reclaimed asphalt from road works for use in pavement mixes
- using crushed waste construction materials such as brick and concrete as an alternative to aggregate in pavement construction
- utilising alternative binder components such as pine oil which provides greenhouse benefits
- use of warm mix asphalt
- using recycled glass fines as a replacement for sand in some pavement mixes and drainage applications
- using recycled plastic road furniture such as bollards and roadside markers
- using recycled plastic or geopolymer concrete pipes instead of concrete pipes for longitudinal drainage
- use of supplementary cementitious materials such as flyash or blast furnace slag in cement production.

The supply of raw material for use in construction, including road construction is seen as a finite resource. In the future, this resource will diminish in its quality and availability and as a result will increase in cost. Therefore the inclusion of recycled materials is likely to increase rapidly as technology and acceptance becomes more widespread.





TRIVIA AND DIDACTIC WHIMSIES

Isn't nature wonderful?

I've seen many remarkable nature photographs over the years but this photo of a nesting Falcon

in an old tree is perhaps the most remarkable nature shot that I've ever seen. I hope you enjoy it as much as I did. Nature is truly breath-taking! Please share it with your older friends, since the younger ones probably have never seen a falcon, and wouldn't recognise it.

Transport in Melbourne

You will note that in our proposed program for next year we will be visiting the Level Crossing Removal Authority and the Melbourne Metro Rail Authority. I thought that it might be a good idea to start us thinking about the future of transport in Melbourne. I want to say from the outset that both private and public transport are integral to the efficiency, safety and enjoyment of our city and our planners should show no bias towards either. This also applies equally to regional Victoria.

In June 2013 I wrote a letter to the Age as follows:

"Victoria's long-term failure to link land and social planning with road and public transport planning is an indictment on our political system - the major parties seek to distinguish themselves by reinventing policies when they come to office. Both parties would serve the state better by developing an agreed integrated strategy based on expert advice and evidence that guides development in a rational, bipartisan framework.

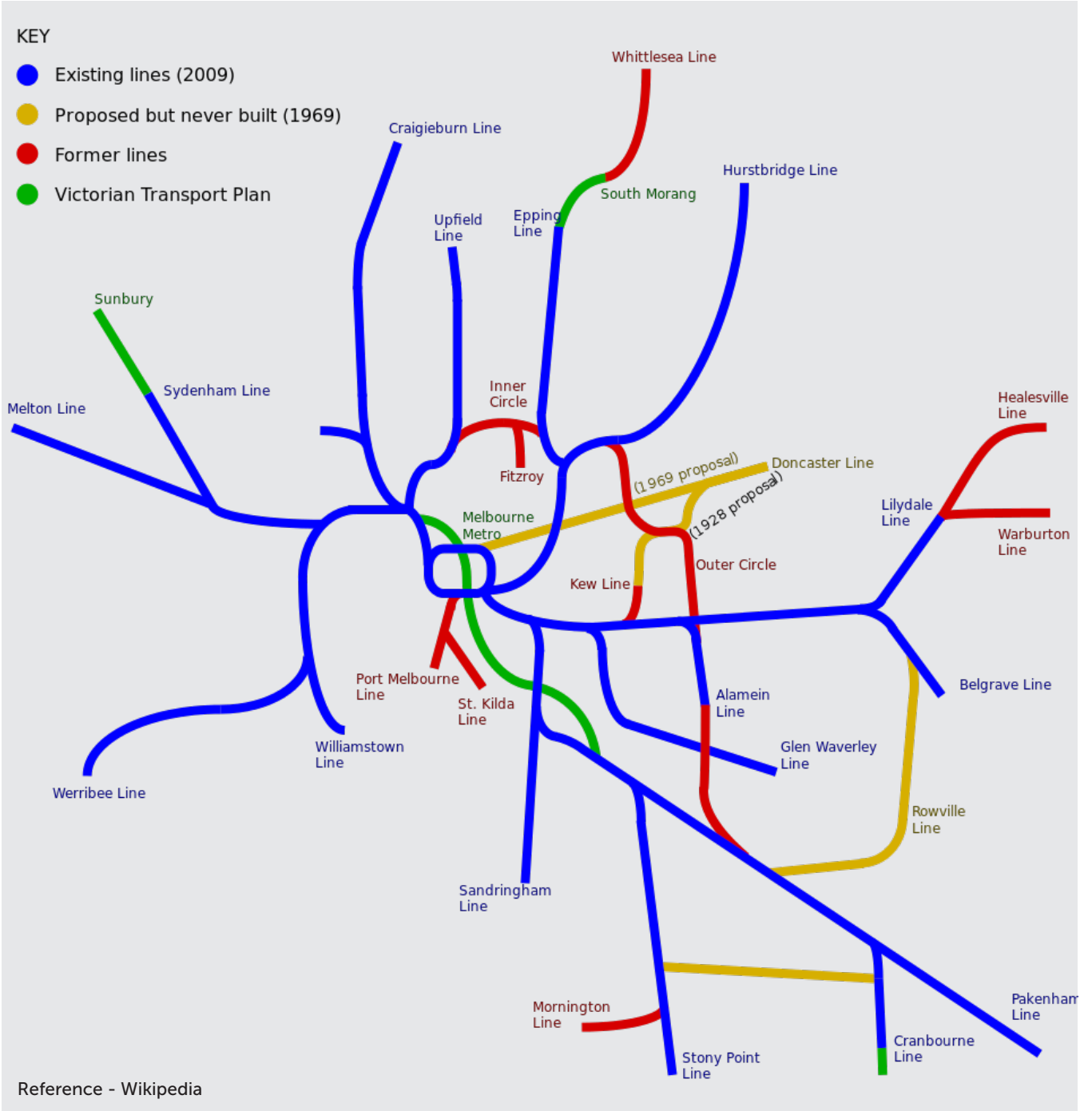
The plan to link the Eastern Freeway to CityLink seems to be about point-scoring rather than one based on evidence that it provides the best value for money ("West Gate stretched to the limit", 3/6). I have been involved in transportation projects in developing countries. Agencies such as the World Bank, the Asian Development Bank and AusAID won't provide funding unless there is an integrated national transportation plan. Why can't we do that at home?"


Ever since the last election the debate about public versus private transport has raged. The previous government pinned its colours to the mast of

private transport with its full-blooded support for the East-West Link Project - for which it threw consultation and collaboration to the wind and tried to push the project through by ignoring proper process and transparency. If you recall the Bailleau Government had an election platform of public transport - one of its policies was to build the Doncaster Rail even though I can't recall any plan justifying it. When Premier Napthine took over this policy was completely overturned by the East - West Link Project and, in my view, the electorate was held to ransom by the threat that it would cost us a lot of money if the Napthine Government lost. The Federal Government of the day supported by the Victorian Government. It was prepared to partly fund the project - on the grounds that it was a road project - while refusing to support any public transport investments. It is history now that the Victorian Government of the day lost this gamble and we have had to pay (about \$400 million I think) for this political exercise - with nothing to show for it. So much for entrusting planning to the politicians.

Our new Government has completely repudiated the East - West Link and has now upped the program for level crossing elimination, a program which VicRoads has been pursuing for many years under the restraints of budget allocations from Treasury. It proposes to eliminate 50% of the crossings in the first two terms of government. The elimination of level crossings (by grade separation of trains and road transport) will certainly improve private transport by eliminating delays that currently exist at level crossings. However there is also a benefit to road-based public transport such as trams and buses. There is also a benefit to rail transport in that trains will not have to slow down (as they do now) to negotiate some crossings - especially where there are tram lines.







In Melbourne there are 170 level crossings on the passenger train network and 106 of these have bus routes (with a handful including tram routes). The Government's stated intention is to eliminate 50 of these crossings. Our train network was largely built in the 19th century. At that time we had one of the largest urban rail networks in the world servicing an area twice the size of London but with only a fraction of London's population. At this time London was generally recognized as the world's most populous city with about 6.5 million people - followed by New York (4.2 million), Paris (3.3 million), Berlin, Chicago, Vienna, Tokyo, St Petersburg, Manchester and Philadelphia (Varying from, 2.7 to 1.4 million). Melbourne's population in 1900 was about 480,000.

Melbourne's rail system has reduced over the years. Some lines such as the Outer Circle linking Oakleigh to the Heidelberg Line at Fairfield have been demolished as has the Kew line which terminated at Kew Station where VicRoads' head office now stands. There has been some renewal on the outer limits where population growth has been occurring. Today Melbourne's rail network is 372 km long compared to London's which is 402 km. Our rail network has suffered from a lack of maintenance for more than a century and struggles to cope with a level of service expected for a city the size of Melbourne. The diagram below shows Melbourne's rail network including former and planned lines.

In the development of our rail network, there was a mixture of elevating lines and stations on embankments (such as Auburn and Glenferrie and more recently, Canterbury) or lowering them to enable roads and tramways to cross them unimpeded. Mostly this approach has left pleasant urban design legacies in the more affluent and leafier suburbs in Melbourne. In the 50s and 60s a number of road over rail grade separations were done with negative results on local suburban centres exacerbating the disconnection between communities caused by surface railways (such as

Graham Street, Port Melbourne and Warrigal Road, Oakleigh. Lessons have been learnt in relation to road overpasses as in recent years the railway is always lowered to ensure that the urban fabric- particularly shopping- is maintained.

Another aspect of Melbourne's rail-based heritage is our 245 km tram network - arguably one of the largest in the world. The electrified system we enjoy today evolved from the original horse drawn system and later the cable tramway. Many cities around the world (and in Australia) dismantled their tram systems in the 1950s but Melbourne retained most of its lines.

Both of our rail-based public transport systems are hampered by the exponential growth in car ownership and population growth resulting in traffic congestion which has severely impacted tram services and slowed train services due to the preponderance of level crossings. Unhappily our tram service - once a beacon of pride - is now one of the world's slowest and least efficient.

In my view, this situation is not fully understood by the public. There has been limited discourse and few - if any - technical studies. Under the level crossing elimination program there will be about 30 new stations constructed due to the grade separations, many of which will become transfer nodes between trains, buses and trams. These nodes are vitally important to our mass transit network.

How about that for a few thought starters? I would be delighted to receive correspondence on these issues so that by the time we visit these organizations, we will have a better appreciation of them.

Stroke – the moment that can change everything

I recently gave a donation to the National Stroke Foundation to help develop education and resources for health professionals to support the delivery of best practice stroke care and reduce the evidence-practice gap. Every 10 minutes someone in Australia has a stroke. It can happen to babies, children, fit men and women, young parents and old codgers like us. Nobody can prepare for how stroke will change their lives.

Stroke happens when blood supply to your brain is interrupted and your brain cells are deprived of the oxygen and nutrients it needs. Your brain is divided into several areas that control different functions such as movement, senses, language and thinking. When a stroke interrupts blood and oxygen flow to these parts, brain cells start to die and functions can be affected.

There are several factors which determine how a stroke could affect you and how well you might recover afterwards. These include the type of stroke, the area of the brain that is damaged, how much brain tissue is damaged and your state of health before the stroke.

Stroke survivors report major life changes that include:

- Waking up one morning and being permanently paralysed on one side of your body
- Being able to understand words, but unable to speak or write
- Having to re-learn how to perform the simplest of everyday activities such as eating, dressing, going to the toilet and bathing
- Having your life and the lives of your family and friends rearranged
- Having to change - or even abandon - your plans for the future

One in six people will suffer a stroke in their lifetime. They are people who are someone's sister, brother, wife, husband, child, parent, best friend or colleague. Behind the statistics there are real lives.

There are some risk factors for stroke – such as age, family history, and gender – which you can't do much about. But there are others you can control. Keeping your blood pressure in a healthy range, lowering 'bad' cholesterol levels and not smoking can all help reduce your risk of having a stroke. Healthy eating, regular exercise and moderating your alcohol intake all help too.

If you think you or someone near you is having a stroke, act fast. Do not hesitate to call 000 – even if you are not sure a stroke has occurred. The minutes and even hours immediately after a stroke is treated, the better chance there is of recovery. While you wait for the ambulance:

- If the person is conscious, lay them down on their side with their head slightly raised and supported.
- Do not give them anything to eat or drink. Loosen any restrictive clothing that could cause breathing difficulties. If weakness is obvious in any limb, support it and avoid pulling on it when moving the person.
- If they are unconscious, check their breathing and pulse and put them on their side. If they do not have a pulse or are not breathing start CPR straight away.
- If you are unsure how to perform CPR the ambulance call taker will give instructions over the phone.

The National Stroke Foundation recommends the F.A.S.T. test as an easy way to remember the most common signs of stroke. Using the F.A.S.T. test involves asking these simple questions:

- Face - Check their face. Has their mouth drooped?
- Arms - Can they lift both arms?
- Speech - Is their speech slurred? Do they understand you?
- Time Is critical.

If you see any of these signs call 000 straight away.



Road works during the Depression

During the Depression, road works were carried out using primitive equipment. Earthworks were formed with horse teams drawing scoops, graders, planers and drags. Sideboards were set to line and level with boning rods and string lines to define the edges of the pavement, the gravel spread by hand and shaped to camber with a template.

Patrolmen worked with a horse and dray on a 10 mile length of road. The allowance for the horse depended on the price of chaff, which was shown on the wages sheet. Some bituminous surfacing was done by hand, the tar or bitumen being applied by pouring pots and screenings spread by shovel from heaps on the side of the road.

Government funds were provided for Unemployment Relief. On the Mount Hotham Road, a camp was erected on the roadside using bush poles, sawn timber, corrugated iron and hessian, the men being billeted in tents. Many

of the men sent up from Melbourne were unfit or unaccustomed to manual labour and only stayed until payday. Others hardened to the conditions and work progressed quite well. The presence of copperhead snakes enlivened operations.

The supervising engineer, Frank Docking, had the task of surveying the section of road under construction during the day and preparing the plans for the overseers at night. He had a Triumph motorbike for transport from which he parted company on a curve one frosty morning.



Mid 1930s – Men of the East Gippsland roads at 'home' near Bairnsdale



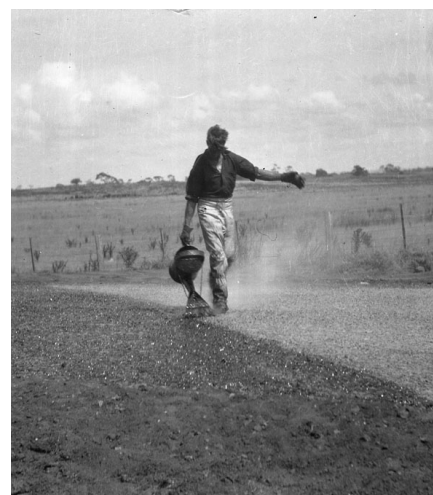
Circa 1936 – A patrolman's outfit for adverse weather conditions: dragging on the Serpentine Road in East Loddon Shire.



1937 – Building the cutting at Rosedale on the Princes Highway East – nearing the end of the horse era



1938 – Campsite for unemployment relief road workers on the Noojee to Erica Road in Gippsland



1938 – hand pouring seal on the Calder Highway

When Insults Had Class...

Although I want you all to remain nice, I want to share a few more insults with you.

"I've just learned about his illness. Let's hope it's nothing trivial."
- Irvin S. Cobb.

"He is not only dull himself; he is the cause of dullness in others."
- Samuel Johnson.

"He is simply a shiver looking for a spine to run up." - Paul Keating.

"In order to avoid being called a flirt, she always yielded easily."
- Charles, Count Talleyrand.

"He loves nature in spite of what it did to him." - Forrest Tucker.

"Why do you sit there looking like an envelope without any address on it?"
- Mark Twain.

"His mother should have thrown him away and kept the stork." - Mae West.

"Some cause happiness wherever they go; others, whenever they go."
- Oscar Wilde.

"He uses statistics as a drunken man uses lamp-posts ... for support rather than illumination." - Andrew Lang.

"He has Van Gogh's ear for music."
- Billy Wilder.

"I've had a perfectly wonderful evening. But I'm afraid this wasn't it."
- Groucho Marx.

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