

## Sustainable Manly

*"In a strategy that echoes the City of Sydney's plans for the central business district, Manly Council wants to replace cars with bicycles, build a new pedestrian plaza, use more energy-efficient lighting, banish cars from lanes and even install light rail. The mayor, Jean Hay, said: 'We are asking the community to imagine a Manly that revitalises our laneways and streets surrounding The Corso; is pedestrian and bicycle friendly; incorporates sustainable, energy-efficient buildings and streetscape design; makes shopping and socialising more enjoyable for locals and visitors and is laid out so cars don't rule the environment – yet [where] parking is easy'. ... Parking fees would pay for [an] underground car park over 50 years, Cr Hay said. Also floated is the idea of a tram on a three-kilometre loop around Manly's heart to encourage locals to shop without using cars, although the council would need to recover its estimated \$4 million cost through government grants. The plan also proposes numerous traffic changes, including closing some roads and introducing shared zones on others where pedestrians and cars travelling less than 10km/h use the same road together."*

**Ref: Matthew Moore, SMH 3/5/11**

## And Also ...

*"Territorians are speaking out against changes to Northern Territory vehicle numberplates. After 32 years of the current numbers-only format, the Motor Vehicle Registry is out of available combinations. From now on, plates will be changed to have four letters and two numbers total, starting with two letters, then two numbers, then another two letters. ... Local four-wheel-drive enthusiast Jol Fleming says the decision is un-Territorian. 'Mate there's devastation. I mean the Territory's gone down the gurgler big time', he said. 'We've got letters, we've got to read? Come on. I'd much prefer to see the old numbers back. It's a bit more Territorian'."*

**Ref: ABC Rural, 20/5/11**

## Victoria's Post-Election Transport

*"High among the reasons for the Coalition's victory in last November's state election was voter discontent with the Brumby government's record in provision of community services, especially public transport. As observers noted on election night, the collapse in Labor's support could be traced along the Frankston and Pakenham rail lines. After years of neglect of public transport by both sides of politics, the Coalition's plan for a new authority to take responsibility for planning and co-ordinating the system recognised that a fundamentally new approach was needed. Since the election, little has been heard about the new central authority from the Baillieu government ... It must be hoped that the proposed authority will not gradually fade from the agenda, as the Brumby government's successive transport plans did ... rectifying the years of neglect will be no small task."*



**"Frankly, trams aren't the only things travelling 15% slower."**

*"A study by the Australian Conservation Foundation has revealed that, measured as a percentage of the state's economic output, Victoria's spending on rail and light rail has been the lowest of any mainland state during the past decade. Only 0.11% of gross state product was spent on railways, bridges and harbours, but three times as much was spent on roads. This was despite the fact that use of public transport soared during the same period, largely because of higher petrol prices. Increases in petrol prices will continue, and the pressures on the transport system will increase along with them. Reversing priorities that stem from the Bolte government's decisions in the 1960s to build freeways to connect Melbourne is a daunting prospect, but the Baillieu government does not have the option of further delay. It has inherited from its predecessor one major project that will help to alleviate the problem, the \$5 billion regional rail link, which will give V/Line services their own route into Melbourne. And, the government plans to build a rail line to Doncaster, the first new line in a metropolitan network that has essentially remained unchanged since 1930. These are welcome beginnings, but Victoria still awaits the substantial reform it was promised in November."*

**Ref: Editorial, The Age, 28/4/11**

## Slow Trams, by Default

*"Melbourne's trams are slowing to a crawl, stuck in traffic as car numbers on the state's roads soar by 100,000 a year, according to a report written by Yarra Trams and handed to the Baillieu government days after it won office. With the number of people catching the tram growing by 50% over the past decade, there has been a 'rapid deterioration of travel speed', the report says – with trams now travelling 15% slower than in 1999. Melbourne has the world's longest tram network – 250 kilometres – but it is also one of the slowest, with an average speed of just 16km/h as trams spend more than 17% of their journey time stopped at traffic lights. If Melbourne followed the boldest international examples, tram travel times would be slashed by up to 30%, the Tram Priority report says.*

*"Melburnians have realised later than people in other cities that priority should be given to public transport because the existing road system has exceeded its capacity, the report says, making three key recommendations to the government:*

- Give trams on the CBD's tram 'spine', Swanston Street, instant priority at all traffic lights.
- Give all routes travelling east-west across the CBD more 'green time' at intersections.
- Ensure trams get a clearer run at Melbourne's 690 intersections where trams compete with cars at traffic lights.



Photo: Craig Abraham, The Age, 21/4/11

*"If nothing substantial is done to improve the operational environment for trams, car use will continue to grow at the current recent rate of approximately 2% per annum", the report says. 'The present situation for trams is likely to worsen significantly'. Yarra Trams has been operated since 2009 by Keolis, a French transport giant that runs train, tram and bus systems in 12 countries around the world.*

*"The report, released to The Age by the Department of Transport after a Freedom of Information request, shows Melbourne compares poorly to several international cities, including Zurich and London, that aggressively push public transport priority ahead of private cars. The report says steps must be taken to remove cars from in front of trams where traffic has reached 'saturation point' – including banning cars from turning right in front of trams. Tram travellers yesterday said they spent too long stuck in traffic. 'We spend half an hour a day at traffic lights', said one commuter, Kathryn Tran, who regularly catches the 86 tram from Thornbury to the CBD. Public Transport Users Association secretary Tony Morton said Yarra Trams had hit on the right idea – it was now up to the Baillieu government's long-promised public transport authority to make a difference. 'We have to decide what's going to be most effective at moving as many people as possible, without gross inefficiencies', he said."*

**Ref: Clay Lucas, The Age, 21/4/11**



**Average tram travel speeds**  
Source: VicRoads; Ref: The Age

*"Well, this is nothing new to anyone who catches trams during peak hour on a regular basis. Mind you, it's not just the red lights. It's the cars parked along the side of main roads."*

*"The city and its citizens should realize that the streets are for multiple modes of transport, not for the storage of cars."*

*"I think the headline should read: 'Cars with One Person and Parked Cars along Major Streets Slowing Down Melbourne'."*

*"When there are 100,000 trams, they can go first."*

*"When I was studying in Cologne back in the late 80s there was a big program to put the trams in the inner city and suburbs underground. They now have a tram system that runs both above and below ground. Cars do not obstruct trams, trams don't obstruct cars and travel times fell significantly making it an attractive option. Of course this requires planning and investment, none of which is evident in this great state."*

**Ref: Readers' Comments, The Age, 21/4/11**

## Road Diets (Part 1)

*"A world expert on road diets, Dan Burden [says]: 'a road diet is anytime you take any lane out of a road'. Of course the knee-jerk reaction is likely to be along the lines of, 'How can removing lanes improve my neighbourhood and not cause traffic backups?' But in nearly every case, the opposite is true. Every road user benefits when road diets go in. They're good for drivers: making roadways safer, more efficient, and providing turning lanes so through traffic can proceed without waiting. They're good for cyclists: a significant percentage of road diets identify enough room to include bike lanes and make cars more predictable on the road. They're good for pedestrians: fewer lanes of traffic to cross means less chaos and some road diets install either centre waiting islands at the corners. Perhaps most important: road diets are cheap, highly-effective and can be done relatively quickly."*

**Ref: Streetfilms, MBA Road Diet, 12/4/11**

[www.streetfilms.org/mba-road-diet/#more-49209](http://www.streetfilms.org/mba-road-diet/#more-49209)

## Leading by Example

*"Both sides of politics are dragging the chain when it comes to choosing fuel-efficient hybrid vehicles. ... According to News Ltd papers just seven out of 104 Labor MPs drive hybrid cars, while the Liberals can only produce one MP drives a hybrid. The information, obtained under Freedom of Information (FOI), shows that Prime Minister Julia Gillard chooses a 3.6-litre Holden Calais VE and the Opposition Leader Tony Abbott drives a husky four-litre Ford Territory, which emits 232 grams of carbon per kilometre driven. However, it may not be all their fault if they choose gas guzzlers over the eco-friendly hybrids. 'Hybrids aren't on the list of approved vehicles and you have to seek special permission to get one', Greens senator Christine Milne said."*

**Ref: AAP, SMH, 18/5/11**

*"And former PM Kevin Rudd's campaign to roll out the eco-friendly Toyota Prius as part of the Commonwealth car fleet has also been dumped – with just one such vehicle still operating. ... Environment Minister Tony Burke drives a Ford Territory. ... Only the Greens have opted for the hybrid vehicles."*

**Ref: Daily Telegraph, 18/5/11**

*"Resources Minister Martin Ferguson ... conceded he did not drive [a hybrid] vehicle but said ministers should be able to choose whatever car they wished. 'I'll drive the car of my choice', he told reporters in Sydney on Wednesday."*

**Ref: AAP, SBS, 18/5/11**

**Should politicians be forced to drive environmentally friendly cars?**

Yes: 73%

No: 27%

Votes: 2,920

**Ref: Telegraph Poll, 18/5/11**

## And Also ...

*"When [Victorian MLA] Louise Asher claims the grand prix 'an outstanding and resounding success', I guess that means it has again cost Victorian taxpayers millions."*

**Ref: Simon Bryce, The Age, 11/5/11**

## Meantime in Germany

*"Germany has outlined a bold plan to rev up the number of all-electric cars on its roads from almost none to one million in under 10 years, helping its automakers shift into the key sector. ... Chancellor Angela Merkel dreams of boosting their number to a million by 2020, and possibly six million by 2030. Germany must become 'a market leader' in the new technology, Merkel told a press conference on Monday. ... The government would also ensure that 10 per cent of its hiring or buying of cars would involve electric cars, she added."*

**Ref: AAP, 9News, 17/5/11**



## More on Newcastle

*"I'd like to make a comment as a 13 year resident of Newcastle Upon Tyne (UK) from 1989-2002. It's interesting to read the article {#200} on the T&W Metro. Since the mid 00s when the fare structure was revised and mostly increased, partly to pay for the extension to Sunderland, ridership dropped significantly as the price was out of reach of many locals. Fare dodging also increased, which is the main reason that barriers are being re-installed at the main stations in city-centres.*

*"To many locals the system has become a bit of a joke, overpriced and unreliable. The trains running between Sunderland and Newcastle are slower than the main-line services they replaced, partly due to additional stations, partly because of restrictions in the Metro trains themselves. Other extensions were planned but never built. Some of the areas the metro passes through are the most deprived in the UK so locals don't bother using it. I hope this gives a balanced picture. Overall though the system is far better in my opinion than any-thing in place in other (much larger) UK conurbations, and definitely anything in Australia. By which I am thinking of the ability to travel to an airport at no extra fare from the regular service (not available in Sydney, Brisbane or Melbourne)."*

**Russell Adams, 18/5/11**

## More on Plastic Roads

*"Re the article on plastic roads in Newsletter #200 (congratulations on reaching this landmark, by the way!), Bass Street in Box Hill was resurfaced some years ago using a plastic compound derived from plastic bottles and gives every appearance of lasting well. The City of Whitehorse could no doubt fill you in on the detail."*

**Ref: Peter Cairney, 19/5/11**

## Problems with Idling Aircraft Engines

*"Researchers have discovered that drops of oil created by idling aircraft engines can over time turn into tiny particles that can easily penetrate the lungs and brain. The surprising discovery has been detailed in the latest edition of the Atmospheric Chemistry and Physics Journal. In the first study of its kind, experts from the Carnegie Mellon University in Pittsburgh, US, collected pollution from an idling commercial plane as it operated at different loads. When the jet operated at full power the emissions were composed of mainly solid particles, however when it idled on the runway they took on a different form – microscopic droplets. 'The magnitude and composition of these emissions strongly depend on engine load, with much higher emissions at low engine loads', the study said.*

*"However when the exhaust was exposed to sunlight in a 'smog chamber' a chemical reaction took place that saw the formation of toxic particles from the interaction between the oil and gases. It was found that sunlight can generate 35 times more particles than were originally emitted from the jet's engine and 10 times what had typically been predicted.*

*"These particles can include compounds such as benzene and toluene, which are known to impact health. 'Smog chamber experiments indicate that photo-oxidation of aircraft emissions produces significant amounts of secondary PM (particulate matter), which, under typical summertime conditions, exceed the primary emissions within minutes of the exhaust leaving the engine'. ... The impact of sunlight on the larger particles emitted from jets at higher engine loads was not as significant."*

**Ref: Kate Schneider, News.com.au, 13/5/11**



**Sunlight and Jet Exhaust**

Photo: Getty Images

## Bus Rapid Transit (Part 4)

*"In all countries, buses currently represent an important share of urban public transport but they are often increasingly caught in congestion which leads to slow journey times, unreliability, increasing costs, dissatisfied customers, declining market share and a deteriorating image. Moderate bus priority schemes, new buses and marketing efforts cannot compensate the basic perception of customers that buses do not meet their needs. BRT systems (i.e. 'a metro with high capacity buses' concept) can and should be adapted to each context; they are sustainable solution that can help:*

- *Being a reliable option focused on its customers (public transport users);*
- *Providing bus mass rapid systems complementary to metro and tram systems;*
- *Greatly improving the operating speed, reliability and image of the bus and*
- *Reducing operating costs.*

*"A BRT system is not the only solution but is one reliable and viable option that can be considered by State Governments, because of its advantages. A BRT Corridor has similar train & tram capacities, in some cases 15,000-40,000 passengers per hour per direction and investment cost is \$5-20 millions per kilometre, just a fraction of train or tram systems. Construction and implementation time can be 5 times less than building a rail system. One important advantage is its flexibility. This mode of transport can be expanded to rail at a future date. This situation is under consideration in Mexico City and Bogota, Colombia. This high capacity bus solution is not competing against other public transport modes but against cars and pollution."*

**Domingo Peña, 18/2/10**



**Transmilenio BRT, Bogota, Colombia**

Photo: Volvo Bus Corporation



**Optibus. Leon Guanajuato, Mexico**

Photo: Wikipedia

Service Type	Explanation
Principal mass transit service	BRT can serve as the principal mass transit technology for a city.
Metro extension	BRT can provide an economical means to extend metro services to outer areas.
Mass transit in-fill	BRT can provide an economical means of adding mass transit lines within a city that already has some rail-based corridors.
Feeder service	BRT can provide a feeder service connecting with existing metro corridors.
Future conversion	BRT can serve as an economical entry into a mass transit system while also allowing for the future conversion to rail.

### Potential Bus Rapid Transit (BRT) roles within an integrated Mass Transit Strategy

## 2030 Melbourne Rail Map

Does the rail map at right look familiar? Its Melbourne as it could (or should) be by 2030. Developed by Colin Mitchell (and others), this is an enhancement of concept first published in Mx on February 24, 2011. There are similar maps by other designers – showing coincidental thinking – which Alan Davis, The Melbourne Urbanist, calls ‘fantasy rail maps’. And they are in a sense, in so much as good planning has to start somewhere. The real question though is why hasn’t our Public Transport Department developed and published – at least by proxy – such maps for substantial new tram and train services, and then gone on to reserve the corridors? VicRoads, and its predecessor organisations, have never been shy about planning and building bits of freeway that the RACV can advocate should be connected!

So I think these maps are great, even if they are imperfect and by their nature never complete. We would be interested in your comments. I’ve attached a PDF of Colin’s map so you can enlarge it and toggle between it and the text below. (Online readers can request the map by email).

The map of course is based on Melbourne’s existing rail network and shows bus, tram, and country rail connections. As well as extending the rail network we’ve added extra connections for trams and ferries (which we will have well before 2030 – won’t we?)

To the existing network, Colin has added the much talked about extensions to Doncaster and Rowville – and here we are mindful that any extensions at the edges will mean necessary improvements in the central core.

Then there are the logical extensions:

- Geelong – Torquay
- Melton – Bacchus Marsh
- Sunbury – Riddles Creek
- Essendon – Melbourne Airport
- Craigieburn – Wandong
- Upfield – Coolaroo
- Epping – Whittlesea
- Doncaster – Donvale
- Lilydale – Healesville
- Glen Waverly – Ferntree Gully
- Cranbourne – Cranbourne East
- Frankston – Mornington Peninsula

And as the two peninsulas develop:

- Mornington Peninsula – Sorrento
- Geelong – Queenscliff

Plus we added some stations on the existing network: Southland; and Cremorne (South Richmond) to service busy trip generators.

Colin’s key design points are:

- Trains from Newport can run to Southern Cross via a new line and new stations at West Gate, Port Melbourne and Southbank.
- Trains from Coolaroo can run via Upfield, **Royal Park**, Melbourne Uni, through the city, to Domain, St Kilda and Ripponlea to Caulfield.





- Likewise, trains from Donvale would run via Doncaster, **North Kew, Clifton Hill, Royal Park**, Melbourne Uni, through the city, to Domain, Albert Park, St Kilda and Ripponlea to Caulfield.
- Trains starting at Williamstown can service an 'outer circle' via Newport, Showgrounds, **Royal Park, Clifton Hill, North Kew**, East Camberwell. Alamein, Chadstone, Oakleigh, Kingston, Cheltenham, Black Rock and Sandringham. (A ferry service between Sandringham and Williamstown would complete the outer rail loop.)

The key new inter-connecting stations are in **bold** text but there are also many other valuable inter-connecting rail services with the existing rail network. Connecting rail-ferry services are shown as red dots (based on a 2009 study). Connecting tram-rail services are shown as green dots, with the expectation that by 2030 the major activity centres of Geelong, Doncaster, Box Hill, Frankston, Dandenong, Broadmeadows and Lilydale will, like Footscray, all have trams. See if you can spot the other new tram services such as Caroline Springs – Watergardens; Cranbourne East – Merinda Park; or Box Hill – Doncaster.

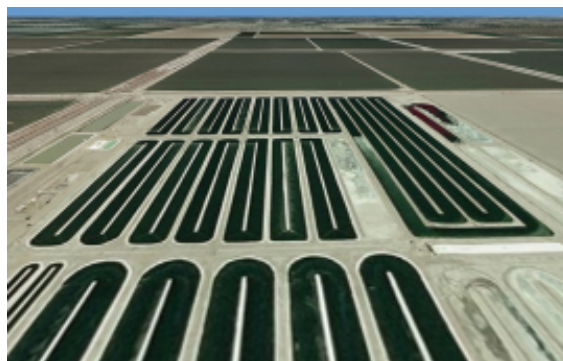
**Stephen Ingrouille, 20/5/11**

## Algae for Oil in the US

*"The U.S. has enough land in the right climate to produce home-grown algae oil that would replace a significant amount of foreign oil imported for transportation use – without endangering its water supply. The Gulf Coast region, the South-eastern seaboard, and the Great Lakes areas are ideally suited to grow algae in outdoor freshwater ponds with minimal water usage. ... Biofuel made from refined algae oils, while showing promise, is still in the early stages of development. In addition to the usual scalability questions put to the developers of any new technology, algae developers have been under even closer scrutiny because a lot of water is required to grow it. Pacific Northwest National Laboratory (PNNL) researchers found that if you compare algae and corn hectare to hectare, algae grown in outdoor ponds annually produces 80 times more oil than corn. Theoretically, they said, the U.S. has enough available land to produce '48t of the current transportation oil imports' with algae. However, that level of production across the U.S. would require too much water – an average of 350 gallons of water to grow and produce one gallon of algae oil.*

*"Instead, the PNNL researchers, led by hydrologist Mark Wigmosta, recommend producing algae only in regions of the country with both the right land and high humidity. They found that if algae are grown in a climate already high in humidity, much less water is needed. The group also identified the regions mentioned above as the best places to grow it. This would still give the U.S. the ability to produce 21 billion gallons of algal oil a year; roughly 17% of the amount of oil that was imported [into the US] for transportation in 2008."*

**Ref: Candace Lombardi, CNet News, 14/4/11**



**Raceway algae ponds in Southern California**  
Photo: Pacific Northwest National Laboratory/QuickBird

## More on Problems with Biodiesel

In #199 we had an article on a service station in Sydney where the biodiesel failed the government air quality tests. Whilst the source of that fuel is unclear we understand that it was made from tallow. Another company supplies biodiesel made from soybeans. Soydiesel® is currently available at some retail sites in Queensland and NSW. It is expected more retail availability will evolve as the benefits of Soydiesel use becomes more apparent. Here is an extract from the Soydiesel fact sheet:

### **"Exhaust Emission Reductions:**

- 95% less carcinogenic compounds.
- 100% elimination of sulphur dioxide.
- 37% less un-burnt hydro-carbons.
- 46% less carbon monoxide.
- 68% less particulate matter."

**Ref: Soydiesel Factsheet, National Biodiesel, 2011**

*"National Biodiesel have been supplying us firstly with soy based B20 biodiesel and since February 2011, with B100 soy biodiesel (100% soy biodiesel). Manningham is the first Victorian local government authority to run diesel vehicles on 100% soy biodiesel (this does not affect food security as it is a waste by-product of the food processing sector). We have had no problems with our vehicles."*

**Ref: Robert Powell, 19/5/11**

## **And Also ...**

*"A north Queensland council has come up with a novel way to dispose of fat from community barbecues – by turning it into fuel for its truck fleet. The Mackay Regional Council is partnering with TAFE, with students building a biofuel plant and using fat from the barbecues and other local businesses to produce bio-diesel. Councillor Karen May says the plant is expected to produce up to 200 litres of fuel per week, which will be used in council trucks. 'We're teaching our young people an alternative way to fuel vehicles rather than just pulling up at the service station', she said. 'The other thing obviously is the lesser greenhouse gas emissions and of course council will save some dollars by not having to pay a contractor to dispose of that fat for us. ... The outcome of the project will be that council will be able to fuel about four of our trucks with the bio-diesel that's produced from the plant', she said."*

**Ref: Melissa Madison, ABC News, 12/4/11**