

Meeting the New Minister

Last Wednesday I attended the presentations by the new Victorian Public Transport Minister, Martin Pakula, and the Department of Transport Secretary, Jim Betts, organised by the Metropolitan Transport Forum (which represents 19 local councils). Opening the channels of communication from both the Ministry and the Department is without doubt a good direction.

The Minister appeared enthusiastic about his new transport role – the Myki ticketing debacle was politely not mentioned – and he was able to highlight a number of important initiatives for public transport. It is my view that we need to give credit where it is due, however there were a couple of points for concern. He passed over continued urban sprawl – excused as political expediency – and told us not to have an issue with road funding. He acknowledged the crucial importance of good public transport provision as we build new suburbs but seemed to be at a loss as to how we would achieve this. Some time was spent discussing grade separation between roads and railways and it was noted that a single installation can cost as much as \$140m (for which we could have a whole fleet of fast ferries on Port Phillip Bay). But there did not seem to be a comprehension that reducing dependence on the private car can reduce many of these associated costs and causes of congestion.

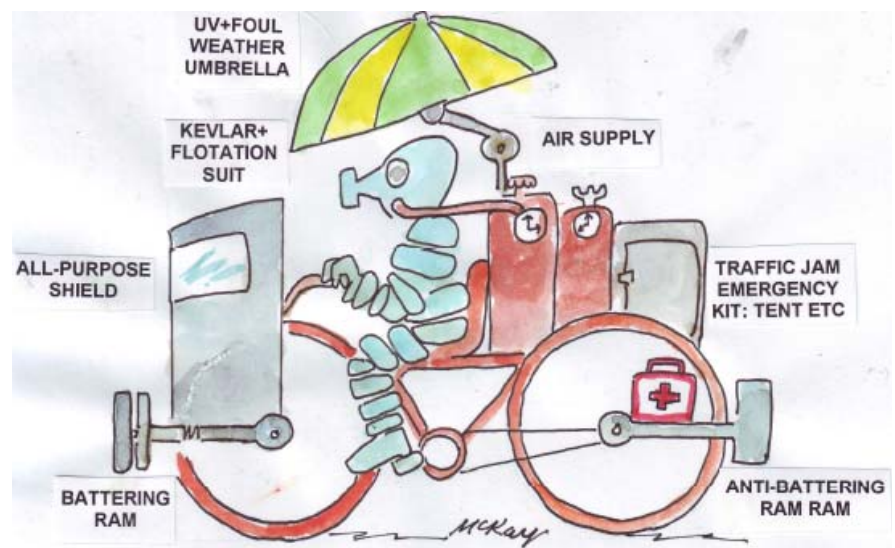
The Secretary both understands and promotes all the elements of good urban design and in particular the importance of integrating land use planning with sustainable transport planning. He listed off an impressive array of achievements under his watch. Secretary Betts knows what we need to do, but the question is: are we doing it fast enough? This in no way is a criticism of his work, but rather indicates that there are other forces within the government. How else do we explain continued urban sprawl, dysfunctional suburbs, encouragement of car dependence, and lack of any real plan for the eventuality of Peak Oil? As Secretary Betts noted, we are still having problems with a single person in a car blocking a tram full of people.

There is much that is good about Melbourne. If we choose we have the capability and the knowledge to make it even better.

The Health Hazard of Cycling

“A new study will investigate whether cycling to and from work is a health hazard. The Queensland University of Technology PhD study, led by Thomas Cole-Hunter, is seeking cyclists who commute into Brisbane’s CBD to assess the air pollution they breathe and the related health effects. ‘I want to find out if the pollution cyclists breathe in is potentially harmful to their health’, he said. ‘I also want to compare pollution exposure experienced on off-road on bike paths to that of on-road lanes shared with buses, cars and trucks, and if wearing a respirator reduces the effects of exposure’. However Mr Cole-Hunter said the news may not be all bad for cyclists, as they sat above heavy gases which settled close to the ground. He said the main concern was with ultra-fine particles, as small as one- billionth of a metre. ‘They can be inhaled deep into the lungs, lodging where the task of oxygen and carbon dioxide exchange occurs between air and blood’, he said. ‘They can be the most abundant component of bus, car and truck exhaust, yet relatively little research has been done in this area’.”

Ref: AAP, Brisbane Times, 12/3/10



Not Green Enough

“In comments he made before delivering his speech in the annual Alfred Deakin Lecture Series in Melbourne on Sunday, the celebrated scientist [Tim Flannery] said [Victoria’s] Premier John Brumby’s government was a fraud for claiming to be ‘green’. ... ‘This government is taking no meaningful steps as far as I can see whatever to address ... the dependence on one of the dirtiest and most polluting energy sources on the planet’.”

Ref: Greg Roberts, The Age, 6/6/10

Un-Real-Time Bus Information

"Have you noticed the new orange plastic attachments that have sprouted around Melbourne in the past few months above the timetables on the posts at bus stops, offering travel time updates and giving a location number? I thought this might be some expansion of 'tram tracker': a system that acknowledges you can't rely on the scheduled timetable. Given the notorious reliability of the buses on the east-west routes across the inner northern suburbs, I thought perhaps they are abandoning all pretence of adhering to a timetable, and simply providing arrival time estimates for the impatient.

"So being curious I dialled 131638 as instructed, expecting to then be asked to punch in the location code and get a synthetic voice telling me how long I would be waiting. Gee, I thought, the buses must all be fitted with GIS that tracks their progress across the city, feeding this into a program that identifies projected travel time to thousands of individually numbered bus stops. Sort of impressive - but probably more complicated and expensive than actions that could match operating performance with the timetable (or vice versa).

"The number turns out to be the Transport Information line, and eventually you get through to a 'real person' operator who can tell you when the next bus is due. Sceptical after being asked my direction of travel, I enquired if she was simply reading from the timetable. The operator assured me it was 'real time' advice and confidently told me the next bus would arrive in 2 minutes - precisely what the timetable below this new sign was also telling me.

"It was 7 minutes before the bus arrived. As this bus is supposed to run on a 12 minute frequency at that time of day, I could only conclude that this 'new' information service adds nothing to the published timetable, except for the cost and inconvenience of making a phone call.

"Well, it did help pass some waiting time."
Ref: 'Jack from Brunswick', 23/3/10

And Also ...

"A passenger fed up with waiting for a clock-watching driver to start his shift drove the bus home herself. Chen Li kept to No.528's route through Hangzhou, eastern China, picking up and dropping off passengers until she got close to home, where she abandoned the coach."

Ref: MXNews 15/9/09

More Congestion Funding in WA

"Great Eastern Highway will be expanded to six lanes between Perth Airport and the Graham Farmer Freeway in a \$225 million upgrade the State Government is touting as the 'new gateway to Perth'. But while the upgrade spells good news for commuters [sic], the State Government has confirmed home and business owners in the path of the new development who refuse to part voluntarily with their property will be forced to sell. Transport Minister Simon O'Brien said yesterday the upgrade, which will widen the highway from four to six lanes along a 4.1km stretch between Kooyong Road, in Rivervale, and Tonkin Highway, in Redcliffe, was vital for creating a good first impression on visitors. The project would significantly ease congestion [sic] and increase safety on the stretch, which services 50,000 vehicles each day and has seen a staggering average of 212 crashes annually over the past six years. 'As one of the State's principal transport routes, it is vital that we upgrade this section to a six-lane dual carriageway to maximise the safety and efficiency [sic] of the road network', Mr O'Brien said. 'It is also important, given its link from the domestic and international airports to the city, that the highway presents an attractive visual environment to create a favourable impression for visitors to Western Australia. This is going to be a great new gateway to Perth.'" Ref: Joseph Catanzaro, West Australian, 31/5/10

"Yeah but I bet the 6 lanes will then bottleneck into 2 lanes causing massive traffic problems as no one in Perth knows how to merge - or navigate a roundabout for that matter."

Problems with Oil



"225 million would have gone a long way towards building an underground railway connecting the two airports and Perth. This development confirms Perth as car-centric."

Ref: Comments, WA, 31/5/10

"Emergency workers clear crude oil washed up on the beach from a slick in Singapore, on May 28. The slick from a damaged tanker has spread from beaches on Singapore's south-eastern coastline to a marine nature reserve and other beaches, according to environment officials."

Ref: The West Australian, 29/5/10 Photo: AFP

Interview with Oz Kayak (Part 28)

OK: I really support taxi services, I can see a lot of benefits [but] if the 'number plate' is so expensive, that is: the 'entry card', someone still has to make a profit. Are they not fully declaring the income – in other words avoiding tax? Or is there some other cosy arrangement? Certainly I'm not implying that it is with the Victorian Taxi Directorate or the government, but there must be a formula that allows you to have a number plate, which has got no value in the strictest sense of the word. The other problem we have – and this is complex to solve – is the change-over shift in afternoon. The cars go back, often to the street outside the owner's property, so the cars are not being changed over [efficiently] and you actually lose the car for about two hours. What the government could do is make sure a certain number of cars are on the road at that time. They tried to solve it with the green-topped vehicles but all I can tell you is that if I want a taxi at four o'clock in the afternoon in the city, there isn't one. {Continued in #159}

Regional Rail and Utes

"Rural transport and road maintenance costs are rising. Therefore, economically rural and regional will become essential to feed the cities, but also to serve the needs of rural communities, as back loading is not always available and fuel prices are increasing. A one-tonne capacity container that fits on to a flat-tray ute could become part of a system to batch goods to and from rural and regional areas. With local distribution by one tonne ute, the rebuilt rural rail system could, with passenger services, become economically viable. Transport costs could be reduced, and road maintenance costs could be substantially reduced. Necessary infrastructure at transfer stations would be minimal – an adequately maintained siding and lifting gear, with three-tonne capacity for safety. The ute for local distribution would usually be owned by the recipient of the goods, or local small business involved as agents – for ordering and distributing goods for local clients. This system has similarities to the effective distribution system used from the late 19th to the mid 20th centuries. An integrated goods and passenger service will allow retired people and other people in need of transport for medical and other services, when no longer able to drive, to remain in their chosen local area."

Ref: Brian Collingburn, On Track! Regional Rail Review, June 2010

New York Taxi UniCab (Part 1)

"The New York City UniCab Taxi of Tomorrow has been designed to change the way people think about catching a taxi - and there's an Australian connection. The concept is based on the award-winning design of Melbourne-based RMIT University student Damian Lucaciu. His concept design, Melbourne TAXI 2020, has been adapted to suit the hustle and bustle of New York City's criss-crossing roadways. According to UniCab website, the essence of the Taxi of Tomorrow is: 'People-moving with a lighter footprint, treading more gently on the earth as human beings rather than human doings'.

"The managing director of the project is also an Australian. Jacob Baldwin is a foundation member of the Disability Council of NSW, and his expertise has been drawn upon because there's one key element to the UniCab that makes it a much more viable option as a city cab – unlike the four-door sedans of this world, the UniCab is wheelchair

friendly. In fact, the UniCab name is inspired by the notion of access for everyone. It has been designed with a low, flat floor-pan and a sliding wheelchair access ramp. The concept's designers say



New York Taxi UniCab Photo

it should be able to transport almost anyone. 'No matter what size, shape or measure of mobility they possess', the UniCab website says. Getting into the cab appears easy, too, with dual sliding doors on the sidewalk side of the car ensuring that nobody needs to get among the traffic to hop in.

"Some of the ingenious elements of the concept include a hydrogen fuel-cell and two low-lying battery banks which work in tandem to send power to all four wheels (each has an electric motor) via a link of generators. The hydrogen fuel-cell begins generating electricity when the level of charge drops to 40 per cent. There's also a solar panel on the roof to help keep the charge up. If the driver does run out of go, though, they can pull into one of several Boomerang Hubs (a hat-tip to the Aussies in the team?) where the cabs can plug into a rapid recharge station while waiting for passengers." {Continued in #159}

Ref: Matt Campbell, The Age, 1/6/10

Parry People Mover

Two flywheel-driven light-rail vehicles have been servicing the UK town of Stourbridge. It is refreshing to hear honestly about the issues as well as the successes of this innovative mode.

“On 12th December 2009, the Class 139 railcars at Stourbridge carried their 200,000th passenger.” “The Stourbridge Town branch now has its best-ever rail service. The quicker turn-around and improved acceleration of the Class 139s compared to the previous heavy rail trains has resulted in 50% more journeys being operated, with a 10 minute ‘turn-up-and-go’ frequency in each direction. This is attracting growth in passenger numbers. Energy consumption has been reduced dramatically, with a cut of carbon dioxide emissions from over 800kg of CO2 a day to around 240kg. ...”

“An intermittent binding brake problem on 139 002, causing the main driveline to work harder than designed, was the probable cause of a fluid coupling heating up and expelling its oil through a ‘fusible plug’ on 6th January. This was the only incident in over 40,000 services when a railcar could not return to the depot under its own power and was stranded at the far end of the line. With the other vehicle fully operational, a ‘rescue’ was arranged and 139 001 towed the failed railcar back up the line (see photo, right) and was then put into service itself. Service resumed at 4:59pm, just 2.5 hours after the failure occurred.”

“As well as Paris/Brussels-London Eurostars, many domestic train services in Britain were affected by more severe winter weather than normal. In the case of the Class 139, on several occasions at the beginning of the operating day the compressed air system which operates the brakes was unable to function, so the brakes ‘failed safe’ and could not be released. Fitters called out to attend to the problem discovered that accumulated water in and around valves in the system had frozen, preventing it from working. One of the Parry Associates team, Merle Craven (an American from ‘up-state’ New York), has experience in preparing heavy trucks for operation in the Canadian Arctic. Merle noticed similarities with the pneumatic systems used there and, by applying the methods used to keep the heavy rigs moving in arctic conditions, he delivered the means to get the PPM railcars moving ... By January 2010 the railcar service had not only been provided reliably, but – apart from when



undergoing routine examinations and servicing – the second railcar has consistently been available to enter service when needed.”

Ref: Extracts from Parry News #56, Feb 2010

Why the Flywheel?

“The questions are asked occasionally: ‘Why do the Class 139 railcars carry around with them big lumps of spinning steel, with attendant bevel boxes, fluid couplings, and freewheel clutches? Wouldn’t the vehicle get along perfectly well if the present 2,000rpm engine speed were just increased by 50%?’ We normally think of a flywheel as a type of energy store – along with batteries and springs, for example – but when it is used in a hybrid system with an engine it can have a very different function that greatly enhances the performance of a vehicle, by more than doubling the power available from the engine. The present PPM flywheel stores around 1kWh (kilowatt-hour) of energy — equal to one of the units on your electricity bill or a fully charged car battery. Not much, you may think, but the trick is that although 1kWh of energy is defined as 1 kiloWatt (about 1.3 horsepower) for one hour it is also equivalent to other combinations of power and time, e.g.:

6.0 kW for 10 min
60.0 kW for 1 min
120.0 kW for 30 secs
360.0 kW for 10 secs

“Unlike a motor, the flywheel power output is limited only by the rating of the transmission it is driving: in the case of the PPM flywheel, four high-power drive belts each capable of transmitting 17kW giving, in

effect, an extra 96hp to add to the engine’s 58hp at 2,000rpm. Even if run at 3,200rpm the 2.3 litre engine only provides 91hp in total. The PPM flywheel provides a boost that adds considerably to the total power output during much of the time that the vehicle is accelerating from rest to cruising speed. This removes the need for a larger engine and enables the existing unit to run at a steadier speed which should further improve efficiency and emissions. There are of course extra losses associated with the flywheel, but this must be set against the ability to regain energy by using it to decelerate the vehicle at the other end of the journey instead of just applying the brakes. The flywheel’s power boost is thus made available for starting off without needing a full recharge from the engine. To achieve the same performance without the flywheel, the Class 139 railcars would need far bigger engines.”

Ref: Mark Parry, Parry News #56, Feb 2010

Solar and/or Biofuels?

“Photovoltaics (PV) and solar-thermal systems are a more efficient and environmentally friendly way of tapping the sun’s energy on abandoned land than crops grown for use in liquid biofuels, according to a new UN report. The report, the first published by the UN Environment Programme’s (UNEP) International Panel for Sustainable Resource Management, acknowledges that in the future land-use restrictions will often pit solar-energy developers and biofuel producers against each another. Open-field biomass can generally only store 1%-6% of the solar radiation that reaches the Earth’s surface. In contrast, PV and solar-thermal systems perform much better, with efficiencies averaging around 15% and stretching as high as 25%. Solar-energy systems have the added advantage that they can be installed on rooftops and facades, requiring no additional land use. The report acknowledges that solar energy is currently far more expensive than energy from biomass, but points out that the cost is dropping rapidly, and may one day be competitive.

“At the heart of the UNEP’s report is the conclusion that the debate over biofuels requires much more nuance and sophistication. In many instances, biofuels offer a significant reduction in greenhouse gas emissions compared with traditional fossil fuels. For example, the use of ethanol from sugar cane as currently practiced in Brazil offers emissions reductions of between 70% and 100% compared with petrol. But such hopeful statistics often cloud deeper – and growing – problems within the world of biofuels. Production and use of biodiesel from palm oil on deforested peatlands can lead to greenhouse gas emissions increases of up to 2,000% as a result of the carbon released from the soil and land. ‘Biofuels are neither a panacea nor a pariah, but like all technologies they represent both opportunities and challenges’, says Achim Steiner, UN under-secretary general, and executive director of the UNEP.

“Steiner emphasises that biofuels have a clear future role in humanity’s energy matrix, particularly second-generation biofuels. But he says that rather than blindly pursuing liquid biofuel production, there are often other options that do a better job at combating climate change and improving rural livelihoods, such as PV. ‘It is a choice about how humanity best manages its finite land bank, and balances a range of competing interests in a world of six billion people, rising to more than nine billion in 2050’, he says.”

Ref: Karl-Erik Stromsta, Re-Charge, 19/10/09

Vanpool & Vanshare

Back in 2006 while wandering the back streets of Seattle (in the US) I chanced upon a van:



“[King County] Metro leads the way with the oldest and largest public commuter van program. Trailblazers in ridesharing, both VanPool and VanShare have been guiding resources for other commute programs around the country.

“VanPool provides the van and everything else for successful ridesharing: rider support services, maintenance, insurance, fuel, tires and training. Groups of five to fifteen people all over the Puget Sound region are choosing to vanpool.

*“VanShare bridging the gap between you and public transportation. VanShare is a group of five or more commuters also using a King County provided van. The difference is VanShares bridge the gap between a public transportation mode and a final destination. The vanshare group splits the monthly cost of US\$175. The fee fare includes: fuel; insurance; vehicle maintenance; 24 hr. roadside assistance; reserved parking for the van at the commuter station or terminal; up to six emergency rides home per year (taxi reimbursement).” **Ref: Metro Transit Website** <http://metro.kingcounty.gov/tops/van-car/commutervans.html>*

Electric Car Group

“Toyota and three other Japanese automakers together with a power company have set up a group to promote electric vehicles by standardising recharging machines and marketing the technology abroad. ... The group is still working out the details of its recharging platform. Standardisation would require all makers to agree on the voltage, outlet and other aspects of the technology while also ensuring relatively speedy recharging.”

Ref: Yuri Kageyama, The Age, 17/3/10

Plugged-in Places

"As part of its plan to become a world leader in making electric and low-carbon cars an everyday feature of life before 2015, the UK is investing 30 million pounds in the scheme 'to drive greener'. Under what is called the Plugged-in Places initiative, the army of roadside charging points will support the emerging electric car technology and provide valuable experience on which to base the future development of a national charging infrastructure. Announcing the initiative, [then] UK Transport Secretary Andrew Adonis said: 'The UK can be a world leader in electric and low-carbon cars – which is why the government has already committed around 400 million pounds of support to encourage development and uptake of ultra-low-emission vehicles. Our aim is for electric and low-carbon cars to be an everyday feature of life on UK roads in less than five years. There is still a lot of work to be done; however, Plugged-in Places is one very significant step putting us firmly on the path to a low-carbon future'. ...

"Plugged-in Places builds on existing measures to support alternative fuels and these are being boosted by seven projects that will benefit from 500,000 pounds' worth of funding through the government's alternative fuels infrastructure grant programme. These schemes will involve the provision of an initial 72 electric charging points and four gas refuelling stations for vehicles in areas across England. Half of the charging points will be established in London by the Transport for London organisation that plans to put them on-street and in underground and surface car parks. The other 36 charging points will be located throughout the industrial West Midlands. Now, the plan is to invite cities and businesses to join together to bid for Plugged-in Places funding to establish thousands more charging points for electric and plug-in electric/petrol hybrid cars.

"They will be set up in streets and car parks as well as at commercial, retail and leisure sites. The ready availability of such charging points is seen as crucial to the successful switch to a cleaner, non-polluting form of transport. Such availability will encourage companies to accept this as a serious challenge to conventional petrol and diesel-engined vehicles, and attract investment to solve the problem of reducing charging times and increasing the range per charge. The long-awaited emergence of a



practical electric car is gathering pace and most vehicle manufacturers are now developing concept or production vehicles that rely on the latest lithium batteries. In the UK, the industry's voice, the Society of Motor Manufacturers & Traders, has formed an electric vehicle group that will promote a collaborative industry-wide approach to the development of ultra-low carbon technologies. Over the next 18 months, more than 340 new electric and plug-in electric/petrol hybrid vehicles, including electric Minis and Smart cars, will go on trial in the UK under the government's low-carbon vehicle demonstrator competition that has been described as the biggest project of its kind."

Ref: John Webb, Eco Voice #71, 4/3/10

Stolen Vehicle Slowdown System

"Since launch in October of 2008, OnStar's Stolen Vehicle Slowdown service has been deployed 38 times in a wide variety of situations, including rental vehicles, thefts from dealers and on stationary vehicles, in order to prevent a high-speed chase from potentially starting. Once an OnStar subscriber has reported a stolen vehicle to law enforcement, he or she can call OnStar and request Stolen Vehicle Assistance. An OnStar Advisor will use advanced GPS technology to pinpoint the exact location of the stolen vehicle, which will be provided only to law enforcement. Once law enforcement officials have the stolen vehicle in a clear line of sight to know conditions are safe, they can request that the OnStar Advisor remotely slow it down. OnStar will then send a signal to the vehicle's engine, reducing engine power and gradually slowing the vehicle to idle speed while all other vehicle systems, including power steering and brakes, remain fully operational. In 2008, 334 people were killed in the USA in crashes that resulted from police pursuits, according to the NHTSA. Stolen Vehicle Slowdown helps take high-speed pursuits out of the equation, and reduces the chance that a subscriber's stolen vehicle will be crashed during a chase."

Ref: Traffic Technology Today, 23/10/09

New Twist on Drive-Time Radio

"Radio station 3AW shut down for 90 minutes yesterday afternoon because of a power supply problem at its transmission site. The problem emerged when silence suddenly replaced Derryn Hinch's program about 5.16pm. A technician was sent to the transmission site in Hoppers Crossing but became delayed in peak-hour traffic."

Ref: The Age, 4/5/10