
From: GHT
Subject: FW: Submission to Select Committee Inquiry - Greater Hobart Traffic Congestion

Dear Chairman and members of the Committee,

I would like to make a submission to the Select Committee.

I am a retired professional Traffic Engineer, working for 35 years in Local Government. 25 years at Hobart City Council, one year at Glenorchy City Council in semi retirement, and 8 years with a Melbourne Council. I've been a ratepayer in Hobart, Clarence and Kingborough and in Melbourne.

I have qualifications as follows; Bachelor of Engineering (Honours) (Monash University), and Post Grad qualifications in Transport and Traffic (Monash University), and in Management (Deakin University).

No doubt you have a heavy task ahead of you reviewing previous studies and data and receiving many submissions. This is a field where it is very hard to ascertain the veracity of the copious amount of information available to you. In modern times I've seen growing 'group-think' and populism in Transport which tend to become 'fact' when repeated enough. I'll try to provide you with a combination of factual information and a practical, commonsense view that I hope might assist.

But the theme of the following is that no one person, including me, knows the answers in this area of congestion and the countermeasures. It requires expert study in combination with community engagement.

By way of example of group-think, I recently read the RACT Mobility Strategy which appears on the surface to be okay, but when you read it carefully and critically it is flawed. It is just thoughts from a panel forum leading to a vision with recommended projects with a cost to taxpayers of billions of dollars. And when you make enquiries with RACT you soon discover that the organisation has no transport expertise nor any idea how deficient the current Mobility Study is. This is partly why I write to you, to try and outline why that type of study is not only technically suspect but dangerous and to outline a more technically correct process to develop a future Transport Strategy that is much more likely to be economically, socially and environmentally successful in managing congestion in future.

I hope that I might do it in an entertaining way using real life examples that I'm sure you will relate to and is enjoyable to read.

(1) The scope of Greater Hobart's traffic congestion and its impact on the community and economy;

I am retired, thankfully I don't have to cope with peak hour traffic anymore. Retirement gives one the great benefit of being able to choose your time of travel and destination to avoid congestion or to choose not to travel to that destination at all.

You will have reams and reams of good information from Infrastructure Australia, your State Government bureaucracy and other sources about the level of, and costs of, congestion. The cost is mainly about loss of productivity. There are other cost factors too but it is mainly about private travel time and commercial travel time incurred in queues and these have estimates of dollar costs per hour. There is no doubt that there is a substantial cost for Greater Hobart of existing congestion.

What the figures probably don't take into account is the people like me who avoid altogether travelling to Hobart CBD because of congestion. Thus, there is a hidden cost to the economy of trips NOT made due to congestion, I think the jargon phrase is 'suppressed demand'. From anecdotal talking to many friends, they also exhibit similar behaviour. The result is that the Greater Hobart economy underperforms. As congestion gets worse, this suppressed trip-making will impact on making the economy worse off.

Often anti-car proponents point to the 'futility' of building new infrastructure like freeways. I remember this clearly when London's M1 Orbital Motorway was built, maybe 20 years ago. The moment the motorway was opened, it was at capacity at peak hours. And the anti car fanatics loved this because they could say what a waste of money, 'the new motorway is already congested'. But what they never could understand is that the new M1 motorway did in fact provide transport for far more people to get to employment, entertainment, medical appointments etc etc. So, there was a huge economic and social benefit from the building of that new infrastructure, even though there still was congestion. The pre existing suppressed demand was reduced and economic and social benefits unlocked.

The point I make, not building new infrastructure for fear of there still being congestion post construction is not logical. New infrastructure leads to more trip making that might not otherwise be made which is a good thing.

As a Committee you are going to get a concerted effort from what I'll term the anti-car brigade that tries to put this simplistic argument - 'we need to stop building cities for cars, we need to build cities for people to be able to walk and ride a bicycle or scooter or skateboard'. They call walking, cycling, and use of other small wheeled devices 'active transport'. Later on I want to try and debunk that simplistic idea by showing you that it may be extremely difficult for metro Hobart to substantially change mode of travel to some of these elements of 'active transport' no matter how idealistically we may wish for this.

(2) Causes of congestion, including physical and topographical barriers;

There are a number of causes of congestion:

1. Natural growth in number of trips made as our collective wealth as a community rises. People have more money and time to make more trips to restaurants, theatres, sporting events, cafes, shops and so on. As this wealth continues to grow in future as we'd all hope it will, and as the population ages and retires and has more time available, then one would think that logically congestion will increase from this factor. We used to use a traffic volume growth estimate of 1.5% per annum increase in traffic on arterial routes. This was based on historical time series traffic volumes on major arterial routes. When compounded over the years, this does add up to eventually substantial increased volumes which must lead to increased congestion if no capacity improvement options are implemented.
2. Related to the above, as wealth increases, more households have access to a motor vehicle. I think the current level of motor vehicle ownership is around 92% of households have at least one motor

vehicle. (ABS Census 2016). Again as wealth increases, the number of households having a vehicle increases and the number of vehicles per household increases. So, one or two or three car households make more trips.

3. I see a huge number of small freight vehicles on the roads now. This is totally conjecture on my part, but I think tradespeople, service providers like gardeners, window cleaners etc, couriers, postal/on-line purchase deliveries, and the 'just in time' sort of business model that modern business has to use also has contributed to our congestion increase in these smaller freight/service vehicles in recent times. This can only get worse as we increasingly use on-line shopping and fine tune 'just in time' stock inventory for business and an ageing population relies more on specialised home services like gardeners, health carers, cleaners and so on.
4. For Hobart, topographical factors are important. Because of our constrained topography we have too few major arterial routes. The rule of thumb for spacing of major arterials is a grid pattern about 1.6kms apart. By way of example, the Brooker Hwy is our only major arterial in a north south direction. There should have been in an ideal world another major arterial between the Brooker Highway and Knocklofty Range but of course the topography precluded this. This is why some of the more local roads like Argyle, Campbell, Murray, and so on are so congested, i.e, because they are acting as de facto arterial routes in lieu of a more ideal arterial network. There are ways to improve this problem that could have been addressed 30 years ago when Governments had opportunities but they didn't.

For example, if decision makers 30 years ago had recognised the future congestion problem and they could have considered long term planning for grade separated intersections along the route like at Risdon Road, Elwick Road and so on. Huge cost, huge impact on abutting land use like housing, but long term a possibly much better economic, social and environmental outcome. The strategy that was followed was a short term strategy of lower cost intersection upgrades on an ad hoc basis. Signals were changed to roundabouts, then changed back to signals. The engineers involved did the best they could with limited funding. If proper planning using a cost benefit approach had been carried out consistently over the years, I think the federal government would have been inclined to better fund more long term infrastructure solutions for the Brooker Highway.

The Derwent River is another physical barrier factor and because there are limited crossing opportunities causes congestion. The Tasman Bridge as currently operated, is congested. The Bowen Bridge is underused because it is not well located for trip making and it is difficult to see how it ever can be better utilised.

5. The work trip sees many people commuting at the same time. We've all thought of a simple solution, staggered work hours, in fact only today I see in the ABC on line news an academic with the startling, amazing 'new' idea about staggered start/finish work hours as a simple solution to peak hour congestion. If only. Although suggested numerous times over the past 25 years, it has never been successful probably for good, practical reasons. However, other cities are introducing ways to make this happen through road charges for using roads based on level of congestion. If you want to travel between 7:30am and 8:30am fine, but you pay a premium price compared with if you travel earlier or later than that peak. Hobart has gradually widening peak hours, and a more recent one has developed in the past 10 years at around 3pm-4pm when schools finish and maybe when tradespeople are finishing. Road charges for use of roads is a way of managing these peak hour congestion periods and 'spreading' them, thus lowering peakiness. Hobart must surely go

down this path of road user charging as other cities are embracing. This strategy will be a major infrastructure project of very high cost but we need to start planning the introduction.

6. An obvious factor causing congestion is Hobart's dispersed pattern of settlement. I am sure you will get the usual people making submissions about the need for inner city apartments and higher density housing. And so be it, I have no problem with this. But I would say this, the dispersed pattern of settlement allowing people to live at Coningham or Cremorne or Dodges Ferry or New Norfolk or wherever, where firstly these properties are affordable and secondly, offer a wonderful lifestyle if that is your desire, are things that we should celebrate as being a positive thing about living in Greater Hobart and beyond, as well as having traffic problems associated which need to be managed.

I remember years ago as a young traffic engineer that I'd heard all about Copenhagen, Denmark and the walking/bicycle culture and inner city living, so I travelled there on holiday to experience it firsthand. It was quite interesting to see a city like that, very different to our culture and lifestyle. In a city like that you have to like living in a little apartment box in close proximity to others. And many people do want this lifestyle. However, I personally found from the experience that I appreciated even more the 'higher quality' lifestyle that we here in Hobart enjoy. This is my subjective view at this point in time. It may change over time. It would be interesting to take a statistically average Copenhagenian to live in an outer suburb of Greater Hobart like Cremorne and see then what they think. You know, I'd say they would love it, they would change places in a heart-beat from the little apartment box in a crowded city to being near an unspoiled beach with dolphins, the occasional whale visiting, clean air, light and air around the house. So, this is why we live in dispersed settlements. Living further out and using a car isn't a conspiracy, it's just what some people want to do to lead their lives as best they can.

7. The final factor I mention is a lack of a sensible programme of provision of new infrastructure over now a long period. From my memory, the most significant investments in infrastructure in and around the Hobart CBD were the duplication of the Southern Outlet in the 1980s and the creation of the Davey Street - Macquarie Street couplet at the gasworks in the mid 1980s. Since that time, most infrastructure work has been very small scale intersection capacity improvements. Along with the capacity improvements has been **reduced** capacity in some cases for other reasons such as pedestrian amenity improvements in inner city streets of Hobart. So on the whole, we've seen very little infrastructure capacity improvement for the gradually increasing trip making that has historically occurred.

(3) Strategic planning processes between Commonwealth, State and Local governments;

I think the strategic planning between the three levels has on the whole been very ordinary over the past 35 years that I've observed. There are a number of salient things here.

1. Local government is not well placed to have very qualified, skilled and experienced people that understand traffic and transport. I've been dismayed at various transport infrastructure projects and processes I've seen at Hobart, Clarence and Kingborough. I could give examples, because I take an interest in these things and I enquire of those Councils about the project appraisal and reporting they do to Council. In every case I've looked at (about 6 projects, ranging in value from \$300,000 to \$12M each), there has been no even 'window dressing' attempt to do a basic cost benefit type appraisal of the project. I could go on for pages on these examples but I'll give just one

current example.

The curious new footbridge over Davey Street between the Cenotaph and the Queens Domain. When I saw that being constructed, I really wondered how that could ever really be a strategically important part of the pedestrian network. Footbridges have two fixed end points and unless they are really well located to take in large numbers of origins and destinations at **each (both)** ends they are going to be hard pressed to be useful. By way of contrast, the footbridge in Melbourne over the Yarra River connects Flinders Street (a railway hub and other activities) with South Bank. When you use that bridge you get the impression that 100,000 people a day would use it. It's a fantastic piece of infrastructure well worth the probably \$15M it cost to build it. The benefits would clearly outweigh the costs. And as an aside, Melbourne has been investing billions of dollars on new road infrastructure over the past 25 years. In the Melbourne scheme of things, \$15M is not a big project for transport infrastructure.

Getting back to Hobart's new bridge, I did ask the Council if there was an appraisal done such as would investigate how many people would use it, other alternatives such as traffic signal alterations that might not give quite the same benefit to individuals but might serve more people and be a lot cheaper (cost probably of the order \$100,000). \$12M for a footbridge of questionable benefit is a lot of our transport infrastructure allocation. \$12M could do a lot of good work on some current congestion bottlenecks for example the Domain Highway on ramp to the Brooker Highway northbound where I see very long queues including a lot of freight vehicles.

Clearly, no overarching cost benefit process is being used to rank other projects like the Brooker Highway/Domain Highway compared to the footbridge. These sorts of cost benefit appraisals never get done at local government level, but should be. In the case of this Hobart footbridge, no such appraisal for alternatives to the footbridge was done according to the Council. I think the basic problem is that Councils don't know how to do it. It's a qualifications/skills/experience issue. The other aspect but intimately related to technical appraisals is community engagement that I will discuss below but again Councils do this poorly.

2. I'm not sure State Government is well placed in this regard of skills/qualifications/experience either. It is pure conjecture on my part because I've been out of the professional loop for a number of years now. I'd hope the Committee might look into whether State Government does have the requisite expertise. But the Bridgewater Bridge issue reported in the Mercury recently where Infrastructure Australia has refused to give this Bridge replacement project a high priority because it has an unfavourable benefit/cost appraisal, indicates to me that Infrastructure Tasmania did not do a benefit cost appraisal. And it should have been done years ago and the project either abandoned or modified. I can recall this project as being a state priority for years. It is almost unbelievable that such a major infrastructure item has apparently been on the books for years without proper project appraisal. That isn't fair to the Tasmanian public.
3. The Commonwealth is now well placed regarding infrastructure assessment through Infrastructure Australia. But the Government of the day had to be dragged into this by the fantastic landmark Productivity Commission report circa 2014 which was scathing of federal, state and local government infrastructure project evaluation processes. Infrastructure Australia was formed sometime after this and from my reading of IA reports it looks to be doing a good job. That Productivity Commission report, like all the reports it does, is well worth a read by Committee members.

4. IA is not interested generally in projects under \$100M. So, there are not that many Greater Hobart projects or State government projects that IA will be directly involved in. My point, is that local and state government has to get with it and fully commit to proper project evaluation for the projects under \$100M. This is a method that looks at; what is the problem being addressed by the project; what are the expected benefits; what are the costs; what alternative project candidates were looked at, and what were their project appraisal results. It is a process that really aids both politicians and the wider public which enables full transparency. It prevents any level of government from vague, spin type statements about 'vision', 'safety issues', 'mobility improvement', and so on that they currently use. It makes the project proponent accountable.

By way of another example of a minor infrastructure project, several years ago Kingborough Council was proposing a new roundabout at a location in Blackmans Bay. It was an intersection I used often and when I read about the proposal I was curious about it so I read the relevant Officer report on line. The report was very vague and it cited 'safety issues' as the reason for the roundabout. Okay so far, roundabouts are good for improving safety. However, there was no assessment of the historical safety record contained in the report. I therefore looked up the crash statistics for the intersection and it was in fact a pretty good safety record. Very few crashes of any sort, certainly no serious injury crashes that would warrant the spending of some \$500,000. This is the sort of lack of project appraisal that goes on day in day out at some Councils and the Aldermen of the Council cannot be blamed for making poor decisions in these cases. It isn't their fault. \$500,000 may not seem a large amount but cumulatively over greater Hobart for all the Councils it becomes substantial.

5. What is vitally important in the cost benefit appraisal approach that IA follows, and that I really hope in time that state government and local government will be mandated to follow, is that our elected representatives actually take notice of the results of these appraisals.

Education of politicians I think appears a necessary thing also so that they really understand these appraisals. One recent example I am aware of, only through Mercury reporting, so please excuse me if the facts are not correct!. But it is the northern suburbs to Hobart railway proposal. From the Mercury's reporting there have been a number of what appear to be good cost benefit appraisals of the proposal which should have killed off that project 5 years ago.

Yet politicians, even good ones like Andrew Wilkie at a federal level, continue to speak out in support of it. The community needs its leaders to stand up in these difficult issues, understand the cost benefit appraisal and communicate the implications to the community instead of taking the politically expedient way of supporting noisy and possibly influential project proponents. The latter is silly and pointless because, just like the Bridgewater Bridge example, eventually the chickens come home to roost and the proposal fails to get funded, or the project does get built and is a failure in operation which then costs large amounts of funding to subsidise it and means that other feasible projects don't get the scarce funding available.

This type of lack of understanding of cost benefit appraisals mean is in my view a part of the community's disillusionment with politicians. Education of politicians in this area would firstly alert them to projects that come forward without good appraisals to send them back, and secondly help them incorporate the results of the appraisals in their final decisions on those projects and crucially how they explain their decisions to the community.

6. A quick comment on community engagement practices at state and local government levels. I found out about this Select Committee inquiry by a fluke. My local council didn't tell me, my state government didn't tell me, it was just a junk email that I happened to look at. Community engagement is vital for successful outcomes in any area of policy or projects. I used to really welcome input from the community when I was a public servant. There are citizens out there with IQs in the 160s, or with different life experiences, different visions and opinions that are a fantastic source. Now, if governments can only just inform these IQs, experiences, visions, opinions with the correct facts, then we can get much better informed opinions and ultimately better decisions. And it's a two way feedback thing. Inform the community, get feedback, use the feedback to adjust the policy/project and then do what never gets done - resend the policy/project back out to the community for another feedback loop. And keep doing this till almost a 'fait accompli' decision is arrived at. If everyone has the same facts and analysis, invariably agreement with a decision occurs. What is vital in community engagement, is that unbiased, good information including cost benefit appraisal information is available for the engagement and clearly explained to the community in a language that they can understand. When you do a good community engagement with good facts, the outcome has to be worthwhile. If either one, the engagement process or the technical process is suspect then the whole shebang fails dismally. Again, local government finds itself often in this place. Sometimes the engagement process is great but the facts and explanations are terrible and vice versa.
7. I wish to comment on something that I've sadly come to realise seems to be a widespread problem in local government. It may also be a problem in state government. It is a growing lack of awareness of Officers of Councils about the role of a Council Officer. The role of an Officer is of course to be unbiased, to present facts and proper analysis and recommendations to Aldermen in order that Aldermen can make the best decision possible in the community interest, and to also serve the ratepayers of the Council who pay their wages. Ratepayers elect Aldermen, and pay Officers, to manage Council assets for ratepayers who own all assets. Too many times I've encountered Officers who have a strange attitude that 'they own' the assets and the ratepayer can go to hell. Most Officers are not like this, but there are some Officers with influence who are. I will not name anyone of course but there are Officers who openly have for example a bias against the car, and openly have a bias for bicycles which very badly affects their judgement and the reports and advice they give Aldermen. It is dangerous to have these people with their own agendas advising Aldermen, it puts Aldermen in a difficult position of approving in good faith the deficient recommendations from their experts.

Bias is a thing that journalists and other professionals have to deal with every day, and it's so easy to do. We all know the bad journalists who are not really journalists, they are biased opinion writers whose aim is to sell papers/get hits on line. It's similar in Transport, there are opinionated professionals and there are unbiased professionals. It is difficult to distinguish between the two, but good, sound Transport processes like I am advocating in this piece, help to avoid the opinion professionals from having too much say.

I think a major educational program needs to go to all levels of local government, particularly senior Officers who greatly influence the culture of their organisations. I've seen great Council Officers who, by their own brilliant understanding of the role of a public servant, pass that on to everyone else they manage and everyone else that they come into contact with. I think that calibre of public servant maybe isn't there now. If that is so, we as a community need to fix it.

(4) Future initiatives to address traffic congestion in the Greater Hobart area; and

I suspect this is where the Committee will get a lot of ideas from well meaning people because many people like to go to solutions before they do any analysis. And that is fine, these ideas and solutions can be incorporated into a proper Transport Study. It is however dangerous to take on these solutions without doing the hard work of rigorous assessment. As I say, I've seen local governments making decisions about infrastructure in this (non rigorous assessment) way. Often it isn't anything mischievous on the part of the individuals concerned, it's just that they have never been taught how to think properly. Thinking means working out 'what is the problem we are looking at', 'what is the objective evidence we have of the problem', 'what are the options for improvement for our problem', then 'how do we measure the performance of the options we have' then leading to making a decision.

Committee members will be well aware that there are many biased people and organisations out there. Bicycle advocates are top of the list. Public transport enthusiasts. Private motor car enthusiasts. Inner city living enthusiasts and so on often have a biased view and they will have pre determined solutions that they wish to promote - again in good faith, they passionately believe in fill in here what you wish.... bike lanes, ferries, bus lanes, bus priority, high density inner city housing, inner city University campuses, tunnels, western bypasses.

I look at this a bit differently. Firstly, I couldn't care less how we travel now or in the future nor which projects get selected as long as overall community benefit, and looking after those that 'lose out' get looked after are all covered. That is a basic cost benefit approach.

Secondly, I look at things as logically as I can. First **how** do we travel at present and **why** do we travel like this. Then from this what are the current problems like congestion and road safety that we face and finally what are the likely trends for the future based on **history**. The comments below derive from my perspective as a car driver, push bike rider, user of Metro bus services over my lifetime and I'll try to project this history to the future.

1. How do we travel now?.

The basic modal splits are like this: private motor car (driver and passenger) makes up about 81% of all trips, metro bus services makes up 5% of trips, bicycles make up 1.4% of trips, motorcycles less than 1%, (0.7%), walking makes up about 6.6% of trips and other modes like taxis/ferry/miscellaneous make up the rest. I've used ABS trip to work census data (2016 Greater Hobart statistical area) as the most recently available. These figures leave out those that worked from home (4%), those that didn't work 11.5%. If you add up the percentages it doesn't sum to 100% because there are minor trips by ferry, two modes and three modes of travel that are insignificant but when added sum to 100%.

A minor point here, the bicycle trips are 1.4%, I suspect these are inflated because of organising efforts by bicycle advocates to have as many cyclists riding on Census day as possible. I experienced this in an earlier Census when I was on the end of such an email chain. Anyway, it doesn't matter, this is the way of the world these days I am sorry to say and I cannot conclusively prove the over inflation of the statistic.

Other sources give different trip rates. Motor car (driver and passenger) 74%, walking 20%, cycling

0.9%, public transport 4%, (Greater Hobart Household Travel Survey 2010). Obviously, the big difference here is the very large number of walking trips.

Hobart is not alone in this sort of modal split character. If you look at a mega City like Melbourne it's a very similar trip profile. Very dominated by the private motor car but with more public transport trips. Similar low bicycle trips. I've tried to check other cities of the world, sometimes it is not easy to get similar data. I recall getting London's data and again I found that metro London has a very similar car dominated profile, low bicycle trips, higher public transport trips.

So, Greater Hobart is not different in trip characteristics from other cities of this country and throughout the developed world.

2. Why do we travel like this?.

Some of the reasons are obvious, some not.

The Car.

Why are 81% of trips by car?. This is the easy question - it's because the car is convenient, safe, reliable, fun for some, and it serves multiple purpose trips - it does the work trip, the lunchtime visit to a doctor, after work shopping or cinema etc. The car is now affordable for most such that, as I say, around 92% of households have at least one car. Congestion is a problem, but not a major one yet. I would say on a level of service (LOS) rating I would rate driving a car in Hobart at LOS A (A being the highest, E being the lowest). Driving a car in Melbourne by way of comparison I'd rate as a LOS C. Driving a car say in a city like London, I'd rate a LOS D or E. I've never driven in say Calcutta but I'd imagine that would be off the scale LOS F!

The Bicycle.

The humble push bike has a lot of seemingly attractive things about it. It's cheap, not affected by congestion, goes anywhere on roads, paths, footpaths, good for fitness. As a former keen push bike rider I can say that the roads of Hobart are great for cycling. Compared to really congested cities, cycling is really easy in Hobart. I would say it's at level of service B+.

The problem for cycling, why not many people use it, is two-fold - one is that it doesn't meet peoples' basic travel needs. It's too far to ride, too slow, you get sweaty etc. It just doesn't work too well for most people. The other serious problem for cycling is the safety factor. A study by Flinders University circa 2008 looked at every single Hospital admission for all hospitals of Australia for one year for all road and non road related crashes resulting in death or serious injury.

It is truly a fantastic piece of research that showed 15% of all road related crash deaths and serious injuries occurred to cyclists (remember that they make up only about 1.4% of trips), for your interest motorcyclists made up 25% of deaths/serious injuries for 0.7% of trips. Just to make the point about these two modes of transport cycling and motorcycling - they combined make up about **40%** of deaths/serious injuries for **2.1%** of total trips. An astounding result. My take on this is that even before I was aware of these research results I intuitively knew that both cycling and motorcycling were very risky activities. I think the general population intuitively feels it too even if they don't have the detailed information about risk. I and my cycling friends just about all of us

have given up as we neared 50 years of age. The perceived risks just became too great for the benefits. I think that we need to communicate the very real risk of cycling and motorcycling to the community. I know it would not be a popular thing to do, but people deserve to know just how risky these two modes are and that both are inherently risky, and that we cannot as politicians or engineers eliminate that risk.

I think people do know there is a risk, it's a perceived knowledge of risk, even if they don't articulate it. People buy a push bike with good intentions to ride it but it ends up in the garage never used. Cycling is suffering somewhat of a crisis in falling participation rates. Munro circa 2015 published the results of a National Participation Survey for cycling between 2011 and 2015 and it showed declining participation rates for all States, except WA from memory which had a slight increase. You will no doubt have submissions from the cycling lobby groups and many organised emails from cyclists and they will say the answer to this non take up of cycling is a lack of infrastructure, the "build it and they will come" answer. Build bike lanes, bike paths and so on and cycling will increase is their mantra. Well, I am afraid I am very skeptical about this. In my career I have seen billions of dollars spent nationally on cycling in Australia and all the statistics, the years and years of ABS Census data, show a very low level of uptake in cycling. So, in my view, cycling may not be the answer to our future transport and congestion issues, it may continue to attract minimal trip making rates. There is a good paper by Paul Mees (now deceased) on adjusted ABS Census data to account for slightly different questions on previous Censi. His paper showed cycling flat lining it for 25 years of data he reviewed. This is an interesting paper written by an unashamedly biased public transport academic who by the way has been critical of Hobart for not investing more in public transport.

There is a very big moral dilemma for politicians in the area of cycling and motorcycling. Both are so risky that one would ideally not wish to encourage citizens to use these modes. However, there are citizens who will use them regardless of risk - these citizens are risk takers and politicians need to consider how to keep them safer. Unfortunately, there isn't anyway to make either of these 'safe'. No amount of engineering will do this. Once a mistake is made by anyone, the rider becomes a 'human missile' and then it is just luck as to whether the rider suffers death, serious injury or just minor injury. It may be that the emerging driver-less, electric artificial intelligence motor vehicles offer help in reducing risk for cyclists and motorcyclists for certain types of crashes. I'll discuss this further below.

One interesting piece of data from the Flinders University analysis was that, in bicycle crashes, half of the deaths and serious injuries result from interaction with another entity such as motor vehicle or pedestrian or other bicycle, but significantly the other half of the deaths/serious injuries result from the rider 'falling off' the bicycle. So, no matter what the infrastructure provision is for bicycles, there is still a huge risk of death and injury for the rider just falling off the bicycle. Bicycle and motorcycle riders are called 'vulnerable road users' for good reason.

Public Transport. As a user of Metro buses in my working life, and occasionally now just out of interest, I am a fan of Metro. Metro runs clean, modern, on time, good frequency, good coverage services. When I hear someone critical of Metro I really wonder whether they have actually used a metro bus. I generally cannot fault them. In terms of door to door travel time, the bus is pretty good. No parking to worry about, one can sit back and read a paper, a device or relax.

So why are the number of trips by Metro buses just a paltry 5% of all trips? This is my conjecture

but I think it is about lack of privacy on the bus, sitting next to a stranger, being stuck to a set timetable to catch the bus, and just not as convenient as the car alternative. If I had to give the Metro a level of service I'd give it a LOS B+, pretty high. So the mass transit bus service per se is not the problem in low use of buses by citizens. Spending vast amounts of funds on improving Metro services as they now exist may not be cost effective. Such a strategy needs very careful investigation.

As does the often mentioned idea of use of ferries for trips. Obviously, for people living close to the ferry terminals, and whose destinations are near the setting down terminals, it's a possibly good option depending on service cost, frequency, time of travel etc. But for others that have to use more than one mode of travel at either end of the route (ie the start or end of ferry trip), it is highly questionable whether these travellers would be attracted to ferry based services. The ABS Census 2016 data shows very few trips made by two or three different modes - ie car/bike, or car/ferry, or car/ferry/bus etc. So, again, introduction of linked ferry services whilst seemingly a good idea needs very careful investigation.

I recently visited Sydney where they do have a marvellous public transport system. The pricing and the interlinked buses, ferries, trains and now trams really offer a great service. For a concession traveller, one can travel all day on all those services for \$2.50 per day. For a non concessionary traveller the maximum fee is around \$15 per day. So, for \$15 one can travel all over Sydney and up and down the east coast, say to Wollongong and back for \$15. When hourly car parking close to the city is \$15 per hour, one can see why Sydney people use public transport in preference to the motor car.

But Sydney is a mega City, Hobart just can't give the same level of service in public transport because of economies of scale.

Walking. Although the studies show walking trips at being between 6.6% (trip to work ABS Census data) and 20% (Greater Hobart Household Travel Survey 2010), of course we are all pedestrians at some point in our trip or during our day. This means that nearly 100% of trips involve walking. That is why traditionally so much importance has been given to making footpaths for pedestrians sacrosanct. I do worry now about the degradation of footpaths being made 'multi user' for cyclists and skateboards and scooters.

I visited Auckland recently and experienced the lime scooter phenomenon there. It was a very scary thing. Scooter riding is very cool indeed but they are silent, fast, go anywhere on the road or footpath travelling seamlessly between the two, and pedestrians have to be super alert with these things whizzing by. I think its a bad outcome, but Hobart no doubt unthinkingly will follow the lead of other cities and allow these on our footpaths.

I'd say the level of service LOS is A in Hobart for pedestrians at present. I really worry though that more electric bicycles and scooters using footpaths in future will degrade this LOS to much lower levels, a real shame I think.

As an older person, I am experiencing myself now a reduced ability to do the sorts of physical activities I once could do. Rock climbing, bushwalking and camping, paddling a sea kayak and so on are getting more difficult to do. One activity that becomes more attractive as you age is a simple daily walk. In my neighbourhood of Cremorne there are many older people that walk the dog or

just alone on a daily routine. I think we need to give the multi use pathways in urban areas a good hard look because of the threat to older pedestrians, all pedestrians really, that they pose. A hit from a bicycle or scooter to an elderly person will probably end up a serious injury, hospitalisation and probably ruin the rest of that older person's life. They will never fully recover from that injury. I think at the very least, state government needs to pass legislation that makes it law that a bicycle rider or scooter or skateboarder rider (small wheeled devices) shall (mandatory) slow to pedestrian walking speed when they encounter any pedestrian on any pathway. The police can easily enforce such a traffic regulation.

A word of caution here. The anti-car extremists in an attempt to be misleading with statistics have lumped walking trips with bicycle and small wheeled devices (scooter, skateboard, roller blade). You will see mode usage statistics aggregated up to try and fool you that all these vehicles create trips of significant volume. So, you will see quoted figures of 10 to 20% for 'active transport' in greater Hobart. Just be aware that the majority of the trips are walking trips. The bicycle trips are very small and the rest of the small wheeled devices have miniscule trip making. But the anti car fanatics wish to align themselves with pedestrians in order to kid you that funding for infrastructure for cycling and small wheeled devices is necessary. In my opinion, all these modes of bicycles and small wheeled devices have nothing in common with pedestrians and in fact may well become a menace to pedestrians. Pedestrian trips in my opinion may well increase much in future due to an ageing population that wishes to try and keep healthy using a very safe mode of walking.

One final caution to finish the modes of travel, the cycling advocates have 'answers' for everything. One of these is that they will quote studies that show, on a cost benefit basis, cycling as an activity to invest in is overall feasible. ie the benefit/cost ratio is greater than 1. This is a very difficult, expert area but I have read those cost benefit analyses and I am unconvinced. In each case the B/C ratio is just over one - only extremely marginally feasible. In each case I've been unconvinced about firstly the benefits (the benefits are largely health related, riding a bike keeps you fit) because riding a bicycle is not necessary for keeping fit. One can keep fit by many other less risky means - walking/paddling/gym/swimming/gardening etc. Secondly, I am not convinced about how the costs are treated. The main costs are infrastructure provision and on-going maintenance and crash injury costs. The crash injury costs are treated like this - the medical bills and the lost wages of number of days off work. Anyone who has had an injury knows that the injury can take a long time to recover from, long after one returns to work, and in some cases particularly for people in older age brackets, they may never get over that injury entirely. The cost benefit studies of cycling neglect this and what price does one put on having such a health outcome, ie on going pain and inconvenience for the rest of one's life?. So, in my humble opinion, from what I've read of these cycling cost benefit studies, it requires a lot more research by unbiased researchers.

3. Future Initiatives.

An obvious key factor here is the new technology in motor vehicles now on our doorstep. You can see the increasing activity from car manufacturers to adapt to a new emerging non fossil fuel future. The marketplace knows the value of private motor vehicle travel to consumers and it will provide the product for the consumer. It is only a matter of time.

The first step will be electric vehicles that are affordable and chargeable at home and on the road. It's in the pipeline now and once realised we will have a non polluting, cheap to run and maintain, and by the way, a fun vehicle with extraordinary acceleration. Zero to 100km/h in 4 seconds - Ferrari type

performance because of instantaneous power to all four wheels. No complicated mechanicals to require costly future maintenance, charged up from your home solar panels during the day or from battery or mains power overnight.

So, my view is that this first stage of introduction of electric vehicles will become popular and make living in a dispersed settlement as we do now more viable from an operating cost point of view.

The second stage of new technology will see the driverless car phenomenon. This will be one of our last so called 'silver bullet' for reducing death and injury on our roads. Vehicles that take human decision making out of the equation will almost eliminate crashes. Interestingly, the artificial intelligence of the driverless car will probably prevent many car/pedestrian and car/bicycle and car/motorcycle type crashes. What this will mean is a reduced road death and injury toll for those vulnerable road users. Also interesting is that such safety improvement will greatly reduce the need for cycling facilities like on road bike lanes or separated bike facilities. This may be a very important factor in allocation of scarce road space in future to optimise lower congestion levels.

Even more improved in-car safety measures will add more safety for occupants such that if a crash does occur, there will be no death or injury.

The driverless car will be a boon for older people like me who wish to still live in outer areas but want to retain their personal mobility to visit friends, medical appointments, theatre, cinema, shopping etc. For these reasons I think that the prospect of inner city living close to hospitals, doctors and other facilities for older people is not as likely under this future driverless car scenario.

Having had elderly parents without access to a motor vehicle, generally their mobility needs are taken care of by their families. Older people don't like buses, or taxis, so after they lose the ability to drive themselves, the onus goes to family members to take care of transport. Which is fine, but the driverless car will do the same thing more effectively and efficiently. I'm looking forward to this in my old age if I get there!.

The driverless, electric car will make it very easy to seamlessly guide the vehicle, charge the vehicle for use of certain congested roads and even make decisions for owners about best times of day and routes to use to minimise road user charges and minimise congestion. This is technology not very difficult to implement.

The driverless electric vehicle could revolutionise public transport by having a range of sizes of fleet vehicles that match the number of passengers, time of day, day of week, origin/destination and to avoid congestion, to best schedule trips for people without access to their own vehicles. So, the scenario would be ; a person wants to go to a medical appointment at Rosny Park. They go on line, give the details about their location, their destination, the time they have to be at the appointment, number of passengers from the household, any special mobility requirements and then the return pick up /drop off information. This automatically generates a best fit vehicle type and time that fits the customer's and others' needs for the locality. On the day, a driverless, electric vehicle that needs to carry whatever is the demand, 3 people, or 10, or 30 people to the Rosny Park locality arrives as near to the door of the customer as possible. It might have seemed far fetched 10 years ago, but it's on our doorstep now. This variable fleet size would complement the mass transit, fixed route, large vehicles required for carrying peak hour loadings.

(5) Any other matters incidental thereto.

I would like to use this opportunity to outline what I think Hobart needs urgently to tackle future congestion.

It is a Transport Strategy derived in a very rigorous way similar to one done by Melbourne circa 1990 called METRAS, Melbourne Metropolitan Arterial Road Study. I only draw on this study because I had an involvement as a young Traffic Engineer of my then Melbourne Council that I worked for and I view this study as an outstanding example of both a sound technical study and a sound community engagement study.

It had a two stream process running concurrently -the technical transport side and a community consultation side. The consultation was with Councils, community groups, individuals, organisations like motoring clubs, and many others. The difference with this study was the feedbacks between the transport side and the consultation side. If the community made suggestions for example for a new freeway, this would be modelled by the transport engineering study then fed back to the community with results for comment back. It was a time consuming process but it is this study that eventually led to Melbourne's brilliant road network improvements of the 1990s that Jeff Kennett as Premier introduced.

I have never seen a Transport Study like this in Tasmania. Mostly, the studies seem to be done by consultants or agencies in isolation from interactive community engagement.

As I mentioned above, I recently became aware of the study done by RACT/UTAS . I cannot understand how a motoring organisation and a university can think they have any expertise to carry out a transport study. Their methodology involved getting 'experts' together at a forum to discuss mobility issues and then come up with a mobility plan costed at many billions of dollars. All this without a proper assessment of the actual problems facing Hobart, nor a cost benefit approach to the solutions to the 'problems' . I personally don't want half a dozen 'experts' determining our city's transport infrastructure needs. I want a full range of opinions from the community, from politicians, who are all informed by facts and analysis to come together in a good Transport Study that will stand up to scrutiny.

As an RACT member I took up this query with the President of RACT and 7 weeks on at the time of writing I have had no response. That fact alone shows you the sort of commitment that organisation has to consulting with the community. A Transport Strategy has to be really technically spot on AND to take the community along with it. All of the community, not just the usual noisy suspects, but ordinary citizens like myself that want information and to express opinions. And crucially, any stakeholder who does submit, should be able to see how the study has considered the submission, and all other stakeholders should also be able to see each others' submissions and the responses. This shares information, informs everyone. So often, the consultation technique is to call for submissions without any good background information, respondents submit uninformed comments, and then the respondents hear nothing further until a final decision has been made. Councils in particular do their consultation this way. It's token consultation.

I personally don't mind what final decisions come out of the Committee's work and which then flow onwards towards on-the-ground projects for transport. All I'd like to see is transparent processes with logic and community engagement. What I see in the RACT type process is the over involvement of special interest groups which by their very involvement achieve project selections based not on any sort of rigor of analysis, but just through their doggedness they get a compromise set of solutions that the project managers think will satisfy those noisy advocates. Thereby you see suggestions for bus lanes along Macquarie -Davey Street that would wipe out parking AND pedestrian kerb bulbings at a capital cost of millions of dollars which would adversely affect businesses and residential properties abutting and reduce the safety and amenity and convenience of pedestrians BUT worst of all, as I've tried to logically point out, there is no certainty that the community would even transfer trips to buses for all that cost and

disbenefit to pedestrians and others. Providing the additional bus lanes might take Metro from a LOS B+ to LOS B++ or LOS A, ie not much improvement above an already very good service.

Similarly you will see in the RACT type projects is hugely expensive projects to provide dedicated bicycle lanes everywhere in Hobart again at a huge cost to ratepayers and taxpayers and again as I've tried to logically outline above, there isn't any certainty that it will result in a large shift of travel to use of the bicycle. I.e, LOS might go from LOS A to LOS A+, not much improvement.

I recall many years ago when Hobart City Council put those bicycle lanes in Argyle Street and Campbell Street, many people would comment to me at meetings and out of work about how little used they appeared to be. I would at that time defend the Council decision by saying something like ' they are new, people will use them in time...". I was wrong, they are still hardly used. If you drive along those roads, your 'snapshot survey' of this will invariably show no one using those empty bicycle lanes. That is the danger here, that Hobart and other metro Councils, will build these bicycle facilities at great capital cost and at great opportunity cost to other road users, only to find those lanes are largely empty.

The bicycle advocates have got dozens of ideas for taking road space and creating cycling facilities. All sorts of ideas that they have been putting forward for years. The RACT Mobility Study took these on board, it's stated policy is to support these and the bus lanes and other projects, all this without knowing what the benefits and costs are going to be. It doesn't have a clue whether these projects will be successful yet on behalf of its members it has committed to these questionable projects. I say that put up these projects into a really sound Transport Study for Hobart and have a closer look.

CONCLUSION

I apologise for the length of this submission. If I could summarise and conclude with some dot point recommendations for your consideration.

- Investigate the project selection and evaluation practices at local government and state government level. This would include an audit of skills/experience/qualifications. Leading on from this, implement necessary changes by way of practices/processes and training/education in the use of proper project evaluation methodology. It may require an Infrastructure Tasmania or Infrastructure Greater Hobart to be set up to implement a good project appraisal process for Councils and State government agencies.
- Consider use of mandatory cost benefit appraisal for projects over a capital cost amount of say \$250,000 for local government and \$1M for state government.
- As an alternative to 2 above, consider local government and state government having to submit to their own Council or Planning Agency a Development Application for projects over a capital cost of \$250,000 for local government and \$1M for state government through the relevant Planning Instruments and be subject to representations from third parties and the processes available through RMPAT. This will greatly change public servant behaviour when they must give expert evidence and be cross examined in this planning process.
- Investigate a METRAS type major Transport Study for Hobart. This is a study which will cost several million dollars and take 3 years. It will be hard to do, it will be attacked by people in public life and

in the media who hate studies because they don't understand the value of good studies. But it will systematically work out what are problems and issues for greater Hobart, what are full range of options for improvement and then assess these in a cost benefit approach so that everyone can see how all the projects objectively stack up. Unless an unbiased type approach like this happens we will be bickering for years about the noisy advocates' pet projects.

This is the opportunity to put all the pet projects up once and for all for scrutiny. A put up and shut up exercise. Put in all the bypass, tunnel, bike lane, bus lane, ferry, road user charging, trams, northern light rail, a new bridge crossing, the Bridgewater Bridge and any other ideas that come out of consultation and assess them properly, professionally, in a consistent, understandable cost benefit framework that everyone can see and comment on.

- Ensure that an expert steering committee oversees the above Transport Strategy. It would comprise State, Federal and Local Government elected representatives, public servants, and key stakeholders. This steering committee would have to be trained, educated in the processes to be contained in the work of the Transport Study prior to the study commencement. The Transport Study would have two concurrent streams of one, the Technical data collection, modelling, analysis and cost benefit appraisal, and second comprehensive Community Engagement.
- Consider training/education at a local government and state government level about the role of the public servant. Principally aimed at public servants but also elected representatives so that they understand the role better and can be alert to public servants who do not measure up to the standard required.

I wish you well in the difficult task ahead of you and look forward to your findings.

regards

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