

Responses from Tom Rayner - meeting Thursday 6-2-2020

You can't tailor a transport system around a different to normal patronage like a festival situation – there are very large numbers of people needing to be transported at only a few times in the year.

Park and ride would service a lot of people but you still have to make it work with vehicles passing each other on the track.

Light rail - 5 tonne axle load - satisfies a light frequent service to connect main transport areas.

Need enough freight to justify using a freight train - not enough here – I don't think it's realistic.

Need to save the rails - the only thing that will work with cost budgets is a tram like vehicle.

Byron train - heavy rail, and interfacing with traffic & pedestrians is tricky – have to go really slow.

Byron study estimated \$67 million for light rail to be introduced throughout Byron Shire.

Tom - cost: 12 hours a day - \$8 million to operate with \$8 million break even from tickets etc.

Rail trail beside track = \$8 million

Upgrading structures = \$27 million

There's already a bike track between Mooball - Burringbar on side of road - not utilised for years.

Tom was asked to put his presentation for the Tweed business council - he swayed the council vote.

Best to say it's cheaper to build off formation than on the track.

Taken his info from a previous tender report from Tweed council and the Arup study - a number of steel sleepers will need to be replaced. He used the Byron report for ballast and re-sleepering.

Terrain is expensive here – Northern Rivers is one of the most expensive land costs.

John: DPC report done by Arup for RTs!

900 metres would have to be made safe vs 200 metres for a RT to get across water courses etc.

Can install premade structures for RTs - like at Gold Coast - self supporting brow, gangplank, leading onto pontoon (only \$20,000).

Michael Simmonds is pro-rail in the Tweed Business Chamber - minutes were written up wrongly.

Sent it to all councillors - minutes of what Tom presented. Austin Curtin thought the RT info was fabricated. But they see it as something that shows a way forward. Pro rail groups are associated with a left wing political party and there is also no action plan so far from us.

Rail: a hot subject - it never goes away.

He needs to be not seen to be in league with rail groups - he is an engineer. He needs to prove to himself that it will be cheaper. Has put a lot of time into getting the major points in his spread sheet.

Ballast is contaminated - have to cover or remove it - they want to remove it – to have a 6 metre wide path. Way to control traffic on the RT - make it smaller.

Problems of rail trails: misuse, interconnector powerlines along the line between Terranora and Mullum extremely important - looking at it now - what happens if people are walking along it etc.

Cost - light rail, where to get vehicles, how often used - hourly service preferable. Different between Byron - Casino - less than hourly. Byron – Murwillumbah, north south, different demographics than east west with maybe a larger train for larger numbers to travel less frequently than hourly there.

Coffee etc and transport bikes on tram at Burringbar - see spreadsheet, stop for one minute, sometimes 3 minutes - average speed 50kms /hour - up to 80kms/hr. At 50kms/hr from Mur'bah to Byron = 59 mins, with all stops. Where to do passing loops - Mullum and Burringbar. How many vehicles? 3 trams – Tom was trying to buy W class trams from Melbourne - looks fantastic - would have to repower them to solar etc - \$1.5 million + battery pack \$30,000? - finance each of bits of equipment over 3 years.

Community - where will they go? Each end is where they will mostly get on and off?

School buses on same routes: 60c/km, 50c/km regular price, \$1/km for tourists – consider options.

Park and ride is good from Tyagarah to save the roads. Byron train and passing loop with tram at Tyagarah to have either to service the route.

Light rail will not need much to be done to bridges to be able to restart services.

Toyota coaster bus converted to an electric - 5 tonne per axle with only two axles. 10 tonne per axle = 40 tonne = 39 tonnes for the solar train. Heavy rail is 25 tonnes/axle.

Roads - semi trailer thousands times more damage to roads than cars.

If there is one in 4 steel sleepers you don't need to put more sleepers in. Cost the machine to do it.

Cost is not so much for removal of trees etc. Can just cut down and paint with poison.

Cost of economics = 6.50am till midnight when back to depot. Has to operate to serve the customers. XPT use services more than the number of lines - same train went Mur'bah - Sydney and then not looked at a service for the NR.GC Motorail packed out plus relief services. XPT was supposed to be faster but wasn't much, because of speed restrictions on bridges etc.

Only way to get off the ground - private funding with Public subsidising school kids - here is somewhere where someone can make \$ out of providing a basic community/ tourist service - but he doesn't see it happening soon. Passenger trains can stand alone here, unlike in other areas.

Council funding to put RT in – people kept away from rail operation - safety fence - trains don't stop fast - minor roads more busy these days – need separated grades, fences. Level crossings – that's a problem with the Byron train - if there's an accident they will have a major problem.

Trams, light rail can mingle with people, although not ideal. Can start and stop easily, light enough, braking system. Can interact even on the rail corridor. Byron train takes a long way to stop.

Katie Milne rang Tom - short list of tenderers – all fine to do the work. It seems the Tweed council staff want the RT on the track.

Tender on hold till green light with legislation and have not started the tenders till then - if you build on formation need to rip up the tracks.

Have to have a change in planning - if a RT there are planning issues – see on their website.

He could do construction of RT in 1 year and a half.

Destination Tweed and NSW - their 'baby' to have a RT - Cameron Arnold, all in it up to their necks.

Schoolkids would need an additional service - maybe two rail sets. Three trams plus on rail - can buy with hydraulic wheels or Tesla cyber truck - F150 Ford equivalent - efficiency of tyres and can have trailers mounted and solar panels on shed that runs it with solar train assisting it.

UK - illegal to sell internal combustion engines in next 15(?) years, so electric is the way to go.

Can adjust Tom's figures that he has assumed from Queensland experience.

Costs to maintain rolling stock - \$1.50/km plus 20c/km for trailers. His figures = 217,000 people = 450,000 people = 8,500 per week = 1,200 per day = 60 people an hour.

Studied the whole track = rated each section from ARTC 2004 study detailing all the structures etc. Taken distance from both sides on bridges = i-beam on top of 24 metres max span and others - limited by lengths of timbers - rule of thumb = \$25,000/metres of steel span bridges: less for others and no cost for concrete bridges. Cost comes down to half the cost for light rail. For heavy rail needs work, but not for light rail. Friend has filmed Stokers Siding to Burringbar - nothing wrong with line.

*If Tweed councillors said they wanted it off formation because of future use - need to turn them around so tenderers go that way. Trigger point there - need a rally there soon!

\$2.6 million in 2004 to repair bridges. Tom = \$18 million now to get to heavy rail standard but light rail Crabbes Creek - Mur'bah = \$6.6 million.

\$6 million for 25 kms = \$250,000/km for structures at rate for that line which is in worst condition. \$30 million for all bridges along line for heavy rail.

\$700,000 per km

Costs more for an on formation RT than to have it off formation = needs a solid base and railings.

Questions: tourism heritage utilising W class trams - light rail - any other solution is too early – could have big trains less frequently to have capacity of moving large numbers if needed.

Trains much more costly until finding new ways for zero emissions - lighter rail to get up to Bangalow. Quick solution - off the shelf - hi rail, can hook them up together.

Looked at Byron - Mur bah different to other direction. Need hourly service. Higher frequency to Bangalow - solution for tourism, rather than Bangalow onwards - less hills from there. More like Byron solar train. Bigger you go the more expensive it is.

Easier with multiple small units dropping people off etc.

Will frequent cafes if they can get back on soon but not if have to wait for too long.

In Cambridge - multi storey bike parking because so many are used there.

In Burringbar you can stop, start, frequently - it takes a long time to stop with a train.

No need to change tracks for a light rail/tram – same gauge.

Combustion motor to electric but convert battery packs in trolleys in front then hook more to go further, to be charged. Used currently? – could be the first in the world?

Need a development stage - Tesla

Byron Bluesfest - Peter Noble - not wanting to spend money

More regulation around trains than for light rail trams.

Businesses already struggling and RTs want to get cafes in old railway carriages along the track.

Numbers don't work for an occasional person going along the track.

1,000 a week = 130 people a day = 65 in each direction. Every day and if bad weather, you wouldn't build a business on that.

Numbers from Byron to Bangalow very high - great marketing. Byron - Lismore quite a lot and Casino - Lismore not much in between.

Local musos and food attracts tourism - lovely green NR and commuters could take tram with a bike at other end.

Struggling for staff in Byron - commute and have dinner at Byron, got character.

Business plan - Art gallery at Tweed - station for older people. Show this to Tweed councillors! The Plan!

5, 10, 15 years - income, timetable - projections.

Independently, with our backing, not by us (we are a pain in their sides). Everyone needs to be on the same page. Need to be seen to be non political.

Present a well put together Bus Plan needed - rail with RT beside. Save the tracks.

To enable this great vision we need to keep the tracks.

Need business plan asap- Tom suggesting man who lives in Stokers Siding - works at SCU in GC - loves idea of trains.

Potential people on Tweed council to speak with - Reece Byrne, Ron Cooper, Pryce Allsopp possibly.

Approach Simon Richardson for help with a business plan.

ARUP study for RTs was simply put together.

With light rail we can do it together with RTs.

Tom could duplicate similar costings for Bangalow to Casino. Cost per metre assumptions and relate that back to sources - conservative figures - lower and upper levels.

Risk assessment for bio-security - John reading the outcomes where TSC haven't highlighted the outcomes of concern – and it is illegal to not highlight the dangers.

*We are grateful for the extensive research Tom has done to create a very good basis for our business plan and he has agreed to extend his costings etc. to Casino.