To: The Coordinator-General
EIS Project Manager – Underground Bus and Train Project
Office of the Coordinator-General
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To: The BaT Project Team

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Dear Coordinator General and BaT Project Team,

Please find below comments which I am submitting in response to the revised Bus and Train (BaT) project documentation released publicly on 1 December 2014. This email and the attached pdf document together comprise my submission.

I trust that you will take these comments into consideration in the future planning of the BaT project and in the Coordinator-Generals review of the EIS.

Kind Regards,

Phillip Stewart

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Dear Coordinator-General,

I am truly disgusted by the process that the BaT project is taking towards planning for the future of South East Queensland (SEQ). The project has and continues to focus on side issues, such as the demolition of the ugly Transit Centre building, while failing to address real problems including questions about how effective the services will be at meeting future demand and how the project fits into the long term plans for transport in South East Queensland.

I reiterate the comments from my previous submission, if you want a transport project to work properly then you need to start by asking two fundamental questions:

1) What transport outcomes and services do we need in the future?
2) What infrastructure is required to deliver those services?

When you ask these two questions you will end up with a project that that delivers the right outcomes for the people of SEQ. Once again, this has not been done in the BaT project.

I would like you to consider the following example situation as an illustration of why the current planning process is so fundamentally flawed.

> *Imagine for a moment that you are the CEO of a large Corporation which owns an Office building and has several hundred employees.*
>
> *One day your Building Manager walks into your office and says "Boss, we have a problem. Our building is too small and we need to buy a new one"*
>
> *Naturally you respond by asking "What exactly is the problem?"*
>
> *Building Manager "We don't have enough desk space for our employees"*
>
> *You "Ok, show me the problem"*
>
> *Your Building Manager then takes you on a tour past all of your cubicles and shows you that each cubicle has a person sitting in it. "See, the office is full!"*
>
> *You "So there is one person in every cubicle?"*
>
> *Building Manager "Yes, that is correct"*
>
> *You "But every cubicle has **four desks** and **four computers!**"*
>
> *Building Manager "I know, but it is hard work getting them organised to sit in the same room. It would be so much easier if we just got a bigger building."*
>
> *You "?!?"*

In this situation, it is pretty obvious that you do not need a new building, but probably do need a new Building Manager.

Consider now the information published by the Queensland Government in the EIS for the BaT tunnel.

Inbound peak hour buses on the South East Busway reach a maximum peak capacity of just 55% of their seated load, dropping to as low as 27% of seated capacity by the time they reach the Cultural Centre. This is an appalling inefficient situation where barely 1 in 4 seats is occupied as the services

approach the city. This excludes the additional standing capacity available on every one of these buses.

Now some clever sod has told Brisbane City Council and the Queensland Government that this part of the Busway is full and that billions of dollars in new busway infrastructure is required.

It should be blindingly obvious that what is really needed is a cold hard look at the way the bus networks are operating to determine why the utilisation of services is so low. Any competent manager of a transport network would realise that this needs to be done long before you commit to billions of dollars of infrastructure investment.

Unfortunately, the publicly released documents for the BaT tunnel demonstrate very little in the way of competence or rigour in the justification for this project.

Consider again the situation where the South East Busway is at 27% of seated capacity, while the Northern Rail Lines are forecast to exceed 150% of seated capacity in 2021.

The BaT tunnel removed the northern rail connection from the Cross-River Rail project and replaced it with additional capacity for the South East Busway. This stupidity of this situation can be clearly summarised in a table below

Area	**Capacity utilisation**	**Additional Capacity Provided**	
		Cross-River Rail	**BaT tunnel**
Northern Rail Lines	150%	✔	✘
Cultural Centre Busway	27%	✘	✔

I can only wonder at the genius it must have taken to come up with the idea of removing capacity from the Northern Rail lines to instead add it to the South East Busway.

The sheer stupidity of this situation made me wonder whether the project team knows about this situation or whether they too are in the dark. So I went to the consultation session on December 3, 2014 and asked them why they were proposing to spend billions of dollars on infrastructure but weren't looking at ways to make the bus network more efficient beforehand.

In short, the response I received was (paraphrasing)

> *"The Government knows about the inefficiencies of the bus network but has no appetite to make the large scale changes necessary to make it operate efficiently"*

That's right. This Government has no appetite to make the buses operate efficiently but every intention of spending billions of dollars on its unjustified pet project. This is not really a surprise, as making changes to bus routes is hard and unpopular while building big infrastructure projects is sexy, job creating stuff.

It is not surprising, but it is **a massively irresponsible use of taxpayers' money** and the power of the positions they have been elected them to.

To top it off I asked the project team how long the tunnel would be able to effectively meet the passenger demand on the rail and bus networks.

The answer was (paraphrasing again):

"We do not know as we have not done any modelling beyond 2031."

This is truly appalling. A project that is supposed to meet the future transport needs of SEQ has barely looked 10 years past its opening date. This might be ok if:

- The project had a robust publicly available Business Case
- There was a plan for how the network would evolve or expand after 2031 (E.g. Allowing for longer trains and/or a future connection to the Northern lines); or
- It was one part of a larger strategic vision for the entire region

But none of these things exist. There is still no publicly available Business Case, there is no future expansion plan and there is no larger strategic vision.

And then finally at the Consultation session I was told two additional things in response to my original EIS submission (paraphrasing again)

"The BaT project is not the Cross-River Rail project. It is not fair to compare the two projects"

"If we had a larger bucket of money we would do things differently"

Firstly, the BaT tunnel is not Cross-River Rail (CRR) project. Let me give you some of the key differences between the projects

Cross-River Rail project	**BaT project**
• Was designed to meet the long-term forecast transport demand	• Was reportedly conceived on the back of a napkin and shows no regard for the transport task
• Went through a rigorous planning process over many years	• Was rushed through the planning process with no scrutiny
• Was part of a larger strategic plan (Connecting SEQ 2031)	• Is designed in isolation with no future expansion plans
• Was classified as "Ready to proceed" and as one of the top infrastructure priorities for the country by Infrastructure Australia	• Has not been reviewed by Infrastructure Australia

So yes, the project is not CRR. But take note that CRR was designed to meet the forecast rail transport task, and the BaT project only delivers **34%** of the rail capacity provided by CRR and then ask yourself this:

How long will the tunnel effectively meet the transport needs of SEQ if it only delivers 34% of the rail capacity of Cross-River Rail?

But even the project team do not know this as they haven't bothered to look more than 10 years after its opening.

And as for having a larger bucket of money, the amount of money you have available should have no effect on the level of competence, integrity and rigour you use in designing and evaluating a project. But in this case it seems to have made everyone involved lose sight of what they should be trying to achieve for the people of SEQ. The result is a rubbish project and a project team with no choice but to keep the public uninformed and distracted by side issues (such as the demolition of the ugly Transit Centre) so that the rubbish doesn't get scrutinised.

So perhaps it is time the project got a cool motto to go with its name. I would suggest

The BaT Tunnel

Legally blind and in the dark

This would fit well with the projects lack of vision for the future and the deliberate attempts to keep the public uninformed.

It is my opinion that the project team and the Queensland Government have lost all credibility in regards to this project. I sincerely hope that as the Co-Ordinator General you are able to use your position to bring some rigour and competence back into this project and prevent the State Government and Brisbane City Council from wasting billions of dollars on what is clearly another white elephant project.

Further examples of the projects problems are provided below and also in my original submission (attached) for your consideration.

Kind regards,

Phillip Stewart.

Review of EIS and Revised Project Documentation for the Bus and Train (BaT) Tunnel

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This document reviews the documentation for the Revised BaT tunnel released on 1-December 2014. The document focuses on changes made to the project in the review, however also makes comment on the original EIS where necessary.

Issue 1:	The project documentation contains deliberate omissions which call into question the need for and effectiveness of the project

One of the truly galling aspect of the project is the clearly demonstrated lack of any understanding of how to properly analyse a rail network.

The SEQ Rail network is a radial network, with services starting at the ends of each line and running to and then through the city to destinations on the other side. In the AM peak, commuters board the services at the outer stations and then travel mostly into the CBD for work/education or other activities.

To understand the demands of the network it is essential to look at the number of boardings and alightings at these outer stations. Why? Because it is the boardings at these outer stations that determine whether your services are full or empty and therefore determine the number of services that are needed.

However, the BaT modelling has been limited to the Brisbane Statistical Division, defined as

> *Brisbane Statistical Division: Covers an area of approximately 4,700km² and comprises the Brisbane Local Government Area (LGA) and the surrounding area to Caboolture in the north, Beenleigh in the south, Ipswich in the west and Redlands in the east. The Brisbane Statistical Division broadly represents the area cover by the Brisbane Strategic Transport Model (BSTM) and the BaT Project Model.*

The modelling is limited to this area despite the EIS reporting that

> *From 1981 to 2011, the population of South East Queensland doubled to over 3 million people. This trend is forecast to continue, where 3.7 million people are expected by 2021 and 4.5 million people by 2031 (refer to Figure 4).*
>
> *Much of the region's population growth is expected to be in areas outside of Brisbane City in the Gold Coast, Ipswich, the Sunshine Coast, Moreton Bay and Logan LGAs. However, approximately 290,000 additional people are expected to settle within the Brisbane LGA by 2031 to bring the total population to around 1.4 million.*

So all of the additional people settling on the Gold and Sunshine Coast are excluded from the modelling. This raises a few key questions that should be answered

- Is the project team aware that the majority of growth on the rail network has been forecast to come from longer distance commuters from these two areas?

- Do they realise that the major reason for needing additional rail capacity was to services these commuters from the Gold and Sunshine Coasts?
- Do they realise that knowing the level of demand from the Gold Coast is essential to determining the number of services that should use the BaT tunnel?

Disturbingly, it appears the answer is no. Reading the EIS there is

- No comment on the number of boardings or alightings at Gold Coast stations.
- No comment on the level of growth on the Gold Coast.
- No comment on how many services are required to meet demand from the Gold Coast.
- No evidence for how long the tunnel will effectively meet the demand from the Gold Coast before a further expansion is required.

No credible project could have progressed to this stage without someone looking at the level of demand expected on rail services from the Gold Coast.

The deliberate exclusion of these figures from the EIS is inexcusable and calls into question the justification for the project and the competence of the projects planners and management.

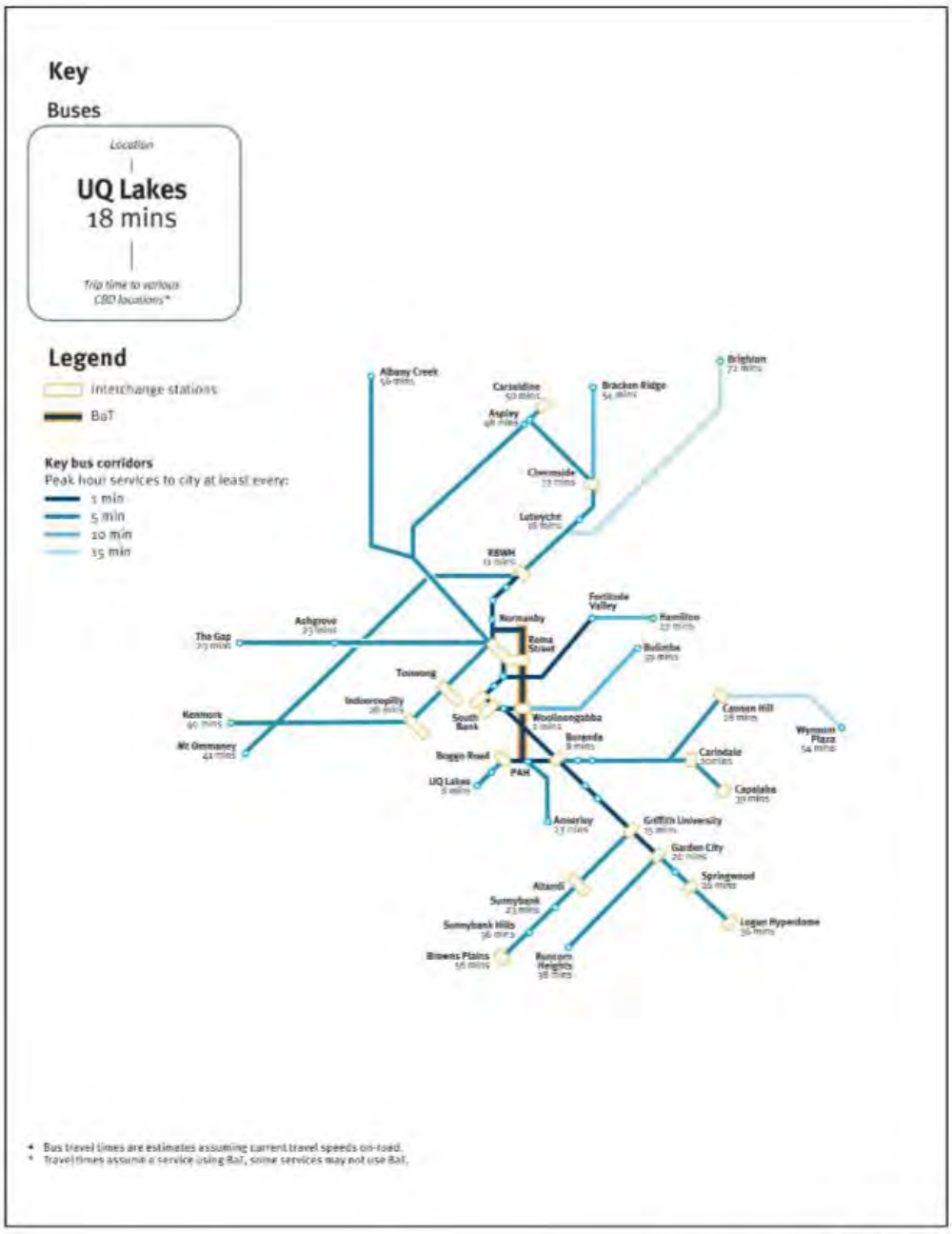
Issue 2:	The impacts of the change to the Northern Busway connection have been deliberately misrepresented in the Revised Project Documentation

The following text is taken from section 2.1.3 of the Revised Reference Design Report

> *The Project would provide a highly efficient connection for bus services from the north and south to link an interchange at Roma Street Station.*
>
> *The main changes for the Project operations are due to the relocation of the busway connection to the Inner Northern Busway east of Countess Street. This would:*
>
> *• allow buses from Kelvin Grove Road to connect into the Bat project via the Normanby Busway Station and increasing the geographical spread of services that could use the Project*
>
> *• allow BaT project bus services to stop at Queensland University of Technology (QUT) Kelvin Grove, providing direct services between QUT Gardens Point and Kelvin Grove campuses, and between QUT Kelvin Grove and the Brisbane CBD and education uses at PA Hospital*
>
> *• significantly increase the service frequency along the existing Inner Northern Busway*
>
> *• enable buses from the BaT project to access the bus layover at Countess Street, providing opportunities for improved operational efficiency and reliability.*

Sounds good and everything is positive. In fact, it is hard to find anywhere in the report that has anything negative to say about this change.

But as with all things that sound too good to be true, they inevitably are. The following diagrams show bus operations with the project, the first taken from the Revised Reference Design Report and the second from the original EIS documentation.

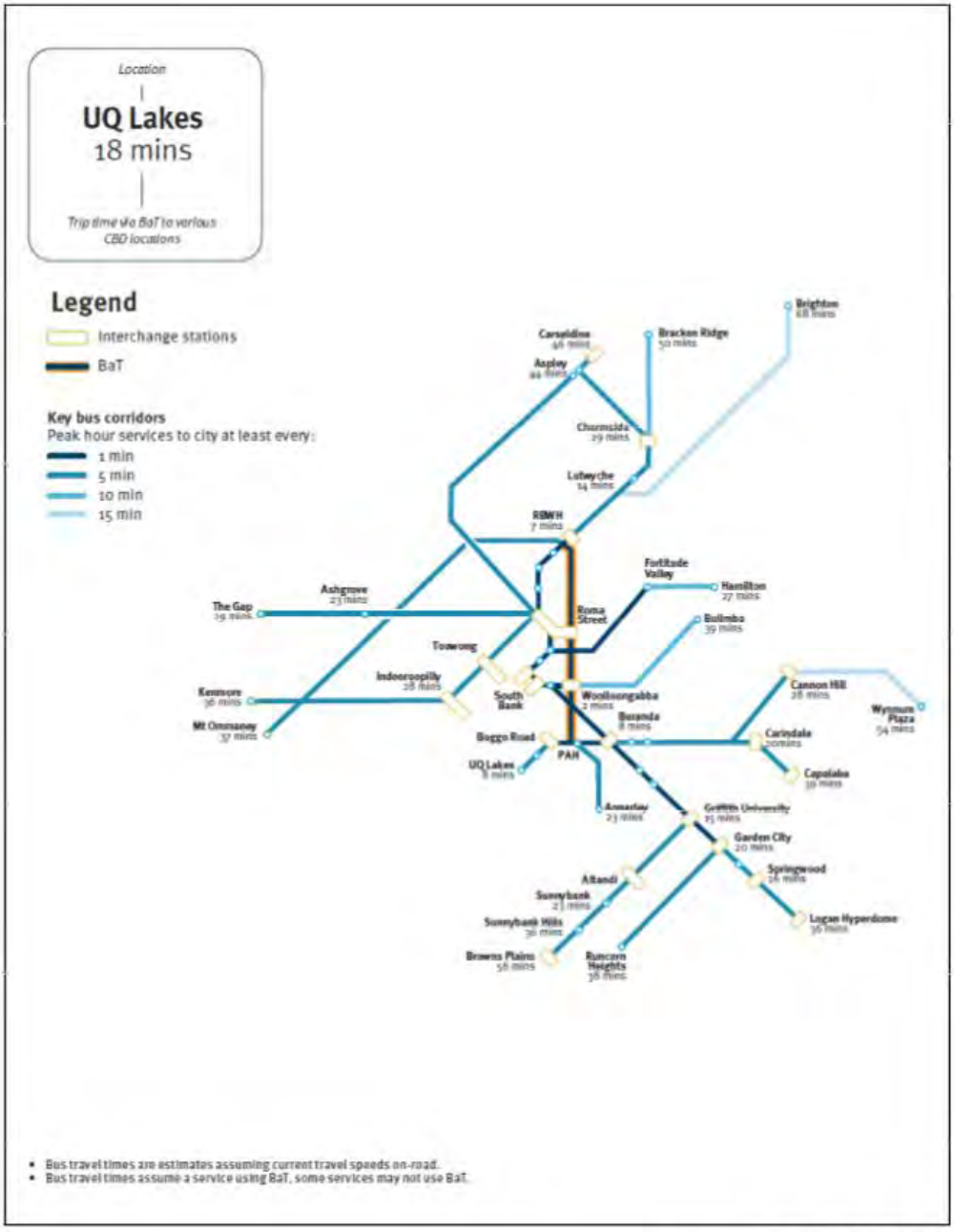


* Bus travel times are estimates assuming current travel speeds on-road.
* Travel times assume a service using BaT, some services may not use BaT.

BaT PROJECT
ENVIRONMENTAL IMPACT STATEMENT
REVISED REFERENCE DESIGN ASSESSMENT REPORT

FIGURE 3-10

Bus network with the Project 2021



BUS AND TRAIN PROJECT
ENVIRONMENTAL IMPACT STATEMENT

FIGURE 5-7

Bus network with the Project

The differences are not immediately obvious, however a close inspection shows that the travel times for all BaT services from the north and west have increased by 4 minutes. For example, Chermside has increased from 29 to 33 minutes.

But where is this noted in the report? Alas, the answer is nowhere. The Project Team was aware of it and updated the diagram, but then decided to try and mislead the public by not including it in the documentation.

But the implications of this are far greater than just a few numbers on a diagram.

Firstly, the project has claimed travel time reductions as one of the key benefits of the project, including in section 5.1 of the Revised Reference Design Report

> • *provide improved travel times and comfort (less overcrowding) provide more resilient rail and bus networks resulting in improved service reliability*

Also from the EIS Chapter 2.5, Page 2-23

> *Trip times by buses would fall on average by over one minute over the entire network. There would be a greater reduction in average trip time on public transport services to the Brisbane CBD particularly services using the Project.*

But the project has now increased travel times for every service using the BaT from the north and also for every cross-town service using BaT as well and not bothered to mention it.

Secondly, the travel times of services is a key factor in determining the future bus fleet requirements. This was done in section 4.4.6, pages 4-84/85 of the original EIS documentation which highlighted as a project benefit that

> *The Project would result in a requirement for 46 fewer buses in 2031 compared to without the Project.*

Indeed, the Revised Reference Design Report, section 4.2.3 page 46, states that

> *Implications for the bus fleet of the Project are addressed in Section 4.4.6 of the EIS (August 2014).*

But travel times are a key factor in determining the bus fleet requirement and you have just added 4 minutes to every service using the BaT tunnel from the north, west or cross-town service. A competent planner would realise this is a trigger to go back and look at you bus fleet requirements again, but alas, ignoring it is just so much easier.

Issue 3:	The project has changed the proposed speed of the Bus tunnel from 80kph to "up to 70kph" without reason. The impact of this change on travel times, bus fleet requirements and the overall project CBA have been ignored

Section 2.2.17 of the EIS states that

> *The following speed limits were used in the modelling:*
>
> • *Project tunnel: 80km/h*

Section 3.2.1 of the Revised Reference Design states that

> *3.2.1 Busway*
>
> *The busway would be a dual-lane, single carriageway with a posted design speed of up to 70km per hour.*

That means that the design speed of the Busway has decreased from 80kph to a speed of "up to 70kph" without any commentary as to why.

The reason for this change is unclear. But the implications of this change are more important than the reasons. There are three obvious implications.

- If you lower the speed of buses then the travel times will increase and your project benefits will change
- If you change the speed of buses then the capacity of your tunnel and stations changes; and
- If you lower the speed of buses then your bus fleet requirements will increase

Since reductions in travel times and reductions in bus fleet requirements were key benefits stated in the EIS I would assume that the implications of this change would have been included in these figures.

But again, alas, these figures remain unchanged. Once again demonstrating a lack of competence and rigour in the project team.

Issue 4:	The altered alignment has added additional bus services onto the Busway network between RCH and Countess Street and again not identified whether this area can support the services

These additional services will reduce the effective life of the existing busway infrastructure. The length of time that the busway will be able to effectively operate is UNKNOWN due to the project teams' failure to model the Busway infrastructure at anything other than "a high level". During the AM Peak this area of the network is required to support

- Peak flow buses from the north utilising the existing Roma Street/King George Square alignment
- Peak flow buses from the north utilising the new BaT tunnel alignment
- Peak flow buses from the south (both in-service and empty) exiting from the existing King George Square/Roma Street alignment; and
- Peak flow buses from the south (both in-service and empty) exiting from the new BaT tunnel alignment

This means that you have peak flow levels of buses running in both directions through this area and once again the project has failed to even determine the number of buses, let alone whether the infrastructure can support it.

It is simply staggering that a project of this magnitude could be proposed and the proponent has no idea whether the connecting infrastructure could actually support it.

It is critically important that the project team investigates the busway infrastructure that connects to the project and that they can answer the following question:

> ***How long will the existing Busway infrastructure be able to support the operation of the BaT project services?***

By ignoring this issue the project team risks creating a trap for future Governments who will be required to fix the outer network constraints on the busway and rail networks at an unknown cost. All because this project doesn't want to do the work to properly identify the issues on the network.

Issue 5: The project has identified that the BaT Busway runs out of capacity in 2031 unless the fleet assumptions are changed

The Technical Transport Report, Section 2.2.20, page 31, states that

> *With the exception of the 2031 BaT Busway Network, all models used 12.5m rigid buses. As the current 2014 fleet, contained a significant number of rigid buses compared to articulated buses, this assumption also yielded the 'likely' scenario in 2021.*
>
> *A preliminary assessment of the BaT Busway Network model identified that continuing this 'rigid bus only' assumption in 2031 would create unacceptable congestion and delay on the network. To address this decrease in network performance, it was assumed that articulated buses would be used to improve efficiency. For modelling purposes it was assumed that 39 per cent of peak bus services in the Project would be 18m articulated buses in 2031. The effect of this change improved the performance of the bus network back to acceptable levels.*

So the modelling has identified that after building this additional tunnel the bus network would be suffering unacceptable congestion after only 10 years unless the bus fleet is changed.

This should draw our attention to two points:

- You are investing billions of dollars in a tunnel that will not even last 10 years
- The modelling has found that you have NO CHOICE but to look at using a different fleet and changing the bus operating strategy

Out of these two options we should logically ask

- Which option can be done quicker?
- Which option can be done most cost-effectively?

The answer to both of these questions is obviously changing the fleet and bus operating strategy.

I went to the consultation session on December 3, 2014 and asked them why they were proposing to spend billions of dollars on infrastructure but weren't looking at ways to make the bus network more efficient beforehand.

In short, the response I received was (paraphrasing)

> *"The Government knows about the inefficiencies of the bus network but has no appetite to make the large scale changes necessary to make it operate efficiently"*

That's right, the project team and the Politicians know that they must change the bus operations to be more efficient, however it is much more politically convenient to push for a large scale infrastructure solution rather than undertake difficult but necessary reviews of the bus operation.

The problems with the bus network have two possible solutions:

- Spend billions of dollars on infrastructure buying you less than 10 years of capacity; or
- Do a cold hard review of services that would fix the problem and save money at the same time

It is obvious what a fiscally responsible Government would do.

Questions need to be answered about why the Queensland Government is doing exactly the opposite.