

Southern RAIL TUNNEL - a better alternative than the proposed 4-lane highway

The proposed 4-lane highway is the result of irresponsible planning. It is simply wrong for the 2010 plan to call for 50,000 to 90,000 people to reside in the Kuranda area. Surely that many people and their tens of thousands of dogs and cats would be having a devastating effect on our water resources and very diverse and sensitive fauna and flora. Such huge development would undoubtedly destroy Kuranda as the village-in-the-rainforest tourist destination which supports so many of us. It makes sense to have any big development in less environmentally sensitive areas like Mareeba, where there is already significant infrastructure anyway.

So in terms of protecting the Wet Tropics World Heritage area and the surrounding areas of tall Eucalypts with its Koalas and rich dry-forest fauna and flora it makes a lot more sense to develop the Mareeba area rather than Myola and Koah (which would inevitably result in further developments in Kuranda and Speewah as well). Further arguments are the inevitable effect of tens of thousands dogs and cats on the rich variety of native wildlife and the negative effect of urbanisation on tourism (they won't come to drive on a 4-lane highway to suburbia, they want a little village in the rainforest).

Mareeba already has a lot of the required infrastructure and would welcome any development more than Kuranda residents.

Now if we can agree that any development should rather happen in the Mareeba area rather than Kuranda/Koah all we need is a fast and efficient transport corridor from Mareeba to Cairns.

A feasibility study needs to be done into the following transport option immediately:

Get the stinking rubbish trucks of the range road and spend a few million dollars to create a few extra overtaking lanes, some wildlife underpasses and any required stabilisation work on the present road as soon as possible. This will alleviate existing traffic problems immediately and in the near future (eg a 4th lane along the long straight above the hairline bend would require very little widening and benching and could be done fast and cheap).

At the same time start planning for a high speed rail link including a 15-18km rail tunnel with the intention to start construction as soon as possible. This ~14-18km single rail tunnel shall lead from White Rock to Bridle Creek and shall be connected with double railway corridors to Mareeba and Cairns. There could also be stations in the White Rock and Bridle Creek areas (near where the tunnel portals would be). Rock from the tunnel can be used to build an elevated transport corridor into Cairns which enables evacuations - high enough to be above 1000 year flood levels.

Wide rail gauge should be used to allow for high speed - at least in the future. A third rail could allow existing narrow track trains through the tunnel as well.

Carriages shall be designed to allow B-doubles, trucks and vehicles to drive on/off (the latter possibly on double storey carriages) as well as having normal and/or double storey passenger carriages with bike and motorbike storage areas. With double tracks above ground the rail tunnel can be used constantly resulting in one train going up or down about every 10 minutes.

Approximately 46km total rail from Cairns central to Mareeba - opposed to 64km by road should allow travel times of 30-40 minutes (better than travel times from Myola/Koah to Cairns via proposed 4-lane highway).

Dangerous goods can simply be timed to go by themselves.

Regenerative braking shall be used which will greatly reduce energy usage, running costs and greenhouse impacts.

More trains/carriages can be built as demand rises.

Once the rail tunnel is operational all heavy freight should go on the train (except in special circumstances eg too wide).

This will free up the range road from its main problem, heavy freight, greatly reducing maintenance needs, stability problems and greatly improving the driving experience for all other road users and for tourists.

BENEFITS of a rail tunnel: (compared with proposed 4-lane highway upgrade)

- 1 reducing the distance between Mareeba and Cairns by about 15km will provide significant savings in vehicle running costs to all users - resulting in savings of about 500 million dollars over 10-15 years (@10,000 VPD) - much more with rising oil prices. For trucks or cars coming from (or going to) down south this saving would increase to ~23km!
- 2 On top of the saving in money those 15km less to drive will mean a saving of about 10-15 minutes for each of the 10000 vehicles. This will add up to over one million man-hours saved each year or another 100-200 million dollars worth of time over ten years (at only 15-20\$/hour).
- 3 CO2 emissions will be significantly reduced due to this distance reduction, electrification and regenerative braking
- 4 the impact on the World Heritage Area will be minimal due to tunneling underneath it
- 5 Cairns area will be known for environmentally responsible solutions resulting in increased eco-tourism; the project itself could be marketed as a tourist attraction
- 6 preserving and enhancing tourist assets which are of tremendous economic importance to this area - Cairns continuous green hills backdrop, Kuranda as rainforest village, Sky-rail experience and scenic road experience (all of these would be severely impacted on by 4-lane highway resulting in possible losses of billions of dollars). The 4-lane highway and its associated destruction and urbanisation is likely to cost our area hundreds of millions of dollars in lost tourism
- 7 minute visual impact compared with proposed road
- 8 the existing range road would retain its charming glimpses of coast through rainforest compared with the proposed 'upgrade' which would basically be an open roof tunnel with views of mainly concrete barriers and sky for most users
- 9 no light pollution at night illuminating a large part of the McAllister range as we would get from the 4-lane highway
- 10 no 10-20 years of traffic delays during construction for either existing rail or road users, which would be a significant inconvenience and financial cost to all users if 4-lane highway would be built. These delays would effectively negate most or all "incremental benefits" until the "upgrade" is completed.
- 11 an extra access is valuable in case of emergencies or failure of any one access - three is always better than two
- 12 a tunnel starting at White Rock will provide Cairns with a safe evacuation route without having to get people over flood-prone country. It could also serve as emergency shelter in case of a category 4 or 5 cyclone.
- 13 rail is more economical and regenerative braking will greatly reduce freight costs compared with 4-lane highway
- 14 rail is much better for the environment and helps to fulfil Australia's greenhouse responsibilities
- 15 reduced dependency on oil - very important with peak oil looming and petrol becoming very expensive!
- 16 system is fully scalable by adding more trains, a 2km passing section in the middle of tunnel or a second tunnel
- 17 existing road with some extra overtaking lanes and without heavy freight will probably have 2-3 times the present capacity (4-6 times present usage) - and cars (specially from/to Mareeba) can go on rail too.
- 18 with 30-40 minutes travelling time to Cairns (much faster than by road) development can feasibly happen in the Mareeba area rather than the environmentally very sensitive Kuranda/Koah area which would be a huge boost for the Mareeba economy and allow eco-tourism to continue in the Kuranda area as well as protecting World Heritage areas
- 19 the system could later be extended to the south of Cairns using double rail instead of widening the southern access road to 8 lanes (or building another road) to give trucks & cars coming from south of Gordonvale a faster access to the city and tablelands.
- 20 when the airport will have to be shifted to the tablelands due to demand or rising sea levels (the latter is why it is when and not if) we will already have a high-speed connection to Cairns.
- 21 similar tunnels in other countries have been build in 5 years compared to 10-20 years for the 4-lane highway so even though this system still has to be planned and designed, it can be ready before the proposed 4-lane highway would be
- 22 having an alternative to the road will allow us to have car-free days or hours on the Kuranda range road. On certain days of the year for several hours the Kuranda range road could be blocked to all traffic except bicycles. If those days are well advertised (maybe once a month for two times four hours) - motor traffic can use the rail tunnel during those times. A regular bicycle day without any motor vehicles would be not just a joy for the bicycle riders, but also a valuable tourist attraction for our region. Regular

walking days would allow people to really enjoy the range road for a leisurely walk with refreshments along the way. Both bicycle and walking days will actually attract new tourist target groups as well as increasing the areas standing as an eco-tourist destination.

- 23 much lower accident rate which in itself is worth a lot and not just in monetary terms
- 24 Since the tunnel follows the existing clearing under the power line, no clearing is needed for exploration drilling etc
- 25 The existing high voltage powerline can be shifted into the tunnel to remove this scar from the landscape
- 26 the project can be financed with the help of private money and a fee can be charged to users avoiding the problem of other roads, schools, hospitals etc suffering because of funding going to the 4-lane highway
- 27 The below 23 km Swiss tunnel does not require ventilation due to regenerative braking and the continuous incline will provide a natural draft, but a vent to Copperlode dam would be easily possible without any affect on World Heritage.
- 28 the tunnel portals can be placed to be outside of world heritage

Even though these many significant advantages would justify a much higher price tag, construction cost is probably fairly comparable to the 4-lane highway option when looking at the whole picture. The costing for the 4-lane highway was around 500 million dollars in July 2004. Since then DMR has refused to give any updates. When adding the costs for the inevitable upgrades of the Smithfield/Cairns (with fly-overs at every roundabout), Kuranda/Koah and Kuranda/Myola road sections as well as the replanting and amelioration works etc it is well possible that the rail option becomes very comparable. In Switzerland a system of 23km of rail tunnels was built for about 750 million AUS\$ including rail, all fittings and two trains (they are building more and more of these). Here we need an extra 23 km of double rail track above ground but we need 20-30% less tunnel so its a very comparable project. DMR's 2000 transport study even plans for another expensive 4-6 lane highway from Koah to Kamerunga as soon as this "upgrade" is finished!!! A doubling of the rail tunnel at that time would be much cheaper.

This rail tunnel alternative with its enormous benefits deserves to be at least considered and properly investigated (the rail options DMR looked at were to the Kuranda area and had no vehicle carrying capacity or regenerative braking).

We ask the Wet Tropics Management Authority to demand from the Queensland Government an immediate and independent study into this alternative solution before blindly approving the 4-lane highway proposal with its obvious and significantly negative impacts on world heritage values, areas fringing world heritage, residents lifestyle, Kuranda and FNQ eco-tourism and every user (during construction). The expensive DMR reports supporting the 4-lane highway are highly biased, omit or hide many obvious disadvantages and leave several important issues unanswered. We need an independent and objective assessment. DMR has failed in their duty to supply one.

Please note that I have presented the same system to DMR in my submission in January 2005 with the only difference that now I believe that the route from White Rock to Mareeba has several additional advantages, not least that suburban development can be kept away from World Heritage. I mention this here just in case some formal argument is made that this corridor cannot serve the planned suburbs in Myola/Koah. If that is really a problem and the state government and WTMA rather see suburban development in those highly sensitive areas (than in Mareeba), please do consider a similar Rail Tunnel Option from Redlynch to Koah (with drive on/off carriage and a ~2.3% incline).

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