



Climate
Change
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**Submission on
Concept Design of the Pacific Highway upgrade: Wells Crossing to Iluka Road**

sent by email to: wellscrossingtoiluka@skm.com.au

The Clarence branch of Climate Change Australia was formed as a local community group to respond to climate change issues. We aim to raise community awareness and responsibility about climate change issues and impacts, to encourage everyone to conserve energy and water, to promote the increased use of renewable energy and to lobby all tiers of government to implement genuine and effective mitigation and adaptation measures to address climate change.

Thank you for the opportunity to comment on the concept design of the Pacific Highway upgrade in the Clarence Valley. It is noted that the Pacific Highway upgrade is a government commitment aimed at addressing the very real safety concerns with the current road. Recognition of this fundamental aim is the focus in the following submission.

In the preparation of this submission, the following facts were also considered:

1. The NSW Government, in its Greenhouse Plan, recognises that the transport sector is a significant and growing contributor to greenhouse gas emissions in the state. In 2002, it was estimated that transport contributed 15% of total NSW emissions and that the amount of emissions had grown by 20% over the previous 12 years.
2. The NSW Government has committed to reduce greenhouse gas emissions by at least 60% by 2050. The European Union is pushing for reductions of at least 30-35% by 2020 and at least 80% by 2050. The head of the IPCC has recently stated that the world will have to reduce carbon dioxide emissions more drastically than has been widely predicted, even going into negative emissions by 2050 to avoid catastrophic disruption to the world's climate. As Australia's per capita emissions are among the highest in the world, there is an expectation in the international community that Australia must take responsibility to make drastic cuts in emissions.
3. Peak oil (i.e. the point when half the world's easy oil reserves have been exhausted) has in the headlines over the past few years. As a concept, peak oil was first described in 1956, and the majority of experts believe this point will be reached before 2015. Once this point is reached, the age of cheap road transport will start to disappear and, along with it, the demand for new motorways.
4. Recent research conducted at the Australian National University has re-defined the importance of forests as carbon stores. Forests sequester and store more carbon than any other terrestrial ecosystem, and constitute an important natural defence against climate change. One hectare of mature, tall, wet forest can store the equivalent of 5,500 tonnes of carbon dioxide (about the same as the annual carbon dioxide emissions from 1,300 cars). Even less productive dry forests and woodlands store significant amounts of carbon, in the woody biomass of big old trees, dead wood on the forest floor, and in the soil.

We believe this will be the largest of the Pacific Highway upgrade projects, involving longer sections of new road than even the major realignments in the Tweed Valley (to avoid the Burringbar Range) and north of Bulahdelah. When the above facts are considered, it is concerning that the concept design for this upgrade of the Pacific Highway appears to be 'business as usual' for the Roads and Traffic Authority (RTA), who are pushing ahead with the creation of a substantial new motorway between Glenugie and Tyndale, triplication of the existing highway along major sections of route through forest, seemingly without any regard to future constraints of a post carbon world.

It is almost as if the RTA has never heard of climate change.

Climate change should have been considered at the concept design stage, with the following matters taken into account:

1. It is widely recognised that higher vehicle speeds on highways contribute to increased fuel use (and to levels of both CO₂ and NO_x emissions). Most publications that provide hints on reducing individuals' emissions, recommend travelling at 90 km/hr on highways. It seems a ridiculous level of over-engineering then, that the RTA is still designing roads for traffic to travel safely at 110 km/hr. Peak oil is a consideration here: during the oil crisis of the 1970s, the US introduced a 55mph (88.5 km/hr) speed limit on all its highways to reduce fuel consumption. Several states still have this speed limit in place. Why can't Australia adopt this as the standard for highways?

As transport sector is a significant contributor to the state's greenhouse gas emissions, it must play a role in meeting the NSW Government's promised cuts in emissions. A reduction of speed limit from 110km/hr to 90km/hr would reduce average emissions on a long highway trip by approximately 15-20%.

This reduction in speed would also reduce fatalities on the highway (as response time is increased, and braking distances decreased).

2. Peak oil will change the way we transport goods and people around. Electric vehicles have a great potential to help reduce the impact of transportation systems on the environment. But it is important to remember that their adoption must be seen as a part of a larger process of moving toward a more sustainable transportation system, which will see greater reliance on rail. There is never likely to be a time in the future when a 6 lane highway will be needed through the Clarence Valley, and so the design of a typical cross section should not accommodate this future potential upgrade and reduce the corridor of disturbance.
3. The section south of Glenugie traverses a forested area, important for its flora and fauna. It is also an important carbon store. It is therefore surprising that the existing Pacific Highway's impacts will be tripled in this section, with the retention of the existing highway as a local road, and the construction of a new A class dual carriage highway. The justification to not use the existing the highway as one of the carriageways in the arterial standard highway is totally inadequate. It is as if the RTA just wants to clear more trees than necessary and increase the impacts of the upgrade!

Climate Change Australia calls for the protection of all intact forests along the route.

4. Fragmentation and erosion of habitat values will be most acute in the section between Glenugie and Tyndale. This would significantly add to the stressors on a number of threatened species and endangered ecological communities known to occur in the area. Climate change is one of these stressors. According to the Department of Environment and Climate Change, climate change may significantly affect native biodiversity by changing the distribution of species, modifying species composition, and altering the geographical extent of habitats and ecosystems. Species most at risk are those unable to migrate or adapt, particularly those with small population sizes, slow growth rates or low

fecundity. However the size of this risk on individuals and in individual areas is difficult to assess since it depends on the compounding effects of other pressures, particularly barriers to migration, changes in hydrology and pressure from weeds and feral animals. Programs to reduce pressures arising from such threats will help reduce the severity of the effects of climate change.

The endangered population of the coastal emu is one of the threatened species known to occur in the area. Climate Change Australia has been unable to find evidence of any highway in Australia in which a fauna crossing (whether underpass or overpass) has successfully protected emus from impacts of that highway. The RTA is in new territory here and the platitudes in the documentation accompanying the concept design do nothing to alleviate concerns that the new highway will be the death knell for the iconic coastal emu. We have no confidence in Stephen Davies' report and recommendations, given his lack of familiarity with the area, and the idiosyncrasies and cryptic nature of the coastal emu.

Before the potential impacts of the highway upgrade on emus can be assessed in accordance with legislation, many more years of ecological and behavioural research is required on the coastal emu.

5. Concrete as it is currently manufactured is an energy intensive material. After fossil fuels and deforestation, the manufacture of cement, the reactive ingredient in concrete, is the largest man-made source of carbon dioxide, estimated to cause over 5% of the world's CO₂ emissions. An Australian company (Zeobond Pty Ltd) has started to make geopolymeric concrete which promises to dramatically cut the carbon dioxide ordinarily emitted during production. The use of this concrete should become mandatory in all major projects such as the Pacific Highway upgrade.

In closing, we are disappointed that the RTA, unlike the NSW Government, remains ignorant of catastrophic climate change and peak oil scenarios, and how these will have dramatic consequences for the way we live, including our use of road-based transport. Regional economies do not benefit from the RTA's current model of a highway upgrade, as the highway users are travelling too fast to stop anywhere other than highway service centres, and the majority of local traffic is pushed onto the sections of old highway that are palmed off onto councils that don't have the resources to maintain it. We ask that the RTA joins forces with climate community groups to promote an alternative future role of the Pacific Highway in meeting our transport needs, in which the highway will not be the domain of juggernauts and cars speeding between Brisbane and Sydney. People and freight are more efficiently moved over long distance by ship or train.

As well as putting forward this new route for the Pacific Highway, we believe that the RTA is continuing to improve safety along the existing Pacific Highway because it is this road that will continue to take a large proportion of the traffic. It is presumed these safety improvements would be achieved through installation of median dividers, and provision of more overtaking lanes, breakdown lanes and hardened road verges. Climate Change Australia is supportive of these measures and does not understand why this program, including bypasses of Ulmarra and South Grafton, was not chosen as the preferred option for the Pacific Highway upgrade. An upgrade similar to the Cowper bypass would significantly reduce most problems with the existing highway while limiting its corridor of disturbance.

We therefore ask that the preferred route of the highway be reconsidered. We prefer for the highway to stay on the highway.

Janet Cavanaugh
Secretary, Clarence Branch
6 March 2009