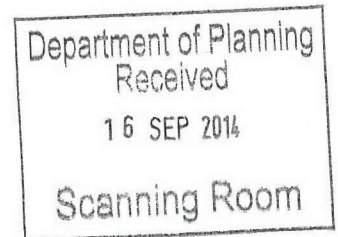


**From:** Malcolm Powell <powellsyd@ozemail.com.au>  
**Sent:** Friday, 12 September 2014 4:13 PM  
**To:** 'information@planning.nsw.gov.au'  
**Subject:** SUBMISSION on NORTHCONNEX PROPOSAL by Malcolm Powell - Application No SSI 13\_6136  
**Attachments:** Goldberg - Bias and Predetermination in Road Traffic Modelling - The Case of the F3 to Sydney Orbital Link.pdf; INFRASTRUCTURE SUBMISSION 14 OCT 08.doc

Director – Infrastructure Projects  
Dept of Planning and Environment  
Application No SSI 13\_6136  
Major Projects Assessment  
GPO Box 39  
Sydney NSW 2001

Submitted by Express Post  
and by email to  
planning.nsw.gov.au



Dear Sir

This submission is made to oppose giving ministerial approval to proceed with the NorthConnex proposal. The EIS for the NorthConnex proposal comprising over 3000 pages fails to examine or properly address in detail ( without spin) the following main issues

- 1- Need to use scarce NSW Gov & Federal government funding for real transport solutions – of greater importance following the GFC ( aka The Great Recession outside Australia)
- 2- The Western Option is the only real solution to provide the missing link in the national highway between the M1 and the M7 corridor (which has been wisely built in an uncongested travel requirement corridor)
- 3- Former NSW RTA influence in 'advancing' road projects which do not serve community interests – Now taken over by NSW Gov agency Dept of Planning & Environment ( DPE )
- 4- Need for integrity & transparency from government agencies when planning infrastructure such as major roadways – especially when considering alliance arrangements involving Gov (taxpayer) funding on final project costs. NSW road projects are notorious for underestimation of initial costs to 'spin' project acceptance.
- 5- How vested interests in the construction industry 'lobby' NSW Gov agencies to ignore community impacts causing high social costs
- 6- How efficiency & productivity improvement requirements from major infrastructure projects are ignored
- 7- How due process requirements under administrative law may be compromised – as evidenced by no cost/benefit analysis being disclosed for the re-branded NorthConnex proposal - evidencing possible 'thought bubble' planning.

8- Privatization issues – especially the issue of financing under ‘alliance’ arrangements with NSW Gov. without disclosure to meet transparency requirements such as project performance guarantees. (The Sydney Airport Railway was subject to a little known ‘performance guarantee’ which cost NSW taxpayers a reported \$800 million when usage was only a fraction of original estimated usage on which the privatized project was based).

9- Implied failure of representation at a political level - which has since developed into a Representation Crisis following recent ICAC revelations.

**10- Requirement for community involvement to properly deal with impacts on Health from pollution with high potential social costs**

These critical issues arising from the now reintroduced proposal as NorthConnex have not changed since the same proposal was extensively examined between 2002 and 2007. Information on the same proposal was submitted by me to the Pearlman Review in Jun 2007. The same information was again given to Infrastructure Australia in Oct 2008 in the attached submission when submissions were requested under well-presented guidelines as indicated. A paper prepared by Dr John Goldberg was also submitted to Infrastructure Australia as an attachment to this submission.

This again raises the issue of why the NSW Gov and its agencies appear to be misleading the affected community about the desirability of this unworkable and possibly unaffordable project (if proposal cost estimates are greatly understated ) is being presented as ‘State Significant Infrastructure’. There are three possible main reasons

- 1- The NSW Gov using the political importance of promoting the illusion that new roads will guarantee free flowing traffic.
- 2- The need to ‘govern by announcements’ with no cost benefit analysis being disclosed in a purchased EIS report in excess of 3000 pages for a No Solution project.
- 3- The need support requirements to maintain continuity of work for the construction industry & their consultants irrespective of outcomes.

Therefore, irrespective of any rational argument to the contrary, the NSW Dept of Planning on the basis of a questionable assessment process may feel compelled to determine (recommend) this costly and no solution project for ministerial approval. Such an outcome may indicate predetermination bias under government instruction.

**It is realized that ministerial approval for NorthConnex under current legal arrangements for NSW major projects does not have to fully & properly address the abovementioned critical issues for the NorthConnex proposal. This legal reality removes the need for any project approval authority having to consider huge social costs arising from an infrastructure proposal. Planning can then proceed under ‘thought bubble’ arrangements.**



**CONCLUSIONS** -The EIS Report of more than 3,000 pages used to advance the NorthConnex proposal for ministerial approval is flawed on the following key issues

- **It fails to deal with duty of care the NSW Gov must always adopt** towards protection of health issues like concentrating unfiltered tunnel through stacks. **The precautionary principle used in proper scientific analysis** must be paramount to meet this duty of care.
- Concentrated highly carcinogenic (cancer causing) fine particulate diesel pollution being spread over adjacent homes & high attendance schools up to a one kilometre radius from emissions stacks.
- As children are still developing their lung function they breathe more frequently & thus increase their lung intake of fine particulates. **Over 9,000 children & senior students attending 17 schools in the Wahroonga area alone will be affected.**
- The concentration of cancer creating diesel vehicle emissions before the fumes are exhausted through stacks creates unacceptable **Occupational Health & Safety hazards in the tunnel for truck drivers forced to use the NorthConnex tunnels**(especially when accidents or breakdowns occur).
- No Cost Benefit Analysis is presented in the EIS. **Any cost benefit analysis must include social impact costs** which may take lengthy time periods to manifest. Therefore fine particulate emissions from diesel powered vehicles may be seen as an emerging **new asbestos problem**.

When acknowledging this submission the details of methodology used to assess my submission would be greatly appreciated.

Yours Faithfully



Malcolm Powell

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# **SUBMISSION TO INFRASTRUCTURE AUSTRALIA**

## **ON BEHALF OF BEECROFT CHELTENHAM CIVIC TRUST INC.**

- 1 Reference to Submission Guidelines
- 2 Reference Framework and Scope of Submission  
relating to F3 to M7 Corridor Missing Link in National Highway  
as Major Community Impact Issue  
for Beecroft Cheltenham Civic Trust (BCCT) Submission
- 3 History of Infrastructure in Australia
- 4 Overview for Link from F3 to M7 Corridor  
with reference to Infrastructure and Productivity
- 5 Community Competence to Analyse High Impact Projects
- 6 Predetermination and Bias
- 7 Integrity of NSW RTA
- 8 Why Tunnel Proposal is No Solution
- 9 What is Real Solution
- 10 What are Health Risks of Road Tunnels
- 11 Air Pollution Exercise and Cardiovascular Risk
- 12 Conclusions

### **ATTACHMENTS**

- 1 Malcolm Powell – Personal Profile
- 2 Goldberg Abstract on Bias and Predetermination

Malcolm Powell  
Vice President (Strategy)  
Beecroft Cheltenham Civic Trust Inc.

14 October 2008 (revised submission)





**1 REFERENCE TO SUBMISSION GUIDELINES** – The Submissions Guide indicates the following areas of responsibility for Infrastructure Australia (IA)

- Current and future needs and priorities for infrastructure of national significance.
- Policy, pricing and regulatory issues impacting on infrastructure use.
- Impediments to efficient use of national infrastructure networks.
- Options and reforms to make infrastructure use more efficient.
- The needs of users of infrastructure.
- Mechanisms for financing investment in infrastructure.

To achieve these responsibility goals immediate tasks for IA are given as

- Conduct of audit to determine adequacy, capacity and condition of nationally significant water, transport, energy and communications infrastructure.
- Production of an infrastructure priority list.
- Production of nationally consistent guidelines for best practice for Public Private Partnerships (PPPs).

Further guidelines statements include

- Focus of IA is on infrastructure issues of significance to national productivity.
- The development of infrastructure to improve Australian standard of living must not come at the expense of environment and social issues.
- While physical and digital infrastructure is the focus of IA it is recognised that COLLABORATIVE INFRASTRUCTURE is critical to the 21<sup>st</sup> century economy.
- Submissions should be evidenced based.

## **2 SCOPE OF SUBMISSION WITH REFERENCE TO GUIDELINES** – Beecroft

Cheltenham Civic Trust Inc (BCCT) was established in 1964 to represent the 2119 community for the following purposes

- To protect the unique bushland and heritage character of the 2119 area.
- To work on a collaborative basis with local State and Federal Government agencies directly and through elected representatives as required to achieve this goal.
- Through research obtain required information to keep the 2119 community informed as well as community organisations in adjoining and other areas of Sydney on issues of community significance mainly arising from land use/transport integration issues.
- Make this information available through the BCCT website ([www.2119.org.au](http://www.2119.org.au)) and publication of newsletters and other material which now includes production of a DVD dealing with the critical health pollution issue for the Sydney Basin.
- Hold regular public meetings to promote community protection goals to promote involvement from the broader 2119 community and adjoining and other communities with which BCCT has developed long standing close working relationships.

This submission is made having regard to these broad objectives. As the submission is made for BCCT it requires concentration on the proposal to create a tunnel link under Pennant Hills Road to join the F3 with the M7 corridor via the M2 section of the Sydney Orbital Road System. This No Solution Tunnel Proposal would have devastating impacts on the Beecroft Cheltenham surrounding high quality residential land use areas with adverse outcomes for National productivity.



### 3. HISTORY OF INFRASTRUCTURE IN AUSTRALIA

Following the discovery of gold in the mid 19<sup>th</sup> century which was a watershed for migration and settlement in Australia, the need for infrastructure quickly emerged as a priority issue under emerging colonial self government arrangements. This historical development contained the following key elements

- It manifested government intervention on a scale unthinkable in Britain itself to allow the colonies to develop on a broader base to accommodate the requirements of a larger population.
- An enlightened approach by the Colonial Office in London facilitated financing requirements possibly in recognition of previous heavy handed responses to popular demands in the United States and Canada.
- Government was not excluded from the private economy and joined with it in a collaborative relationship which provided the infrastructure transport requirements for roads, rail and ports to allow the export of primary and mineral products which delivered a high standard of living and created an ongoing expectation for heavy government involvement for provision of infrastructure.
- For marketing of primary products this collaborative approach was also used under many historical examples of co-operative marketing and purchasing arrangements which develop to service particular primary production requirements. The co-operative movement was also extended to include building society arrangements for home purchase, provision of health care insurance and car insurance in the case of the NRMA which operated as one of the most successful specialist insurance companies in the world. These arrangements have been demutualised, privatised or otherwise removed to suit the economic rationalist ideology.
- This role of government for provision of infrastructure continued in various forms until the NSW Greiner Government embraced privatisation as a reaction to the unwise use of government funds for business enterprises in Western Australia and Victoria during the 1980s. Unfortunate outcomes coincided with the development of Thatcherism in the UK which created an ideological environment for experimentation with alternative PPP arrangements.
- The prime rationale for PPP arrangements was to protect Triple A credit ratings for government within a climate of economic rationalist ideology. This failed to properly recognise the huge gains that had been historically gained under collaborative arrangements previously put in place where government provided the infrastructure under which the private sector could flourish.
- It is difficult to understand why government would not have continued to maintain less costly debt funding arrangements for specific infrastructure to deliver high social cost benefits without prejudicing Triple A credit ratings. Adopting a collaborative approach with credit rating agencies would be required. Government financing also delivers intergeneration equity as future generations who benefit from the infrastructure repay the loans. This has previously occurred for government loan financing wisely deployed.
- Prior to emergence of these PPP arrangements government planners used outcome analysis which focussed upon public benefit and properly examined community impact tradeoffs. PPPs have brought about a paradigm shift from this position to an emphasis on toll revenue to fund the financing structures of the PPP Tollroads, which have heavy debt financing which may be more cheaply obtained from government financing sources.



## **OVERVIEW FOR LINK FROM F3 TO M7 CORRIDOR WITH REFERENCE TO INFRASTRUCTURE AND PRODUCTIVITY**

- The efficient operation of the Sydney Economy is an essential requirement for high National productivity as Sydney contains over 20% of the Australian population. As Sydney has expanded, the land use/transport integration issue for Sydney has created transport infrastructure problems which are beyond the funding capacity of the NSW Government to resolve.
- Lacking appropriate means to execute solutions the NSW Government has therefore resorted to planning and announcements to give the impression that this fundamental problem is being addressed for the efficient operation of Sydney as a significant international city making high economic contribution to Australia.
- Inner areas of Sydney previously used for port and warehousing facilities have now acquired a mainly residential land use. Required freight movements to and from the replacement Port Botany shipping facilities compete too much with road freight and commuter requirements for Sydney Airport facilities.
- Unfortunately the Federal Government made a bad policy decision with the privatisation of Sydney Airport which overlooked the serious congestion cost problems in that area of Sydney which restrict delivery of productivity improvements.
- The opportunity to move the main airport facilities (reported to directly and indirectly support 8% of the Sydney workforce) to a more suitable out of Sydney location has now been removed for the foreseeable future through privatisation.
- Newcastle has emerged as a further replacement port facility for Sydney requiring significant high growth freight movements to service Sydney growth. Rail facilities between Newcastle and Sydney are biased to commuter transport and have limited growth capacity due to integration problems with modern Sydney warehousing and distribution centres which have been established and continue to emerge in Sydney Western and South Western areas.
- For the efficient operation of the Sydney economy, the only real solution lies in building an outer western road and rail connection for freight movements planned to properly integrate with the modern warehousing and distribution facilities which are emerging around the M7 corridor.
- This real solution option will require the political decision making process to embrace visionary leadership under government financing arrangements previously used with much success in Australia. As availability of finance for privatisation will now be severely restricted as a consequence of the recent breakdown in global banking arrangements serious consideration should be given to the use of special infrastructure bonds to fund high capital requirements. Repayment by future generations who benefit from the infrastructure will deliver intergenerational equity.



## COMMUNITY COMPETENCE TO ANALYSE HIGH IMPACT PROJECTS

For road projects members of the community and community organisations cannot be expected to function as traffic planning experts or road construction experts. Unfortunately attempts to obtain traffic count and other expert information under FOI have been denied. The government bureaucracy responsible for these areas (DOTARS and/or NSW RTA for the Tunnel Proposal) must deal with these issues in an open and transparent manner under a regime of integrity. For the No Solution Tunnel proposal there is unfortunately widespread community belief that these requirements have not been met. This belief has been reinforced by:

- The Feb 07 announcement of a 'behind closed doors' Independent Review rather than an Open Independent Inquiry which was expected following confirmations given.
- The Terms of Reference for this Review making no direct reference to adverse community impacts where the community knowledge far exceeds the knowledge of road building planners and their consultant advisers **who only examine impacts in a planning context without living with the day to day outcomes of the adverse impacts.**
- Failure of process through Terms of Reference for the Independent Review not having been referred to community groups for consultation and input before announcement. Community groups in the Pennant Hills Road corridor and surrounding areas have clearly demonstrated to road building bureaucrats and relevant elected parliamentary 'representatives' since the proposal was advanced a desire to understand the processes used to arrive at the No Solution Tunnel Proposal.
- Evidence presented by community groups appears to have influenced a recommendation from the Pearlman Review Report which gave the surprising recommendation that planning for the Western (Option C) should begin now (Jul 07). This unexpected recommendation went beyond the restricted terms of reference for the review.

**6 PREDETERMINATION AND BIAS** – A community perception has developed that the No Solution Tunnel Proposal is an exercise in spin doctoring to create the appearance of presenting a solution. It does not address the issues of adding to existing congestion in the Pennant Hills Road corridor and increasing noise, pollution and road safety impacts. It is a No Solution Proposal advanced by SKM used wrong methodology based on an incorrect mix of private and heavy vehicles. Dr John Goldberg (University of Sydney, School of Architecture Design Science and Planning) has exposed these issues in his paper attached to this submission. This analysis and other papers by Dr John Goldberg analysing relevant issues are available on [www.arch.usyd.edu.au/web/staff/homepages/johngoldberg](http://www.arch.usyd.edu.au/web/staff/homepages/johngoldberg)

**7 INTEGRITY OF NSW RTA** - Tunnel construction would be the responsibility of the NSW RTA which unfortunately has a sorry record regarding underestimation of road project costs especially for tunnels. The NSW Audit Office 'Managing Air Quality' Performance Audit Report April 2005 (page 5) recommends that 'the RTA improve its estimation of the scope and cost of proposals particularly road tunnels.'

An example of NSW RTA underestimation of construction costs is provided by the NSW Albury External Bypass Road Project which was the subject of a Commission of Inquiry in 1996. It appears that the then Federal Minister for Transport The Hon John Anderson became concerned about cost estimates for the project which had greatly escalated from the original estimates. He appointed independent auditors which led to a revision of the original project analysis. This analysis resulted in a reversal of the original decision to build a road through Albury with high community impacts in favour of building an external bypass.



## **8 WHY THE TUNNEL IS NO SOLUTION TO PROVIDE MISSING LINK IN NATIONAL HIGHWAY**

### **Myth 1 – It will reduce traffic congestion on Pennant Hills Road**

The tunnel, with two lanes in each direction, after the reduction of the surface road, will only result in one extra lane in each direction. This will not alleviate traffic congestion, which through traffic induction, is continually increasing - mainly from heavy truck freight movement requirements.

### **Myth 2 – It will get trucks off Pennant Hills Road**

Trucks will not be forced to use the tunnel and will be prohibited from doing so if carrying dangerous goods. As the surface road will remain toll free, it will be preferred by larger trucks wanting to avoid lane space constraints in the tunnel.

### **Myth 3 – It will help local traffic**

Federal funding for the project requires a continuous tunnel with no openings for local traffic between the F3 at Wahroonga and the M2 at Beecroft. Local traffic will still use Pennant Hills Road and will compete with trucks for the reduced road space. (Once approved it is likely that the NSW RTA will ignore this requirement.)

### **Myth 4 – Toxic emissions will be filtered**

It is also a requirement of Federal funding that 'best practice filtration' be used. Experience with other Sydney road tunnels means that this will be interpreted as no filtration. The health of all residents along the corridor, especially the young and elderly, is at risk.

Further reference is made to toxic emissions under Item 10 of this submission (What are the Health Risks of Road Tunnels).

### **Myth 5 – The cost**

The recent Pearlman report estimates the cost of tunnel construction alone to be approx \$3.5 billion (\$400m per km at current costs). We know from the Lane Cove Tunnel that the actual cost was over ten times more, at around \$1billion, than the estimated cost of \$90 million. Construction costs are notoriously underestimated by the NSW RTA to get projects approved. Commuters end up paying huge tolls to use these roads. The cost of retrofitting a tunnel to a busy road corridor like Pennant Hills Road and the disruption to traffic and transport would make final costs well above current cost estimates.

### **Myth 6 – The tunnel will be safe**

Many examples from Europe, USA and Australia, most recently the Burnley Tunnel fire in Melbourne, outline the dangers of accidents and fires in road tunnels. If built this will be the longest road tunnel in Australia at some 8.4km. We have already had a bomb scare on Pennant Hills Road on 11Sep 07. What if this happened in the tunnel?

## 9 WHAT IS THE REAL SOLUTION

In her recent review of the process to recommend the tunnel, The Hon Marla Pearlman recognised the futility of the tunnel proposal and stated that it was **not a long-term solution**. Pearlman stepped outside the narrow and unsatisfactory terms of reference to recommend that **'a type C (Western) corridor be planned now'**. Federal Minister for Roads, Jim Lloyd in his 14 Sep 07 Media Release on the Pearlman Review, repeated this recommendation. Pearlman appears to understand that **only a western route will provide a real solution for the missing link in the National Highway**.

### What are the Benefits of a Western Option.

1. It is a more direct route taking traffic from the M7 at Dean Park near Blacktown to the F3 at Kariong near Gosford. This is where traffic from the newly developing industrial, warehouse and distribution facilities in Western Sydney needs to go. With the closure of Sydney Harbour as a working port, more road freight will be expected from the port of Newcastle.
2. It is some 20km shorter than the proposed tunnel.
3. It by-passes mainly residential suburbs and avoids the steepest and most congested sections of the M2, Pennant Hills Road corridor and the F3.
4. It is a surface road which minimises the impacts of pollution and noise, improves road safety, and reduces congestion and energy use from heavy trucks.
5. It requires a new crossing of the Hawkesbury River which is essential to accommodate growth in North West Sydney, especially when bushfires and accidents frequently block the F3. This strategic need is widely recognised by many including Judy Hopwood, Member for Hornsby in the NSW Parliament.
6. The required new bridge could be combined with new rail freight lines to avoid the need for additional freight lines from Strathfield to Hornsby. The Main North Line is old infrastructure with steep grades and tight curves making it unsuitable for the modern long, fast freight trains. It is now at full capacity and quadruplication of the lines has been proposed for which planning is proceeding for another no solution rail proposal.
7. Visionary leadership will be required to overcome the problem of PAST DEPENDENCE associated with attempts to upgrade the main northern line to handle increasing rail freight requirements between Sydney and Newcastle. A new western rail connection to link rail freight requirements with modern warehousing facilities in Western and Southern Sydney must assume priority in forward planning for rail freight to secure both productivity and energy consumption improvements. Different route arrangements may be required for road and rail both using the common bridge crossing.
8. In this planning process the links into Sydney warehouse and distribution centres from the proposed new freight rail link between Melbourne and Brisbane through Parkes need careful consideration to ensure delivery of real solutions.

It must be realised that if the proposed tunnel is built, the real solution Western Option C is unlikely to proceed. Federal Member for Berowra, Philip Ruddock stated at a public meeting in May 2005 that there would only be Federal funding available for one option. The current Federal Government would also face this reality. It is therefore important not to waste scarce funding resources on no solutions proposals such as the F3 to M7 Corridor Link via a tunnel under Pennant Hills Road to the M2 section of the Sydney Orbital.



## 10 WHAT ARE THE HEALTH RISKS OF ROAD TUNNELS

Health experts are seriously concerned about the impact of pollution and toxic emissions concentrated in stacks from road tunnels. It is known that this pollution is not dispersed into the air but falls to ground and is then spread by the prevailing winds, affecting people for some 2 km radius from the stacks. Stacks built for the Lane Cove and M5 East tunnels are inadequate and far too short to disperse pollution. Residents of Beecroft and Cheltenham together with our neighbours in Pennant Hills, Thornleigh and Normanhurst will suffer this pollution. Not only will people who live and work along the corridor be affected, there are some six high enrolment schools along the corridor so our children's health will be adversely affected. Research has shown that twice as many people die in Sydney from the effects of vehicle emission than from road accidents yet these social costs are not considered when road tunnels are planned.

Health impacts of vehicle emissions include:

- Cancer causing (carcinogenic) ultra fine particles from diesel emissions
- Increased incidents of asthma and lung diseases
- Increased risk of heart disease

### A CAUTIONARY TALE

A study by Dr Nicholas Mills and others (in the New England Journal of Medicine on September 13, 2007) investigated why exposure to traffic pollutants causes unfavourable responses in the heart and blood vessels.

### THE INSIDIOUS NATURE OF DIESEL FUMES - A brief outline of Dr Mills article

Volunteers with stable known coronary heart disease had their heart muscles, vessels and clot-reducing agents monitored while breathing dilute diesel exhaust fumes at a concentration routinely experienced when driving in traffic.

The effect on the heart muscle was measured immediately by ECG traces during the tests. Changes in calibre of the vessels and the tendency for clot-formation were measured six hours after the exposure. Researchers found that, when the test participant was breathing diesel fumes, the heart was less able to keep up with its oxygen requirements and the blood vessels' natural defences against clot-formation were reduced.

**Mills findings have an obvious significance for public health.** The world health organization (WHO) estimates that air pollution is responsible for 800,000 premature deaths worldwide each year. This study recommends: **“Environmental health policy interventions targeting reductions in urban air pollution should be considered in order to decrease the risk of adverse cardiovascular events.”**

Commenting on the study's findings, Dr Murray A. Mittleman (M.D., Dr.P.H.) sends a simple cautionary message:

Be careful where you exercise.

## 11. AIR POLLUTION EXERCISE, AND CARDIOVASCULAR RISK

**“A recent scientific statement from the American Heart Association concluded that **transient changes in air pollution are associated with a short-term increased risk of cardiovascular disease and death.**”**

Perhaps the contaminants cross the lung lining, and get into the blood directly to cause the harmful effects. Perhaps lung reflexes alter the calibre of the coronary artery, increasing the risk of irregular heartbeat and the risk of dislodging plaque that can block the artery. Or the increased risk (which starts early and can last for days) may be due to stressed lung tissue causing inflammation elsewhere and re-setting the blood's tendency to maintain clots.

These acute responses to an episode of particulate air pollution occur in addition to any chronic cardiovascular problems arising from other background pollution. Whatever the mechanism might be, the study suggests that breathing high levels of air pollution during exertion heightens the risk of triggering a sudden heart attack. The study specifically investigated the effect of concentrations of particles and gases that are typical of diesel fumes in urban traffic flows, on subjects who had already suffered heart attacks of varying severity.

Since a first heart attack can be fatal and since a predisposition towards clot formation often goes unnoticed, even the fittest are wise to avoid wherever possible any unusual exertion close to traffic.

### **HOW THIS IS RELEVANT TO THE PROPOSED ‘NO SOLUTION’ TUNNEL LINK IN THE NATIONAL HIGHWAY OF THE F3 AND THE M7 CORRIDOR**

If health matters to us, reductions in urban pollution must be urgently achieved, not merely considered. Diesel fumes are a direct and immediate threat to our local community, especially to those with a history of heart disease. The inevitable traffic induction, increasing the number of diesel powered heavy trucks for freight movements and their highly carcinogenic pollution has not been properly considered. Above all independent health authorities need to keep promoting the need to apply the precautionary principle as a public health safeguard. Government authorities (especially the NSW RTA) must adopt the precautionary principle and not wait for evidence to pile up of these adverse medical conditions which can take up to 40 years to manifest.

We have a responsible, well educated community in the North West area of Sydney that appreciates this issue. Our unique local environment and healthy lifestyle deserve protection. As no leadership seems forthcoming on these critical issues from elected parliamentarians, the community needs to demonstrate leadership from the grass roots. The Beecroft Cheltenham Civic Trust (BCCT) aims to bring into focus the underlying issues that are driving projects in our local area. At present, this process is clearly not working for community benefit



## 12 CONCLUSIONS

- The proposed tunnel to link the F3 with the M7 radial segment of the Sydney Orbital Road System is a No Solution Proposal which will not provide the necessary infrastructure required as the missing link in the National Highway.
- The No Solution Tunnel Proposal will not contribute to the efficient operation of the Sydney economy and will not deliver productivity benefits.
- Efficiency and productivity benefits will only come about from a real solution western (Option C) link for which the Pearlman Review recommended that planning should commence now (Jul 07).
- The integrity of the NSW RTA methods for assessment of large scale road infrastructure projects should be reviewed under open transparent arrangements.
- The issue of bias and predetermination for review of major road projects leading to misuse of government funds for competing national infrastructure projects needs close examination under competent review arrangements.
- At high political level there is need for visionary leadership to properly understand the need for real solutions to handle the difficult land use / transport integration issues associated with the development and efficient operation of the Sydney economy with significant national implications.
- Visionary leadership must consider returning to special government bond financing arrangements using funds raised for specific projects capable of delivering efficiency and productivity improvements.
- Required visionary leadership must properly factor in the role of lobbyists acting for vested interests in bureaucracy, construction and finance.
- The collaborative role of community groups must be properly accommodated in project planning to identify community impacts which seriously influence health and general lifestyle in areas where high quality housing land use has been long established.
- The air current system in the Sydney Basin must be considered for major infrastructure projects which may adversely affect public health through vehicle pollution.

**Malcolm Powell 14 October 2008**

## **MALCOLM POWELL – PERSONAL PROFILE**

Following completion of NSW Leaving Certificate (Dux of School) in 1959 attended University of Sydney to complete Economics Degree as Commercial Trainee with large Australian industrial supply public company. Through special training programs in Finance Division reporting to Chief Executive Finance gained extensive financial management knowledge required for the operations of a national company. Further training included 12 months intensive company overview training program to gain detailed understanding of company operations. Appointed Internal Auditor when this training was completed.

After 6 years commercial and financial management experience entered the insurance industry in 1966 and established own insurance broking company in 1969 which specialized in arrangement of business and commercial insurance covers. For over 25 years, this business specialised in arrangement of mainly difficult to place liability risk and other special insurance covers which required development of required risk management assessment skills.

Have undertaken since 1974 a wide variety of projects assignments obtained through network of business contacts developed through operation of insurance intermediary business. This involved mainly turnaround management issues for a variety of business operations. Since 1998 have mainly concentrated on the establishment of a company supplying equipment to the mining and quarrying industry. Currently direct and develop this company in the role of Commercial Director and major Shareholder.

Have long experience in design and maintenance of financial management systems for ongoing cashflow management using computer based systems. Business skills also include design and management of practical business models with special emphasis upon business to business marketing and servicing arrangements using computer based systems.

### Community Participation

Commenced in 1969 living with wife Fran and two children (Natasha and Benjamin) in Beecroft Sydney, which enjoys a unique bushland and heritage character. Since 1970 have been heavily involved in local community organisations. Currently an elected committee member of the BCCT (Beecroft Cheltenham Civic Trust Inc.), holding the position of Vice President (Strategy). Have special interest in role of government in community issues, including public policy issues arising from conflict of privatisation interests with community interests.

### Professional Membership

Senior Associate Australian and New Zealand Institute of Insurance and Finance (ANZIIF) (Membership can only be gained from completion of 12 subject Diploma completed in 1994). Completed in 1997 further ANZIIF Diploma in Business with Honours in Finance and Marketing

Member of Sydney Chapter of USA based Turnaround Management Association (TMA) since 2004 when established in Australia.

14 October 2008

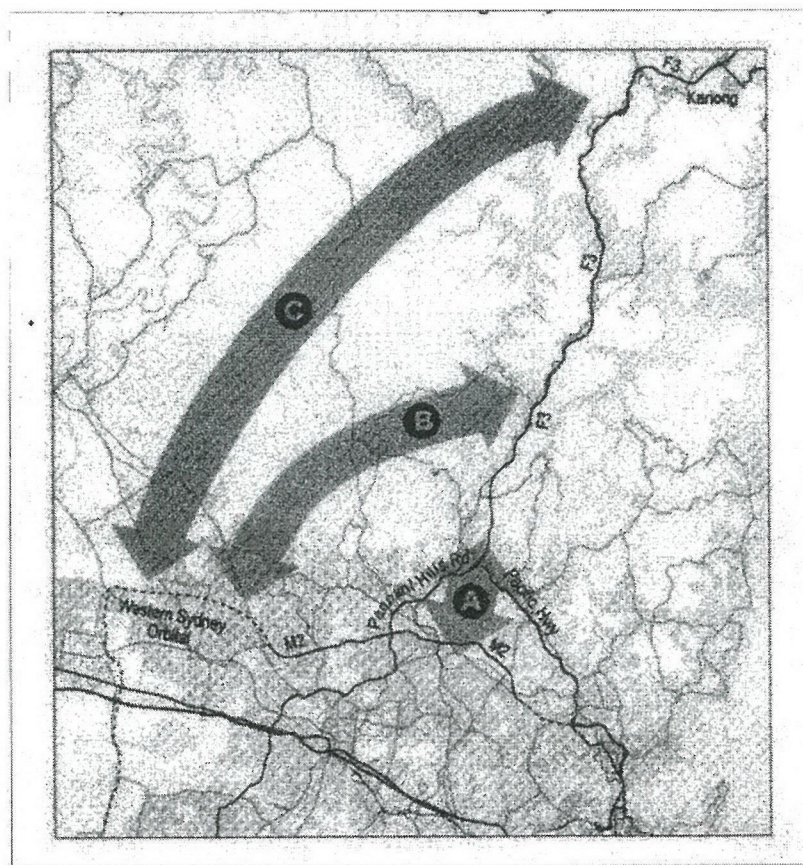


# **BIAS AND PREDETERMINATION IN ROAD TRAFFIC MODELLING – THE CASE OF THE F3 TO SYDNEY ORBITAL LINK**

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## **ABSTRACT**

The broad corridor options for the orbital link road are specified as **A**, **B** and **C** in **Figure 1**. Sinclair Knight Merz (SKM) favour the **A** options, which involve tunnels under existing roads including Pennant Hills Road. The promotion of the **A** options is shown to depend on the incorrect use of the four-step transport model particularly in relation to the key issue of heavy vehicle traffic. The bias introduced by such use is consistent with a bureaucratic predetermination to favour the tunnel options.



**FIGURE 1.** The three broad options A, B, & C for the proposed F3 to Sydney Orbital Link (SKM, 2004). This paper is concerned with the treatment of option A which involves tunnels under existing roads.



## 1. Why the model output cannot be relied upon

The agreement between modelled and observed traffic flows at various locations in the existing road network is shown in Table 4.1 (Appendix A) of the study. For example, RTA counting stations 74.200N and 74.200S monitor the F3 freeway at Edgeworth David Road, Wahroonga. The accuracy of the agreement is impressive. What has been carried out is a **calibration** of the model. But calibration of a transport model is different from its **validation**. The calibration process uses traffic data to verify that the model can reproduce accurately the same traffic disposition in the network as that used to develop the model. Validation on the other hand involves verification that the model will produce the correct future output, at the same level of confidence for an independent set of input data. In the present case it is required that the model output produces the traffic flows and their distribution among cars and heavy vehicles in the tunnel link which were not part of the data used to generate the model.

How then can the model be used to predict tunnel usage and the ratio of heavy vehicles to total traffic? The answer to this question is not given in the study, nor can it be given.

The calibrated model is deficient in another aspect. It has not, in its formulation, distinguished between heavy vehicles and cars. Yet in a four-step model, as used in the study and summarised below, it is required, according to **STEP 3** (see Appendix) to introduce a value of modal split between the two types of vehicle. The RTA monitors do not make this distinction between heavy vehicles and cars either, making it easier for SKM to calibrate a deficient model.

Perhaps the bureaucracy holds the simplistic view that if the tunnels were to be built, all heavy vehicles will use them, leaving Pennant Hills Road to cars. But if the private sector were to be involved, the matter of toll diversion would arise. Although figures for diversion are given, they do not distinguish between cars and heavy vehicles. Heavy vehicles are more likely to avoid the toll, encouraging these vehicles to continue using Pennant Hills Road. But it does not really matter whether the model evaluates diversion or not, because its output is comprehensively flawed for the reasons already given.

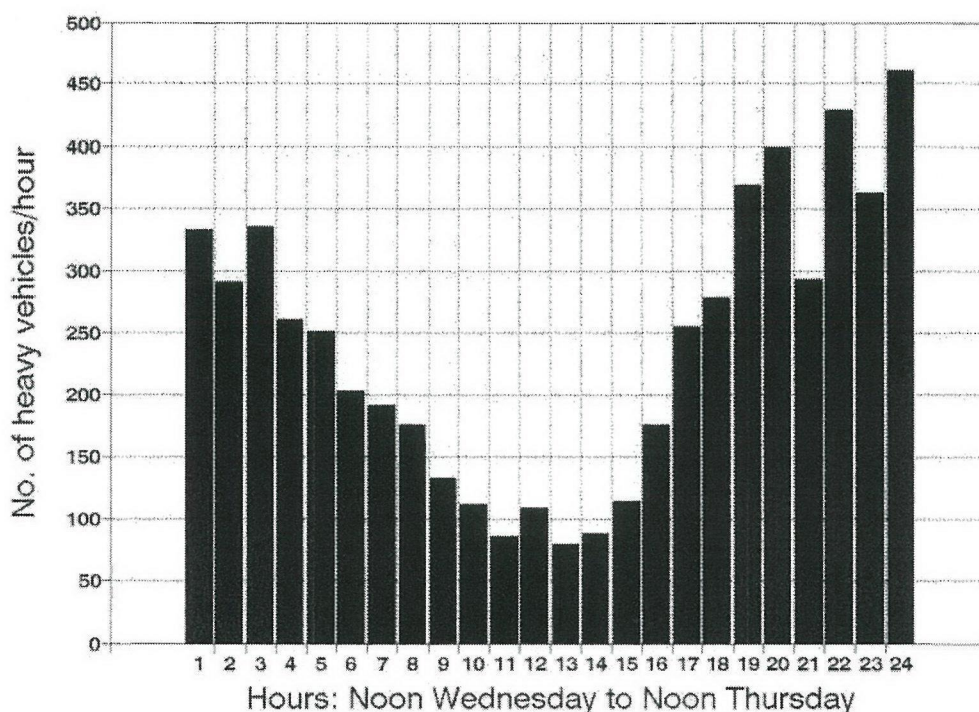
Nevertheless, the matter of modal split is the key issue on which other factors depend: relief from traffic noise; the design of emission stacks and filtration; and the level of service<sup>1</sup> for motorists and heavy vehicle drivers.

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<sup>1</sup> According to AUSTROADS (1988), level of service is a qualitative measure specifying conditions in traffic flow. There are six levels ranging from free flow to flow breakdown. These levels involve consideration of speed, freedom to manoeuvre, comfort, safety and convenience. On Pennant Hills Road, for example, it is a matter of common experience that the level of service is generally poor for motorists because they have to compete for road space with heavy vehicles. Thus, a specific value for lane loading (vehicles per lane per hour) for which the traffic stream consists of cars only would correspond to a higher level of service than the same value for cars mixed with heavy vehicles.



The authors of the SKM study were clearly aware of the heavy vehicle problem. For example, on page 110, the heavy vehicle count on the F3 in 2002 is quoted as 7000 /day. This corresponds to an average hourly volume of 292. Independent counts obtained in 1989 by community groups living near the F3 showed an hourly average of 241. But these averages conceal very large variations in the HV counts. In the latter case the minimum was 71 and the maximum 461. This data is illustrated in **Figure 2** below.



**FIGURE 2.** A typical set of heavy vehicle counts in both directions along the F3 Freeway at Wahroonga during midweek the year of opening (1989). Data by courtesy of Less Expressway Noise (LEN) [Filename: Traffic 2H2WTRK].

The SKM study would have been expected to show the existence of similar large fluctuations, but it failed to do so. Obviously the larger values will correspond to a reduced level of service compared with the smaller ones.

## 2. The Albury External Bypass Road

There are remarkable parallels between the bureaucratic treatment of the Albury external bypass route and the F3 to Sydney Orbital Link. Both projects were the subject of bias, although as is shown below, in the case of the Albury bypass road, the bias was fortunately corrected.

In 1996, a Commission of Inquiry was jointly established between the Victorian and NSW road authorities to evaluate the case for a road to bypass Albury on the border of NSW and Victoria.

Evidence given by SKM to the Commission favoured the highway route through the centre of Albury rather than by-pass the town. The author gave evidence that as the calibrated model did not include the bypass, the potential usage of the bypass by heavy vehicles could not be satisfactorily established. Despite this evidence, the Commission rejected the case for the bypass on the grounds of cost and this affected the economic performance in terms of benefit-to-cost ratio. This decision meant, inter alia, that the Albury community was denied some relief from heavy vehicle noise at night, even though a survey had already established that sleep disturbance was a very significant problem. This example shows how a biased model can have serious environmental consequences.

In 2001, independent auditors appointed by the then Minister, the Hon. John Anderson, discovered "several serious flaws in the original traffic and economic analysis". The original cost estimate for the internal route was found to be seriously biased. The original cost was claimed to be \$200m in 1998 but in 2000 the cost was \$500m. Revision of the analysis led to reinstatement of the external bypass. (Statements by Hon. John Anderson, then Minister for Transport and Regional Services).

### **3. Concluding remarks**

This paper has summarized objective reasons why the **A** options should be abandoned. It is unfortunate that AUSROADS, apparently impressed with the SKM findings, has come to the demonstrably erroneous conclusion that the **A** options are preferred.

However, the bureaucracy needs to understand that it is not in the public interest to accept unsound technical arguments in dealing with such an important issue as the establishment of a section of the national highway route. Such acceptance would lead the public to believe that there is an unstated agenda involved in the choice of routes and a predetermination to proceed irrespective of any contrary arguments raised.

5 March 2006



## **APPENDIX**

### **SUMMARY OF THE FOUR STEP MODELLING PROCESS**

#### **STEP 1 : Trip production/attraction**

1. Divide region into zones. Use survey to identify the travel characteristic of each zone.
2. Determine where journeys begin and end
3. Determine factors which influence trip generation
4. Establish the main corridors of movement

#### **STEP 2 : Trip distribution**

Having determined the number of trips produced (or attracted) by the various zones, these must then be distributed among the various zones-answering the question in STEP 1 (2): where to?

#### **STEP 3: Modal split**

→Specify modal split between heavy vehicles and cars.

#### **STEP 4 : Trip assignment**

What route - minimum time and distance paths?

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