F3-M2 PROPOSED LINK

STEP Position Paper June 2002



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Recommendations

Recommendation 1: Travel demand is a transport issue, not a road issue. As such, the study needs to be undertaken as a transport options study, not as a road study. One option that must be comprehensively investigated is shifting some of the travel demand onto mass transit (and the investment of the money into this option). To do otherwise is to ignore the fundamentals of transport planning.

Recommendation 2: This proposed link cannot be looked at until a more comprehensive strategy is put together on how our region, and Sydney overall is planning integrated transport solutions in light of population projections. While these may include a highway link, we need a total transport management response, and a more long-sighted plan before subsidising roads such as the proposed link.

Recommendation 3: Sinclair Knight Merz must take into account recent studies being done overseas that show that 50-90% of new road capacity is filled with new traffic within five years during peak hour (due to the fact that road building influences travel behaviour and sees significant rises in traffic growth rates). Current modelling techniques used in this country fail to adequately address the extent of this 'induced traffic' and so overestimate the benefits of additional road capacity.

Recommendation 4: The feasibility study must *explicitly* note the substantial rises in vehicle use and therefore total vehicle kilometres driven that occur when a new road is built. It must also be explicitly stated that such a step contradicts State Government policy, which is to reduce total vehicle kilometres driven in the Sydney basin. Unless these two interrelated issues are made clear in the community consultation process, the public is responding without a true picture of the wider impacts of road building.

Recommendation 5: This road cannot be built as a 'solution' to freight demand until New South Wales has a comprehensive strategy on how to incorporate the forecast doubling of freight by 2020. This State has been promised a comprehensive freight strategy for a decade now, and there is still no sign of it.

1. Introduction

This position paper has been written by STEP Inc. in response to the Federal Government funded investigation into a link between the F3 freeway and M2 tollway, associated with the construction of the Western Sydney orbital road. STEP Inc is a community based conservation group of some 400 members from the area of Ku-ring-gai and surrounding suburbs.

Study Schedule

While the idea of a link road in this region is not a new one, dates relating to the most recent study of a link proposal are listed below:

4 Jan 2001 Federal Government issues media release announcing that the Western Sydney Orbital 'underway' (subject to determination of the Environmental Impact Statement). Total cost of project \$1.25 billion with \$350 million of this funding coming from the Federal Government and the remainder from the private sector.
 4 Jan 2001 Concurrent release announcing the allocation of \$1 million for a study into a proposed link between the Orbital and the F3 freeway.

March 2002 Study into proposed F3/M2 link commences.

The initial study into link options is expected to last the rest of the year. As at June 2002 the study is in its scoping phase, and there is 'no firm agenda for link route options'. The only information provided for the community to comment upon at this stage is that of the study area -extending from the Newcastle Freeway (F3) at Kariong on the Central Coast, to the northern section of the Sydney Orbital, from Dean Park in the west, to the M2 tollway at Lane Cove in the east.

The study is being conducted by Sinclair Knight Merz, who invite community comment at their website (http://commcons.skm.com.au/f3tosydneyorbital). Both Federal and State governments have stated that the abandoned freeway corridor along Lane Cove Valley and South Turramurra (known as the B2/B3 corridor) is not under consideration as a surface road link. Some options that *may* result from the scoping phase (based on previous studies) are widening Pennant Hills Road, a tunnel under Pennant Hills Road or a tunnel under South Turramurra. Given that no firm options are yet being released to the public this paper looks at the link in terms of its implications for traffic management, sustainability and environmental issues that in many cases will affect residents wherever it is located.

Residents of the Sydney region list traffic congestion, pollution and noise as areas of major concern in their lives². Any transport construction project must take into account where people will live and work and needs to provide a means of sustainable travel opportunity into the next few decades and beyond. Any project that would see increased car use and inappropriate

¹ Media Release John Anderson 5 April 2002

² EPA 2000 p 6

development patterns would ultimately result in worse congestion, noise & pollution for Sydney's residents.

Current population growth rates indicate that our population will double in 36 years. Planning needs to take place now that considers the type of city that we provide for ourselves in the future as well as for the generations which follow us. Projects such as the proposed link only consider very short term time frames, simply shifting the bottlenecks around in our transport system and fail to address the greater planning implications of current population growth.

This position paper investigates issues such as these that we believe the consultants, government bodies and residents must consider in relation to the proposed link.

2. The issue of congestion: why directing more traffic into the city is not a sustainable transport solution

'What you have to face up to is the fact that you will never clear the bottlenecks by putting in more lanes or increasing capacity'

- Professor Ross Blunden, foundation professor for Traffic Engineering UNSW-

STEP points out that an F3/M2 link road would ultimately stimulate unsustainable rises in traffic on the road network in the region. Studies of peak hour trends in the United States have shown rises in traffic following a road capacity increase fill 60-90% of the increased space within five years³. When the highly regarded Surface Transportation Policy Institute in the United States analysed the traffic data of 23 cities in the US they found that 'travel delay is actually higher on average in the 23 metro areas that built the most roads'.⁴

This rise in traffic is known as induced traffic. It is caused by changes in travel behaviour and land use changes that happen when a road is built. Changes include shifts from public transport to driving because of the easier (in the short term) journey. Adding to road capacity also encourages commuters to take longer trips and new vehicle trips that they wouldn't have taken otherwise. People travelling to work leave later, because of the temporarily eased congestion (extending peak hour). After a relatively short time, these trends see traffic volumes building up on the new road, and it too becomes congested.

The assertions in the U.S studies are borne out by Sydney's experience with recent transport projects. When the Mays Hill –Prospect section of the M4 opened, induced traffic saw 23,000 vehicles extra per working weekday using the M4 and Greater Western Highway combined. Similarly, when the Sydney Harbour Tunnel opened, it resulted in a 21.5% increase over three years in traffic across the harbour⁵.

It is undeniable that there would be a short term easing of congestion on the Pacific Highway and Pennant Hills Road if the link were built. It is also undeniable in the face of the figures above that very quickly these short term gains would be negated by the increase in driving induced by the link.

³ VTPI p7 (6 other studies showing similar levels in the rise in total vehicle kilometers travelled following road capacity expansion are shown in this document)

⁴ STPP n2

⁵ State of the Environment report 1997 p 426

The link would also see a significant rise in the number of people commuting between the Central Coast and Sydney as commuting between the cities becomes more feasible (in the short term only). Road capacity expansion has a significant impact on land use patterns⁶ – and the new link would generate a new round of land developments on the Central Coast. Such developments would occur in a dispersed car dependent style (rather than the hubs that occur around rail corridors). As will be seen further in this paper, commuter numbers from the Central Coast into Sydney are already substantial, and are likely to rise considerably with 80 000 new residents projected for the area by 2021.

Planning NSW has urged the need for infrastructure that will result in 'compact cities' on the Central Coast, and caution that 'planning can open up or reduce opportunities to use viable alternatives to the private car'⁷. There is a plethora of evidence both here and overseas that shows that road infrastructure encourages dispersed, car dependent style land use development. It is clear that a link would result in irreversible land use patterns that are neither compact nor sustainable.

The rises that would occur due to induced traffic and the influence of a link road on Central Coast travelling patterns, hold major implications when looking into a link's feasibility. In particular, any road link that swung towards the Lane Cove area would funnel an unacceptable amount of traffic inward to the city — a city already unable to handle present levels of congestion and air pollution. A link swinging towards the city would also add significantly to levels of congestion in Chatswood and the CBD. In a relatively short time, once the link was itself congested, drivers would spill back onto the Pacific Highway, Pennant Hills Road, the Comenarra Parkway, the Arterial Road etc. The result will be far more total vehicle kilometres overall in the region, and ultimately more congestion on all the roads of Ku-ring-gai and the North Shore than we now have.

3. Population projections for Central Coast and North West Region : Implications for transport in the region

3.1 Central Coast

The Central Coast currently houses 293,000 residents. This is the fastest growing area of the Greater Metropolitan Region, with population projections suggesting that the region will have to accommodate about 368,000 residents by 2021 (an increase of approximately 80,000).

These projections hold major implications for accessibility and transport issues in the region, particularly given that current infrastructure is not even providing adequate transport choice for the existing population. The government's own documentation admits that for the majority of Central Coast residents at present there is 'no real choice other than to own a car'⁸, and they have perceived a need for a high speed link between Newcastle and Sydney to redress the imbalance between road and rail use for these commuters. Clearly the Central Coast will need greatly improved mass transit options to manage the projected population growth of 80,000

⁶ For example, Laird/Newman 2001 p53

⁷ Planning NSW 2001 p3

⁸ Planning NSW 1998 p 19

residents over the next 20 years if the Greater Metropolitan Region is not to face increases in pollution and congestion costs.

Due to shortfalls in jobs in the region, a large proportion of Central Coast residents are forced to commute to Sydney for work (approximately 30,000 commuters). The majority of these commuters do this trip by private motor vehicle on the F3 and spend at least two hours per day commuting.

The local Economic Development Board estimates that one third of the labour force is exporting its skills outside of the region daily and there is recognition that current travel patterns carry 'significant social, environmental and economic implications for the region'.

With the government having produced several documents in recent years linking rising vehicle kilometres to air pollution and congestion¹⁰, clearly an integrated transport system is required if pollution and congestion costs are not to increase sharply as a result of population pressures in the region. Any road based solution to current traffic problems must be coupled with significant improvements in rail options or risk exacerbating rather than alleviating the current transport problems in the region.

3.2 North West Region

Aside from the implications of Central Coast population growth, the link must be regarded in the light of the North West sector of Sydney, upon which it will certainly impact. Poor or no public transport infrastructure in many areas of the sector currently sees car use at unsustainable levels. More than 75% of residents in this area use a private motor vehicle for the journey to work - indeed in the Baulkham Hills area, 85% of residents use their motor vehicle for this purpose 11. A link road would only exacerbate this trend, with short-term time gains quickly negated as the link encouraged even more car use (as we showed in our comments about induced traffic occurring when road capacity is increased). Even aside from the attendant pollution concerns associated with such a level of car use, quite simply this area cannot feasibly sustain the current imbalance in transport mode share given the huge rise in population planned for the next 20 years in the area.

This sector of Sydney, served only by poorly utilised private bus services by way of public transport, will see 140 000 new residents (12% of Sydney's total population growth) moving into the area by 2026¹².

Even the major motoring association, the National Roads and Motorists Association (NRMA) has been calling for investment in mass transit in the area, urging that 'current high levels of car reliance within the region can not be accommodated without a significant decline in the environmental and urban amenity of the region in the long term' ¹³.

⁹ Central Coast Moving Forward website

¹⁰ Examples include Action for Air, Integrated Transport Strategy.

¹¹ North West Rail Link p 10

¹² Quoted in North West Rail Link Overview Report p 4

¹³ NRMA 1996 p 27

3.3 Car dependence: how it impacts on the region

Traffic Growth on Key Regional Roads				
	1993	1999	% increase	
Pennant Hills Road	35,816	65,046	82%	
Old Windsor Road	15,421	32,907	113%	
M2 Motorway	n.a	68 850	-	

RTA Traffic Volumes Data 1993 and 1999

The table above shows that traffic levels on some of the major roads in the region have increased by an average 100% *in six years* – which translates to an approximate rise of 10% annually. The rises indicated are clearly unsustainable both in terms of land use issues (car use encourages dispersed development patterns) and pollution implications arising from the increase in vehicle kilometres travelled (discussed in numerous government documents but particularly in Action for Air¹⁴).

Such trends indicate that if a link road is built its benefits would be negated within a very short period - and then there would be pressure for another road, or another re-widening. Rather than a stop-gap measure, trends such as the ones below need *traffic demand management* responses and an investment in mass transit investment to allow people travel choice that is sustainable, can cope with the growth in people's travel needs and doesn't lock Sydney's residents into travel patterns which result in rising pollution and congestion.

4. Environmental values – bushland, noise, air pollution

Having touched very briefly on environmental concerns above, this section of the paper looks in more detail at bushland, noise and air pollution issues associated with transport.

4.1 Bushland

One of the options previously considered in studies was a surface road through South Turramurra and the Lane Cove Valley. Although the current study will not be canvassing a road along this corridor, STEP wishes to point out that any option that would involve the destruction of large amounts of bushland (for example at tunnel entrances or exits) is unacceptable. Bushland needs to be preserved in reserves large enough to make species survival viable. The bushland in this area has already been significantly compromised by the construction of the M2.

The bushland in the Upper Lane Cover Valley houses a vast number of flora and fauna species. A recent study found these included 500 native species of flora, numerous native mammal

¹⁴ EPA 1998

species (including the brushtail and ringtail possum, sugar glider, long nosed bandicoot and echidna), 17 frog species, 20 kinds of lizard, 2 turtle species and 172 bird species¹⁵.

The bushland also provides amenity, recreational activity and pleasure to thousands of Sydney residents due to its proximity to the suburbs of Turramurra, Wahroonga, Hornsby and surrounds. Through the Bushcare programme there are some 650 local volunteers caring for 160 sites in the Ku-ring-gai municipality. These volunteers contribute 13,000 hours of unpaid labour each year in caring for local bushland ¹⁶. There is a large number of residents who regularly use the 16 walking tracks through the bushland for recreation.

Aside from the bushland removed for a link, a major road through this area would impact on drainage patterns along the valley system.

Importantly, the bushland in the area local to Ku-ring-gai and Hornsby constitutes an urban remnant of bushland of exactly the type that <u>State Environment Planning Policy 19</u> was set up to preserve. The policy specifies that the preservation of urban bushland is particularly important in 'locations that are readily accessible to the community'. It also urges the retention of 'parcels of the size and configuration which will enable the existing plants and animal communities to survive in the long term.'

4.2 Noise

Road traffic noise is one of the most widespread and growing environmental problems in urban NSW
- State of the Environment Report 2000-

'At this moment in time we are considering moving as I cannot see this problem being fixed'
-North Rocks resident affected by noise arising from the M2 tollway 1998-

It is extremely unlikely that the proposed link would be in the form of a surface road – however given that there are not yet fixed options to which STEP can respond, the issue merits some comment. The negative experience of other Sydney communities with respect to road related noise pollution does not instill confidence in STEP that freeways through residential areas can have their noise levels mitigated to a level about which residents feel comfortable.

There are numerous instances tabled in the NSW Parliament over the past decade of residents having to fight over many years to gain additional noise mitigation measures when those provided proved hopelessly inadequate. Despite assurances at the time of construction of the M2 that residents would not be adversely affected by noise, many suffered unacceptable noise levels- one resident wrote 'noise occurs 24 hours per day and is particularly evident from engine and exhaust truck noise... the noise is getting progressively worse' ¹⁷.

Residents nearby the F3 were forced to form a resident's action group in order to have retrospective measures taken because the Roads and Traffic Authority's own measures were inadequate. Ultimately the level of unacceptable noise cost an additional \$5.4 million in soundproofing the F3 at Wahroonga. In the case of the F5, the Member for Campbelltown

¹⁵ Martyn 1994

¹⁶ Ku-ring-gai Council 2002

¹⁷ Hansard Vol 267 p8778

fighting on behalf of unfortunate constituents received the response from the RTA that 'funds to control noise will be limited and cannot significantly address this issue' 18.

In every one of these cases, residents were forced to fight for their right to live without disturbing levels of noise, despite Roads and Traffic Authority assurances in pre-construction documents that residents would not suffer unacceptable noise increases.

4.3 Air Pollution

Motor vehicle related air pollution in this city sees Sydney's residents frequently breathing in pollutants at levels that fail World Health Organisation standards. While catalytic converters and improved fuel efficiency have seen a decrease in some pollutants, the rise in car use in Sydney has seen many of these gains negated. A recent report showed that for many pollution types Sydneysiders are producing higher levels per capita than New Yorkers and Londoners. Between 1991 and 1998 Sydney's car use rose by 24% even though the population only rose by 7%. ¹⁹ This has serious implications for related air pollution. Investing in public transport rather than roads would go some way to improving our urban air quality.

Looking at a few of the major pollutants in our urban air:²⁰

Pollutant Type	Percentage attributable to motor vehicles in Sydney	Health effects	Comparisons to safe thresholds
Nitrous Oxides	82%	Prohibits haemoglobin from carrying oxygen	-
Carbon monoxide	90%	Interferes with the blood's ability to carry oxygen to the brain, heart and other tissues. Is particularly dangerous for people with existing heart disease, and unborn or newborn children.	World Health Organisation goals continue to be exceeded in Sydney's CBD.
Ozone	-	Can trigger asthma attacks and irritate air passages and eyes. It can cause cancer, gene mutation, reproductive malfunction or neurotoxic effects.	World Health Organisation standards exceeded on up to 31 days in a given year
Benzene	Freeways have been found to contribute, in their vicinity, up to 60% of downwind benzene and toluene levels in the air	Motor vehicles emit 3,100 tonnes of benzene in NSW annually. This is compared with industry, which emits 560 tonnes.	Benzene is a known carcinogen – as such the World Health Organisation has stated that there can be no 'safe threshold' for it

¹⁸ Hansard Vol 238 p4436

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¹⁹ EPA 2000 p58

²⁰ Parliamentary Research Papers 1998

Implications of the way our transport systems are set up and the pollution which they generate are not minor,. On days of high pollution there is an increase in mortality of 2-3%. Vehicle air pollution results in health and medical costs of around \$300 million annually²¹.

The government has recognised a link between land use for transport and air pollution. Action for Air's main objective was to reduce the growth in vehicle kilometres travelled by effectively integrating urban and transport planning and improving transport choices. Its recommendations were published in 1998. Despite this, construction of the M5, M5 East, Eastern Distributor and now the Western Sydney Orbital have proceeded resulting in a rise in the number of people opting for driving over public transport²². By contrast we've seen a tiny fraction of funding going into mass transit options.

5. Freight Considerations

The New South Wales government does not yet have a comprehensive freight strategy, despite having commented in at least three planning documents since 1993 that such a strategy is vital if we are to provide sustainable transportation for the future. Freight levels will double in the next 20 years (Bureau of Transport Economics estimate) — and the absence of a strategy to deal with this freight increase is unacceptable.

Heavy trucks cause at least 1000 times the impact to roads compared to other vehicles, so it makes sense that trucks should only be used for essential 'in-city' type freight movements where rail is less viable. Given that one train can take 150 trucks off the road, our rail system must have the investment needed to take some of the freight increase off the road. Freight currently carried by trucks going through Sydney rather than moving within it should be reallocated onto trains. This cannot be done if the federal government does not invest money into our interstate rail system. Over the past 25 years, the Federal Government has invested \$40 billion in our road system, while allocating only \$1.9 billion to rail. No fewer than four inquiries and commissions over the past 6 years have recommended an urgent injection of funds to upgrade the rail system making it more feasible for freight.

²¹ Parliamentary Research Papers 1998

²² Between 1991 and 1998 growth rate for vehicle kilometers travelled in Sydney was *more than triple* its population growth rate

6. So what's the solution?

Travel demand is not a road issue, it is a transport issue. True cost benefit analysis presupposes looking at all alternatives to a certain issue (in this case travel demand). A 'road only' study of options to address this region's transport issues ignores our state government policies about integrated sustainable transport. At the very least, inclusion of an 'up-grade of rail option' in the study is vital – and must be looked at in a comprehensive manner- not tacked on the end as an afterthought or to pacify resident's concerns.

While there have been some gains in mass transit options with the Transitways systems being implemented in Western Sydney, the North West and Central Coast have had no similar mass transit improvements.

Rail infrastructure investment in this region could make a vast and positive impact on transport patterns, and must be sped up and facilitated – over and above road infrastructure. Three long awaited rail projects have been cited recently by State government, as vital to providing sustainable and efficient transport patterns in the Greater Metropolitan Region, namely:

- High speed rail link between Sydney and Newcastle
- Parramatta Rail Link connecting the Northern line to Parramatta
- North West rail link joining Cheltenham to Mungerie Park

Looking at each of these:

6.1 Sydney – Newcastle High speed link

Government documents on planning for the Central Coast recommended that the first stage of this link, Sydney to Warnervale, should be completed by 2007 and the second stage, Warnervale to Newcastle, to commence construction in 2010²³.

With ninety percent of the Central Coasts 293,000 residents located in the urban districts of Woy Woy peninsula, Gosford- Narara Valley, Erina-Terrigal, The Entrance-South Lakes, Wyong-Tuggerah, Toukley-Budgewoi, Warnervale and Gorokan, improvements in mode share could be achieved with improvements in capacity and ease of use on the rail systems and stations connecting these districts.

Currently about 60% of the Central Coast commuters coming into Sydney by train are coming into areas with major 'hub' stations – such as Hornsby, North Sydney, Parramatta, Sydney and Chatswood²⁴. (see appendix 1) Similarly, two stations (Gosford and Wyong) service 65% of commuters doing the trip. If journey times to and from these major stations were improved by the implementation of the recommended high speed link (in addition to the benefits of the Parramatta link), mass transit would go some way to being more competitive with road travel.

Having contacted both the Rail Infrastructure Corporation and Transport NSW regarding the proposed high speed rail upgrade, STEP has been told that no documentation, reports or options

²³ Planning NSW 1999

²⁴ Transport Data Centre Report 2001

under review are available for public comment. Given that the commitment was to provide high speed rail by 2007, it is disturbing that investigations are not yet at a point where the public has access to specific planning options under review.

6.2 Parramatta Rail Link

Based on current patronage modelling for whole link, completion of this project by 2010 will add 11.6 million new trips to the City Rail network – approximately 20,000 new rail passengers each working day in its first year of operation. Epping to Chatswood link would add 7.1 million trips per year (12,000 passengers per day) in first year of operation²⁵.

It has also been estimated that by 2021, the new Parramatta Rail Link (planned for full completion in 2010), will have reduced passenger car trips by more than six million. ²⁶

This rail line has been on the agenda for more than a decade – the previous government promised in 1994 to have it completed by 2000. Currently the government's position on funding options for the Parramatta to Epping component is that it still needs to be further investigated in line with a revised 2010 completion date.

6.3 North West Rail Link

Preliminary investigations predict that the proposed North West Rail Link would see patronage of 7.5 million users per year on opening, increasing to 9 million by 2026. This is 25,400 users per day on opening and 31,100 in 2026.²⁷The link would see trips from Chatswood to Castle Hill of 26 minutes and from Castle Hill to Epping of 9 minutes, and have positive implications for congestion, pollution and accessibility issues currently facing the sector.

While the North West link was originally planned for completion by 2010, it has now been deferred due to lack of available funding. There is no set schedule now indicated.

6.4 Community Attitudes toward Mass Transit

Politicians frequently claim that in building roads they are simply responding to the wishes of their electorates. This has been belied by a recent survey of the population of Sydney where 70% of respondents stated that they believe the government needs to inject more money into mass transit options even at the expense of road funding²⁸.

Government bodies produced a lot of rhetoric responding to these concerns, but there are few on-ground examples of incorporating their policies on sustainable transport into action in this city.

²⁵ Transport NSW 2001

 ²⁶ correspondance from PRL to STEP – available on request
 ²⁷ North west Rail Link Overview Report p 24

²⁸ Warren Centre 2001

7. Conclusion

STEP is concerned with the effect that a link road would have not only on the residents in its immediate vicinity (such as Pennant Hills Road and North Shore residents), but also on the populations of the Central Coast and North West sector, who deserve more than stop-gap measures that will lock them further into car dependent, congested transportation patterns.

Despite a plethora of government reports and policies claiming the need to redress the balance between road and rail infrastructure in Sydney for more sustainable and equitable transport options for our residents, on-ground infrastructure funding over the past decade has consistently favoured private motor vehicle use over mass transit. In the past 25 years the Federal Government has spent \$40 billion on road infrastructure and maintenance and only \$1.9 billion on rail²⁹.

The link road is a 'patching' not 'planning' proposal and does not address long term planning for the sort of city we want Sydney to be in the long term – especially given that if present trends continue our population will double within 36 years. Until a longer plan for Sydney's future development is conducted, the proposed link should not proceed. We question the wisdom of constructing a link that will generate yet further traffic, encourage more inter regional travel, perpetuate congestion in the region overall and which ignores thousands of pages of the government's own documentation showing that Sydney must curb its car use or face crippling congestion and unacceptable air pollution in the future.

We urge the Federal Government to undertake a comprehensive assessment of the effects that any proposed link road would have, including traffic, freight, pollution and population issues. Such a study must incorporate a comprehensive transport and traffic assessment, comparing the effects of the 'do-nothing' approach with both the construction of various road options and the upgrading of mass transit options.

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²⁹ Laird 2001

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