Preface

This Working Paper presents findings from the F3 to Sydney Orbital Link Study. The Study applied strategic analysis to the assessment of corridor types and feasible route options to determine an acceptable and preferred option which best satisfies National Highway objectives.

A number of specific routes and associated engineering details such as interchange and ventilation layouts were developed and analysed during the course of the Study, for the purpose of determining feasibility and assessing the options. The specific routes and details described in this Working Paper should be seen in this context.

This Study is documented in a Main Report which is supported by two records of Value Management Workshops, a draft Options Development Report and seven Working Papers as follows:

Value Management Workshop No.1 Record (June, 2002)
Value Management Workshop No.2 Record (September, 2003)
Draft Options Development Report (October, 2002)
Working Paper No 1 Community Consultation Report
Working Paper No 4 Traffic and Transportation Report
Working Paper No 6 Tunnel Investigations Report

It may be necessary to read sections from the Main Report and a number of the other Working Papers to gain a more complete understanding of the information being reported.

Access to the Main Report is available via the study website at:


Details on how to gain access to the Working Papers can be found on the study website.

If Government decides to further develop the recommended option from this Study, a concept proposal and an Environmental Impact Statement (EIS), including a route alignment and other details, will be developed for further assessment. Community consultation will continue through each stage of project development.
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Summary

A comprehensive community involvement program was implemented to provide the broader community with the opportunity to make a demonstrable input to the F3 to Sydney Orbital Link study and to ensure that the concerns of the community were adequately and appropriately addressed. The community consultation program included activities to meet the information and participation needs of all stakeholders, which included Federal, State and local government elected representatives and officers, industry and community organisations, business groups and the wider community.

The Study Area extends over seven Local Government Areas (LGA). The population of the Study Area is estimated to be approximately 340,000 people, equating to approximately 100,000 households. The Study Area includes a wide diversity of industrial and commercial activities and interests, which were recognised as an important part of the community.

Identification of issues at study commencement

The number of people who participated in the consultation process during its early stages was small, compared to the total population in the study area, but there was commonality of broad issues raised.

Key concerns at that stage ranged from strategic issues – such as encouraging improved public transport, increased freight to rail, and the need to link growing residential and employment areas – to specific issues, such as the need to avoid impact on Lane Cove National Park. Other issues raised included: the need to apply sustainable principles to the study, the consideration of induced traffic, the design capacity of any new link, tolls, impacts on communities and environmental impacts particularly from ventilation stacks and concern about the safety of tunnels in relation to fire and traffic incidents. These were recurring themes through the study.

Consultation on broad options

Community Focus Group meetings were held in late July 2002 when broad corridor options (Types A, B and C) had been identified. The Community Focus Groups were asked for feedback on these three broad options.

At that stage there were varying views on the relative advantages and disadvantages of the three broad corridor types. Many commented that while Type A would be needed in the short term, government should be taking a longer term view in relation to a western route with a river crossing of the Hawkesbury River. It was made clear that the Type A options would be mostly in tunnel, which appeared to have potential for broad community acceptance provided that appropriate pollution control measures could be placed on the ventilation stacks.

There continued to be strong debate about the new link as a road solution, rather than focussing on other integrated transport management measures including improvements to public transport, demand management, freight to rail and dedicated routes for heavy traffic.

More concerns were raised in relation to the potential scale and significance of environmental impacts of the Type B options than either Type C or Type A, although concerns about the impact of Type C options on National Parks and the Hawkesbury River were also raised.

Consultation on the Type A feasible options

Four feasible Type A route options were placed on display for 10 weeks from July to October 2003. A total of 991 submissions were received. The purpose of seeking public comment on the corridor options was to seek specific feedback on the issues associated with each corridor Type and particularly the Type A options.

There were high concentrations of submissions from particular geographic areas, with reasonably commonality of views about the potential impacts of options on those areas and hence support for, or opposition to, specific options. The largest number of submissions originated from Wahroonga (20%)
and Turramurra (15%), with the next greatest number originating from Normanhurst (9%) and Thornleigh (6%). Together, submissions from these areas comprised half of the total received.

In decreasing order of their frequency, the ten most often raised issues were: ventilation stacks (predominantly questions about the number and location); general concerns about air quality and impacts of vehicles and tunnel emissions; noise; support for further investigation of public transport options, rather than road solutions; health impacts from vehicle and tunnel emissions, including impacts on health from exposure of toxins if the Brickyard Park forms part of the Type A Purple option; adverse impacts on schools and hospitals; issues about traffic modelling on Pennant Hills Road; impacts on Lane Cove National Park; longer term transport needs for Sydney; and impact on property values.

**Key Outcomes**

**Comments on the project**

Many people expressed support for a new link and for the objective of relieving traffic congestion on Pennant Hills Road. Many also sought relief to existing traffic congestion on the Pacific Highway. Many submissions and conversations described first hand experience of the existing poor travelling conditions and diminished local amenity caused by the current level of traffic on Pennant Hills Road, particularly by heavy vehicles.

The project is supported by road transport industry groups. They expressed views that completion of this link is critically important in enhancing the road infrastructure of Sydney and would deliver considerable social and economic benefits to the city as well as to businesses based locally and elsewhere.

A new road link was certainly not supported by all. Many submissions advocated a more comprehensive review of the transport needs of Sydney and for greater focus on integrated transport solutions. In some submissions it was argued that the cost, in the order of $2 billion, would be better spent on rail. It was submitted that options to improve public transport had not been adequately considered. It was argued that Sydney needs investment that would shift travel demand for mass transit and freight onto efficient rail networks.

**Project timing and cost**

The 20-year time horizon for the study was considered by many residents, community organisations, some Councils and transport groups as being relatively short for the significant investment required.

Many expressed strong opposition to any toll on a new link. It was argued that a toll would discourage drivers from using the new link with consequent traffic diversion to, and congestion on, untolled alternatives. In this context, it was noted that the traffic figures presented in the public information documents were based on untolled traffic figures only and that information had not been provided on the impacts of tolls on these figures.

Some submissions described the immediate need for the project and considered the announced date of 2007 for commencement of construction to be too late. This comment was also made frequently at the public displays by people who live along Pennant Hills Road. They described the pollution, noise, and the generally unsafe traffic and travelling environment that exists now.

**Comment on Type A, B and C corridor options**

It was generally acknowledged in submissions that the Type A corridor options would best meet the shorter-term objectives of the project by providing earlier traffic relief to Pennant Hills Road. However, many submissions recommended that a more strategic long-term view needs to also be pursued.

While some supported Type B options, there was strong support for further investigation of a Type C option, on the basis that a long term solution was needed. It was argued that increasing traffic volumes from the Central Coast would ultimately use the capacity on the F3 and the new link, and an alternative route would be required. Another issue raised was the need to provide for a second crossing of the Hawkesbury River as an alternative route during bushfires or in the case of an accident or other action destroying the existing Hawkesbury River Bridge, or rendering it unpassable. Some argued for a Type C option rather than a Type A option because vehicles carrying dangerous goods...
would not be permitted to use a tunnel and hence these vehicles would not be removed from Pennant Hills Road (note that it was perceived, not necessarily correctly, that tunnels would not be part of Type B and Type C corridor options).

While many acknowledged the need to address the problems of Pennant Hills Road as quickly as possible, some described the Type A options as a “band-aid” solution and were strong in their view that planning is urgently needed for a much longer term solution – through further investigation of a Type C option. Public comment as expressed in submissions, at displays and at the Community Focus Groups was strong on this issue.

A caveat to support for the Type A route options raised in submissions was the adequacy of the F3 Freeway and interchanges from Wahroonga to Kariong to cater for traffic growth including, if required, capacity upgrade prior to a Type A option being constructed.

**Comment on the Type A options**

Of those submissions that identified a preference for an option, the majority expressed support for Type A Purple option and there was least support for Type A Red option. These two options are discussed here, with further comment on these options and the Type A Blue and Type A Yellow contained in the main body of the report.

The Purple option appeared to receive the greatest support on the basis that it was perceived to best meet the transport objectives and minimise social and environmental effects. Many submissions commented on the equity of selecting this option. It was argued in submissions that this route has long been known as the orbital route through Sydney, and furthermore residents in this vicinity would also most benefit from a tunnel option. The location of a tunnel that generally follows Pennant Hills Road and the existing rail corridor was viewed by some correspondents as minimising the potential impact of a link on additional properties.

The Purple option passes along a relatively level elevated ridge with no substantial valleys or river crossings and this was considered in submissions to be an advantage in terms of minimising steep grades at either end and crossing under watercourses, that would eventuate with other Type A options.

The opportunity to achieve optimal grades was identified in submissions as assisting in minimising environmental impacts. Overall, it was suggested that the environmental and social impacts from the Purple option would be less significant than for other options.

In relation to the transport network it was contended that the Purple option enables a shorter route for access to and from the western and southern Sydney markets and linkage to the proposed M7 Motorway. It was considered by many to provide the best opportunity for traffic from western Sydney to access areas north of Sydney, would reduce traffic volumes on Pennant Hills Road, improve the amenity for existing residents and to provide a good opportunity for an interchange at M2/Pennant Hills Road.

Notwithstanding the above, significant opposition to the Purple option originated from the Normanhurst/Thornleigh area, in relation to the proposed open trench in the vicinity of the Brickyard Park. Schools, hospitals, aged care facilities and houses are located in close proximity to this area. The brickyard was in the past used for the disposal of putrescible waste and there was significant concern that this area may need to be excavated for road construction. Concerns were expressed about the possible exposure of “toxic” material from the pit, impacts from emissions from the trench, potential developmental and health impacts, noise, and overall impacts on amenity. Furthermore, it was highlighted in submissions that Hornsby Council is progressively developing community and sporting facilities at the Brickyard Park.

Many reasons were put forward in opposition to the Red option. Most common among these was that it would be an abrogation of the government’s commitment to the abandonment of the B2-B3 corridor. A large number of people wrote about having purchased/built homes and developed their properties with the understanding that further highway development would not be considered in that corridor. It was argued that the State Government had promised that no properties would be affected in the vicinity of the F3 and the B2-B3 corridor – and that all four Type A options violate this promise.
The Type A Red option was commonly perceived to be the least viable, due to its length and potentially the option with the greatest impact on homes. Much of the area where the Red option is located is characterised by high density of residential development.

Another issue raised in relation to the Red option was the potential impact on the Lane Cove River. There was concern that tunnels through certain geological formations under the Lane Cove River could have a substantial impact on the flow regime of the river. Many expressed concern that the steep grades at the southern end of this option, for it to go under the River, would lead to a decision for a bridge crossing instead, notwithstanding that Newsletter No.2 clearly described the Red option as being entirely in tunnel.

Another important issue was the potential for direct or indirect adverse impacts on flora and fauna, and wildlife corridors, of the Lane Cove Valley. It was submitted that the intrinsic value and amenity of the Valley could also be impacted by air and noise pollution. It was argued that it would have maximum impact on heritage values compared to other options, and impact on Urban Conservation Area No.26 in Ku-ring-gai.

It was argued that the Red option is too indirect for long distance freight traffic and many vehicles would still use Pennant Hills Road, and that it would encourage traffic into the city. It was argued this option would funnel more cars onto Sydney’s already congested feeder roads, rather than reducing traffic congestion on major existing roads and reducing freight transport costs. The potential for induced traffic was raised.

**Impacts on air quality**

The most frequently raised issue in submissions was in relation to air quality, including the need for ventilation stacks. Significant concern was expressed about the potential number and location of the stacks and the proposed method of treatment. These details were not available at the stage of the display of options and there was criticism that people could not make informed comment on the options without this (and other) technical information. There was considerable commonality in community demands for tunnel emissions to be filtered and for best practice emission treatment technology to be applied.

The M5 East tunnel was cited in submissions as evidence of the controversy and potential for adverse air quality impacts associated with ventilation stacks. Also, many correspondents raised the fact that, by comparison with the proposed Lane Cove tunnel, there is no industrial land in the vicinity of the Type A options and that ventilation stacks would have to be located in open space or residential areas. Concern was expressed over the potential adverse impacts on sensitive receivers such as schools and hospitals in the area, including the Seventh Day Adventist Hospital.

Some correspondents requested that a health risk assessment be carried out as part of detailed investigations.

**Impact on properties**

There was considerable concern in relation to the need to acquire properties for the new link and the destruction of family homes and other developments. The issue of decreased property values was of concern to many residents and Councils. It was submitted that the possibility of a new link in the vicinity of a property or the anticipation of a tunnel under a property would result in a decrease in property value. It was argued that a decision on a preferred option should be made as soon as possible to minimise uncertainty.

**Design**

Some argued that two lanes would not be sufficient for the long term and that, given the difficulty of widening a tunnel in the future, the new link should be three lanes in width. It was suggested that the third lane should be constructed, even if it is not operational for some time.

Many residents, particularly those living at the northern end of the Type A options stressed that the tunnel should commence along the existing F3 corridor, to minimise or avoid property impacts in this area.
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Introduction

In April 2002, Sinclair Knight Merz was commissioned by the Roads and Traffic Authority (RTA) on behalf of the Department of Transport and Regional Services (DOTARS) to undertake a feasibility study for a National Highway link between the Newcastle Freeway F3 to the Sydney Orbital. The new route would replace the interim National Highway link that utilises Pennant Hills Rd between the M2 and F3. The route would link the F3 with the Sydney Orbital, to form a continuous motorway standard National Highway through Sydney.

A comprehensive community involvement program was an integral part of the study. The program was designed and managed to afford the broader community the opportunity to make a demonstrable input to the process, and to ensure that the requirements of the community were adequately and appropriately managed and addressed.

This report documents the process and outcomes of the consultation process.

1.1 The Context for Consultation

The route selection study was expected to attract significant public debate. At the time of study commencement, the proposed link had already received extensive regional print, radio and television media coverage through its announcement, in conjunction with the release of the Western Sydney Orbital Environmental Impact Statement (EIS) and subsequent planning approval. Due to the size of the study area and the significant involvement of communities in the Western Sydney Orbital and M2 Motorway projects, as well as those affected by the previously abandoned B2-B3 corridor, it was expected that there would be considerable community interest in this study.

1.2 Purpose of the Community Consultation Program

Community involvement is an integral part of any route selection process. While it is recognised that there are inherent difficulties in seeking community input before route options and specific property impacts are identified, it has nevertheless been found that early community input is essential. Its value lies in early identification and resolution, if possible, of issues that are important to various community sectors, local issues and values and particularly identification of those aspects that are unique to the communities potentially affected.

1.3 Stakeholders

The Community Involvement Program included activities to meet the information and participation needs of all stakeholders.

Stakeholders associated with this project can be grouped into the following:

- Elected Members of Federal and State Parliaments
- Elected representatives of local government
- Officers of Federal, State and Local government agencies
- Local government organisations
• Advisory and interest groups
• Road transport groups
• Residents within the Study Area
• Businesses within the Study Area
• Potentially affected land owners (and ultimately affected land owners)
• Organisations and individuals with significant interests in the project or the area adjoining the proposed route of the project.
• The wider community (including road users).
• The media.
Community Processes and Activities

The Study Area extends over seven Local Government Areas (LGA). The population of the Study Area is estimated to be approximately 340,000 people, equating to approximately 100,000 households. Relatively small proportions of the communities in the study area speak languages other than English. Other languages include Italian, Chinese and Arabic.

The Study Area includes a wide diversity of industrial and commercial activities and the business communities, which were recognised as an important part of the community.

2.1 Initial Identification of Stakeholders

At study commencement, community, environmental and business groups in the study area were identified from Council and community websites and their details noted in the study contact mailing list. During the course of the study the mailing list was progressively expanded.

2.2 Initial Contact with Key Stakeholders

A letter was sent to all the identified community, environmental and business groups to inform them of the commencement of the route selection study, its process and opportunities for them to be involved. These groups were also invited to nominate representatives for the Community Focus Groups.

2.3 1800 Telephone Information Line

A telephone information line (freecall 1800 number) was set up for the duration of the project. The phone number was advertised on all written communication such as newsletters, displays, the website and advertisements. The phone was answered in the Sinclair Knight Merz offices.

To the end of October 2003, 1,044 calls had been made to the 1800 number.

2.4 Web Site

Material developed for the consultation program was accessible to people via the SKM website. The web site address was detailed in all communication. The content of the website was updated at key milestones in the study. Media Releases, Newsletters and other project documents (such as CFG notes) were posted on the site.

2.5 Briefings to Stakeholders

Briefings were offered and made to key stakeholders such as Local Government bodies, and to various community and business groups during the course of the study.

To the end of October 2003, the study team had provided 15 briefings to Councils and 12 briefings to other community and business groups.

1 City of Blacktown, City of Parramatta, City of Ryde, Gosford City, Baulkham Hills Shire, Hornsby Shire, Ku-ring-gai Shire
2.6 Advertising

Advertising played an important role in advising the community about the consultation process and the various activities designed to provide them with an opportunity to view and comment on route options development, and key findings.

Advertising was one means used to inform the community about the Public Information Days, and Route Options Display, and to advise the extension of time for comment on the route options.

Advertisements were placed in local and metropolitan newspapers, on several dates at each stage of consultation.

2.7 Planning Focus Meeting

A Planning Focus Meeting was held on 17 April 2002. Representatives of Federal, State and Local Government agencies, and peak transport bodies attended the meeting. The purpose of the Planning Focus Meeting was to brief key agencies and organisations on the study process, and to commence on-going dialogue with them.

Key aspects for discussion at the Planning Focus meeting were:

- Background to the study, and its scope
- Study and project objectives
- The route selection process and selection criteria
- The consultation process
- Timing
- Agency/organisation requirements
- Information requirements.

2.8 Community Focus Groups

Community Focus Groups (CFGs) were established to help the study team to identify community issues, assist in communicating facts about the study, and help distribute information to those potentially affected by the study and to the broader community.

The role of the CFGs was to form a link between the community and the study team and to:

- inform the study team of community feeling and opinion towards the study
- be informed of the study findings as they become available
- provide advice and feedback on community opinion toward aspects of the study
- provide information to community groups and individuals on the study’s direction, and
- facilitate community input into aspects of the study.

Specifically, it was envisaged that members of the CFG would:

- as a group, represent a variety of local interests and each individual represent a different local community or a different special interest;
- include people who represent the interests of those individuals most likely to be directly affected by the study;
• have access to community networks through which they are able to communicate accurate information to and from the study team; and

• have a commitment to provide community feedback to the study team, to disseminate information to the community groups that they represent and to attend most of the Group meetings.

People were asked to nominate for a Community Focus Group by completing a Nomination Form. The form asked each person to state:

• their primary interest in the study;

• what they offer the study;

• whether they would be able to communicate information to others; and

• any specific community affiliations.

Everyone who nominated for a CFG was included.

The intention at the start of the study was to establish four Community Focus Groups (CFGs), which were geographically dispersed. It was planned for each group was to meet twice before the route options display, and once towards the end of the options display period.

Nominations for the CFGs were called for through the study Newsletter No.1, advertisements in the media and through the study website. The response was much less than anticipated, with relatively few nominations and limited geographic spread. In an endeavour to expand the membership of the CFGs, follow up calls and letters to stakeholder groups were initiated.

From the nominations received it was possible to form two groups. The most convenient meeting location for the members of the groups were Dural and Pennant Hills. These groups met three times:

• June 2002 – at study commencement

• July 2002 – during the development of options

• September 2003 – during the period of the route options display.

At the time of the route options display, several people inquired about the CFGs and completed Nomination Forms. A third CFG was established to ensure that everyone who nominated had the opportunity to participate in a CFG. All of the people who nominated at that time were included in the third CFG that met once:

• September 2003 - during the period of the route options display.

2.9 Newsletters

Two Newsletters were issued during the study. Both newsletters were distributed to all households and to businesses in the study area. SKM engaged a professional distribution company and Australia Post to distribute the Newsletters, which numbered 115,000 in the case of Newsletter No.1 and 117,500 in the case of Newsletter No. 2.

Newsletters were posted to everyone on the study mailing list and to all CFG members at the time. The Newsletters could also be viewed and downloaded from the study website.

Copies of the Newsletters were also provided to the Councils for display at their office counters and libraries.

• Newsletter No.1 was issued at the commencement of the study, in April 2002. Its purpose was to introduce the study and provide general background, show a map of the study area, outline the study process and explain how interested stakeholders could get more information and/or be involved in the project. Newsletter No.1 also provided information on community focus groups and invited nominations, provided information about the public information days and where people
could talk to a member of the study team and provided key contact details, including the 1800 Freecall number, study email address, study web page address and other contact details (including information in community languages).

There was a significant time lapse between Newsletters No.1 and No.2. It had been intended to consult further on route options towards the latter part of 2002. However, in October 2002, it was decided to extend the study timeframe due to the complex nature of the study and further investigations required. An announcement was made by the Minister for Transport and Regional Services.

- Newsletter No. 2 was issued at the time of the route options display, in July 2003. Its purpose was to present the process for identifying options, describe the feasible options and provide a preliminary comparison of the corridor Type A options. Newsletter No.2 also invited comment on the options, provided information about the public displays of the options and where people could talk to a member of the study team and provided key contact details including the 1800 number, study email address, study web-page address and other contact details (including information in community languages).

Many people reported they had not received Newsletter No.2 and many also reported at that stage that they had not received Newsletter No.1 either. During the weeks following newsletter distribution SKM requested the distributor to audit distribution in these areas. In all but one case it was indicated that newsletters had been distributed to households in the nominated areas or people interviewed were unable to confirm whether or not they had received it. The possibility of human error is of course acknowledged, however it is believed that as the newsletters in most cases were distributed with advertising material, they may have been overlooked.

The recipients may have received the Newsletter but not immediately recognised its relevance. Many people had understood their area not to be potentially affected by the options and hence would not have been particularly sensitive to this material when first distributed. Some submissions indicated that they considered the B2-B3 corridor to have been abandoned and hence did not perceive that there could be a tunnel route in their area.

2.10 Background Report

A Background Report was released concurrently with Newsletter No.2. Its purpose was to provide further explanation of the information in the Newsletter. The Background Report was made available through the study website and posted on request.

The Report was posted to all CFG members. Copies were made available to Councils for their use and to place in libraries. Copies were also available for viewing at the route options displays. Study team members exercised discretion in making copies available if people were hesitant about their ability or willingness to download copies from the study website. A similar approach was taken in response to phone calls about the Report.

2.11 Public Displays

Public displays were held during the course of the study. These were a forum where the community could meet some of the study team members and have informal discussions with them on aspects of the study.

Public Information Days

Public Information Days were held at five locations2, in May 2002. Staff attended each display on two occasions, at times chosen to reflect the greatest likelihood of attracting most people3

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2 Gosford, Thornleigh, North Ryde, Dural and Parklea

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The 5 locations were chosen to achieve maximum geographic spread as well as having appropriate amenities and facilities for the display, and for the team members involved. The availability of venues on the dates required was another factor for consideration.

Newsletters were made available to the community at the displays. Comment forms were available to encourage written feedback. Community members were also invited to nominate for CFGs.

The displays were advertised in local and metropolitan media.

Concurrent with the Information Day displays at the shopping centres, identical display material was placed at Councils in the study area and posters and Newsletters were made available to Councils to place in libraries and community facilities.

It was estimated that some 2,000 people visited the displays. Contact ranged from detailed and lengthy discussion with study team members to people picking up a Newsletter in passing.

**Route Options Displays**

Route Options Displays were held at four locations\(^4\), in August 2003. Staff attended the displays at Gosford and Dural on two occasions, and the displays at Hornsby and Carlingford on six occasions, at times chosen to reflect the greatest likelihood of attracting most people\(^5\).

Concurrent with the Information Day displays at the shopping centres, identical display material was placed at the seven Councils in the study area as well as Wyong Shire Council at Council’s request. Posters and Newsletters were made available to all of the Councils to place in libraries and community facilities.

During the period of consultation on the route options, some people queried the reasons for holding the displays in the locations chosen, rather than locating displays in the areas potentially most affected by the Type A options. Some submitted that displays should not have been held in Dural and Gosford.

The four locations were chosen to achieve maximum geographic spread as well as having appropriate amenities and facilities for the display, and for the team members involved. The general accessibility of the venue and its availability on the dates required were other factors for consideration. Size of the venue was an equally important consideration so as to minimise disruption to tenants and other users of the venue, noting that public displays may be intrusive in smaller venues and the increased activity is more easily absorbed into the activities of larger venues.

It was decided to hold displays at Gosford and Dural because these areas are at the northern and western boundaries of the study area, and displays were held at these locations during the early stage of the study. People in these areas had shown a high level of interest in the study from its commencement. The venues at Hornsby and Carlingford were chosen because they were approximately to the north and south of the Type A options, and met the other requirements described above.

Newsletters were made available to the community at the displays. Copies of the Background Reports were available for viewing and study team members made copies available if people were hesitant about their ability or willingness to download copies from the study website, or if they did not have access to the web.

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\(^3\) Study team members attended at nominated times and beyond this, venues the displays were left unattended and were available for viewing outside these times, usually for the entire time the venue was open thus significantly extending the opportunity for people to find out about the study and its progress.

\(^4\) Gosford, Dural, Hornsby and Carlingford

\(^5\) Study team members attended at nominated times and beyond this, venues the displays were left unattended and were available for viewing outside these times, usually for the entire time the venue was open thus significantly extending the opportunity for people to find out about the study and its progress.
It was estimated that well in excess of 2,500 people attended the route options display. The mode of attendance varied from lengthy discussion with team members (up to an hour in some cases) to those who picked up a Newsletter in passing. The team attended the displays well beyond the advertised times to ensure that everyone had an opportunity to have their questions answered and views heard.
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Issues for Identification of Options

At study commencement it was initially thought there would be a high degree of interest in the study, especially given previous proposals in the Dural and Galston areas, the public interest shown in the M2 development and previous proposals including the B2/B3 corridors.

There was considerably less community interest at that stage than anticipated. This was considered to be most likely due to the significant size of the study area, the many diverse communities and interests involved, and the strategic nature of the study.

State and local government organisations, and some community and business organisations are experienced in addressing strategic issues and these organisations were active in the early stages of the consultation process. The broader community, however, was thought more likely to respond to identified corridors/routes for which community impacts could be identified.

Consultation later on, during the route options display period, also indicated a broad community perception that options would not have been considered in the Wahroonga/Turramurra/North Epping areas and hence these communities did not take an active interest in the study in its early stages.

Given the relatively low level of broad interest in the early stages of the study it was acknowledged as likely that the most significant community input would occur in the final months of the study, when and after the feasible route options were made public, and this was the case.

3.1 Initial Identification of Issues

While the number of people who participated in the consultation process during its early stages was small, compared to the total population in the study area, there was considerable commonality of broad issues raised. It is unlikely that new issues would have arisen from consultation with a broader group. It was anticipated that more detailed issue would be identified once the feasible route options were known.

The list below summarises the issues that were raised during the Information Days, by email and phone, written comments and the discussions of the CFG meetings held in June 2002.

- Need to promote reduced reliance on road and transport and provide incentives for greater use. Query of the justification for building new roads rather than improving public transport and rail system for freight
- There should be no damage to National Parks & bushland / open space and remnant vegetation including Berowra Valley Regional Park. Also, no damage to parks and bushland through indirect impacts eg. erosion, runoff. Environmental impact overall should be minimised at local and regional levels.
- Sustainable development principles should be applied to the study. There is a need to counter Sydney's growth (eg through decentralisation), avoid fragmentation of communities and effects on future land uses.
- Many comments were made in relation to the impact of induced traffic, unforeseen local traffic consequences and impacts on adjacent roads. It was argued that the option chosen must provide early traffic relief off Pennant Hills Road, and also Pacific Highway south of Pearces Corner. Need for a fair distribution of outer suburban and country/interstate traffic. Need for detailed origin destination data and traffic model verification
Design issues such as the capacity of the link, concerns that some trucks could not use a new link, fire and safety in tunnels. Specific issues such as concerns about Pennant Hills Road and possibility of upgrading it as a National Highway link and impacts of widening and safety. Some suggested that dedicated truck lane and cycling lanes should be part of any link.

Questions in relation to whether road would be tolled, and cost of tolls to users
Location and treatment of tunnel stacks and treatment of air emissions
Minimisation of effects on human built environment including resumption of houses; impact on property values
No surface solution in Lane Cove Park (B2/B3)

A second round of CFG meetings was held in late July 2002. At that time the study had been taken to the point where broad options (Types A, B and C) had been identified. The key focus for the July CFG meetings was to gain community feedback on these three broad options. The comments made by the CFG groups are summarised below.

General Comments

- Project is focused on meeting the demand - it should address demand management
- Growth in capacity will see a growth in demand in excess of projections
- Whether changes in work (and therefore journey) practices had been taken into account
- Some commented that it was important to decide the short term solution – plan for now, not try to determine what will happen in the future, whereas others stressed the need for a long term solution. Many suggested the need to consider Type A as short term solution, with longer term as well
- Need for second road out of Sydney. Need to look at Putty Road as potential long term option
- Freight issue needs to be dealt with using other technology i.e. trucks to rail
- Build tunnel as cheaply as possible, use the balance of available funding for rail

Comments on Type A corridor options

- F3 widening to 6 lanes emphasises need for orbital solution by 2006 (makes Type A critical)
- good option – sooner the better
- Some stated that Type A options were logical, but unacceptable in terms of potential environmental and social impacts. Others considered Type A options had the least potential environmental impacts.
- The further east, the better
- If in tunnel there is a need for state-of-the-art filtration; need to locate ventilation stacks in areas where there is good air dispersion
- Start at Macquarie Park, in tunnel. Need interchange facilities at Macquarie Park to go east
- Ensure impacts on M2 are calculated; widening of M2 is required
- Greater benefits in long term than Type B or C
- This option still needs to use F3 – other options are better
- Need relief of Pacific Highway as well, so essential to build Type A
- Design for 3 lanes in each direction in the tunnel

Comments on Type B options

- Not a viable option – use Type A with a link to the orbital
- Would result in increased traffic for new Motorway links
- Not acceptable on environmental grounds – Galston Gorge and Berowra Regional Park
- Does not address needs of growth areas to the west
• Type B does not make sense – needs to connect F3 further north
• In terms of potential for impact on Aboriginal cultural heritage, B is second worst
• Inappropriate for needs
• High cost / high social impact. Significant impact on housing and communities
• Question whether long term benefits outweigh environmental impact

Comments on Type C corridor options
• Too expensive – will take money from more valuable infrastructure needs
• Long term, it is the only viable option for heavy transport and is truly the “missing link”
• Needs to be complemented with a rail solution
• Support Type C in conjunction with Type A – and use Type A for road freight only
• Cleanest and most efficient option
• Need to overcome the problems associated with a single Hawkesbury Bridge crossing – Type C provides a required alternative. Need duplication of the Hawkesbury River crossing for safety/flexibility, to facilitate growth in Sydney’s west and access from the west to the tourist and recreational opportunities of the Central Coast
• Will relieve Pennant Hills Road and free up other roads.
• Good in terms of decentralisation and impact on regional centres (such as the Hunter Region). Opens up economic opportunities. Opens the western industrial area. Opportunity to open up recreation and tourism on the Central Coast
• Build in conjunction with Type A because of construction time
• Easiest route to construct
• Worst in terms of indigenous and environmental impacts
• No short term benefit
• Need Types C and A
Consultation on Feasible Options

The commencement of the display of route options was announced by the Deputy Prime Minister and Minister for Transport and Regional Services, the Hon John Anderson MP, on 25 July 2003.

Distribution of Newsletter No.2 commenced on Monday 28 July 2003. Distribution of Newsletter No.2 was organised through a professional distribution company. A total of 117,500 newsletters were distributed across throughout the study area.

Copies of Newsletter No.2 were also posted to everyone who was on the study mailing list at that time.

The availability of Newsletter No.2 and the display of options was advertised in metropolitan and local media.

The study website was updated with the Minister’s statement, details on the display locations and times, and included links to view and download copies of Newsletter No.2 and the Background Report.

Copies of Newsletter No.2 and the Background Report were sent to key stakeholders, with an offer of a briefing by the study team. Key stakeholders included NSW government transport and planning agencies, the seven Councils in the study area, and key community and business groups that had been briefed earlier in the study process.

The initial period for consultation on route options was a 7-week period, from 25 July to 12 September, 2003. There was concern in the community that the consultation period was not long enough. On 8 September 2003, the Minister announced an extension of time for public comment on the options. That extended the period for a further 3 weeks, resulting in a total consultation period on the route options of 10 weeks.

4.1 Comments on Route Options

The purpose of seeking public comment on the route options was to seek specific feedback on the issues associated with each corridor Type and particularly the Type A options. This section summarises those issues and the comments that were made.

In reading this section it is important to note that the analysis is provided to indicate trends and relativities of views of those who participated in this consultation activity. No suggestion is made either way as to whether these views are necessarily representative of the community as whole.

Caution must also be exercised in relation to analysing the relative importance of an issue as compared across the study area. There were high concentrations of submissions from particular geographic areas, with reasonably commonly held views about the potential impacts of options on those areas and hence support for, or opposition to, specific options. At no time was there any suggestion that the submissions would be used in any numerical input to the route selection and decision making process. Notwithstanding that, many households sent separate letters signed by each member of the household, and there were a number of petitions. These are important in relation to the depth of concern they signal, rather than as an absolute representation of numbers of people in support or opposition to any particular point of view, or option preference.
About the Submissions Received

In the period from 25 July 2003 when the display of route options was announced and 10 October 2003 (being 1 week after the extended date for close of public comment) a total of 991 submissions were received.

- 576 were received by email
- 415 were received by mail and facsimile
- during this period 570 calls were received on the 1800 number.

An analysis was made of the origin of submissions, by suburb. Figure 1 shows that the largest number of submissions originated from Wahroonga (20%) and Turramurra (15%), with the next greatest number originating from Normanhurst (9%) and Thornleigh (6%). Together, submissions from these areas comprised half of the total received.

Figure 1: Percentage of Submissions Received by Suburb

The 10 most commonly raised issues, in decreasing order of number of times raised in submissions, are listed below. It is noted that when taken together, the issue of ventilation stacks and air quality is overwhelming as the top issue. Figure 2 shows the top 10 issues, with this grouping of key issues.

1. Ventilation stacks (predominantly questions about the number and location)
2. General concerns about air quality and impacts of vehicles and tunnel emissions (included comments about air quality impacts from the open trench described as part of Type A Purple option)
3. Noise
4. Support for further investigation of public transport options, rather than road solutions
5. Health impacts from vehicle and tunnel emissions, including impacts on health from exposure of “toxins” if the Brickyard Park is used for the Type A Purple option
6. Adverse impacts on schools and hospitals
7. Issues about traffic modelling on Pennant Hills Road
8. Impacts on Lane Cove National Park
9. Longer term transport needs for Sydney
10. Impact on property values.

**Figure 2: Top 10 Issues (%)**

![Bar chart showing top 10 issues]

4.2 Summary of Issues and Comments

In summarising comments on the route options, consideration has been made of issues raised and comments made in the written submissions, comments made during phone calls to study team members, comments to team members at the displays and discussions at the CFG meetings.

It should also be noted that Sections 4.2 and 4.3 draw heavily on comments made in the submissions, to the study team at displays or in phone calls, and that the factual basis of those comments may in some cases be in question. It should also be noted that many of the comments are contradictory, reflecting the different perspectives and interests of individual community members and organisations.

**4.2.1 Consultation Process and Community Involvement**

The consultation process was criticised in many submissions. The key aspects of complaints were:

- potentially affected property owners had not been advised prior to the options display
- the distribution (lack of receipt) of Newsletter No.2. Specific complaints were received from the South Turramurra/Wahroonga area and also the Normanhurst/Thornleigh area.
- the location of the staffed route options displays

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6 With reference to this report, the approach adopted was to report the issues using as much as possible the style and language used by members of the community and correspondents.
the study team declined to attend a public meeting in the Ku-ring-gai area

Councils had not been consulted prior to the options display.

• Some submitted that the credibility of the study has been undermined by the lack of transparency and effective consultation with those segments of the community affected by most of the options.

• Some submitted that the process of selecting a preferred option at this stage was flawed given the lack of any detailed information that would enable the community and organisations to make an informed comment.

• Numerous comments were made about the lack of detailed information both in the submissions and by those attending the route options displays. It was a high community expectation that the route options display would provide more detail than that contained in Newsletter No.2 and the Background Report. Community anxiety was exacerbated by maps that were not prepared by the study team and which were distributed in the community particularly, in the Ku-ring-gai area. These maps were misleading in that they purported to show precise routes and individual property impacts. Some people were hostile at displays when the study team members were unable to explain those maps, or specific suburbs/street/property impacts.

• Submissions sought details on:
  
  − the precise location of routes
  
  − exactly which properties would be affected
  
  − the location of ventilation stacks
  
  − interchange designs.

• Specific details were requested in relation to:
  
  − the study assumptions
  
  − traffic studies and predictions, network model
  
  − specific alignment details, including the depth and width of the tunnel and details of the options in the vicinity of creeks and the Lane Cove River
  
  − portal and interchange designs, including property effects
  
  − identified property impacts including sub-stratum impacts
  
  − construction impacts including noise, vibration and impacts on above-ground structures
  
  − the location and height of ventilation stacks and proposed means of air emissions treatment, and the location and operational impacts of ventilation intake chambers.

• A few submissions contended there had been deliberate withholding of documentation and technical information needed to support assertions in the public study documents. A number of submissions requested the supply of study working papers.

• It was noted that if an EIS process was commenced on a preferred option, the other options would not be reconsidered.

• Some submissions acknowledged the early nature of the study and raised issues to be considered during an EIS stage.
Some submissions expressed appreciation for the opportunity to comment on the study and options at this stage.

4.2.2 Project Parameters

Objectives and Scope

Many people expressed support for the new link to relieve the traffic congestion on Pennant Hills Road.

- Many expressed the need for relief to existing traffic congestion on the Pacific Highway. These submissions described first hand experience of the existing poor travelling conditions and diminished local amenity caused by the current level of use of Pennant Hills Road, particularly by heavy vehicles.

- The project is supported by road transport industry groups including the NSW Road Transport Association and the NRMA. They considered completion of this link to be critically important in enhancing the road infrastructure of Sydney and to have the opportunity to deliver considerable social and economic benefits to the city as well as to businesses based locally and elsewhere.

- It was acknowledged by many that the Type A corridor options would best meet the shorter-term objectives of the project by providing earlier traffic relief to Pennant Hills Road.

There were concerns about the study scope and project objectives.

- The 20-year time horizon for the study was considered by many residents, community organisations, some Councils and transport groups as being relatively short for the significant investment required. The need for a longer-term solution was identified in many submissions.

- Some submissions considered there is too great an emphasis on relief for Pennant Hills Road. Some submitted that the objective of relieving traffic congestion on the Pacific Highway should be an equal consideration. Some expressed the view that creating a more efficient solution in the vicinity of Pennant Hills Road would provide an opportunity to create stronger economic links between Sydney and the regional areas to the north. The section of Highway between Wahroonga and Artarmon was identified as a major physical barrier.

- Some expressed the view that the scope of the study was too narrow and that more attention should have been given to other aspects including long term tax incentives/disincentives, funding for freight and commuter options, dedicated commercial road/rail intermodal freight corridors etc.

- The scope of the project should be broadened to include enhancement of Pennant Hills Road for improved public transport and local accessibility issues according to some submissions. One perceived consequence of the development of the link was the opportunity for improved public transport once traffic levels have been reduced on Pennant Hills Road and the Pacific Highway

Some groups and individuals did not support the project.

- Some expressed the view that the new link would not alleviate poor travelling conditions as it would reach capacity in 2021. Some expressed the view that providing more road capacity in urban centres would exacerbate overall congestion and encourage people out of public transport and result in induced traffic. It is argued that this is contrary to NSW Government policy, which is to reduce total vehicle kilometres driven in the Sydney basin. The costs of air pollution and congestion were cited and it was submitted that the new link would encourage more people into cars and hence would not improve road safety.

- It was submitted that the new link would not improve local amenity, as Pennant Hills Road would always be a busy, polluted arterial road. Further, it was submitted that the new link would facilitate traffic growth with associated problems of air and noise pollution and community severance.

- It was submitted that constructing a new road would be largely ineffectual in improving travel reliability and reducing operating costs of long-distance commercial and freight transport. A link
road would simply induce additional private vehicle use and thus not provide reduced congestion for commercial and freight transport according to some submissions.

Cost of the Project, Funding and Tolls

- Many submissions anticipated that cost would be the primary determinant in the selection of a preferred route. It was argued that the cheapest option should not be chosen over one that could provide better environmental and traffic outcomes.

- It was submitted that there is no indication that one or more of the options is economically viable, considering the large capital costs and the relatively short timeframe involved.

- Submissions expressed the view that a 20-year time horizon was too short for an investment of the scale estimated. Others submitted that there has been inadequate justification for the construction of a $2 billion roadway compared with upgrades and improvements to rail. $2 billion is an unjustifiably high price tag for a short-term '20 year lifespan' response. It was submitted that this project needs to be justified against costing for rail upgrades, or travel demand management programs.

- Any financial contributions or allocation of financial risk for the F3 to Sydney Orbital link must be clear and readily publicly accountable was an issue raised.

- Many expressed strong opposition to a toll on the new link. Some expressed the view that a toll would discourage drivers from using the new link with consequent traffic diversion and congestion on untolled roads.

- Some expressed concern that the figures presented in the public information documents indicated the untolled traffic figures only and that information had not been provided on the impacts of tolls on these figures. It was considered that the link would not be cost effective if a toll is imposed, especially given the 20-year horizon.

Timing

- Submissions described the immediate need for the project and considered a 2007 start to be too late. This comment was also made frequently at the public displays by people who live along Pennant Hills Road. They described first-hand the air and noise pollution they suffer and the generally unsafe traffic and travelling environment that exists now.

- It was submitted that the government should accelerate the construction of the link and any associated works, because the completion of the M7 would relocate the bottleneck to the northern part of Pennant Hills Road. Further, the fast tracking of the missing link would facilitate overseas and interstate trade and commerce; safe and reliable access to major population centres; minimise long term and agency costs; support regional development; and contribute to ecologically sustainable development.

- Development of detailed options and commencement of construction to commence at the earliest possible time following approval was expressed as a view.

Traffic and Transport Issues

There were many submissions that discussed traffic and transport issues, including the origin-destination figures and sought more detailed information.

- An indication of the adequacy of the Sydney Road network to absorb the higher levels of traffic generated by the Type A options was suggested as an aspect to be included in the study.

- Some local government organisations supported the Type A route options in principle. One proviso was that the adequacy of the F3 Freeway, and interchanges from Wahroonga to Kariong to cater for the additional traffic is assessed, and if required, its capacity is upgraded prior to a Type A option being constructed.
• Some expressed the view that the capacity of Pennant Hills Road should be reduced, even to one traffic lane in each direction to avoid induced traffic and future congestion. A consequence suggested was a dedicated 24 hr/7 day bus lane along Pennant Hills Road and the F3.

• Some expressed the view that all four options result in poor traffic and transport outcomes. Among the issues raised were that Yellow and Red options would simply direct more commuter traffic into the CBD, Chatswood and North Sydney areas, which are already suffering from current congestion levels. Further, these two options are based on poor traffic management principles, as a route headed south-east would mix freight transport with the commuter peak streams. Both the Red and Yellow options were considered unacceptable by some, as they simply funnel more vehicles toward the CBD and do not achieve the stated objectives of reducing traffic on Pennant Hills Road and facilitating long distance and commercial freight.

Need for Integrated Transport Solutions – increased investment in rail and public transport

From the commencement of the study some organisations and individuals expressed the view that the study objectives should have been focused on an integrated transport solution rather than a road solution. Comments made in this context are as follows:

• While the study claims to support a balanced transport outcome, it was submitted that the commitments for this to be achieved are lacking.

• It was argued that the cost, in the order of $2 billion, would be better spent on rail improvements. It was submitted that options to improve public transport had not been adequately considered. Some expressed the view that Sydney needs investment that will shift travel demand to mass transit and freight onto efficient rail networks.

• Submissions commented that there was no information in the public information documents to indicate the extent of analysis of the capacity of the rail network and options for improvements. It was submitted that there was no assessment of the cost of providing rail freight infrastructure capacity in the Newcastle/Sydney/Wollongong region. Further, that the assumption of 100% growth in road freight leads to a pre-determined road solution. The longer the rail transport is neglected, the greater the demands on the road system was a comment expressed.

• Some expressed the view that the study had not considered the effect of increasing the rail infrastructure to serve Central Coast commuters; the high speed rail connection to Newcastle and its effect on commuter traffic; improvements to the rail alignment and grade between Sydney and the Central Coast to make it more suitable for higher speed passenger transport and for freight transport; nor the future need of public transport between Central Coast and Newcastle.

• The study did not convince some people how a link fits into overall planning for Sydney and for NSW. The Parry Report was cited as indicating that recently completed tunnels are taking patronage from the rail network, which is against sustainability and indicates a lack of overall planning for traffic and transport in NSW and Sydney. Some expressed the view that the Yellow and Red options would take people from the rail network and create additional road traffic.

• Submissions contended there is no indication of how the project fits the Visionary Objectives for a Sustainable City and further that it fails to address community expectations of a socially, environmentally and economically sustainable project.

• With the focus on removing traffic from Pennant Hills Road the project does not adequately address the need to expand the use of public transport and less dependence on private transport or of increased rail freight was a view argued.

• It was submitted that the options for a new link do not show nodal complementarity or logistics to manage transport of goods or public transport.

• It was submitted that consideration should be given to how the link would assist access to railway stations or freight lines; as well as access to the Liverpool-Parramatta transit link and the proposed Parramatta Rail link.
Comments on the public transport system were that it is nearing saturation during peak hours in the northern parts of the study area and there is extensive rat-running of traffic through the local road network because of the inability of the arterial and sub-arterial road network to cater for the current traffic and expected growth.

Many contended that traffic congestion on the Pacific Highway, Mona Vale Road, Ryde Road, the M2 and Pennant Hills Road are at saturation levels during peak periods and the proposal does not consider the future traffic growth of these outlying areas sufficiently enough.

It was submitted that the link with the Sydney Orbital needs to be more direct and further investigation needs to be given to connecting the end of the Sydney Orbital closer to Old Windsor Road and to the F3 north of Hornsby, rather than diverting traffic back on to the M2 and then through a parallel route to Pennant Hills Road.

Rather than taking any integrated transport network approach the study was viewed by some to pay only lip service to the viability of improvements to rail and buses as part of an integrated approach and the potential for modal switch if these improvements and upgrades were made. A further comment regarding public transport considerations was to ask why public transport upgrades were not fully under consideration as alternatives to road expansion. The report's assertions regarding origin and designation data was considered to be unsubstantiated and the origin of this data was queried. It was submitted that at peak periods of the day, comprising mostly of ‘journey to work’ trips, 50% of Central Coast commuters travelling south on the F3 are heading to the four hubs of Hornsby, North Sydney, Parramatta, and the CBD. Improving mass transit connections to these hubs to improve the modal split between rail and road has not been adequately investigated by the consultants and their assertions about ‘dispersed trips’ need to be substantiated by origin/destination data.

Some expressed the view that a comprehensive approach to traffic management should be adopted to minimise future congestion. A comprehensive public transport strategy should also be developed and implemented. Any proposals to use Pennant Hills Roads and other local roads to develop new bus networks, with links to the rail network would be supported, as would other initiatives that would facilitate a shift to public transport.

4.2.3 Type B and Type C Options

Some respondents commented on the Type B option, although mostly in the context of the need to give further consideration to both Types B and C, as discussed below. Those who only commented on the Type B option considered this to provide an efficient route in terms of movements between the north and around the city, rather than through it.

Many expressed the view that a more strategic long-term view needs to also be pursued as long-distance transport needs would only be serviced by the Type A options until the year 2021. On this basis the Type B and Type C options should be continued to be examined so that the longer-term transport growth needs of Sydney and the State (post 2021) can be preserved through their incorporation into planning and zoning processes, before it is too late.

Comments made in submissions about the corridor Type B included:

- Lack of detailed information about the proportion of local and through traffic using Pennant Hills Road.

- A lack of information about what freight is using Pennant Hills Road now and in the future.

- A lack of consideration of other modal issues.

- A need to review net corridor impacts and particularly implications for infrastructure upstream and downstream.

- Inadequate resolution of the interchanges.

- Limited consideration of public transport aspects.
Some submissions noted opposition to Type B options as they include routes through Galston and adjacent rural areas.

Many respondents were concerned that there had been insufficient investigation of the Type B and Type C options. Generalised comments pertained to the view that none of the Type A options would improve traffic on the Pacific Highway and more northerly options would create a true orbital road, avoiding the need to travel through the CBD or Sydney.

While some supported the Type B option, there was strong support for further investigation of a Type C option, on the basis that a long term solution was needed. The view was expressed that increasing traffic from the Central Coast would ultimately use the capacity on the F3 and the new link, and an alternative route would be required.

Another issue raised was the need to provide for a second crossing of the Hawkesbury River as an alternative route during bushfires or in the case of an accident or other action rendering the existing Hawkesbury River Bridge unpassable or destroying it.

Public comment as expressed in submissions, at displays and at the Community Focus Groups was very strong on this issue. While many acknowledged the need to address the problems of Pennant Hills Road as quickly as possible, some described this as the “band-aid” solution; and were very forceful in their view that planning is urgently needed for a much longer term solution – through further investigation of a Type C option. Some expressed the view that the Type A options are an expensive stop-gap measure that would not solve regional traffic congestion.

Other reasons given in submissions in support of the Type C option included:

- It would greatly lessen the flow of traffic on the F3 between Wahroonga and Kariong.
- Fewer residential properties would be affected either by resumption or by having a tunnel underneath them.
- Avoids effects of ventilation stacks and adverse impacts.
- Reduces traffic congestion that would occur with increased traffic flow out of the tunnels adjacent to the M2 in respect of any of the Type A options.
- The State Government should be encouraged to further investigate providing a reservation along the Type C broad corridor so that the longer term planning of vehicle movements between Western Sydney and the Central/Northern Coast can be adequately planned.
- Option C is the only option that would create a true Western Sydney Orbital Road and is the only way that traffic on Pennant Hills Road would be restored to normality. Consideration should be given to building rail in the same corridor. No options should be progressed to EIS stage until Option C has been fully and properly considered as a viable alternative.
- Type C options should continue to be investigated as a longer term solution to road capacity, security/strategic access issues and to provide a separate crossing of the Hawkesbury River.
- The creation of an alternate major additional transport corridor to the F3 is a priority for the Central Coast and for Australia and planning for such a route should commence as a matter of urgency.

4.2.4 Comments on the B2-B3 Corridor

Many residents of the Wahroonga area indicated concern about potential impacts on the B2-B3 corridor.

They reiterated their understanding that this corridor had been abandoned in 1996. Many correspondents indicated that they had purchased homes and properties since that date. Many submissions were received from residents in Kingsley Close, an area that was released for urban development following the abandonment of the B2-B3 corridor. Residents claimed that they purchased in this area in the belief that the abandonment was permanent.
• It was strongly contended that the State Government had promised that no properties would be affected in the vicinity of the F3 and B2-B3 corridor – and that all four Type A options violate this promise.

• This concern related to any route option, whether on the surface or in tunnel.

4.2.5 Environmental Impacts

Some submissions expressed the view that the study fails to adequately address a number of issues concerning social and environmental impacts including: impacts of construction on creek or river crossings and impacts on aquatic ecosystems; impacts of construction generally; potential for damage to bushland from drilling and investigative work; potential for emission stacks associated with the tunnels to be placed in bushland or other open space; potential impacts on threatened species or endangered ecological communities.

Air Quality, Emissions and Ventilation Stacks

The issue of ventilation stacks, including the number, location and system of air quality treatment was the most raised issue of concern. This issue was raised as either a general concern about air quality impacts or as a separate issue. These are some of the comments made in submission about air quality impacts and ventilation stacks.

• The potential health effects and impact from vehicles and particularly ventilation stack emissions on environmental quality and amenity.

• The M5 East tunnel and issues about the Lane Cove tunnel were cited as evidence of the controversy associated with ventilation stack proposals, including the possibility for build up of pollutants in the tunnels.

• Some correspondents noted that the Wahroonga area is undergoing generational change, with many families with young children living and moving in to the area. The potential health effects of vehicle emissions were frequently raised as an issue of serious concern.

• These potential health effects were also raised very strongly by people living in the Thornleigh and Normanhurst areas, particularly in the vicinity of the proposed open trench associated with the Purple option. Emissions of toxins and metals from exhaust engines were cited specifically as having the potential to stunt the intellectual development of children. Benzene emissions were cited as being a gas by-product of burning fossil fuels, and as being carcinogenic at any level.

• Another source of toxins identified in submissions was the material previously buried in the brickpit at Thornleigh. Hence the proximity of the trench associated with the Purple route was opposed by many community members and P&C groups.

• Many correspondents raised the fact that, by comparison with the proposed Lane Cove tunnel, there is no industrial land in the vicinity of the Type A options and that ventilation stacks would have to be located in open space or residential areas. Concern was expressed over the potential adverse impacts on sensitive receivers such as schools and hospitals in the area, including the Seventh Day Adventist Hospital.

• Some correspondents requested that a health risk assessment be carried out as part of detailed investigations, and also that the ventilation stacks be filtered.

• It was noted that the siting of ventilation stacks in valleys should be avoided at all costs.

• Along the route of the Type A options there are schools, kindergartens, churches, a hospital, and shopping centres as well as ovals, aged care facilities and other community facilities. It was submitted as inconceivable that emission stacks would not be filtered.

• Best practice technologies for tunnel emissions should be used to ensure that community expectations in regard to health impacts and community cost are addressed.
Impact on Ecological Values

Many submissions described the ecological value of their areas, particularly natural bushland area and those associated with the Lane Cove National Park and River.

- Submissions described the value of the B2-B3 corridor and the flora and fauna of the area including the Sydney Blue Gum Forest. It was stressed that this corridor should not be used as the route for the new link, neither should it be used for construction purposes.

- Many people spoke to the team at the displays, and wrote of the ecological value of the Lane Cove bushland and its significance as a wildlife corridor through this part of Sydney. Furthermore, the corridor has value for recreational purposes. The section between Ryde Road at West Pymble and Pennant Hills Road was claimed to be the longest section of the Lane Cove River Valley remaining without any heavy intervention, which is very beneficial to the ecology of the area as wildlife habitat. It is also argued to be an extremely diverse and hence ecologically rich area.

- The Blue, Red and Yellow options were considered completely unacceptable by some submissions on environmental grounds. It was argued that even in tunnel form, the proposed Blue, Red and Yellow routes would destroy bushland for site investigations, and construction of tunnel exits and entrances, emission stacks and access roads for stacks. Emission stacks were perceived to have the potential to localise and concentrate sources of highly polluted vehicle exhaust, and to have unacceptable detrimental impacts on the treasured bushland of the Upper Lane Cove Valley and surrounds, including vegetation communities and habitats along the Upper Lane Cove Valley. Remnant bushland that could be affected was identified as including Threatened Ecological Communities such as Blue Gum High Forest and Sydney Turpentine Ironbark Forest.

- There was concern that localised pollution emanating from stacks would have negative impacts on fauna in the Lane Cove valley corridor, including mammals such as echidnas, brushtail and ringtail possums, sugar gliders and long nosed bandicoots, 17 frog species, 20 kinds of lizard, 2 turtle species and 172 bird species, as well as listed threatened species such as powerful owls and red-crowned toadlets.

- The value that the local community places on bushland is illustrated by a group of residents in the Ashburton Ave area in South Turramurra who wrote that, in response to recent bushfires, they have formed a community fire unit and bushcare group that is committed to improving and protecting the environment. They are very concerned about the potential impacts of a tunnel portal or associated works in this area.

- Some correspondents stressed the need to consider potential cumulative impacts into consideration when evaluating ecological impacts, rather than considering only individual species or vegetation communities.

Noise Impacts

- This was raised frequently especially in the context of increasing the noise from the M2 Motorway. There was concern about any structures being located in valleys, which would have the effect of magnifying traffic noise.

- Noise generated by ventilation intake chambers was raised as an issue, especially for the quiet valleys in the area.

Heritage

- Several submissions described the value of an area in Wahroonga which is currently being investigated as a Draft Urban Conservation Area (UCA 26). It was stressed that this area is recognised for its significant heritage architectural and landscape features and that any route through this area has the potential to impact on it.
The issue of bushfire was raised in several contexts.

- Of concern to some, was the increased possibility of bushfire that could result from any construction or operational activities in the Lane Cove National Park or its vicinity, especially if the Red option included a bridge over the Lane Cove River.

- Another issue of concern was the potential for smoke from bushfires or backburning to enter the ventilation intake chambers and hence the tunnel.

- Submissions noted that Robin Ave in South Turramurra has been identified as a high fire hazard area and it is inappropriate to consider the construction of a major road in this area (i.e., the Red option).

### 4.2.6 Social Impact Considerations

#### Impact on Properties

- There was considerable concern in relation to the need to acquire properties for the new link and the destruction of family homes and other developments.

- The issue of decreased property values was of concern to many residents and some Councils. It was submitted that the possibility of a new link in the vicinity of a property, or the anticipation of a tunnel under a property would result in a decrease in property value.

- Moreover, many residents commented that they had paid premium prices to live in scenic and bushland areas such as Wahroonga and Turramurra, and in areas that were at some distance from the B2-B3 corridor. They contended that the potential for a major road development in those areas would have a significant impact on their properties and lifestyle that they had anticipated.

- It was submitted that any road that passes under properties would have an impact on property values due to impacts of vibration and potential structural impacts from construction and operation.

#### Uncertainty about Property and Amenity

- Many people wrote of the major uncertainty and concern created as a result of the display of the route options. They said that this has created significant difficulty for those wanting to sell property, in the midst of renovations or considering them, and for those desiring to purchase in the area. The uncertainty created for the elderly living in areas potentially affected by one of the options was highlighted.

- In addition to the many people who wrote submissions stating this concern, it was a recurrent theme raised during discussion at the public displays and in phone calls.

#### Impacts on Community Facilities

- It was submitted that all the options impact on community facilities including schools.

- The Red option was identified in submissions as having an impact on two high schools, two primary schools, four kindergartens, Sydney Adventist Hospital, playing fields, shopping centres, a sports club and churches.

- There was concern that the Purple option, in the vicinity of the Brickyard Park would impact on community facilities in Hornsby Council’s Dartford Road development, as well as schools, hospitals and aged care facilities.
4.2.7 Road Design and Construction

**Design**

- Some expressed the view that 2 lanes would not be sufficient for the long term, and given the difficulty of widening a tunnel in the future, the new link should be three lanes in width.

- Some expressed the view that the third lane should be constructed, even if it is not operational for some time.

- It was contended that 3 lanes should be provided on significant uphill grades and that the capacity of the link must be consistent with the remainder of the network, in particular the F3.

- It was submitted that to obtain maximum benefit from the link, widening to six lanes is required between the southern end of the F3 at Wahroonga and the proposed widening north of the Hawkesbury River.

- A significant number of submissions opposed the proposed trench in the vicinity of the Brickyard Park at Thornleigh.

- It was submitted that preliminary investigations indicate that grades to achieve tunnelling under Lane Cove Valley would need to be greater than 8%. It was argued that a route along this corridor (the Red option) would therefore have to bridge the valley and the proposal to maintain the Red option in tunnel under the River would not be feasible.

- The steepness of the grades of the Blue, Red and Yellow options was of concern to many as it was perceived these would result in greater vehicle emissions, creating more pollution.

- There was concern that the location of watercourses and creek beds would create construction difficulties and also impact heavily on the environment.

- Another concern expressed was the long length of tunnels and potential issues of evacuation, particularly in the event of bushfire.

**Geotechnical Considerations**

- A few submissions raised the issue that land in South Turramurra lies on a rock shelf and experienced massive movement as proven by tremendous cracks in the land. It is feared that new structures like freeway tunnels would encounter massive damage in the short term.

- A submission indicated that the volcanic diatreme and breccia in the area need to be avoided because of the geological rarity of these formations.

- Areas of geological faults present in areas around the Red and Yellow options were identified in submissions.

**Tunnel Characteristics**

- Many were concerned about the depth of the tunnel. This concern was exacerbated by misinformation circulated within some communities that the tunnel could be as little as 10 m below the surface.

- Potential issues of concern were vibrations during construction and operation, and structural damage to properties. The potential depth of the tunnel under watercourses was also of concern and any consequent environmental impacts.

- There was concern that tunnelling may result in effects on the groundwater table and therefore have an impact on bushland.
Some argued for a Type C option rather than a Type A option because vehicles carrying dangerous goods would not be permitted to use a tunnel and hence these vehicles would not be removed from Pennant Hills Road.

A comment was made that the Wahroonga geology of old weathered volcanic clay is highly reactive to moisture changes and that a tunnel under this area (Red option in particular) may have major future effects on properties.

**Interchanges**

Many residents, particularly those living at the northern end of the Type A options requested that the tunnel should commence north of the existing interchange between the F3, Pacific Highway and Pennant Hills Road, with no property impacts in this area. A detailed submission outlined a proposal for a tunnel to commence up to 1 km north of the Pacific Highway junction to minimise traffic congestion in the event of an accident, and to avoid impacts on bushland.

Some expressed the view that locating the tunnel portal and ramps at or near the existing Pacific Highway bridge would have a significant and unnecessary detrimental impact on numerous residential properties.

It was suggested that the proposed interchange with the M2 is in an already congested location and this would exacerbate the situation.

There was concern about the location of the on and off ramps, particularly with respect to the Yellow option where a bridge to the M2 is proposed. It was of concern that it would generate additional noise and significant visual impacts for residents in the vicinity of Terrys Creek.

In relation to the Blue option it was submitted that the southern interchange with the M2 should be a direct connection, to avoid delays and encourage use of the new link.

It was submitted that the southern interchange for the Purple should be designed to link to the M2 (East) directly and be designed to minimise any desire for vehicles to use Pennant Hills Road in lieu of the link road.

**Incorporation of Bicycle Facilities as part of the new link**

Specific comments in relation to bicycle facilities included:

- Tunnel infrastructure is unsuitable for bicycle access. An alternative route should be provided that is of high quality and provides continuous bicycle facilities that connect the same end and start locations for the road.

- The most feasible and useable facility would be wide, dedicated bicycle lanes on both sides of Pennant Hills Road.

- High quality, continuous bicycle facilities should be provided and should connect the same end and start locations for the link road.

4.3 Comments on the Type A Options

It was generally acknowledged that Type A corridor options would best meet the project objectives of providing earlier traffic relief to Pennant Hills Road. However, some comments made in submissions are as follows.

- The new link would not overcome traffic congestion associated with the Central Coast traffic exiting the F3 at Wahroonga to destinations along the Pacific Highway, North Shore or the northern beaches.
• Type A options are further away from the growth areas of the northwest sector and the Central Coast and further investigation should be carried out to determine a better link for these areas and better freight transport.

• The reasons for the preference of Type A options over Types B and C needs further clarification as it appears to be based on community pressure and high construction costs.

4.3.1 Purple Option

Of the submissions that commented in support of a particular option(s) considerably more supported Purple than any other option. This is shown in comparison to the other Type A options in Figure 3.

*Figure 3: Number of Submissions which Supported a Particular Option*

These reasons were put forward in submissions in *support of the Purple option*:

• Best meets the transport objective, minimises social and environmental effects and satisfies the economic test

• Equity – people living along Pennant Hills Road already live with the impacts and have made property decisions with this knowledge. This route has long been known as the orbital route through Sydney

• Follows Pennant Hills Road and the existing rail corridor

• Provides an opportunity for a priority bus route to be created along Pennant Hills Road

• Passes along a relatively level elevated ridge with no substantial valleys or river crossings

• At both ends, the Purple option has gradients that would permit much gentler slopes near the portals

• Minimises the need for variations in the depth of the tunnels below ground surface and hence permits the depth to be more uniformly maintained

• A tunnel option most closely in parallel with Pennant Hills Road would be most beneficial and least invasive

• Greatest potential to minimise property and environmental impacts

• Location of ventilation stacks on a ridge provides the greatest opportunity to ensure rapid and effective dispersion of emissions
• Avoids impacts on the Sydney Blue Gum Forest located in the B2-B3 corridor
• Does not pass under any major waterways and avoids Lane Cove River
• Avoids the steep terrain of the Lane Cove Valley
• Enables a shorter route for access to and from the western and southern Sydney markets and linkage to the proposed WSO/M7
• Provides the best opportunity for traffic from western Sydney to access areas north of Sydney.
• Has the potential to reduce traffic volume on Pennant Hills Road and improve the amenity for existing residents
• Provides a better opportunity for an interchange at M2/Pennant Hills Road
• Greatest opportunity to improve traffic flow for increasing traffic generated by development in the north west and west, particularly at weekends and public holidays
• Serves the need of long term transport
• Sole option that does not impinge on undeveloped bushland
• Least disruption to housing and social services
• Obviates local traffic disruption
• Would have most impact on traffic relief on suburban roads with the least amount of damage to the environment.
• The Purple option achieves the stated planning objectives but is not acceptable unless full interchange access is provided to both Pennant Hills Road and the M2.

These reasons were put forward in submissions in opposition to the Purple option:
• It would have an unacceptable impact in the vicinity of the Brickyard Park where it is proposed to be in an open trench.
  − Council has invested in the clean-up of this area and there are proposed sports fields as well as the nearly completed Indoor Sports Stadium.
  − There would be an unacceptable impact on Normanhurst West Public School in terms of noise and air quality impacts and general impacts on health and consequently learning. The school is some 50 m from the brickpit. Four other schools in this area have also been referred to.
  − Potential to generate toxic fumes from construction in the area previously landfilled
  − Purple has significant potential impact on Council’s Dartford Road site. A proposed trench in this vicinity is considered impractical due to the existence of 500,000 tonnes of putrescible waste within the landfill; current activities to restore the site and seal the waste; planned future development for sporting facilities. A heritage item exists on the site and leachate management is a significant constraint.
• It would skew the connection with the M2 to the west and does not allow traffic to travel directly to/from the east on the M2
• Locating ventilation stacks in the vicinity of a Purple route is inconsistent with the objective of improving amenity along Pennant Hills Road.
4.3.2 Blue Option

Of the submissions that commented in support of a particular option(s) approximately the same number supported the Blue and Yellow options, as shown in Figure 3. These reasons were put forward in submissions in support of the Blue option:

- Offers most direct link between the F3, M2, W7 and M4 and main routes linking the Hunter, Central Coast, Illawarra and points further north, south and west of Sydney.
- Would be the natural route for most heavy trucks
- Follows an existing transport corridor
- Would best serve the needs of areas of rapid population and/or economic growth such as the Central Coast and western Sydney and the Hunter and Wollongong in the future.
- Transport and warehousing would be attracted to the vicinity of the W7 and the new link would of itself attract extra road freight activity on a significant scale and add to the freight movement along this route.
- Connects well with the Pacific Highway and Pennant Hills Road and is likely to provide significant relief to road users and residents along Pennant Hills Road.
- Provides a better opportunity for an interchange at M2/Pennant Hills Road
- Takes most traffic off Pennant Hills Road and most heavy vehicles off surface roads
- Most improvement in noise and air quality
- Likely to cause less convenience than alternatives
- No disadvantage in terms of access from northern Sydney and points further north to major areas of freight based activity around Port Botany and Sydney Airport when compared with other routes.

These reasons were put forward in opposition to the Blue option:

- It would skew the connection with the M2 to the west and does not allow traffic to travel directly to/from the east on the M2
- Affects many properties away from Pennant Hills Road which were not previously affected by any route

4.3.3 Yellow Option

These reasons were put forward in support of the Yellow option:

- Opportunity to remove heavy vehicles from the Pacific Highway
- Runs predominantly under open space
- Least community impact in terms of properties, ventilation stacks and community facilities
- Justifies the need for both eastern and western bypasses
- Provides relief to both Pennant Hills Road and to the Pacific Highway.

These reasons were put forward in submissions in opposition to the Yellow option:

- Would exacerbate existing traffic problems at North Epping. These are caused in part by the effect of the late afternoon sun inhibiting visibility on the M2. This option would require tunnels branching off a known blackspot
- Would increase congestion on the Pacific Highway
• Brings traffic through the centre of Sydney
• Does not make sense to bring traffic from the south and west, and send it east to go north
• Destroys land in the North Epping area when RTA land is available elsewhere
• Does not alleviate heavy traffic on The Comenarra Parkway or the Pacific Highway
• Would funnel more cars onto Sydney’s already congested feeder roads, rather than reducing traffic congestion on major existing roads and reducing freight transport costs.
• Passes under densely populated areas of Pennant Hills and North Epping
• The Yellow and Red options would take people from the rail network and create additional road traffic.

The Carr Government abandoned the B2/B3 option in 1966, yet all of the Type A options cover part of that area. The Red option also covers part of the abandoned C1 and B1 options. This is a breach of promises made to the community.

− Decision to include Red and Yellow options are totally contrary to government’s promise
− Those residents who bought properties in the area since the abandonment of the corridor are likely to suffer a loss in property values.

• The new link joining the M2 as the M2 tunnel would be inadequate for the increased volume of traffic. Also, the existing noise barriers at North Epping would need to be re-evaluated with a reduction in the speed limit that applies to the M2. Air pollution is also of concern.
• Any link of the F3 to the M2 on the eastern side of Pennant Hills Road since that would have the potential effect of offloading additional traffic through into the Ryde City area.
• Yellow options create major negative impacts to one group of residents while providing significant benefit to another group.
• Yellow represents poor economic benefit.

4.3.4 Red Option

Of the submissions that commented in support of a particular option(s) fewer supported the Red option. These reasons were put forward in submissions in support of the Red option:

• It is the original route proposed many years ago
• Provides a more direct link and would be attractive to traffic from the central coast and northern Sydney
• Equity, as those who purchased properties in the vicinity of the southern end of the F3 would have anticipated its extension in the future
• Opportunity to remove heavy vehicles from the Pacific Highway

Of the submissions that commented in opposition to a particular option(s) more opposed the Red option than any of the other Type A options, as shown in Figure 4.
These reasons were put forward in submissions in opposition to the Red option:

- The Carr Government abandoned the B2 option in 1996, yet all of the Type A options cover part of that area. The Red option also covers part of the abandoned C1 and B1 options. This is a breach of promises made to the community. The abandonment of the corridor and release of land created the expectation that no routes would be considered in this area.

- Any option with a bridge over the Lane Cove River or that otherwise has an impact on the Lane Cove River bushland and/or National Park is unacceptable.

- Tunnels through the jointed sandstone under the Lane Cove River could have a substantial impact on the flow regime of the river.

- Impacts on a large residential area, local schools (such as Turramurra Public School), a major hospital, playing fields and churches

- It is too indirect for Orbital traffic and many vehicles would still use Pennant Hills Road

- Takes fewer vehicles and heavy vehicles off Pennant Hills Road (than other options)

- Encourages traffic into the city

- Does not alleviate heavy traffic on The Comenarra Parkway or the Pacific Highway

- Will increase congestion in North Ryde and South Turramurra

- It is the least viable as it is the longest and has the greatest impact on homes and bushland

- Runs primarily under high density housing

- Tunnelling would have a significant effect on many properties and wildlife

- Excessive gradients to enable tunnel to pass under the Lane Cove River thus potentially necessitating a bridge at this location

- Steeper gradients result in higher energy costs to vehicles

- Ramps at M2 would damage areas of Lane Cove National Park and cause air, noise and visual pollution

- No industrial areas in the vicinity and ventilation stacks would be visually and environmentally unacceptable
- Will exacerbate existing traffic problems
- Increased risk of bushfires
- Would funnel more cars onto Sydney’s already congested feeder roads, rather than reducing traffic congestion on major existing roads and reducing freight transport costs.
- Maximum impact on indigenous heritage sites relative to other options
- The Red option would take people from the rail network and create additional road traffic.
- If Red is chosen there is no certainty that the EIS may not lead to a bridge or cut and cover of the Lane Cove River. There is strong objection to any bridging of the Lane Cove Valley
- Red would have the greatest negative impact on the local customer base and impacts on properties.
- The existing noise barriers at North Epping would need to be re-evaluated also with a reduction in the speed limit that applies to the M2.
- Any link of the F3 to the M2 on the eastern side of Pennant Hills Road that would have the potential effect of offloading additional traffic through into the Ryde City area.
- Red option creates major negative impacts to one group of residents while providing significant benefit to another group.
- Red represents poor economic benefit.

4.3.5 Comments by NSW State Agencies

NSW State Government agencies were consulted during the study and meetings were held with relevant agencies in regard to specific issues.

The Department of Infrastructure, Planning and Natural Resources made a submission during the display of route options. The Department’s submission did not comment specifically on any of the options, rather it provided a focused technical review of the information available.

4.3.6 Local Government Comments on Type A Options

A consistent comment made by Councils was their disappointment in not being consulted about the options prior to their being placed on public display. Councils requested that they be kept better informed as the study progresses to the selection of a preferred option.

*Summary of submission made by Baulkham Hills Shire*

- Preference for Type A Purple option with three lanes in either direction and based on the untolled option.
- The State Government should be encouraged to further investigate providing a reservation along the Type B, C corridor so that the longer term planning of vehicle movements West/Northern Coast can be adequately planned.

*Summary of submission made by Blacktown City Council*

- Acknowledged that the Type A corridor option would best meet shorter term objectives of the project by providing earlier traffic relief to Pennant Hills Road.
- A more strategic long term view needs to also be pursued as long-distance transport needs would only be serviced by the Type A option until the year 2021. On this basis the Type B and Type C options should be continued to be examined so that the longer-term transport needs of Sydney and
NSW (post 2010) can be preserved through their incorporation in the short term into planning and zoning processes.

**Summary of submission made by Gosford City Council**

- Favours either the Yellow or Red option.
- Supports the corridor Type A option in principle provided that the adequacy of the F3 Freeway and interchanges from Wahroonga to Kariong to cater for the additional traffic is assessed and, if required, capacity upgraded prior to a Type A option being constructed.
- The long term adequacy of the Kariong interchange and its feeder roads should be assessed.
- Supports a greater emphasis on rail infrastructure.

**Summary of submission made by the Council of the Municipality of Ku-ring-gai**

- Opposed to the link as either a surface or tunnel link through Ku-ring-gai along a similar route to the abandoned B2/B3 corridor. A road through this corridor is considered to be totally inappropriate and inconsistent with the State Government’s decision on this corridor and area. Council will oppose any road link through this area.
- The Carr Government abandoned the B2 option in 1966, yet all of the Type A options cover part of that area. The Red option also covers part of the abandoned C1 and B1 options. This is a breach of promises made to the community.
- Any road that passes under properties would have an impact on property values due to impacts of vibration and potential structural impacts from construction and operation.
- There has been no indication as to how a link fits into overall planning for Sydney and for NSW.
  - The Parry Report indicates that recently completed tunnels are taking patronage from the rail network, which is against sustainability and indicates a lack of overall planning for traffic and transport in NSW and Sydney. The Yellow and Red options would take people from the rail network and create additional road traffic.
  - No indication of how the proposals fit the Visionary Objectives for a Sustainable City and fail to address community expectations of a socially, environmentally and economically sustainable project.
  - The 20-year horizon does not provide a sustainable transport network.
  - With the focus on removing traffic from Pennant Hills Road the project does not adequately address the need to expand the use of public transport and less dependence on private transport or of increased rail freight
  - The proposals do not show nodal complementarity nor logistics to manage transport of goods or public transport
  - Consideration should be given to how the link would assist access to railway stations or freight lines; as well as access to the Liverpool-Parramatta transit link and the proposed Parramatta Rail link
  - The proposals do not preserve bushland, significant heritage and urban green zones
  - There is not a commitment to green construction as the “exhaust” stacks may not be filtered, and there is the possibility of bridging the Lane Cove River.
Findings from Council’s Traffic and Transport study indicated that the public transport system is nearing saturation during peak hours and there is extensive rat-running of traffic through the local road network because of the inability of the arterial and sub-arterial road network to cater for the current traffic and expected growth.

Traffic congestion on the Pacific Highway, Mona Vale Road, Ryde Road, the M2 and Pennant Hills Road are at saturation levels during peak periods and the proposal does not consider the future traffic growth of these outlying areas sufficiently enough.

Type A options are further away from the growth areas of the north-west sector and the Central Coast and further investigation should be carried out to determine a better link for these areas and better freight transport.

The link with the Sydney Orbital needs to be more direct and further investigation needs to be given to connecting the end of the Sydney Orbital closer to Old Windsor Road and to the F3 north of Hornsby, rather than diverting traffic back on to the M2 and then through a parallel route to Pennant Hills Road.

- The project objectives tend to be too focused on the relief of traffic on Pennant Hills Road and there is no information that enables a proper assessment of the traffic patterns and origins and destinations.
- The reasons for the preference of Type A options over Types B and C needs further clarification as it appears to be based on community pressure and high construction costs.
- The link would not be cost effective if a toll is imposed, especially given the 20 year horizon.
- The cost of the link as well as degradation of the local community amenity is not sensible for a mere 20 year horizon.
- Along the route of the Type A options there are schools, kindergartens, churches, a hospital, and shopping centres as well as ovals, aged care facilities and other community facilities. It is inconceivable that emission stacks would not be filtered.
- If Red is chosen there is no certainty that the EIS may not lead to a bridge or cut and cover of the Lane Cove River. Council strongly objects to any bridging of the river.
- There are many serious amenity issues for the municipality’s residents and anticipated degradation of the bushland and the National Park and the Lane Cove River.
- All options impact on Urban Conservation Area 26 in Wahroonga.
- The lack of design makes assessment difficult but several options would have very difficult gradients.

**Summary of submission made by Hornsby Shire Council**

- Supports Type A as a short-term solution to traffic problems on Pennant Hills Road.
- Supports further development of a specific route in tunnel generally in accordance with Purple or Blue options
- Purple has significant potential impact on Council's Dartford Road site. A proposed trench in this vicinity is considered impractical due to the existence of 500,000 tonnes of putrescible waste within the landfill; current activities to restore the site and seal the waste; planned future development for sporting facilities. A heritage item exists on the site and leachate management is a significant constraint. Potential impacts on Normanhurst West Public School are also of concern. Council opposes any surface road associated with the Purple option.
• Council requests that the southern interchange be designed to link to the M2 (East) directly and be
designed to minimise any desire for vehicles to use Pennant Hills Road in lieu of the link road.
Council also submitted that the Purple option would link closer to the existing Pacific Highway/F3
interchange; and requested further details on this interchange for both Purple and Blue.

• The scope of the project should be broadened to include enhancement of Pennant Hills Road for
improved public transport and local accessibility issues.

• Further detailed information is requested on proposals to deal with air quality in the vicinity of the
tunnels and exhaust (sic) stacks.

• 3 lanes should be provided on significant uphill grades. The capacity of the link must be consistent
with the remainder of the network, in particular the F3.

• Development of detailed options and commencement of construction to commence at the earliest
possible time following approval.

• To obtain maximum benefit from the link, widening to 6 lanes is required between the southern end
of the F3 at Wahroonga and the proposed widening north of the Hawkesbury River.

• Council strongly objects to the loss of any finite, irreplaceable bushland that may be caused by any
option and particularly the Red and Yellow options.

• Council and the community need to be informed as to whether the link would be constructed as a
toll road or whether it would be funded directly by the government.

• Does not support Type B options which include routes through Galston and adjacent rural areas.

• Considers that Type C options should continue to be investigated as a longer term solution to road
capacity, security/strategic access issues and to provide a separate crossing of the Hawkesbury
River.

**Summary of submission made by the Council of the City of Ryde**

• Strong objection to Red or Yellow. Council opposes any link of the F3 to the M2 on the eastern
side of Pennant Hills Road since that would have the potential effect of offloading additional traffic
through into the Ryde City area.

• Blue or Purple options are preferred

• Concerned about likely generation of further traffic movements form the north and south via the F3
link and into the Metro 3 network

• Type A does not address the long term issues pertaining to the Orbital link

• Concerned at absence of demand management objectives in the study

**Summary of submission made by the Wyong Shire Council**

• Supports the Red option

• Before proceeding with further work there should be an identification of the consequences of the
preferred option in regard to traffic congestion at the southern end connection with the M2

• The upgrading of the F3 south of the Hawkesbury River to 6 lanes should be expeditiously carried
out.

• Views the creation of an alternate major additional transport corridor to the F3 as a priority of the
Central Coast and for Australia and that planning for such a route should commence as a matter of
urgency.
Summary of submission made by the Western Sydney Regional Organisation of Councils (WSROC)

- In-principle support for Purple, with two lanes in each direction. This option is favoured because it gives superior connectivity to Greater Western Sydney and the Orbital under construction.

- A comprehensive approach to traffic management should be adopted to minimise future congestion. A comprehensive public transport strategy should also be developed and implemented. WSROC broadly supports proposals to use Pennant Hills Roads and other local roads to develop new bus networks, with links to the rail network. WSROC also supports other initiatives that would facilitate a shift to public transport.
5 Outcomes of the Consultation Program

5.1 Key Outcomes

This study is for a major link potentially affecting a large population, either directly or indirectly, involving diverse issues and differing community views. The consultation activities have engaged a large number of people in the broad community, as well as local government agencies and other key bodies.

On the basis of the submissions made in writing, and taking into consideration comments made during the public displays and through phone conversations, it appears that there is broad community support for a Type A option, with the expectation that the Type C options would be further investigated to provide a long term western route and potential second crossing of the Hawkesbury River. Making provision for such a route through the planning process was important to many members of the community and other key stakeholders.

Of the Type A options, there was broad support for the Type A Purple option as it was seen to best meet the project objectives, would provide the most relief to Pennant Hills Road and would be developed along an existing transport corridor.

Notwithstanding the above, there was significant community opposition to a particular aspect of the Purple option, namely the section in an open trench in the vicinity of the Brickyard Park. The high number of submissions from the Normanhurst/Thornleigh area reflects the depth of feeling on this issue.

There are schools, hospitals, aged care facilities and houses located in close proximity to this area. The brickyard also has a history of being used for the disposal of putrescible waste and residents expressed strong concern in relation to any possible need to excavate this area for road construction. Concerns about the road development and in relation to the possible exposure of “toxic” material from the pit include impacts from emissions from the trench; potential impacts developmental and health impacts, noise, and overall impacts on amenity. Furthermore, Hornsby Council is progressively developing community and sporting facilities at the Brickyard Park.

There was significant opposition to the Type A Red option. Foremost among the reasons for opposing this route was that it would be considered to be an abrogation of the government’s commitment to the abandonment of the B2-B3 corridor. The high number of submissions from the Wahroonga/Turrramurra area reflects the depth of feeling on this issue.

It was argued that the State Governments had promised that no properties would be affected in the vicinity of the F3 and B2-B3 corridor – and that Type A options violate this promise.

The Red option was commonly argued to be the least viable, as it was perceived to be a long tunnel and has the greatest impact on homes. Much of the area where the Red option is located is characterised by high density of residential development. Other concerns with the Red option included potential impacts on the Lane Cove River and Valley.

Other than issues in relation to specific routes and property impacts, the single most raised issue of concern was in relation to air quality and ventilation stacks. Significant concern was expressed about the potential number and location of the stacks and proposed methods of treatment. There was considerable commonality in community expectation for the tunnel emissions to be filtered and for best
practice technology to be applied. If this study proceeds to an EIS stage, it was a high community expectation that there would be a detailed investigation of air quality impacts and emission treatment and for best environmental practice to be implemented. Some correspondents requested that a health risk assessment be carried out as part of detailed investigations.

5.2 Information Flow to the Next Stage

A substantial amount of information was generated through the consultation activities for the study. Following a decision on a preferred option, the next logical step would be to review again the submissions that made specific reference to that option and review the particular points of those submissions. This would be beneficial in refining the option and for any further detailed environmental impact assessment. It is recommended this be undertaken.
Appendix A

Summary of Issues

This Appendix lists the main issues that were raised and recorded during the consultation activities for the study.

1. Air Quality

2. Construction
   2.1 Air & dust
   2.2 Noise & vibration
   2.3 Construction areas – impacts on property
   2.4 General concern about construction issues and impacts

3. Consultation
   3.1 Process of consultation including newsletter distribution
   3.2 Opportunities community involvement and access to information
   3.3 Display locations

4. Cycleways

5. Design
   5.1 Road issues generally
   5.2 Tunnel issues generally
   5.3 Number of lanes
   5.4 Safety & emergency access arrangements
   5.5 Fire & hazard arrangements
   5.6 Location of interchanges
   5.7 Interchanges with other roads (not F3 or M2)

6. Economic Impacts & Costs
   6.1 Need
   6.2 Affordability
   6.3 Funding
   6.4 Impact on other infrastructure

7. Flora & Fauna
7.1 Loss of vegetation
7.2 Impact on Lane Cove National Park
7.3 Impact on reserves & open space
7.4 Impact on flora and fauna – species, communities, wildlife corridors

8. Environmental Management

9. Heritage

10. Operation
   10.1 Noise Impacts
   10.2 Toll
   10.3 Emergency vehicles access in tunnels

11. Property
   11.1 Property acquisition – surface impacts
   11.2 Property acquisition – stratum impacts
   11.3 Property Impact – physical impacts beyond acquisition
   11.4 Impact on property value
   11.5 Impact on sale of property
   11.6 Uncertainty about future improvements to properties

12. Social
   12.1 Uncertainty about the future, impacts on properties, whether affected or not
   12.2 Property effects, direct and indirect
   12.3 Timing re property impacts and possible acquisition
   12.4 Changing character of area
   12.5 Noise impacts during construction and operation
   12.6 Retaining visual quality of the area, importance of landscape

13. Timing
   13.1 Construction
   13.2 Operation
   13.3 Perception re project commencement

14. Tunnel
   14.1 Safety
   14.2 Emission treatment in tunnel
   14.3 Transport of hazardous goods
14.4 Particulates generation
14.5 Filters
14.6 Long tunnels & driver psychology
14.7 Tunnel depth
14.8 Transport of dangerous goods

15. Ventilation Stacks
15.1 Number and location
15.2 Design (filtration etc)
15.3 Health impacts
15.4 Property Impacts – direct/physical
15.5 Impact on Property Value
15.6 Impact on schools/hospitals
15.7 Visual Impact

16. Traffic
16.1 Increase in traffic on local roads
16.2 Modelling – Pennant Hills Road
16.3 Modelling – Pacific Highway
16.4 Impact on adjacent roads
16.5 Number of heavy vehicles
16.6 Accidents and road trauma

17. Transport Policy & Strategic Options
17.1 Regional Planning
17.2 Freight to rail, not road
17.3 Public transport, not road
17.4 Longer term needs
17.5 Security of roads

18. Water Quality

19 Pennant Hills Road, impact of traffic
19.1 Traffic impact

20. Pacific Highway, impact of traffic

21. Central Coast Traffic
21.1 Not meeting needs for this area
21.2 Need for access to western Sydney