

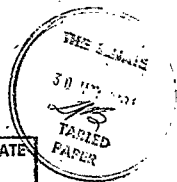


Parliament of the Commonwealth of Australia

Gungahlin's Transport Links

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A Report
of the Joint
Committee on
the Australian
Capital Territory

GUNGAHLIN'S TRANSPORT LINKS

**A report of the Parliamentary Joint Committee on the
Australian Capital Territory**

May 1991

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* The Hon. John Moore, MP was replaced by Mr Robert Halverson on 7 March 1991.

TERMS OF REFERENCE

On 16 August 1990 the Commonwealth Minister for the Arts, Tourism and Territories, the Hon. David Simmons MP, asked the Committee to review the external transport proposals for Gungahlin developed by the National Capital Planning Authority.

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RECOMMENDATIONS

1. The Committee recommends that:
 - (a) bus services be introduced into Gungahlin as soon as the first neighbourhoods are occupied;
 - (b) intertown express services be introduced between Gungahlin and Belconnen, and Gungahlin and Civic as soon as demand exists;
 - (c) a conveniently located bus interchange be established in Gungahlin at the first opportunity; and
 - (d) a detailed strategy of measures to encourage the use of public transport and other non-car modes of transport, such as those described in paragraph 3.4, be developed and implemented as soon as Gungahlin's first neighbourhoods are occupied. (*Paragraph 3.23*)

2. The Committee recommends that:
 - (a) the NCPA and the ACT Planning Authority jointly commission or conduct a study into the establishment of a rapid transport system in the Australian Capital Territory. This study should consider the following matters:
 - (i) the most appropriate type of rapid transport technology;
 - (ii) the extent of such a transport system, for example whether it should link Gungahlin to Civic alone or be part of a wider network;
 - (iii) a timetable for the construction of such a system including the possible early establishment of the system in already settled areas of Canberra;
 - (iv) the construction and operational costs of such a system;
 - (v) the potential to attract private involvement in the establishment of such a system through 'joint venture' or 'value capture' arrangements; and

(vi) the impact of such a system on reducing the demand for additional road space from Gungahlin;

(b) to maximise the potential advantages of a new technology rapid transport system, including the possibility of reducing the need for additional road space to cater for the travel needs of the future residents of Gungahlin, this study should be completed and its findings released before the Commonwealth and Territory Governments commit themselves to the construction of any new roads to or from Gungahlin; and

(c) in the interim a reservation be made between Civic and Gungahlin to allow for the construction of a rapid transport system. *(Paragraph 3.25)*

3. The Committee recommends that:

(a) the Commonwealth and Territory Governments jointly and separately (where appropriate) develop and implement the measures described in paragraph 4.4 - such as limiting employment growth in Civic - to limit the number of vehicles travelling between Gungahlin and Civic or other southern destinations; and

(b) the Commonwealth Government's long term strategy for office location be amended to give priority to the development of additional office space in Gungahlin as well as in Tuggeranong and Belconnen. *(Paragraph 4.8)*

4. The Committee recommends that:

William Slim Drive between the Barton Highway and Ginninderra Drive be upgraded. *(Paragraph 4.24)*

5. The Committee recommends that:

(a) provision not be made in the National Capital Plan for a John Dedman East road; and

(b) the Bruce Ridge - O'Connor Hills area be given legislative protection to preserve its ecological, recreational and educational values. *(Paragraph 4.60)*

6. The Committee recommends that:

(a) a detailed environmental impact assessment be made of the John Dedman Community Option and John Dedman West alignments, addressing such issues as:

(i) the potential impact of each alignment on the Bruce Ridge and O'Connor Hills, and

(ii) the potential impact of the Community Option alignment on the amenity of facilities at the AIS for residents and other users; and

(b) in conjunction with the assessment, a broader study of the present and future parking and traffic management needs in the area of the AIS be conducted jointly by the ACT Planning Authority and the NCPA. *(Paragraph 4.63)*

7. The Committee recommends that:

(a) provision be made in the National Capital Plan for a Majura Parkway;

(b) a detailed alignment study be conducted to minimise any impact on existing leases in the Majura Valley, for example by following the line of the existing Majura Lane;

(c) a detailed environmental impact assessment of the Parkway be made, addressing such issues as:

- the potential impact of the Parkway on animal movement corridors and how best to maintain those corridors; and

- the possible impact of increases in traffic levels on Northcott Drive and Fairbairn Avenue and the need to introduce or upgrade noise abatement measures; and

(d) the ACT Government investigate the immediate introduction of noise abatement measures along Fairbairn Avenue. *(Paragraph 4.79)*

8. The Committee recommends that:
- (a) Monash Drive not be constructed. However the road reservation should be retained in the National Capital Plan until it is clear that a severe disruption to the amenity of North Canberra can be avoided by the increased use of public transport and by the effective operation of the peripheral roads; and
 - (b) the Mount Majura - Mount Ainslie area be given legislative protection to preserve its ecological, recreational and educational values. *(Paragraph 4.99)*

9. The Committee recommends that:
- (a) the proposed extension to Ginninderra Drive not proceed but that, to minimise the level of through traffic in Lyncham and O'Connor, Mouat Street be widened and traffic management and calming techniques be introduced in the area;
 - (b) the implementation of these measures not be deferred until the expected increase in traffic from Gungahlin occurs, but commence immediately so that the already high levels of through traffic are reduced; and
 - (c) the ACT Planning Authority conduct a comprehensive study of all North Canberra suburbs to identify particular streets that warrant the introduction of traffic management and calming techniques. *(Paragraph 4.105)*

9. The Committee recommends that:
- (a) the joint NCPA and ACT Planning Authority study of the area south of Mitchell and between the Federal and Barton Highways commence immediately, and
 - (b) the study assess the usefulness of a highway link road and determine a road alignment which would effectively link the two highways with the Majura Valley corridor so as to encourage commercial and other through traffic to divert to the peripheral arterial roads and by-pass North Canberra. *(Paragraph 4.110)*

PREFACE

Works for the provision of services to Canberra's new town of Gungahlin commenced late last year and the first residential neighbourhood is expected to be ready for occupation in early 1993. The first phase of development, involving the construction and occupation of seven suburbs grouped around a town centre, may be completed as early as 1995. Development plans for the district indicate that towards the turn of the century some 30,400 people will be living in Gungahlin. Eventually, Gungahlin will be home to over 85,000 people.¹

Demographic and employment projections suggest that 40,500 of Gungahlin's eventual population of 85,000 will be in paid employment. If the current development plans proceed, the town centre in Gungahlin will be similar in size to Belconnen and will eventually employ some 9,000 people. This means that around 31,500 people will need to travel to jobs in locations outside Gungahlin.² When combined with the demand for travel from residents for reasons not related to paid employment, a total travel pattern of some 33,000 people wanting to leave Gungahlin each week day morning will be created. A similar number will make the return trip in the evening and many other trips, to and from Gungahlin, will be made during the day.

Designing a transport system to provide for a travel demand of this scale is one of the most significant planning issues the people of Canberra and those concerned with the future of the National Capital are likely to confront over the next five to ten years.

The decisions made now will, to a very great extent, shape the future of Canberra. This report is the result of a ten month long public inquiry into the external transport proposals for Gungahlin developed by the National Capital Planning Authority (NCPA).

In the Chapters that follow, the NCPA's proposals are explained; a number of key principles which the Committee believes should guide the development and assessment of any transport proposals are identified; and the advantages and disadvantages of each element of the NCPA's proposals, and a number of other transport proposals, are assessed.

Finally, in a series of recommendations, the report calls on the Commonwealth and Territory Governments to implement some of the proposals, to reject others and to examine further a range of environmental, transport and urban planning issues.

¹ ACT Planning Authority, *Evidence*, p273 and National Capital Development Commission, *Gungahlin - The Concept*, an information pamphlet distributed during the Gungahlin External Travel Study.

² It would appear unlikely that, at least in the early stages of Gungahlin's development, all of those people employed in the Gungahlin town centre will reside in Gungahlin. Over time it can be expected that employment and residential patterns will coincide and that most people who work in Gungahlin will tend to live there as well (NCPA, *Evidence*, p31).

1. THE TRANSPORT PROPOSALS

The Gungahlin External Travel Study

1.1 Consideration of how to provide for the travel needs of the future residents of Gungahlin dates from 1985, when the former National Capital Development Commission released a series of preliminary options for public discussion.

1.2 These options generated considerable debate within the community and, in response, the Commission decided to initiate a major program of public information and consultation. The program, known as the Gungahlin External Travel Study, was an ambitious exercise which aimed:

- to inform the community, particularly the North Canberra community, about the various environmental, transport and urban planning issues involved in meeting Gungahlin's transport needs; and
- to encourage the community to consider a range of possible solutions to Gungahlin's transport needs.

1.3 Through a combination of public meetings and opinion surveys the Study canvassed the views of 750 residents of the inner north; 58 community and business organisations (including schools) based in the area; 23 commercial leaseholders whose interests could potentially be affected; and a group of people who were selected to represent the views of the future residents of Gungahlin.

1.4 The final report of the Study assessed the implications of a wide range of planning issues and concluded that the demand for travel to and from Gungahlin should be met with an integrated package of measures, including:

- (a) containment of the level of employment growth in Civic and the introduction of positive incentives for decentralised development and the creation of the maximum number of jobs in Gungahlin, Mitchell and Belconnen;
- (b) retention and enhancement of the integrity of North Canberra suburbs by the provision of traffic protection facilities to minimise any increases in traffic flows on residential streets, a reduction in the extent of commuter parking in residential streets, and the development of a traffic distribution and parking plan for Civic;
- (c) a realistic investment in the public transport system to allow services to be improved and extended, and the active promotion of public transport services to reduce reliance on private transport;

- (d) the introduction of measures to restrain the growth in demand for peak hour travel and encourage less reliance on private motor cars, including -
 - (i) the implementation of a detailed commuter cycleway strategy,
 - (ii) the introduction of measures to encourage more passengers per car and peak spreading, and
 - (iii) the location of community facilities, such as child care centres and health centres, near the main public transport routes; and
- (e) the provision of additional road space in a manner that would achieve a balance between protecting the built environment from traffic effects, protecting the bushland areas and providing efficient access to desired destinations.

1.5 The Study's conclusions on the specific locations for the additional roads that would be required and the timing of their construction were:

- (a) the extension of William Slim Drive to connect Gungahlin and Belconnen. This option was identified as the first priority;
- (b) John Dedman Parkway on the eastern side of North Canberra, incorporating John Dedman East and John Dedman Community Option. This road was identified as the first major road from Gungahlin and as requiring improvements to the Glenloch interchange;
- (c) a Majura Parkway in the Majura Valley. The Short Majura Community Option was identified as the preferred option in this corridor;
- (d) Monash Drive on the eastern side of North Canberra. The Study concluded that the existing road reservation in this area should be retained for future use;
- (e) a link between the Barton and Federal Highways and a connection to the Majura Parkway to provide a route for commercial traffic to by-pass North Canberra; and

- (f) the extension of Ginninderra Drive through to Northbourne Avenue to minimise traffic infiltration through North Canberra.¹

1.6 The Committee is aware that among some sections of the North Canberra community there is a degree of scepticism about the objectivity of the Study and unhappiness with the Study's conclusions.²

1.7 It is almost inevitable that any public consideration of issues as complex and controversial as those associated with the Gungahlin travel task will reveal differing points of view within the community. In the Committee's view, the level of participation, debate and even disagreement generated during the Study and by the report of the Study does not cast doubt on the objectivity or the commitment to genuine community consultation of those involved in the exercise. Instead it illustrates the importance of the issues to the local community, indicates the complexity of the issues and confirms the success of the Study in informing and educating the community about the issues.

1.8 The Study was a valuable and successful initiative in seeking to involve the community in the decision making process. The report of the Study provides extensive background information and detailed analysis of a range of possible transport solutions. It also gives a reliable indication of the range of community views on the subject.

The National Capital Planning Authority's Transport Strategy

1.9 The findings and conclusions of the Gungahlin External Travel Study were a major input in the development by the NCPA of its preferred transport strategy for Gungahlin.

1.10 The NCPA has accepted many findings of the Study and is proposing the following transport strategy for Gungahlin:

- (a) to emphasise Northbourne Avenue as a public transport corridor with the possibility of a bus only lane and, in the longer term, to further investigate the feasibility of a light rail service;
- (b) the construction of the John Dedman Parkway from Gungahlin to the west of Black Mountain with a road to the east of Black Mountain, passing between the Australian National Botanic Gardens and the CSIRO complex to connect with Parkes Way;

¹ Lansley, Hayes and Storer Pty Ltd, *Having a Say - Report of a community consultation on the Gungahlin External Travel Study*, (1989), pp200-208.

² See submissions from B Odell; North Canberra Protection Group; S and W Hodgman; Dr P Kauffman; Black Mountain and O'Connor Foothills Protection Association; Mr J Prat; and Mount Ainslie-Mount Majura Protection Association.

- (c) a road reservation for a Majura Parkway to provide an eastern route to Civic and South Canberra;
- (d) a limited capacity road broadly along the existing Monash Drive alignment, connecting from Antill Street, Watson, to Fairbairn Avenue, Campbell, with a connection running between Ainslie Village and CSIRO to Ainslie Avenue;
- (e) an extension of Ginninderra Drive to Northbourne Avenue to take through traffic out of Lyneham and O'Connor; and
- (f) the possibility of an east-west link between the Federal and Barton Highways to allow traffic to by-pass North Canberra and use the Majura Valley route (subject to the completion of a detailed planning study on the area to be jointly conducted with the ACT Planning Authority).³

The National Capital Plan

The NCPA is required, by the provisions of the *Australian Capital Territory (Planning and Land Management Act) 1988*, to prepare and administer a National Capital Plan. The object of the Plan is to ensure that Canberra and the Territory are planned and developed in accordance with their national significance. The Plan is required, in part, to set out the general policies for the planning of national and arterial road systems throughout the Territory.

The National Capital Plan, which was published in December 1990, shows the general alignments of the arterial roads that form the basis of the NCPA's preferred transport strategy for Gungahlin. The Plan states that the 'final resolution of the location, scale and timing of these roads will depend on the outcome of consideration of the proposals by the Joint Committee on the ACT, similar consideration by the Territory Government and environmental impact assessments. Final roads as approved [by the Commonwealth Minister for the Arts, Tourism and Territories] will be incorporated in the National Capital Plan.'

(Sources: NCPA, *National Capital Plan*, (1990), p46; NCPA, *Submission*, p1.)

³ NCPA, *Submission*, p23.

NOTE: A map showing the routes proposed by the NCPA and, where they differ, the routes endorsed by the Gungahlin External Travel Study is at Appendix 4.

The Territory Plan

The ACT Planning Authority has been established to prepare and maintain the Territory Plan, the object of which is to ensure that 'the planning and development of the Territory provides the people with an attractive, safe and efficient environment in which to live and work and have their recreation'. The Plan may include the detailed conditions of planning, design and development of land and the priorities in carrying out such planning, design and development. The *Australian Capital Territory (Planning and Land Management) Act 1988* requires that the Territory Plan shall not be inconsistent with the National Capital Plan. Therefore, whatever provisions the National Capital Plan contains in relation to the transport links to and from Gungahlin will need also to be provided for in the Territory Plan.

(Source: ACT Planning Authority, *Submission*, pp2-3 and p11.)

1.11 The only significant difference between the roads proposed by the NCPA and those suggested in the report of the Gungahlin External Travel Study is that, for the western arm of John Dedman Parkway, the NCPA prefers a route to the east of the Australian Institute of Sport complex (between the AIS and Bruce Ridge) rather than the Community Option endorsed in the report of the Study (which runs to the west of the AIS).

The ACT Planning Authority's View

1.12 The ACT Planning Authority has expressed general agreement with the NCPA's proposed transport strategy.

1.13 In evidence to the Committee the Authority argued that at present Canberra's system of peripheral roads is incomplete. In Canberra's southern districts the Tuggeranong and Eastern Parkways act as peripheral roads - attracting through traffic away from residential areas and on to high speed, high capacity roads. The northern districts, however, do not have an adequate peripheral road system and as a result high levels of traffic which are not destined for the area travel through North Canberra.

1.14 The Authority considers that the construction of roads in the John Dedman, Monash Drive and Majura Parkway corridors would complete Canberra's peripheral road system. It argues that not only would these roads attract through traffic out of North Canberra, but by connecting with the Tuggeranong and Eastern Parkway systems, they would also play a strong role in linking Canberra to the surrounding region - through the Barton and Federal Highways to the north and through Tharwa Drive and the Monaro Highway to the south.⁴

⁴ ACT Planning Authority, *Evidence*, pp51-53.

1.15 The points of difference between the ACT Planning Authority and the NCPA relate mainly to the timetable for constructing the proposed roads and the capacity limits for some of the proposed roads, not to the need for additional road space.

1.16 The ACT Government has also expressed concern about funding arrangements for the construction of any new roads. The point has been made that, as the National Capital Plan identifies Canberra's main road network as being of national significance, the question of Commonwealth funding for any additions to the network is an issue for consideration.⁵

⁵ ACT Planning Authority, *Submission*, pp8-9 and p11.

2. PRINCIPLES TO GUIDE THE ASSESSMENT

2.1 In this Chapter a framework is established to guide the assessment of the NCPA's transport strategy.

Key Issues to be Considered

2.2 A key requirement of Gungahlin's external transport system is that it should provide effective access to and from Gungahlin.

2.3 Just as the future residents of Gungahlin have a right to expect the adequate and early provision of a range of facilities and services within Gungahlin (shopping, health and child care facilities for example), they are entitled to the early establishment of adequate transport links to the rest of Canberra.

2.4 It is equally important, however, that such links are not made to the detriment of Canberra's unique character or at the expense of the neighbourhood amenity of existing residential areas of the City.

2.5 Over the years of its existence Canberra's urban environment has been designed to emphasise and complement the City's national landscape setting. Key elements in this setting are the inner hills and ridges which surround and frame the urban areas. The National Capital Plan describes the hills and ridges as providing a unified visual backdrop and landscape setting for the National Capital, and blending city and country in a way which makes a significant contribution to the character of the National Capital.¹

2.6 Not only do the hills and ridges contribute aesthetically and symbolically to Canberra's character, they are extensively used for recreation by the community. Many submissions to the inquiry describe how the hills are frequently used for bushwalking, jogging, orienteering and as vantage points from which to view the City.

2.7 The forests and woodlands of the inner hills are also fine examples of the types of vegetation that were once common in the area.² The importance of seeking to retain and preserve areas of remnant vegetation was given Commonwealth support when, in 1989, the Federal Government announced the 'Save the Bush' program, through which \$1.5m will be spent each year on remnant vegetation conservation programs.³ As well as providing a valuable resource for nature studies and scientific research, remnant

¹ NCPA, *National Capital Plan*, pp54-56.

² National Parks Association (ACT) Inc., *The Conservation of Remnant Woodland and Grassland in the ACT*, (1991), pp21-25.

³ In 1989-90 \$1 million was allocated for the Save the Bush program. In 1990-91 \$1.5 million will be made available (Commonwealth of Australia, *Landcare Information - Land, Water and Vegetation Programs*, 1990-91 (1990), p26).

vegetation helps control soil erosion and salinity and serves as a habitat for wildlife. The inner hills in Canberra provide many outstanding examples of diversity in vegetation and topography which has encouraged a rich fauna.

2.8 In particular, many bird species are known to use the inner hills and ridges. A recent study on the conservation of remnant woodland in the Australian Capital Territory reported that over half the bird species found in suburban areas of Canberra do not breed in the urban environment and are dependent upon such bushland for breeding habitat. Mount Ainslie, Mount Majura and Black Mountain support over eighty breeding species including some species uncommon in the Territory. The hills and ridges also serve as wildlife corridors for transient species such as kangaroos and wallabies, providing access between the inner forest and woodland areas and other areas of open space.⁴

2.9 For these reasons the protection of the aesthetic, symbolic, recreational and environmental values of the inner hills should figure highly in the assessment of the transport proposals.

2.10 As described earlier, the Gungahlin External Travel Study identified traffic related noise and air pollution as issues of major concern within the residential areas of North Canberra.

2.11 Given the deleterious effect of noise and air pollution on residential amenity and on physical and mental health, it would seem appropriate that any transport proposals should avoid residential areas or, if they do pass through or nearby such areas, be accompanied by strict measures to limit the impact of any increase in pollution levels.

2.12 Another important issue to be considered is the need to minimise the emission of greenhouse gases so as to make what little contribution can be made in Canberra to reducing the danger of global warming. It is also important to make more efficient use of non-renewable energy sources. Therefore the transport solutions developed for Gungahlin must seek to encourage a more efficient use of energy.

2.13 If Gungahlin's external transport system can be developed in a way that is sensitive to all of the concerns described above, the type and extent of environmental degradation normally associated with transport systems could be avoided or at least minimised. In this event the Canberra community would make a significant contribution to the creation of a more environmentally friendly and ecologically sustainable future. The National Capital would become a national example of planning for the future rather than perpetuating the present.

⁴ National Parks Association, *op.cit.*, pp21-25.

The Guiding Principles

2.14 The Committee believes that any transport solutions proposed for Gungahlin must:

- . meet the travel needs of the future residents of Gungahlin efficiently and effectively;
- . not threaten or jeopardise Canberra's landscaped settings or character;
- . cause no or minimal destructive impact to the City's natural environment;
- . cause no or minimal disruption to the residential amenity of Canberra's northern and inner suburbs; and
- . minimise any increase in the levels of air and noise pollution, greenhouse gas emissions and rates of energy consumption.

2.15 If any transport proposal is unable to satisfy these principles it should not proceed and, if necessary, alternative proposals should be sought.

2.16 In the Chapters that follow, each element of the NCPA's preferred transport strategy is considered in the light of these principles.

3. PUBLIC TRANSPORT

The NCPA proposes to emphasise Northbourne Avenue as a public transport corridor with the possibility of a bus only lane and, in the longer term, to further investigate the feasibility of a light rail service.

Introduction

3.1 Canberra relies even more heavily on the private motor vehicle for transport than most cities in Australia and overseas. The problems associated with 'automobile dependence' are well documented and include the alienation of significant amounts of land for roads and parking space (at the expense of more 'people friendly' land uses), high levels of traffic congestion, high levels of noise and air pollution and high rates of energy consumption.¹

3.2 If a greater than usual emphasis can be placed on public transport in the development of Gungahlin's external transport network, the problems of 'automobile dependence' would be reduced.

Extending the Existing System

3.3 The most obvious public transport option for Gungahlin is the extension of Canberra's existing bus system. The NCPA has proposed this option by suggesting that express bus services, like the direct intertown '333' services currently operated by ACTION, be extended into Gungahlin and that bus interchange facilities be established in Gungahlin at the first opportunity.

3.4 The early introduction of bus services to Gungahlin is crucial if a pattern of public transport use is to be established and significant levels of patronage are to be attracted. While the introduction of 333 services to and from Gungahlin is a necessary first step, it will not in itself be sufficient to attract people away from travelling by private car. If this is to be achieved a major commitment from the relevant authorities will be required. This commitment should involve:

- . advertising and publicity campaigns;
- . the integration of cycle path and public transport networks by providing secure bicycle storage facilities at bus interchanges and bike carrying facilities on the buses;

¹ For recent Australian and international studies in this area see Newman, P., and Kenworthy, J., *Cities and Automobile Dependence* (1989) and Newman, P., Kenworthy, J., and Lyons, T., *Transport Energy Conservation Policies for Australian Cities* (1990).

- the provision of park and ride facilities at bus interchanges;
- the provision of secure bike storage facilities at places of employment; and
- the imposition of increased parking charges in and around Civic - in the Committee's view increases in parking charges are inevitable and would help to discourage private car use.

3.5 A key to increasing the attractiveness of public transport as a travel option is to ensure that the intertown express bus service is reliable, quick and direct. The provision of bus only or bus priority lanes on the intertown connections to Gungahlin should be seen as essential and not, as envisaged by the NCPA, a mere possibility.

3.6 Another, more sophisticated, improvement to the service would be the introduction of measures to give express buses priority at intersections. One way of achieving this would be to develop and install a system allowing drivers to activate a green traffic signal as they approach intersections.

3.7 Even with the introduction of priority measures such as these, the travel efficiency of buses is limited by the necessity to share road space with other vehicles. Traffic congestion would be avoided, journey times would be decreased and public transport would become a more attractive option if the public transport system operated separately, or largely separately, from other traffic. Much of the discussion before the Committee about improving the travel efficiency of public transport has focussed on the potential of light rail transport systems.

A Light Rail System

3.8 Light rail is the phrase used to describe a single or multiple carriage electric tram. Light rail vehicles are capable of higher acceleration than traditional heavy rail vehicles and can travel at speeds of up to 100km/h on separate rights of way, or at lower speeds along city streets. Light rail vehicles can turn at right angles or negotiate roundabouts with ease and can run quietly and safely through pedestrian malls or adjacent to houses through narrow alignments.²

3.9 Over the last 10 to 15 years cities throughout North America and Europe have been turning increasingly to light rail as a public transport alternative. New systems have been built, old systems restored and existing systems upgraded and extended. It has been a common pattern in many of these cities that, following the introduction of light rail, public transport patronage has increased significantly. Data presented by one witness shows that in San Diego many people have changed their travel patterns and are now travelling by light rail rather than private car. This shift in transport 'modes' is something that the previous bus system had been unable to achieve despite improvements to the system through the introduction of dedicated busways, and is something that most in the city thought could never happen.³

² *Having a Say*, pp47-48, and Kenworthy, J., *Submission*, p5.
³ Kenworthy, J., *op.cit.*, p24.

3.10 The overseas experience is that light rail is seen to offer a higher standard of service than other public transport systems in almost all respects. It operates on a reliable schedule (which assists passengers making connections from one service to another); it offers a smooth, quiet and quick ride; and it operates on a clear, understandable and permanent route.⁴

3.11 Some of the other features of a light rail system which make it attractive both to travellers and to city administrators are that:

- light rail vehicles do not emit exhaust fumes and are therefore less environmentally damaging;
- light rail vehicles are very energy efficient - their engines do not idle when the vehicle is stationary and it takes comparatively little energy to move a steel wheeled vehicle along steel rails;
- by removing or partly removing traffic from city streets, light rail can enhance the urban environment (noise and air pollution levels can be reduced, the number of traffic accidents may be reduced and road space can be reclaimed to allow tree plantings and other landscaping works); and
- the introduction of a sleek and modern transport technology can increase civic pride, provide attractive services for tourists and project a progressive yet environmentally conscious image.

3.12 During the inquiry, one witness described to the Committee the type of light rail system that could link Gungahlin with the rest of Canberra. The suggested system involves various route combinations, based on differing levels of projected patronage, linking Gungahlin with Civic and Belconnen, and includes an option to develop a light rail network within Gungahlin branching out from an interchange at the town centre.⁵

3.13 The basic system proposes the construction of a single track from Gungahlin to Belconnen, followed soon after by a single track connection from Gungahlin to Civic. In the early stages of the system one vehicle could operate services departing from Gungahlin every 30 minutes. As Gungahlin's population increases and passenger numbers increase, the system could be expanded with the addition of extra vehicles and the construction of passing loops. By these means it could be possible for a single track system to cater for a capacity of over 5,500 passengers per hour, with departures every 3 3/4 minutes.⁶ By duplicating the track the system would be able to provide for even greater numbers of passengers and would allow a greater margin for timetable delays.

⁴ *ibid*, pp21-22.
⁵ Horscroft, D., *Evidence*, pp136-149.
⁶ Horscroft, D., *Submission*, pp11-13.

Possible Light Rail Route - Gungahlin to Civic

After leaving the Gungahlin town centre the track could pass through or on the outskirts of the Mitchell light industrial area, then further south along Flemington Road between the National Exhibition Centre and the Canberra Racecourse. At the intersection of Flemington Road and Northbourne Avenue, the track could cross the median strip between the north and south bound lanes of Northbourne Avenue. The track could run within the median strip all the way into Civic, until turning right into Bunda Street and then into the lay-by originally intended as a taxi rank at the City bus interchange.

The light rail vehicles would be able to activate traffic signals as they approached each of the intersections so as to ensure an uninterrupted journey.

The development of a high standard public transport system along this corridor has been supported by the National Exhibition Centre Trust and by many individuals and organisations who have made submissions to the inquiry. Support for such a development could also be expected from businesses operating in Mitchell and the Management of the Canberra racecourse.

3.14 Although submissions to the inquiry expressed little doubt about the ability of a light rail system to attract a significantly higher number of people than currently travel on the bus system, reservations have been expressed about whether Canberra's present population level is sufficiently high to support a high standard public transport system, and about the infrastructure costs associated with establishing a system.

3.15 Media reports during the inquiry quoted prominent members of the ACT Government as expressing the view that it was inappropriate to consider light rail as a transport option until Canberra's population reaches 500,000. This figure is not expected to be achieved for 15 to 20 years. In the Committee's view, is it simplistic and ill-considered to discuss light rail on this basis. Canberra's population level is only one of many issues that should be assessed in an analysis of the viability of a new public transport system. Issues such as population dispersal and densities, residential, employment and travel patterns and the ability of light rail to attract a greater than usual share of the travel market are arguably more significant issues than absolute population levels. Information presented to the Committee indicates that in both the United States and countries in Europe, there are many examples of cities with population levels and densities similar to those of Canberra that already have or are planning light rail systems. The data in fact suggests that Canberra may have something of a natural advantage over many of the US cities referred to as a higher proportion of Canberra residents already use public transport for their journeys to work.⁷

⁷ In 1981 about 11% of journeys to work in Canberra were on public transport. Using 1980 US Census information the public transport modal split for the following US cities is: Portland (8.6%), Sacramento (2.3%), San Diego (3.4%), San Jose (3.3%) and Los Angeles

3.16 Light rail is often criticised for being an expensive transport solution. The Committee has been unable to draw a firm conclusion on this question because there is very little up to date and directly applicable information available. The estimates available to the Committee vary widely and indicate that the cost of a light rail system may be anywhere between \$2 million per kilometre and \$20 million per kilometre.⁸

3.17 While there is considerable uncertainty about the capital costs associated with a light rail system, there is general agreement that the operational costs are less than those attributable to a bus system. There are three main reasons:

- (a) the maintenance costs on an electric engine are considerably less than those on an internal combustion engine;⁹
- (b) the operational life of a bus is about 15 years whereas the operational life of a light rail vehicle can be up to 40 years; and
- (c) fewer vehicle drivers are required because more passengers can be carried on a single light rail vehicle and between two and four vehicles can be linked together and operated by one driver.¹⁰

⁸ (7.7%), (Kenworthy, J., *op.cit.*, p9).
See *Having a Say* pp95-96, Le Bars, S., *Evidence*, p240 and Kenworthy, *op. cit.* pp18-19.
NOTE: Factors such as the nature of the routes chosen, the treatment of intersections, the type of equipment used or proposed to be used, the level of service provided and other infrastructure and maintenance issues lead to significant variations in costs and can reduce the reliability of the figures as a basis for comparison.

⁹ *Having a Say*, p48.
¹⁰ Horscroft, D., *Submission*, pp6-7. Mr Horscroft mentions that the Victorian transport authorities have only recently retired some of Melbourne's trams which had been operating for between 50 and 60 years.

Public Transport Subsidies

Public transport systems in Australia and overseas are often criticised for operating at a financial loss and thus being heavily subsidised by the taxpayer. While efforts should, of course, be made to encourage greater use of the services provided and to encourage efficiency in their operation it is almost inevitable that public transport will continue to rely on public subsidies - to expect otherwise is unrealistic.

Public transport subsidies should not, however, be seen or represented as being entirely undesirable. As is argued in this Chapter, an efficient and effective public transport system can benefit not only those who use it but also the community in which it operates - for example, by contributing to a more efficient use of energy. Additional efficiencies associated with public transport are that it can reduce road maintenance costs and the number of road accidents.

Another frequently overlooked issue in the transport funding debate is the very significant cost to the taxpayer of a road system. The debate between public and road transport systems could be portrayed as being between public transport subsidies, which are partly offset by environmental benefits and cost efficiencies, and private transport subsidies, which are compounded by additional, often unrecognised, costs such as maintenance, environmental damage and accident costs.

(Sources: Self, P., *Evidence*, pp98-100; Hall, D., *The Future Planning and Development of Canberra: An Evaluation of Current Policies*, p23.)

3.18 It is possible that the viability of a light rail connection to Gungahlin would be given added impetus if the Very Fast Train (VFT) were developed and if, as is presently proposed, the Canberra station for the VFT were located in the area between Mitchell and Gungahlin. A recent paper commissioned by the NCPA from the Director of the Town and Country Planning Association (UK) concluded that the VFT station would be a substantial employment magnet for Gungahlin, would stimulate population growth in Canberra and would generate considerable demand for convenient and rapid transport to and from the station and the economic activities it would attract.¹¹

3.19 In its submission to the inquiry the ACT Planning Authority agrees that the construction of the VFT 'may improve the viability of a higher standard public transport link and may, in time, reduce the total capacity needed in the external road connections to Gungahlin.'¹²

¹¹ Hall, D., *The Future Planning and Development of Canberra: An Evaluation of Current Policies*, (1990), p24.

¹² ACT Planning Authority, *Submission*, pp10-11.

3.20 The potential advantages of a light rail system are also described in the report of the Sustainable Canberra project which was released just before the Committee's report was completed. The project - which was co-sponsored by various ACT Government agencies, the Australian Conservation Foundation, the Australian Federation of Construction Contractors, the Building Owners and Managers Association and the Canberra Association for Regional Development - concluded that, for the type of reasons outlined above, it is now an opportune time for Canberra to consider light rail as a serious public transport option.¹³

Conclusions

3.21 While it is unlikely that a simple substitution of public transport technology for road transport technology will solve Gungahlin's travel needs¹⁴, the potential advantages of a high standard public transport system are such that considerable effort should be put into upgrading Canberra's present system of public transport. The upgrading of public transport should occur immediately so as to capture a significant share of the Gungahlin travel demand.

3.22 The Committee endorses the NCPA's proposal to emphasise Northbourne Avenue as a public transport corridor and considers that, as a necessary first step in efforts to upgrade the public transport system, the existing bus based system should be extended and improved.

3.23 The Committee recommends that:

- (a) bus services be introduced into Gungahlin as soon as the first neighbourhoods are occupied;
- (b) intertown express services be introduced between Gungahlin and Belconnen, and Gungahlin and Civic as soon as demand exists;
- (c) a conveniently located bus interchange be established in Gungahlin at the first opportunity; and
- (d) a detailed strategy of measures to encourage the use of public transport and other non-car modes of transport, such as those described in paragraph 3.4, be developed and implemented as soon as Gungahlin's first neighbourhoods are occupied.

¹³ Newman, P., and Kenworthy, J., *Towards a More Sustainable Canberra: An Assessment of Canberra's Transport, Energy and Land Use*, (1991), pp90-91.

¹⁴ NCPA, *Evidence*, p6.

3.24 The evidence presented to the Committee suggests that a rapid transport system would have considerable advantages over other forms of public transport and would be more successful in encouraging greater use of public transport and reducing Canberra's reliance on the private car.

3.25 The Committee recommends that:

- (a) the NCPA and the ACT Planning Authority jointly commission or conduct a study into the establishment of a rapid transport system in the Australian Capital Territory. This study should consider the following matters:
 - (i) the most appropriate type of rapid transport technology;
 - (ii) the extent of such a transport system, for example whether it should link Gungahlin to Civic alone or be part of a wider network;
 - (iii) a timetable for the construction of such a system, including the possible early establishment of the system in already settled areas of Canberra;
 - (iv) the construction and operational costs of such a system;
 - (v) the potential to attract private involvement in the establishment of such a system through 'joint venture' or 'value capture' arrangements; and
 - (vi) the impact of such a system on reducing the demand for additional road space from Gungahlin;
- (b) to maximise the potential advantages of a new technology rapid transport system, including the possibility of reducing the need for additional road space to cater for the travel needs of the future residents of Gungahlin, this study should be completed and its findings released before the Commonwealth and Territory Governments commit themselves to the construction of any new roads to or from Gungahlin; and
- (c) in the interim, a reservation be made between Civic and Gungahlin to allow for the construction of a rapid transport system.

4. ROADS

The Need for Roads

- 4.1 It has been forecast by the planning authorities that each weekday morning:
 - over 28,000 people will leave Gungahlin travelling in cars, 3,400 will travel in buses and 1,600 will travel by motor bike, bicycle or other means;
 - 25,000 people will leave in cars in the peak period (from 7:00am - 9:00am);
 - 14,600 people will leave Gungahlin in cars in the peak hour (from 8:00am - 9:00am); and
 - 11,800 people will travel in cars to destinations within or south of the central area of Canberra during the peak hour.
- 4.2 Based on an expected average car occupancy rate of 1.2 persons per car, this means that each morning, between 8:00am and 9:00am, about 9,800 vehicles would head southwards from Gungahlin to destinations in central Canberra, Woden, Weston Creek, Tuggeranong, Fyshwick and Queanbeyan.¹
- 4.3 If the measures directed at reducing dependence on private cars discussed in Chapter 3 are implemented, the Committee anticipates that these numbers could be significantly reduced.
- 4.4 A number of other measures for reducing the number of vehicles heading south from Gungahlin each weekday morning were suggested to the inquiry. These included:
 - limiting the level of employment growth in Civic;
 - introducing incentives to encourage decentralised development and creating the greatest possible number of jobs in Gungahlin, Mitchell and Belconnen;
 - implementing a detailed commuter cycleway strategy; and
 - introducing measures to encourage more passengers per car and encouraging more people to travel outside peak times.²

¹ NCDC, *The Gungahlin Travel Task*, an information pamphlet distributed during the Gungahlin External Transport Study.

² See submissions from the Australian Conservation Foundation - Canberra Branch (p3 and p5); Mr S Hatch (pp1-2); Energy Alliance (pp1-2); The Conservation Council of the South East Region and Canberra (p1, p3 and p4) and Dr M Zachara (pp2-4).

4.5 The Committee endorses each of these approaches and considers that the development and implementation of policies with these objectives should be an essential part of any transport solution for Gungahlin.

4.6 In relation to employment location, the Committee has noted in previous reports to the Parliament that the Commonwealth has a unique influence in the creation of employment opportunities in town centres arising from its decisions about where to locate Commonwealth office space. In its 1987 review of metropolitan development in Canberra the Committee concluded that the Commonwealth should limit further expansion of Commonwealth employment in Civic and should take steps to locate any additional offices in the other town centres.³ It is the Committee's view that this approach is still appropriate and it is pleased to note that the policies for employment location in the National Capital Plan state, in part, that:

Commonwealth employment will be encouraged to locate in town centres (other than Civic), Parkes, Barton and Russell. The Authority will also assist any Commonwealth efforts to encourage the private sector to invest in such projects.⁴

4.7 In 1988 the Commonwealth developed a long term strategy for Commonwealth office location which not only limited the further growth of Commonwealth office space in Civic, and limited office accommodation in Parkes and Barton to departments and agencies requiring a close working relationship with the Executive and the Parliament, but also gave priority to the development of additional office space in town centres, particularly in Tuggeranong and Belconnen. The Committee supports the purpose and direction of this strategy and suggests that it now be amended to include reference to encouraging the development of additional office in Gungahlin as well.

4.8 The Committee recommends that:

- (a) the Commonwealth and Territory Governments jointly and separately (where appropriate) develop and implement the measures described in paragraph 4.4 - such as limiting employment growth in Civic - to limit the number of vehicles travelling between Gungahlin and Civic or other southern destinations; and
- (b) the Commonwealth Government's long term strategy for office location be amended to give priority to the development of additional office space in Gungahlin as well as in Tuggeranong and Belconnen.

4.9 The Committee acknowledges that the introduction of these measures would be likely to have only a limited effect on the number of vehicles travelling to and from Gungahlin. Even when the hopefully significant effect of improvements to the public transport system is taken into account, it is reasonable to expect that a considerable number of Gungahlin residents will continue to travel to and from Gungahlin in private cars.⁵

4.10 It is thus necessary to consider how the road system will cater for the expected growth in traffic. As described in Chapter 1, the NCPA proposes to construct several new roads for this purpose.

4.11 In determining the extent of the need for additional roads it is necessary to first assess the capacity of the existing arterial roads in North Canberra to absorb the growth in traffic.

The North Canberra Road System

4.12 The North Canberra road system was planned as an interlocking grid system, with most roads of a similar standard and capacity. It was constructed at an early stage of Canberra's development, when traffic volumes were considerably lower and noise levels, exhaust emissions and road safety issues were consequently of less concern to the community.

4.13 As a result the North Canberra road system differs significantly from modern road systems such as those elsewhere in Canberra. Many of the major roads in North Canberra - such as Limestone Avenue, Majura Avenue, Wakefield Avenue, Macarthur Avenue, Officer Crescent/Ebden Street and Miller Street - perform arterial functions, and yet have residential properties fronting them.

4.14 Modern road systems, however, are designed on a hierarchical basis where arterial roads, which most often do not have residential frontages, are constructed on the boundary of a residential area. The areas are served internally through a network of roads decreasing in size from distributor and collector roads to local streets. In North Canberra the arterial roads typically run through the middle of residential areas, making it much easier for through traffic to divert into the residential areas when traffic on the arterial system becomes congested.

4.15 Traffic flow studies indicate that in peak periods, a significant and increasing number of vehicles divert from North Canberra's arterial roads onto the residential streets. Moreover, there is evidence that an increasing number of heavy commercial vehicles use the residential streets to avoid traffic lights and congestion on Northbourne Avenue.⁶

³ Joint Committee on the ACT, *Metropolitan Canberra*, (1987), pp41-44.
⁴ NCPA, *National Capital Plan*, p31.

⁵ NCPA, *Submission*, p100.

⁶ *Having a Say*, p198.

4.16 The consequences of traffic infiltration for the residents of North Canberra include congestion, noise and air pollution, increased traffic safety risk and increased on-street parking which restricts visibility and hinders access.

4.17 Another constraint on the use of the existing North Canberra road system to meet the additional traffic demand is the capacity of the major road in the system - Northbourne Avenue. Studies conducted by the NCPA show that in the short to medium term it may be possible to add between 500 and 1,000 vehicles per hour to Northbourne Avenue. This spare capacity, however, exists only in parts of Northbourne Avenue. At the major intersections with Mout Street, Macarthur Avenue and Barry Drive, Northbourne Avenue is already running to close to capacity.⁷

4.18 Furthermore there are likely to be competitors for whatever spare capacity exists at present - for example, the possible introduction of bus only lanes may take up a considerable amount of road space, as may additional traffic generated by the expected residential developments in West Belconnen. As soon as this excess capacity is taken up even greater pressure will be exerted on the nearby residential areas.

4.19 It seems clear that there is little scope for the existing North Canberra road system to absorb much of the demand for road space that will be generated from Gungahlin. The Committee accepts therefore that some new roads will be required.

4.20 The first of these new roads, which has already been approved, is described in the following section. The report then goes on to consider each of the new roads proposed by the NCPA.

William Slim Drive

4.21 The first road connection into Gungahlin will be provided by an extension to William Slim Drive, north of the Barton Highway. The Committee endorsed this road connection in an earlier report to the Parliament⁸ and has been advised that construction work is expected to commence on the road later in 1990/1.⁹

4.22 It is expected that William Slim Drive will be used extensively by Gungahlin residents to gain access to the Belconnen town centre, particularly in the early years of settlement before retail, commercial and employment centres are fully established in the district. At present William Slim Drive is only one lane in each direction and it is likely that within a relatively short period of time the road will need to be upgraded.

4.23 The extension of William Slim Drive into Gungahlin and the upgrading of that section of the road between the Barton Highway and Ginninderra Drive would be a very cost effective way of linking Gungahlin to the rest of Canberra.

⁷ NCPA, *Evidence*, p20.

⁸ Joint Committee on the ACT, *Report on proposals for variations of the plan of layout of the City of Canberra and its environs, Variations 1990/1*, (1990), p3.

⁹ ACT Planning Authority, *Submission*, p4.

4.24 The Committee recommends that:

William Slim Drive between the Barton Highway and Ginninderra Drive be upgraded.

John Dedman Parkway

The NCPA proposes the construction of John Dedman Parkway from Gungahlin to the west of Black Mountain (John Dedman West), with an offshoot road to the east of Black Mountain which passes between the Australian National Botanic Gardens and the CSIRO to connect to Parkes Way (John Dedman East).

4.25 The proposed John Dedman Parkway leaves Gungahlin at a point between Kaleen and North Lyncham. Travelling south through cleared land it crosses Ellenborough Street in Kaleen and then Ginninderra Drive. Soon after crossing Ginninderra Drive the road divides into two lower standard roads (with one lane in each direction). One road continues to the west of Bruce Ridge and Black Mountain, connecting with Caswell Drive at Belconnen Way, and the other diverts to the east passing between O'Connor and Bruce Ridges and along the boundary between the Botanic Gardens and the CSIRO before joining Parkes Way.

4.26 Other features of the NCPA's Parkway proposal are that it would:

- have grade separated intersections at the Barton Highway and at Ginninderra Drive;
 - ultimately, have a grade separated intersection with Belconnen Way for the western arm only and, if further residential development of the Belconnen District occurs, then a grade separation at Glenloch Interchange could be considered;
 - be constructed in a cutting, or cut and cover tunnel, for a significant length of the eastern arm to protect the Botanic Gardens and CSIRO from visual and noise effects; and
 - not have any intersections with Ellenborough Street, Fairfax Street (Macarthur Avenue) or Barry Drive.
- 4.27 The cost of the road has been estimated to be \$33.3 million.

4.28 Both the NCPA and the ACT Planning Authority agree that a road in the John Dedman Parkway corridor is likely to be an essential addition to Canberra's arterial road network if Gungahlin residents are to be provided with adequate standards of transport accessibility and if North Canberra is to be protected from the intrusion of through traffic.¹⁰ The NCPA suggests that the John Dedman Parkway should be the first new road constructed as it would provide convenient access to and from the western suburbs of Gungahlin, which are expected to be the first to be occupied.

4.29 Wide community support has been expressed for the construction of a road in the John Dedman corridor. In the Gungahlin External Travel Study, 86% of respondents to the assessment survey favoured a road in this corridor. The need for a road in the corridor is also generally accepted by those who have made submissions to the inquiry. There is considerable division, however, as to the preferred alignment within the broad corridor. *Opinion appears to be split between:*

John Dedman East, which is part of the NCPA's proposal and would run between the O'Connor and Bruce Ridges and between the CSIRO and the Australian National Botanic Gardens (43% of respondents to the Study expressed support for this route); and

John Dedman Community Option, a route proposed by the North Canberra Protection Group, which would run to the west of the Australian Institute of Sport complex before connecting with Caswell Drive (this route was favoured by 48% of respondents to the Study).

4.30 John Dedman West was a third option considered during the Gungahlin External Travel Study, and despite the fact that it has received little community support - only 9% of respondents expressed a preference for this route - it has been included as part of the Parkway package proposed by the NCPA.

John Dedman East

4.31 *The most significant argument in favour of John Dedman East is that it offers a direct route between western Gungahlin and central Canberra. For Gungahlin residents this means quick and convenient access to Civic and southern destinations, and for North Canberra residents it would probably minimise any increase in through traffic.*

4.32 While these are good reasons to support the construction of John Dedman East, the Committee has been presented with a number of reasons for the proposal not to proceed.

4.33 The first of these relates to the environmental impact of the construction of a road through the O'Connor Hills and Bruce Ridge area.

¹⁰ NCPA, *Submission*, p24 and ACT Planning Authority, *Submission*, p6.

4.34 An environmental analysis of the area prepared in 1982 for the former National Capital Development Commission describes the regenerated forest on Bruce Ridge, O'Connor Hill and the nearby Gossan Hill as second in size only to Black Mountain Reserve as an area of dry sclerophyll forest remaining within urban Canberra.

...the hills have local importance as relatively large areas of forest which are easily accessible to the population of North Canberra and Belconnen... [the hills] form a visual and habitat link [which] have the capability to return to a more natural condition thereby increasing the size and continuity of forest cover in the area.¹¹

4.35 The Study found that the forested ridge areas have high ecological value and moderate to high ecological sensitivity and that management objectives for the area should emphasise the protection of the vegetation and wildlife in a natural state. The regenerating wood land on O'Connor Hill was considered to be of moderate to high ecological value and have a high ecological sensitivity.

4.36 These findings were confirmed in a recent study on the conservation of remnant woodland in the ACT conducted by the ACT National Parks Association.¹²

4.37 The value of Bruce Ridge and O'Connor Hill as a recreational and educational resource for the citizens of North Canberra and Belconnen is also emphasised in many submissions the Committee has received.¹³

4.38 The importance of this area extends beyond its ecological and recreational value. As the National Capital Plan acknowledges, the inner hills make a major contribution to the landscape quality which is a feature of Canberra's character:

The inner hills provide the scenic backdrop and natural setting for Canberra's urban area, and within Canberra central they are integral to Walter Burley Griffin's composition.¹⁴

4.39 The effect of constructing a road between Bruce Ridge and O'Connor Hill would be to bisect the area of bushland, leaving two smaller areas of reduced ecological viability¹⁵, to restrict recreational access to the area and reduce its recreational amenity and value and to threaten a key aspect of the character of the National Capital.

4.40 Reservations about John Dedman East are not limited to that section of the road proposed to run through the bushland. The North Canberra Protection Group expressed concern on behalf of the Management of the Canberra Motor Village and residents in O'Connor about the potentially high levels of noise and vibration generated by traffic on that section of the road running from the city side of O'Connor Hill to the underpass at Barry Drive.

¹¹ Kendall, P., and Landsdown, P., 'Canberra Hill Areas Environmental Analysis, Bruce Ridge - O'Connor Hill - Gossan Hill' in NCDC, *Divisional Report No. 2*, (1982).

¹² National Parks Association, *op.cit.*, pp23-25.

¹³ See submissions from Australian Conservation Foundation - Canberra Branch (p6); North Canberra Protection Group (p7); Black Mountain and O'Connor Foothills Protection Association (p2); Dr M Brandl; Ms B Knie; Mr T Findlay and Mr A Gould.

¹⁴ NCPA, *National Capital Plan*, p56.

¹⁵ *Having a Say*, p66.

4.41 Vigorous opposition has also been expressed to the southern section of the road, which is proposed to run along virtually the entire eastern boundary of the Australian National Botanic Gardens. The Director of the Gardens has argued that the construction of a road on this alignment will bring noise and pollution to an environment which is valued by a large number of Canberra, inter-State and overseas visitors.¹⁶ The Friends of the Botanic Gardens submit that John Dedman East would also:

- . degrade vistas from the Gardens to the east;
- . render the Gardens less attractive to wildlife, particularly to birds, which feature as a strong public attraction throughout the year;
- . disturb visitors to the Banksia Centre which is a facility developed to assist in the rehabilitation of people with disabilities - the roadway would be about 10 metres from the Banksia Centre; and
- . exacerbate traffic problems near the front entrance of the Gardens.¹⁷

4.42 The NCPA has acknowledged the sensitivity of the Gardens to visual and noise effects by proposing to construct that part of John Dedman East adjacent to the Gardens in a cutting or cut and cover tunnel. A secondary advantage of the construction of a tunnel is that it would provide for continued pedestrian access between the Gardens and the CSIRO. The length of tunnel necessary to cover the roadway along the length of the Botanic Gardens boundary would be substantial and would add considerably to the cost of construction. A number of witnesses to the inquiry have expressed doubt about the willingness of the relevant public authorities to fund such expensive works.¹⁸

4.43 Concern about the impact of the proposed John Dedman East road on the Gardens has also been expressed by the Australian Heritage Commission. In a submission to the inquiry the Commission advised the Committee that the historic, scientific, educational, aesthetic and design values of the Gardens are such that it has been listed on the Register of the National Estate. The Gardens are the first and only purely native plant public gardens in Canberra and are the only established purely native plant public gardens in Australia. The effect of listing the Gardens on the Register of the National Estate is that the Commonwealth, in this case the NCPA, is required to avoid taking any action that adversely effects the Gardens unless there is no feasible and prudent alternative to the taking of that action. It is the view of the Commission that it should be feasible and prudent to construct an alternative to John Dedman East.¹⁹

¹⁶ Australian National Botanic Gardens, *Submission*, p1.

¹⁷ Friends of the ANBG, *Submission*, p1.

¹⁸ Australian National Botanical Gardens, *op. cit.*, p1; CSIRO Officers' Association (ACT), *Submission*, p2.

¹⁹ Australian Heritage Commission, *Submission*, pp1-3.

John Dedman West

4.44 In the John Dedman Parkway system proposed by the NCPA the role of John Dedman West is primarily to provide a route for traffic heading to South Canberra.

4.45 The environmental impact of this road, although not as dramatic as that of John Dedman East, has still attracted some comment. It was pointed out in the Gungahlin External Travel Study that the road would encroach onto the western edge of O'Connor Hill and the northern edge of Bruce Ridge, and would cause the loss of some forest and woodland.²⁰

4.46 A number of submissions have also pointed out that the O'Connor Hill - Bruce Ridge area is used extensively by athletes from the Australian Institute of Sport and by the wider community for cross-country running and orienteering. John Dedman West would tend to isolate the bushland from potential users and would diminish its quality as a recreational resource.²¹

John Dedman Community Option

4.47 The John Dedman Community Option was developed by the North Canberra Protection Group, an umbrella organisation representing the Mount Ainslie and Mount Majura Protection Association, the Black Mountain and O'Connor Foothills Protection Association and many North Canberra residents. The Group was formed in 1988 to develop a coordinated response to the Gungahlin External Travel Study. Following a number of public meetings the Group prepared and presented to the Travel Study a 'Ring Road' proposal involving a link road between the Barton and Federal Highways, measures to restrict access from Gungahlin to North Canberra residential streets, a peripheral parkway in the Majura Valley, and a John Dedman Parkway to the west of both the Australian Institute of Sport and Black Mountain.

4.48 A number of these options were endorsed by the Travel Study and are included in the NCPA's present proposals; for example, the link road between the northern highways, the Majura Parkway, and the Ginninderra Drive extension to discourage traffic infiltration through Lyneham and O'Connor. The only major element that was not accepted by the NCPA was the Group's suggested alignment for John Dedman Parkway.

4.49 The alignment for the John Dedman Community Option passes to the west of the Australian Institute of Sport complex, between the AIS and Fern Hill Technology Park, rather than to the east of the Institute as proposed by the NCPA. After crossing Batty Street near the Bruce Indoor Stadium the road passes to the east of the Bruce campus of the ACT Institute of Technical and Further Education and then follows an alignment, similar to that proposed by the NCPA, between Bruce Ridge and Calvary Hospital before connecting to Caswell Drive at Belconnen Way.

²⁰ *Having a Say*, p71.

²¹ ACT Orienteering Association Inc, *Submission*; Black Mountain and O'Connor Foothills Protection Association, *op. cit.*, p2; Australian Sports Commission, *Submission*, p2.

4.50 The main argument in support of the Community Option alignment is that, unlike the John Dedman East and West alignments, it does not threaten the ecological, recreational or symbolic integrity of the Bruce Ridge and O'Connor Hills area.

4.51 The arguments that have been raised against the Community Option relate mainly to its impact on the Australian Institute of Sport (AIS). In its submission to the inquiry the Australian Sports Commission states that it is strongly opposed to a parkway running to the west of the AIS as it would encroach on the major car parks to the west of Leverrier Crescent. In the Commission's view the Community Option could:

...have a serious impact on car parking for AIS day-to-day operations and events, and for major sporting events and would impede vehicular and pedestrian traffic access and egress...²²

4.52 Plans prepared by the NCPA and the ACT Planning Authority showing a possible alignment for the Community Option demonstrate, however, that the road need only encroach on the AIS's car park to a limited extent.

4.53 The number of car parking spaces that would be taken up by the road was in the order of 300. It was also shown, however, that if available land to the north of the Leverrier Street car park were developed as car parks, an additional 2,500 spaces could be provided. This would not only counter the loss caused by the Community Option but would reinstate the 1,200 overflow spaces that were lost when construction commenced on the Taxation Office computer centre site on Battye Street.

4.54 The Committee notes, however, that parking difficulties and traffic flow problems already arise whenever major sporting or entertainment events occur at the AIS or the Bruce Stadium. A comprehensive analysis of existing traffic and parking demands and possible solutions should be conducted irrespective of the eventual alignment for John Dedman Drive.

4.55 The Sports Commission also expressed concern that the noise and air pollution generated by a parkway standard road could reduce the amenity of the area for those athletes in residence.²³

4.56 The plans referred to in paragraph 4.52 also show that it is possible to find an alignment for the Community Option which completely avoids the nearby site for the proposed Australian Customs Service computer centre.

²² Australian Sports Commission, *ibid*.

²³ NOTE: The residential wing of the AIS facilities provides accommodation for up to 360 resident scholarship holders and visiting sports teams preparing for national or international competition, (*ibid*, p1).

Conclusions

4.57 Despite the advantages John Dedman East offers to residents of Gungahlin and North Canberra, arguments against the route are compelling.

4.58 In the Committee's view it is unacceptable to run a road through an area of bushland which has demonstrated ecological, recreation and educational values and which contributes significantly to Canberra's character. It is even more unacceptable that the road would jeopardize the tranquillity and National Estate values of Australia's National Botanic Gardens.

4.59 Indeed, the Committee believes that the Bruce Ridge - O'Connor Hills area should be given legislative protection to preserve its ecological, recreational and educational values.

4.60 The Committee recommends that:

- (a) provision not be made in the National Capital Plan for a John Dedman East road; and
- (b) the Bruce Ridge - O'Connor Hills area be given legislative protection to preserve its ecological, recreational and educational values.

4.61 Of the remaining John Dedman alignments the Committee prefers the Community Option. It offers a more direct route onto the southern peripheral parkway system than John Dedman West and, unlike the western alignment, it has little impact on the environment of Bruce Ridge and O'Connor Hills.

4.62 Nevertheless, the Committee believes it cannot recommend that such a route be included in the National Capital Plan until further work is done to assess the parking and traffic requirements in and around the AIS, and the extent and cost of sound attenuation measures needed to protect the AIS's residential quarters from the effects of traffic noise and air pollution.

4.63 The Committee recommends that:

- (a) a detailed environmental impact assessment be made of the John Dedman Community Option and John Dedman West alignments, addressing such issues as:
 - (i) the potential impact of each alignment on the Bruce Ridge and O'Connor Hills, and
 - (ii) the potential impact of the Community Option alignment on the amenity of facilities at the AIS for residents and other users; and

- (b) in conjunction with the assessment, a broader study of the present and future parking and traffic management needs in the area of the AIS be conducted jointly by the ACT Planning Authority and the NCPA.

Majura Parkway

The NCPA proposes that a road reservation be made for a Majura Parkway through the Majura Valley to provide an eastern route to Civic and South Canberra.

4.64 The Parkway is intended to meet the needs of those travelling to and from the eastern side of Gungahlin. This proposal received widespread support in submissions to the inquiry and was endorsed by 62% of the participants in the Gungahlin External Travel Study.

4.65 The cost of the Parkway has been estimated to be \$32.2 million.

4.66 The main reasons advanced in support of a Majura Parkway are that:

- . it is the least disruptive and environmentally damaging of the major road options;
- . by not intruding into Canberra's urban bushland it preserves the visual character of the National Capital;
- . it would provide a high speed traffic link between Gungahlin and southern destinations;
- . it would complete the eastern parkway system and would provide quick and direct access to the airport and the Fyshwick industrial area; and
- . it would provide a route for commercial traffic to by-pass central Canberra. It would be particularly effective as a by-pass if a link were constructed between the Barton and Federal Highways.

4.67 Like all options the Parkway is not without its negative impacts. These relate to concerns about its ability to attract traffic away from the North Canberra corridor; its impact on animal movement corridors; the traffic consequences around Campbell Park and Fairbairn Avenue; and its impact on leaseholders in the Majura Valley.

Attractiveness to Traffic

4.68 The Parkway would provide a direct and high speed route for Gungahlin residents travelling to the Airport, Queanbeyan and Fyshwick and by connecting with the Eastern Parkway for those travelling to Woden, Tuggeranong and the South-East region. But, as figures provided by the NCPA show, journeys to these destinations are expected to comprise only 25% of the morning peak hour travel from Gungahlin. The majority of journeys (some 56%) will be to the central area of Canberra - Civic, Parkes, Barton, Manuka and Kingston.²⁴

4.69 Because Majura Parkway is not a direct route to the central area - to Civic in particular - it could be expected that some people travelling from Gungahlin to the central area would choose to travel on Northbourne Avenue or on the arterial roads of North Canberra. Because of the level of traffic congestion in the North Canberra corridor and the relatively high speed travel possible on the Majura Parkway, the North Canberra route may not in fact be the quickest way to Civic. Nevertheless it is a choice that some travellers can be expected to make at least until congestion reaches high levels.

4.70 This does not necessarily show that Majura Parkway should be dismissed as an option, merely that it would not by itself solve all the problems associated with the growth in traffic from Gungahlin. Other measures to attract traffic from the central corridor and to protect North Canberra suburbs would be necessary.

Wildlife Corridors

4.71 The bushland on Mount Ainslie and Mount Majura is home to a wide range of animal and birdlife. In addition, it has been observed that the main kangaroo migration route from this area to the bushland on the border of the Territory runs across the northern part of the Majura Valley.

4.72 The construction of a parkway standard road either in addition to, or to replace, the existing Majura Lane could be expected to increase the likelihood of kangaroo deaths. The NCPA proposes the construction of underpasses to allow for animal migration.

Campbell Park/Fairbairn Avenue

4.73 In the southern section of the Valley it is proposed that the Parkway will connect with Morshead Drive, thus completing the Eastern Parkway, and with Northcott Drive so traffic can be directed toward Civic along Fairbairn Avenue.

4.74 While the Northcott Drive/Fairbairn Avenue connection would provide a convenient route to part of the central area, it would also lead to an increase in traffic levels which could affect the Campbell Park Offices, the Royal Military College Duntroon and nearby residents.

²⁴ NCPA, *Supplementary Submission*.

4.75 The Committee has received a submission from a number of residents in Campbell whose properties adjoin Fairbairn Avenue and who claim that the present levels of traffic noise inhibit the reasonable use of their properties. They have called for the immediate introduction of measures to reduce the effect of traffic noise, such as the construction of sound reducing earth banks.²⁵ This problem will clearly be exacerbated by the construction of the Parkway.

Rural Leases

4.76 The Majura Parkway would have a significant impact on two of the rural leases in the Valley. At the northern end of the Valley the property known as 'Glenlyle' would be affected by two of the parkway routes considered during the Gungahlin External Travel Study - the Short and Basic Majura options. The Short Majura route would be extremely damaging to the property, passing within 50 metres of the homestead. The Basic Majura route, which the NCPA is proposing, would have a lesser impact but would still separate a woolshed, a hayshed and two dams from the remainder of the property. The present leaseholder has advised the Committee that, if provision were made for stock crossings, the property would remain a viable farm.²⁶

4.77 At the southern end of the Valley it appears that the proposed Majura Parkway would have major impact on the property known as 'Cherryburn Farm'. Information provided by the current leaseholder shows the Parkway running through the middle of the property making a woolshed, stockyards and a number of dams unusable, requiring the destruction of one house and passing nearby another. In the leaseholder's view Cherryburn would not be a viable farm if the Parkway took this alignment and he has indicated his intention to seek compensation in the order of \$1.5m if the Parkway proceeds.

Conclusions

4.78 The Majura Parkway option would have substantially less impact on Canberra's bushland than other major road options presented to the Committee and would provide a high speed traffic link for many of Gungahlin's residents heading for southern destinations. The road also provides a very effective Canberra by-pass. But it may not appear to be an attractive option to City bound traffic and thus may not be as effective as some other options in diverting traffic from travelling through North Canberra. For this reason it should not be seen as a single solution to the road transport needs of Gungahlin's future residents.

²⁵ Residents of Campbell, *Submission*, p3.
²⁶ Killen, Dr D., *Submission*, pp6-7.

NOTE: The Gungahlin External Travel Study concluded that it was desirable, in order to encourage more city bound traffic to travel on the Majura Parkway, that the shortest possible route should be chosen for the Parkway. The NCPA observed in their submission that the Short Majura, for a saving of about one kilometre in road length, would require several hundred metres of deep and costly rock cutting, and more extensive provision for animal movement corridors than would be needed if the Basic Majura route were selected (NCPA, *Submission*, p26).

4.79 The Committee recommends that:

- (a) provision be made in the National Capital Plan for a Majura Parkway;
- (b) a detailed alignment study be conducted to minimise any impact on existing leases in the Majura Valley, for example by following the line of the existing Majura Lane;
- (c) a detailed environmental impact assessment of the Parkway be made, addressing such issues as:
 - the potential impact of the Parkway on animal movement corridors and how best to maintain those corridors; and
 - the possible impact of increases in traffic levels on Northcott Drive and Fairbairn Avenue and the need to introduce or upgrade noise abatement measures; and
- (d) the ACT Government investigate the immediate introduction of noise abatement measures along Fairbairn Avenue.

Monash Drive

The NCPA proposes a limited capacity road broadly along the existing Monash Drive alignment, connecting Antill Street, Watson, to Fairbairn Avenue, Campbell, with a connection running between Ainslie Village and the CSIRO offices in Campbell to Ainslie Avenue.

4.80 The proposed Monash Drive is the only road in the NCPA's transport strategy that follows the alignment of an existing road reservation. For more than thirty years a reservation for Monash Drive has been shown on the plan of Canberra and it now also appears in the National Capital Plan.

4.81 Monash Drive is one of the most controversial elements of the NCPA's transport strategy. The advantage of Monash Drive is that it provides a relatively direct route from Gungahlin to central Canberra. This would not only benefit Gungahlin residents by allowing quick access to Civic and other central destinations, but would provide very effective protection for the suburbs of North Canberra from the effects of through traffic.²⁷

²⁷ *Having a Say*, p62.

4.82 Despite these advantages, the Gungahlin External Travel Study revealed that only 36% of respondents to the Study survey supported the construction of a road in the Monash Drive corridor.²⁸

4.83 The two concerns raised most frequently about Monash Drive relate to its impact on nearby residents and its impact on the bushland of Mount Majura and Mount Ainslie.

4.84 The potential of the road to affect residential amenity is most apparent in the northern and southern sections of the road corridor, where it passes close to some homes in Hackett and Campbell. The NCPA recognises this possibility and proposes that, in those areas where the road passes close to houses, special measures - such as constructing the road in a cutting or erecting noise barriers - would be employed to minimise the visual and traffic noise intrusions.²⁹

4.85 A recent study conducted by the National Parks Association of the ACT found that, although Mount Majura and Mount Ainslie have a history of various land uses, the area is of outstanding regional ecological value. The diversity of vegetation types in varying stages of regeneration is outstanding and the extensive woodland is particularly noteworthy given the severe reduction in this type of vegetation in the ACT. The Yellow Box-Red Gum woodland is said to be probably the best example of its type in the ACT.³⁰

4.86 The report goes on to note that this diversity in vegetation has encouraged a rich fauna, some of which is reliant on the area for breeding purposes. The eastern slopes of Mount Ainslie are particularly renowned for providing feeding and breeding habitat to a wide variety of bird life.

4.87 The precise impacts of Monash Drive on the vegetation and wildlife of the area were identified in the Gungahlin Travel Study as being:

- direct loss of habitat, with proportional reductions in wildlife populations (e.g. some native bird species, arboreal mammals) due to reduction of the number of nesting sites;
- consequent reduction in numbers of native birds moving on a daily basis into nearby suburbs;
- further reduction in numbers of some animals driven away by the introduction of a noise source into a quiet environment;
- creation by the road of psychological barriers to the movement of some small mammals and birds;
- increased animal mortality on the road; and

²⁸ *ibid.*, p144.

²⁹ NCPA, *Submission*, p28.

³⁰ National Parks Association, *op.cit.*, p22.

discouragement of kangaroo movement into areas between the road and nearby houses.³¹

4.88 Like the O'Connor Hills and Bruce Ridge area on the western side of North Canberra, many people make use of the Mount Majura and Mount Ainslie bushland for a variety of recreational pursuits. While the construction of Monash Drive would not preclude such activities, access to the area would be more limited than at present and it is likely that the quality of the recreational experience would be diminished by the loss of bushland and by the noise and visual intrusion of the road.³²

4.89 During the inquiry the Committee received a submission from and met with representatives of the Friends of the Remembrance Nature Park group. The Remembrance Nature Park is located on the lower slopes of Mount Ainslie behind the Australian War Memorial. Over the last ten years the Friends of the Park have worked to remove exotic species within the area of the Park and encourage the regeneration of vegetation native to the area. The Monash Drive corridor passes along the northern boundary of the Park and would degrade considerably the recreational value of the area. It may also:

...disrupt the Park's essential link with the mountain, including the natural seepage of moisture and the gradual spreading of the seeds of the native plants [from the higher slopes]...³³

4.90 A very significant proportion of the traffic that could be expected to travel on Monash Drive would be travelling to and from the eastern side of Gungahlin. As described earlier the Majura Parkway is also designed to provide for traffic to and from the eastern side of Gungahlin. It has been put to the Committee that if Monash Drive were constructed it would attract traffic which might otherwise travel on Majura Parkway, and that if Monash Drive were not constructed Majura Parkway would be a more cost-efficient road as it would provide access to and from the eastern side of Gungahlin for substantially more travellers.³⁴

4.91 The ACT Planning Authority is of the view that, while the Majura Parkway may carry large volumes of traffic in the peak periods, motorists would find it a more costly route than Monash Drive. The costs would arise from the additional time spent travelling and the extra fuel and other vehicle running costs.³⁵

³¹ *Having a Say*, p62.

³² Reid Residents' Association, *Submission*, p3.

³³ Friends of the Remembrance Nature Park, *Submission*, p1.

³⁴ Bomford, R., *Submission*, p5.

³⁵ NOTE: As mentioned in paragraph 4.66, the amount of additional travel time, if any, associated with a trip from Gungahlin to the central area on the Majura Parkway is unclear because although the length of the Majura Parkway route would be greater than the length of the Monash Drive route, a Majura Parkway trip would be relatively uncongested and higher average speeds would be possible.

4.92 The additional cost attributed to Majura Parkway has not been quantified, but it is unlikely to differ greatly from the costs calculated to arise from the additional distance that would be travelled from Gungahlin to Civic on the John Dedman Community Option as opposed to John Dedman East. The ACT Planning Authority calculated this cost to be around \$800,000 per year.³⁶

4.93 It is the Committee's view that if it costs \$800,000 per year to avoid the significant environmental damage that would be caused by the construction of Monash Drive it is a price worth paying.

4.94 The Committee does not accept that current circumstances warrant the construction of Monash Drive.

4.95 The Committee would like to see the construction of Monash Drive permanently avoided, but the potential advantages of the road to the residents of both Gungahlin and North Canberra are such that the requirement for Monash Drive may need, at some stage in the future, to be reassessed. Such reassessment might be appropriate if it is shown that traffic to and from Gungahlin is not being adequately provided for by a John Dedman Drive west of Black Mountain and the Majura Parkway, and if residents of North Canberra are experiencing severely disruptive levels of through traffic. If it were eventually constructed it would be essential for Monash Drive to display high standards of environmental sensitivity.

4.96 The values of the Mount Majura and Mount Ainslie bushland are such that, like the Bruce Ridge - O'Connor Hills area to the west of the City, as much as possible of the area should be preserved and given legislative protection. At the present time this should involve protecting all of the bushland to the east of the existing road reservation for Monash Drive. If in the future it is shown that the other elements of the transport system are operating effectively and that North Canberra is being adequately protected from through traffic, then the road reservation for Monash Drive should be removed from the National Capital Plan. In this event, legislative protection could be extended to cover the area of the road reservation as well.

4.97 The threat posed by the NCPA's proposals for Monash Drive and John Dedman East highlights the absence of formal legislative protection for much of Canberra's natural environment.

4.98 This is an issue of great concern and, in addition to the specific recommendations on legislative protection for certain areas, the Committee will be seeking terms of reference for an inquiry into the general issue of nature conservation and environmental management within those areas of open space in the ACT which have been described in the National Capital Plan as being of national significance.

4.99 The Committee recommends that:

- (a) Monash Drive not be constructed. However, the road reservation should be retained in the National Capital Plan until it is clear that a severe disruption to the amenity of North Canberra can be avoided by the increased use of public transport and by the effective operation of the peripheral roads; and
- (b) the Mount Majura - Mount Ainslie area be given legislative protection to preserve its ecological, recreational and educational values.

The Extension of Ginninderra Drive

The NCPA proposes to extend Ginninderra Drive along the northern end of Southwell Park to connect with Northbourne Avenue.

4.100 One of the key conclusions arising from the Gungahlin Travel Study was the need to protect the local streets and residential areas in North Canberra from any further increases in through traffic.³⁷ Under this proposal, which was developed by the Study participants and endorsed by the NCPA, Ginninderra Drive would possibly pass over Mouat Street (with no right turn from Ginninderra Drive on to Mouat Street) and run along the edge of Southwell Park, passing the Hockey Centre, the Tennis Centre and the Yowani Country Club Golf Course. According to advice from the NCPA, the road would not encroach on any of the existing leases in the area, with the possible exception of a small, generally unused section of the south-west corner of the golf course.³⁸ The proposal would also require an additional intersection on Northbourne Avenue, probably controlled by traffic lights, and the widening of Northbourne Avenue between this intersection and Antill Street, Dickson, to cater for the additional traffic entering Northbourne Avenue.

4.101 The sporting and recreation facilities in and around Southwell Park are used frequently and extensively and although it seems that this proposal would not cut directly across any of the facilities directly, it would separate the National Tennis Centre from the remainder of the precinct, may even further complicate access to some of the facilities and would generally reduce the amenity of the area. The Committee has also been advised that an extension to Ginninderra Drive would jeopardise plans made by the ACT Hockey Association to develop the facilities at the Hockey Centre.³⁹

³⁶ ACT Planning Authority, *Evidence*, p259.

³⁷ The need to protect North Canberra streets from through traffic was also argued in a number of submissions to the inquiry. In particular see those submissions from Mr R Bomford (p6); the Australian Conservation Foundation - Canberra Branch (pp6-7); Ms P Sturgess - Hay and Dr M Zachara.

³⁸ NCPA, *Supplementary Submission*.

³⁹ The Hockey Centre (Inc.), *Submission*, pp1-2.

4.102 An alternative proposal developed during the inquiry by the NCPA and the ACT Planning Authority is for the widening and realignment of Mouat Street between Ginninderra Drive and Northbourne Avenue to alleviate traffic congestion, and for the introduction of traffic calming measures in Lyneham to discourage and slow down through traffic (for example, the closure or redirection of connections to Mouat Street).

4.103 The relative costs of each option have been estimated to be \$6m for the Ginninderra Drive extension and associated works and \$4m for the widening of Mouat Street and associated works.⁴⁰

4.104 In the Committee's view, the Mouat Street alternative not only seeks to minimise the high levels of through traffic in Lyneham and O'Connor but does so in a way that is cheaper and does not have the undesirable consequences of the proposed extension to Ginninderra Drive.

4.105 The Committee recommends that:

- (a) the proposed extension to Ginninderra Drive not proceed but that, to minimise the level of through traffic in Lyneham and O'Connor, Mouat Street be widened and traffic management and calming techniques be introduced in the area;
- (b) the implementation of these measures not be deferred until the expected increase in traffic from Gungahlin occurs, but commence immediately so that the already high levels of through traffic are reduced; and
- (c) the ACT Planning Authority conduct a comprehensive study of all North Canberra suburbs to identify particular streets that warrant the introduction of traffic management and calming techniques.

The East-West Highway Link

The NCPA proposes that, subject to the completion of a joint NCPA-ACT Planning Authority study, an east-west link between the Federal and Barton Highways should be constructed.

4.106 At present, heavy vehicles approaching Canberra from the east may by-pass the city centre by diverting from the Federal Highway down the existing Majura Lane to southern destinations in Canberra and beyond. For traffic approaching Canberra from the west along the Barton Highway similar options for a by-pass route on a peripheral road are not available. Consequently, many vehicles from the Barton Highway use the

central arterial roads (such as Northbourne and Limestone Avenues) to get to and through the city. Furthermore, in order to avoid the traffic lights and congestion on the central arterial roads, an increasing number of heavy vehicles are diverting onto residential streets in the inner northern suburbs.⁴¹

4.107 One way of dealing with this growing problem would be to provide alternative routes for trucks and other vehicles entering or passing through Canberra. In this way heavy traffic could be redirected away from residential areas, and traffic not bound for the City precinct could by-pass the area.

4.108 The proposal to construct a link road between the Federal and Barton Highways would seem to be an attractive option. It would enable traffic not stopping in Canberra to pass from one highway to another without entering the North Canberra district and, provided the link road connected effectively with the Majura Valley corridor, would encourage southbound traffic from the Federal Highway to travel on either the existing Majura Lane or a future Majura Parkway. Such a link road may also help provide access to and from the Very Fast Train station if it is constructed in the area.

4.109 The major constraint to construction of the highway link is its potential impact on existing leaseholders in the area - including the Canberra Racecourse and the National Exhibition Centre. The NCPA has advised that it intends to conduct a joint study with the ACT Planning Authority to examine planning and leasing issues relating to the area through which the proposed highway link would pass.

4.110 The Committee recommends that:

- (a) the joint NCPA and ACT Planning Authority study of the area south of Mitchell and between the Federal and Barton Highways commence immediately; and
- (b) the study assess the usefulness of a highway link road and determine a road alignment which would effectively link the two highways with the Majura Valley corridor so as to encourage commercial and other through traffic to divert to the peripheral arterial roads and by-pass North Canberra.

⁴⁰ NCPA, *Supplementary Submission*.

⁴¹ *Having a Say*, p198.

5. SUMMARY AND PRIORITIES

5.1 This Chapter draws together the Committee's key conclusions and identifies a number of issues for future consideration.

Transport Conclusions

5.2 The potential advantages of a high standard public transport system are significant not only for the future residents of Gungahlin but for the whole community of Canberra. Accordingly, considerable effort should be put into upgrading the existing bus system. Measures such as the early introduction of express services to and from Gungahlin and the early establishment of a bus interchange in Gungahlin are necessary, as is the development of a complementary package of measures, such as bus priority lanes and park and ride facilities, to encourage people out of their cars and onto the public transport system.

5.3 The introduction of a rapid transit system of public transport, possibly a light rail system, would offer a higher standard of service to travellers and would seem to offer greater prospects of encouraging more people to change their travel patterns away from 'automobile dependence'. A light rail system for Canberra is appealing and has considerable community support but more work is needed on a range of issues relating to the cost and performance of such a system before a decision to build such a system can be made.

5.4 Despite the potential of public transport to provide for a substantially higher proportion of the demand for travel than the planning authorities predict, the Committee accepts that a considerable number of people travelling to and from Gungahlin will do so in private cars. As there is only limited spare capacity in the existing North Canberra road system, additional road space will need to be provided to cater for the expected growth in traffic to and from Gungahlin. The Committee also agrees that it is important to protect residential streets in North Canberra from any further increase in the level of through traffic.

5.5 The transport strategy presented by the NCPA proposes the construction of John Dedman Parkway (with both eastern and western arms), Majura Parkway, Monash Drive, the extension of Ginninderra Drive and an east-west highway link between the Federal and Barton.

5.6 The Committee agrees that a road in the John Dedman corridor would benefit Gungahlin residents - by providing a relatively direct route to central Canberra and southern destinations - and North Canberra residents - by providing an alternative to the North Canberra corridor for vehicles travelling to and from Gungahlin. The Committee cannot, however, support John Dedman East. A road on this alignment would have unacceptable environmental consequences for the Bruce Ridge-O'Connor Hills area and would degrade the environs of the National Botanic Gardens. The ecological, recreational and educational values of the Bruce Ridge-O'Connor Hills area are such that

the area should be preserved from current and future threats by being given legislative protection. The Committee is inclined to prefer the alternative alignment proposed by the North Canberra Protection Group which has considerably less environmental impact. Before this alignment can be recommended further work is needed to clarify its impact on the AIS facilities.

5.7 The Committee supports the construction of a parkway in the Majura Valley. It would offer a high speed link to and from eastern Gungahlin. The Parkway should, however, avoid as much as possible any impact on existing leases in the area. For this reason the alignment should follow that described as the Basic Majura route in the northern section of the Valley and elsewhere in the Valley should follow the alignment of the existing Majura Lane as much as possible. The Parkway should also be designed to minimise any impact on animal migration corridors in the area.

5.8 The Committee does not accept that current circumstances warrant the construction of a road in the Monash Drive corridor, but accepts that a need for the road may arise at some stage in the future. The Mount Majura - Mount Ainslie area of bushland has been described as being of 'outstanding regional ecological value'. In order to preserve these values as much as possible of the area should, like the Bruce Ridge - O'Connor Hills area, be given legislative protection.

5.9 The extension of Ginninderra Drive is proposed as a way of discouraging traffic from travelling through the residential areas of Lyneham and O'Connor. The Committee does not support the proposal due to its likely impact on the sporting precinct of Southwell Park. However, the Committee endorses an alternative strategy presented by the ACT Planning Authority and the NCPA which involves the widening of Mouat Street and the introduction of traffic management and calming techniques in Lyneham and O'Connor.

5.10 The Committee also supports the objectives of the east-west highway link and urges the NCPA and the ACT Planning Authority to resolve the planning and leasehold issues that are holding up further development of the proposal.

Funding

5.11 The NCPA has estimated that the total cost of its preferred transport strategy would be in the order of \$101.9 million, comprising the following costs for each element of the strategy:

John Dedman Parkway	\$ 33.3m
Ginninderra Drive Extension	\$ 5.3m
East-West Highway Link	\$ 12.24m
Majura Parkway	\$ 32.2m
Monash Drive	\$ 18.9m
	<u>\$101.9m¹</u>

5.12 The effect of the Committee's conclusions would be to reduce the costs of road works by more than \$20m. These savings arise from the rejection of the Monash Drive proposal and the support for the widening of Mouat Street and associated works rather than an extension of Ginninderra Drive.²

5.13 The \$20m saved on roads should be used to fund, or partly fund, the improvements to the public transport system recommended in Chapter 3.

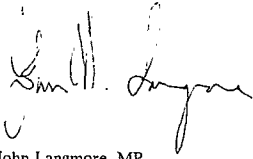
5.14 During the inquiry the ACT Planning Authority raised for discussion the source of funding for the transport proposals.

5.15 It was argued that as Canberra's system of national and arterial roads has been identified in the National Capital Plan as being of national significance,³ the question of Commonwealth funding of the Gungahlin transport proposals should be addressed.

5.16 The Committee has previously expressed the view that the Commonwealth should accept full responsibility for any additional infrastructure, management and maintenance costs caused as a consequence of the National Capital Plan.⁴ The difficulty is, of course, to assess these costs.

¹ These figures are in 1989 values and are derived from the NCPA's submission (p29) and information provided in its supplementary submission.
² Available information suggests that the costs associated with the construction of the John Dedman Community Option would not differ greatly from those associated with the NCPA's preferred alignment of John Dedman East and West. This assessment does not include any costs associated with improvements to Glenloch Interchange and Parkes Way which, in any case, will be required.
³ See the panels on pages 5 and 6 of the report.
⁴ Joint Committee on the ACT, *Review of the National Capital Plan*, (1990), p56 and Joint Committee on the ACT, *Review of the National Capital Plan, 2nd Report - The Certified Draft Plan*, (1990), p17.

5.17 The Committee believes that it is clear that the Commonwealth should bear some responsibility for the costs. It cannot be argued that the ACT ratepayer should bear the full costs of Gungahlin's transport system. The final resolution of this issue is not, however, a matter for the Committee. It should be negotiated between the Commonwealth and Territory Governments.

A handwritten signature in black ink, appearing to read 'John Langmore', written in a cursive style.

John Langmore, MP
Chairman

20 MAY 1991

THE CONDUCT OF THE INQUIRY

On 16 August 1990 the Commonwealth Minister for the Arts, Tourism and Territories, the Hon. David Simmons MP, asked the Committee to review the external transport proposals for Gungahlin developed by the National Capital Planning Authority.

The Committee's inquiry was advertised in the national and regional print media and interested members of the public and organisations were invited to submit their views on the NCPA's proposals to the Committee by 12 October 1990. The Committee received 63 submissions to the inquiry from individuals, community groups, professional associations and Commonwealth and Territory Government agencies (a full list of submissions is at Appendix 2).

The Committee inspected various sites along each of the road alignments proposed by the NCPA on Tuesday 20 November 1990 and Monday 4 February 1991. The Committee was accompanied on these inspections by representatives of the NCPA and, on the first inspection, by representatives of the North Canberra Protection Group, the Black Mountain and O'Connor Foothills Protection Association and the Friends of Remembrance Nature Park.

The Committee conducted hearings, which were open to the public, on Monday 4 February, Tuesday 5 February and Monday 4 March 1991. At these hearings the Committee sought further information from a number of those individuals and organisations who had made submissions to the inquiry. A list of witnesses who appeared before the Committee at these hearings is at Appendix 3.

SUBMISSIONS TO THE INQUIRY

Submissions to the inquiry were received from the following individuals and organisations..

Individuals

B A Odell

Mr Richard Bomford

Mr Stephen Watts

Dr H H E Loofs-Wissowa

Mr Terry Fewtrell

Mr Michael Thwaites

Steve & Wendy Hodgman

Dr Paul Kauffman

Mrs Rosemary Blemings

Mr Ian A McAuley

Dr M Brandl

Ms Bernadette Knie

Ms Elizabeth Truswel

Mr D E Horton, QC

Mr A D Horscroft

Mr Trevor Findlay

Dr E D L Killen

D P Craig

Individuals (Cont.)

Ms Kerrie Tucker
P M & R J Hoy
Mr S G Hatch
Mr Howard Crockford
Dr M J Zachara
Mr Alan Gould
Dr Jeff Kenworthy
Mr John Pratt
Ms Chris McElhinny
Mr D R Croker

Organisations

Yowani Country Club Incorporated
Friends of the Remembrance Nature Park
Australian Conservation Foundation (Canberra Branch)
Reid Residents' Association
Energy Alliance
Friends of the Australian National Botanic Gardens
Conservation Council of the South-East Region & Canberra.
National Exhibition Centre Trust
North Canberra Protection Group
Black Mountain and O'Connor Foothills Protection Association
Mitchell-Gungahlin Chamber of Commerce

Organisations (Cont.)

Royal Australian Planning Institute Inc.
Bruce Precinct Association
ACT Tennis Association Inc.
CSIRO Officers' Association (ACT Branch)
An Association of Residents of Campbell
ACT Orienteering Assoc, Inc
The Hockey Centre Inc
Friends of the Aranda Bushland
National Parks Association of the ACT
Residents Rally for Canberra
Mt Ainslie - Mt Majura Protection Association

Governments and Government Agencies

Australian National Botanic Gardens
The Council of the Shire of Gunning
Yarrowlumla Shire Council
Yass Shire Council
National Capital Planning Authority
Australian Heritage Commission
Australian Sports Commission
ACT Heritage Committee
Department of Defence
ACT Institute of TAFE

WITNESSES AT PUBLIC HEARINGS

MONDAY 4 FEBRUARY 1991

National Capital Planning Authority

- Mr L Neilson, Chief Executive
- Mr M Smith, Chief Planner
- Mr L Evans, Director, Forward Planning

ACT Planning Authority

- Mr G Campbell, Chief Territory Planner
- Mr R Grose, Principal Planner (Transport Planning)

North Canberra Protection Group

- Dr M Brandl
- Mr G Caldersmith
- Mr G Horn
- Mr T Shopen

Black Mountain and O'Connor Foothills Protection Association

- Dr P Kauffman
- Mr M Savage

TUESDAY 5 FEBRUARY 1991

- . Professor P Self
- . Dr J Kenworthy
- . Mr A D Horscroft
- . Australian National Botanic Gardens
 - Dr R Hnatiuk, Director
- . CSIRO Officers' Association (ACT Branch)
 - Mr W Muller, Branch Vice-Chairman
 - Mr M Horn, Member
- . Friends of the Aranda Bushland
 - Mrs M Evans
 - Professor S Mander
 - Dr M Zachara
- . Australian Sports Commission
 - Mr B Hobson, Director, Corporate Services
 - Mr B Hindson, Manager of Facilities
- . Ms J Lansley
- . Dr E D L Killen
- . ACT Tennis Association
 - Mr R Smalley, *President*
 - Mr B Robertson, General Manager
 - Mr L Dyer, Administrator
- . Hockey Centre Incorporated
 - Mr G Carter, President

National Capital Planning Authority

- Mr L Neilson, Chief Executive
- Mr L Evans, Director, Forward Planning

MONDAY 4 MARCH 1991

- . Asea Brown Boveri
 - Mr S Le Bars, General Manager, Powerlines, Telecommunications and Railways Division, EPT Pty Ltd
 - Mr K Bergmann, Consultant
- . Interim Territory Planning Authority
 - Mr G Campbell, Chief Territory Planner
 - Mr R Grose, Principal Planner (Transport Planning)
- . ACTION
 - Mr M Wadsworth, General Manager
 - Mr I Cooper, Manager, Planning and Development
- . ACT Department of Environment, Land and Planning
 - Ms C Parsons, General Manager, Environment and Conservation Bureau,
 - Mr Paul Davies, Manager, Conservation and Wildlife Section
- . Black Mountain and O'Connor Foothills Protection Association
 - Mr D Fraser
- . National Capital Planning Authority
 - Mr L Neilson, Chief Executive
 - Mr L Evans, Director, Forward Planning

NCPA Proposals for Gungahlin External
Travel Solutions

