

INFRASTRUCTURE AUSTRALIA

REFORM AND INVESTMENT FRAMEWORK TEMPLATES FOR USE BY PROPONENTS

(To be read in conjunction with Infrastructure Australia's
Better Infrastructure Decision-Making guidelines)

Summary Template and Templates for Stages 1-6

December 2010

Proposal Summary (2 pages, excluding maps)

Initiative Name:	North East Transport Corridor – Northbourne Avenue Transitway
Location (State/Region(or City)/ Locality):	Canberra, ACT
Name of Proponent Entity:	ACT Government
Contact (Name, Position, phone/e-mail):	Gary Byles Chief Executive ACT Department of Territory and Municipal Services Telephone: 02 6207 6000

Description of Initiative:

Northbourne Avenue and Canberra Avenue are significant approach routes into the national capital. The two routes converge at the National Triangle in the centre of Canberra forming the North-East corridor (see [Appendix 1](#)).

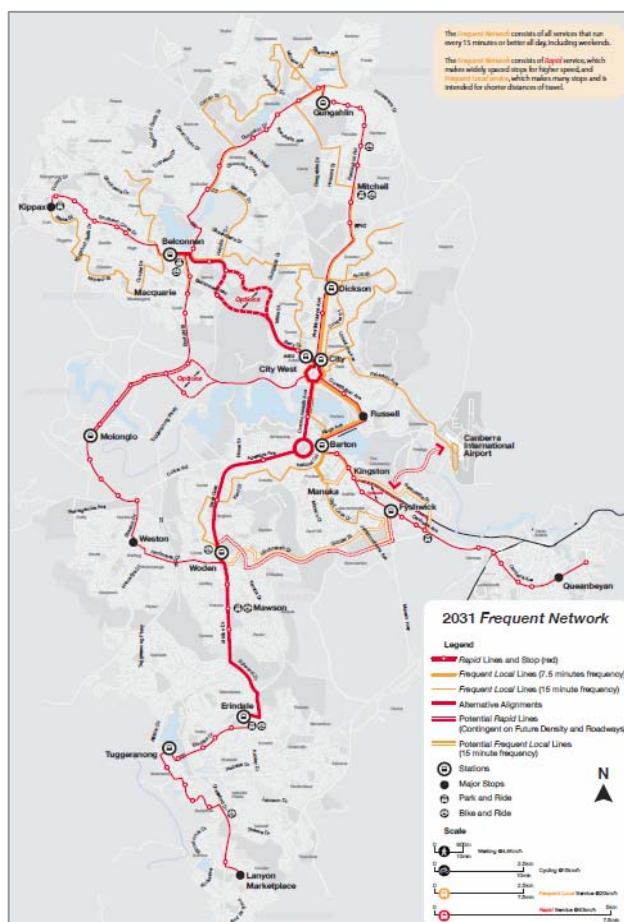
The Northbourne Avenue Transitway is a key component of the ACT's draft Public Transport (PT) strategy, and a priority project of *The Sustainable Transport Plan for the ACT (2004)*. The draft PT strategy identified future public transport investment and initiatives that will need to be implemented in order to meet the ACT's mode share targets, which are outlined in *The Sustainable Transport Plan for the ACT*. (A summary of *The Sustainable Transport Plan for the ACT* and the PT strategy for the ACT is provided at [Appendix 2](#)).

Northbourne Avenue is a nationally significant approach route in the National Capital. It is a formal boulevard – 60 metres wide and 3.5km in length and forms the main entry into the National Capital from the Federal and Barton Highways. It is also a significant transport corridor between the City and the growth area of Gungahlin.

Northbourne Avenue is currently experiencing significant congestion. Transitway design solutions provide an opportunity to achieve a broad range of sustainability outcomes – efficient transport, economic efficiency and a national showcase for transit oriented land use changes, facilitating urban renewal at both the residential and commercial levels.

A transitway for the Northbourne Avenue corridor will need to accommodate a range of higher order outcomes. In particular, as the gateway to the National Capital, the corridor must reflect its national significance, through high quality urban design, which accords with the principles set out in the National Capital Plan.

The ACT is currently undertaking a feasibility study into the Northbourne Avenue transitway, including a bus station in Dickson. This study will identify a preferred option for the corridor to achieve the broad goals and objectives outlined in this submission. Following the completion of the feasibility study, a detailed design of the preferred option will be undertaken (funded by the ACT). The detailed design will include development of a business case which addresses IA's specific requirements.



Theme alignment

The project aligns with Infrastructure Australia's theme: *Transforming our cities*.

The Northbourne Avenue transitway is key part of a network of public transport improvements aimed at achieving higher levels of public transport patronage in the ACT, together with changes to land use along key corridors and at major nodes and town centres. A key element of the infrastructure plan for public transport is delivery of a network of transitways and bus priority routes across the ACT urban area. Other transitways currently under investigation include Canberra Avenue (linking Queanbeyan, NSW and east Canberra to the National Triangle and CBD) and Belconnen to City (linking Belconnen to the city via the Australian National University precinct).

Northbourne Avenue is a key spine corridor, which connects the fastest growing residential area in the ACT (Gungahlin) with the Canberra CBD. The Gungahlin district had a population of some 40,000 residents in 2010, and this is projected to grow to approximately 55,000 in 2019. When fully developed, the Gungahlin district is expected to have a population of 90,000 people and employment for approximately 15,000.

In addition, North Canberra, which is also served by the Northbourne Avenue corridor, had a population of approximately 47,000 people in 2010 and this is expected to rise to 53,000 in 2019. This area provides an excellent opportunity for increased residential densities supporting transit oriented development in the corridor.

Planning policy exists to ultimately support an additional 45,000 within the Gungahlin to City corridor, thereby increasing the viability of frequent public transport services and reducing the need for additional land release and long distance private vehicle travel:

- 10,000 extra people living alongside Northbourne Avenue (through redevelopment)
- 20,000 extra people living within the Flemington Road corridor at the Northern end (through greenfield development)
- 4300 extra people living in the CBD

Parts of Flemington Road, which connects to Northbourne Avenue at the northern end, already have bus lanes in place and planning provision for high density developments. A transitway on Northbourne Avenue provides further opportunity to extend and orient inner area residential developments towards public transport and to mutually support efficient and sustainable corridor development.

Along the Northbourne Avenue transitway, a major station is planned at Dickson. Recent planning for Dickson identifies mixed use development close to the major station. This node (station) is a meeting point for frequent bus services, both north-south and east-west, as identified in the ACT Public Transport Strategic Network Plan. Construction of the transitway and the establishment of the station will draw together the land use and transport and transform this node.

Currently, in Canberra, lack of transport corridor development and the low population densities dispersed over a wide area make it difficult for public transport to play a key role in serving travel needs. Northbourne Avenue transit corridor with increased population density, and commercial activity and nodal development at Dickson, will integrate land use and transport along this corridor.

A high quality transit route between Gungahlin and Canberra CBD and integration with land use will assist in achieving the required land use changes, which will in turn further enhance the viability of transit services in that corridor.

Pipeline category nominated by proponent (please indicate one category only):

Early Stage.

The project is currently the subject of a feasibility study, which will identify a preferred option by June 2011. This will be followed by detailed design (funded by the ACT Government).

Capital Cost of Initiative by Proponent (\$M, nominal, undiscounted):

\$60 million to \$80 million, subject to outcomes of the feasibility and detailed design

Commonwealth contribution sought by Proponent, and cash flow in financial years – including any requests for project development funding (\$M, nominal, undiscounted):	To be determined during feasibility and detailed design phase
Other funding (source/amount/cash flow) (\$M, nominal, undiscounted):	NA
BCR by Proponent excluding Wider Economic Benefits	<p>A previous economic analysis of bus priority measures on Northbourne Avenue produced a benefit to cost-ratio of 3.18. This figure did not include land value capture, emission reductions or other newer economic modelling approaches, and is considered conservative.</p> <p>Further analysis, including BCR, will be undertaken as part of the feasibility for the project which is currently being undertaken, and the forthcoming detailed design.</p>
High level development and implementation program	<p>2010-11:</p> <ul style="list-style-type: none"> • Feasibility study covering the whole corridor – identifying preferred bus priority, pedestrian and cycling configuration, and location for Dickson station; • Business case seeking \$6 million to undertake detailed design of the transitway in 2011-12 (through ACT Government budget); and • Business case seeking funding for design and construction of Dickson station (through ACT Government budget) <p>2011-12:</p> <ul style="list-style-type: none"> • Design and construct segregated cycle way (ACT funding); • Design and construct Dickson bus station (ACT funding); • Detailed design of the transitway, costed in accordance with IA’s criteria and assessment requirements (ACT funding), and works approval from the NCA; • Assessment and preparation of a detailed business case for construction, in accordance with IA requirements; and • Comprehensive bid to IA seeking funding for construction of the transitway <p>2012-13 to 2014-15:</p> <ul style="list-style-type: none"> • Construction of the transitway. A construction program would be prepared as part of the detailed design phase. A range of issues would need to be carefully managed during construction, including tree management, conflicts with different road users, relocation of services in the median and temporary traffic management. Delivery of the full project is likely to take approximately three years and it is likely that both northbound and southbound could be constructed simultaneously.
Confidentiality	<ul style="list-style-type: none"> • NA

Templates for Individual Stages in the Reform and Investment Framework

Stage 1: Goal Definition																					
Goal Statements	<p><i>ACT Goals</i></p> <p>The primary goal of this initiative is to assist in delivering the ACT Government’s policy of a more compact and sustainable city.</p> <p>Canberra currently has a population of some 350,000. However its dispersed urban form, which was designed in the 1950s and 1960s presents a range of challenges. Currently the urban footprint of Canberra equates to Sydney (from Cronulla in the south, to Hornsby in the north, and west to Parramatta – an area with a population of several million).</p> <p>The ACT is approximately 2,352 square kilometres in area, but less than one quarter of that is suitable for urban development and most of that is already developed.</p> <p>The ACT Government has an integrated planning framework, with urban form guided by the 2004 <i>Canberra Spatial Plan</i> (currently under review), which recognised the need to use the land in the ACT more effectively, to limit expansion, protect the Territory’s natural environment and encourage greater housing choice and increased density within a 7.5 kilometre radius of the CBD. Integral to this land use plan was <i>The Sustainable Transport Plan 2004</i>, which sets out mode share targets:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Mode</th> <th style="text-align: center;">2001 (baseline)</th> <th style="text-align: center;">2011 (interim)</th> <th style="text-align: center;">2026</th> </tr> </thead> <tbody> <tr> <td><i>Walking</i></td> <td style="text-align: center;">4.1%</td> <td style="text-align: center;">6%</td> <td style="text-align: center;">7%</td> </tr> <tr> <td><i>Cycling</i></td> <td style="text-align: center;">2.3%</td> <td style="text-align: center;">5%</td> <td style="text-align: center;">7%</td> </tr> <tr> <td><i>Public Transport</i></td> <td style="text-align: center;">6.7%</td> <td style="text-align: center;">9%</td> <td style="text-align: center;">16%</td> </tr> <tr> <td><i>Total</i></td> <td style="text-align: center;">13.1%</td> <td style="text-align: center;">20%</td> <td style="text-align: center;">30%</td> </tr> </tbody> </table> <p><i>(based on journey to work trips)</i></p> <p>Achievement of these mode share targets will also assist the ACT Government in achieving its emissions targets, recently enshrined in legislation. The legislation commits the ACT to making a 40 per cent cut in emissions, based on 1990 levels, by 2020 and 80 per cent by 2050.</p> <p><i>National Goals</i></p> <p>At the same time as achieving goals of sustainability, and urban land use change at a “local” level, the design of the transitway will need to meet national goals related to the role of the corridor as the main gateway in to the National Capital. Northbourne Avenue is currently identified as an inter-town public transport (IPT) route in the Territory Plan, and in the National Capital Plan.</p> <p>Northbourne Avenue is designated as a Main Avenue in the National Capital Plan, recognising its special significance. The National Capital Plan foreshadows “rigorous planning scrutiny and care” to ensure high standards of development, urban design and landscaping. Special requirements in the National Capital Plan relevant to bus priority measures on Northbourne Avenue include:</p> <ul style="list-style-type: none"> • Provision for national uses, offices or national associations, tourist accommodation and residential development • High standards of building design and finish • Incorporation of building height controls, and building lines and landscaping, suitable to the final approaches to the Parliamentary Zone • Consideration of parking, vehicle access and traffic impacts of development. 	Mode	2001 (baseline)	2011 (interim)	2026	<i>Walking</i>	4.1%	6%	7%	<i>Cycling</i>	2.3%	5%	7%	<i>Public Transport</i>	6.7%	9%	16%	<i>Total</i>	13.1%	20%	30%
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Stage 1: Goal Definition

	<p>With respect to transport, the National Capital Plan requires the reservation of routes for public transport services linking major employment nodes to be segregated as far as practicable from other transport systems and operating with a priority right of way. Segregated right of way for inter-town public transport is to be reserved between Canberra CBD (Civic) and “town centres and major employment nodes”. The right of way identified on urban design principles in the National Capital Plan call for high aesthetic and environmental quality in keeping with a garden city.</p>
<p>Objective Statements</p>	<p>In order to achieve the high order goal of compact city and sustainability, the initiative has a number of key objectives:</p> <p><i>ACT Objectives</i></p> <ol style="list-style-type: none"> 1. Deliver a high quality public transport infrastructure project as the first stage of a network of transitways across Canberra, in accordance with required planning and design outcomes to meet Northbourne Avenue’s role as a key approach route to the National Capital. 2. Integrate transport and land use through transitway development along inter-town public transport (IPT) transport corridors and create opportunities for transit oriented developments. 3. Shift the balance of travel from private vehicles towards public transport as per the mode share targets of the <i>ACT Sustainable Transport Plan (2004)</i>. 4. Reduce the total cost of the transport system including economic, environmental and social exclusion costs. 5. Efficient public transport services and infrastructure in a key metropolitan corridor, servicing a growing population. 6. Managing congestion in a corridor carrying a high volume of vehicle traffic. 7. Improved reliability and frequency for public transport services, recognising that improved travel times and reliability can be a powerful incentive in attracting public transport patronage. Travel time includes in-vehicle time as well as time getting to/from stops, as well as wait time. 8. Increased population density and employment at town centres and nodes within the corridor, which in turn will assist in improving the viability of public transport services, and allow for increased frequency. 9. Establishment of bus-based public transport with exclusive rights of way and stations, which could later be used by light rail vehicles when density and service levels warrant. 10. Increased economic efficiency for movement of goods and people within the corridor.

Stage 1: Goal Definition

National Objectives

Delivery of a transitway that achieves high level urban design, landscaping and infrastructure quality, which enhances the national role of Northbourne Avenue as a Main Avenue and approach route to the National Capital, and builds on the high quality urban design and landscaping that are currently a feature of the corridor.

Goal and Objective Alignment

Infrastructure Australia's Strategic Priorities (SP)

SP1	SP2	SP3	SP4	SP5	SP 6	SP7
Expand Australia's productive capacity	Increase Australia's productivity	Diversify Australia's economic capabilities	Build on Australia's global competitive advantages	Develop our cities and/or regions	Reduce greenhouse emissions	Improve social equity, and quality of life

The project aligns closely with IA strategic Priorities:

SP5 - Develop our cities and/or regions

SP6 – Reduce greenhouse emissions

SP7 – Improve social equity, and quality of life

SP5 Develop our cities and/or regions

The current dispersed land use in Canberra has led to low levels of public transport usage, a high level of reliance on cars as the primary form of transport, increasing congestion on key routes, emissions, accidents, parking demand and loss of amenity for local residents. In addition, high level of reliance on cars results in reduced use of active transport and reduced productivity within the economy.

The ACT has the lowest unemployment rate in the nation and both the unemployment and the participation rates are declining. Providing public transport options have the ability to support greater participation in the work force.

Furthermore, high use of private cars results in inequities across the community. The high and increasing cost of housing in inner areas means that low income earners are pushed towards the fringe where journey times are longer and public transport services less frequent and less reliable due to congestion in the road system.

Public transport service planning and infrastructure is integral to delivering high quality urban planning outcomes. Providing the resident population and workforce with transport choice will allow for the city of Canberra to be developed in a compact form. It will facilitate urban renewal of low density housing stock within the corridor to higher density housing and allow for development of medium to high density housing in greenfields areas at the northern end of the corridor.

Stage 1: Goal Definition

Provision of high quality public transport infrastructure within key corridors increases the reliability and user experience of public transport services. Higher density developments at key nodes and interchanges, together with a mix of land uses, allows more people to access public transport and to walk and cycle. Increased population density and employment at town centres and nodes allows more people to use the services, thereby increasing their viability. This can then create a snowball effect in that higher use of the system justifies improvements to the system and a higher level of service.

In this way the development of integrated land/use transport strategies, such as the delivery of the Northbourne Avenue transitway, support the outcomes of both *The Sustainable Transport Plan* and the *Canberra Spatial Plan*.

SP 6 Reduce green-house emissions

Over much of its length, Northbourne Avenue is a 6 lane divided carriageway with a wide median, which contains large stands of mature trees. The median is 27 metres wide and trees are planted to leave a central corridor some 17 metres wide. Recent kerbside cycle lanes have been constructed in the Northbourne Avenue corridor.

Traffic volumes on Northbourne Avenue are in the order of 30,000 vehicles per day. Peak hourly flow is around 3,000 vehicles over the three traffic lanes with interrupted conditions with traffic lights. According to Austroads national standard, Northbourne Avenue is over capacity resulting in excessive delays and poor performance along the whole corridor. Buses experience significant delays and late running of buses due to the congestion, and the fact that the buses operate in general traffic lanes.

Northbourne Avenue is a major bus route, including both local services and the “Red Rapid” route – a high frequency, limited stop, service that runs from the Gungahlin Town Centre through the Canberra CBD (and then on to Fyshwick in the south).

Current weekday bus flows are in the order of:

- Peak direction – 35 buses per hour
- Off-peak direction – 23 buses per hour

Buses operate with little priority on Northbourne Avenue, with the exception of a short queue bypass lane near Downer (in the northern end of the corridor). Stops are kerbside, and are not indented from the traffic lanes. As buses are caught up in the congestion, bus bunching happens and the high frequency of bus services becomes ineffective for the users (i.e., buses all arrive at the same time).

Increasing bus reliability, travel times and patronage along Northbourne Avenue will assist greatly in managing congestion in the corridor, reducing greenhouse emissions. Average vehicle occupancy in the corridor is estimate at approximately 1.2 people per vehicles. On that basis, for every full bus (carrying 60 passengers) using the corridor, approximately 50 cars are taken off the road. Fewer cars and/or reduced congestion in the corridor will also mean reduced fuel consumption, and reduced noise and air pollution.

Stage 1: Goal Definition

SP7 Improve social equity, and quality of life

Providing improved public transport services increases transport choice, and allows people to reduce their reliance on private cars, which provides social benefits to the broader community, including:

- Sustained community accessibility to all members of the community, despite population increases, and increases in the number of households.
- Increased transport safety through reduced accidents.
- Improved equity of access to transport for all groups and sectors in the community.

In addition, improved land use/transport outcomes in the corridor will allow for a broader range of housing choice. This means that lower income earners have the opportunity to live closer to major nodes, have access to high quality transport links, and allows for increased social inclusion of groups that may otherwise be excluded due to lack of access. Urban renewal in older existing areas allows for a diversity of housing choice, and more diverse communities.

Improved transport choice and service levels also facilitate more “active” transport, resulting in health benefits. In most cases, accessing public transport services in this corridor will require part of the journey to be undertaken by foot, or bicycle. Transitway options for the Northbourne Avenue corridor will incorporate pedestrian and cycling facilities.

Stage 2: Problem Identification

Problem Identification:

Current Issues

The ACT Government has committed to meeting targets in the areas of reducing greenhouse emissions, achieving a compact city, achieving high levels of social inclusion and providing a sustainable transport network.

These outcomes are hampered by an urban structure and transport network which promote the use of the private motor vehicle.

The 2007 ACT State of the Environment Report stated that for the ACT:

- Vehicle kilometres travelled per person is declining, however private motor vehicles are the dominant form of transport
 - Private car is used for 81% of journeys to work (national average 76%)
 - Public transport use is lower than the national average (7.9% compared to 15.2% nationally)
- 23.2% of the ACT's greenhouse gas emissions are related to transport fuels.

Much of Canberra's urban structure was determined in the 1960s, 1970s and 1980s, prior to self government. Canberra was designed around dispersed town centres, separated by hills, ridges and rivers. At that time planners intended that people would live and work in the same district, reducing or eliminating the need for extensive commuter travel. Extensive networks of roads (in many cases boulevards) were constructed, abundant surface (in most cases free) car parks were provided in town centres and use of the private car became entrenched in the Canberra way of life.

Since self government in 1989, successive ACT Governments have begun to manage the issue of sustainability in the ACT. Shifting demographics, predicted changes in climate, and cost pressures mean that the shape and form of the city needs to change. It is not efficient, sustainable or equitable, to continue to cater for a dispersed city, reliant on private motor vehicles for all travel.

The 2004 *Canberra Spatial Plan* and the *Sustainable Transport Plan for the ACT* currently form the ACT Planning Strategy, which guides the development of sustainable land use and transport policies.

The *ACT Sustainable Transport Plan* identified Northbourne Avenue is a priority transport corridor for enhancement.

Current demand in the corridor is high, and is already limiting the rapid movement of buses. Demand is expected to increase considerably over the next 20 years. Current demand shows existing capacity constraints for public transport and vehicle movement. Northbourne Avenue is heavily trafficked and exceeding capacity. It carries in excess of 30,000 vehicles per day and in peak hour alone it is carrying about 3,000 vehicles in the city direction.

Stage 2: Problem Identification

	<p>The corridor is the arterial connector for the ACT's fastest growing district (Gungahlin) to Canberra Central. Gungahlin has grown by more than 30% over the last six years. Lack of bus priority infrastructure makes public transport unattractive even though it is part of the public transport spine. During the course of a weekday over 500 scheduled buses travel along Northbourne Avenue. 13 Routes use Northbourne Avenue at the peak. Lack of bus priority infrastructure makes the availability of high frequency in effective. Bus schedules currently factor by two their normal trip to incorporate congestion and delay of the movement. Trip along Northbourne Avenue travel at less than 18 km/hr. The upstream that has bus lane travel at 60-70 km/h. The <i>ACT Strategic Public Transport Plan</i> identified a target of 40km/h along Northbourne Avenue corridor to achieve efficient transit movement.</p>
<p>Problem Identification: Future Scenarios</p>	<p>The ACT Government is committed to achieving improvements in efficiency of the transport network, as identified in <i>The Sustainable Transport Plan for the ACT</i>. This will assist in managing congestion, maintaining residential amenity and quality of life, and limiting greenhouse gas emissions. <u>Drivers for Change</u></p> <p><i>Socio-demographic Change</i></p> <p>The ACT population has been growing at a rate of 1.9% per annum between 1999 and 2009. The population of Gungahlin, the development area to the north of Canberra which is serviced by the Northbourne Avenue corridor, has grown at more than 5% per annum. It is expected that Gungahlin will continue to grow at this rate to reach about 65,000 by 2021. . Significant additional land is scheduled to be released in the Gungahlin district, resulting in an ultimate population for the Gungahlin district in the vicinity of 90,000.</p> <p>In addition, the suburbs in North Canberra (along the corridor), which were developed in the 1960s are currently experiencing significant urban renewal, progressively converting to a more dense land use. This is expected to result in an increase population in this area from 46,800 in 2009 to 53,000 in 2019.</p> <p>Further, population growth in the surrounding areas of NSW (particularly in Yass and Palerang shires) will see additional cross-border traffic using the Northbourne Avenue corridor.</p> <p><i>Federal Government Employment Policies</i></p> <p>As noted above, the design of Canberra in the 1960s and 1970s assumed that people would work in the same town or district as they resided. This was largely a result of the decentralised policy of the Federal Government at the time, which located large Departments across the city.</p> <p>In recent years the Federal Government has adopted a policy of centralising many of their Departments into the CBD, and to a lesser extent the Woden Town Centre. Several departments have relocated from Barton/Parkes to the CBD, and office space in Belconnen has been redeveloped into residential dwellings. No major Department has been located in the Gungahlin town centre, meaning that the majority of the workforce is forced to commute elsewhere.</p>

Stage 2: Problem Identification

While this centralisation can assist in the viability of mass transit to major nodes, it also results in increased car travel to the CBD – and in the case of north Canberra, much of this traffic needs to use Northbourne Avenue.

Lack of Alternative Routes

The early planning for Gungahlin by the National Capital Development Authority (NCDC) included two arterial roads between the Gungahlin district and CBD and beyond – designed to relieve the pressure on the Northbourne Avenue corridor. These were Gungahlin Drive, and Monash Drive.

Gungahlin Drive, which services the central and western suburbs of Gungahlin was constructed by the ACT Government. The link was completed in 2008 and is currently being duplicated. Construction of the Gungahlin Drive extension was delayed for many years due to community concerns regarding its impact on the O'Connor Ridge.

The second arterial road, Monash Drive, is unlikely to ever be constructed, due to the fact that its alignment runs through the Mount Majura and Mount Ainslie nature reserves – identified as red gum yellow box woodland reserves, which are protected under the Federal Environment Protection and Biodiversity Conservation Act. The ACT Government has removed this alignment from the Territory Plan and requested that the NCA remove it from the National Capital Plan.

The eventual development of the Majura Parkway (the subject of a separate IA bid) is expected to alleviate some demand for north-south travel that bypasses the CBD, but will not address CBD-bound travel demand. Northbourne Avenue has been the public transport spine identified in both the National Capital Plan and the Territory Plan. Demand in the corridor will need to be met with multi-modal facilities: efficient passengers and vehicle movement, : high quality, fast and safe cycle facilities (to be included within the Northbourne Avenue corridor, and due for construction in 2011-12); and high quality public transport links (the transitway).

Energy Prices

As energy prices increase over time, demand for high quality public transport as an alternative to private vehicle use is expected to increase. This project aims to have adequate infrastructure in place to allow increased public transport demand to be met with high quality services.

In addition, higher fuel prices are likely to increase demand for inner city residential housing. This initiative aims to bring about urban renewal and high density development within the corridor and at nodes, providing affordable housing choices.

Climate Change

The ACT is responding to predicted changes to climate by legislating a target of a 40 per cent cut in emissions, based on 1990 levels, by 2020 and 80 per cent by 2050. Higher public transport patronage, based on efficient and reliable public transport services (using high quality public transport infrastructure) is a fundamental element of achieving these targets.

Stage 2: Problem Identification

Increased Parking Prices

As commercial land in Canberra becomes scarcer, parking supply is expected to become more limited, and prices increase to be more in line with other Australian cities. For example, the National Capital Authority is currently assessing the supply and pricing of parking in the National Zone (Barton/Parkes). This is likely to be a key factor in increasing demand for public transport services in the ACT.

Under the current arrangements, public transport services in the Northbourne Avenue corridor operate within a general traffic lane. This limits the reliability of services, as they have no priority or ability to bypass traffic delays in the corridor.

Should the transitway be built, it will provide the opportunity for buses to be given priority, which will increase running time reliability. Bus stations would be constructed and equipped with real time passenger information, allowing an increased level of certainty around services, and allowing for reliable interchanging. Bus routes in the north Canberra district can be routed through the corridor, allowing for increased frequency, thereby increasing the attractiveness of public transport over the private motor vehicle.

Concurrently, work is underway within the ACT Government to look at additional supporting mechanisms across the network, including parking pricing in major centres, infrastructure to support multi-modal trips (including bike-and-ride, and park-and-ride facilities), and real time passenger information across the frequent service network. A smart-card ticketing system is currently in its trial phase and is expected to be rolled out across the network in early 2011. This will provide increased flexibility in ticket pricing, and capture additional user data across the network, which can be used for detailed network planning purposes.

Stage 3: Problem Assessment

<p>Problem Assessment</p>	<p><i>To what extent does (or will) the problem impact upon the goals and objectives?</i></p> <p>The transitway network is a key element in achieving the ACT's <i>Sustainable Transport Plan</i> mode share targets, and delivering on emissions targets.</p> <p>Insufficient transport choice will continue to promote the private car as the primary travel choice, and will limit opportunities for land use consolidation in key corridors.</p> <p>Congestion in key corridors will continue to constrain economic productivity. The average speed of vehicles in the corridor is estimated to be below 20 km/hour during peak periods.</p> <p>Note – the extent of the problem will be further quantified as part of the current feasibility study and the forward design for the project to be undertaken in 2011-12.</p>
<p>Current and Future Problems</p>	<p><i>How is the problem currently (and likely to) affecting the nation/ state/ region (city)/ locality?</i></p> <p><i>Quantify the extent to which the problems may affect the attainment of the goals/objectives.</i></p> <p><i>List the data and evidence available to support the quantification.</i></p> <p>As Northbourne Avenue is a growth corridor, the growing congestion and capacity limitations have the following implications:</p> <p><u>Locally:</u></p> <ul style="list-style-type: none"> • Excessive delays to passenger travels (model estimate indicates almost double during peak periods) • Public transport services continue to be unreliable • Traffic infiltration through abutting North Canberra suburbs causing safety and amenity problems (modelling indicates more than 30% growth on residential roads over the next ten years) • Traffic safety and emission issues will continue to grow. <p><u>Nationally:</u></p> <ul style="list-style-type: none"> • The main approach to the nation's capital is inefficient due to growing congestion • Lack of public transport infrastructure on this corridor has consequence of feeding more car based traffic into Canberra CBD and Parliamentary zones • Limited access within Canberra CBD and to the national institutions

Stage 3: Problem Assessment

Regionally

- Traffic feeding from NSW on this corridor has increased by more than 15% in the last five years
- The capacity constraints limit efficient cross border travel.

The traffic modelling indicates that these issues are projected to grow to unsustainable levels over the next ten years.

The feasibility study currently underway, together with the detailed design to be undertaken during 2011-12 (subject to the availability of ACT funding), will quantify the current and future extent of the problem in accordance with IA guidelines and criteria.

Stage 4: Problem Analysis

Problem Analysis	<p>Outline the underlying causes of the problem.</p> <p>Give the policy argument explaining the genesis of the problem (e.g. market failure, incorrect pricing, lack of investment signals, governance).</p> <p>Provide data and other evidence to back up the policy arguments.</p> <p>Canberra’s relatively small population and low density land use means that changing commuting modes and patterns on targeted corridors offers the greatest opportunity to achieve significant improvements in travel behaviour and land use, and reduce per capita carbon emissions.</p> <p>In the current system, services are spread thinly over a large area. This results in low frequency of services and high running costs – and the resultant low levels of reliability results in low patronage, which further increases the need for public subsidy. Absence of consolidation opportunities through public transport infrastructure means that Canberra has traditionally had a high cost per capita public transport service (in terms of kilometres of service per capita).</p> <p>The current planning for public transport across the ACT aims to consolidate services on key routes, encouraging opportunities for land use change within those corridors. The Northbourne Avenue corridor offers the opportunity for a national showcase public transport corridor, providing high quality urban design outcomes, consolidate land uses (both commercial and residential) and reliable transit options for a growing residential population in Gungahlin and North Canberra.</p>
Identify Fundamental Cause, not Symptoms, of the Problem	<p>Focus on the fundamental cause of the problem, e.g. the root cause of road congestion should not simply be claimed as a “lack of capacity” – what has caused the lack of capacity?</p> <p>It may, for example, be a demand/supply mismatch caused by incorrect pricing and excess demand, or a lack of supply side investment due to the absence of price signals or targeted revenue streams.</p> <p>Northbourne Avenue is a multi-modal transport corridor. It is a key public transport spine of the Canberra public transport network. However, it’s design and lack of public transport infrastructure impede its ability to function effectively as public transport spine.</p> <p>Northbourne Avenue, in its peak direction alone, carries approximately 3000 vehicles per hour during the peak period. This means that demand already exceeds capacity by approximately 10 percent, which is evident by the long queues and delays that currently exist along the corridor during the peak periods. The Gungahlin district is the ACT’s fastest growing residential area, and further land release will continue to increase congestion along the Northbourne Avenue corridor, as well as nearby residential streets. The result is significant safety problems, loss of productivity, and loss of residential amenity as the traffic infiltrates through surrounding residential streets.</p> <p>Enhancing the role of public transport along Northbourne Avenue is an effective way of managing growing travel demand along the corridor. The congestion is imposing a significant impact on the ACT community in terms of economic, environmental and social costs.</p>

Stage 4: Problem Analysis

	<p>Specific factors contributing the problem include:</p> <ul style="list-style-type: none"> • Significant growth in new residential suburbs in Gungahlin, which is expected to continue for the foreseeable future (the Gungahlin district will be fully developed around 2025 and will have an ultimate population of approximately 90,000 people, with employment for only 15,000. <p>Rapid growth in commercial activities in the CBD – employment activity increased by 64% between 2001 and 2006 and is forecast to increase by a further 20% by 2011 (and even further by 2016).</p>
<p>Problem Prioritisation</p>	<p><i>Identify why this problem has been prioritised against other problems across that network and/or region – i.e. demonstrate which problems are most likely to hinder the achievement of goals and objectives.</i></p> <p>Through the <i>Sustainable Transport Plan for the ACT</i>, the ACT Government has committed to mode share targets for public transport of 9% of all work trips by 2011, and 16% of all work trips by 2026. The draft Public Transport Network Plan identifies a new approach to designing and delivering public transport in Canberra. It identifies future public transport investment and initiatives that will be required to achieve the targets, and includes bus priority projects and other bus speed reliability infrastructure.</p> <p>Transitway/bus priority projects and other speed/reliability infrastructure (including real time passenger information and improved ticketing systems) allow operating speed standards to be developed, on which the performance of the public transport system can be monitored, and continuous improvements made. Reliable and fast public services are effective in managing traffic demand and congestion, attracting more passengers, and increasing mobility and accessibility to economic activities and reduce emissions. This in turn increases the financial viability of the system.</p> <p>The Northbourne Avenue transitway is a signature public transport project – providing a high quality public transport experience and operating speed reliability. The project will result in improved operating speed reliability, contributing to achieving targeted public transport patronage, helping to achieve the ACT Governments mode share and emissions reduction targets.</p>

Stage 5: Option Generation

REFORM (ESSENTIALLY NON-CAPITAL INVESTMENT) OPTIONS

Option 1

Short description of the option, and how it is likely to achieve the goals/objectives.

The feasibility study currently underway will identify and assess the range of options for the corridor. This work will build on the results of the feasibility study undertaken in 2005, which considered 10 options:

1. median busway
2. kerb-side guided busway
3. single-lane reversible median busway
4. near-side buslane and 2 lanes
5. contraflow offside buslanes with queue jump lanes
6. offside buslanes with median queue jump lanes
7. contraflow bus lane (tidal) with queue jump lanes
8. setback nearside bus lane
9. kerbside high occupancy vehicle lanes (T2 and T3)
10. General carriageway plus buslane (with cycle options).

The National Capital Authority (NCA) was a key stakeholder in the 2005 study due to the national significance of the corridor, and the need for works approval sign off on the preferred option. This consultation, together with the analysis undertaken, concluded that Option 10 was the most feasible option. Option 10 (shown below) involves widening the existing three lane carriageways to provide an additional transit lane for city bound vehicles and high occupancy vehicles. This was considered the best option as it segregates buses from other traffic, and would provide substantial travel time benefits. It was however, the highest cost option in the study.

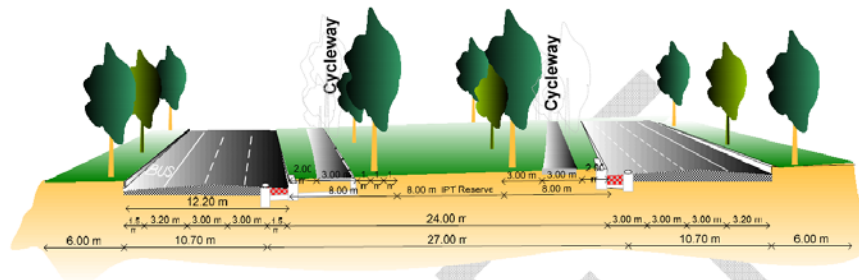


Figure 1-D Recommended Initial Cross Section

Stage 5: Option Generation

While the NCA supported the option (in principle) in 2005, no further design has taken place in the interim, due to changes in priorities of the NCA and the significant funding requirement. Given the organisational changes that have taken place within the NCA since the 2005 study, the current feasibility study will revisit a number of options and determine a preferred option that enhances Northbourne Avenue's national significance and can be given works approval by the NCA. NCA will be a key stakeholder in the current feasibility study.

Detailed discussion on the options will be provided to Infrastructure Australia following the completion of the current feasibility study.